

## 밀링공구용 팁 호칭방법

## ● 밀링공구용 팁 일람 페이지의 구성

- ①대응 커터 별로 정리했습니다.
- ②대응 커터의 배열은 알파벳순으로 나타냈습니다.

## ● 밀링공구용 팁 규격의 구성

- ①커터용, 와이퍼, 드릴용으로 분류했습니다.  
②배열은 팁규격의 알파벳순으로 했습니다.

- 페이지 제목
- 전체제품 표시

## ● 밀링공구용 팁 일람

[illegible]

L014

■ **팁** 규격 표시

## 대응 커터명 표시

다음단에 계속되는 표시

동일 커터용의 정보가 다음 단계에 걸치는 경우에 표시합니다.

## 팁 외관 사진

## 계재 페이지 표시

해당하는 팁의 자세한 규격이  
게재되어 있습니다.

## ■ 피삭재별 적용재종

재종선정의 기준으로, 피삭재에 적합한 절삭상태를  
기재하고 있습니다.

- : 안정절삭   ● : 일반절삭   ⊕ : 불안정 절삭

## ■ 사용공구별 타이틀

### ■ 팁 규격란

### ■ 팁 정도 · 호닝 표시

### ■ 팁 재종 표시란

## ● 커터용 팁

[illegible]

L024

## Tip 형상 그림

### ■ 팁 치수란

## ■ 재종별 재고 표시란

## 재고표시 법령

페이지를 펼쳤을  
때 왼쪽 페이지에  
표시되어 있습니다.

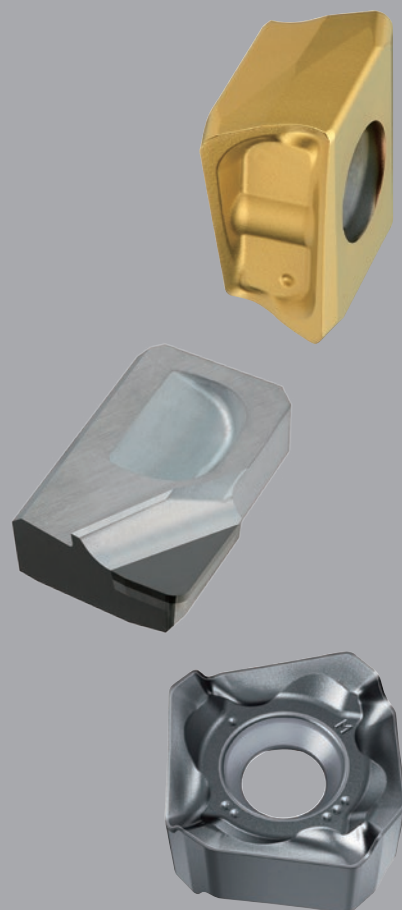
## ●주문 시는

- ①팁규격, 팁재종을 지정해 주십시오.

# 밀링공구용 팁 규격 CBN&PCD팁 규격 팁 재종

|                         |      |
|-------------------------|------|
| 커터용 팁의 호칭의미 .....       | L002 |
| 커터용 재종 .....            | L004 |
| 커터 적용영역.....            | L005 |
| CVD&PVD코팅 (다이아코팅) ..... | L008 |
| 서멧 .....                | L010 |
| 초경합금 .....              | L011 |
| CBN(CBN소결체).....        | L012 |
| PCD(다이아몬드 소결체) .....    | L013 |
| 밀링공구용 팁 일람.....         | L014 |

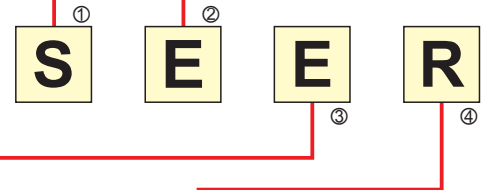
|                   |      |
|-------------------|------|
| 밀링공구용 팁규격         |      |
| 커터용 팁 .....       | L024 |
| 와이퍼팁.....         | L050 |
| CBN&PCD팁.....     | L052 |
| CBN&PCD와이퍼팁 ..... | L055 |
| 드릴용 팁 .....       | L056 |

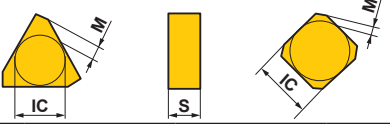


# 커터용 팁의 호칭의미

| 기호 | 팁 형상         |                                                                                     |
|----|--------------|-------------------------------------------------------------------------------------|
| N  | 정7각형         |  |
| O  | 정팔각형         |  |
| S  | 정사각형         |  |
| T  | 정삼각형         |  |
| C  | 마름모형 꼭지각80°  |  |
| M  | 마름모형 꼭지각86°  |  |
| A  | 평행4변형 꼭지각85° |  |
| R  | 원형           |  |
| X  | 특수형상         | —                                                                                   |
| W  | 와이퍼          | —                                                                                   |

| 기호 | 여유각 AN |                                                                                     |
|----|--------|-------------------------------------------------------------------------------------|
| C  | 7°     |  |
| D  | 15°    |  |
| E  | 20°    |  |
| F  | 25°    |  |
| G  | 30°    |  |
| N  | 0°     |  |
| P  | 11°    |  |
| O  | 기타 여유각 |                                                                                     |
| X  | 기타 여유각 |                                                                                     |



| ③ 정도기호                                                                              |                  |                       |                 |
|-------------------------------------------------------------------------------------|------------------|-----------------------|-----------------|
|  |                  |                       |                 |
| 기호                                                                                  | 코너높이<br>허용차M(mm) | 내접원<br>허용차<br>IC (mm) | 두께허용차<br>S (mm) |
| A                                                                                   | ±0.005           | ±0.025                | ±0.025          |
| C                                                                                   | ±0.013           | ±0.025                | ±0.025          |
| E                                                                                   | ±0.025           | ±0.025                | ±0.025          |
| G                                                                                   | ±0.025           | ±0.025                | ±0.13           |
| K※                                                                                  | ±0.013           | ±0.05—±0.15           | ±0.025          |
| M※                                                                                  | ±0.08—±0.18      | ±0.05—±0.15           | ±0.13           |
| N※                                                                                  | ±0.08—±0.18      | ±0.05—±0.15           | ±0.025          |

※ 표가 붙은 것은 원칙적으로 측면은 소결체 팁이다

| ④ 홈 · 구멍기호 |        |                                 |             |                                                                                       |
|------------|--------|---------------------------------|-------------|---------------------------------------------------------------------------------------|
| 기호         | 구멍의 유무 | 구멍 형상                           | 브레이커의<br>유무 | 팁 단면                                                                                  |
| W          | 있음     | 일부원통구멍<br>+<br>편면취<br>(40°—60°) | 없음          |  |
| T          | 있음     |                                 | 편면          |  |
| B          | 있음     | 일부원통구멍<br>+<br>편면취<br>(70°—90°) | 없음          |  |
| N          | 없음     | —                               | 없음          |  |
| R          | 없음     | —                               | 편면          |  |
| X          | —      | —                               | —           | 특 수                                                                                   |

| 기호 |    |    |    | 내접원<br>(mm) |
|----|----|----|----|-------------|
|    |    |    |    |             |
|    | 06 | 06 | 11 | 6.35        |
|    | 08 | 07 | 13 | 7.94        |
|    | 09 | 09 | 16 | 9.525       |
| 10 |    |    |    | 10.00       |
| 12 |    |    |    | 12.00       |
|    | 12 | 12 | 22 | 12.70       |
|    | 16 | 15 | 27 | 15.875      |
| 20 |    |    |    | 20.00       |

⑤ 팁 내접원

| 기호 |  | 두께<br>(mm) |
|----|--|------------|
|    |  |            |
| 03 |  | 3.18       |
| T3 |  | 3.97       |
| 04 |  | 4.76       |

⑥ 팁 두께

| 기호 | 호닝               |
|----|------------------|
| F  | <br>샤프한 날        |
| E  | <br>R 호닝         |
| T  | <br>챔퍼호닝         |
| S  | <br>콤비네이션 호닝     |
| Z  | <br>챔퍼호닝 (인선강화형) |

⑨ 호닝

12<sup>⑤</sup> 03<sup>⑥</sup> A<sup>⑦</sup> F<sup>⑧</sup> E<sup>⑨</sup> R<sup>⑩</sup> 1<sup>⑪</sup> - JS<sup>⑫</sup>

| ⑦ 플랫커팅날절입각 |          |
|------------|----------|
|            |          |
| 기호         | 플랫커팅날절입각 |
| A          | 45°      |
| E          | 75°      |
| P          | 90°      |
| Z          | 기타 각도    |

| ⑧ 와이퍼날 여유각 |          |
|------------|----------|
|            |          |
| 기호         | 와이퍼날 여유각 |
| D          | 15°      |
| E          | 20°      |
| F          | 25°      |
| G          | 30°      |

| ⑩ 승수 |      |
|------|------|
| 기호   | 승수   |
| L    | 좌승수  |
| N    | 좌우공용 |
| R    | 우승수  |

| ⑪ 와이퍼날 폭 |                    |
|----------|--------------------|
|          |                    |
| 기호       | 와이퍼날 폭             |
| 1        | 1.4<br>(TEKN만1.94) |

| ⑫ 브레이커 기호 |         |
|-----------|---------|
| 기호        | 명칭      |
| FT        | FT 브레이커 |
| HS        | HS 브레이커 |
| JH        | JH 브레이커 |
| JM        | JM 브레이커 |
| JP        | JP 브레이커 |
| JS        | JS 브레이커 |
| LS        | LS 브레이커 |
| MM        | MM 브레이커 |
| MS        | MS 브레이커 |

L

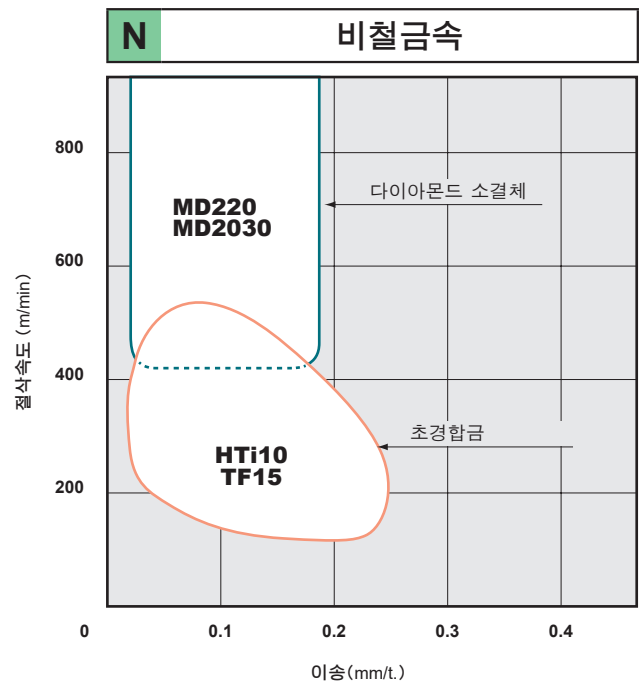
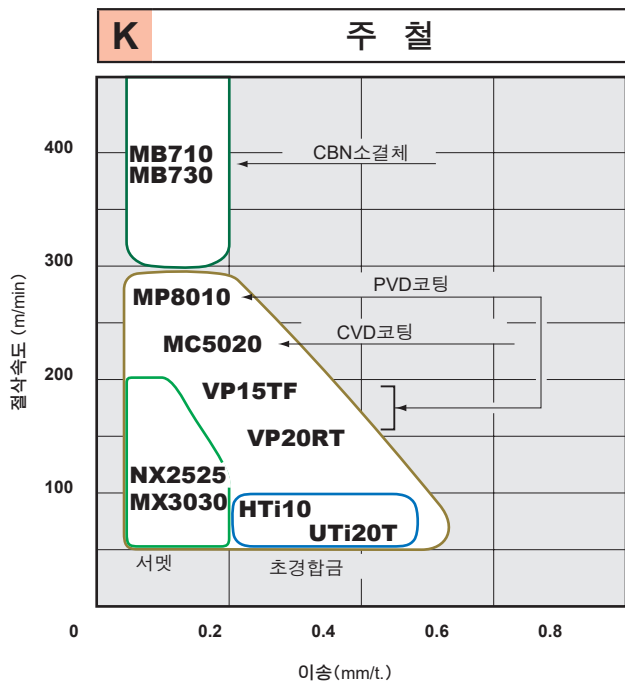
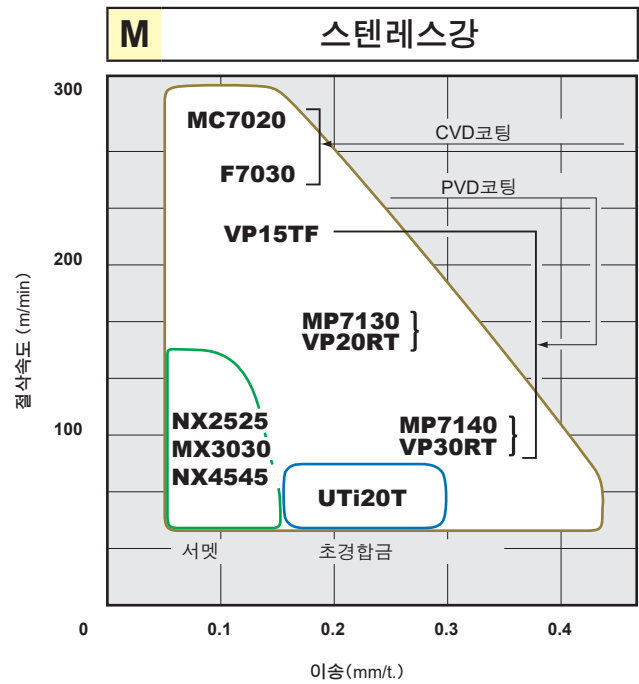
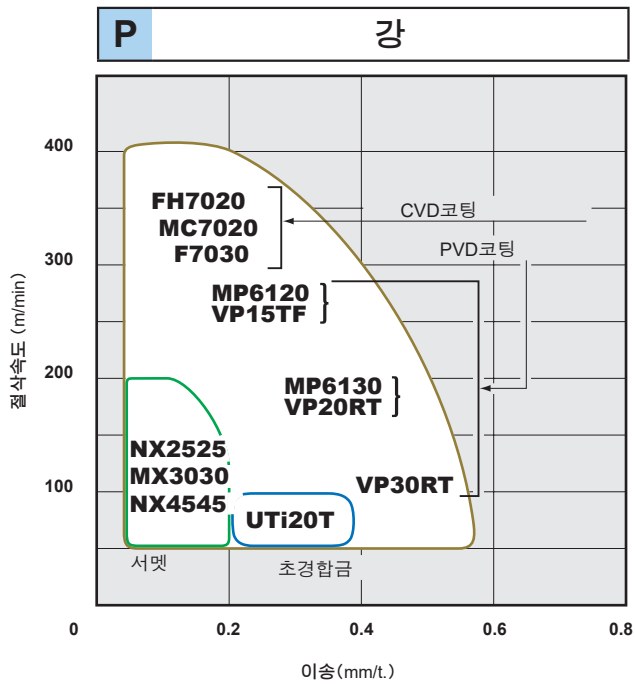
모델명: F101-0000

# 커터용 재종

## ● 커터용팁 재종

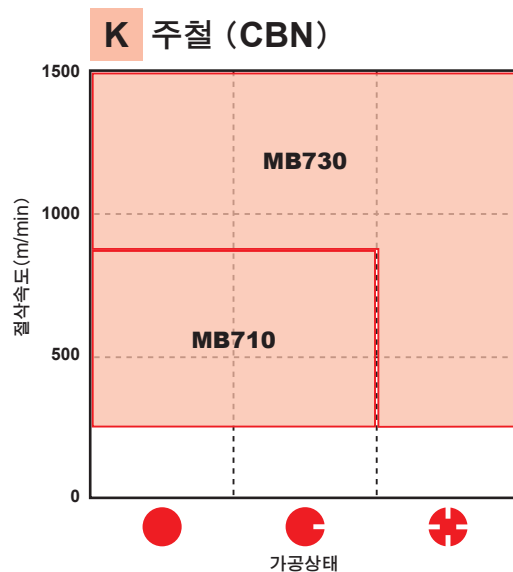
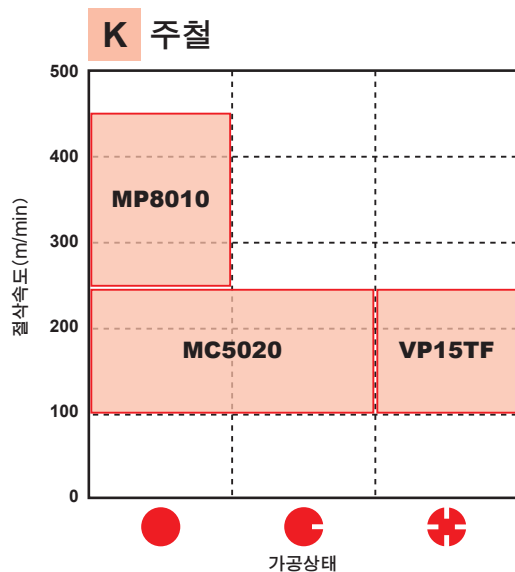
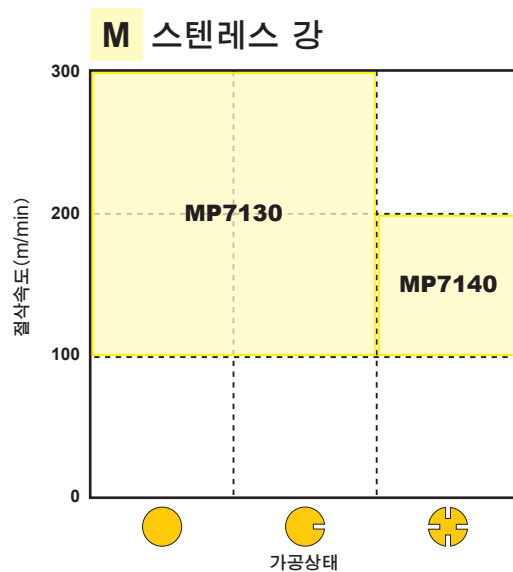
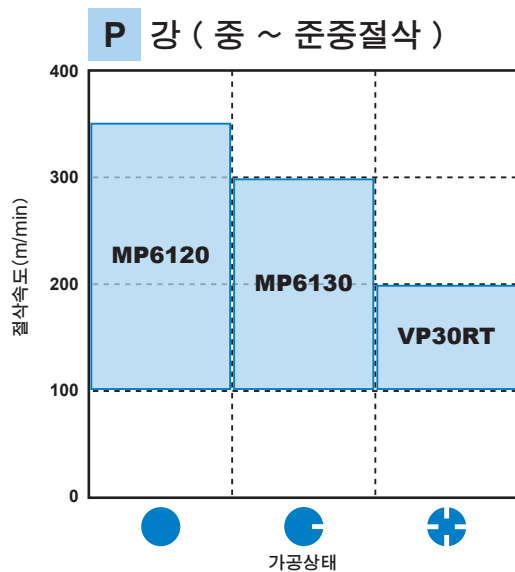
| ISO사용<br>분류기호 | 코팅  |                                                             | 코팅서멧  | 서멧                                          | 초경합금                      | CBN<br>(CBN 소결체) | PCD<br>(다이아몬드 소결체) |
|---------------|-----|-------------------------------------------------------------|-------|---------------------------------------------|---------------------------|------------------|--------------------|
|               | CVD | PVD                                                         |       |                                             |                           |                  |                    |
| 강             | P   | 10<br>MC7020<br>FH7020<br>F7030                             |       | NX2525<br>NEW<br>MX3020<br>MX3030<br>NX4545 |                           |                  |                    |
|               |     | 20<br>MP6120<br>VP15TF<br>MP6130                            | VP25N |                                             | UTi20T                    |                  |                    |
|               |     | 30<br>UP20M<br>VP20RT                                       |       |                                             |                           |                  |                    |
|               |     | 40<br>VP30RT                                                |       |                                             |                           |                  |                    |
|               |     |                                                             |       |                                             |                           |                  |                    |
| 스텐레스강         | M   | 10<br>MC7020<br>F7030                                       | VP25N | NX2525<br>NEW<br>MX3020<br>MX3030<br>NX4545 |                           |                  |                    |
|               |     | 20<br>VP15TF<br>MP7130<br>MP7030<br>UP20M<br>VP20RT         |       |                                             | UTi20T                    |                  |                    |
|               |     | 30<br>MP7140<br>VP30RT                                      |       |                                             |                           |                  |                    |
|               |     | 40                                                          |       |                                             |                           |                  |                    |
|               |     |                                                             |       |                                             |                           |                  |                    |
| 주철            | K   | 10<br>MC5020                                                | VP25N | NX2525<br>NEW<br>MX3020<br>MX3030           | HTi05T<br>HTi10<br>UTi20T | MB710<br>MB730   |                    |
|               |     | 20<br>MP8010<br>VP15TF                                      |       |                                             |                           |                  |                    |
|               |     | 30<br>VP20RT                                                |       |                                             |                           |                  |                    |
|               |     |                                                             |       |                                             |                           |                  |                    |
|               |     |                                                             |       |                                             |                           |                  |                    |
| 비철금속          | N   | 10                                                          |       |                                             | HTi10                     |                  | MD205              |
|               |     | 20<br>LC15TF                                                |       |                                             | TF15                      |                  | MD220              |
|               |     | 30                                                          |       |                                             |                           |                  | MD230              |
|               |     |                                                             |       |                                             |                           |                  | MD2030             |
|               |     |                                                             |       |                                             |                           |                  |                    |
| 내열합금 · 티탄합금   | S   | 10                                                          |       |                                             |                           | MB730            |                    |
|               |     | 20<br>MP9120<br>VP15TF<br>MP9130<br>NEW<br>MP9140<br>MP9030 |       |                                             |                           |                  |                    |
|               |     | 30                                                          |       |                                             |                           |                  |                    |
|               |     | 40                                                          |       |                                             |                           |                  |                    |
|               |     |                                                             |       |                                             |                           |                  |                    |
| 고경도재          | H   | 10<br>MP8010<br>VP15TF                                      |       |                                             |                           |                  |                    |
|               |     | 20                                                          |       |                                             |                           |                  |                    |
|               |     | 30                                                          |       |                                             |                           |                  |                    |

# 커터 적용영역



# 커터 적용영역

● 피삭재에 따른 가공상태 및 절삭속도에 의한 추천 인서트재종



## ■ 가공상태



안정 절삭

평면가공  
절입이 일정한 절삭  
기계가공의 표피절삭  
가공물클램프강성이 높은 절삭

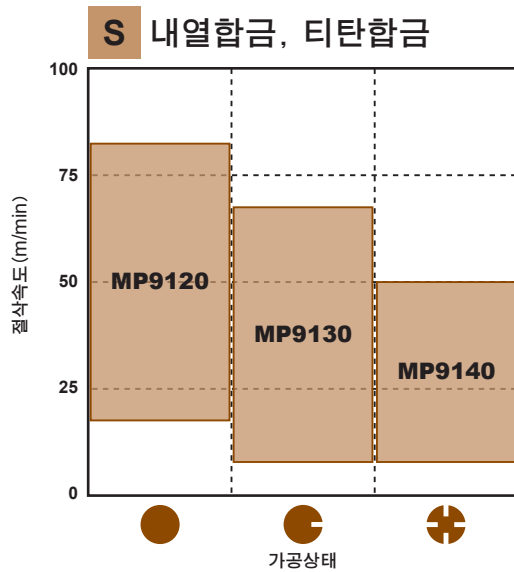
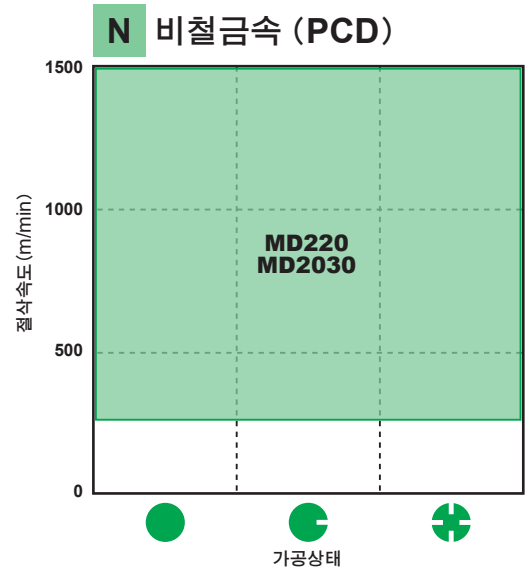
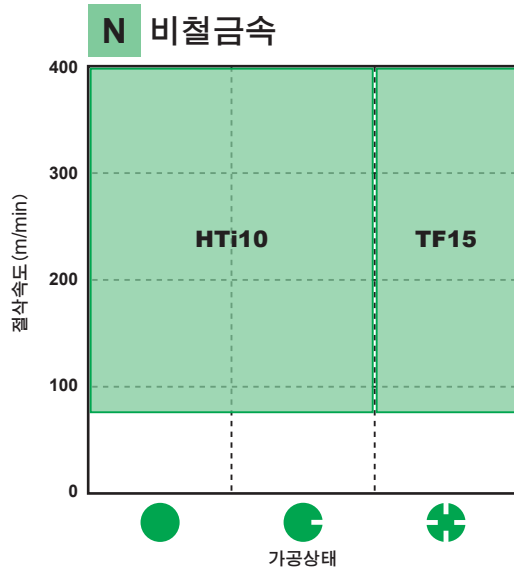


일반 절삭



불안정 절삭

심한 단속절삭  
절입의 변동이 큰 절삭  
가공물클램프강성이 낮은 절삭





## ■ 재료특성

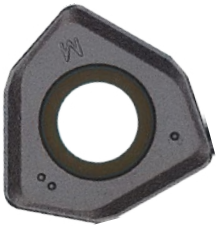
| 재종     | 초경합금모재   | 코팅 층                                          |       |
|--------|----------|-----------------------------------------------|-------|
|        | 경도 (HRA) | 물질                                            | 두께    |
| MC5020 | 91.0     | TiCN-Al <sub>2</sub> O <sub>3</sub> -Ti 화합물적층 | 후(厚)막 |
| MC7020 | 88.8     | TiCN-Al <sub>2</sub> O <sub>3</sub> 화합물적층     | 후(厚)막 |
| FH7020 | 88.8     | TiCN-Al <sub>2</sub> O <sub>3</sub> -Ti 화합물적층 | 후(厚)막 |
| F7030  | 88.8     | TiCN-Al <sub>2</sub> O <sub>3</sub> -TiN      | 박막    |
| MP6120 | 91.5     | (Al,Ti,Cr)N                                   | 박막    |
| MP6130 | 90.5     | (Al,Ti,Cr)N                                   | 박막    |
| MP7030 | 90.5     | (Al,Ti)N-Ti 화합물적층                             | 박막    |
| MP7130 | 90.5     | (Al,Ti)N-Ti 화합물적층                             | 박막    |
| MP7140 | 88.8     | (Al,Ti)N-Ti 화합물적층                             | 박막    |

| 재종         | 초경합금모재   | 코팅 층              |    |
|------------|----------|-------------------|----|
|            | 경도 (HRA) | 물질                | 두께 |
| MP8010     | 93.5     | (Al,Ti,Si)N       | 박막 |
| MP9120     | 91.5     | (Al,Ti,Cr)N       | 박막 |
| MP9030     | 90.5     | (Al,Ti)N-Ti 화합물적층 | 박막 |
| MP9130     | 90.5     | (Al,Ti,Cr)N       | 박막 |
| NEW MP9140 | 89.0     | Al-(Al,Ti)N       | 박막 |
| VP15TF     | 91.5     | (Al,Ti)N          | 박막 |
| VP20RT     | 90.5     | (Al,Ti)N          | 박막 |
| VP30RT     | 88.8     | (Al,Ti)N          | 박막 |
| UP20M      | 90.5     | Ti 계 화합물적층        | 박막 |

주1) 경도는 내부 경도의 대표값을 나타냅니다.

## 강, 스텐레스강 가공용

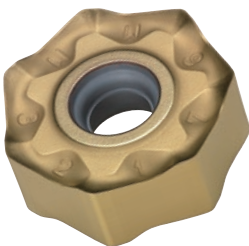
### MC7020



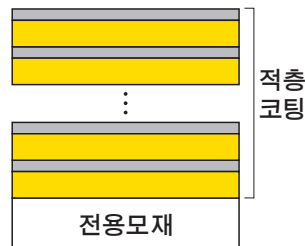
미립고내마모 Al<sub>2</sub>O<sub>3</sub>층과 미세섬유상 TiCN 층으로 고속 영역에서의 강/스테인리스강 전삭 가공에서 뛰어난 내마모성을 발휘합니다. 인성 및 내열균열성이 뛰어난 전용 초경합금 모재를 사용해 인선의 돌발적인 결손을 억제합니다.

## 스테인레스강 가공용

### MP7030



MP7030은, Ti계 화합물을 베이스로 한 적층코팅을 채용하고 있어, 스텐레스강절삭에 있어서 뛰어난 내마모성 및 내결손성을 발휘합니다. 또한 전용모재를 채용하여 난삭재, 특히 스텐레스 가공에서 뛰어난 성능을 발휘합니다.



