

耐热合金加工用整体硬质合金钻头

DSA 系列

尺寸
扩大

超耐热合金加工中实现长寿命

追加DC12.3mm~15.0mm尺寸



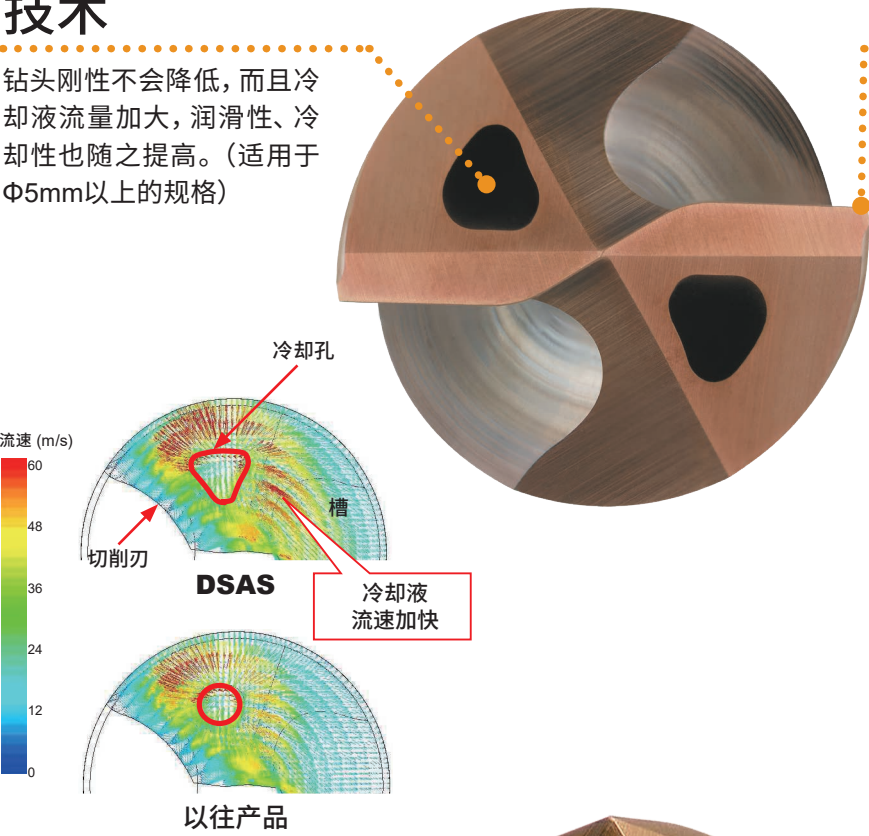
追加L/D=5尺寸 (2022年8月)

耐热合金加工用整体硬质合金钻头

DSA 系列

TRI-Cooling 技术

钻头刚性不会降低，而且冷却液流量加大，润滑性、冷却性也随之提高。（适用于Φ5mm以上的规格）



冷却液流速比较
(转速 4700 min⁻¹时的解析)

