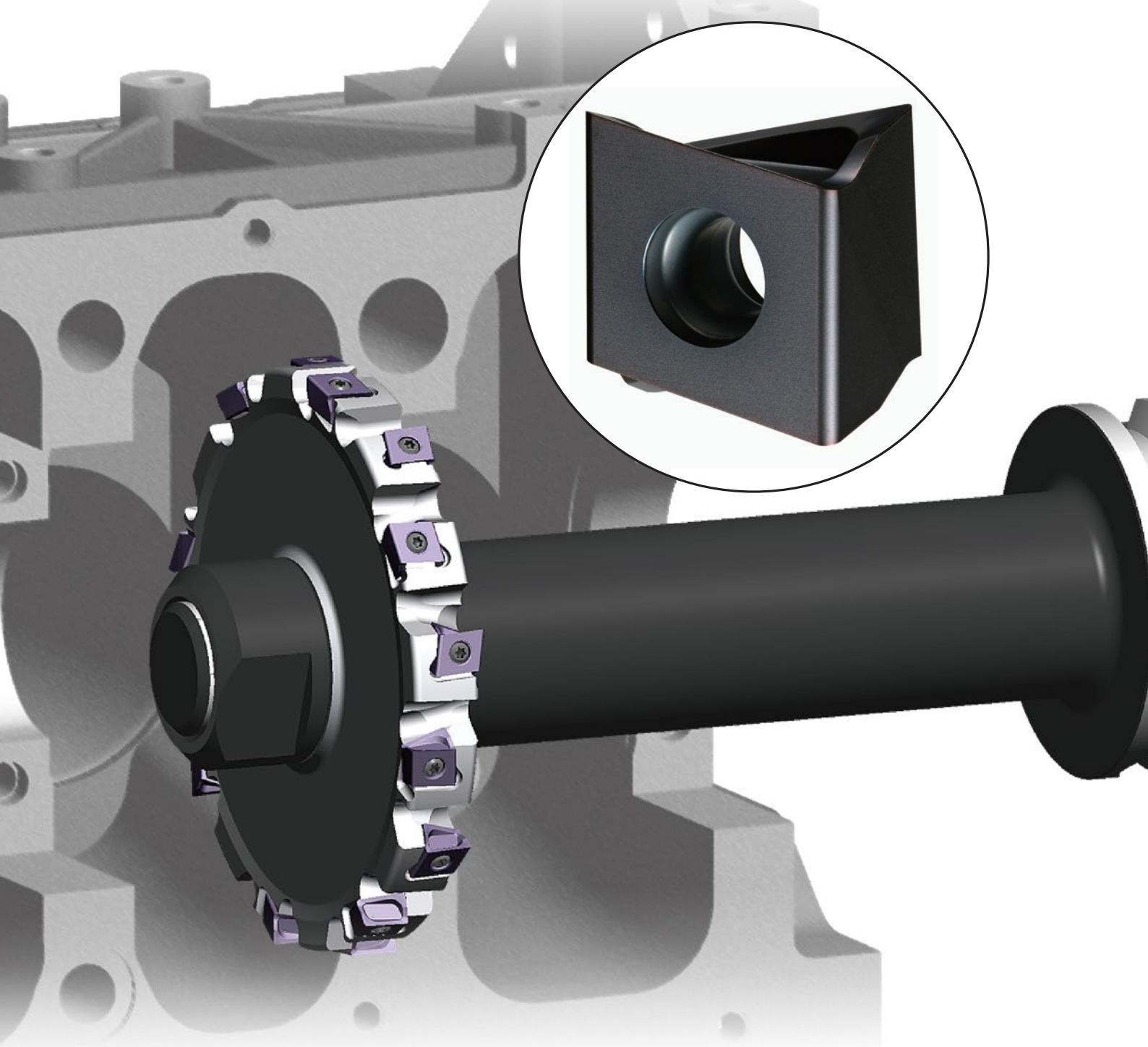


Exchangeable Inserts

Side Cutter Series

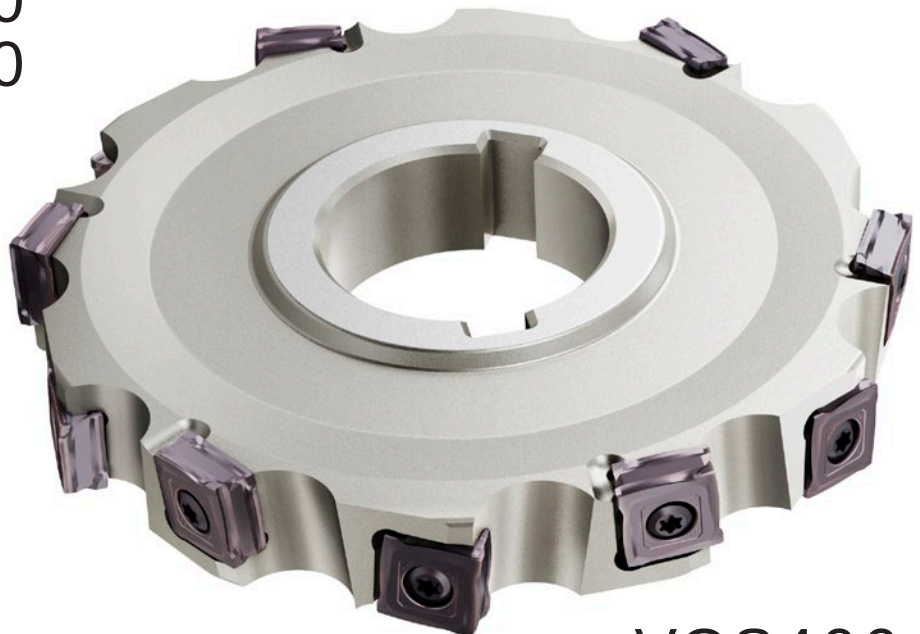
Series
Expansion

Side Cutter with Low Cutting Resistance
Vertical mount double-sided insert for VAS series