## 내열합금, 티탄합금가공용

### MP9130



초미립 WC에 적합한 조성·조직을 채용함으로써 경도를 유지한 채, 인성을 향상하는데 성공했습니다. 코팅은 “Al-Ti-Cr-N계 적층코팅을 채용하여, 뛰어난 내열성과 내마모성을 확보함은 물론이고, Ti합금에 대해서 저마찰계수이기때문에, 뛰어난 내용착성을 발휘, 적층 구조의 최적화에 의해 내결손성을 향상하는 등의 특징을 갖고 있습니다.

NEW

### MP9140



Al 함유량을 높여 피막 경도 향상 및 고경도상 안정화를 도모했으며, 절삭 가공 시의 내마모성, 내열성, 내용착성이 향상되었습니다.

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코팅 두께 0.1~0.2μm

# 서멧

- 고속밀링 가공에는 NX2525
- 일반 밀링가공에는 NX4545, MX3030

## ■선정기준

### 밀링

| 피삭재 | 선정재종             | 추천절삭 속도 (m/min)    | ISO<br>사용분류<br>기호        | 적용범위 |
|-----|------------------|--------------------|--------------------------|------|
| 강   | NX2525           | 250<br>(150 — 350) | P<br>10<br>20<br>30<br>M |      |
|     | MX3030<br>NX4545 | 150<br>(120 — 180) |                          |      |
| 주철  | NX2525           | 200<br>(150 — 300) | K<br>10<br>20            |      |
|     | MX3030           | 150<br>(120 — 180) |                          |      |

주1) 습식절삭의 경우, 강절삭은 다이아코팅 VP15TF을, 주철절삭은 다이아코팅 MC5020을 사용해 주십시오.

## ■재료특성

| 재종     | 경도 (HRA) |
|--------|----------|
| NX2525 | 92.2     |
| MX3030 | 90.0     |
| NX4545 | 90.0     |

주1) 경도는 내부 경도의 대표값을 나타냅니다.

# 초경합금

●강절삭에는 UTi20T계, 주철·비철금속, 비금속에는 HTi10계, 강·주철, 어느쪽이나 대응가능한 범용의 UTi계 등 용도에 맞는 재종을 시리즈화

## ■선정기준

밀링

| 피삭재        | 선정재종          | 추천절삭 속도 (m/min)    | ISO<br>사용분류<br>기호 | 적용범위   |
|------------|---------------|--------------------|-------------------|--------|
| P<br>강     | UTi20T        | 120<br>(50 - 180)  | 10                |        |
|            |               |                    | 20                |        |
|            |               |                    | 30                | UTi20T |
| M<br>스텐레스강 | UTi20T        | 120<br>(50 - 180)  | 10                |        |
|            |               |                    | 20                |        |
|            |               |                    | 30                | UTi20T |
| K<br>주철    | HTi10         | 100<br>(50 - 150)  | 10                | HTi10  |
|            | UTi20T        | 120<br>(50 - 180)  | 20                |        |
|            |               |                    | 30                | UTi20T |
| N<br>비철금속  | HTi10<br>TF15 | 400<br>(300 - 500) | 10                | HTi10  |
|            |               |                    | 20                |        |
|            |               |                    | 30                | TF15   |

## ■재료특성

| ISO사용<br>분류기호 | 합금성분           | 특 징                    | 피삭재                 |
|---------------|----------------|------------------------|---------------------|
| P M           | WC-TiC-TaC-Co계 | 내열성, 내소성변형성에 뛰어나다.     | 탄소강, 합금강, 스텐레스강, 주철 |
| K N           | WC-Co계         | 강도가 높고, 여유면의 선마모에 강하다. | 주철, 비철금속, 비금속       |

## ■합금특성

| ISO사용<br>분류기호 | 재종     | 경도<br>(HRA) |
|---------------|--------|-------------|
| P M           | UTi20T | 90.5        |
| K N           | HTi05T | 92.5        |
|               | HTi10  | 92.0        |
| N             | TF15   | 91.5        |

주1) 경도는 내부 경도의 대표값을 나타냅니다.

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초경합금

# CBN(CBN소결체)

- 주철가공에는 MB710, MB730 의 2 재종을 준비하고 있습니다 .
- 주물의 고속항삭가공용으로 BC5030 을 라인업했습니다 .
- BC5030 은 전용본체 AOX 형과의 조합으로 사용코너수가 최대 16 코너가 되어 , 경제적인 고능률가공이 가능합니다 .



## ■ 선정기준/추천절삭 조건

### 정삭가공

| 피삭재 |       | 조직        | 절삭속도 (m/min) |     |     |      |      | 이송<br>(mm/t.) | 절입<br>(mm) | 절삭유제 |
|-----|-------|-----------|--------------|-----|-----|------|------|---------------|------------|------|
|     |       |           | 250          | 500 | 750 | 1000 | 1250 |               |            |      |
| 회주철 | FC250 | 페라이트+펄라이트 | MB710 MB730  |     |     |      |      | -0.3          | -0.5       | 건식   |
|     | FC300 | 펄라이트      |              |     |     |      |      |               |            |      |

### 항삭가공

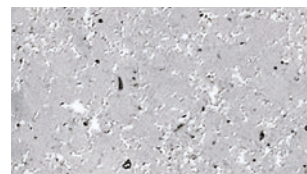
| 피삭재 |       | 조직   | 절삭속도 (m/min) |     |      |      |      | 이송<br>(mm/t.) | 절입<br>(mm) | 절삭유제 |
|-----|-------|------|--------------|-----|------|------|------|---------------|------------|------|
|     |       |      | 250          | 500 | 1000 | 1500 | 2000 |               |            |      |
| 회주철 | FC250 | 펄라이트 | BC5030       |     |      |      |      | -0.15         | -3.0       | 건식   |

## ■ 각 재종의 특징 · 주성분

| 재종     | 용도                         | 특징                                                                                                              | 주성분                                          | 코팅막    |
|--------|----------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------|
| MB710  | 일반가공용                      | 조성을 주철가공용에 최적화하고 , 내마모성과 내결손성의 균형이 뛰어난 범용재종입니다 .                                                                | CBN<br>TiC<br>Al <sub>2</sub> O <sub>3</sub> | —      |
| MB730  | 고속가공용<br>단속가공용             | CBN 함유량이 가장 높고 , 높은 열전도성을 나타냅니다 .<br>따라서 고속가공시의 높은 절삭열에도 충분히 대응가능한 고속가공용 재종입니다 .                                | CBN(고함유)<br>Co기함유                            | —      |
| BC5030 | 고속 깊은 절입가공<br>고속 깊은 절입단속가공 | CBN함유량이 많고 높은 열전도율성을 나타냅니다 .<br>인서트 전체가 CBN소결체이므로 고속절삭 및 깊은 절입고능률가공이 가능한 재종입니다 .<br>코팅에 의해 다 사용한 코너의 식별이 쉽습니다 . | CBN<br>AlN                                   | TiN베이스 |

# PCD(다이아몬드 소결체)

- 알루미늄합금 등 비철합금 절삭에 적합합니다.
- 초고속 정삭절삭에 대응



MD220 의 조직사진



MD2030 의 조직사진

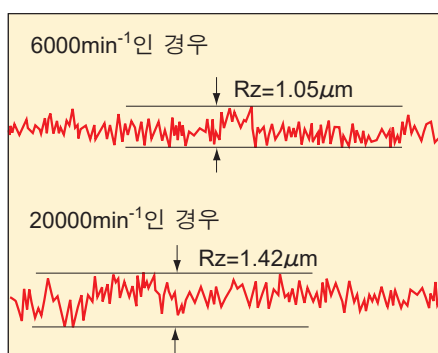
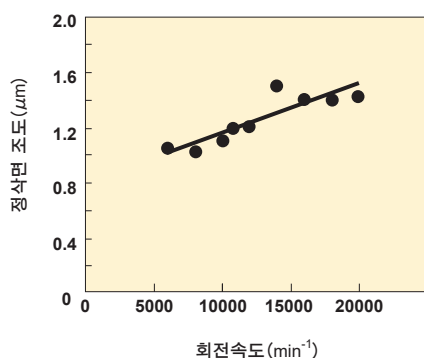
## ■ 각 재종의 특징

| 재종     | 특징                                                                                          |
|--------|---------------------------------------------------------------------------------------------|
| MD220  | 다이아몬드의 입경이 대략 $10\mu\text{m}$ 으로, 내마모성과 내결손성과의 균형이 가장 뛰어난 재료입니다. 폭 넓은 툴링에 적용 가능합니다.         |
| MD2030 | 단속 절삭 가공에 있어서의 내결손성을 향상시켰습니다. 인선 에지의 안정성을 얻을 수 있고, 범용성이 뛰어나기 때문에, 폭넓은 피삭재/가공 조건에 적용이 가능합니다. |

## ■ 추천절삭조건

| 피삭재                            | 절삭속도 (m/min) | 팁 재종            | 날당 이송 (mm/t.) | 절입 (mm) |
|--------------------------------|--------------|-----------------|---------------|---------|
| 알루미늄 합금<br>(Si함유 $\leq 12\%$ ) | 1000—6000    | MD220<br>MD2030 | —0.3          | —0.5    |
| 알루미늄 합금<br>(Si함유 $\geq 13\%$ ) | 200—800      |                 |               |         |

## ■ 절삭성능



〈 절삭조건 〉

피삭재 : A7075-T6  
 팁 : NP-GDCW1240PDFR2  
 재종 : MD220  
 공구 : V10000R0406D  
 이송 : 0.2mm/t.  
 절입 : 0.5mm  
 절삭폭 : 80mm  
 건식절삭

L

코발트강-알루미늄

# 밀링공구용 팁 일람

| 대응 커터<br>팁 외관                                                                       | 팁 규격란            | 페이지  | 대응 커터<br>팁 외관                                                                       | 팁 규격란            | 페이지  | 대응 커터<br>팁 외관                                                                         | 팁 규격란                                                                                 | 페이지               |                   |      |
|-------------------------------------------------------------------------------------|------------------|------|-------------------------------------------------------------------------------------|------------------|------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------|-------------------|------|
|    | LDCN190412R      | L052 |    | WNEU2007ZEN7C-M  | L051 |    | JOMW06T215ZZSR-FT                                                                     | L026              |                   |      |
|                                                                                     | LDCN190412L      |      |                                                                                     |                  |      |                                                                                       | JOMW080320ZZSR-FT                                                                     |                   |                   |      |
|    | GDCN2004PDR      | L052 |    | WNEU2007ZEN7C-WP | L051 |                                                                                       |    |                   | JDMW09T320ZDSR-FT | L026 |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       |                                                                                       |                   | JDMW120420ZDSR-FT |      |
|    | NNMU130508ZER-L  | L032 |    | NNMU200608ZEN-MK | L033 |    |                                                                                       | JDMW140520ZDSR-FT | L026              |      |
|                                                                                     | NNMU130508ZEN-M  |      |                                                                                     |                  |      |                                                                                       |                                                                                       | JOMT06T215ZZSR-JM |                   |      |
|                                                                                     | NNMU130532ZEN-M  |      |                                                                                     |                  |      |                                                                                       | JOMT080320ZZSR-JM                                                                     |                   |                   |      |
|                                                                                     | NNMU130532ZEN-R  |      |                                                                                     |                  |      |                                                                                       | JDMT09T320ZDSR-JM                                                                     |                   |                   |      |
|  | WNEU1305ZEN4C-M  | L050 |  | NNMU200608ZEN-HK | L033 |   | JDMT120420ZDSR-JM                                                                     | L026              |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | JDMT140520ZDSR-JM                                                                     |                   |                   |      |
|  | NNMU200708ZEN-M  | L032 |  | WNEU2006ZEN7C-WK | L051 |                                                                                       |  |                   | JDMT120420ZDSR-ST | L026 |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       |                                                                                       |                   | JDMT140520ZDSR-ST |      |
|  | NNMU200708ZEN-MP | L032 |  | NNMU200608ZEN-MK | L033 |  | JDMT140523ZDER-JL                                                                     | L026              |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | JDMT120423ZDER-JL                                                                     |                   |                   |      |
|  | NNMU200712ZER-L  | L033 |  | NNMU200608ZEN-HK | L033 |                                                                                       |  |                   | JDMT140523ZDER-JL | L024 |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       |                                                                                       |                   |                   |      |
|  | NNMU200712ZER-MM | L032 |  | WNEU2006ZEN7C-WK | L051 |  |                                                                                       | AOGT123602PEFR-GM | L024              |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       |                                                                                       | AOGT123604PEFR-GM |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOGT123608PEFR-GM                                                                     |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       |                                                                                       | L024              |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123602PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123604PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123608PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123610PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123612PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123616PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123620PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123624PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123630PEER-M                                                                      |                   |                   |      |
|                                                                                     |                  |      |                                                                                     |                  |      |                                                                                       | AOMT123632PEER-M                                                                      |                   |                   |      |

| 대응 커터<br>팁 외관                                                                       | 팁 규격란            | 페이지  |
|-------------------------------------------------------------------------------------|------------------|------|
|    | AOMT123604PEER-H | L024 |
|                                                                                     | AOMT123608PEER-H |      |
|                                                                                     | AOMT123616PEER-H |      |
|                                                                                     |                  |      |
|    | AOMT184804PEER-H | L024 |
|                                                                                     | AOMT184808PEER-H |      |
|                                                                                     | AOMT184816PEER-H |      |
|                                                                                     | AOMT184832PEER-H |      |
|                                                                                     | AOMT184840PEER-H |      |
|                                                                                     | AOMT184850PEER-H |      |
|                                                                                     | AOMT184864PEER-H |      |
|                                                                                     |                  |      |
|  | AOMT184804PEER-M | L024 |
|                                                                                     | AOMT184808PEER-M |      |
|                                                                                     | AOMT184810PEER-M |      |
|                                                                                     | AOMT184812PEER-M |      |
|                                                                                     | AOMT184816PEER-M |      |
|                                                                                     | AOMT184820PEER-M |      |
|  | QOMT0830R-M2     | L034 |
|                                                                                     | QOMT1035R-M2     |      |
|                                                                                     | QOMT1342R-M2     |      |
|                                                                                     | QOMT1651R-M2     |      |
|                                                                                     | QOMT1856R-M2     |      |
|                                                                                     | QOMT2062R-M2     |      |
|                                                                                     | QOMT2576R-M2     |      |
|                                                                                     |                  |      |
|                                                                                     | QOGT0830R-G1     | L034 |
|                                                                                     | QOGT1035R-G1     |      |
|                                                                                     | QOGT1342R-G1     |      |
|                                                                                     | QOGT1651R-G1     |      |
|                                                                                     | QOGT1856R-G1     |      |
|                                                                                     | QOGT2062R-G1     |      |
|                                                                                     | QOGT2576R-G1     |      |

| 대응 커터<br>팁 외관                                                                       | 팁 규격란             | 페이지  |
|-------------------------------------------------------------------------------------|-------------------|------|
|    | RPHT1040M0E4-L    | L034 |
|                                                                                     | RPHT1040M0E4-M    |      |
|                                                                                     | RPHT1040M0E4-R    |      |
|                                                                                     | RPHT1248M0E4-L    |      |
|                                                                                     | RPHT1248M0E4-M    |      |
|                                                                                     | RPHT1248M0E4-R    |      |
|                                                                                     | RPMT1040M0E4-L    |      |
|                                                                                     | RPMT1040M0E4-M    |      |
|                                                                                     | RPMT1040M0E4-R    |      |
|                                                                                     | RPMT1248M0E4-L    |      |
|   | RDMW0517M0E       | L034 |
|                                                                                     | RDMW0620M0E       |      |
|                                                                                     | RDMW0724M0E       |      |
|  | SOET12T308PEER-JL | L038 |
|                                                                                     |                   |      |
|  | SOMT12T308PEER-JM | L039 |
|                                                                                     | SOMT12T308PEEL-JM |      |
|  | SOMT12T308PEER-JH | L038 |
|                                                                                     |                   |      |
|  | SOMT12T320PEER-FT | L039 |
|                                                                                     |                   |      |
|  | SOGT12T308PEFR-JP | L038 |
|                                                                                     |                   |      |
|  | WOEW12T308PEER8C  | L051 |
|                                                                                     | WOEW12T308PETR8C  |      |

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|---------------------------------------------------------------------------------------|-----------------|------|
|    | SEET13T3AGEN-JL | L037 |
|                                                                                       |                 |      |
|    | SEMT13T3AGSN-JM | L037 |
|                                                                                       |                 |      |
|    | SEMT13T3AGSN-JH | L037 |
|                                                                                       |                 |      |
|  | SEMT13T3AGSN-FT | L037 |
|                                                                                       |                 |      |
|  | SEGT13T3AGFN-JP | L037 |
|                                                                                       |                 |      |
|  | WEEW13T3AGER8C  | L050 |
|                                                                                       | WEEW13T3AGTR8C  |      |
|  | WEEW13T3AGFR3C  | L055 |
|                                                                                       | WEEW13T3AGTR3C  |      |

# 밀링공구용 팁 일람

| 대응 커터<br>팁 외관                                                                       | 팁 규격란             | 페이지  |
|-------------------------------------------------------------------------------------|-------------------|------|
|    | AXD4000           | L046 |
|                                                                                     | XDGX175004PDFR-GL |      |
|                                                                                     | XDGX175008PDFR-GL |      |
|                                                                                     | XDGX175012PDFR-GL |      |
|                                                                                     | XDGX175016PDFR-GL |      |
|                                                                                     | XDGX175020PDFR-GL |      |
|                                                                                     | XDGX175024PDFR-GL |      |
|                                                                                     | XDGX175030PDFR-GL |      |
|                                                                                     | XDGX175032PDFR-GL |      |
|                                                                                     | XDGX175040PDFR-GL |      |
|                                                                                     | XDGX175050PDFR-GL |      |
|  | XDGX175004PDER-GM | L046 |
|                                                                                     | XDGX175008PDER-GM |      |
|                                                                                     | XDGX175012PDER-GM |      |
|                                                                                     | XDGX175016PDER-GM |      |
|                                                                                     | XDGX175020PDER-GM |      |
|                                                                                     | XDGX175024PDER-GM |      |
|                                                                                     | XDGX175030PDER-GM |      |
|                                                                                     | XDGX175032PDER-GM |      |
|                                                                                     | XDGX175040PDER-GM |      |
|                                                                                     | XDGX175050PDER-GM |      |
|  | XDGX175004PDFR-GM | L046 |
|                                                                                     | XDGX175008PDFR-GM |      |
|                                                                                     | XDGX175012PDFR-GM |      |
|                                                                                     | XDGX175016PDFR-GM |      |
|                                                                                     | XDGX175020PDFR-GM |      |
|                                                                                     | XDGX175024PDFR-GM |      |
|                                                                                     | XDGX175030PDFR-GM |      |
|                                                                                     | XDGX175032PDFR-GM |      |
|                                                                                     | XDGX175040PDFR-GM |      |
|                                                                                     | XDGX175050PDFR-GM |      |

| 대응 커터<br>팁 외관                                                                       | 팁 규격란              | 페이지  |
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|    | AXD7000            | L047 |
|                                                                                     | XDGX227008PDFR-GL  |      |
|                                                                                     | XDGX227016PDFR-GL  |      |
|                                                                                     | XDGX227020PDFR-GL  |      |
|                                                                                     | XDGX227030PDFR-GL  |      |
|                                                                                     | XDGX227032PDFR-GL  |      |
|                                                                                     | XDGX227040PDFR-GL  |      |
|                                                                                     | XDGX227050PDFR-GL  |      |
|                                                                                     |                    |      |
|                                                                                     |                    |      |
|    | XDGX227008PDER-GLA | L047 |
|                                                                                     | XDGX227016PDER-GLA |      |
|                                                                                     | XDGX227020PDER-GLA |      |
|                                                                                     | XDGX227024PDER-GLA |      |
|                                                                                     | XDGX227030PDER-GLA |      |
|                                                                                     | XDGX227032PDER-GLA |      |
|                                                                                     | XDGX227040PDER-GLA |      |
|                                                                                     | XDGX227050PDER-GLA |      |
|                                                                                     |                    |      |
|                                                                                     |                    |      |
|  | BAE                | L024 |
|                                                                                     | AEMW150304ER       |      |
|                                                                                     | AEMW150308ER       |      |
|                                                                                     | AEMW19T304ER       |      |
|  | BAP300 SRM2        | L025 |
|                                                                                     | APMT1135PDER-H1    |      |
|                                                                                     | APMT1135PDER-H2    |      |
|                                                                                     | APMT1135PDER-H3    |      |
|                                                                                     | APMT1135PDER-H4    |      |
|                                                                                     | APMT1135PDER-H6    |      |
|  | APMT1135PDER-M0    | L025 |
|                                                                                     | APMT1135PDER-M1    |      |
|                                                                                     | APMT1135PDER-M2    |      |
|                                                                                     |                    |      |
|                                                                                     |                    |      |
|                                                                                     |                    |      |
|  | APGT1135PDER-G2    | L025 |
|                                                                                     |                    |      |

| 대응 커터<br>팁 외관                                                                         | 팁 규격란            | 페이지  |
|---------------------------------------------------------------------------------------|------------------|------|
|    | BAP3500          | L049 |
|                                                                                       | XPMT13T3PDER-M1  |      |
|                                                                                       | XPMT13T3PDER-M2  |      |
|                                                                                       | XPMT13T3PDER-M6  |      |
|                                                                                       | XPMT13T3PDER-M75 |      |
|                                                                                       | XPMT13T3PDER-M8  |      |
|    | XPMT13T3PDER-M1  | L049 |
|                                                                                       | XPMT13T3PDER-M2  |      |
|                                                                                       | XPMT13T3PDER-M6  |      |
|                                                                                       | XPMT13T3PDER-M75 |      |
|                                                                                       | XPMT13T3PDER-M8  |      |
|                                                                                       |                  |      |
|   | XPMT13T3PDER-M1  | L049 |
|                                                                                       | XPMT13T3PDER-M2  |      |
|                                                                                       | XPMT13T3PDER-M6  |      |
|                                                                                       | XPMT13T3PDER-M75 |      |
|                                                                                       | XPMT13T3PDER-M8  |      |
|                                                                                       |                  |      |
|  | XPMT13T3PDER-M1  | L049 |
|                                                                                       | XPMT13T3PDER-M2  |      |
|                                                                                       | XPMT13T3PDER-M6  |      |
|                                                                                       | XPMT13T3PDER-M75 |      |
|                                                                                       | XPMT13T3PDER-M8  |      |
|                                                                                       |                  |      |
|  | BAP400 SRM2      | L025 |
|                                                                                       | APMT1604PDER-H1  |      |
|                                                                                       | APMT1604PDER-H2  |      |
|                                                                                       | APMT1604PDER-H4  |      |
|                                                                                       | APMT1604PDER-H6  |      |
|                                                                                       | APMT1604PDER-H8  |      |
|  | APMT1604PDER-M2  | L025 |
|                                                                                       |                  |      |
|                                                                                       |                  |      |
|                                                                                       |                  |      |
|                                                                                       |                  |      |
|                                                                                       |                  |      |
|  | APGT1604PDFR-G2  | L025 |
|                                                                                       |                  |      |

| 대응 커터<br>팁 외관                                                                       | 팁 규격란          | 페이지           | 대응 커터<br>팁 외관                                                                       | 팁 규격란                                                                               | 페이지              | 대응 커터<br>팁 외관                                                                         | 팁 규격란             | 페이지                                                                                   |                                                                                     |                                                                                       |                |      |
|-------------------------------------------------------------------------------------|----------------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------|------|
|    | SFAN1203ZFFR2  | L037          |    | RPMW08T2M0T                                                                         | L035             |    | JPMT060204-E      | L027                                                                                  |                                                                                     |                                                                                       |                |      |
|                                                                                     | SFAN1203ZFFL2  |               |                                                                                     | RPMW10T3M0E                                                                         |                  |                                                                                       |                   |                                                                                       |                                                                                     |                                                                                       |                |      |
|                                                                                     | SFCN1203ZFFR2  |               |                                                                                     | RPMW10T3M0T                                                                         |                  |                                                                                       |                   |                                                                                       |                                                                                     |                                                                                       |                |      |
|                                                                                     | SFCN1203ZFFL2  |               |                                                                                     | RPMW1204M0E                                                                         |                  |                                                                                       |                   |                                                                                       |                                                                                     |                                                                                       |                |      |
|                                                                                     |                | SFCN1203ZFFR2 |                                                                                     |                                                                                     |                  |                                                                                       | RPMW1204M0T       |                                                                                       |  | MPMT070308                                                                            | L031           |      |
|    |                |               |                                                                                     | RPMW1606M0E                                                                         |                  | MPMT090308                                                                            |                   |                                                                                       |                                                                                     |                                                                                       |                |      |
|                                                                                     |                |               |                                                                                     | RPMW1606M0T                                                                         |                  | MPMT120408                                                                            |                   |                                                                                       |                                                                                     |                                                                                       |                |      |
|    | WFC42ZFER2     | L055          |    | RPMT08T2M0E-JS                                                                      | L035             |    | SPMW090304        | L041                                                                                  |                                                                                     |                                                                                       |                |      |
|                                                                                     |                |               |                                                                                     |                                                                                     |                  |                                                                                       |                   |                                                                                       | SPMW090308                                                                          |                                                                                       |                |      |
|                                                                                     |                |               |                                                                                     |                                                                                     |                  |                                                                                       | RPMT10T3M0E-JS    |                                                                                       |                                                                                     | SPMW120304                                                                            |                |      |
|                                                                                     |                |               |                                                                                     |                                                                                     |                  |                                                                                       | RPMT1204M0E-JS    |                                                                                       |                                                                                     | SPMW120308                                                                            |                |      |
|  | NP-WFC42ZFER2  | L055          |    | SPMB1204APT                                                                         | L040             |  | CCMX083508EN-A    | L025                                                                                  |                                                                                     |                                                                                       |                |      |
|                                                                                     |                |               |                                                                                     |                                                                                     |                  |                                                                                       |                   |                                                                                       | CCMX09T308EN-A                                                                      |                                                                                       |                |      |
|  | HNMX1206EN06-R | L026          |  | XDGT1550PDER-G04                                                                    | L045             |  | CCMX09T308EN-B    | L026                                                                                  |                                                                                     |                                                                                       |                |      |
|                                                                                     |                |               |                                                                                     |                                                                                     |                  |                                                                                       |                   |                                                                                       |                                                                                     |                                                                                       |                |      |
|  | HNMX1206ER12-R | L026          |                                                                                     |  |                  | XDGT1550PDER-G08                                                                      | L045              |  | ZCMX083508ER-A                                                                      | L049                                                                                  |                |      |
|                                                                                     |                |               |                                                                                     |                                                                                     |                  |                                                                                       |                   |                                                                                       |                                                                                     |                                                                                       | ZCMX09T308ER-A |      |
|  | SNC43B2G       | L038          |                                                                                     |                                                                                     |                  |                                                                                       |                   | XDGT1550PDER-G12                                                                      | L045                                                                                |  | ZCMX09T308ER-B | L049 |
|                                                                                     | SNC43B2S       |               |                                                                                     |                                                                                     |                  |                                                                                       |                   | XDGT1550PDER-G16                                                                      |                                                                                     |                                                                                       |                |      |
|                                                                                     | SNK43B2G       |               |                                                                                     |                                                                                     |                  |                                                                                       |                   | XDGT1550PDER-G20                                                                      |                                                                                     |                                                                                       |                |      |
|                                                                                     | SNK43B2S       |               |                                                                                     |                                                                                     |                  |                                                                                       |                   | XDGT1550PDER-G30                                                                      |                                                                                     |                                                                                       |                |      |
|  | SNKF43B2S      | L038          |  |                                                                                     | XDGT1550PDER-G32 | L045                                                                                  |                   |  | SEA42C10GR                                                                          | L035                                                                                  |                |      |
|                                                                                     | SNMF43B2G      |               |                                                                                     |                                                                                     |                  |                                                                                       |                   |                                                                                       | XDGT1550PDER-G40                                                                    |                                                                                       | SEA42C10GL     |      |
|                                                                                     |                |               |                                                                                     |                                                                                     |                  |                                                                                       | XDGT1550PDER-G50  |                                                                                       |                                                                                     |                                                                                       |                |      |
|                                                                                     |                |               |                                                                                     |                                                                                     |                  |                                                                                       | XDGT1550PDRF-GL04 |                                                                                       |                                                                                     |                                                                                       |                |      |
|                                                                                     |                |               |                                                                                     | XDGT1550PDRF-GL08                                                                   |                  |                                                                                       |                   |                                                                                       |                                                                                     |                                                                                       |                |      |