PVD涂层 硬质合金材料 DP9020

保持韧性的同时，硬度提高，在耐热合金加工中可发挥较强的耐磨损性。

直线状切削刃 & 专用刃口修磨

采用强韧的直线切削刃与耐热合金加工用刃口修磨，可形成稳定的切屑并抑制崩刀。

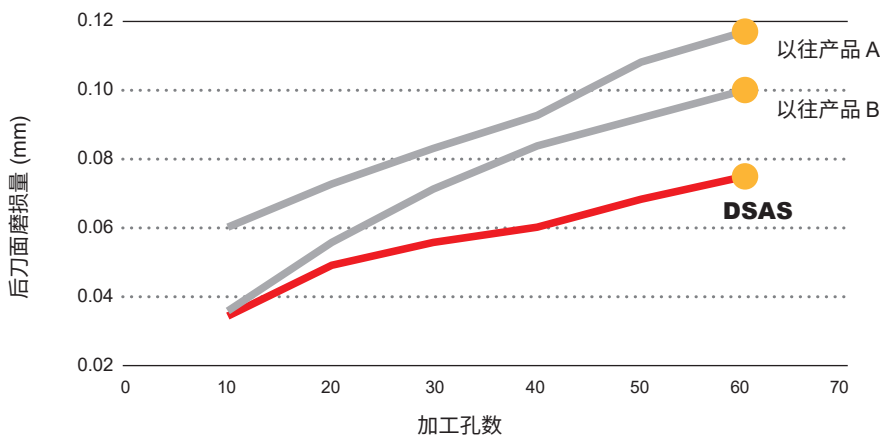


耐热合金加工用 刃带

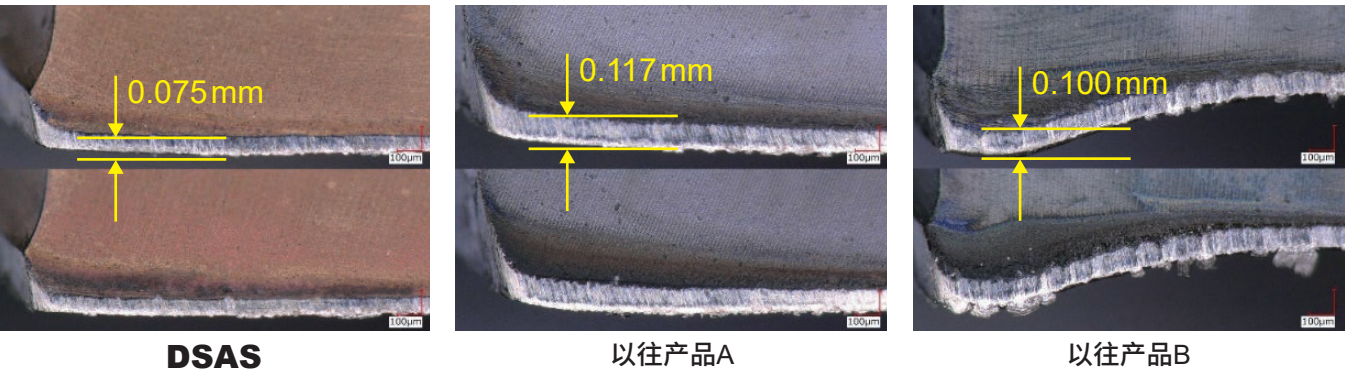
适用于耐热合金加工的较窄单刃带，减小接触面积，可抑制切削热及加工硬化的产生。

切削性能

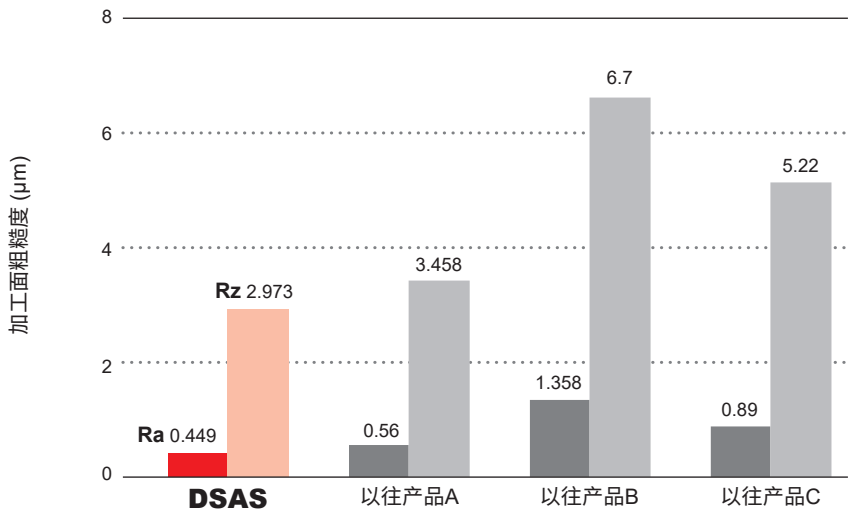
Inconel 718 耐磨损性比较



<切削条件>
工件材料: Inconel 718
使用刀具: DSAS0700X03S080