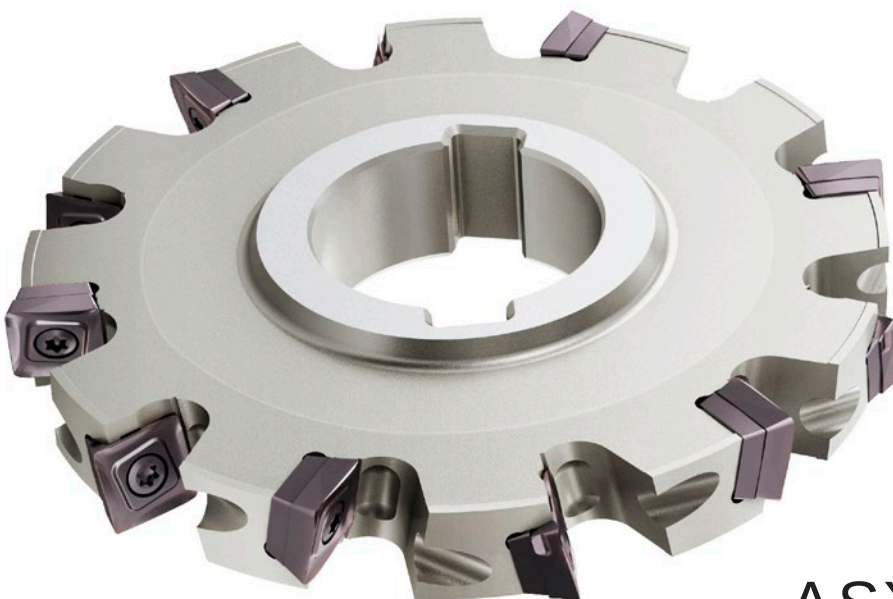




NEW VAS300
VAS400
VAS500



VOS400



ASX400

Unique side cutter series taking advantage of the latest technology, materials and cutter geometry.

Engineering Specials

	VAS Series		
	VAS300	VAS400	VAS500
Workpiece Material	 	 	 
Low Cutting Resistance			
Toughness			
Insert Shape	Vertical	Vertical	Vertical
No. of Teeth	Double Sided Insert	Double Sided Insert	Double Sided Insert
No. of Corners Used	4	4	4
Half Side Max.Depth of Cut APMX	8.6mm	RE<3.0mm 12.2mm	RE<3.0mm 16.2mm
		RE≥3.0mm 11.4mm	RE≥3.0mm 15.4mm
Full Side Largest Width CW	17.2mm	100mm	100mm
Full Side Max. Cutting Dia DC	ø300mm	ø400mm	ø660mm
Corner R (RE1) Development	0.4,0.8,1.2,1.6,2.0 2.4,3.0,4.0	0.4,0.8,1.2,1.6,2.0 2.4,3.0,4.0,5.0	0.4,0.8,1.2,1.6,2.0 2.4,3.0,4.0,5.0,6.0,7.0
Reference Page	⇒ Page 3	⇒ Page 3	⇒ Page 3

	VOS400	ASX400
Workpiece Material		  
Low Cutting Resistance		
Toughness		
Insert Shape	Vertical	20° Positive
No. of Teeth	Double Sided Insert	Single Sided Insert
No. of Corners Used	8	4
Half Side Max.Depth of Cut APMX	10.0mm	10.0mm
Full Side Largest Width CW	100mm	100mm
Full Side Max. Cutting Dia DC	ø400mm	ø400mm
Corner R (RE1) Development	C 0.2	0.8
Reference Page	⇒ Page 13	⇒ Page 15

Exchangeable Inserts Side Cutter

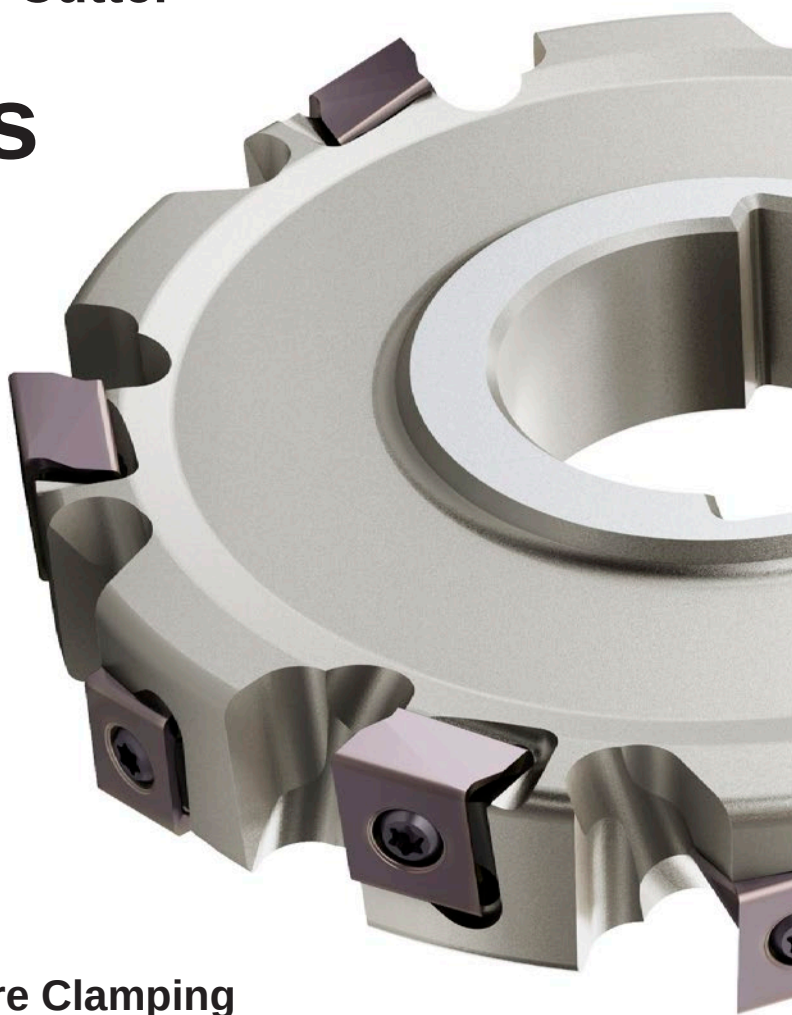
VAS Series

NEW

VAS300

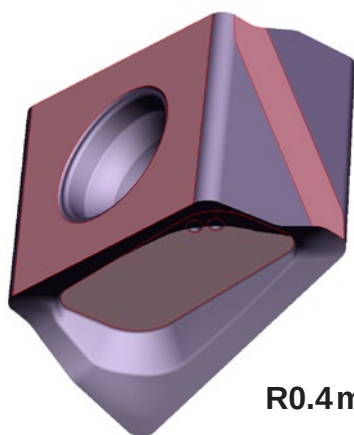
VAS400

VAS500

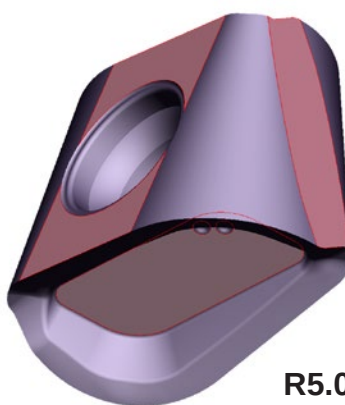


Insert with 4 Cutting Edges Secure Clamping

All insert sizes ensure a variety of seating surfaces.