# 밀링공구용 팁 일람

| 대응 커터<br>팁 외관                                                                                         | 팁 규격란               | 페이지  |
|-------------------------------------------------------------------------------------------------------|---------------------|------|
| FBP415<br>QBP415<br> | SPEN1203EEER1       | L040 |
|                                                                                                       | SPEN1203EEEL1       |      |
|                                                                                                       | SPNN1203EEER1       |      |
|                                                                                                       | SPNN1203EEEL1       |      |
|                      | SPER1203EEER-JS     | L040 |
|                                                                                                       |                     |      |
|                      | SPEN1203EETR1       | L053 |
|                                                                                                       |                     |      |
|                      | WPC42EEER10C        | L051 |
|                                                                                                       | WPC42EEEL10C        |      |
| FF3000<br>         | SPCA53Z             | L039 |
|                                                                                                       |                     |      |
|                    | SPCG53Z             | L039 |
|                                                                                                       |                     |      |
| FMAX<br>           | GOER1404PXFR2       | L052 |
|                                                                                                       | GOER1408PXFR2       |      |
|                                                                                                       | NEW GOER1408PXFR2-8 | L052 |
|                                                                                                       |                     |      |
|                    | NEW GOER1401ZXFR2   | L052 |
|                                                                                                       |                     |      |
| FMSD<br>           | SDEN1203AEN         | L035 |
|                                                                                                       | SDKN1203AEN         |      |
|                                                                                                       | SDKN1203AETN        |      |
|                                                                                                       | SDKN1504AETN        |      |

| 대응 커터<br>팁 외관                                                                                  | 팁 규격란            | 페이지  |
|------------------------------------------------------------------------------------------------|------------------|------|
| FP490<br>     | SPEN424A         | L039 |
|                                                                                                |                  |      |
| FP590<br>     | SPEN535A         | L039 |
|                                                                                                |                  |      |
| NF10000<br>   | GDCN2004PDFR3    | L052 |
|                                                                                                |                  |      |
| NF10000<br>   | NP-GDCN2004PDSR3 | L053 |
|                                                                                                |                  |      |
| NR10000<br> | GDCN2004ZDTR1    | L052 |
|                                                                                                |                  |      |
| MG200<br>   | MGEEW1035PFTR    | L031 |
|                                                                                                |                  |      |
| MG300<br>   | MGEEW1242PFTR    | L031 |
|                                                                                                |                  |      |
| MG400<br>   | MGEEW1650PFTR    | L031 |
|                                                                                                |                  |      |
| MG245<br>   | MGEEW1035AFTR    | L031 |
|                                                                                                |                  |      |
| MG345<br>   | MGEEW1242AFTR    | L031 |
|                                                                                                |                  |      |
| MG445<br>   | MGEEW1650AFTR    | L031 |
|                                                                                                |                  |      |

| 대응 커터<br>팁 외관                                                                              | 팁 규격란             | 페이지  |
|--------------------------------------------------------------------------------------------|-------------------|------|
| MVX<br> | NEW SOMX052704-UM | L056 |
|                                                                                            |                   |      |
|         | SOMX063005-UM     | L056 |
|                                                                                            | SOMX073505-UM     |      |
|                                                                                            | SOMX084005-UM     |      |
|                                                                                            | SOMX094506-UM     |      |
|                                                                                            | SOMX115506-UM     |      |
|                                                                                            | SOMX136008-UM     |      |
|         | SOMX166508-UM     | L056 |
|                                                                                            | SOMX187008-UM     |      |
|                                                                                            | SOMX063005-US     |      |
|                                                                                            | SOMX073505-US     |      |
|                                                                                            | SOMX084005-US     |      |
|                                                                                            | SOMX094506-US     |      |
|        | SOMX115506-US     | L056 |
|                                                                                            | SOMX136008-US     |      |
|                                                                                            | SOMX166508-US     |      |
|                                                                                            | SOMX187008-US     |      |
|                                                                                            | SOMX062905-UH     |      |
|                                                                                            | SOMX073405-UH     |      |
|       | SOMX083905-UH     | L057 |
|                                                                                            | SOMX094406-UH     |      |
|                                                                                            | SOMX115406-UH     |      |
|                                                                                            | SOMX135908-UH     |      |
|                                                                                            | SOMX166408-UH     |      |
|                                                                                            | SOMX186908-UH     |      |
|       | SOGX063005-UN     | L057 |
|                                                                                            | SOGX073505-UN     |      |
|                                                                                            | SOGX084005-UN     |      |
|                                                                                            | SOGX094506-UN     |      |
|                                                                                            | SOGX115506-UN     |      |
|                                                                                            | SOGX136008-UN     |      |
|                                                                                            | SOGX166508-UN     | L057 |
|                                                                                            | SOGX187008-UN     |      |

| 대응 커터<br>팁 외관                                                                                                                                                                                                                                                                                                                                                               | 팁 규격란           | 페이지                                                                                | 대응 커터<br>팁 외관                                                                                | 팁 규격란           | 페이지         | 대응 커터<br>팁 외관                                                                                               | 팁 규격란                                                                                 | 페이지         |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------|-------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|---------------|
| NSE300<br>SE300<br><br><br><br>        | TEEN1603PEFR1   | L043                                                                               | OCTACUT<br> | OEMX12T3ETR1    | L033        | CESP<br>CFSP<br>CGSP<br> | SPMW120304                                                                            | L041        |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEEN1603PEER1   |                                                                                    |                                                                                              | OEMX12T3ESR1    |             |                                                                                                             | SPMW120308                                                                            |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEEN1603PETR1   |                                                                                    |                                                                                              | OEMX1705ESR1    |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEEN1603PESR1   |                                                                                    |                                                                                              | OEMX1705ETR1    |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TECN1603PEFR1W  | L044                                                                               |             | OEMX12T3ETR1    | L053        |                          | SPMN120304                                                                            | L040        |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TECN1603PEER1W  |                                                                                    |                                                                                              |                 |             |                                                                                                             | SPMN120304T                                                                           |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TECN1603PETR1W  |                                                                                    |                                                                                              |                 |             |                                                                                                             | SPMN120308                                                                            |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              |                 |             |                                                                                                             | SPMN120312                                                                            |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEER1603PEER-JS | L044                                                                               |             | OEMX12T3EER1-JS | L033        |                                                                                                             | SPMN120408                                                                            |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              | OEMX1705EER1-JS |             |                                                                                                             | SPMN120412                                                                            |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    | OEMX1705ETR1-JS                                                                              | SPGN120304      |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              | SPGN120308      |             |                                                                                                             |                                                                                       |             |               |
| TECN1603PEFR1                                                                                                                                                                                                                                                                                                                                                               | L054            |  | REMX1705SN                                                                                   | L034            |             | S500<br>                | SPMN150408                                                                            |             | L040          |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              |                 |             |                                                                                                             | SPMN150412                                                                            |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              |                 |             | SPGN150404                                                                                                  |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              |                 |             | SPGN150408                                                                                                  |                                                                                       |             |               |
| NSE400<br>SE400<br><br><br><br> | TECN2204PEFR1   | L044                                                                               |           | REMX12T3EN-JS   | L034        | SE415<br>QSE415<br>    | SEEN1203EFFR1                                                                         | L036        |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TECN2204PEER1   |                                                                                    |                                                                                              | REMX1705EN-JS   |             |                                                                                                             | SEEN1203EFER1                                                                         |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TECN2204PETR1   |                                                                                    |           |                 | L034        |                                                                                                             |  |             | SEEN1203EFTR1 |
|                                                                                                                                                                                                                                                                                                                                                                             | TEEN2204PEFR1   |                                                                                    |                                                                                              |                 |             |                                                                                                             |                                                                                       |             | SEEN1203EFSR1 |
|                                                                                                                                                                                                                                                                                                                                                                             | TEEN2204PEER1   |                                                                                    |           | TPEW1303ZPER2   | L044        |                        | SEKN1203EFSR1                                                                         | L036        |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEEN2204PETR1   |                                                                                    |                                                                                              |                 |             |                                                                                                             | SEKN1203EFTR1                                                                         |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEEN2204PESR1   |                                                                                    |                                                                                              |                 |             | SEKN1203EFTR                                                                                                |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEKN2204PEER1   |                                                                                    |           | TPEW1303ZPTR2   | L054        |                        | SEER1203EFER-JS                                                                       | L036        |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEKN2204PESR1   |                                                                                    |                                                                                              |                 |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEKN2204PETR1   |                                                                                    |                                                                                              |                 |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEKN2204PETR    |                                                                                    |                                                                                              |                 |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              |                 |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TEER2204PEER-JS | L044                                                                               |           | CPMT1205ZPEN-M2 | L026        |                        | SECN1203EFFR1                                                                         | L053        |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              | CPMT1205ZPEN-M3 |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 | CPMT1906ZPEN-M2                                                                    |                                                                                              |                 |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             |                 | CPMT1906ZPEN-M3                                                                    |                                                                                              |                 |             |                                                                                                             |                                                                                       |             |               |
|                                                                                                                                                                                                                                                                                                                                                                             | TECN2204PEFR1   | L054                                                                               |           | CFSP            | SPMW090304  | L041                                                                                                        |  | WEC42EFER5C | L050          |
|                                                                                                                                                                                                                                                                                                                                                                             |                 |                                                                                    |                                                                                              | SPMW090308      | WEC42EFTR5C |                                                                                                             |                                                                                       |             |               |

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금속 절삭 공구

# 밀링공구용 팁 일람

| 대응 커터<br>팁 외관                                                                                                            | 팁 규격란                                                                                                           | 페이지             | 대응 커터<br>팁 외관                                                                                  | 팁 규격란                                                                                        | 페이지                                                                                            | 대응 커터<br>팁 외관                                                                                    | 팁 규격란                                                                                            | 페이지      |                                                                                                  |        |      |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------|--------|------|
| <div>SE445<br/>LSE445</div> <div></div> | SECN1203AFTN1                                                                                                   | L035            | SE545                                                                                          | WEC53AFER5C                                                                                  | L050                                                                                           | SRM2                                                                                             | SRM16C-M                                                                                         | L042     |                                                                                                  |        |      |
|                                                                                                                          | SEEN1203AFFN1                                                                                                   |                 |               | WEC53AFTR5C                                                                                  |                                                                                                |               | SRM20C-M                                                                                         |          |                                                                                                  |        |      |
|                                                                                                                          | SEEN1203AFEN1                                                                                                   |                 | SG20                                                                                           | RGEN2004M0EN                                                                                 | SRM25C-M                                                                                       |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEEN1203AFTN1                                                                                                   |                 |               | RGEN2004M0SN                                                                                 | SRM30C-M                                                                                       |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEEN1203AFSN1                                                                                                   |                 | SPX                                                                                            | JPMX140412-JM                                                                                | SRM32C-M                                                                                       |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEKN1203AFSN1                                                                                                   |                 |               | JPMX190412-JM                                                                                | SRM16E-M                                                                                       |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEKN1203AFTN1                                                                                                   |                 |                                                                                                |                                                                                              | SRM20E-M                                                                                       |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEKN1203AFTN                                                                                                    |                 |                                                                                                |                                                                                              | SRM25E-M                                                                                       |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | <div></div>                    | SEER1203AFEN-JS | L036                                                                                           | <div></div> | JPMX140412-WH                                                                                  | L027                                                                                             |                                                                                                  | SRM30E-M | L042                                                                                             |        |      |
|                                                                                                                          |                                                                                                                 |                 |                                                                                                | JPMX190412-WH                                                                                | SRM32E-M                                                                                       |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
| <div></div>                             | SECN1203AFFR1                                                                                                   | L053            | <div></div>   | MPMX120412-JM                                                                                | L032                                                                                           | <div></div>   | SRG16C                                                                                           | L042     |                                                                                                  |        |      |
|                                                                                                                          |                                                                                                                 |                 |                                                                                                | MPMX120412-WH                                                                                |                                                                                                | SRG20C                                                                                           |                                                                                                  |          |                                                                                                  |        |      |
| <div></div>                           | WEC42AFTR5C                                                                                                     | L050            | <div></div>  | SPMX120408-JM                                                                                | L032                                                                                           |                                                                                                  | SRG25C                                                                                           |          | L042                                                                                             |        |      |
|                                                                                                                          |                                                                                                                 |                 |                                                                                                |                                                                                              |                                                                                                | SRG30C                                                                                           |                                                                                                  |          |                                                                                                  |        |      |
| <div>SE515</div> <div></div>          | SECN1504EFTR1                                                                                                   | L036            | <div></div> | SRBT10                                                                                       | L041                                                                                           | <div></div> | SRG16E                                                                                           | L042     |                                                                                                  |        |      |
|                                                                                                                          | SEEN1504EFER1                                                                                                   |                 |                                                                                                | SRBT12                                                                                       |                                                                                                | SRG20E                                                                                           |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEEN1504EFSR1                                                                                                   |                 |                                                                                                | SRBT16                                                                                       |                                                                                                | SRG25E                                                                                           |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEEN1504EFTR1                                                                                                   |                 |                                                                                                | SRBT20                                                                                       |                                                                                                | SRG30E                                                                                           |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEKN1504EFSR1                                                                                                   |                 |                                                                                                | SRBT25                                                                                       |                                                                                                | SRG32E                                                                                           |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | SEKN1504EFTR1                                                                                                   |                 |                                                                                                | SRBT30                                                                                       |                                                                                                |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
|                                                                                                                          | <div></div>                  | WEC53EFTR5C     | L050                                                                                           |                                                                                              | SRBT32                                                                                         | L041                                                                                             | <div></div> | SRG40C   | L042                                                                                             |        |      |
|                                                                                                                          |                                                                                                                 |                 |                                                                                                |                                                                                              |                                                                                                |                                                                                                  | SRG50C                                                                                           |          |                                                                                                  |        |      |
|                                                                                                                          | <div>SE545</div> <div></div> | SEEN1504AFEN1   |                                                                                                | L036                                                                                         | <div></div> |                                                                                                  | SRFT10                                                                                           | L041     | <div></div> | SRG40E | L042 |
|                                                                                                                          |                                                                                                                 | SEEN1504AFSN1   |                                                                                                |                                                                                              |                                                                                                |                                                                                                  | SRFT12                                                                                           |          | SRG50E                                                                                           |        |      |
| SEEN1504AFTN1                                                                                                            |                                                                                                                 | SRFT16          | APMT1135PDER-H2                                                                                |                                                                                              |                                                                                                | L025                                                                                             |                                                                                                  |          |                                                                                                  |        |      |
| SEKN1504AFSN1                                                                                                            |                                                                                                                 | SRFT20          | APMT1604PDER-H2                                                                                |                                                                                              |                                                                                                |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
| SEKN1504AFTN1                                                                                                            |                                                                                                                 | SRFT25          | APMT1135PDER-M2                                                                                | L025                                                                                         |                                                                                                |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |
| <div></div>                           |                                                                                                                 | SEER1504AFEN-JS | L036                                                                                           |                                                                                              |                                                                                                |                                                                                                  | SRFT30                                                                                           |          | APMT1604PDER-M2                                                                                  |        |      |
|                                                                                                                          |                                                                                                                 |                 |                                                                                                | SRFT32                                                                                       |                                                                                                |                                                                                                  |                                                                                                  |          |                                                                                                  |        |      |

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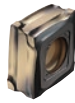
밀링공구용 팁

| 대응 커터<br>팁 외관                                                                       | 팁 규격란       | 페이지  | 대응 커터<br>팁 외관                                                                     | 팁 규격란                                                                               | 페이지           | 대응 커터<br>팁 외관                                                                       | 팁 규격란                                                                                 | 페이지              |                                                                                       |                  |      |
|-------------------------------------------------------------------------------------|-------------|------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------|------------------|------|
|    | STAWK○○○○TG | L064 |  | GCMT040204-U1                                                                       | L056          |  | SPMT120408-A                                                                          | L041             |                                                                                       |                  |      |
|                                                                                     |             |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       |                  |                                                                                       |                  |      |
|    | STAWN○○○○T  | L062 |  | GCMT040204-U2                                                                       | L056          |  | MPMW070308                                                                            | L031             |                                                                                       |                  |      |
|                                                                                     | STAWN○○○○TH |      |                                                                                   |                                                                                     |               |                                                                                     | MPMW090308                                                                            |                  |                                                                                       |                  |      |
|                                                                                     |             |      |                                                                                   |                                                                                     |               |                                                                                     | MPMW120408                                                                            |                  |                                                                                       |                  |      |
|  | SUFT10R05   | L043 |  | GPMT060204-U1                                                                       | L056          |  | NP-GDCW1240PDR2                                                                       | L053             |                                                                                       |                  |      |
|                                                                                     | SUFT10R10   |      |                                                                                   | GPMT070204-U1                                                                       |               |                                                                                     |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT10R20   |      |                                                                                   | GPMT090304-U1                                                                       |               |  | GPMT11T308-U1                                                                         | L056             |  | LNGU130804PNER-M | L028 |
|                                                                                     | SUFT12R05   |      |                                                                                   | GPMT140408-U1                                                                       |               |                                                                                     |                                                                                       |                  |                                                                                       | LNGU130804PNEL-M |      |
|                                                                                     | SUFT12R10   |      | GPMT060204-U2                                                                     |  | GPMT070204-U2 | L056                                                                                | LNGU130808PNER-M                                                                      |                  |                                                                                       |                  |      |
|                                                                                     | SUFT12R20   |      | GPMT090304-U2                                                                     |                                                                                     |               |                                                                                     | LNGU130808PNEL-M                                                                      |                  |                                                                                       |                  |      |
|                                                                                     | SUFT12R30   |      | GPMT11T308-U2                                                                     |                                                                                     |               |                                                                                     | LNGU130812PNER-M                                                                      |                  |                                                                                       |                  |      |
|                                                                                     | SUFT16R05   |      | GPMT140408-U2                                                                     |                                                                                     |               |                                                                                     | LNGU130812PNEL-M                                                                      |                  |                                                                                       |                  |      |
|                                                                                     | SUFT16R10   |      | GPMT060204-U3                                                                     |  | GPMT070204-U3 | L056                                                                                | LNGU130816PNER-M                                                                      |                  |                                                                                       |                  |      |
|                                                                                     | SUFT16R15   |      | GPMT090304-U3                                                                     |                                                                                     |               |                                                                                     | LNGU130816PNEL-M                                                                      |                  |                                                                                       |                  |      |
|                                                                                     | SUFT16R20   |      | GPMT11T308-U3                                                                     |                                                                                     |               |                                                                                     | LNGU130820PNER-M                                                                      |                  |                                                                                       |                  |      |
|                                                                                     | SUFT16R30   |      | GPMT140408-U3                                                                     |                                                                                     |               |                                                                                     | LNGU130820PNEL-M                                                                      |                  |                                                                                       |                  |      |
|                                                                                     | SUFT20R05   |      | TAWN                                                                              |  | TAWN          | L058                                                                                |  | LNGU130824PNER-M |                                                                                       | L028             |      |
|                                                                                     | SUFT20R10   |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT20R15   |      |                                                                                   |  | TAWKH○○○○TG   | L060                                                                                |                                                                                       | LNGU130830PNER-M |                                                                                       |                  |      |
|                                                                                     | SUFT20R20   |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       | LNGU130830PNEL-M |                                                                                       |                  |      |
|                                                                                     | SUFT20R30   |      |                                                                                   |  | TAWBH○○○○T    | L059                                                                                |                                                                                       | LNGU130840PNER-M |                                                                                       |                  |      |
|                                                                                     | SUFT25R05   |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       | LNGU130840PNEL-M |                                                                                       |                  |      |
|                                                                                     | SUFT25R10   |      |                                                                                   |  |               | L059                                                                                |                                                                                       | LNGU130850PNER-M |                                                                                       |                  |      |
|                                                                                     | SUFT25R20   |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       | LNGU130850PNEL-M |                                                                                       |                  |      |
|                                                                                     | SUFT25R30   |      |                                                                                   |  |               | L059                                                                                |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT30R05   |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT30R10   |      |                                                                                   |  |               | L059                                                                                |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT30R20   |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT30R30   |      |                                                                                   |  |               | L059                                                                                |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT32R05   |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT32R10   |      |                                                                                   |  |               | L059                                                                                |                                                                                       |                  |                                                                                       |                  |      |
|                                                                                     | SUFT32R20   |      |                                                                                   |                                                                                     |               |                                                                                     |                                                                                       |                  |                                                                                       |                  |      |

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금속 가공용 커터

# 밀링공구용 팁 일람

| 대응 커터<br>팁 외관                                                                                                                              | 팁 규격란            | 페이지  | 대응 커터<br>팁 외관                                                                                                                            | 팁 규격란                                                                                          | 페이지               | 대응 커터<br>팁 외관                                                                                                                          | 팁 규격란             | 페이지       |      |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------------|------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|------|
| <div>NEW</div> <div></div> <div>VAS400<br/>사이드 커터</div>   | LNGU130804PNER-R | L028 | <div>NEW</div> <div></div> <div>VAS500<br/>사이드 커터</div> | LNGU171050PNEL-R                                                                               | L029              | <div></div> <div>VOX400<br/>VOS400<br/>사이드 커터</div> | SONX1206PER       | L039      |      |
|                                                                                                                                            | LNGU130804PNEL-R |      |                                                                                                                                          | LNGU171060PNER-R                                                                               |                   |                                                                                                                                        | SONX1206PEL       |           |      |
|                                                                                                                                            | LNGU130808PNER-R |      |                                                                                                                                          | LNGU171060PNEL-R                                                                               |                   |                                                                                                                                        | WOEX1206PER5C     | L051      |      |
|                                                                                                                                            | LNGU130808PNEL-R |      |                                                                                                                                          | LNGU171070PNER-R                                                                               |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU130812PNER-R |      |                                                                                                                                          | LNGU171070PNEL-R                                                                               |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU130812PNEL-R |      | VFX5                                                                                                                                     | <div></div>   | XNMU160708R-MS    | L048                                                                                                                                   | VIPER             | TPNX1605N | L045 |
|                                                                                                                                            | LNGU130816PNER-R |      |                                                                                                                                          |                                                                                                | XNMU160712R-MS    |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU130816PNEL-R |      |                                                                                                                                          |                                                                                                | XNMU160716R-MS    |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU130820PNER-R |      |                                                                                                                                          |                                                                                                | XNMU160724R-MS    |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU130820PNEL-R |      |                                                                                                                                          |                                                                                                | XNMU160732R-MS    |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU130824PNER-R |      |                                                                                                                                          |                                                                                                | XNMU160740R-MS    |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU130824PNEL-R |      |                                                                                                                                          |                                                                                                | VPX200            | LOGU0904020PNER-L                                                                                                                      | L030              |           |      |
|                                                                                                                                            | LNGU130830PNER-R |      |                                                                                                                                          |                                                                                                |                   | LOGU0904040PNER-L                                                                                                                      |                   |           |      |
|                                                                                                                                            | LNGU130830PNEL-R |      |                                                                                                                                          |                                                                                                |                   | LOGU0904080PNER-L                                                                                                                      |                   |           |      |
|                                                                                                                                            | LNGU130840PNER-R |      | <div></div>                                            | XNMU160708R-HS                                                                                 | L048              | LOGU0904100PNER-L                                                                                                                      |                   |           |      |
|                                                                                                                                            | LNGU130840PNEL-R |      |                                                                                                                                          |                                                                                                |                   | LOGU0904120PNER-L                                                                                                                      |                   |           |      |
|                                                                                                                                            | LNGU130850PNER-R |      |                                                                                                                                          |                                                                                                |                   | LOGU0904160PNER-L                                                                                                                      |                   |           |      |
|                                                                                                                                            | LNGU130850PNEL-R |      | <div></div>                                           | XNMU160708R-LS                                                                                 | L048              | LOGU0904020PNFR-L                                                                                                                      |                   |           |      |
|                                                                                                                                            |                  |      |                                                                                                                                          | LOGU0904040PNFR-L                                                                              |                   |                                                                                                                                        |                   |           |      |
| <div>NEW</div> <div></div> <div>VAS500<br/>사이드 커터</div> | LNGU171004PNER-R | L029 | VFX6                                                                                                                                     | XNMU190912R-MS                                                                                 | L048              | <div>NEW</div> <div></div>                        | LOGU0904080PNFR-L | L030      |      |
|                                                                                                                                            | LNGU171004PNEL-R |      |                                                                                                                                          | XNMU190916R-MS                                                                                 |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171008PNER-R |      |                                                                                                                                          | XNMU190924R-MS                                                                                 |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171008PNEL-R |      |                                                                                                                                          | XNMU190932R-MS                                                                                 |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171012PNER-R |      |                                                                                                                                          | XNMU190940R-MS                                                                                 |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171012PNEL-R |      |                                                                                                                                          | XNMU190950R-MS                                                                                 |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171016PNER-R |      |                                                                                                                                          |                                                                                                | LOGU0904100PNFR-L |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171016PNEL-R |      |                                                                                                                                          |                                                                                                | LOGU0904120PNFR-L |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171020PNER-R |      |                                                                                                                                          |                                                                                                | LOGU0904160PNFR-L |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171020PNEL-R |      | VFX6                                                                                                                                     | <div></div> | XNMU190912R-HS    | L048                                                                                                                                   | LOGU0904020PNER-M | L030      |      |
|                                                                                                                                            | LNGU171024PNER-R |      |                                                                                                                                          |                                                                                                |                   |                                                                                                                                        | LOGU0904040PNER-M |           |      |
|                                                                                                                                            | LNGU171024PNEL-R |      |                                                                                                                                          |                                                                                                |                   |                                                                                                                                        | LOGU0904080PNER-M |           |      |
|                                                                                                                                            | LNGU171030PNER-R |      |                                                                                                                                          |                                                                                                | LOGU0904100PNER-M |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171030PNEL-R |      |                                                                                                                                          |                                                                                                | LOGU0904120PNER-M |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171040PNER-R |      |                                                                                                                                          |                                                                                                | LOGU0904160PNER-M |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171040PNEL-R |      |                                                                                                                                          |                                                                                                | LOGU0904020PNFR-M |                                                                                                                                        |                   |           |      |
|                                                                                                                                            | LNGU171050PNER-R |      |                                                                                                                                          |                                                                                                | LOGU0904040PNFR-M |                                                                                                                                        |                   |           |      |
|                                                                                                                                            |                  |      |                                                                                                                                          |                                                                                                | LOGU0904080PNFR-M |                                                                                                                                        |                   |           |      |
|                                                                                                                                            |                  |      | LOGU0904100PNFR-M                                                                                                                        |                                                                                                |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            |                  |      | LOGU0904120PNFR-M                                                                                                                        |                                                                                                |                   |                                                                                                                                        |                   |           |      |
|                                                                                                                                            |                  |      | LOGU0904160PNFR-M                                                                                                                        |                                                                                                |                   |                                                                                                                                        |                   |           |      |

| 대응 커터<br>팁 외관                                                                                          | 팁 규격란                | 페이지  |
|--------------------------------------------------------------------------------------------------------|----------------------|------|
| <b>VPX300</b><br><br> | LOGU1207020PNER-M    | L030 |
|                                                                                                        | LOGU1207040PNER-M    |      |
|                                                                                                        | LOGU1207080PNER-M    |      |
|                                                                                                        | LOGU1207100PNER-M    |      |
|                                                                                                        | LOGU1207120PNER-M    |      |
|                                                                                                        | LOGU1207160PNER-M    |      |
|                                                                                                        | LOGU1207200PNER-M    |      |
|                                                                                                        | LOGU1207240PNER-M    |      |
|                                                                                                        | LOGU1207300PNER-M    |      |
|                                                                                                        | LOGU1207320PNER-M    |      |
|                      | LOGU1207020PNFR-M    | L030 |
|                                                                                                        | LOGU1207040PNFR-M    |      |
|                                                                                                        | LOGU1207080PNFR-M    |      |
|                                                                                                        | LOGU1207100PNFR-M    |      |
|                                                                                                        | LOGU1207120PNFR-M    |      |
|                                                                                                        | LOGU1207160PNFR-M    |      |
|                                                                                                        | LOGU1207200PNFR-M    |      |
|                                                                                                        | LOGU1207240PNFR-M    |      |
|                                                                                                        | LOGU1207300PNFR-M    |      |
|                                                                                                        | LOGU1207320PNFR-M    |      |
| <b>WJX</b><br>      | JOMU140715ZZER-M     | L027 |
|                     | SNGU140812ANFR-L     | L038 |
|                                                                                                        | SNGU140812ANER-L     |      |
|                                                                                                        | SNGU140812ANER-M     |      |
|                                                                                                        | SNMU140812ANER-M     |      |
|                                                                                                        | SNMU140812ANER-R     |      |
|                                                                                                        | SNMU140812ANER-H     |      |
|                                                                                                        | NEW SNGU140812ANFL-L |      |
|                                                                                                        | NEW SNGU140812ANEL-L |      |
|                                                                                                        | SNGU140812ANEL-M     |      |
|                                                                                                        | SNMU140812ANEL-M     |      |
|                                                                                                        | SNMU140812ANEL-R     |      |

| 대응 커터<br>팁 외관                                                                                                   | 팁 규격란            | 페이지  |
|-----------------------------------------------------------------------------------------------------------------|------------------|------|
| <b>WSX445</b><br>              | WNGU1406ANEN8C-M | L051 |
|                                                                                                                 |                  |      |
| <b>코너각0°<br/>11°포지티브</b><br>   | TPEN1603PPR      | L044 |
|                                                                                                                 | TPEN2204PDR      |      |
|                                                                                                                 | TPKN1603PPR      |      |
|                                                                                                                 | TPKN2204PDR      |      |
| <b>코너각15°<br/>11°포지티브</b><br>  | SPKN1203EDR      | L040 |
|                                                                                                                 | SPKN1504EDR      |      |
|                                                                                                                 | SPEN1203EDR      |      |
| <b>코너각45°<br/>20°포지티브</b><br> | SEKN1203AGTN     | L037 |
|                                                                                                                 |                  |      |
| <b>네가</b><br>                | SNMN120408       | L038 |
|                                                                                                                 | SNMN120412       |      |
| <b>11°포지티브</b><br>           | TPMN160304       | L045 |
|                                                                                                                 | TPMN160308       |      |
|                                                                                                                 | TPMN160312       |      |
|                                                                                                                 | TPMN220404       |      |
|                                                                                                                 | TPMN220408       |      |
|                                                                                                                 | TPMN220412       |      |