钻头直径: DC=7mm
孔深: 12mm (l= DCx 1.7)
切削速度: vc= 15m/min
每转进给量: fr= 0.1mm/rev.
冷却方式: 水溶性(内部供液)
使用机床: 立式加工中心



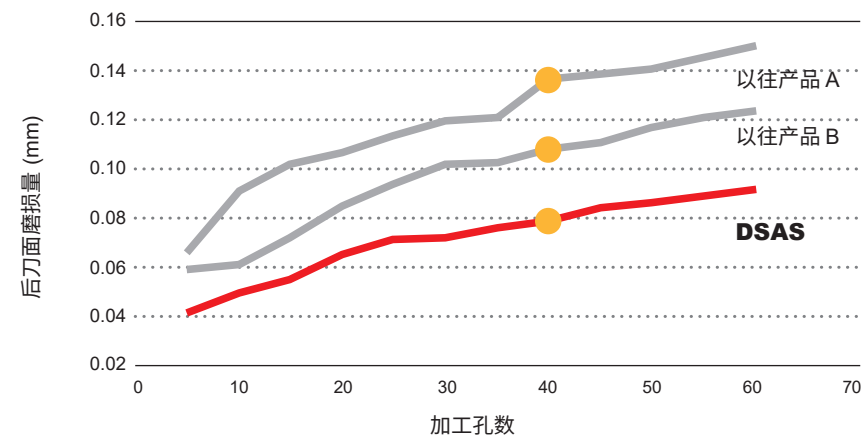
Inconel 718 加工面精度比较



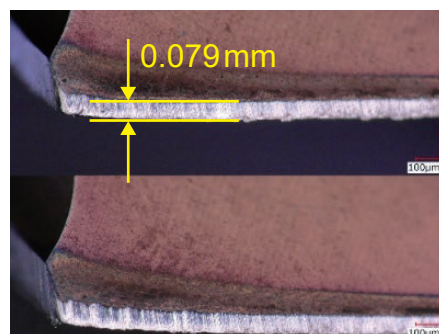
<切削条件>
工件材料: Inconel 718
使用刀具: DSAS0700X03S080
钻头直径: DC=7mm
孔深: 10mm (l= DCx 1.4)
切削速度: vc=15m/min
每转进给量: fr= 0.1mm/rev.
冷却方式: 水溶性(内部供液)
使用机床: 立式加工中心