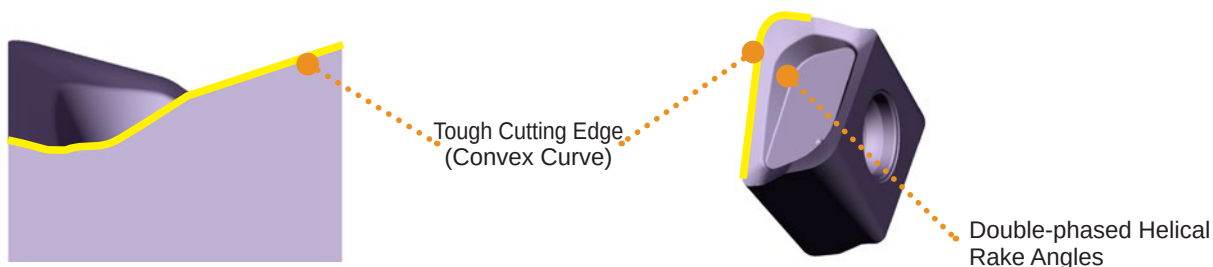


R0.4mm



R5.0mm

Low Cutting Resistance Insert → Preferred Sharpness





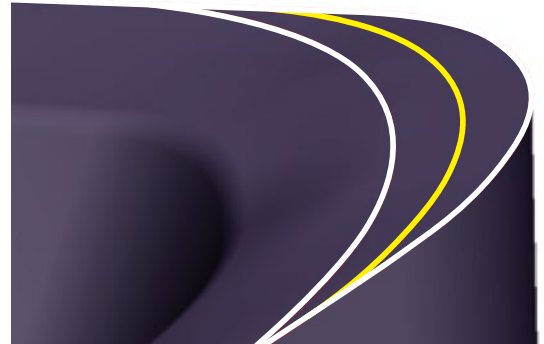
High Precision Shaping of Workpiece Material Corner R

Corner R shape with ideal curved edge.

For R0.4 — 3.0mm



For R3.0 — 5.0mm

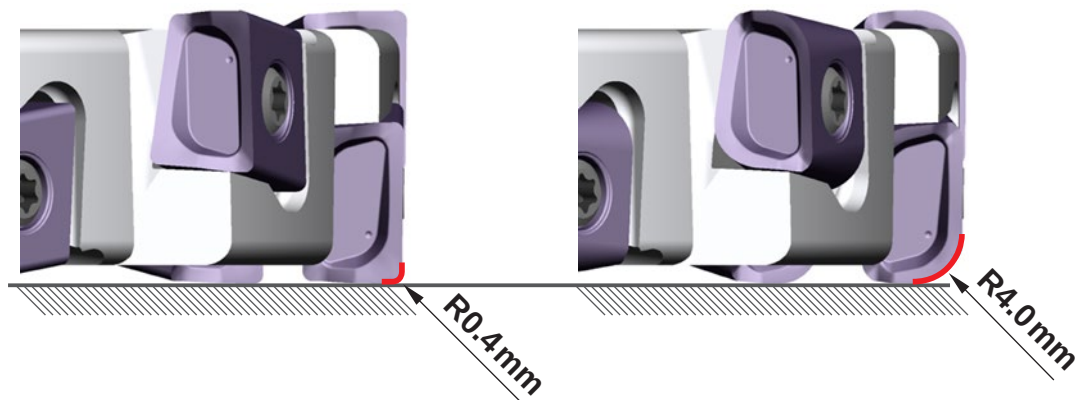


When Loading Holder : GAMF : + 8° GAMP : + 3°

★ The VAS500 has a max. R7.0mm

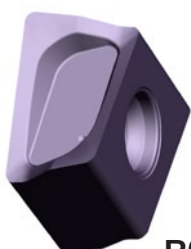
Holders Can Load All Corner R (RE1)

Cutting width and diameter do not change even if corner R does.

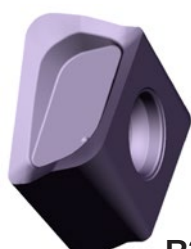


Various Corner R (RE1) Development

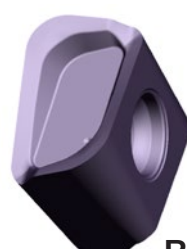
R0.4 • R0.8 • R1.2 • R1.6 • R2.0 • R2.4 • R3.0 • R4.0 • R5.0 • R6.0 • R7.0 (mm)



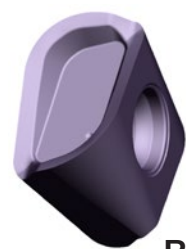
R0.8mm



R2.0mm



R3.0mm



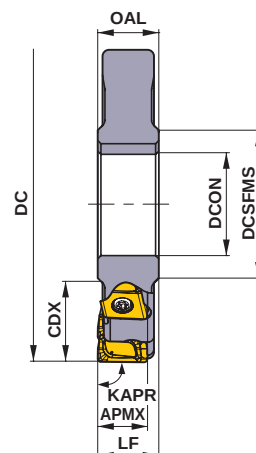
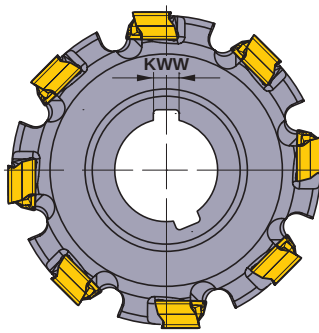
R5.0mm