# 커터용팁

| 피삭재 | P          | 강      |  |  |  |  | 절삭상태(기준):<br>●: 안정절삭    ●: 일반절삭    ✱: 불안정 절삭<br><br>호닝:<br>E: R호닝    F: 샤프한 날 |
|-----|------------|--------|--|--|--|--|-------------------------------------------------------------------------------|
|     | M          | 스테인레스강 |  |  |  |  |                                                                               |
|     | K          | 주철     |  |  |  |  |                                                                               |
|     | N          | 비철금속   |  |  |  |  |                                                                               |
| S   | 내열합금, 티탄합금 |        |  |  |  |  |                                                                               |
| H   | 고경도강       |        |  |  |  |  |                                                                               |

| 대용 커터<br>팁 외관 | 규 격             | 정<br>호            | 정<br>호 | 코팅     |        |        |        |        |        |        |        | 서멧    | 초경     | 치수 (mm) |      |        |      |       |      | 형 상 |     |    |  |  |  |  |
|---------------|-----------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|---------|------|--------|------|-------|------|-----|-----|----|--|--|--|--|
|               |                 |                   |        | MC5020 | MP6120 | MP6130 | MP7130 | MP9120 | MP9130 | VP15TF | VP20RT | UP20M | NX2525 | UT20T   | TF15 | L      | LE   | W1    | S    |     | BS  | RE |  |  |  |  |
|               | APX3000<br>M096 | AOGT123602PEFR-GM | G      | F      |        |        |        |        |        |        |        |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOGT123604PEFR-GM | G      | F      |        |        |        |        |        |        |        |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOGT123608PEFR-GM | G      | F      |        |        |        |        |        |        |        |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 |                   |        |        |        |        |        |        |        |        |        |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | APX3000<br>M096 | AOMT123604PEER-H  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | APX3000<br>장날형  | AOMT123608PEER-H  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | M202            | AOMT123616PEER-H  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 |                   |        |        |        |        |        |        |        |        |        |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | APX3000<br>M096 | AOMT123602PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | APX3000<br>장날형  | AOMT123604PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | M202            | AOMT123608PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT123610PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT123612PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT123616PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT123620PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT123624PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT123630PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT123632PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | APX4000<br>M102 | AOMT184804PEER-H  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | APX4000<br>장날형  | AOMT184808PEER-H  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | M206            | AOMT184816PEER-H  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT184832PEER-H  | M      | E      |        |        | ●      | ●      |        |        |        |       | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT184840PEER-H  | M      | E      |        |        | ●      | ●      |        |        |        |       | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT184850PEER-H  | M      | E      |        |        | ●      | ●      |        |        |        |       | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT184864PEER-H  | M      | E      |        |        | ●      | ●      |        |        |        |       | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 |                   |        |        |        |        |        |        |        |        |        |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | APX4000<br>M102 | AOMT184804PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | APX4000<br>장날형  | AOMT184808PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | M206            | AOMT184810PEER-M  | M      | E      | ●      |        |        |        | ●      | ●      | ●      |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT184812PEER-M  | M      | E      | ●      |        |        |        | ●      | ●      | ●      |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT184816PEER-M  | M      | E      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●     | ●      |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               |                 | AOMT184820PEER-M  | M      | E      | ●      |        |        |        | ●      | ●      | ●      |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |
|               | BAE             | AEMW150304ER      | M      | E      |        |        |        |        |        |        |        |       | ●      | ●       | ●    | 16.696 | 15.2 | 9.525 | 3.18 | —   | 0.4 |    |  |  |  |  |
|               |                 | AEMW150308ER      | M      | E      |        |        |        |        |        |        |        |       | ●      | ●       | ●    | 16.623 | 14.8 | 9.525 | 3.18 | —   | 0.8 |    |  |  |  |  |
|               |                 | AEMW19T304ER      | M      | E      |        |        |        |        |        |        |        |       | ●      | ●       | ●    | 20.161 | 18.4 | 12.7  | 3.97 | —   | 0.4 |    |  |  |  |  |
|               |                 | AEMW19T308ER      | M      | E      |        |        |        |        |        |        |        |       | ●      | ●       | ●    | 20.088 | 18.0 | 12.7  | 3.97 | —   | 0.8 |    |  |  |  |  |
|               |                 |                   |        |        |        |        |        |        |        |        |        |       |        |         |      |        |      |       |      |     |     |    |  |  |  |  |

●: 표준재고품  
(1케이스 10개 포장입니다)

| 피삭재 | P | 강 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| 피삭재 | P | 강 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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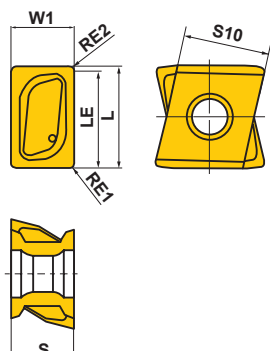
● = NEW

●: 표준재고품  
(1케이스 10개 포장입니다)

● = NEW

**L027**

# 커터용팁

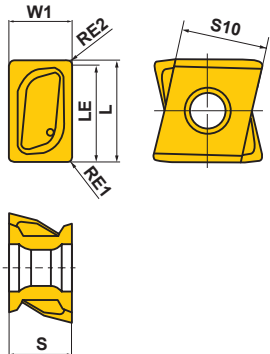
| 피삭재                             | P                    | 강          |    |    | <div><div>●</div><div>●</div><div>✱</div><div>●</div></div> | 절삭상태(기준):<br>●:안정절삭    ●:일반절삭    ✱:불안정 절삭 |         |      |     |      |     |     |     |                                                                                       |
|---------------------------------|----------------------|------------|----|----|-------------------------------------------------------------|-------------------------------------------|---------|------|-----|------|-----|-----|-----|---------------------------------------------------------------------------------------|
|                                 | M                    | 스텐레스강      |    |    |                                                             | 호닝:<br>E:R호닝                              |         |      |     |      |     |     |     |                                                                                       |
|                                 | K                    | 주철         |    |    |                                                             |                                           |         |      |     |      |     |     |     |                                                                                       |
|                                 | N                    | 비철금속       |    |    |                                                             |                                           |         |      |     |      |     |     |     |                                                                                       |
|                                 | S                    | 내열합금, 티탄합금 |    |    |                                                             |                                           |         |      |     |      |     |     |     |                                                                                       |
| H                               | 고경도강                 |            |    |    |                                                             |                                           |         |      |     |      |     |     |     |                                                                                       |
| 대응 커터<br>팁 외관                   | 규격                   | 승수         | 정도 | 호닝 | 코팅                                                          |                                           | 치수 (mm) |      |     |      |     |     |     | 형상                                                                                    |
|                                 |                      |            |    |    | MP6120                                                      | VP15TF                                    | L       | LE   | S   | S10  | RE1 | RE2 | W1  |                                                                                       |
| <b>VAS400</b><br>사이드 커터<br>M090 | LNGU130804PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 0.4 | 0.8 | 8.0 |  |
|                                 | LNGU130804PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 0.4 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130808PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 0.8 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130808PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 0.8 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130812PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 1.2 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130812PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 1.2 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130816PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 1.6 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130816PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 1.6 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130820PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 2.0 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130820PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 2.0 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130824PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 2.4 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130824PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 2.4 | 0.8 | 8.0 |                                                                                       |
|                                 | LNGU130830PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 3.0 | 1.6 | 8.0 |                                                                                       |
|                                 | LNGU130830PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 3.0 | 1.6 | 8.0 |                                                                                       |
|                                 | LNGU130840PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 4.0 | 1.6 | 8.0 |                                                                                       |
|                                 | LNGU130840PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 4.0 | 1.6 | 8.0 |                                                                                       |
|                                 | LNGU130850PNER-M     | R          | G  | E  | ●                                                           |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 5.0 | 1.6 | 8.0 |                                                                                       |
|                                 | LNGU130850PNEL-M     | L          | G  | E  | ●                                                           |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 5.0 | 1.6 | 8.0 |                                                                                       |
|                                 | NEW LNGU130804PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 0.4 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130804PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 0.4 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130808PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 0.8 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130808PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 0.8 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130812PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 1.2 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130812PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 1.2 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130816PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 1.6 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130816PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 1.6 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130820PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 2.0 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130820PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 2.0 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130824PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 2.4 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130824PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 12.2 | 8.0 | 11.0 | 2.4 | 0.8 | 8.0 |                                                                                       |
|                                 | NEW LNGU130830PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 3.0 | 1.6 | 8.0 |                                                                                       |
|                                 | NEW LNGU130830PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 3.0 | 1.6 | 8.0 |                                                                                       |
|                                 | NEW LNGU130840PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 4.0 | 1.6 | 8.0 |                                                                                       |
|                                 | NEW LNGU130840PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 4.0 | 1.6 | 8.0 |                                                                                       |
|                                 | NEW LNGU130850PNER-R | R          | G  | E  | ●●                                                          |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 5.0 | 1.6 | 8.0 |                                                                                       |
|                                 | NEW LNGU130850PNEL-R | L          | G  | E  | ●●                                                          |                                           | 13.0    | 11.4 | 8.0 | 11.0 | 5.0 | 1.6 | 8.0 |                                                                                       |



본그림은 우승수(R)를 나타냅니다.

본그림은 우승수(R)를 나타냅니다.

● = NEW

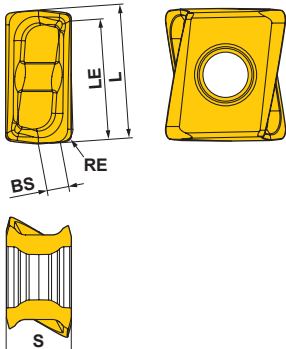
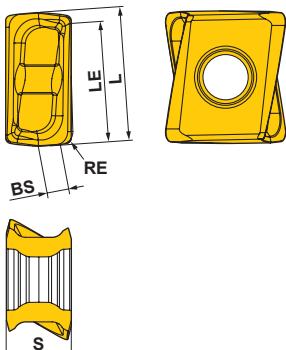
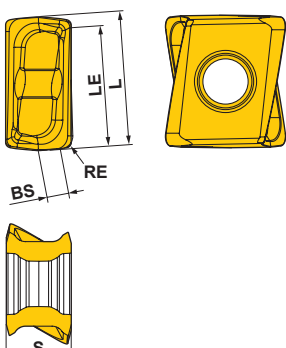
| 피삭재                                                                                                                                                                                                             | P                | 강          |    |    |   |  |  | 절삭상태(기준): |         |           |      |     |     |      |                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|---------|-----------|------|-----|-----|------|--------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                 | M                | 스텐레스강      |    |    |                                                                                                                                                                     |                                                                                   |                                                                                   | ●: 안정절삭   | ●: 일반절삭 | ✱: 불안정 절삭 |      |     |     |      |                                                                                      |
|                                                                                                                                                                                                                 | K                | 주철         |    |    |                                                                                                                                                                     |                                                                                   |                                                                                   |           |         |           |      |     |     |      |                                                                                      |
|                                                                                                                                                                                                                 | N                | 비철금속       |    |    |                                                                                                                                                                     |                                                                                   |                                                                                   |           |         |           |      |     |     |      |                                                                                      |
|                                                                                                                                                                                                                 | S                | 내열합금, 티탄합금 |    |    |                                                                                                                                                                     |                                                                                   |                                                                                   |           |         |           |      |     |     |      |                                                                                      |
|                                                                                                                                                                                                                 | H                | 고경도강       |    |    |                                                                                                                                                                     |                                                                                   |                                                                                   |           |         |           |      |     |     |      |                                                                                      |
| 대응 커터<br>팁 외관                                                                                                                                                                                                   | 규격               | 승수         | 정도 | 호닝 | 코팅                                                                                                                                                                  |                                                                                   | 치수 (mm)                                                                           |           |         |           |      |     | 형상  |      |                                                                                      |
|                                                                                                                                                                                                                 |                  |            |    |    | MP6120                                                                                                                                                              | VP15TF                                                                            | L                                                                                 | LE        | S       | S10       | RE1  | RE2 |     | W1   |                                                                                      |
| <b>VAS500</b><br>사이드 커터<br>➡ M092<br><br><br> | LNGU171004PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 0.4 | 0.8 | 10.0 |  |
|                                                                                                                                                                                                                 | LNGU171004PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 0.4 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171008PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 0.8 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171008PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 0.8 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171012PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 1.2 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171012PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 1.2 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171016PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 1.6 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171016PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 1.6 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171020PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 2.0 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171020PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 2.0 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171024PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 2.4 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171024PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 16.2    | 10.0      | 13.0 | 2.4 | 0.8 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171030PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 3.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171030PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 3.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171040PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 4.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171040PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 4.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171050PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 5.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171050PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 5.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171060PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 6.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171060PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 6.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171070PNER-R | R          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 7.0 | 1.6 | 10.0 |                                                                                      |
|                                                                                                                                                                                                                 | LNGU171070PNEL-R | L          | G  | E  | ●                                                                                                                                                                   | ●                                                                                 |                                                                                   | 17.0      | 15.4    | 10.0      | 13.0 | 7.0 | 1.6 | 10.0 |                                                                                      |

본그림은 우승수(R)를 나타냅니다.

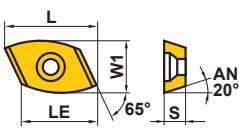
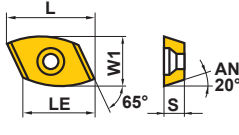
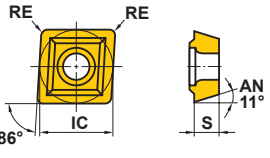
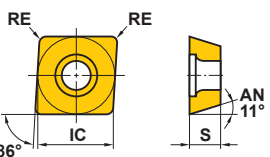
본그림은 우승수(R)를 나타냅니다.

● = NEW

# 커터용팁

| 피삭재                                                                                 | P 강               | M 스텐레스강 | K 주철            | N 비철금속  | S 내열합금, 티탄합금 | H 고경도강 | 결삭상태(기준):<br>●: 안정결삭    ●: 일반결삭    ✱: 불안정 결삭 |     |                                                                                       |     |  |  | 호닝:<br>E: R호닝 |  |
|-------------------------------------------------------------------------------------|-------------------|---------|-----------------|---------|--------------|--------|----------------------------------------------|-----|---------------------------------------------------------------------------------------|-----|--|--|---------------|--|
|                                                                                     |                   |         |                 |         |              |        |                                              |     |                                                                                       |     |  |  |               |  |
| 대응 커터<br>팁 외관                                                                       | 규 격               | 코팅      | 초경              | 치수 (mm) |              |        |                                              |     | 형 상                                                                                   |     |  |  |               |  |
|                                                                                     |                   |         |                 | L       | RE           | LE     | S                                            | BS  |                                                                                       |     |  |  |               |  |
|    | LOGU0904020PNER-L | G E     | ● ● ● ● ● ● ● ● | 8.7     | 0.2          | 7.6    | 4.3                                          | 1.7 |    |     |  |  |               |  |
|                                                                                     | LOGU0904040PNER-L | G E     | ● ● ● ● ● ● ● ● | 8.7     | 0.4          | 7.6    | 4.3                                          | 1.5 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904080PNER-L | G E     | ● ● ● ● ● ● ● ● | 8.7     | 0.8          | 7.6    | 4.3                                          | 1.2 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904100PNER-L | G E     | ● ● ● ● ● ● ● ● | 8.7     | 1            | 7.6    | 4.3                                          | 1   |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904120PNER-L | G E     | ● ● ● ● ● ● ● ● | 8.7     | 1.2          | 7.6    | 4.3                                          | 0.8 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904160PNER-L | G E     | ● ● ● ● ● ● ● ● | 8.7     | 1.6          | 7.6    | 4.3                                          | 0.5 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904020PNFR-L | G F     |                 | ●       | 8.7          | 0.2    | 7.6                                          | 4.3 |                                                                                       | 1.7 |  |  |               |  |
|                                                                                     | LOGU0904040PNFR-L | G F     |                 | ●       | 8.7          | 0.4    | 7.6                                          | 4.3 |                                                                                       | 1.5 |  |  |               |  |
|                                                                                     | LOGU0904080PNFR-L | G F     |                 | ●       | 8.7          | 0.8    | 7.6                                          | 4.3 |                                                                                       | 1.2 |  |  |               |  |
|                                                                                     | LOGU0904100PNFR-L | G F     |                 | ●       | 8.7          | 1      | 7.6                                          | 4.3 |                                                                                       | 1   |  |  |               |  |
|                                                                                     | LOGU0904120PNFR-L | G F     |                 | ●       | 8.7          | 1.2    | 7.6                                          | 4.3 |                                                                                       | 0.8 |  |  |               |  |
|                                                                                     | LOGU0904160PNFR-L | G F     |                 | ●       | 8.7          | 1.6    | 7.6                                          | 4.3 |                                                                                       | 0.5 |  |  |               |  |
|  | LOGU0904020PNER-M | G E     | ● ● ● ● ● ● ● ● | 8.7     | 0.2          | 7.6    | 4.3                                          | 1.7 |   |     |  |  |               |  |
|                                                                                     | LOGU0904040PNER-M | G E     | ● ● ● ● ● ● ● ● | 8.7     | 0.4          | 7.6    | 4.3                                          | 1.6 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904080PNER-M | G E     | ● ● ● ● ● ● ● ● | 8.7     | 0.8          | 7.6    | 4.3                                          | 1.2 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904100PNER-M | G E     | ● ● ● ● ● ● ● ● | 8.7     | 1            | 7.6    | 4.3                                          | 1   |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904120PNER-M | G E     | ● ● ● ● ● ● ● ● | 8.7     | 1.2          | 7.6    | 4.3                                          | 0.9 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904160PNER-M | G E     | ● ● ● ● ● ● ● ● | 8.7     | 1.6          | 7.6    | 4.3                                          | 0.5 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU0904020PNFR-M | G F     |                 | ●       | 8.7          | 0.2    | 7.6                                          | 4.3 |                                                                                       | 1.7 |  |  |               |  |
|                                                                                     | LOGU0904040PNFR-M | G F     |                 | ●       | 8.7          | 0.4    | 7.6                                          | 4.3 |                                                                                       | 1.6 |  |  |               |  |
|                                                                                     | LOGU0904080PNFR-M | G F     |                 | ●       | 8.7          | 0.8    | 7.6                                          | 4.3 |                                                                                       | 1.2 |  |  |               |  |
|                                                                                     | LOGU0904100PNFR-M | G F     |                 | ●       | 8.7          | 1      | 7.6                                          | 4.3 |                                                                                       | 1   |  |  |               |  |
|                                                                                     | LOGU0904120PNFR-M | G F     |                 | ●       | 8.7          | 1.2    | 7.6                                          | 4.3 |                                                                                       | 0.9 |  |  |               |  |
|                                                                                     | LOGU0904160PNFR-M | G F     |                 | ●       | 8.7          | 1.6    | 7.6                                          | 4.3 |                                                                                       | 0.5 |  |  |               |  |
|  | LOGU1207020PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 0.2          | 11.3   | 7.0                                          | 3.0 |  |     |  |  |               |  |
|                                                                                     | LOGU1207040PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 0.4          | 11.3   | 7.0                                          | 2.8 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207080PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 0.8          | 11.3   | 7.0                                          | 2.4 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207100PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 1.0          | 11.3   | 7.0                                          | 2.3 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207120PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 1.2          | 11.3   | 7.0                                          | 2.1 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207160PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 1.6          | 11.3   | 7.0                                          | 1.7 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207200PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 2.0          | 11.3   | 7.0                                          | 1.4 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207240PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 2.4          | 11.3   | 7.0                                          | 1.0 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207300PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 3.0          | 11.3   | 7.0                                          | 0.5 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207320PNER-M | G E     | ● ● ● ● ● ● ● ● | 12.4    | 3.2          | 11.3   | 7.0                                          | 0.3 |                                                                                       |     |  |  |               |  |
|                                                                                     | LOGU1207020PNFR-M | G F     |                 | ●       | 12.4         | 0.2    | 11.3                                         | 7.0 |                                                                                       | 3.0 |  |  |               |  |
|                                                                                     | LOGU1207040PNFR-M | G F     |                 | ●       | 12.4         | 0.4    | 11.3                                         | 7.0 |                                                                                       | 2.8 |  |  |               |  |
|                                                                                     | LOGU1207080PNFR-M | G F     |                 | ●       | 12.4         | 0.8    | 11.3                                         | 7.0 |                                                                                       | 2.4 |  |  |               |  |
|                                                                                     | LOGU1207100PNFR-M | G F     |                 | ●       | 12.4         | 1.0    | 11.3                                         | 7.0 |                                                                                       | 2.3 |  |  |               |  |
|                                                                                     | LOGU1207120PNFR-M | G F     |                 | ●       | 12.4         | 1.2    | 11.3                                         | 7.0 |                                                                                       | 2.1 |  |  |               |  |
|                                                                                     | LOGU1207160PNFR-M | G F     |                 | ●       | 12.4         | 1.6    | 11.3                                         | 7.0 |                                                                                       | 1.7 |  |  |               |  |
|                                                                                     | LOGU1207200PNFR-M | G F     |                 | ●       | 12.4         | 2.0    | 11.3                                         | 7.0 |                                                                                       | 1.4 |  |  |               |  |
|                                                                                     | LOGU1207240PNFR-M | G F     |                 | ●       | 12.4         | 2.4    | 11.3                                         | 7.0 |                                                                                       | 1.0 |  |  |               |  |
|                                                                                     | LOGU1207300PNFR-M | G F     |                 | ●       | 12.4         | 3.0    | 11.3                                         | 7.0 |                                                                                       | 0.5 |  |  |               |  |
|                                                                                     | LOGU1207320PNFR-M | G F     |                 | ●       | 12.4         | 3.2    | 11.3                                         | 7.0 |                                                                                       | 0.3 |  |  |               |  |

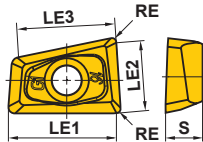
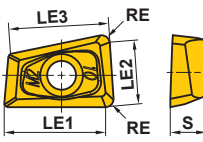
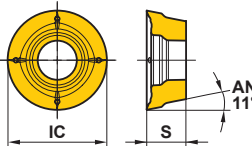
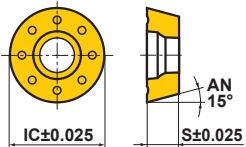
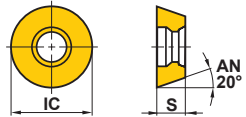
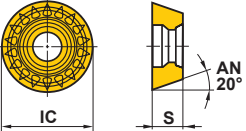
● = NEW

| 피삭재                                                                                 | P     | 강             |       |    |    | 절삭상태(기준) :<br>● : 안정절삭    ● : 일반절삭    ✱ : 불안정 절삭 |         |      |      |      |       |      |     |                                                                                                                  |
|-------------------------------------------------------------------------------------|-------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------|------|------|------|-------|------|-----|------------------------------------------------------------------------------------------------------------------|
|                                                                                     | M     | 스테인레스강        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
|                                                                                     | K     | 주철            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
|                                                                                     | N     | 비철금속          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
|                                                                                     | S     | 내열합금, 티탄합금    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
|                                                                                     | H     | 고경도강          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
| 호닝:<br>E: R호닝    T: 챔퍼호닝                                                            |       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
|                                                                                     |       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
| 대응 커터<br>팁 외관                                                                       | 규 격   | 정<br>호        | 외<br>호                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 코팅                                                                                                                                                                                                                                                    | 서멧                                                                                                                                                                                                                                                    | 초경                                               | 치수 (mm) |      |      |      |       |      | 형 상 |                                                                                                                  |
|                                                                                     |       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | VP15TF<br>UP20M                                                                                                                                                                                                                                       | NX2525                                                                                                                                                                                                                                                | UT120T<br>HT110                                  | L       | LE   | W1   | IC   | S     | RE   |     |                                                                                                                  |
|    | MG245 | MGEEW1035AFTR | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T                                                                                                                                                                                                                                                     | ●                                                                                                                                                                                                                                                     | ●                                                | ● ●     | 14.3 | 9.3  | 9    | —     | 3.5  | —   | <br>본 그림은 바깥날용 (E) 를 나타냅니다.   |
|                                                                                     | MG345 | MGEEW1242AFTR | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T                                                                                                                                                                                                                                                     | ●                                                                                                                                                                                                                                                     | ●                                                | ● ●     | 17.0 | 11.2 | 10.5 | —     | 4.2  | —   |                                                                                                                  |
|                                                                                     | MG445 | MGEEW1650AFTR | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T                                                                                                                                                                                                                                                     | ●                                                                                                                                                                                                                                                     | ●                                                | ● ●     | 21.8 | 14.9 | 13   | —     | 5    | —   |                                                                                                                  |
|                                                                                     |       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
|    | MG200 | MGEEW1035PFTR | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T                                                                                                                                                                                                                                                     | ●                                                                                                                                                                                                                                                     | ●                                                | ● ●     | 14.3 | 9.3  | 9    | —     | 3.5  | —   | <br>본 그림은 바깥날용 (E) 를 나타냅니다.   |
|                                                                                     | MG300 | MGEEW1242PFTR | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T                                                                                                                                                                                                                                                     | ●                                                                                                                                                                                                                                                     | ●                                                | ● ●     | 17.0 | 11.2 | 10.5 | —     | 4.2  | —   |                                                                                                                  |
|                                                                                     | MG400 | MGEEW1650PFTR | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T                                                                                                                                                                                                                                                     | ●                                                                                                                                                                                                                                                     |                                                  | ● ●     | 21.8 | 14.9 | 13   | —     | 5    | —   |                                                                                                                  |
|                                                                                     |       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
|  | CBMP  | MPMT070308    | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E                                                                                                                                                                                                                                                     | ●                                                                                                                                                                                                                                                     |                                                  | ●       | —    | —    | —    | 7.94  | 3.18 | 0.8 | <br>본 그림은 바깥날용 (E) 를 나타냅니다. |
|                                                                                     | M250  | MPMT090308    | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E                                                                                                                                                                                                                                                     | ● ●                                                                                                                                                                                                                                                   |                                                  | ●       | —    | —    | —    | 9.525 | 3.18 | 0.8 |                                                                                                                  |
|                                                                                     | ECMP  | MPMT120408    | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E                                                                                                                                                                                                                                                     | ●                                                                                                                                                                                                                                                     |                                                  | ●       | —    | —    | —    | 12.7  | 4.76 | 0.8 |                                                                                                                  |
|                                                                                     | TAB   |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |
|  | TSMP  | MPMW070308    | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                       |                                                  | ●       | —    | —    | —    | 7.94  | 3.18 | 0.8 | <br>본 그림은 바깥날용 (E) 를 나타냅니다. |
|                                                                                     | M248  | MPMW090308    | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                       |                                                  | ●       | —    | —    | —    | 9.525 | 3.18 | 0.8 |                                                                                                                  |
|                                                                                     |       | MPMW120408    | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                       |                                                  | ●       | —    | —    | —    | 12.7  | 4.76 | 0.8 |                                                                                                                  |
|                                                                                     |       |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                  |         |      |      |      |       |      |     |                                                                                                                  |

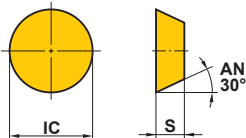
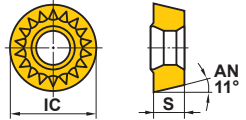
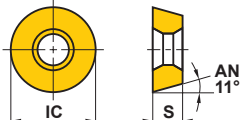
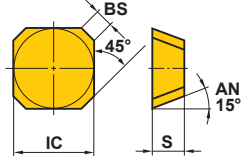
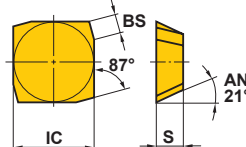
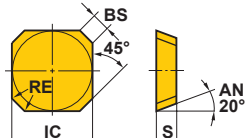
대한민국헌법

[illegible]