切削性能

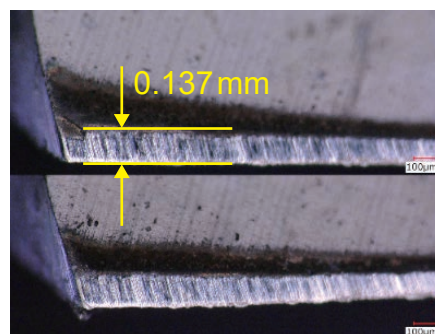
RENE41 耐磨损性比较



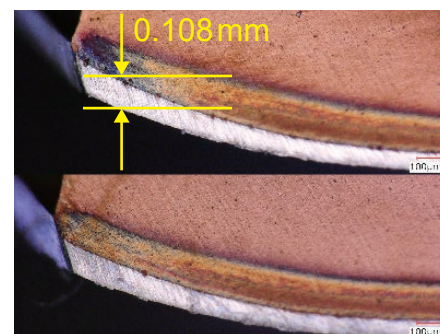
<切削条件>
 工件材料: RENE 41
 使用刀具: DSAS0690X03S080
 钻头直径: DC=6.9mm
 孔深: 10mm (l= DCx 1.4)
 切削速度: vc=15m/min
 每转进给量: fr=0.1mm/rev.
 冷却方式: 水溶性(内部供液)
 使用机床: 立式加工中心



DSAS

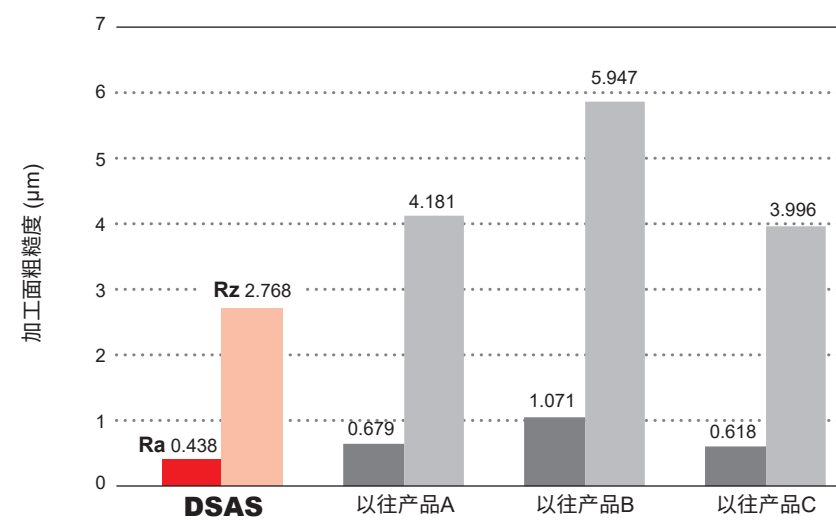


以往产品A



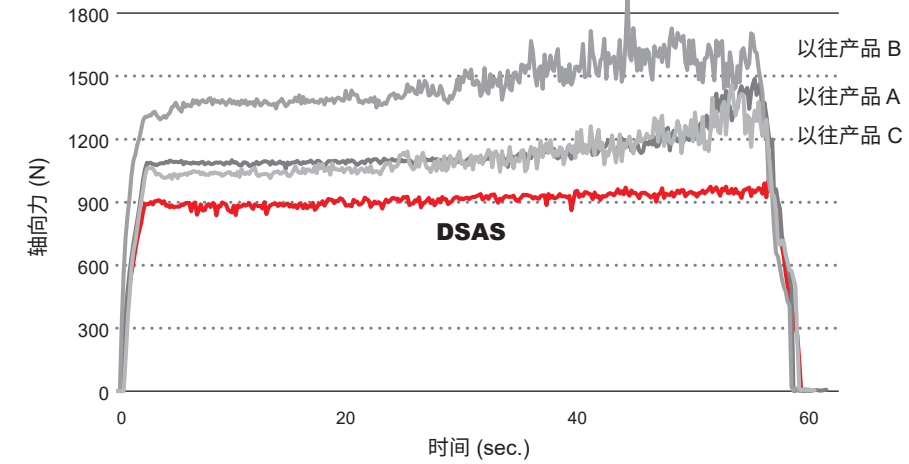
以往产品B

RENE41 加工面精度比较



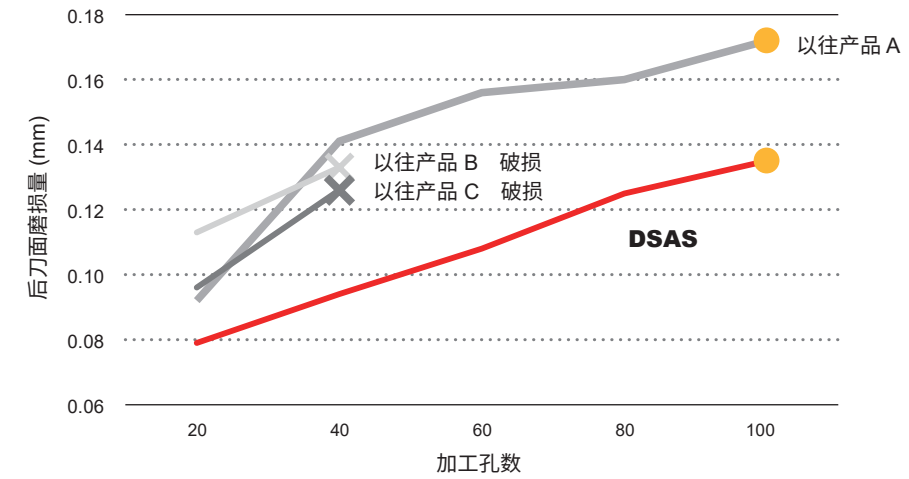
<切削条件>
 工件材料: RENE 41
 使用刀具: DSAS0690X03S080
 钻头直径: DC=6.9mm
 孔深: 10mm (l= DCx 1.4)
 切削速度: vc=15m/min
 每转进给量: fr=0.1mm/rev.
 冷却方式: 水溶性(内部供液)
 使用机床: 立式加工中心