SIDE CUTTER



VAS300 NEW

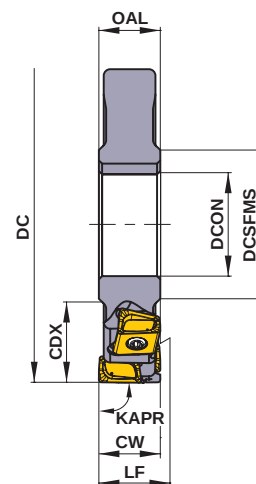
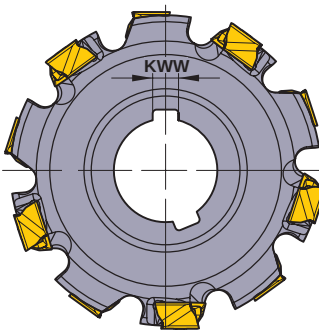
P
M
K
N
S
H



Max. Cutting Diameter **DC** : $\varnothing 300$ mm
 Max. Depth of Cut **APMX** : 8.6mm

■ Half Side

DC	Effective No. of Teeth	LF	CDX	DCON	DCSFMS	OAL	KWW	Insert Type
80	8	≥ 12	20.0	27	40	≥ 12	7	LNGU09
100	10	≥ 12	27.0	32	46	≥ 12	8	LNGU09
125	12	≥ 12	35.0	40	55	≥ 12	10	LNGU09
160	14	≥ 12	52.5	40	55	≥ 12	10	LNGU09



Largest Width **CW** : 17.2mm
 Max. Cutting Diameter **DC** : $\varnothing 300$ mm

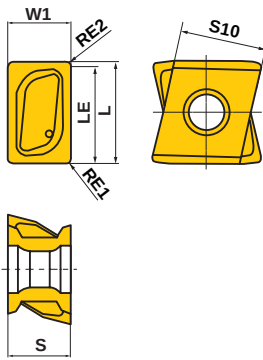
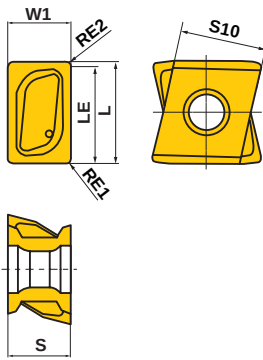
■ Full Side

DC	Effective No. of Teeth	Total No. of Teeth	LF	CW	CDX	DCON	DCSFMS	OAL	KWW	Insert Type
80	4	8	≥ 12	12 – 17.2	20.0	27	40	≥ 12	7	LNGU09
100	5	10	≥ 12	12 – 17.2	27.0	32	46	≥ 12	8	LNGU09
125	6	12	≥ 12	12 – 17.2	35.0	40	55	≥ 12	10	LNGU09
160	7	14	≥ 12	12 – 17.2	52.5	40	55	≥ 12	10	LNGU09

Note 1) Please contact us for details of any geometry of half sides and full sides.

Inserts

(mm)

Workpiece Material	P	Steel	✚	●	✚		Cutting Conditions (Guide) :							
	K	Cast Iron					●	Stable Cutting <th>●</th> <td>General Cutting<th>✚</th><td>Unstable Cutting</td></td>	●	General Cutting <th>✚</th> <td>Unstable Cutting</td>	✚	Unstable Cutting		
							Edge Preparation :							
							E	Round						
Shape	Order Number	Hand	Class	Edge Preparation	Coated	L	LE	S	S10	RE1	RE2	W1	Geometry	
Low Resistance Type M Breaker NEW  <td>LNGU090604PNER-M</td> <td>R</td> <td>G</td> <td>E</td> <td>●</td> <td></td> <td>9.0</td> <td>8.6</td> <td>6.0</td> <td>8.5</td> <td>0.4</td> <td>0.4</td> <td>6.0</td> <td rowspan="16">  </td>	LNGU090604PNER-M	R	G	E	●		9.0	8.6	6.0	8.5	0.4	0.4	6.0	
	LNGU090604PNEL-M	L	G	E	●		9.0	8.6	6.0	8.5	0.4	0.4	6.0	
	LNGU090608PNER-M	R	G	E	●		9.0	8.6	6.0	8.5	0.8	0.4	6.0	
	LNGU090608PNEL-M	L	G	E	●		9.0	8.6	6.0	8.5	0.8	0.4	6.0	
	LNGU090612PNER-M	R	G	E	●		9.0	8.6	6.0	8.5	1.2	0.4	6.0	
	LNGU090612PNEL-M	L	G	E	●		9.0	8.6	6.0	8.5	1.2	0.4	6.0	
	LNGU090616PNER-M	R	G	E	●		9.0	8.6	6.0	8.5	1.6	0.4	6.0	
	LNGU090616PNEL-M	L	G	E	●		9.0	8.6	6.0	8.5	1.6	0.4	6.0	
	LNGU090620PNER-M	R	G	E	●		9.0	8.6	6.0	8.5	2.0	0.4	6.0	
	LNGU090620PNEL-M	L	G	E	●		9.0	8.6	6.0	8.5	2.0	0.4	6.0	
	LNGU090624PNER-M	R	G	E	●		9.0	8.6	6.0	8.5	2.4	0.4	6.0	
	LNGU090624PNEL-M	L	G	E	●		9.0	8.6	6.0	8.5	2.4	0.4	6.0	
	LNGU090630PNER-M	R	G	E	●		9.0	8.6	6.0	8.5	3.0	0.4	6.0	
	LNGU090630PNEL-M	L	G	E	●		9.0	8.6	6.0	8.5	3.0	0.4	6.0	
	LNGU090640PNER-M	R	G	E	●		9.0	8.6	6.0	8.5	4.0	0.4	6.0	
	LNGU090640PNEL-M	L	G	E	●		9.0	8.6	6.0	8.5	4.0	0.4	6.0	

Right hand insert shown.

Right hand insert shown.