# 커터용팁

| 피삭재                                                                                 | P                          | 강          |      |       |        |        |        |        |        |        |        |        | 절삭상태 (기준) :                          |        |         |      |      |      |       |      |     |                                                                                       |
|-------------------------------------------------------------------------------------|----------------------------|------------|------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------------------------|--------|---------|------|------|------|-------|------|-----|---------------------------------------------------------------------------------------|
|                                                                                     | M                          | 스텐레스강      |      |       |        |        |        |        |        |        |        |        | ● : 안정절삭    ● : 일반절삭    ✖ : 불안정 절삭   |        |         |      |      |      |       |      |     |                                                                                       |
|                                                                                     | K                          | 주철         |      |       |        |        |        |        |        |        |        |        | 호닝 :                                 |        |         |      |      |      |       |      |     |                                                                                       |
|                                                                                     | N                          | 비철금속       |      |       |        |        |        |        |        |        |        |        | E : R호닝    F : 샤프한 날    S : 콤비네이션 호닝 |        |         |      |      |      |       |      |     |                                                                                       |
|                                                                                     | S                          | 내열합금, 티탄합금 |      |       |        |        |        |        |        |        |        |        |                                      |        |         |      |      |      |       |      |     |                                                                                       |
| H                                                                                   | 고경도강                       |            |      |       |        |        |        |        |        |        |        |        |                                      |        |         |      |      |      |       |      |     |                                                                                       |
| 대응 커터<br>팁 외관                                                                       | 규 격                        | 정온         | 호닝   | 코팅    |        |        |        |        |        |        |        |        |                                      | 초경     | 치수 (mm) |      |      |      |       |      | 형 상 |                                                                                       |
|                                                                                     |                            |            |      | F7030 | MC7020 | MP6120 | MP6130 | MP7130 | MP7140 | MP9120 | MP9130 | VP15TF | VP30RT                               | MP8010 | HT110   | LE1  | LE2  | LE3  | IC    | S    |     | RE                                                                                    |
|    | AQX M154 QOGT0830R-G1      | G          | E ※1 |       | ●      |        |        |        |        | ●      | ●      | ●      | ●                                    |        |         | 7.7  | 4.9  | 7.3  | —     | 3    | 0.4 |    |
|                                                                                     | QOGT1035R-G1               | G          | E ※1 |       | ●      |        |        |        |        | ●      | ●      | ●      | ●                                    |        |         | 9.9  | 6.4  | 9.3  | —     | 3.5  | 0.4 |                                                                                       |
|                                                                                     | QOGT1342R-G1               | G          | E ※1 |       | ●      |        |        |        |        | ●      | ●      | ●      | ●                                    |        |         | 12.4 | 8.1  | 11.6 | —     | 4.2  | 0.4 |                                                                                       |
|                                                                                     | QOGT1651R-G1               | G          | E ※1 |       | ●      |        |        |        |        | ●      | ●      | ●      | ●                                    |        |         | 15.8 | 10.4 | 14.6 | —     | 5.1  | 0.4 |                                                                                       |
|                                                                                     | QOGT1856R-G1               | G          | E ※1 |       | ●      |        |        |        |        | ●      | ●      | ●      | ●                                    |        |         | 17.3 | 11.4 | 16   | —     | 5.6  | 0.4 |                                                                                       |
|                                                                                     | QOGT2062R-G1               | G          | E ※1 |       | ●      |        |        |        |        | ●      | ●      | ●      | ●                                    |        |         | 19.8 | 13.1 | 18.1 | —     | 6.2  | 0.4 |                                                                                       |
|                                                                                     | QOGT2576R-G1               | G          | E ※1 |       | ●      |        |        |        |        | ●      | ●      | ●      | ●                                    |        |         | 25.2 | 16.6 | 23.1 | —     | 7.6  | 0.4 |                                                                                       |
|    | AQX M154 QOMT0830R-M2      | M          | E    |       | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●                                    |        |         | 7.3  | 4.4  | 7.3  | —     | 3    | 0.8 |   |
|                                                                                     | QOMT1035R-M2               | M          | E    |       | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●                                    |        |         | 9.5  | 5.9  | 9.3  | —     | 3.5  | 0.8 |                                                                                       |
|                                                                                     | QOMT1342R-M2               | M          | E    |       | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●                                    |        |         | 12   | 7.6  | 11.6 | —     | 4.2  | 0.8 |                                                                                       |
|                                                                                     | QOMT1651R-M2               | M          | E    |       | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●                                    |        |         | 15.4 | 9.9  | 14.6 | —     | 5.1  | 0.8 |                                                                                       |
|                                                                                     | QOMT1856R-M2               | M          | E    |       | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●                                    |        |         | 16.9 | 10.9 | 16   | —     | 5.6  | 0.8 |                                                                                       |
|                                                                                     | QOMT2062R-M2               | M          | E    |       | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●                                    |        |         | 19.4 | 12.6 | 18.1 | —     | 6.2  | 0.8 |                                                                                       |
|                                                                                     | QOMT2576R-M2               | M          | E    |       | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●                                    |        |         | 24.8 | 16.1 | 23.1 | —     | 7.6  | 0.8 |                                                                                       |
|  | ARP M186 RPHT1040M0E4-L    | H          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 10    | 3.97 | —   |  |
|                                                                                     | RPHT1040M0E4-M             | H          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 10    | 3.97 | —   |                                                                                       |
|                                                                                     | RPHT1040M0E4-R             | H          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 10    | 3.97 | —   |                                                                                       |
|                                                                                     | RPHT1248M0E4-L             | H          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 12    | 4.76 | —   |                                                                                       |
|                                                                                     | RPHT1248M0E4-M             | H          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 12    | 4.76 | —   |                                                                                       |
|                                                                                     | RPHT1248M0E4-R             | H          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 12    | 4.76 | —   |                                                                                       |
|                                                                                     | RPMT1040M0E4-L             | M          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 10    | 3.97 | —   |                                                                                       |
|                                                                                     | RPMT1040M0E4-M             | M          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 10    | 3.97 | —   |                                                                                       |
|                                                                                     | RPMT1040M0E4-R             | M          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 10    | 3.97 | —   |                                                                                       |
|                                                                                     | RPMT1248M0E4-L             | M          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 12    | 4.76 | —   |                                                                                       |
|                                                                                     | RPMT1248M0E4-M             | M          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 12    | 4.76 | —   |                                                                                       |
|                                                                                     | RPMT1248M0E4-R             | M          | E    |       | ●      |        |        | ●      |        | ●      |        |        |                                      |        |         | —    | —    | —    | 12    | 4.76 | —   |                                                                                       |
|  | ARX M192 RDMW0517M0E       | M          | E    |       |        |        |        |        |        |        |        | ●      | ●                                    |        |         | —    | —    | —    | 5     | 1.70 | —   |  |
|                                                                                     | RDMW0620M0E                | M          | E    |       |        |        |        |        |        |        |        | ●      | ●                                    |        |         | —    | —    | —    | 6     | 1.99 | —   |                                                                                       |
|                                                                                     | RDMW0724M0E                | M          | E    |       |        |        |        |        |        |        |        | ●      | ●                                    |        |         | —    | —    | —    | 7     | 2.38 | —   |                                                                                       |
|                                                                                     |                            |            |      |       |        |        |        |        |        |        |        |        |                                      |        |         |      |      |      |       |      |     |                                                                                       |
|  | OCTACUT M180 REMX1705SN    | M          | S    | ●     |        |        |        |        |        |        |        |        |                                      |        |         | —    | —    | —    | 17.25 | 5.2  | —   |  |
|                                                                                     |                            |            |      |       |        |        |        |        |        |        |        |        |                                      |        |         |      |      |      |       |      |     |                                                                                       |
|  | OCTACUT M180 REMX12T3EN-JS | M          | E    | ●     |        |        |        |        |        |        |        |        |                                      |        |         | —    | —    | —    | 12.95 | 4.17 | —   |  |
|                                                                                     | REMX1705EN-JS              | M          | E    | ●     |        |        |        |        |        |        |        |        |                                      |        |         | —    | —    | —    | 17.25 | 5.2  | —   |                                                                                       |
|                                                                                     |                            |            |      |       |        |        |        |        |        |        |        |        |                                      |        |         |      |      |      |       |      |     |                                                                                       |

※1 HT110의 호닝은 "F"입니다.

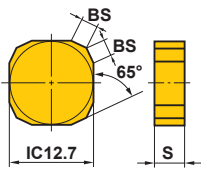
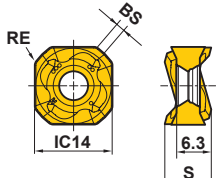
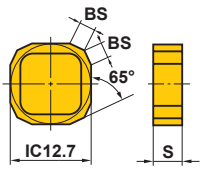
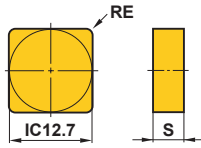
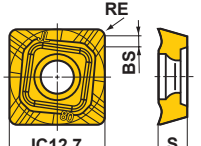
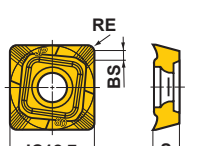
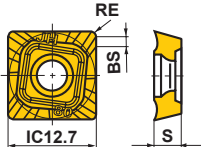
| 피삭재                                                                                 | P                          | 강          |       |       |       |       |       |       | 절삭상태(기준) :<br>● : 안정절삭    ● : 일반절삭    ✖ : 불안정 절삭 |     |     |                                                                                       |
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|                                                                                     | M                          | 스테인레스강     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
|                                                                                     | K                          | 주철         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
|                                                                                     | N                          | 비철금속       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
|                                                                                     | S                          | 내열합금, 티탄합금 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
|                                                                                     | H                          | 고경도강       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
| 호닝 :<br>E: R호닝    F: 샤프한 날    S: 콤비네이션 호닝    T: 챔퍼호닝                                |                            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
| 대응 커터<br>팁 외관                                                                       | 규격                         | 정호         | 후호                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 코팅                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 서멧                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 초경                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 치수 (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     | 형상  |                                                                                       |
|                                                                                     |                            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | F7030<br>MC5020<br>VP15TF<br>UP20M                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | NX2525<br>NX4545                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | UTi20T<br>HTi10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | IC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BS                                               | RE  |     |                                                                                       |
|    | SG20<br>M064 RGEN2004M0EN  | E          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4.76                                             | —   | —   |    |
|                                                                                     | RGEN2004M0SN               | E          | S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4.76                                             | —   | —   |                                                                                       |
|                                                                                     |                            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
|    | BRP M196 RPMT08T2M0E-JS    | M          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.78                                             | —   | —   |    |
|                                                                                     | RPMT10T3M0E-JS             | M          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.97                                             | —   | —   |                                                                                       |
|                                                                                     | RPMT1204M0E-JS             | M          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4.76                                             | —   | —   |                                                                                       |
|                                                                                     | RPMT1606M0E-JS             | M          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6.35                                             | —   | —   |                                                                                       |
|                                                                                     |                            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
|  | BRP M196 RPMW08T2M0T       | M          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.78                                             | —   | —   |  |
|                                                                                     | RPMW10T3M0E                | M          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.97                                             | —   | —   |                                                                                       |
|                                                                                     | RPMW10T3M0T                | M          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.97                                             | —   | —   |                                                                                       |
|                                                                                     | RPMW1204M0E                | M          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4.76                                             | —   | —   |                                                                                       |
|                                                                                     | RPMW1204M0T                | M          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4.76                                             | —   | —   |                                                                                       |
|                                                                                     | RPMW1606M0E                | M          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6.35                                             | —   | —   |                                                                                       |
|                                                                                     | RPMW1606M0T                | M          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6.35                                             | —   | —   |                                                                                       |
|  | FMSD SDEN1203AEN           | E          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.2 | —   |  |
|                                                                                     | SDKN1203AEN                | K          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.2 | —   |                                                                                       |
|                                                                                     | SDKN1203AETN               | K          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.7 | —   |                                                                                       |
|                                                                                     | SDKN1504AETN               | K          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15.875                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.76                                             | 1.7 | —   |                                                                                       |
|                                                                                     |                            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
|  | FE404 M266 E404 SEA42C10GR | A          | F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 2.4 | —   |  |
|                                                                                     | SEA42C10GL                 | A          | F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ▲                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 2.4 | —   |                                                                                       |
|                                                                                     |                            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |     |     |                                                                                       |
|  | SE445 LSE445 SECN1203AFTN1 | C          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.4 | 1.0 |  |
|                                                                                     | SEEN1203AFFN1              | E          | F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.4 | 1.0 |                                                                                       |
|                                                                                     | SEEN1203AFEN1              | E          | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.4 | 1.0 |                                                                                       |
|                                                                                     | SEEN1203AFTN1              | E          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.4 | 1.0 |                                                                                       |
|                                                                                     | SEEN1203AFSN1              | E          | S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.4 | 1.0 |                                                                                       |
|                                                                                     | SEKN1203AFSN1              | K          | S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.4 | —   |                                                                                       |
|                                                                                     | SEKN1203AFTN1              | K          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.4 | —   |                                                                                       |
|                                                                                     | SEKN1203AFTN               | K          | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ●                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.18                                             | 1.7 | 1.0 |                                                                                       |

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# 커터용팁

| 피삭재                                                                                 | P                | 강                    |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    | 절삭상태(기준):<br>●:안정절삭    ●:일반절삭    ✱:불안정 절삭<br><br>호닝:<br>E:R호닝   F:샤프한 날   T:챔퍼호닝 |      |     |     |                                                                                       |
|-------------------------------------------------------------------------------------|------------------|----------------------|----|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|-------|----|----------------------------------------------------------------------------------|------|-----|-----|---------------------------------------------------------------------------------------|
|                                                                                     | M                | 스텐레스강                |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
|                                                                                     | K                | 주철                   |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
|                                                                                     | N                | 비철금속                 |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
|                                                                                     | S                | 내열합금, 티탄합금           |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
| H                                                                                   | 고경도강             |                      |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
| 대응 커터<br>팁 외관                                                                       | 규격               | 정호                   | 호닝 | 코팅    |        |        |        |        |        |        |        |        | 서멧     |        | 초경     |        | 치수 (mm) |        |       | 형상 |                                                                                  |      |     |     |                                                                                       |
|                                                                                     |                  |                      |    | F7030 | MC5020 | MP6120 | MP6130 | MP7130 | MP7140 | MP9120 | MP9130 | VP15TF | VP20RT | VP30RT | MX3030 | NX2525 | NX4545  | UTi20T | HTi10 |    | TF15                                                                             | S    | BS  | RE  |                                                                                       |
|    | BN425 DN         | SNC43B2G             | C  | F     |        |        |        |        |        |        |        |        |        |        |        |        |         |        | ●     |    |                                                                                  | 4.8  | 2   | —   |    |
|                                                                                     |                  | SNC43B2S             | C  | T※1   |        |        |        |        |        |        |        |        |        |        |        |        |         |        | ●     | ●  |                                                                                  | 4.8  | 2   | —   |                                                                                       |
|                                                                                     |                  | SNK43B2G             | K  | F     |        |        |        |        |        |        |        |        |        |        |        |        |         |        | ●     | ●  |                                                                                  | 4.8  | 2   | —   |                                                                                       |
|                                                                                     |                  | SNK43B2S             | K  | T※1   |        |        |        |        |        |        |        |        |        |        |        |        |         |        | ●     | ●  | ●                                                                                | 4.8  | 2   | —   |                                                                                       |
|                                                                                     |                  |                      |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
|    | WSX445 M018      | SNGU140812ANFR-L     | G  | F     |        |        |        |        |        |        |        |        |        |        |        |        |         |        | ●     |    |                                                                                  | 8.4  | 1.5 | 1.2 |   |
|                                                                                     |                  | SNGU140812ANER-L     | G  | E     | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      |        |         |        |       |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     |                  | SNGU140812ANER-M     | G  | E     | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      |        |         |        |       |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     |                  | SNMU140812ANER-M     | M  | E     | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      |        |         |        |       |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     |                  | SNMU140812ANER-R     | M  | E     | ●      | ●      | ●      |        |        |        |        | ●      | ●      |        |        |        |         |        |       |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     |                  | SNMU140812ANER-H     | M  | E     | ●      | ●      | ●      |        |        |        |        | ●      | ●      |        |        |        |         |        |       |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     |                  | NEW SNGU140812ANFL-L | G  | F     |        |        |        |        |        |        |        |        |        |        |        |        |         |        | ●     |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     |                  | NEW SNGU140812ANEL-L | G  | E     | ●      | ●      | ●      |        |        |        |        | ●      |        |        | ●      |        |         |        |       |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     |                  | SNGU140812ANEL-M     | G  | E     | ●      | ●      | ●      |        |        |        |        | ●      |        |        | ●      |        |         |        |       |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     |                  | SNMU140812ANEL-M     | M  | E     | ●      | ●      | ●      |        |        |        |        | ●      |        |        | ●      |        |         |        |       |    |                                                                                  | 8.4  | 1.5 | 1.2 |                                                                                       |
|                                                                                     | SNMU140812ANEL-R | M                    | E  | ●     | ●      | ●      |        |        |        |        | ●      |        |        |        |        |        |         |        |       |    | 8.4                                                                              | 1.5  | 1.2 |     |                                                                                       |
|  | BN425 DN         | SNKF43B2S            | K  | T     |        |        |        |        |        |        |        |        |        |        |        |        |         |        | ●     |    |                                                                                  | 4.8  | 2   | —   |  |
|                                                                                     |                  | SNMF43B2G            | M  | E     | ●      |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  | 4.8  | 2   | —   |                                                                                       |
|                                                                                     |                  |                      |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
|  |                  | SNMN120408           | M  | E     | ●      |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  | 4.76 | —   | 0.8 |  |
|                                                                                     |                  | SNMN120412           | M  | E     | ●      |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  | 4.76 | —   | 1.2 |                                                                                       |
|                                                                                     |                  |                      |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
|  | ASX400 M080      | SOET12T308PEER-JL    | E  | E     | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      |         |        | ●     |    |                                                                                  | 3.97 | 1.4 | 0.8 |  |
|                                                                                     |                  |                      |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
|  | ASX400 M080      | SOGT12T308PEFR-JP    | G  | F     |        |        |        |        |        |        |        |        |        |        |        |        |         |        | ●     |    |                                                                                  | 3.97 | 1.4 | 0.8 |  |
|                                                                                     |                  |                      |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |
|  | ASX400 M080      | SOMT12T308PEER-JH    | M  | E     | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      | ●      |         |        |       |    |                                                                                  | 3.97 | 1.4 | 0.8 |  |
|                                                                                     |                  |                      |    |       |        |        |        |        |        |        |        |        |        |        |        |        |         |        |       |    |                                                                                  |      |     |     |                                                                                       |

※1 UTi20T의 호닝은 "E"입니다.

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※1 NX2525, NX4545의 호닝은 "T"입니다.

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※ 1케이스 2개 포장입니다.

●: 표준재고품

(1케이스 10개 포장입니다)

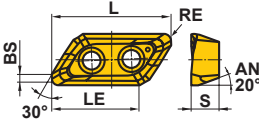
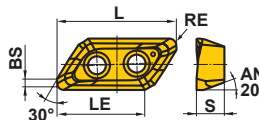
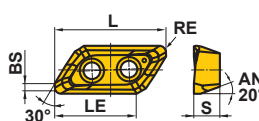


※1 F7030의 호닝은 "E"입니다.

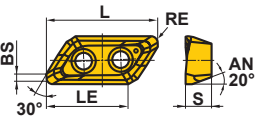
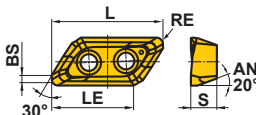
**L044**



# 커터용팁

| 피삭재                                                                                 | P                 | 강                 |    |  |  |  |  | 절삭상태(기준):<br>●: 안전절삭   ●: 일반절삭   ✱: 불안정 절삭 |      |      | 호닝:<br>E: R호닝   F: 샤프한 날 |     |     |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------|-------------------|----|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------|------|------|--------------------------|-----|-----|---------------------------------------------------------------------------------------|
|                                                                                     | M                 | 스텐레스강             |    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                            |      |      |                          |     |     |                                                                                       |
|                                                                                     | K                 | 주철                |    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                            |      |      |                          |     |     |                                                                                       |
|                                                                                     | N                 | 비철금속              |    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                            |      |      |                          |     |     |                                                                                       |
|                                                                                     | S                 | 내열합금, 티탄합금        |    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                            |      |      |                          |     |     |                                                                                       |
|                                                                                     | H                 | 고경도강              |    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                            |      |      |                          |     |     |                                                                                       |
| 대응 커터<br>팁 외관                                                                       | 구 격               | 전하                | 회전 | 코팅                                                                                |                                                                                   |                                                                                   | 초경                                                                                | 치수 (mm)                                    |      |      |                          |     | 형 상 |                                                                                       |
|                                                                                     |                   |                   |    | LC15TF                                                                            | MP6120                                                                            | MP9120                                                                            | TF15                                                                              | L                                          | LE   | S    | BS                       | RE  |     |                                                                                       |
|    | AXD4000<br>M134   | XDGX175004PDFR-GL | G  | F                                                                                 | ●                                                                                 |                                                                                   |                                                                                   | ●                                          | 23   | 16.9 | 5                        | 1.7 | 0.4 |    |
|                                                                                     | XDGX175008PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 23                                         | 17   | 5    | 1.3                      | 0.8 |     |                                                                                       |
|                                                                                     | XDGX175012PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 23                                         | 17   | 5    | 0.9                      | 1.2 |     |                                                                                       |
|                                                                                     | XDGX175016PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 22                                         | 16.4 | 5    | 1.4                      | 1.6 |     |                                                                                       |
|                                                                                     | XDGX175020PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 22                                         | 16.4 | 5    | 1                        | 2.0 |     |                                                                                       |
|                                                                                     | XDGX175024PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 22                                         | 16.4 | 5    | 0.6                      | 2.4 |     |                                                                                       |
|                                                                                     | XDGX175030PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 21.1                                       | 16.1 | 5    | 0.8                      | 3.0 |     |                                                                                       |
|                                                                                     | XDGX175032PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 21.1                                       | 16.1 | 5    | 0.6                      | 3.2 |     |                                                                                       |
|                                                                                     | XDGX175040PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 20                                         | 15.6 | 5    | 0.8                      | 4.0 |     |                                                                                       |
|                                                                                     | XDGX175050PDFR-GL | G                 | F  | ●                                                                                 |                                                                                   |                                                                                   | ●                                                                                 | 19.4                                       | 15.3 | 5    | 0.4                      | 5.0 |     |                                                                                       |
|  | AXD4000<br>M134   | XDGX175004PDER-GM | G  | E                                                                                 |                                                                                   | ●                                                                                 | ●                                                                                 |                                            | 23   | 17   | 5                        | 1.7 | 0.4 |  |
|                                                                                     | XDGX175008PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 23                                         | 17   | 5    | 1.2                      | 0.8 |     |                                                                                       |
|                                                                                     | XDGX175012PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 23                                         | 17   | 5    | 0.9                      | 1.2 |     |                                                                                       |
|                                                                                     | XDGX175016PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 22                                         | 15.9 | 5    | 1.4                      | 1.6 |     |                                                                                       |
|                                                                                     | XDGX175020PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 22                                         | 15.9 | 5    | 0.8                      | 2.0 |     |                                                                                       |
|                                                                                     | XDGX175024PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 22                                         | 15.9 | 5    | 0.4                      | 2.4 |     |                                                                                       |
|                                                                                     | XDGX175030PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 21.1                                       | 16   | 5    | 0.6                      | 3.0 |     |                                                                                       |
|                                                                                     | XDGX175032PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 21.1                                       | 16   | 5    | 0.4                      | 3.2 |     |                                                                                       |
|                                                                                     | XDGX175040PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 20                                         | 14.8 | 5    | 0.5                      | 4.0 |     |                                                                                       |
|                                                                                     | XDGX175050PDER-GM | G                 | E  |                                                                                   | ●                                                                                 | ●                                                                                 |                                                                                   | 19.4                                       | 15   | 5    | 0.4                      | 5.0 |     |                                                                                       |
|  | AXD4000<br>M134   | XDGX175004PDFR-GM | G  | F                                                                                 |                                                                                   |                                                                                   |                                                                                   | ●                                          | 23   | 17   | 5                        | 1.7 | 0.4 |  |
|                                                                                     | XDGX175008PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 23                                         | 17   | 5    | 1.2                      | 0.8 |     |                                                                                       |
|                                                                                     | XDGX175012PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 23                                         | 17   | 5    | 0.9                      | 1.2 |     |                                                                                       |
|                                                                                     | XDGX175016PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 22                                         | 15.9 | 5    | 1.4                      | 1.6 |     |                                                                                       |
|                                                                                     | XDGX175020PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 22                                         | 15.9 | 5    | 0.8                      | 2.0 |     |                                                                                       |
|                                                                                     | XDGX175024PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 22                                         | 15.9 | 5    | 0.4                      | 2.4 |     |                                                                                       |
|                                                                                     | XDGX175030PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 21.1                                       | 16   | 5    | 0.6                      | 3.0 |     |                                                                                       |
|                                                                                     | XDGX175032PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 21.1                                       | 16   | 5    | 0.4                      | 3.2 |     |                                                                                       |
|                                                                                     | XDGX175040PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 20                                         | 14.8 | 5    | 0.5                      | 4.0 |     |                                                                                       |
|                                                                                     | XDGX175050PDFR-GM | G                 | F  |                                                                                   |                                                                                   |                                                                                   | ●                                                                                 | 19.4                                       | 15   | 5    | 0.4                      | 5.0 |     |                                                                                       |

밀링공구용 팁

|                                                                                   |                 |                    |                                                                                                                                                                                                                                                                                                                                         |                            |      |                                            |    |      |      |    |     |     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|--------------------------------------------|----|------|------|----|-----|-----|-------------------------------------------------------------------------------------|
| 피삭재                                                                               | P               | 강                  |     |                            |      | 절삭상태(기준):<br>●: 안정절삭   ●: 일반절삭   ✖: 불안정 절삭 |    |      |      |    |     |     |                                                                                     |
|                                                                                   | M               | 스테인레스강             |                                                                                                                                                                                                                                                                                                                                         |                            |      |                                            |    |      |      |    |     |     |                                                                                     |
|                                                                                   | K               | 주철                 |                                                                                                                                                                                                                                                                                                                                         |                            |      |                                            |    |      |      |    |     |     |                                                                                     |
|                                                                                   | N               | 비철금속               |                                                                                                                                                                                                                                                                                                                                         |                            |      |                                            |    |      |      |    |     |     |                                                                                     |
|                                                                                   | S               | 내열합금, 티탄합금         |                                                                                                                                                                                                                                                                                                                                         |                            |      |                                            |    |      |      |    |     |     |                                                                                     |
|                                                                                   | H               | 고경도강               |                                                                                                                                                                                                                                                                                                                                         |                            |      |                                            |    |      |      |    |     |     |                                                                                     |
| 대응 커터<br>팁 외관                                                                     | 규격              | 정노                 | 호닝                                                                                                                                                                                                                                                                                                                                      | 코팅                         | 초경   | 치수 (mm)                                    |    |      |      |    | 형상  |     |                                                                                     |
|                                                                                   |                 |                    |                                                                                                                                                                                                                                                                                                                                         | LC15TF<br>MP6120<br>MP9120 | TF15 | L                                          | LE | S    | BS   | RE |     |     |                                                                                     |
|  | AXD7000<br>M142 | XDGX227008PDFR-GL  | G                                                                                                                                                                                                                                                                                                                                       | F                          | ●    |                                            | ●  | 30   | 21.6 | 7  | 2   | 0.8 |  |
|                                                                                   |                 | XDGX227016PDFR-GL  | G                                                                                                                                                                                                                                                                                                                                       | F                          | ●    |                                            | ●  | 30   | 21.7 | 7  | 1.2 | 1.6 |                                                                                     |
|                                                                                   |                 | XDGX227020PDFR-GL  | G                                                                                                                                                                                                                                                                                                                                       | F                          | ●    |                                            | ●  | 30   | 21.7 | 7  | 0.8 | 2.0 |                                                                                     |
|                                                                                   |                 | XDGX227030PDFR-GL  | G                                                                                                                                                                                                                                                                                                                                       | F                          | ●    |                                            | ●  | 28.8 | 21.2 | 7  | 0.9 | 3.0 |                                                                                     |
|                                                                                   |                 | XDGX227032PDFR-GL  | G                                                                                                                                                                                                                                                                                                                                       | F                          | ●    |                                            | ●  | 28.8 | 21.2 | 7  | 0.7 | 3.2 |                                                                                     |
|                                                                                   |                 | XDGX227040PDFR-GL  | G                                                                                                                                                                                                                                                                                                                                       | F                          | ●    |                                            | ●  | 27.5 | 20.6 | 7  | 1   | 4.0 |                                                                                     |
|                                                                                   |                 | XDGX227050PDFR-GL  | G                                                                                                                                                                                                                                                                                                                                       | F                          | ●    |                                            | ●  | 27   | 20.3 | 7  | 0.4 | 5.0 |                                                                                     |
|  | AXD7000<br>M142 | XDGX227008PDER-GLA | G                                                                                                                                                                                                                                                                                                                                       | E                          | ●    | ●                                          |    | 30   | 21.7 | 7  | 2   | 0.8 |  |
|                                                                                   |                 | XDGX227016PDER-GLA | G                                                                                                                                                                                                                                                                                                                                       | E                          | ●    | ●                                          |    | 30   | 21.7 | 7  | 1.2 | 1.6 |                                                                                     |
|                                                                                   |                 | XDGX227020PDER-GLA | G                                                                                                                                                                                                                                                                                                                                       | E                          | ●    | ●                                          |    | 30   | 21.7 | 7  | 0.8 | 2.0 |                                                                                     |
|                                                                                   |                 | XDGX227024PDER-GLA | G                                                                                                                                                                                                                                                                                                                                       | E                          | ●    | ●                                          |    | 30   | 21.7 | 7  | 0.3 | 2.4 |                                                                                     |
|                                                                                   |                 | XDGX227030PDER-GLA | G                                                                                                                                                                                                                                                                                                                                       | E                          | ●    | ●                                          |    | 28.8 | 21.1 | 7  | 0.9 | 3.0 |                                                                                     |
|                                                                                   |                 | XDGX227032PDER-GLA | G                                                                                                                                                                                                                                                                                                                                       | E                          | ●    | ●                                          |    | 28.8 | 21.1 | 7  | 0.6 | 3.2 |                                                                                     |
|                                                                                   |                 | XDGX227040PDER-GLA | G                                                                                                                                                                                                                                                                                                                                       | E                          | ●    | ●                                          |    | 27.5 | 20.4 | 7  | 0.9 | 4.0 |                                                                                     |
|                                                                                   |                 | XDGX227050PDER-GLA | G                                                                                                                                                                                                                                                                                                                                       | E                          | ●    | ●                                          |    | 27   | 20.2 | 7  | 0.3 | 5.0 |                                                                                     |