Inconel718 L/D=5 切削阻力比较



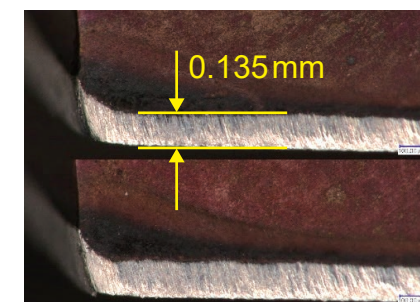
<切削条件>
 工件材料: Inconel 718
 使用刀具: DSAS0600X05S060
 钻头直径: DC=6mm
 孔深: 30mm (l= DCx 5)
 切削速度: vc=10m/min
 每转进给量: fr=0.06mm/rev.
 冷却方式: 水溶性(内部供液)
 使用机床: 立式加工中心

Inconel718 L/D=5 耐磨损性比较

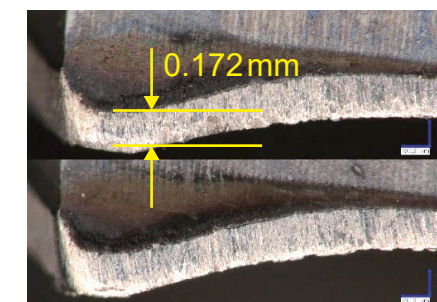


<切削条件>
 工件材料: Inconel 718
 使用刀具: DSAS0600X05S060
 钻头直径: DC=6mm
 孔深: 30mm (l= DCx 5)
 切削速度: vc=20m/min
 每转进给量: fr=0.10mm/rev.
 冷却方式: 水溶性(内部供液)
 使用机床: 立式加工中心

加工100个孔后的照片



DSAS



以往产品A

DSAS



- P
- M
- K
- N
- S
- H

耐热合金

内部供液型



DC=3	3<DC≤6	6<DC≤10	10<DC≤15	
$\begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.022 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.027 \end{smallmatrix}$	
DCON=6	6<DCON≤10	10<DCON≤16		
$\begin{smallmatrix} 0 \\ -0.008 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.009 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.011 \end{smallmatrix}$		

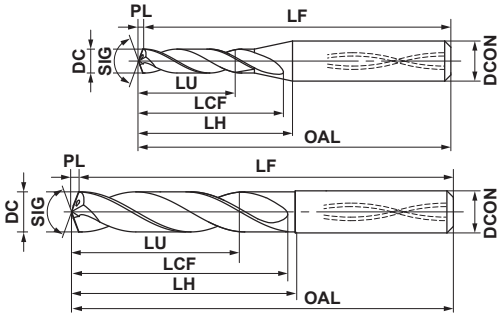


图1

图2

★观察的方向不同，涂层颜色会有所差异，但性能方面完全没问题。

DC	L/D	DP9020	型号	LU	LCF	LH	OAL	LF	PL	DCON	图
3.00	3	●	DSAS0300X03S060	9.5	21.5	23.5	70.5	70	0.5	6	1
3.00	5	●	DSAS0300X05S060	15.5	28.5	31.5	78.5	78	0.5	6	1
3.10	3	●	DSAS0310X03S060	9.9	21.6	23.6	70.6	70	0.6	6	1
3.10	5	●	DSAS0310X05S060	16.1	28.6	31.6	78.6	78	0.6	6	1
3.18	3	●	DSAS0318X03S060	10.1	21.6	23.6	70.6	70	0.6	6	1
3.18	5	●	DSAS0318X05S060	16.5	28.6	31.6	78.6	78	0.6	6	1
3.20	3	●	DSAS0320X03S060	10.2	21.6	23.6	70.6	70	0.6	6	1
3.20	5	●	DSAS0320X05S060	16.6	28.6	31.6	78.6	78	0.6	6	1
3.26	3	●	DSAS0326X03S060	10.4	21.6	23.6	70.6	70	0.6	6	1
3.26	5	●	DSAS0326X05S060	16.9	28.6	31.6	78.6	78	0.6	6	1
3.30	3	●	DSAS0330X03S060	10.5	21.6	23.6	70.6	70	0.6	6	1
3.30	5	●	DSAS0330X05S060	17.1	28.6	31.6	78.6	78	0.6	6	1
3.40	3	●	DSAS0340X03S060	10.8	21.6	23.6	70.6	70	0.6	6	1
3.40	5	●	DSAS0340X05S060	17.6	28.6	31.6	78.6	78	0.6	6	1
3.50	3	●	DSAS0350X03S060	11.1	21.6	23.6	70.6	70	0.6	6	1
3.50	5	●	DSAS0350X05S060	18.1	28.6	31.6	78.6	78	0.6	6	1
3.57	3	●	DSAS0357X03S060	11.4	22.7	23.7	70.7	70	0.7	6	1
3.57	5	●	DSAS0357X05S060	18.6	30.7	31.7	78.7	78	0.7	6	1
3.60	3	●	DSAS0360X03S060	11.5	22.7	23.7	70.7	70	0.7	6	1
3.60	5	●	DSAS0360X05S060	18.7	30.7	31.7	78.7	78	0.7	6	1
3.70	3	●	DSAS0370X03S060	11.8	22.7	23.7	70.7	70	0.7	6	1
3.70	5	●	DSAS0370X05S060	19.2	30.7	31.7	78.7	78	0.7	6	1
3.80	3	●	DSAS0380X03S060	12.1	22.7	23.7	70.7	70	0.7	6	1
3.80	5	●	DSAS0380X05S060	19.7	30.7	31.7	78.7	78	0.7	6	1
3.90	3	●	DSAS0390X03S060	12.4	22.7	23.7	70.7	70	0.7	6	1
3.90	5	●	DSAS0390X05S060	20.2	30.7	31.7	78.7	78	0.7	6	1
3.97	3	●	DSAS0397X03S060	12.6	22.7	23.7	70.7	70	0.7	6	1
3.97	5	●	DSAS0397X05S060	20.5	30.7	31.7	78.7	78	0.7	6	1
4.00	3	●	DSAS0400X03S060	12.7	22.7	23.7	70.7	70	0.7	6	1
4.00	5	●	DSAS0400X05S060	20.7	30.7	31.7	78.7	78	0.7	6	1
4.10	3	●	DSAS0410X03S060	13.0	24.7	26.7	73.7	73	0.7	6	1
4.10	5	●	DSAS0410X05S060	21.2	33.7	35.7	82.7	82	0.7	6	1