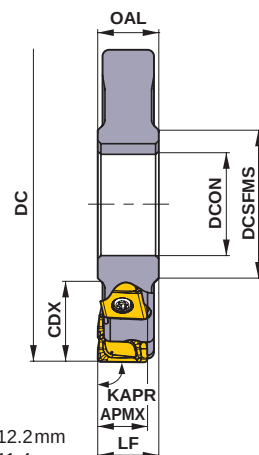
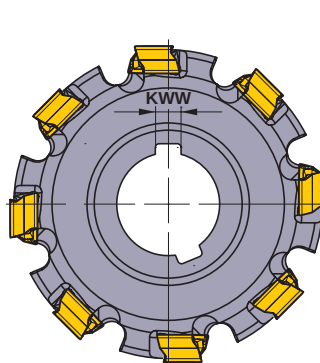
● = NEW

SIDE CUTTER

VAS400



P M **K** N S H



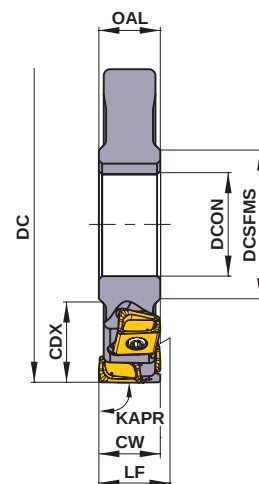
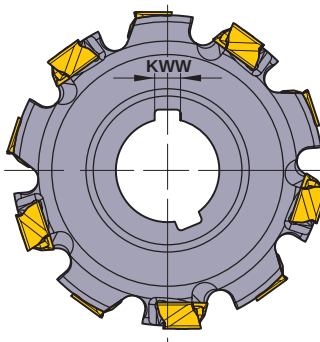
Max. Cutting Diameter **DC** : $\phi 400$ mm
 Max. Depth of Cut **APMX** : RE1<3.0mm
 RE1 $\geq$ 3.0mm

12.2mm
 11.4mm

Half Side

DC	Effective No. of Teeth	LF	CDX	DCON	DCSFMS	OAL	KWW	Insert Type
80	8	≥ 18	20.0	27	40	≥ 17	7	LNGU13
100	10	≥ 18	27.0	32	46	≥ 17	8	LNGU13
125	12	≥ 18	35.0	40	55	≥ 17	10	LNGU13
160	14	≥ 18	52.5	40	55	≥ 17	10	LNGU13

(mm)



Largest Width **CW** : 100mm
 Max. Cutting Diameter **DC** : $\phi 400$ mm

Full Side

DC	Effective No. of Teeth	Total No. of Teeth	*1 LF	*2 CW	CDX	DCON	DCSFMS	OAL	KWW	Insert Type
80	4	8	≥ 17	18-24	20.0	27	40	≥ 17	7	LNGU13
100	5	10	≥ 17	18-24	27.0	32	46	≥ 17	8	LNGU13
125	6	12	≥ 17	18-24	35.0	40	55	≥ 17	10	LNGU13
160	7	14	≥ 17	18-24	52.5	40	55	≥ 17	10	LNGU13

(mm)

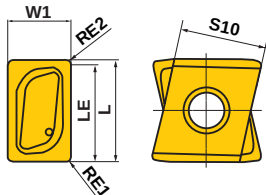
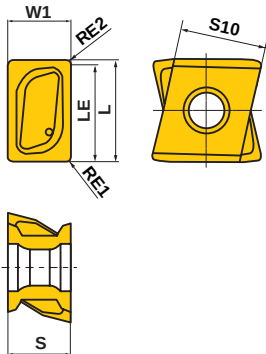
*1 In case of adjustment piece specification. LF : ≥ 24

*2 CW of RE1<3.0mm is 24mm, and RE1 $\geq$ 3.0mm is 22.8mm. Multilevel designs available for CW over each sizes.

Note 1) Please contact us for details of any geometry of half sides and full sides.

Inserts

(mm)

Workpiece Material	P	Steel	C	•	Cutting Conditions (Guide) : ● : Stable Cutting ● : General Cutting ✖ : Unstable Cutting Edge Preparation : E : Round								
	K	Cast Iron				✖							
Shape	Order Number	Hand	Class	Edge Preparation	Coated	L	LE	S	S10	RE1	RE2	W1	Geometry
Low Resistance Type M Breaker 	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	
Strong Cutting Edge Type R Breaker 	LNGU130804PNER-R	R	G	E	● ●	13.0	12.2	8.0	11.0	0.4	0.8	8.0	
	LNGU130804PNEL-R	L	G	E	● ●	13.0	12.2	8.0	11.0	0.4	0.8	8.0	
	LNGU130808PNER-R	R	G	E	● ●	13.0	12.2	8.0	11.0	0.8	0.8	8.0	
	LNGU130808PNEL-R	L	G	E	● ●	13.0	12.2	8.0	11.0	0.8	0.8	8.0	
	LNGU130812PNER-R	R	G	E	● ●	13.0	12.2	8.0	11.0	1.2	0.8	8.0	
	LNGU130812PNEL-R	L	G	E	● ●	13.0	12.2	8.0	11.0	1.2	0.8	8.0	
	LNGU130816PNER-R	R	G	E	● ●	13.0	12.2	8.0	11.0	1.6	0.8	8.0	
	LNGU130816PNEL-R	L	G	E	● ●	13.0	12.2	8.0	11.0	1.6	0.8	8.0	
	LNGU130820PNER-R	R	G	E	● ●	13.0	12.2	8.0	11.0	2.0	0.8	8.0	
	LNGU130820PNEL-R	L	G	E	● ●	13.0	12.2	8.0	11.0	2.0	0.8	8.0	
	LNGU130824PNER-R	R	G	E	● ●	13.0	12.2	8.0	11.0	2.4	0.8	8.0	
	LNGU130824PNEL-R	L	G	E	● ●	13.0	12.2	8.0	11.0	2.4	0.8	8.0	
	LNGU130830PNER-R	R	G	E	● ●	13.0	11.4	8.0	11.0	3.0	1.6	8.0	
	LNGU130830PNEL-R	L	G	E	● ●	13.0	11.4	8.0	11.0	3.0	1.6	8.0	
	LNGU130840PNER-R	R	G	E	● ●	13.0	11.4	8.0	11.0	4.0	1.6	8.0	
	LNGU130840PNEL-R	L	G	E	● ●	13.0	11.4	8.0	11.0	4.0	1.6	8.0	
	LNGU130850PNER-R	R	G	E	● ●	13.0	11.4	8.0	11.0	5.0	1.6	8.0	
	LNGU130850PNEL-R	L	G	E	● ●	13.0	11.4	8.0	11.0	5.0	1.6	8.0	

Right hand insert shown.

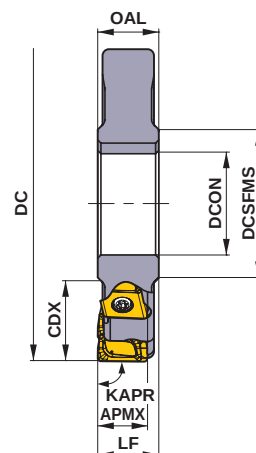
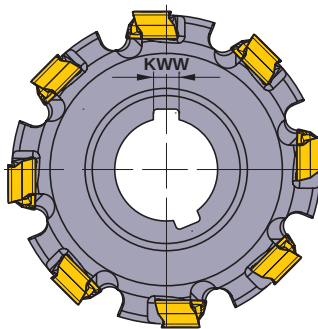
Right hand insert shown.