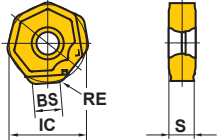
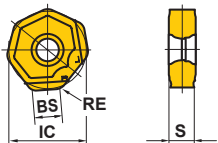
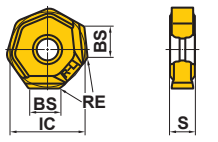
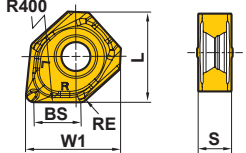
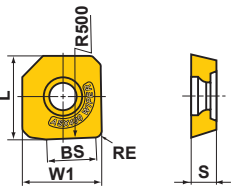
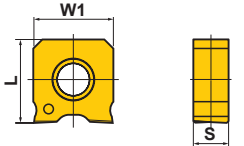
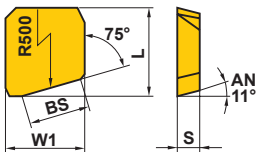
대한민국-영국

**L048**



2010-01-01

## L050

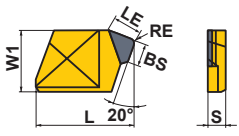
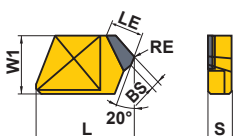
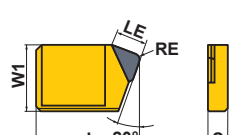
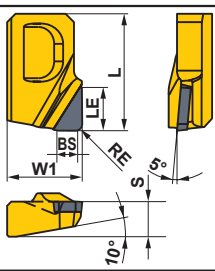
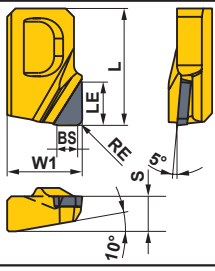
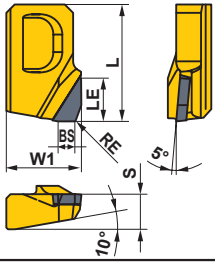
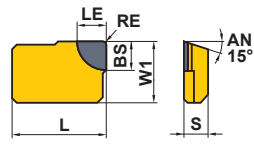
| 피삭재                                                                                                                       | P                | 강          |        |        |        |        |        |               |         | 절삭상태(기준):<br>●:안정절삭    ●:일반절삭    ✱:불안정 절삭 |        |       |    |       |     |     |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------|------------------|------------|--------|--------|--------|--------|--------|---------------|---------|-------------------------------------------|--------|-------|----|-------|-----|-----|---------------------------------------------------------------------------------------|
|                                                                                                                           | M                | 스텐레스강      |        |        |        |        |        |               |         |                                           |        |       |    |       |     |     |                                                                                       |
|                                                                                                                           | K                | 주철         |        |        |        |        |        |               |         |                                           |        |       |    |       |     |     |                                                                                       |
|                                                                                                                           | N                | 비철금속       |        |        |        |        |        |               |         |                                           |        |       |    |       |     |     |                                                                                       |
|                                                                                                                           | S                | 내열합금, 티탄합금 |        |        |        |        |        |               |         |                                           |        |       |    |       |     |     |                                                                                       |
|                                                                                                                           | H                | 고경도강       |        |        |        |        |        |               |         |                                           |        |       |    |       |     |     |                                                                                       |
| 대응 커터<br>팁 외관                                                                                                             | 규격               | 정<br>도     | 호<br>닝 | 코팅     |        |        | 서멧     | 초경            | 치수 (mm) |                                           |        |       |    |       | 형상  |     |                                                                                       |
|                                                                                                                           |                  |            |        | MC5020 | MP6120 | VP15TF | NX2525 | NEW<br>MX3020 | HT105T  | L                                         | W1     | IC    | S  | BS    |     | RE  |                                                                                       |
|                                                                                                                           |                  |            |        |        |        |        |        |               |         |                                           |        |       |    |       |     |     |                                                                                       |
| <br>AHX640S<br>Ⓜ046                      | WNEU2007ZEN7C-M  | E          | E      |        |        |        | ●      |               |         |                                           | —      | —     | 20 | 6.9   | 7.2 | 0.8 |    |
| <br>AHX640S<br>Ⓜ046                      | WNEU2007ZEN7C-WP | E          | E      |        |        |        | ●      |               |         |                                           | —      | —     | 20 | 6.9   | 7.1 | 0.8 |    |
| <br>AHX640S<br>Ⓜ046<br>AHX640W<br>Ⓜ054 | WNEU2006ZEN7C-WK | E          | E      |        |        |        | ●      |               |         |                                           | —      | —     | 20 | 6.55  | 7.4 | 0.8 |   |
| <br>WSX445<br>Ⓜ018                     | WNGU1406ANEN8C-M | G          | E      |        |        |        | ●      | ●             | ●       | ●                                         | 16.87  | 16.87 | —  | 6     | 8   | 1.0 |  |
| <br>ASX400<br>Ⓜ080                     | WOEW12T308PEER8C | E          | E      |        |        |        |        |               | ●       |                                           | 13.2   | 12.5  | —  | 3.97  | 8   | 0.8 |  |
|                                                                                                                           | WOEW12T308PETR8C | E          | T      |        |        |        | ●      |               |         |                                           | 13.2   | 12.5  | —  | 3.97  | 8   | 0.8 |                                                                                       |
|                                                                                                                           |                  |            |        |        |        |        |        |               |         |                                           |        |       |    |       |     |     |                                                                                       |
| <br>VOX400<br>Ⓜ076                     | WOEX1206PER5C    | E          | E      |        |        |        | ●      |               |         |                                           | 13.025 | 12.5  | —  | 5.5   | —   | —   |  |
| <br>FBP415<br>QBP415                   | WPC42EEER10C     | C          | E      |        |        |        |        |               | ●       |                                           | 15.163 | 12.7  | —  | 3.175 | 10  | —   |  |
|                                                                                                                           | WPC42EEEL10C     | C          | E      |        |        |        |        |               | ●       |                                           | 15.163 | 12.7  | —  | 3.175 | 10  | —   |                                                                                       |
|                                                                                                                           |                  |            |        |        |        |        |        |               |         |                                           |        |       |    |       |     |     |                                                                                       |

본그림은 우승수(R)를 나타냅니다.

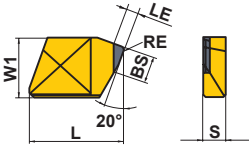
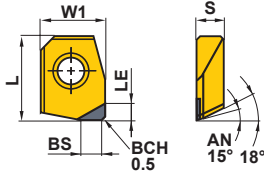
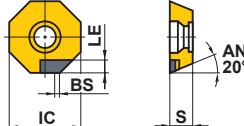
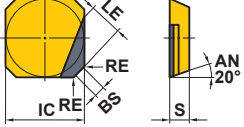
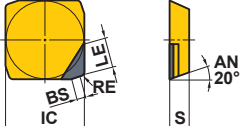
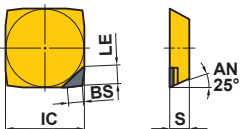
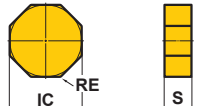
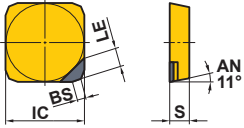
● = NEW

본그림은 우승수(R)를 나타냅니다.

# CBN&PCD팁

| 피삭재                                                                                                        | K               | 주철   | ●     | ●               | ●       | 절삭상태(기준): ●: 안정절삭    ●: 일반절삭    ✖: 불안정 절삭 |      |     |     |     |                                                                                       |
|------------------------------------------------------------------------------------------------------------|-----------------|------|-------|-----------------|---------|-------------------------------------------|------|-----|-----|-----|---------------------------------------------------------------------------------------|
|                                                                                                            | N               | 비철금속 |       |                 |         | ●                                         | ●    |     |     |     |                                                                                       |
| 대응 커터<br>팁 외관                                                                                              | 규 격             | H70전 | CBN   | PCD             | 치수 (mm) |                                           |      |     |     |     | 형 상                                                                                   |
|                                                                                                            |                 |      | MB730 | MD220<br>MD2030 | L       | W1                                        | S    | BS  | LE  | RE  |                                                                                       |
| NF10000<br>Ⓜ072<br>       | GDCN2004PDFR3   | C    |       | ●               | 20      | 12.7                                      | 4.76 | 3   | 5   | 1.2 |    |
| NR10000<br>               | GDCN2004ZDTR1   | C    |       | ●               | 20      | 12.7                                      | 4.76 | 1.4 | 6.3 | 0.8 |    |
| AF10000<br>               | GDCN2004PDR     | C    |       | ●               | 20      | 12.7                                      | 4.76 | 4.9 | 6.2 | 1.2 |    |
| FMAX<br>Ⓜ066<br>        | GOER1404PXFR2   | E    |       | ● ●             | 14      | 9                                         | 4.2  | 2   | 5   | 0.4 |   |
|                                                                                                            | GOER1408PXFR2   | E    |       | ● ●             | 14      | 9                                         | 4.2  | 2   | 5   | 0.8 |                                                                                       |
| FMAX<br>Ⓜ066<br>NEW<br> | GOER1408PXFR2-8 | E    |       | ●               | 14      | 9                                         | 4.2  | 2   | 8   | 0.8 |  |
|                                                                                                            |                 |      |       |                 |         |                                           |      |     |     |     |                                                                                       |
| FMAX<br>Ⓜ066<br>NEW<br> | GOER1401ZXFR2   | E    |       | ●               | 14      | 9                                         | 4.2  | 2   | 5   | 0.1 |  |
|                                                                                                            |                 |      |       |                 |         |                                           |      |     |     |     |                                                                                       |
| AF5000<br>              | LDCN190412R     | C    |       | ●               | 19.05   | 12.7                                      | 4.76 | 4.3 | 6.2 | 1.2 |  |
|                                                                                                            | LDCN190412R     | C    | ●     |                 | 19.05   | 12.7                                      | 4.76 | 4.3 | 6.0 | 1.2 |                                                                                       |
|                                                                                                            | LDCN190412L     | C    |       | ●               | 19.05   | 12.7                                      | 4.76 | 4.3 | 6.2 | 1.2 |                                                                                       |
|                                                                                                            |                 |      |       |                 |         |                                           |      |     |     |     |                                                                                       |

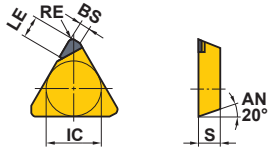
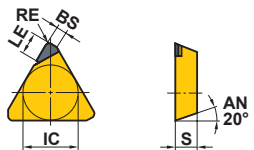
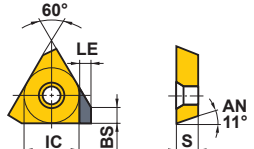
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| 피삭재                                                                                                    | K                | 주철   | ● ● ● | ●     | 절삭상태(기준) : ●:안정절삭    ●:일반절삭    ✖:불안정 절삭 |         |      |     |       |     |     |                                                                                       |
|--------------------------------------------------------------------------------------------------------|------------------|------|-------|-------|-----------------------------------------|---------|------|-----|-------|-----|-----|---------------------------------------------------------------------------------------|
|                                                                                                        | N                | 비철금속 |       |       |                                         |         |      |     |       |     |     |                                                                                       |
| 대응 커터<br>팁 외관                                                                                          | 규 격              | Hn정  | CBN   | PCD   |                                         | 치수 (mm) |      |     |       |     |     |                                                                                       |
|                                                                                                        |                  |      | MB710 | MB730 | BC5030                                  | MD220   | L    | W1  | IC    | LE  | S   | BS                                                                                    |
| NF10000<br>Ⓜ072<br>   | NP-GDCN2004PDSR3 | C    | ●     |       | 20                                      | 12.7    | —    | 2.5 | 4.76  | 3   | 0.8 |    |
| V10000<br>Ⓜ070<br>    | NP-GDCW1240PDFR2 | C    |       | ●     | 12                                      | 9.5     | —    | 2   | 4     | 2   | —   |    |
| OCTACUT<br>Ⓜ180<br>   | OEMX12T3ETR1     | M    | ●     |       | —                                       | —       | 12.7 | 2.5 | 3.97  | 1   | —   |    |
| SE445<br>LSE445<br> | SECN1203AFFR1    | C    |       | ▲     | —                                       | —       | 12.7 | 5   | 3.18  | 1.4 | 1.0 |  |
| SE415<br>           | SECN1203EFFR1    | C    |       | ●     | —                                       | —       | 12.7 | 5   | 3.18  | 1.4 | 1.0 |  |
| BF407<br>           | SFCN1203ZFFR2    | C    |       | ▲     | —                                       | —       | 12.7 | 3   | 3.175 | 2.4 | —   |  |
| AOX445<br>Ⓜ060<br>  | SL-ONEN120404ASN | E    | ●     |       | —                                       | —       | 12.7 | —   | 4.76  | —   | 0.4 |  |
| FBP415<br>          | SPEN1203EETR1    | E    | ●     |       | —                                       | —       | 12.7 | 3   | 3.175 | 1.4 | —   |  |

L

금속재료의 가공

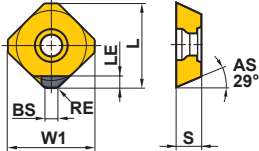
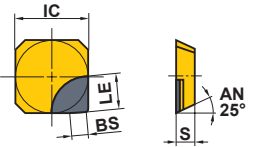
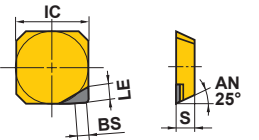
# CBN&PCD팁

| 피삭재                                                                                                  | K             | 주철   | C                        | C   | C       | 절삭상태(기준) : ●: 안정절삭    ●: 일반절삭    ✱: 불안정 절삭 |       |     |     |                                                                                      |
|------------------------------------------------------------------------------------------------------|---------------|------|--------------------------|-----|---------|--------------------------------------------|-------|-----|-----|--------------------------------------------------------------------------------------|
|                                                                                                      | N             | 비철금속 |                          |     |         |                                            |       |     |     |                                                                                      |
| 대응 커터<br>팁 외관                                                                                        | 규 격           | 정 노  | CBN                      | PCD | 치수 (mm) |                                            |       |     |     | 형 상                                                                                  |
|                                                                                                      |               |      | MB710<br>BC5030<br>MD220 |     | IC      | LE                                         | S     | BS  | RE  |                                                                                      |
| SE300<br>NSE300<br> | TECN1603PEFR1 | C    |                          | ●   | 9.525   | 5                                          | 3.175 | 1.4 | 0.4 |   |
|                                                                                                      |               |      |                          |     |         |                                            |       |     |     |                                                                                      |
| SE400<br>NSE400<br> | TECN2204PEFR1 | C    |                          | ▲   | 12.7    | 5                                          | 4.76  | 1.4 | 1.0 |   |
|                                                                                                      |               |      |                          |     |         |                                            |       |     |     |                                                                                      |
| PMF<br>M256<br>    | TPEW1303ZPTR2 | E    | ●                        |     | 7.94    | 1.5                                        | 3.18  | 2   | —   |  |
|                                                                                                      |               |      |                          |     |         |                                            |       |     |     |                                                                                      |

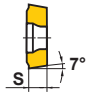
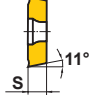
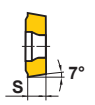
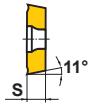
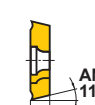
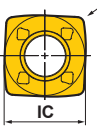
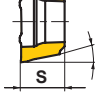
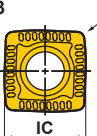
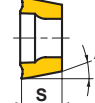
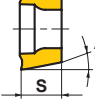
L

밀링공구용 팁

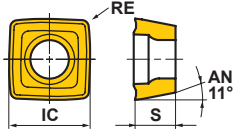
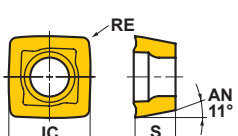
# CBN&PCD팁(와이퍼)

| 피삭재                                                                                | K              | 주철   | C     | CBN   | PCD     | 절삭상태(기준) : ●: 안정절삭    ●: 일반절삭    ✖: 불안정 절삭 |     |      |       |     |     |                                                                                      |
|------------------------------------------------------------------------------------|----------------|------|-------|-------|---------|--------------------------------------------|-----|------|-------|-----|-----|--------------------------------------------------------------------------------------|
|                                                                                    | N              | 비철금속 |       |       |         |                                            |     |      |       |     |     |                                                                                      |
| 대응 커터<br>팁 외관                                                                      | 규 격            | 정호   | CBN   | PCD   | 치수 (mm) |                                            |     |      |       |     | 형 상 |                                                                                      |
|                                                                                    |                |      | MB710 | MD220 | L       | W1                                         | LE  | IC   | S     | BS  |     | RE                                                                                   |
|   | ASX445<br>M030 | E    |       | ●     | 16.6    | 16.48                                      | 1.8 | —    | 3.97  | 3.0 | 1.5 |   |
|                                                                                    | WEEW13T3AGFR3C | E    | ●     |       | 16.6    | 16.48                                      | 1.8 | —    | 3.97  | 3.0 | 1.5 |                                                                                      |
|                                                                                    | WEEW13T3AGTR3C | E    |       |       |         |                                            |     |      |       |     |     |                                                                                      |
|   | BF407          | C    |       | ▲     | —       | —                                          | 6.2 | 12.4 | 3.175 | 2.4 | —   |   |
|                                                                                    | WFC42ZFER2     | C    |       |       |         |                                            |     |      |       |     |     |                                                                                      |
|  | BF407          | C    |       | ▲     | —       | —                                          | 3.0 | 12.4 | 3.175 | 2.4 | —   |  |
|                                                                                    | NP-WFC42ZFER2  | C    |       |       |         |                                            |     |      |       |     |     |                                                                                      |

# 드릴용 팁

| 대응 커터<br>팁 외관                                                                                                                                                                                                                                         | 규격                           | H형 | 코팅     |       |       |        |       |        | 치수 (mm) |      |      |     | 형상                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----|--------|-------|-------|--------|-------|--------|---------|------|------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                       |                              |    | VP15TF | UP20M | GP20M | UE6020 | US735 | MC1020 | MC5020  | IC   | L    | S   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RE                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <div>TAF<br/>P241</div> <div></div> <div>GCMT</div> <div></div> <div>GPMT</div>     | GCMT040204-U1                | M  | ●      |       |       |        |       |        | —       | 5.0  | 2.38 | 0.4 | U1브레이커<br><div>GCMT</div> <div></div> <div></div> <div>7°</div> <div>GPMT</div> <div></div> <div></div> <div>11°</div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT060204-U1                | M  | ●      |       | ●     |        |       |        | 5.56    | —    | 2.38 | 0.4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT070204-U1                | M  | ●      |       | ●     |        |       |        | 6.35    | —    | 2.38 | 0.4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT090304-U1                | M  | ●      |       | ●     |        |       |        | 7.94    | —    | 3.18 | 0.4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT11T308-U1                | M  | ●      |       | ●     |        |       |        | 9.525   | —    | 3.97 | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT140408-U1                | M  | ●      |       | ●     |        |       |        | 12.7    | —    | 4.76 | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <div>TAF<br/>P241</div> <div></div> <div>GCMT</div> <div></div> <div>GPMT</div>     | GCMT040204-U2                | M  | ●      | ●     |       |        |       |        | —       | 5.0  | 2.38 | 0.4 | U2브레이커<br><div>GCMT</div> <div></div> <div></div> <div>7°</div> <div>GPMT</div> <div></div> <div></div> <div>11°</div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT060204-U2                | M  | ●      | ●     | ●     | ●      |       |        | 5.56    | —    | 2.38 | 0.4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT070204-U2                | M  | ●      | ●     | ●     | ●      |       |        | 6.35    | —    | 2.38 | 0.4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT090304-U2                | M  | ●      | ●     | ●     | ●      |       |        | 7.94    | —    | 3.18 | 0.4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT11T308-U2                | M  | ●      | ●     | ●     | ●      |       |        | 9.525   | —    | 3.97 | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT140408-U2                | M  | ●      | ●     | ●     | ●      |       |        | 12.7    | —    | 4.76 | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <div>TAF<br/>P241</div> <div></div> <div>GCMT</div> <div></div> <div>GPMT</div> | GPMT060204-U3                | M  | ●      |       | ●     | ●      |       |        | 5.56    | —    | 2.38 | 0.4 | U3브레이커<br><div>GPMT</div> <div></div> <div></div> <div>AN 11°</div>                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT070204-U3                | M  | ●      |       | ●     | ●      |       |        | 6.35    | —    | 2.38 | 0.4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT090304-U3                | M  | ●      |       | ●     | ●      |       |        | 7.94    | —    | 3.18 | 0.4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT11T308-U3                | M  | ●      |       | ●     | ●      |       |        | 9.525   | —    | 3.97 | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | GPMT140408-U3                | M  | ●      |       | ●     | ●      |       |        | 12.7    | —    | 4.76 | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       |                              |    |        |       |       |        |       |        |         |      |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <div>MVX<br/>P230</div> <div></div> <div>GCMT</div> <div></div> <div>GPMT</div> | <div>NEW</div> SOMX052704-UM | M  | ●      |       |       |        |       | ●      | ●       | 5    | —    | 2.7 | 0.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ø14—ø16.5<br><div></div> <div></div> <div>AN 11°</div><br>ø17—ø63<br><div></div> <div></div> <div>AN 11°</div> |
|                                                                                                                                                                                                                                                       | SOMX063005-UM                | M  | ●      |       |       |        |       | ●      | ●       | 6    | —    | 3   | 0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX073505-UM                | M  | ●      |       |       |        |       | ●      | ●       | 7    | —    | 3.5 | 0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX084005-UM                | M  | ●      |       |       |        |       | ●      | ●       | 8.3  | —    | 4   | 0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX094506-UM                | M  | ●      |       |       |        |       | ●      | ●       | 9.7  | —    | 4.5 | 0.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX115506-UM                | M  | ●      |       |       |        |       | ●      | ●       | 11.6 | —    | 5.5 | 0.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX136008-UM                | M  | ●      |       |       |        |       | ●      | ●       | 13.8 | —    | 6   | 0.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX166508-UM                | M  | ●      |       |       |        |       | ●      | ●       | 16.5 | —    | 6.5 | 0.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX187008-UM                | M  | ●      |       |       |        |       | ●      | ●       | 18.2 | —    | 7   | 0.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <div>MVX<br/>P230</div> <div></div> <div>GCMT</div> <div></div> <div>GPMT</div> | SOMX063005-US                | M  | ●      |       |       |        |       |        | 6       | —    | 3    | 0.5 | <div></div> <div></div> <div>AN 11°</div>                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX073505-US                | M  | ●      |       |       |        |       |        | 7       | —    | 3.5  | 0.5 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX084005-US                | M  | ●      |       |       |        |       |        | 8.3     | —    | 4    | 0.5 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX094506-US                | M  | ●      |       |       |        |       |        | 9.7     | —    | 4.5  | 0.6 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX115506-US                | M  | ●      |       |       |        |       |        | 11.6    | —    | 5.5  | 0.6 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX136008-US                | M  | ●      |       |       |        |       |        | 13.8    | —    | 6    | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX166508-US                | M  | ●      |       |       |        |       |        | 16.5    | —    | 6.5  | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                       | SOMX187008-US                | M  | ●      |       |       |        |       |        | 18.2    | —    | 7    | 0.8 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

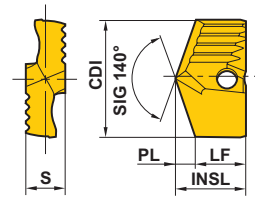
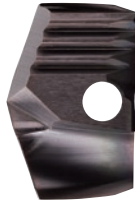
● = NEW

| 대응 커터<br>팁 외관                                                                                                  | 규 격                  | H정 | 코팅     |      |  |  |  |  | 치수 (mm) |   |     |     | 형 상                                                                                 |
|----------------------------------------------------------------------------------------------------------------|----------------------|----|--------|------|--|--|--|--|---------|---|-----|-----|-------------------------------------------------------------------------------------|
|                                                                                                                |                      |    | DP8020 | TF15 |  |  |  |  | IC      | L | S   | RE  |                                                                                     |
| <b>MVX</b><br><b>P230</b><br> | <b>SOMX062905-UH</b> | M  | ●      |      |  |  |  |  | 6       | — | 2.9 | 0.5 |  |
|                                                                                                                | <b>SOMX073405-UH</b> | M  | ●      |      |  |  |  |  | 7       | — | 3.4 | 0.5 |                                                                                     |
|                                                                                                                | <b>SOMX083905-UH</b> | M  | ●      |      |  |  |  |  | 8.3     | — | 3.9 | 0.5 |                                                                                     |
|                                                                                                                | <b>SOMX094406-UH</b> | M  | ●      |      |  |  |  |  | 9.7     | — | 4.4 | 0.6 |                                                                                     |
|                                                                                                                | <b>SOMX115406-UH</b> | M  | ●      |      |  |  |  |  | 11.6    | — | 5.4 | 0.6 |                                                                                     |
|                                                                                                                | <b>SOMX135908-UH</b> | M  | ●      |      |  |  |  |  | 13.8    | — | 5.9 | 0.8 |                                                                                     |
|                                                                                                                | <b>SOMX166408-UH</b> | M  | ●      |      |  |  |  |  | 16.5    | — | 6.4 | 0.8 |                                                                                     |
|                                                                                                                | <b>SOMX186908-UH</b> | M  | ●      |      |  |  |  |  | 18.2    | — | 6.9 | 0.8 |                                                                                     |
| <b>MVX</b><br><b>P230</b><br> | <b>SOGX063005-UN</b> | G  | ●      |      |  |  |  |  | 6       | — | 3   | 0.5 |  |
|                                                                                                                | <b>SOGX073505-UN</b> | G  | ●      |      |  |  |  |  | 7       | — | 3.5 | 0.5 |                                                                                     |
|                                                                                                                | <b>SOGX084005-UN</b> | G  | ●      |      |  |  |  |  | 8.3     | — | 4   | 0.5 |                                                                                     |
|                                                                                                                | <b>SOGX094506-UN</b> | G  | ●      |      |  |  |  |  | 9.7     | — | 4.5 | 0.6 |                                                                                     |
|                                                                                                                | <b>SOGX115506-UN</b> | G  | ●      |      |  |  |  |  | 11.6    | — | 5.5 | 0.6 |                                                                                     |
|                                                                                                                | <b>SOGX136008-UN</b> | G  | ●      |      |  |  |  |  | 13.8    | — | 6   | 0.8 |                                                                                     |
|                                                                                                                | <b>SOGX166508-UN</b> | G  | ●      |      |  |  |  |  | 16.5    | — | 6.5 | 0.8 |                                                                                     |
|                                                                                                                | <b>SOGX187008-UN</b> | G  | ●      |      |  |  |  |  | 18.2    | — | 7   | 0.8 |                                                                                     |