注1) Φ5mm以下的冷却孔形状为圆形。

DC = 加工直径
LU = 可使用长度
LCF = 槽长

LH = 颈长
OAL = 全长
LF = 功能长度

PL = 顶端与肩部的尺寸差
DCON = 安装部直径

●：标准库存品

(mm)

DC	L/D	DP9020	型号	LU	LCF	LH	OAL	LF	PL	DCON	图
4.20	3	●	DSAS0420X03S060	13.4	24.8	26.8	73.8	73	0.8	6	1
4.20	5	●	DSAS0420X05S060	21.8	33.8	35.8	82.8	82	0.8	6	1
4.30	3	●	DSAS0430X03S060	13.7	24.8	26.8	73.8	73	0.8	6	1
4.30	5	●	DSAS0430X05S060	22.3	33.8	35.8	82.8	82	0.8	6	1
4.37	3	●	DSAS0437X03S060	13.9	24.8	26.8	73.8	73	0.8	6	1
4.37	5	●	DSAS0437X05S060	22.6	33.8	35.8	82.8	82	0.8	6	1
4.40	3	●	DSAS0440X03S060	14.0	24.8	26.8	73.8	73	0.8	6	1
4.40	5	●	DSAS0440X05S060	22.8	33.8	35.8	82.8	82	0.8	6	1
4.50	3	●	DSAS0450X03S060	14.3	24.8	26.8	73.8	73	0.8	6	1
4.50	5	●	DSAS0450X05S060	23.3	33.8	35.8	82.8	82	0.8	6	1
4.60	3	●	DSAS0460X03S060	14.6	25.8	28.8	75.8	75	0.8	6	1
4.60	5	●	DSAS0460X05S060	23.8	35.8	38.8	85.8	85	0.8	6	1
4.70	3	●	DSAS0470X03S060	15.0	25.9	28.9	75.9	75	0.9	6	1
4.70	5	●	DSAS0470X05S060	24.4	35.9	38.9	85.9	85	0.9	6	1
4.76	3	●	DSAS0476X03S060	15.2	25.9	28.9	75.9	75	0.9	6	1
4.76	5	●	DSAS0476X05S060	24.7	35.9	38.9	85.9	85	0.9	6	1
4.80	3	●	DSAS0480X03S060	15.3	25.9	28.9	75.9	75	0.9	6	1
4.80	5	●	DSAS0480X05S060	24.9	35.9	38.9	85.9	85	0.9	6	1
4.86	3	●	DSAS0486X03S060	15.5	25.9	28.9	75.9	75	0.9	6	1
4.86	5	●	DSAS0486X05S060	25.2	35.9	38.9	85.9	85	0.9	6	1
4.90	3	●	DSAS0490X03S060	15.6	25.9	28.9	75.9	75	0.9	6	1
4.90	5	●	DSAS0490X05S060	25.4	35.9	38.9	85.9	85	0.9	6	1
5.00	3	●	DSAS0500X03S060	15.9	28.9	29.9	81.9	81	0.9	6	2
5.00	5	●	DSAS0500X05S060	25.9	39.9	42.9	89.9	89	0.9	6	2
5.10	3	●	DSAS0510X03S060	16.2	28.9	29.9	81.9	81	0.9	6	2
5.10	5	●	DSAS0510X05S060	26.4	39.9	42.9	89.9	89	0.9	6	2
5.16	3	●	DSAS0516X03S060	16.5	29.0	30.0	82.0	81	1.0	6	2
5.16	5	●	DSAS0516X05S060	26.8	40.0	43.0	90.0	89	1.0	6	2
5.20	3	●	DSAS0520X03S060	16.6	29.0	30.0	82.0	81	1.0	6	2
5.20	5	●	DSAS0520X05S060	27.0	40.0	43.0	90.0	89	1.0	6	2
5.30	3	●	DSAS0530X03S060	16.9	29.0	30.0	82.0	81	1.0	6	2
5.30	5	●	DSAS0530X05S060	27.5	40.0	43.0	90.0	89	1.0	6	2
5.40	3	●	DSAS0540X03S060	17.2	29.0	30.0	82.0	81	1.0	6	2
5.40	5	●	DSAS0540X05S060	28.0	40.0	43.0	90.0	89	1.0	6	2
5.50	3	●	DSAS0550X03S060	17.5	29.0	30.0	82.0	81	1.0	6	2
5.50	5	●	DSAS0550X05S060	28.5	40.0	43.0	90.0	89	1.0	6	2
5.56	3	●	DSAS0556X03S060	17.8	31.1	31.1	82.1	81	1.1	6	2
5.56	5	●	DSAS0556X05S060	28.9	43.1	43.1	90.1	89	1.1	6	2
5.60	3	●	DSAS0560X03S060	17.9	31.1	31.1	82.1	81	1.1	6	2
5.60	5	●	DSAS0560X05S060	29.1	43.1	43.1	90.1	89	1.1	6	2
5.70	3	●	DSAS0570X03S060	18.2	31.1	31.1	82.1	81	1.1	6	2
5.70	5	●	DSAS0570X05S060	29.6	43.1	43.1	90.1	89	1.1	6	2
5.80	3	●	DSAS0580X03S060	18.5	31.1	31.1	82.1	81	1.1	6	2
5.80	5	●	DSAS0580X05S060	30.1	43.1	43.1	90.1	89	1.1	6	2
5.90	3	●	DSAS0590X03S060	18.8	31.1	31.1	82.1	81	1.1	6	2
5.90	5	●	DSAS0590X05S060	30.6	43.1	43.1	90.1	89	1.1	6	2
5.95	3	●	DSAS0595X03S060	19.0	31.1	31.1	82.1	81	1.1	6	2
5.95	5	●	DSAS0595X05S060	30.9	43.1	43.1	90.1	89	1.1	6	2
6.00	3	●	DSAS0600X03S060	19.1	31.1	31.1	82.1	81	1.1	6	2
6.00	5	●	DSAS0600X05S060	31.1	43.1	43.1	90.1	89	1.1	6	2
6.10	3	●	DSAS0610X03S080	19.5	34.2	37.2	87.2	86	1.2	8	2
6.10	5	●	DSAS0610X05S080	31.7	47.2	49.2	96.2	95	1.2	8	2
6.20	3	●	DSAS0620X03S080	19.8	34.2	37.2	87.2	86	1.2	8	2
6.20	5	●	DSAS0620X05S080	32.2	47.2	49.2	96.2	95	1.2	8	2
6.30	3	●	DSAS0630X03S080	20.1	34.2	37.2	87.2	86	1.2	8	2
6.30	5	●	DSAS0630X05S080	32.7	47.2	49.2	96.2	95	1.2	8	2
6.35	3	●	DSAS0635X03S080	20.3	34.2	37.2	87.2	86	1.2	8	2
6.35	5	●	DSAS0635X05S080	33.0	47.2	49.2	96.2	95	1.2	8	2

DSAS

(mm)