SIDE CUTTER

VAS500



P M **K** N S H

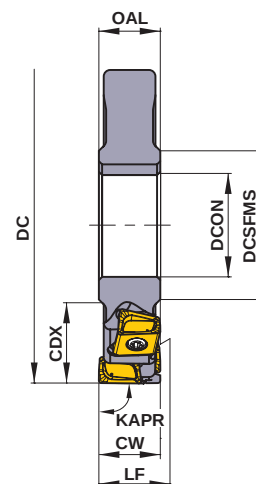
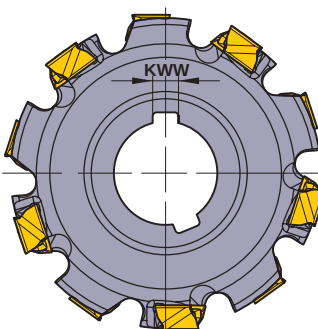


Max. Cutting Diameter **DC** : $\phi 660$ mm
 Max. Depth of Cut **APMX** : RE1<3.0mm 16.2mm
 RE1 $\geq$ 3.0mm 15.4mm

Half Side

DC	Effective No. of Teeth	LF	CDX	DCON	DCSFMS	OAL	KWW	Insert Type
100	8	≥ 23	27.0	32	46	≥ 23	8	LNGU17
125	10	≥ 23	35.0	40	55	≥ 23	10	LNGU17
160	12	≥ 23	52.5	40	55	≥ 23	10	LNGU17
200	16	≥ 23	65.0	50	70	≥ 23	12	LNGU17

★ In case of adjustment piece specification. **LF** : ≥ 29



Largest Width **CW** : 100mm
 Max. Cutting Diameter **DC** : $\phi 660$ mm

Full Side

DC	Effective No. of Teeth	Total No. of Teeth	*1 LF	*2 CW	CDX	DCON	DCSFMS	OAL	KWW	Insert Type
100	4	8	≥ 23	23 - 32	27.0	32	46	≥ 23	8	LNGU17
125	5	10	≥ 23	23 - 32	35.0	40	55	≥ 23	10	LNGU17
160	6	12	≥ 23	23 - 32	52.5	40	55	≥ 23	10	LNGU17
200	8	16	≥ 23	23 - 32	65.0	50	70	≥ 23	12	LNGU17

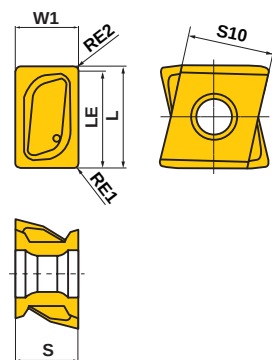
*1 In case of adjustment piece specification. **LF** : ≥ 29

*2 CW of RE1<3.0mm is 32mm, and RE1 $\geq$ 3.0mm is 30.8mm. Multilevel designs available for CW over each sizes.

Note 1) Please contact us for details of any geometry of half sides and full sides.

Inserts

(mm)

Workpiece Material	P	Steel					Cutting Conditions (Guide) : ● : Stable Cutting ● : General Cutting ✖ : Unstable Cutting Edge Preparation : E : Round								
	K	Cast Iron													
Shape	Order Number		Hand	Class	Edge Preparation	Coated		L	LE	S	S10	RE1	RE2	W1	Geometry
Strong Cutting Edge Type R Breaker 	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	

Right hand insert shown.

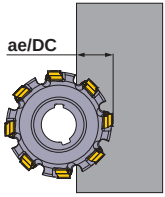
Right hand insert shown.

VAS300/400/500

Recommended Cutting Conditions (Dry Cutting)

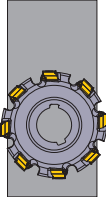
Shoulder Milling

(mm)

Workpiece Material	Properties	Insert Grade	vc (m/min)	ap	ae/DC	fz (mm/t.)	Cutting Mode
P	Mild Steels	MP6120 VP15TF	150 (130—180)	≤APMX	<10%	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	<30%	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	≤50%	0.10 (0.08—0.15)	
	Carbon Steels Alloy Steels	MP6120 VP15TF	150 (130—180)	≤2.0	≤50%	0.12 (0.08—0.20)	
			150 (130—180)	≤4.0	<10%	0.12 (0.08—0.20)	
			150 (130—180)	≤4.0	≤50%	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	<10%	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	≤50%	0.10 (0.08—0.12)	
			150 (130—180)	≤2.0	≤50%	0.12 (0.08—0.20)	
K	Gray Cast Irons	VP15TF	150 (130—180)	≤4.0	<10%	0.12 (0.08—0.20)	
			150 (130—180)	≤4.0	≤50%	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	<10%	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	≤50%	0.10 (0.08—0.12)	
			130 (110—160)	≤2.0	≤50%	0.12 (0.08—0.20)	
			130 (110—160)	≤4.0	<10%	0.12 (0.08—0.20)	
	Gray Cast Irons	VP15TF	130 (110—160)	≤4.0	≤50%	0.10 (0.08—0.15)	
			130 (110—160)	≤APMX	<10%	0.10 (0.08—0.15)	
			130 (110—160)	≤APMX	≤50%	0.10 (0.08—0.12)	
			130 (110—160)	≤2.0	≤50%	0.12 (0.08—0.20)	
			130 (110—160)	≤4.0	<10%	0.12 (0.08—0.20)	
			130 (110—160)	≤4.0	≤50%	0.10 (0.08—0.15)	
	Gray Cast Irons	VP15TF	130 (110—160)	≤APMX	<10%	0.10 (0.08—0.15)	
			130 (110—160)	≤APMX	≤50%	0.10 (0.08—0.12)	
			130 (110—160)	≤2.0	≤50%	0.12 (0.08—0.20)	
			130 (110—160)	≤4.0	<10%	0.12 (0.08—0.20)	
			130 (110—160)	≤4.0	≤50%	0.10 (0.08—0.15)	
			130 (110—160)	≤APMX	<10%	0.10 (0.08—0.15)	