# 드릴용 팁

본 페이지의 모든  
제품은  
한국산입니다

TAW H형  
P219



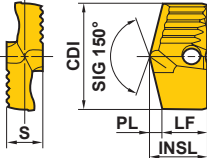
| 규격         | 코팅     |       | 치수 (mm) |      |      |     |     | 적용홀더             |
|------------|--------|-------|---------|------|------|-----|-----|------------------|
|            | VP15TF | VP10H | CDI     | INSL | LF   | PL  | S   |                  |
| TAWNH1850T | ●      | □     | 18.5    | 12.7 | 9.3  | 3.4 | 7.0 | TAWSN<br>1900S25 |
| TAWNH1860T | ●      | □     | 18.6    | 12.7 | 9.3  | 3.4 | 7.0 |                  |
| TAWNH1870T | ●      | □     | 18.7    | 12.7 | 9.3  | 3.4 | 7.0 | TAWMN<br>1900S25 |
| TAWNH1880T | ●      | □     | 18.8    | 12.7 | 9.3  | 3.4 | 7.0 |                  |
| TAWNH1890T | ●      | □     | 18.9    | 12.7 | 9.3  | 3.4 | 7.0 | TAWLN<br>1900S25 |
| TAWNH1900T | ●      | □     | 19.0    | 12.7 | 9.2  | 3.5 | 7.0 |                  |
| TAWNH1910T | ●      | □     | 19.1    | 12.7 | 9.2  | 3.5 | 7.0 | TAWSN<br>2000S25 |
| TAWNH1920T | ●      | □     | 19.2    | 12.7 | 9.2  | 3.5 | 7.0 |                  |
| TAWNH1930T | ●      | □     | 19.3    | 12.7 | 9.2  | 3.5 | 7.0 | TAWMN<br>2000S25 |
| TAWNH1940T | ●      | □     | 19.4    | 12.7 | 9.2  | 3.5 | 7.0 |                  |
| TAWNH1950T | ●      | □     | 19.5    | 12.6 | 9.1  | 3.5 | 7.0 | TAWLN<br>2000S25 |
| TAWNH1960T | ●      | □     | 19.6    | 12.7 | 9.1  | 3.6 | 7.0 |                  |
| TAWNH1970T | ●      | □     | 19.7    | 12.7 | 9.1  | 3.6 | 7.0 | TAWSN<br>2100S25 |
| TAWNH1980T | ●      | □     | 19.8    | 12.7 | 9.1  | 3.6 | 7.0 |                  |
| TAWNH1990T | ●      | □     | 19.9    | 12.7 | 9.1  | 3.6 | 7.0 | TAWMN<br>2100S25 |
| TAWNH2000T | ●      | □     | 20.0    | 12.6 | 9.0  | 3.6 | 7.0 |                  |
| TAWNH2010T | □      | □     | 20.1    | 12.7 | 9.0  | 3.7 | 7.0 | TAWLN<br>2100S25 |
| TAWNH2020T | □      | □     | 20.2    | 12.7 | 9.0  | 3.7 | 7.0 |                  |
| TAWNH2030T | □      | □     | 20.3    | 12.7 | 9.0  | 3.7 | 7.0 | TAWSN<br>2200S25 |
| TAWNH2040T | □      | □     | 20.4    | 12.7 | 9.0  | 3.7 | 7.0 |                  |
| TAWNH2050T | ●      | □     | 20.5    | 12.6 | 8.9  | 3.7 | 7.0 | TAWMN<br>2200S25 |
| TAWNH2060T | □      | □     | 20.6    | 12.6 | 8.9  | 3.7 | 7.0 |                  |
| TAWNH2070T | □      | □     | 20.7    | 12.7 | 8.9  | 3.8 | 7.0 | TAWLN<br>2200S25 |
| TAWNH2080T | □      | □     | 20.8    | 12.7 | 8.9  | 3.8 | 7.0 |                  |
| TAWNH2090T | □      | □     | 20.9    | 12.7 | 8.9  | 3.8 | 7.0 | TAWSN<br>2300S25 |
| TAWNH2100T | ●      | □     | 21.0    | 12.6 | 8.8  | 3.8 | 7.0 |                  |
| TAWNH2110T | □      | □     | 21.1    | 12.6 | 8.8  | 3.8 | 7.0 | TAWMN<br>2300S25 |
| TAWNH2120T | □      | □     | 21.2    | 12.7 | 8.8  | 3.9 | 7.0 |                  |
| TAWNH2130T | □      | □     | 21.3    | 12.7 | 8.8  | 3.9 | 7.0 | TAWLN<br>2300S25 |
| TAWNH2140T | □      | □     | 21.4    | 12.7 | 8.8  | 3.9 | 7.0 |                  |
| TAWNH2150T | ●      | □     | 21.5    | 14.5 | 10.6 | 3.9 | 8.0 | TAWSN<br>2400S25 |
| TAWNH2160T | □      | □     | 21.6    | 14.5 | 10.6 | 3.9 | 8.0 |                  |
| TAWNH2170T | □      | □     | 21.7    | 14.5 | 10.6 | 3.9 | 8.0 | TAWMN<br>2400S25 |
| TAWNH2180T | □      | □     | 21.8    | 14.6 | 10.6 | 4.0 | 8.0 |                  |
| TAWNH2190T | □      | □     | 21.9    | 14.6 | 10.6 | 4.0 | 8.0 | TAWLN<br>2400S25 |
| TAWNH2200T | ●      | □     | 22.0    | 14.5 | 10.5 | 4.0 | 8.0 |                  |
| TAWNH2210T | □      | □     | 22.1    | 14.5 | 10.5 | 4.0 | 8.0 | TAWSN<br>2500S25 |
| TAWNH2220T | □      | □     | 22.2    | 14.5 | 10.5 | 4.0 | 8.0 |                  |
| TAWNH2230T | □      | □     | 22.3    | 14.6 | 10.5 | 4.1 | 8.0 | TAWMN<br>2500S25 |
| TAWNH2240T | □      | □     | 22.4    | 14.6 | 10.5 | 4.1 | 8.0 |                  |
| TAWNH2250T | ●      | □     | 22.5    | 14.5 | 10.4 | 4.1 | 8.0 | TAWLN<br>2500S25 |
| TAWNH2260T | □      | □     | 22.6    | 14.5 | 10.4 | 4.1 | 8.0 |                  |
| TAWNH2270T | □      | □     | 22.7    | 14.5 | 10.4 | 4.1 | 8.0 | TAWSN<br>2600S25 |
| TAWNH2280T | □      | □     | 22.8    | 14.5 | 10.4 | 4.1 | 8.0 |                  |
| TAWNH2290T | □      | □     | 22.9    | 14.6 | 10.4 | 4.2 | 8.0 | TAWMN<br>2600S25 |

| 규격         | 코팅     |       | 치수 (mm) |      |      |     |     | 적용홀더             |
|------------|--------|-------|---------|------|------|-----|-----|------------------|
|            | VP15TF | VP10H | CDI     | INSL | LF   | PL  | S   |                  |
| TAWNH2300T | ●      | □     | 23.0    | 14.5 | 10.3 | 4.2 | 8.0 | TAWSN<br>2300S25 |
| TAWNH2310T | □      | □     | 23.1    | 14.5 | 10.3 | 4.2 | 8.0 |                  |
| TAWNH2320T | □      | □     | 23.2    | 14.5 | 10.3 | 4.2 | 8.0 | TAWMN<br>2300S25 |
| TAWNH2330T | □      | □     | 23.3    | 14.5 | 10.3 | 4.2 | 8.0 |                  |
| TAWNH2340T | □      | □     | 23.4    | 14.6 | 10.3 | 4.3 | 8.0 | TAWLN<br>2300S25 |
| TAWNH2350T | ●      | □     | 23.5    | 14.5 | 10.2 | 4.3 | 8.0 |                  |
| TAWNH2360T | □      | □     | 23.6    | 14.5 | 10.2 | 4.3 | 8.0 | TAWSN<br>2400S32 |
| TAWNH2370T | □      | □     | 23.7    | 14.5 | 10.2 | 4.3 | 8.0 |                  |
| TAWNH2380T | □      | □     | 23.8    | 14.5 | 10.2 | 4.3 | 8.0 | TAWMN<br>2400S32 |
| TAWNH2390T | □      | □     | 23.9    | 14.5 | 10.2 | 4.3 | 8.0 |                  |
| TAWNH2400T | ●      | □     | 24.0    | 14.5 | 10.1 | 4.4 | 8.0 | TAWLN<br>2400S32 |
| TAWNH2410T | □      | □     | 24.1    | 14.5 | 10.1 | 4.4 | 8.0 |                  |
| TAWNH2420T | □      | □     | 24.2    | 14.5 | 10.1 | 4.4 | 8.0 | TAWSN<br>2500S32 |
| TAWNH2430T | □      | □     | 24.3    | 14.5 | 10.1 | 4.4 | 8.0 |                  |
| TAWNH2440T | □      | □     | 24.4    | 14.5 | 10.1 | 4.4 | 8.0 | TAWMN<br>2500S32 |
| TAWNH2450T | ●      | □     | 24.5    | 16.2 | 11.7 | 4.5 | 9.0 |                  |
| TAWNH2460T | □      | □     | 24.6    | 16.2 | 11.7 | 4.5 | 9.0 | TAWLN<br>2500S32 |
| TAWNH2470T | □      | □     | 24.7    | 16.2 | 11.7 | 4.5 | 9.0 |                  |
| TAWNH2480T | □      | □     | 24.8    | 16.2 | 11.7 | 4.5 | 9.0 | TAWSN<br>2600S32 |
| TAWNH2490T | □      | □     | 24.9    | 16.2 | 11.7 | 4.5 | 9.0 |                  |
| TAWNH2500T | ●      | □     | 25.0    | 16.1 | 11.6 | 4.5 | 9.0 | TAWMN<br>2600S32 |
| TAWNH2510T | □      | □     | 25.1    | 16.2 | 11.6 | 4.6 | 9.0 |                  |
| TAWNH2520T | □      | □     | 25.2    | 16.2 | 11.6 | 4.6 | 9.0 | TAWLN<br>2600S32 |
| TAWNH2530T | □      | □     | 25.3    | 16.2 | 11.6 | 4.6 | 9.0 |                  |
| TAWNH2540T | □      | □     | 25.4    | 16.2 | 11.6 | 4.6 | 9.0 | TAWSN<br>2700S32 |
| TAWNH2550T | ●      | □     | 25.5    | 16.1 | 11.5 | 4.6 | 9.0 |                  |
| TAWNH2560T | □      | □     | 25.6    | 16.2 | 11.5 | 4.7 | 9.0 | TAWMN<br>2700S32 |
| TAWNH2570T | □      | □     | 25.7    | 16.2 | 11.5 | 4.7 | 9.0 |                  |
| TAWNH2580T | □      | □     | 25.8    | 16.2 | 11.5 | 4.7 | 9.0 | TAWLN<br>2700S32 |
| TAWNH2590T | □      | □     | 25.9    | 16.2 | 11.5 | 4.7 | 9.0 |                  |
| TAWNH2600T | ●      | □     | 26.0    | 16.1 | 11.4 | 4.7 | 9.0 | TAWSN<br>2800S32 |
| TAWNH2610T | □      | □     | 26.1    | 16.1 | 11.4 | 4.7 | 9.0 |                  |
| TAWNH2620T | □      | □     | 26.2    | 16.2 | 11.4 | 4.8 | 9.0 | TAWMN<br>2800S32 |
| TAWNH2630T | □      | □     | 26.3    | 16.2 | 11.4 | 4.8 | 9.0 |                  |
| TAWNH2640T | □      | □     | 26.4    | 16.2 | 11.4 | 4.8 | 9.0 | TAWLN<br>2800S32 |
| TAWNH2650T | ●      | □     | 26.5    | 16.1 | 11.3 | 4.8 | 9.0 |                  |
| TAWNH2660T | □      | □     | 26.6    | 16.1 | 11.3 | 4.8 | 9.0 | TAWSN<br>2900S32 |
| TAWNH2670T | □      | □     | 26.7    | 16.2 | 11.3 | 4.9 | 9.0 |                  |
| TAWNH2680T | □      | □     | 26.8    | 16.2 | 11.3 | 4.9 | 9.0 | TAWMN<br>2900S32 |
| TAWNH2690T | □      | □     | 26.9    | 16.2 | 11.3 | 4.9 | 9.0 |                  |
| TAWNH2700T | ●      | □     | 27.0    | 16.1 | 11.2 | 4.9 | 9.0 | TAWLN<br>2900S32 |
| TAWNH2710T | □      | □     | 27.1    | 16.1 | 11.2 | 4.9 | 9.0 |                  |
| TAWNH2720T | □      | □     | 27.2    | 16.1 | 11.2 | 4.9 | 9.0 | TAWSN<br>3000S32 |
| TAWNH2730T | □      | □     | 27.3    | 16.2 | 11.2 | 5.0 | 9.0 |                  |
| TAWNH2740T | □      | □     | 27.4    | 16.2 | 11.2 | 5.0 | 9.0 | TAWMN<br>3000S32 |

● : 표준재고품 □ : 수주생산품  
(1케이스 1개 포장입니다)

| 규격         | 코팅     |       | 치수 (mm) |      |      |     |      | 적용홀더             |
|------------|--------|-------|---------|------|------|-----|------|------------------|
|            | VP15TF | VP10H | CDI     | INSL | LF   | PL  | S    |                  |
| TAWNH2750T | ●      | □     | 27.5    | 17.3 | 12.3 | 5.0 | 10.0 | TAWSN<br>2800S32 |
| TAWNH2760T | □      | □     | 27.6    | 17.3 | 12.3 | 5.0 | 10.0 |                  |
| TAWNH2770T | □      | □     | 27.7    | 17.3 | 12.3 | 5.0 | 10.0 | TAWMN<br>2800S32 |
| TAWNH2780T | □      | □     | 27.8    | 17.4 | 12.3 | 5.1 | 10.0 |                  |
| TAWNH2790T | □      | □     | 27.9    | 17.4 | 12.3 | 5.1 | 10.0 | TAWLN<br>2800S32 |
| TAWNH2800T | ●      | □     | 28.0    | 17.3 | 12.2 | 5.1 | 10.0 |                  |
| TAWNH2810T | □      | □     | 28.1    | 17.3 | 12.2 | 5.1 | 10.0 |                  |
| TAWNH2820T | □      | □     | 28.2    | 17.3 | 12.2 | 5.1 | 10.0 |                  |
| TAWNH2830T | □      | □     | 28.3    | 17.4 | 12.2 | 5.2 | 10.0 |                  |
| TAWNH2840T | □      | □     | 28.4    | 17.4 | 12.2 | 5.2 | 10.0 |                  |
| TAWNH2850T | ●      | □     | 28.5    | 17.3 | 12.1 | 5.2 | 10.0 | TAWSN<br>2900S32 |
| TAWNH2860T | □      | □     | 28.6    | 17.3 | 12.1 | 5.2 | 10.0 |                  |
| TAWNH2870T | □      | □     | 28.7    | 17.3 | 12.1 | 5.2 | 10.0 | TAWMN<br>2900S32 |
| TAWNH2880T | □      | □     | 28.8    | 17.3 | 12.1 | 5.2 | 10.0 |                  |
| TAWNH2890T | □      | □     | 28.9    | 17.4 | 12.1 | 5.3 | 10.0 | TAWLN<br>2900S32 |
| TAWNH2900T | ●      | □     | 29.0    | 17.3 | 12.0 | 5.3 | 10.0 |                  |
| TAWNH2910T | □      | □     | 29.1    | 17.3 | 12.0 | 5.3 | 10.0 |                  |
| TAWNH2920T | □      | □     | 29.2    | 17.3 | 12.0 | 5.3 | 10.0 |                  |
| TAWNH2930T | □      | □     | 29.3    | 17.3 | 12.0 | 5.3 | 10.0 |                  |
| TAWNH2940T | □      | □     | 29.4    | 17.4 | 12.0 | 5.4 | 10.0 |                  |

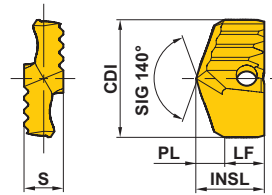
| 규격         | 코팅     |       | 치수 (mm) |      |      |     |      | 적용홀더             |
|------------|--------|-------|---------|------|------|-----|------|------------------|
|            | VP15TF | VP10H | CDI     | INSL | LF   | PL  | S    |                  |
| TAWNH2950T | ●      | □     | 29.5    | 17.3 | 11.9 | 5.4 | 10.0 | TAWSN<br>3000S32 |
| TAWNH2960T | □      | □     | 29.6    | 17.3 | 11.9 | 5.4 | 10.0 |                  |
| TAWNH2970T | □      | □     | 29.7    | 17.3 | 11.9 | 5.4 | 10.0 | TAWMN<br>3000S32 |
| TAWNH2980T | □      | □     | 29.8    | 17.3 | 11.9 | 5.4 | 10.0 |                  |
| TAWNH2990T | □      | □     | 29.9    | 17.3 | 11.9 | 5.4 | 10.0 | TAWLN<br>3000S32 |
| TAWNH3000T | ●      | □     | 30.0    | 17.3 | 11.8 | 5.5 | 10.0 |                  |
| TAWNH3010T | □      | □     | 30.1    | 17.3 | 11.8 | 5.5 | 10.0 |                  |
| TAWNH3020T | □      | □     | 30.2    | 17.3 | 11.8 | 5.5 | 10.0 |                  |
| TAWNH3030T | □      | □     | 30.3    | 17.3 | 11.8 | 5.5 | 10.0 |                  |
| TAWNH3040T | □      | □     | 30.4    | 17.3 | 11.8 | 5.5 | 10.0 |                  |

| 대응 드릴팁 외관<br>형상                                                                                                                                                                               | 규격         | 코팅     |  | 치수 (mm) |      |      |     |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------|--|---------|------|------|-----|-----|
|                                                                                                                                                                                               |            | VP15TF |  | CDI     | INSL | LF   | PL  | S   |
| <b>TAW H형</b><br>P229   | TAWBH2450T | ●      |  | 24.5    | 15.0 | 11.7 | 3.3 | 9.0 |
|                                                                                                                                                                                               | TAWBH2460T | □      |  | 24.6    | 15.0 | 11.7 | 3.3 | 9.0 |
|                                                                                                                                                                                               | TAWBH2470T | ●      |  | 24.7    | 15.0 | 11.7 | 3.3 | 9.0 |
|                                                                                                                                                                                               | TAWBH2650T | □      |  | 26.5    | 14.9 | 11.3 | 3.6 | 9.0 |
|                                                                                                                                                                                               | TAWBH2670T | ●      |  | 26.7    | 14.9 | 11.3 | 3.6 | 9.0 |
|                                                                                                                                                                                               |            |        |  |         |      |      |     |     |

# 드릴용 팁

편밀링 0도  
일반용  
상

TAW H형  
(주철용)  
P219



| 규격          | 코팅     | 치수 (mm) |      |     |     |     | 적용홀더             |
|-------------|--------|---------|------|-----|-----|-----|------------------|
|             | DP5010 | CDI     | INSL | LF  | PL  | S   |                  |
| TAWKH1850TG | ●      | 18.5    | 12.7 | 8.6 | 4.1 | 7.0 | TAWSN<br>1900S25 |
| TAWKH1860TG | ●      | 18.6    | 12.7 | 8.6 | 4.1 | 7.0 |                  |
| TAWKH1870TG | ●      | 18.7    | 12.7 | 8.6 | 4.1 | 7.0 |                  |
| TAWKH1880TG | ●      | 18.8    | 12.7 | 8.6 | 4.1 | 7.0 |                  |
| TAWKH1890TG | ●      | 18.9    | 12.7 | 8.6 | 4.1 | 7.0 |                  |
| TAWKH1900TG | ●      | 19.0    | 12.6 | 8.5 | 4.1 | 7.0 | TAWMN<br>1900S25 |
| TAWKH1910TG | ●      | 19.1    | 12.7 | 8.5 | 4.2 | 7.0 | TAWLN<br>1900S25 |
| TAWKH1920TG | ●      | 19.2    | 12.7 | 8.5 | 4.2 | 7.0 |                  |
| TAWKH1930TG | ●      | 19.3    | 12.7 | 8.5 | 4.2 | 7.0 |                  |
| TAWKH1940TG | ●      | 19.4    | 12.7 | 8.5 | 4.2 | 7.0 |                  |
| TAWKH1950TG | ●      | 19.5    | 12.6 | 8.4 | 4.2 | 7.0 |                  |
| TAWKH1960TG | ●      | 19.6    | 12.7 | 8.4 | 4.3 | 7.0 | TAWSN<br>2000S25 |
| TAWKH1970TG | ●      | 19.7    | 12.7 | 8.4 | 4.3 | 7.0 |                  |
| TAWKH1980TG | ●      | 19.8    | 12.7 | 8.4 | 4.3 | 7.0 |                  |
| TAWKH1990TG | ●      | 19.9    | 12.7 | 8.4 | 4.3 | 7.0 |                  |
| TAWKH2000TG | ●      | 20.0    | 12.6 | 8.3 | 4.3 | 7.0 |                  |
| TAWKH2010TG | □      | 20.1    | 12.6 | 8.3 | 4.3 | 7.0 | TAWLN<br>2000S25 |
| TAWKH2020TG | □      | 20.2    | 12.7 | 8.3 | 4.4 | 7.0 |                  |
| TAWKH2030TG | □      | 20.3    | 12.7 | 8.3 | 4.4 | 7.0 |                  |
| TAWKH2040TG | □      | 20.4    | 12.7 | 8.3 | 4.4 | 7.0 |                  |
| TAWKH2050TG | ●      | 20.5    | 12.6 | 8.2 | 4.4 | 7.0 | TAWSN<br>2100S25 |
| TAWKH2060TG | □      | 20.6    | 12.6 | 8.2 | 4.4 | 7.0 |                  |
| TAWKH2070TG | □      | 20.7    | 12.7 | 8.2 | 4.5 | 7.0 |                  |
| TAWKH2080TG | □      | 20.8    | 12.7 | 8.2 | 4.5 | 7.0 |                  |
| TAWKH2090TG | □      | 20.9    | 12.7 | 8.2 | 4.5 | 7.0 |                  |
| TAWKH2100TG | ●      | 21.0    | 12.6 | 8.1 | 4.5 | 7.0 | TAWMN<br>2100S25 |
| TAWKH2110TG | □      | 21.1    | 12.6 | 8.1 | 4.5 | 7.0 | TAWLN<br>2100S25 |
| TAWKH2120TG | □      | 21.2    | 12.6 | 8.1 | 4.5 | 7.0 |                  |
| TAWKH2130TG | □      | 21.3    | 12.7 | 8.1 | 4.6 | 7.0 |                  |
| TAWKH2140TG | □      | 21.4    | 12.7 | 8.1 | 4.6 | 7.0 |                  |
| TAWKH2150TG | ●      | 21.5    | 14.5 | 9.8 | 4.7 | 8.0 | TAWSN<br>2200S25 |
| TAWKH2160TG | □      | 21.6    | 14.5 | 9.8 | 4.7 | 8.0 |                  |
| TAWKH2170TG | □      | 21.7    | 14.5 | 9.8 | 4.7 | 8.0 |                  |
| TAWKH2180TG | □      | 21.8    | 14.6 | 9.8 | 4.8 | 8.0 |                  |
| TAWKH2190TG | □      | 21.9    | 14.6 | 9.8 | 4.8 | 8.0 |                  |
| TAWKH2200TG | ●      | 22.0    | 14.5 | 9.7 | 4.8 | 8.0 | TAWMN<br>2200S25 |
| TAWKH2210TG | □      | 22.1    | 14.5 | 9.7 | 4.8 | 8.0 | TAWLN<br>2200S25 |
| TAWKH2220TG | □      | 22.2    | 14.5 | 9.7 | 4.8 | 8.0 |                  |
| TAWKH2230TG | □      | 22.3    | 14.5 | 9.7 | 4.8 | 8.0 |                  |
| TAWKH2240TG | □      | 22.4    | 14.6 | 9.7 | 4.9 | 8.0 |                  |
| TAWKH2250TG | ●      | 22.5    | 14.5 | 9.6 | 4.9 | 8.0 | TAWSN<br>2300S25 |
| TAWKH2260TG | □      | 22.6    | 14.5 | 9.6 | 4.9 | 8.0 |                  |
| TAWKH2270TG | □      | 22.7    | 14.5 | 9.6 | 4.9 | 8.0 |                  |
| TAWKH2280TG | □      | 22.8    | 14.5 | 9.6 | 4.9 | 8.0 |                  |
| TAWKH2290TG | □      | 22.9    | 14.6 | 9.6 | 5.0 | 8.0 |                  |

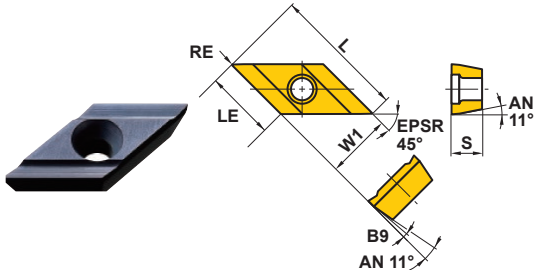
| 규격          | 코팅     | 치수 (mm) |      |      |     |     | 적용홀더             |
|-------------|--------|---------|------|------|-----|-----|------------------|
|             | DP5010 | CDI     | INSL | LF   | PL  | S   |                  |
| TAWKH2300TG | ●      | 23.0    | 14.5 | 9.5  | 5.0 | 8.0 | TAWSN<br>2300S25 |
| TAWKH2310TG | □      | 23.1    | 14.5 | 9.5  | 5.0 | 8.0 |                  |
| TAWKH2320TG | □      | 23.2    | 14.5 | 9.5  | 5.0 | 8.0 |                  |
| TAWKH2330TG | □      | 23.3    | 14.5 | 9.5  | 5.0 | 8.0 |                  |
| TAWKH2340TG | □      | 23.4    | 14.5 | 9.5  | 5.0 | 8.0 |                  |
| TAWKH2350TG | ●      | 23.5    | 14.5 | 9.4  | 5.1 | 8.0 | TAWSN<br>2400S32 |
| TAWKH2360TG | □      | 23.6    | 14.5 | 9.4  | 5.1 | 8.0 |                  |
| TAWKH2370TG | □      | 23.7    | 14.5 | 9.4  | 5.1 | 8.0 |                  |
| TAWKH2380TG | □      | 23.8    | 14.5 | 9.4  | 5.1 | 8.0 |                  |
| TAWKH2390TG | □      | 23.9    | 14.5 | 9.4  | 5.1 | 8.0 |                  |
| TAWKH2400TG | ●      | 24.0    | 14.5 | 9.3  | 5.2 | 8.0 | TAWMN<br>2400S32 |
| TAWKH2410TG | □      | 24.1    | 14.5 | 9.3  | 5.2 | 8.0 | TAWLN<br>2400S32 |
| TAWKH2420TG | □      | 24.2    | 14.5 | 9.3  | 5.2 | 8.0 |                  |
| TAWKH2430TG | □      | 24.3    | 14.5 | 9.3  | 5.2 | 8.0 |                  |
| TAWKH2440TG | □      | 24.4    | 14.5 | 9.3  | 5.2 | 8.0 |                  |
| TAWKH2450TG | ●      | 24.5    | 16.0 | 10.7 | 5.3 | 9.0 | TAWSN<br>2500S32 |
| TAWKH2460TG | □      | 24.6    | 16.1 | 10.7 | 5.4 | 9.0 |                  |
| TAWKH2470TG | □      | 24.7    | 16.1 | 10.7 | 5.4 | 9.0 |                  |
| TAWKH2480TG | □      | 24.8    | 16.1 | 10.7 | 5.4 | 9.0 |                  |
| TAWKH2490TG | □      | 24.9    | 16.1 | 10.7 | 5.4 | 9.0 |                  |
| TAWKH2500TG | ●      | 25.0    | 16.1 | 10.7 | 5.4 | 9.0 | TAWMN<br>2500S32 |
| TAWKH2510TG | □      | 25.1    | 16.2 | 10.7 | 5.5 | 9.0 | TAWLN<br>2500S32 |
| TAWKH2520TG | □      | 25.2    | 16.2 | 10.7 | 5.5 | 9.0 |                  |
| TAWKH2530TG | □      | 25.3    | 16.2 | 10.7 | 5.5 | 9.0 |                  |
| TAWKH2540TG | □      | 25.4    | 16.2 | 10.7 | 5.5 | 9.0 |                  |
| TAWKH2550TG | ●      | 25.5    | 16.1 | 10.6 | 5.5 | 9.0 | TAWSN<br>2600S32 |
| TAWKH2560TG | □      | 25.6    | 16.1 | 10.6 | 5.5 | 9.0 |                  |
| TAWKH2570TG | □      | 25.7    | 16.2 | 10.6 | 5.6 | 9.0 |                  |
| TAWKH2580TG | □      | 25.8    | 16.2 | 10.6 | 5.6 | 9.0 |                  |
| TAWKH2590TG | □      | 25.9    | 16.2 | 10.6 | 5.6 | 9.0 |                  |
| TAWKH2600TG | ●      | 26.0    | 16.1 | 10.5 | 5.6 | 9.0 | TAWMN<br>2600S32 |
| TAWKH2610TG | □      | 26.1    | 16.1 | 10.5 | 5.6 | 9.0 | TAWLN<br>2600S32 |
| TAWKH2620TG | □      | 26.2    | 16.2 | 10.5 | 5.7 | 9.0 |                  |
| TAWKH2630TG | □      | 26.3    | 16.2 | 10.5 | 5.7 | 9.0 |                  |
| TAWKH2640TG | □      | 26.4    | 16.2 | 10.5 | 5.7 | 9.0 |                  |
| TAWKH2650TG | ●      | 26.5    | 16.1 | 10.4 | 5.7 | 9.0 | TAWSN<br>2700S32 |
| TAWKH2660TG | □      | 26.6    | 16.1 | 10.4 | 5.7 | 9.0 |                  |
| TAWKH2670TG | □      | 26.7    | 16.1 | 10.4 | 5.7 | 9.0 |                  |
| TAWKH2680TG | □      | 26.8    | 16.2 | 10.4 | 5.8 | 9.0 |                  |
| TAWKH2690TG | □      | 26.9    | 16.2 | 10.4 | 5.8 | 9.0 |                  |
| TAWKH2700TG | ●      | 27.0    | 16.1 | 10.3 | 5.8 | 9.0 | TAWMN<br>2700S32 |
| TAWKH2710TG | □      | 27.1    | 16.1 | 10.3 | 5.8 | 9.0 | TAWLN<br>2700S32 |
| TAWKH2720TG | □      | 27.2    | 16.1 | 10.3 | 5.8 | 9.0 |                  |
| TAWKH2730TG | □      | 27.3    | 16.2 | 10.3 | 5.9 | 9.0 |                  |
| TAWKH2740TG | □      | 27.4    | 16.2 | 10.3 | 5.9 | 9.0 |                  |