DC	L/D	DP9020	型号	LU	LCF	LH	OAL	LF	PL	DCON	图
6.40	3	●	DSAS0640X03S080	20.4	34.2	37.2	87.2	86	1.2	8	2
6.40	5	●	DSAS0640X05S080	33.2	47.2	49.2	96.2	95	1.2	8	2
6.50	3	●	DSAS0650X03S080	20.7	34.2	37.2	87.2	86	1.2	8	2
6.50	5	●	DSAS0650X05S080	33.7	47.2	49.2	96.2	95	1.2	8	2
6.60	3	●	DSAS0660X03S080	21.1	36.3	38.3	91.3	90	1.3	8	2
6.60	5	●	DSAS0660X05S080	34.3	50.3	52.3	99.3	98	1.3	8	2
6.70	3	●	DSAS0670X03S080	21.4	36.3	38.3	91.3	90	1.3	8	2
6.70	5	●	DSAS0670X05S080	34.8	50.3	52.3	99.3	98	1.3	8	2
6.75	3	●	DSAS0675X03S080	21.5	36.3	38.3	91.3	90	1.3	8	2
6.75	5	●	DSAS0675X05S080	35.0	50.3	52.3	99.3	98	1.3	8	2
6.80	3	●	DSAS0680X03S080	21.7	36.3	38.3	91.3	90	1.3	8	2
6.80	5	●	DSAS0680X05S080	35.3	50.3	52.3	99.3	98	1.3	8	2
6.90	3	●	DSAS0690X03S080	22.0	36.3	38.3	91.3	90	1.3	8	2
6.90	5	●	DSAS0690X05S080	35.8	50.3	52.3	99.3	98	1.3	8	2
6.95	3	●	DSAS0695X03S080	22.2	36.3	38.3	91.3	90	1.3	8	2
6.95	5	●	DSAS0695X05S080	36.1	50.3	52.3	99.3	98	1.3	8	2
7.00	3	●	DSAS0700X03S080	22.3	36.3	38.3	91.3	90	1.3	8	2
7.00	5	●	DSAS0700X05S080	36.3	50.3	52.3	99.3	98	1.3	8	2
7.10	3	●	DSAS0710X03S080	22.7	39.4	40.4	91.4	90	1.4	8	2
7.10	5	●	DSAS0710X05S080	36.9	54.4	57.4	104.4	103	1.4	8	2
7.14	3	●	DSAS0714X03S080	22.8	39.4	40.4	91.4	90	1.4	8	2
7.14	5	●	DSAS0714X05S080	37.1	54.4	57.4	104.4	103	1.4	8	2
7.20	3	●	DSAS0720X03S080	23.0	39.4	40.4	91.4	90	1.4	8	2
7.20	5	●	DSAS0720X05S080	37.4	54.4	57.4	104.4	103	1.4	8	2
7.30	3	●	DSAS0730X03S080	23.3	39.4	40.4	91.4	90	1.4	8	2
7.30	5	●	DSAS0730X05S080	37.9	54.4	57.4	104.4	103	1.4	8	2
7.40	3	●	DSAS0740X03S080	23.6	39.4	40.4	91.4	90	1.4	8	2
7.40	5	●	DSAS0740X05S080	38.4	54.4	57.4	104.4	103	1.4	8	2
7.50	3	●	DSAS0750X03S080	23.9	39.4	40.4	91.4	90	1.4	8	2
7.50	5	●	DSAS0750X05S080	38.9	54.4	57.4	104.4	103	1.4	8	2
7.54	3	●	DSAS0754X03S080	24.1	41.5	41.5	91.5	90	1.5	8	2
7.54	5	●	DSAS0754X05S080	39.2	57.5	57.5	104.5	103	1.5	8	2
7.60	3	●	DSAS0760X03S080	24.3	41.5	41.5	91.5	90	1.5	8	2
7.60	5	●	DSAS0760X05S080	39.5	57.5	57.5	104.5	103	1.5	8	2
7.70	3	●	DSAS0770X03S080	24.6	41.5	41.5	91.5	90	1.5	8	2
7.70	5	●	DSAS0770X05S080	40.0	57.5	57.5	104.5	103	1.5	8	2
7.80	3	●	DSAS0780X03S080	24.9	41.5	41.5	91.5	90	1.5	8	2
7.80	5	●	DSAS0780X05S080	40.5	57.5	57.5	104.5	103	1.5	8	2
7.90	3	●	DSAS0790X03S080	25.2	41.5	41.5	91.5	90	1.5	8	2
7.90	5	●	DSAS0790X05S080	41.0	57.5	57.5	104.5	103	1.5	8	2
7.94	3	●	DSAS0794X03S080	25.3	41.5	41.5	91.5	90	1.5	8	2
7.94	5	●	DSAS0794X05S080	41.2	57.5	57.5	104.5	103	1.5	8	2
8.00	3	●	DSAS0800X03S080	25.5	41.5	41.5	91.5	90	1.5	8	2
8.00	5	●	DSAS0800X05S080	41.5	57.5	57.5	104.5	103	1.5	8	2
8.10	3	●	DSAS0810X03S100	25.8	44.5	47.5	97.5	96	1.5	10	2
8.10	5	●	DSAS0810X05S100	42.0	61.5	63.5	114.5	113	1.5	10	2
8.20	3	●	DSAS0820X03S100	26.1	44.5	47.5	97.5	96	1.5	10	2
8.20	5	●	DSAS0820X05S100	42.5	61.5	63.5	114.5	113	1.5	10	2
8.30	3	●	DSAS0830X03S100	26.4	44.5	47.5	97.5	96	1.5	10	2
8.30	5	●	DSAS0830X05S100	43.0	61.5	63.5	114.5	113	1.5	10	2
8.33	3	●	DSAS0833X03S100	26.5	44.5	47.5	97.5	96	1.5	10	2
8.33	5	●	DSAS0833X05S100	43.2	61.5	63.5	114.5	113	1.5	10	2
8.40	3	●	DSAS0840X03S100	26.7	44.5	47.5	97.5	96	1.5	10	2
8.40	5	●	DSAS0840X05S100	43.5	61.5	63.5	114.5	113	1.5	10	2

DC = 加工直径
LU = 可使用长度
LCF = 槽长

LH = 颈长
OAL = 全长
LF = 功能长度

PL = 顶端与肩部的尺寸差
DCON = 安装部直径

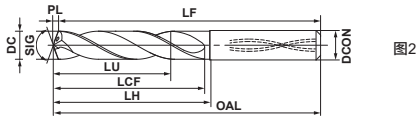


图2

(mm)