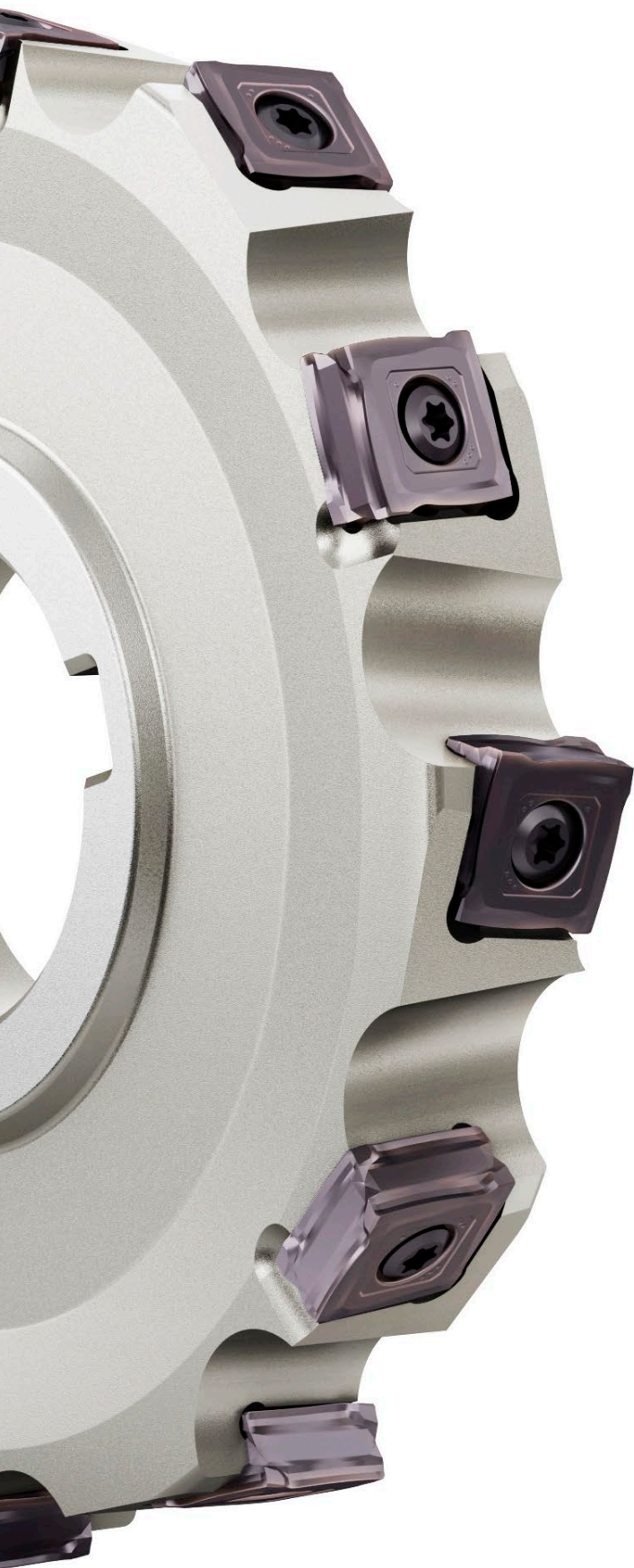
Face Milling (Centre Cutting)

(mm)

Workpiece Material	Properties	Insert Grade	vc (m/min)	ap	fz (mm/t.)	Cutting Mode
P	Mild Steels	MP6120 VP15TF	150 (130—180)	≤APMX	0.10 (0.08—0.15)	
				≤2.0	0.12 (0.08—0.20)	
	Carbon Steels Alloy Steels	MP6120 VP15TF	150 (130—180)	≤4.0	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	0.10 (0.08—0.12)	
K	Gray Cast Irons	VP15TF	150 (130—180)	≤2.0	0.12 (0.08—0.20)	
			150 (130—180)	≤4.0	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	0.10 (0.08—0.12)	
	Gray Cast Irons	VP15TF	150 (130—180)	≤2.0	0.12 (0.08—0.20)	
			150 (130—180)	≤4.0	0.10 (0.08—0.15)	
			150 (130—180)	≤APMX	0.10 (0.08—0.12)	
	Gray Cast Irons	VP15TF	130 (110—160)	≤2.0	0.12 (0.08—0.20)	
			130 (110—160)	≤4.0	0.10 (0.08—0.15)	
			130 (110—160)	≤APMX	0.10 (0.08—0.12)	

Exchangeable Inserts Side Cutter

VOS400



Features

Cutter Body

High Rigidity Design

Arranging the inserts vertically absorbs the principal cutting force through the thickness of the insert and achieves extremely high rigidity.

Easy to Clamp Insert

Inserts are screwed into the side of the holder, this simplifies clamping and unclamping for superior usability.

Insert

Unique Vertical Insert

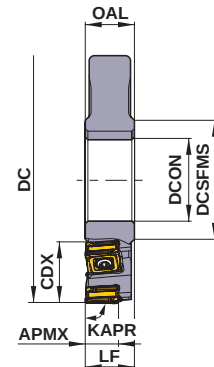
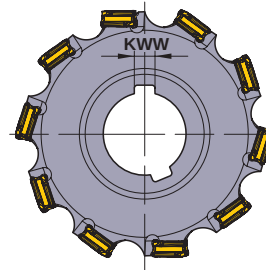
8 usable corners with high strength cutting edge. The fracture resistance is significantly improved due to a convex curve cutting edge and a specially shaped relief face. Maximum depth of cut is 10mm.

SIDE CUTTER

VOS400



P M **K** N S H

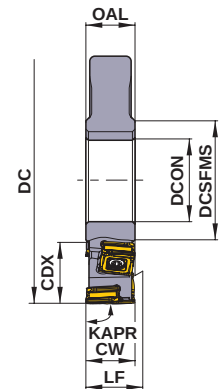
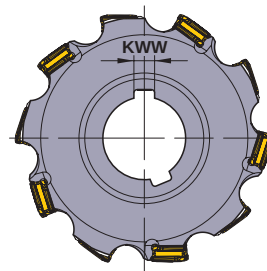


Half Side

Max. Cutting Diameter **DC** : $\phi 400$ mm

(mm)

DC	Effective No. of Teeth	LF	CDX	DCON	DCSFMS	OAL	KWW	APMX (mm)
80	8	≥ 16	20.0	27	40	≥ 16.8	7	10.0
100	10	≥ 16	27.0	32	46	≥ 16.8	8	10.0
125	12	≥ 16	35.0	40	55	≥ 16.8	10	10.0
160	14	≥ 16	52.5	40	55	≥ 16.8	10	10.0



Full Side

Largest Width **CW** : 100mm

Max. Cutting Diameter **DC** : $\phi 400$ mm

(mm)

DC	Effective No. of Teeth	Total No. of Teeth	LF	CW	CDX	DCON	DCSFMS	OAL	KWW
80	4	8	≥ 16	16 – 20	20.0	27	40	≥ 16	7
100	5	10	≥ 16	16 – 20	27.0	32	46	≥ 16	8
125	6	12	≥ 16	16 – 20	35.0	40	55	≥ 16	10
160	7	14	≥ 16	16 – 20	52.5	40	55	≥ 16	10

Note 1) Multilevel designs available for CW over 20mm.