● : 표준재고품 □ : 수주생산품  
(1케이스 1개 포장입니다)

| 규격          | 코팅     | 치수 (mm) |      |      |     |      | 적용홀더                                                     |
|-------------|--------|---------|------|------|-----|------|----------------------------------------------------------|
|             | DP5010 | CDI     | INSL | LF   | PL  | S    |                                                          |
| TAWKH2750TG | ●      | 27.5    | 17.2 | 11.2 | 6.0 | 10.0 | TAWSN<br>2800S32<br>TAWMN<br>2800S32<br>TAWLN<br>2800S32 |
| TAWKH2760TG | □      | 27.6    | 17.2 | 11.2 | 6.0 | 10.0 |                                                          |
| TAWKH2770TG | □      | 27.7    | 17.2 | 11.2 | 6.0 | 10.0 |                                                          |
| TAWKH2780TG | □      | 27.8    | 17.3 | 11.2 | 6.1 | 10.0 |                                                          |
| TAWKH2790TG | □      | 27.9    | 17.3 | 11.2 | 6.1 | 10.0 |                                                          |
| TAWKH2800TG | ●      | 28.0    | 17.3 | 11.2 | 6.1 | 10.0 |                                                          |
| TAWKH2810TG | □      | 28.1    | 17.3 | 11.2 | 6.1 | 10.0 |                                                          |
| TAWKH2820TG | □      | 28.2    | 17.3 | 11.2 | 6.1 | 10.0 |                                                          |
| TAWKH2830TG | □      | 28.3    | 17.3 | 11.2 | 6.1 | 10.0 |                                                          |
| TAWKH2840TG | □      | 28.4    | 17.4 | 11.2 | 6.2 | 10.0 |                                                          |
| TAWKH2850TG | ●      | 28.5    | 17.3 | 11.1 | 6.2 | 10.0 | TAWSN<br>2900S32<br>TAWMN<br>2900S32<br>TAWLN<br>2900S32 |
| TAWKH2860TG | □      | 28.6    | 17.3 | 11.1 | 6.2 | 10.0 |                                                          |
| TAWKH2870TG | □      | 28.7    | 17.3 | 11.1 | 6.2 | 10.0 |                                                          |
| TAWKH2880TG | □      | 28.8    | 17.3 | 11.1 | 6.2 | 10.0 |                                                          |
| TAWKH2890TG | □      | 28.9    | 17.4 | 11.1 | 6.3 | 10.0 |                                                          |
| TAWKH2900TG | ●      | 29.0    | 17.3 | 11.0 | 6.3 | 10.0 |                                                          |
| TAWKH2910TG | □      | 29.1    | 17.3 | 11.0 | 6.3 | 10.0 |                                                          |
| TAWKH2920TG | □      | 29.2    | 17.3 | 11.0 | 6.3 | 10.0 |                                                          |
| TAWKH2930TG | □      | 29.3    | 17.3 | 11.0 | 6.3 | 10.0 |                                                          |
| TAWKH2940TG | □      | 29.4    | 17.3 | 11.0 | 6.3 | 10.0 |                                                          |

| 규격          | 코팅     | 치수 (mm) |      |      |     |      | 적용홀더                                                     |
|-------------|--------|---------|------|------|-----|------|----------------------------------------------------------|
|             | DP5010 | CDI     | INSL | LF   | PL  | S    |                                                          |
| TAWKH2950TG | ●      | 29.5    | 17.3 | 10.9 | 6.4 | 10.0 | TAWSN<br>3000S32<br>TAWMN<br>3000S32<br>TAWLN<br>3000S32 |
| TAWKH2960TG | □      | 29.6    | 17.3 | 10.9 | 6.4 | 10.0 |                                                          |
| TAWKH2970TG | □      | 29.7    | 17.3 | 10.9 | 6.4 | 10.0 |                                                          |
| TAWKH2980TG | □      | 29.8    | 17.3 | 10.9 | 6.4 | 10.0 |                                                          |
| TAWKH2990TG | □      | 29.9    | 17.3 | 10.9 | 6.4 | 10.0 |                                                          |
| TAWKH3000TG | ●      | 30.0    | 17.3 | 10.8 | 6.5 | 10.0 |                                                          |
| TAWKH3010TG | □      | 30.1    | 17.3 | 10.8 | 6.5 | 10.0 |                                                          |
| TAWKH3020TG | □      | 30.2    | 17.3 | 10.8 | 6.5 | 10.0 |                                                          |
| TAWKH3030TG | □      | 30.3    | 17.3 | 10.8 | 6.5 | 10.0 |                                                          |
| TAWKH3040TG | □      | 30.4    | 17.3 | 10.8 | 6.5 | 10.0 |                                                          |

## TAW 드릴 챔퍼링 모듈용 인서트

| 외관<br>형상                                                                            | 규격              | 코팅     | 치수 (mm) |      |     |      |     |    |
|-------------------------------------------------------------------------------------|-----------------|--------|---------|------|-----|------|-----|----|
|                                                                                     |                 | VP15TF | L       | LE   | WI  | S    | RE  | B9 |
|  | TAWC12T301-45GM | ●      | 17.4    | 9.05 | 8.5 | 3.97 | 0.1 | 5° |
|                                                                                     |                 |        |         |      |     |      |     |    |

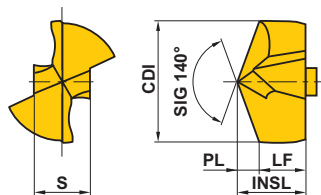
● : 표준재고품 (1케이스 1개 포장입니다)

# 드릴용 팁

밀링공구용 팁

사양

STAW  
P210



| 규격          | 코팅     |       | 치수 (mm) |      |     |     |     | 적용홀더          |
|-------------|--------|-------|---------|------|-----|-----|-----|---------------|
|             | VP15TF | VP10H | CDI     | INSL | LF  | PL  | S   |               |
| STAWN1000TH | ●      | □     | 10.0    | 5.6  | 3.8 | 1.8 | 4.6 | STAWSS1000S16 |
| STAWN1010TH | ●      | □     | 10.1    | 5.6  | 3.8 | 1.8 | 4.6 | STAWSN1000S16 |
| STAWN1020TH | ●      | □     | 10.2    | 5.7  | 3.8 | 1.9 | 4.6 | STAWMN1000S16 |
| STAWN1030TH | ●      | □     | 10.3    | 5.7  | 3.8 | 1.9 | 4.6 | STAWLN1000S16 |
| STAWN1040TH | ●      | □     | 10.4    | 5.7  | 3.8 | 1.9 | 4.6 |               |
| STAWN1050TH | ●      | □     | 10.5    | 5.9  | 4.0 | 1.9 | 4.8 | STAWSS1050S16 |
| STAWN1060TH | ●      | □     | 10.6    | 5.9  | 4.0 | 1.9 | 4.8 | STAWSN1050S16 |
| STAWN1070TH | ●      | □     | 10.7    | 5.9  | 4.0 | 1.9 | 4.8 | STAWMN1050S16 |
| STAWN1080TH | ●      | □     | 10.8    | 6.0  | 4.0 | 2.0 | 4.8 | STAWLN1050S16 |
| STAWN1090TH | ●      | □     | 10.9    | 6.0  | 4.0 | 2.0 | 4.8 |               |
| STAWN1100TH | ●      | □     | 11.0    | 6.2  | 4.2 | 2.0 | 5.1 | STAWSS1100S16 |
| STAWN1110TH | ●      | □     | 11.1    | 6.2  | 4.2 | 2.0 | 5.1 | STAWSN1100S16 |
| STAWN1120TH | ●      | □     | 11.2    | 6.2  | 4.2 | 2.0 | 5.1 | STAWMN1100S16 |
| STAWN1130TH | ●      | □     | 11.3    | 6.3  | 4.2 | 2.1 | 5.1 | STAWLN1100S16 |
| STAWN1140TH | ●      | □     | 11.4    | 6.3  | 4.2 | 2.1 | 5.1 |               |
| STAWN1150TH | ●      | □     | 11.5    | 6.5  | 4.4 | 2.1 | 5.3 | STAWSS1150S16 |
| STAWN1160TH | ●      | □     | 11.6    | 6.5  | 4.4 | 2.1 | 5.3 | STAWSN1150S16 |
| STAWN1170TH | ●      | □     | 11.7    | 6.5  | 4.4 | 2.1 | 5.3 | STAWMN1150S16 |
| STAWN1180TH | ●      | □     | 11.8    | 6.5  | 4.4 | 2.1 | 5.3 | STAWLN1150S16 |
| STAWN1190TH | ●      | □     | 11.9    | 6.6  | 4.4 | 2.2 | 5.3 |               |
| STAWN1200TH | ●      | □     | 12.0    | 6.8  | 4.6 | 2.2 | 5.5 | STAWSS1200S16 |
| STAWN1210TH | ●      | □     | 12.1    | 6.8  | 4.6 | 2.2 | 5.5 | STAWSN1200S16 |
| STAWN1220TH | ●      | □     | 12.2    | 6.8  | 4.6 | 2.2 | 5.5 | STAWMN1200S16 |
| STAWN1230TH | ●      | □     | 12.3    | 6.8  | 4.6 | 2.2 | 5.5 | STAWLN1200S16 |
| STAWN1240TH | ●      | □     | 12.4    | 6.9  | 4.6 | 2.3 | 5.5 |               |
| STAWN1250TH | ●      | □     | 12.5    | 7.1  | 4.8 | 2.3 | 5.8 | STAWSS1250S16 |
| STAWN1260TH | ●      | □     | 12.6    | 7.1  | 4.8 | 2.3 | 5.8 | STAWSN1250S16 |
| STAWN1270TH | ●      | □     | 12.7    | 7.1  | 4.8 | 2.3 | 5.8 | STAWMN1250S16 |
| STAWN1280TH | ●      | □     | 12.8    | 7.1  | 4.8 | 2.3 | 5.8 | STAWLN1250S16 |
| STAWN1290TH | ●      | □     | 12.9    | 7.1  | 4.8 | 2.3 | 5.8 |               |
| STAWN1300TH | ●      | □     | 13.0    | 7.3  | 4.9 | 2.4 | 6.0 | STAWSS1300S16 |
| STAWN1310TH | ●      | □     | 13.1    | 7.3  | 4.9 | 2.4 | 6.0 | STAWSN1300S16 |
| STAWN1320TH | ●      | □     | 13.2    | 7.3  | 4.9 | 2.4 | 6.0 | STAWMN1300S16 |
| STAWN1330TH | ●      | □     | 13.3    | 7.3  | 4.9 | 2.4 | 6.0 | STAWLN1300S16 |
| STAWN1340TH | ●      | □     | 13.4    | 7.3  | 4.9 | 2.4 | 6.0 |               |
| STAWN1350TH | ●      | □     | 13.5    | 7.6  | 5.1 | 2.5 | 6.2 | STAWSS1350S16 |
| STAWN1360TH | ●      | □     | 13.6    | 7.6  | 5.1 | 2.5 | 6.2 | STAWSN1350S16 |
| STAWN1370TH | ●      | □     | 13.7    | 7.6  | 5.1 | 2.5 | 6.2 | STAWMN1350S16 |
| STAWN1380TH | ●      | □     | 13.8    | 7.6  | 5.1 | 2.5 | 6.2 | STAWLN1350S16 |
| STAWN1390TH | ●      | □     | 13.9    | 7.6  | 5.1 | 2.5 | 6.2 |               |
| STAWN1400TH | ●      |       | 14.0    | 7.8  | 5.3 | 2.5 | 6.4 | STAWSS1400S16 |
| STAWN1410TH | ●      |       | 14.1    | 7.9  | 5.3 | 2.6 | 6.4 | STAWSN1400S16 |
| STAWN1420TH | ●      |       | 14.2    | 7.9  | 5.3 | 2.6 | 6.4 | STAWMN1400S16 |
| STAWN1430TH | ●      |       | 14.3    | 7.9  | 5.3 | 2.6 | 6.4 | STAWLN1400S16 |
| STAWN1440TH | ●      |       | 14.4    | 7.9  | 5.3 | 2.6 | 6.4 |               |

밀링공구용 팁

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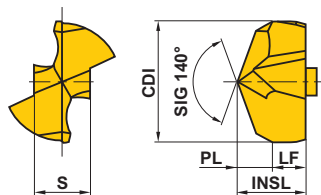
| 규격          | 코팅     |       | 치수 (mm) |      |     |     |     | 적용홀더                                                             |
|-------------|--------|-------|---------|------|-----|-----|-----|------------------------------------------------------------------|
|             | VP15TF | VP10H | CDI     | INSL | LF  | PL  | S   |                                                                  |
| STAWN1450TH | ●      |       | 14.5    | 8.1  | 5.5 | 2.6 | 6.7 | STAWSS1450S16<br>STAWSN1450S16<br>STAWMN1450S16<br>STAWLN1450S16 |
| STAWN1460TH | ●      |       | 14.6    | 8.2  | 5.5 | 2.7 | 6.7 |                                                                  |
| STAWN1470TH | ●      |       | 14.7    | 8.2  | 5.5 | 2.7 | 6.7 |                                                                  |
| STAWN1480TH | ●      |       | 14.8    | 8.2  | 5.5 | 2.7 | 6.7 |                                                                  |
| STAWN1490TH | ●      |       | 14.9    | 8.2  | 5.5 | 2.7 | 6.7 |                                                                  |
| STAWN1500TH | ●      |       | 15.0    | 8.4  | 5.7 | 2.7 | 6.9 | STAWSS1500S20<br>STAWSN1500S20<br>STAWMN1500S20<br>STAWLN1500S20 |
| STAWN1510TH | ●      |       | 15.1    | 8.4  | 5.7 | 2.7 | 6.9 |                                                                  |
| STAWN1520TH | ●      |       | 15.2    | 8.5  | 5.7 | 2.8 | 6.9 |                                                                  |
| STAWN1530TH | ●      |       | 15.3    | 8.5  | 5.7 | 2.8 | 6.9 |                                                                  |
| STAWN1540TH | ●      |       | 15.4    | 8.5  | 5.7 | 2.8 | 6.9 |                                                                  |
| STAWN1550T  | ●      |       | 15.5    | 8.7  | 5.9 | 2.8 | 7.1 | STAWSS1600S20<br>STAWSN1600S20<br>STAWMN1600S20<br>STAWLN1600S20 |
| STAWN1560T  | ●      |       | 15.6    | 8.7  | 5.9 | 2.8 | 7.1 |                                                                  |
| STAWN1570T  | ●      |       | 15.7    | 8.8  | 5.9 | 2.9 | 7.1 |                                                                  |
| STAWN1580T  | ●      |       | 15.8    | 8.8  | 5.9 | 2.9 | 7.1 |                                                                  |
| STAWN1590T  | ●      |       | 15.9    | 8.8  | 5.9 | 2.9 | 7.1 |                                                                  |
| STAWN1600T  | ●      |       | 16.0    | 8.8  | 5.9 | 2.9 | 7.1 |                                                                  |
| STAWN1610T  | ●      |       | 16.1    | 8.8  | 5.9 | 2.9 | 7.1 |                                                                  |
| STAWN1620T  | ●      |       | 16.2    | 8.8  | 5.9 | 2.9 | 7.1 |                                                                  |
| STAWN1630T  | ●      |       | 16.3    | 8.9  | 5.9 | 3.0 | 7.1 |                                                                  |
| STAWN1640T  | ●      |       | 16.4    | 8.9  | 5.9 | 3.0 | 7.1 |                                                                  |
| STAWN1650T  | ●      |       | 16.5    | 9.3  | 6.3 | 3.0 | 7.6 | STAWSS1700S20<br>STAWSN1700S20<br>STAWMN1700S20<br>STAWLN1700S20 |
| STAWN1660T  | ●      |       | 16.6    | 9.3  | 6.3 | 3.0 | 7.6 |                                                                  |
| STAWN1670T  | ●      |       | 16.7    | 9.3  | 6.3 | 3.0 | 7.6 |                                                                  |
| STAWN1680T  | ●      |       | 16.8    | 9.4  | 6.3 | 3.1 | 7.6 |                                                                  |
| STAWN1690T  | ●      |       | 16.9    | 9.4  | 6.3 | 3.1 | 7.6 |                                                                  |
| STAWN1700T  | ●      |       | 17.0    | 9.4  | 6.3 | 3.1 | 7.6 |                                                                  |
| STAWN1710T  | ●      |       | 17.1    | 9.4  | 6.3 | 3.1 | 7.6 |                                                                  |
| STAWN1720T  | ●      |       | 17.2    | 9.4  | 6.3 | 3.1 | 7.6 |                                                                  |
| STAWN1730T  | ●      |       | 17.3    | 9.4  | 6.3 | 3.1 | 7.6 |                                                                  |
| STAWN1740T  | ●      |       | 17.4    | 9.5  | 6.3 | 3.2 | 7.6 |                                                                  |
| STAWN1750T  | ●      |       | 17.5    | 9.9  | 6.7 | 3.2 | 8.1 | STAWSS1800S20<br>STAWSN1800S20<br>STAWMN1800S20<br>STAWLN1800S20 |
| STAWN1760T  | ●      |       | 17.6    | 9.9  | 6.7 | 3.2 | 8.1 |                                                                  |
| STAWN1770T  | ●      |       | 17.7    | 9.9  | 6.7 | 3.2 | 8.1 |                                                                  |
| STAWN1780T  | ●      |       | 17.8    | 9.9  | 6.7 | 3.2 | 8.1 |                                                                  |
| STAWN1790T  | ●      |       | 17.9    | 10.0 | 6.7 | 3.3 | 8.1 |                                                                  |
| STAWN1800T  | ●      |       | 18.0    | 10.0 | 6.7 | 3.3 | 8.1 |                                                                  |
| STAWN1810T  | ●      |       | 18.1    | 10.0 | 6.7 | 3.3 | 8.1 |                                                                  |
| STAWN1820T  | ●      |       | 18.2    | 10.0 | 6.7 | 3.3 | 8.1 |                                                                  |
| STAWN1830T  | ●      |       | 18.3    | 10.0 | 6.7 | 3.3 | 8.1 |                                                                  |
| STAWN1840T  | ●      |       | 18.4    | 10.0 | 6.7 | 3.3 | 8.1 |                                                                  |

# 드릴용 팁

밀링공구용 팁

사양

STAW  
P210



| 구 격         | 코팅     |  | 치수 (mm) |      |     |     |     | 적용 홀더                                                            |
|-------------|--------|--|---------|------|-----|-----|-----|------------------------------------------------------------------|
|             | DP5010 |  | CDI     | INSL | LF  | PL  | S   |                                                                  |
| STAWK1000TG | ●      |  | 10.0    | 5.6  | 3.3 | 2.3 | 4.6 | STAWSS1000S16<br>STAWSN1000S16<br>STAWMN1000S16<br>STAWLN1000S16 |
| STAWK1010TG | ●      |  | 10.1    | 5.6  | 3.3 | 2.3 | 4.6 |                                                                  |
| STAWK1020TG | ●      |  | 10.2    | 5.6  | 3.3 | 2.3 | 4.6 |                                                                  |
| STAWK1030TG | ●      |  | 10.3    | 5.7  | 3.3 | 2.4 | 4.6 |                                                                  |
| STAWK1040TG | ●      |  | 10.4    | 5.7  | 3.3 | 2.4 | 4.6 |                                                                  |
| STAWK1050TG | ●      |  | 10.5    | 5.9  | 3.5 | 2.4 | 4.8 | STAWSS1050S16<br>STAWSN1050S16<br>STAWMN1050S16<br>STAWLN1050S16 |
| STAWK1060TG | ●      |  | 10.6    | 5.9  | 3.5 | 2.4 | 4.8 |                                                                  |
| STAWK1070TG | ●      |  | 10.7    | 5.9  | 3.5 | 2.4 | 4.8 |                                                                  |
| STAWK1080TG | ●      |  | 10.8    | 5.9  | 3.5 | 2.4 | 4.8 |                                                                  |
| STAWK1090TG | ●      |  | 10.9    | 6.0  | 3.5 | 2.5 | 4.8 |                                                                  |
| STAWK1100TG | ●      |  | 11.0    | 6.2  | 3.7 | 2.5 | 5.1 | STAWSS1100S16<br>STAWSN1100S16<br>STAWMN1100S16<br>STAWLN1100S16 |
| STAWK1110TG | ●      |  | 11.1    | 6.2  | 3.7 | 2.5 | 5.1 |                                                                  |
| STAWK1120TG | ●      |  | 11.2    | 6.2  | 3.7 | 2.5 | 5.1 |                                                                  |
| STAWK1130TG | ●      |  | 11.3    | 6.2  | 3.7 | 2.5 | 5.1 |                                                                  |
| STAWK1140TG | ●      |  | 11.4    | 6.3  | 3.7 | 2.6 | 5.1 |                                                                  |
| STAWK1150TG | ●      |  | 11.5    | 6.5  | 3.9 | 2.6 | 5.3 | STAWSS1150S16<br>STAWSN1150S16<br>STAWMN1150S16<br>STAWLN1150S16 |
| STAWK1160TG | ●      |  | 11.6    | 6.5  | 3.9 | 2.6 | 5.3 |                                                                  |
| STAWK1170TG | ●      |  | 11.7    | 6.5  | 3.9 | 2.6 | 5.3 |                                                                  |
| STAWK1180TG | ●      |  | 11.8    | 6.5  | 3.9 | 2.6 | 5.3 |                                                                  |
| STAWK1190TG | ●      |  | 11.9    | 6.5  | 3.9 | 2.6 | 5.3 |                                                                  |
| STAWK1200TG | ●      |  | 12.0    | 6.8  | 4.1 | 2.7 | 5.5 | STAWSS1200S16<br>STAWSN1200S16<br>STAWMN1200S16<br>STAWLN1200S16 |
| STAWK1210TG | ●      |  | 12.1    | 6.8  | 4.1 | 2.7 | 5.5 |                                                                  |
| STAWK1220TG | ●      |  | 12.2    | 6.8  | 4.1 | 2.7 | 5.5 |                                                                  |
| STAWK1230TG | ●      |  | 12.3    | 6.8  | 4.1 | 2.7 | 5.5 |                                                                  |
| STAWK1240TG | ●      |  | 12.4    | 6.8  | 4.1 | 2.7 | 5.5 |                                                                  |
| STAWK1250TG | ●      |  | 12.5    | 7.0  | 4.2 | 2.8 | 5.8 | STAWSS1250S16<br>STAWSN1250S16<br>STAWMN1250S16<br>STAWLN1250S16 |
| STAWK1260TG | ●      |  | 12.6    | 7.0  | 4.2 | 2.8 | 5.8 |                                                                  |
| STAWK1270TG | ●      |  | 12.7    | 7.0  | 4.2 | 2.8 | 5.8 |                                                                  |
| STAWK1280TG | ●      |  | 12.8    | 7.0  | 4.2 | 2.8 | 5.8 |                                                                  |
| STAWK1290TG | ●      |  | 12.9    | 7.0  | 4.2 | 2.8 | 5.8 |                                                                  |
| STAWK1300TG | ●      |  | 13.0    | 7.2  | 4.4 | 2.8 | 6.0 | STAWSS1300S16<br>STAWSN1300S16<br>STAWMN1300S16<br>STAWLN1300S16 |
| STAWK1310TG | ●      |  | 13.1    | 7.3  | 4.4 | 2.9 | 6.0 |                                                                  |
| STAWK1320TG | ●      |  | 13.2    | 7.3  | 4.4 | 2.9 | 6.0 |                                                                  |
| STAWK1330TG | ●      |  | 13.3    | 7.3  | 4.4 | 2.9 | 6.0 |                                                                  |
| STAWK1340TG | ●      |  | 13.4    | 7.3  | 4.4 | 2.9 | 6.0 |                                                                  |
| STAWK1350TG | ●      |  | 13.5    | 7.5  | 4.6 | 2.9 | 6.2 | STAWSS1350S16<br>STAWSN1350S16<br>STAWMN1350S16<br>STAWLN1350S16 |
| STAWK1360TG | ●      |  | 13.6    | 7.6  | 4.6 | 3.0 | 6.2 |                                                                  |
| STAWK1370TG | ●      |  | 13.7    | 7.6  | 4.6 | 3.0 | 6.2 |                                                                  |
| STAWK1380TG | ●      |  | 13.8    | 7.6  | 4.6 | 3.0 | 6.2 |                                                                  |
| STAWK1390TG | ●      |  | 13.9    | 7.6  | 4.6 | 3.0 | 6.2 |                                                                  |

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| 규격          | 코팅     |  | 치수 (mm) |      |     |     |     | 적용 홀더                                                            |
|-------------|--------|--|---------|------|-----|-----|-----|------------------------------------------------------------------|
|             | DP5010 |  | CDI     | INSL | LF  | PL  | S   |                                                                  |
| STAWK1400TG | ●      |  | 14.0    | 7.8  | 4.8 | 3.0 | 6.4 | STAWSS1400S16<br>STAWSN1400S16<br>STAWMN1400S16<br>STAWLN1400S16 |
| STAWK1410TG | ●      |  | 14.1    | 7.8  | 4.8 | 3.0 | 6.4 |                                                                  |
| STAWK1420TG | ●      |  | 14.2    | 7.9  | 4.8 | 3.1 | 6.4 |                                                                  |
| STAWK1430TG | ●      |  | 14.3    | 7.9  | 4.8 | 3.1 | 6.4 |                                                                  |
| STAWK1440TG | ●      |  | 14.4    | 7.9  | 4.8 | 3.1 | 6.4 |                                                                  |
| STAWK1450TG | ●      |  | 14.5    | 8.1  | 5.0 | 3.1 | 6.7 | STAWSS1450S16<br>STAWSN1450S16<br>STAWMN1450S16<br>STAWLN1450S16 |
| STAWK1460TG | ●      |  | 14.6    | 8.1  | 5.0 | 3.1 | 6.7 |                                                                  |
| STAWK1470TG | ●      |  | 14.7    | 8.2  | 5.0 | 3.2 | 6.7 |                                                                  |
| STAWK1480TG | ●      |  | 14.8    | 8.2  | 5.0 | 3.2 | 6.7 |                                                                  |
| STAWK1490TG | ●      |  | 14.9    | 8.2  | 5.0 | 3.2 | 6.7 |                                                                  |
| STAWK1500TG | ●      |  | 15.0    | 8.4  | 5.2 | 3.2 | 6.9 | STAWSS1500S20<br>STAWSN1500S20<br>STAWMN1500S20<br>STAWLN1500S20 |
| STAWK1510TG | ●      |  | 15.1    | 8.4  | 5.2 | 3.2 | 6.9 |                                                                  |
| STAWK1520TG | ●      |  | 15.2    | 8.4  | 5.2 | 3.2 | 6.9 |                                                                  |
| STAWK1530TG | ●      |  | 15.3    | 8.5  | 5.2 | 3.3 | 6.9 |                                                                  |
| STAWK1540TG | ●      |  | 15.4    | 8.5  | 5.2 | 3.3 | 6.9 |                                                                  |
| STAWK1550TG | ●      |  | 15.5    | 8.7  | 5.3 | 3.4 | 7.1 | STAWSS1600S20<br>STAWSN1600S20<br>STAWMN1600S20<br>STAWLN1600S20 |
| STAWK1560TG | ●      |  | 15.6    | 8.7  | 5.3 | 3.4 | 7.1 |                                                                  |
| STAWK1570TG | ●      |  | 15.7    | 8.7  | 5.3 | 3.4 | 7.1 |                                                                  |
| STAWK1580TG | ●      |  | 15.8    | 8.8  | 5.3 | 3.5 | 7.1 |                                                                  |
| STAWK1590TG | ●      |  | 15.9    | 8.8  | 5.3 | 3.5 | 7.1 |                                                                  |
| STAWK1600TG | ●      |  | 16.0    | 8.8  | 5.3 | 3.5 | 7.1 |                                                                  |
| STAWK1610TG | ●      |  | 16.1    | 8.8  | 5.3 | 3.5 | 7.1 |                                                                  |
| STAWK1620TG | ●      |  | 16.2    | 8.8  | 5.3 | 3.5 | 7.1 |                                                                  |
| STAWK1630TG | ●      |  | 16.3    | 8.8  | 5.3 | 3.5 | 7.1 |                                                                  |
| STAWK1640TG | ●      |  | 16.4    | 8.9  | 5.3 | 3.6 | 7.1 | STAWSS1700S20<br>STAWSN1700S20<br>STAWMN1700S20<br>STAWLN1700S20 |
| STAWK1650TG | ●      |  | 16.5    | 9.3  | 5.7 | 3.6 | 7.6 |                                                                  |
| STAWK1660TG | ●      |  | 16.6    | 9.3  | 5.7 | 3.6 | 7.6 |                                                                  |
| STAWK1670TG | ●      |  | 16.7    | 9.3  | 5.7 | 3.6 | 7.6 |                                                                  |
| STAWK1680TG | ●      |  | 16.8    | 9.3  | 5.7 | 3.6 | 7.6 |                                                                  |
| STAWK1690TG | ●      |  | 16.9    | 9.4  | 5.7 | 3.7 | 7.6 |                                                                  |
| STAWK1700TG | ●      |  | 17.0    | 9.4  | 5.7 | 3.7 | 7.6 |                                                                  |
| STAWK1710TG | ●      |  | 17.1    | 9.4  | 5.7 | 3.7 | 7.6 |                                                                  |
| STAWK1720TG | ●      |  | 17.2    | 9.4  | 5.7 | 3.7 | 7.6 |                                                                  |
| STAWK1730TG | ●      |  | 17.3    | 9.4  | 5.7 | 3.7 | 7.6 | STAWSS1800S20<br>STAWSN1800S20<br>STAWMN1800S20<br>STAWLN1800S20 |
| STAWK1740TG | ●      |  | 17.4    | 9.4  | 5.7 | 3.7 | 7.6 |                                                                  |
| STAWK1750TG | ●      |  | 17.5    | 9.8  | 6.0 | 3.8 | 8.1 |                                                                  |
| STAWK1760TG | ●      |  | 17.6    | 9.8  | 6.0 | 3.8 | 8.1 |                                                                  |
| STAWK1770TG | ●      |  | 17.7    | 9.8  | 6.0 | 3.8 | 8.1 |                                                                  |
| STAWK1780TG | ●      |  | 17.8    | 9.8  | 6.0 | 3.8 | 8.1 |                                                                  |
| STAWK1790TG | ●      |  | 17.9    | 9.8  | 6.0 | 3.8 | 8.1 |                                                                  |
| STAWK1800TG | ●      |  | 18.0    | 9.9  | 6.0 | 3.9 | 8.1 |                                                                  |
| STAWK1810TG | ●      |  | 18.1    | 9.9  | 6.0 | 3.9 | 8.1 |                                                                  |
| STAWK1820TG | ●      |  | 18.2    | 9.9  | 6.0 | 3.9 | 8.1 |                                                                  |
| STAWK1830TG | ●      |  | 18.3    | 9.9  | 6.0 | 3.9 | 8.1 |                                                                  |
| STAWK1840TG | ●      |  | 18.4    | 9.9  | 6.0 | 3.9 | 8.1 |                                                                  |

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