Note 2) Please contact us for details of any geometry of half sides and full sides.

Inserts

(mm)

Shape	Order Number	Hand	Class	Edge Preparation	Coated	IC	S	Geometry
	SONX1206PER	R	N	E	●	12.7	6.3	 IC S
	SONX1206PEL	L	N	E	●	12.7	6.3	

Right hand tool holder shown.

● : Inventory maintained in Japan.
(10 inserts in one case)

Exchangeable Inserts Side Cutter

ASX400



Features

ASX is a well-balanced cutter for positive insert type that improves fracture resistance and reduces cutting resistance. Effective for when workpiece material with small thickness is cut and when heat generation is needed to suppress because of low cutting resistance, and ideal for finish cutting.

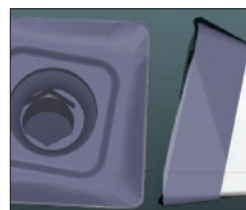
High Reliability

Uses a carbide shim and proprietary Anti-Fly-Insert (A.F.I) to prevent the inserts from moving when machining. Additionally the clamp screw uses TORXPLUS, for high clamping force ensuring high reliability.



Low Cutting Resistance

Due to the 3D design of the cutting edge and a large rake angle, high cutting edge sharpness has been achieved with reduced cutting resistance.



Easy to Use

Employs a screw on type mechanism, therefore inserts can easily be loaded. Additionally when indexing the insert, it is not necessary to remove the screw completely.



SIDE CUTTER



ASX400

P

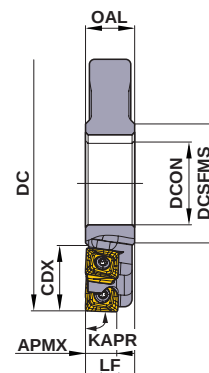
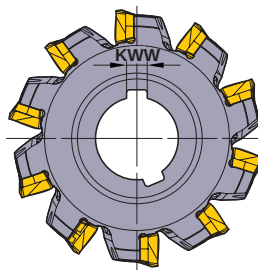
M

K

N

S

H

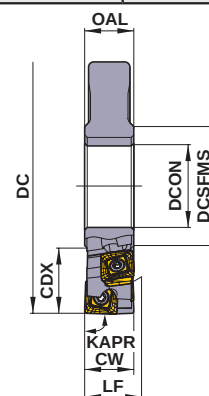
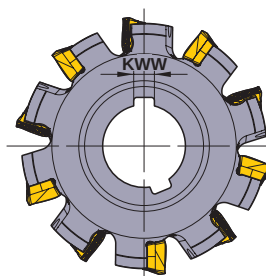


Half Side

Max. Cutting Diameter **DC** : $\phi 400$ mm

(mm)

DC	Effective No. of Teeth	LF	CDX	DCON	DCSFMS	OAL	KWW	APMX (mm)
80	8	≥ 16	20.0	27	40	≥ 16.8	7	10.0
100	10	≥ 16	27.0	32	46	≥ 16.8	8	10.0
125	12	≥ 16	35.0	40	55	≥ 16.8	10	10.0
160	14	≥ 16	52.5	40	55	≥ 16.8	10	10.0



Largest Width **CW** : 100 mm
Max. Cutting Diameter **DC** : $\phi 400$ mm

(mm)

Full Side

DC	Effective No. of Teeth	Total No. of Teeth	LF	CW	CDX	DCON	DCSFMS	OAL	KWW
80	4	8	≥ 16	16 – 20	20.0	27	40	≥ 16	7
100	5	10	≥ 16	16 – 20	27.0	32	46	≥ 16	8
125	6	12	≥ 16	16 – 20	35.0	40	55	≥ 16	10
160	7	14	≥ 16	16 – 20	52.5	40	55	≥ 16	10

Note 1) Multilevel designs available for CW over 20mm.

Note 2) Please contact us for details of any geometry of half sides and full sides.

Inserts

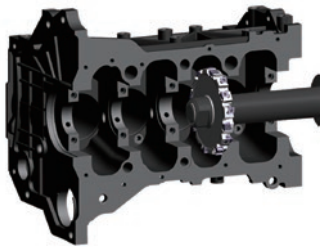
(mm)

Shape	Order Number	Hand	Class	Edge Preparation	Coated	IC	S	BS	RE	Geometry
	SOMT12T308PEER-JM	R	M	E	●	12.7	3.97	1.4	0.8	
	SOMT12T308PEEL-JM	L	M	E	●	12.7	3.97	1.4	0.8	

Right hand tool holder shown.

● : Inventory maintained in Japan.
(10 inserts in one case)

Application Examples

Tool		VAS400 ø300 mm	VAS400 ø160 mm
Insert (Grade)		LNGU130804PNER-M (VP15TF)	LNGU130804PNER-M (VP15TF)
Workpiece		Brake Caliper (JIS FCD450) 	Cylinder Block (JIS FC250) 
Cutting Conditions	Revolution n (min-1)	120	500
	Cutting Speed vc (m/min)	113	201
	Feed per Tooth fz (mm/t.)	0.09—0.24	0.14
	Table Feed vf (mm/min)	150—400	500
	Depth of Cut ap (mm)	1.0—2.0	1.0
Cutting Mode		Dry Cutting	Dry Cutting
Machine		Machining Centre	Horizontal
Results		Approximately double longer tool life than conventional products. Excellent cutting dimensions and finished surface roughness. 30% reduction in tooling costs. Improved machining efficiency.	1.5 times better machining efficiency than conventional products. Approximately double longer tool life. Stable cutting with minimal sound and fine finished surface roughness. Improved machining efficiency and longer tool life.

The above application examples are customer's applications, so it can be different from the recommended conditions.



Exchangeable Inserts

Side Cutter Series

For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or driver. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

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(Tools specifications subject to change without notice.)

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