DC	L/D	DP9020	型 号	LU	LCF	LH	OAL	LF	PL	DCON	图
8.50	3	●	DSAS0850X03S100	27.0	44.5	47.5	97.5	96	1.5	10	2
8.50	5	●	DSAS0850X05S100	44.0	61.5	63.5	114.5	113	1.5	10	2
8.60	3	●	DSAS0860X03S100	27.4	46.6	48.6	102.6	101	1.6	10	2
8.60	5	●	DSAS0860X05S100	44.6	64.6	66.6	117.6	116	1.6	10	2
8.70	3	●	DSAS0870X03S100	27.7	46.6	48.6	102.6	101	1.6	10	2
8.70	5	●	DSAS0870X05S100	45.1	64.6	66.6	117.6	116	1.6	10	2
8.73	3	●	DSAS0873X03S100	27.8	46.6	48.6	102.6	101	1.6	10	2
8.73	5	●	DSAS0873X05S100	45.3	64.6	66.6	117.6	116	1.6	10	2
8.80	3	●	DSAS0880X03S100	28.0	46.6	48.6	102.6	101	1.6	10	2
8.80	5	●	DSAS0880X05S100	45.6	64.6	66.6	117.6	116	1.6	10	2
8.90	3	●	DSAS0890X03S100	28.3	46.6	48.6	102.6	101	1.6	10	2
8.90	5	●	DSAS0890X05S100	46.1	64.6	66.6	117.6	116	1.6	10	2
9.00	3	●	DSAS0900X03S100	28.6	46.6	48.6	102.6	101	1.6	10	2
9.00	5	●	DSAS0900X05S100	46.6	64.6	66.6	117.6	116	1.6	10	2
9.10	3	●	DSAS0910X03S100	29.1	49.8	50.8	102.8	101	1.8	10	2
9.10	5	●	DSAS0910X05S100	47.3	68.8	71.8	122.8	121	1.8	10	2
9.20	3	●	DSAS0920X03S100	29.4	49.8	50.8	102.8	101	1.8	10	2
9.20	5	●	DSAS0920X05S100	47.8	68.8	71.8	122.8	121	1.8	10	2
9.30	3	●	DSAS0930X03S100	29.7	49.8	50.8	102.8	101	1.8	10	2
9.30	5	●	DSAS0930X05S100	48.3	68.8	71.8	122.8	121	1.8	10	2
9.40	3	●	DSAS0940X03S100	30.0	49.8	50.8	102.8	101	1.8	10	2
9.40	5	●	DSAS0940X05S100	48.8	68.8	71.8	122.8	121	1.8	10	2
9.50	3	●	DSAS0950X03S100	30.3	49.8	50.8	102.8	101	1.8	10	2
9.50	5	●	DSAS0950X05S100	49.3	68.8	71.8	122.8	121	1.8	10	2
9.53	3	●	DSAS0953X03S100	30.4	49.8	50.8	102.8	101	1.8	10	2
9.53	5	●	DSAS0953X05S100	49.4	68.8	71.8	122.8	121	1.8	10	2
9.60	3	●	DSAS0960X03S100	30.6	49.8	50.8	102.8	101	1.8	10	2
9.60	5	●	DSAS0960X05S100	49.8	68.8	71.8	122.8	121	1.8	10	2
9.70	3	●	DSAS0970X03S100	30.9	49.8	50.8	102.8	101	1.8	10	2
9.70	5	●	DSAS0970X05S100	50.3	68.8	71.8	122.8	121	1.8	10	2
9.80	3	●	DSAS0980X03S100	31.2	51.8	51.8	102.8	101	1.8	10	2
9.80	5	●	DSAS0980X05S100	50.8	71.8	71.8	122.8	121	1.8	10	2
9.90	3	●	DSAS0990X03S100	31.5	51.9	51.8	102.8	101	1.8	10	2
9.90	5	●	DSAS0990X05S100	51.3	71.8	71.8	122.8	121	1.8	10	2
9.92	3	●	DSAS0992X03S100	31.6	51.8	51.8	102.8	101	1.8	10	2
9.92	5	●	DSAS0992X05S100	51.4	71.8	71.8	122.8	121	1.8	10	2
10.00	3	●	DSAS1000X03S100	31.8	51.8	51.8	102.8	101	1.8	10	2
10.00	5	●	DSAS1000X05S100	51.8	71.8	71.8	122.8	121	1.8	10	2
10.10	3	●	DSAS1010X03S120	32.2	54.9	57.9	112.9	111	1.9	12	2
10.10	5	●	DSAS1010X05S120	52.4	75.9	79.9	135.9	134	1.9	12	2
10.20	3	●	DSAS1020X03S120	32.5	54.9	57.9	112.9	111	1.9	12	2
10.20	5	●	DSAS1020X05S120	52.9	75.9	79.9	135.9	134	1.9	12	2
10.30	3	●	DSAS1030X03S120	32.8	54.9	57.9	112.9	111	1.9	12	2
10.30	5	●	DSAS1030X05S120	53.4	75.9	79.9	135.9	134	1.9	12	2
10.32	3	●	DSAS1032X03S120	32.9	54.9	57.9	112.9	111	1.9	12	2
10.32	5	●	DSAS1032X05S120	53.5	75.9	79.9	135.9	134	1.9	12	2
10.40	3	●	DSAS1040X03S120	33.1	54.9	57.9	112.9	111	1.9	12	2
10.40	5	●	DSAS1040X05S120	53.9	75.9	79.9	135.9	134	1.9	12	2
10.50	3	●	DSAS1050X03S120	33.4	54.9	57.9	112.9	111	1.9	12	2
10.50	5	●	DSAS1050X05S120	54.4	75.9	79.9	135.9	134	1.9	12	2
10.60	3	●	DSAS1060X03S120	33.7	54.9	57.9	112.9	111	1.9	12	2
10.60	5	●	DSAS1060X05S120	54.9	75.9	79.9	135.9	134	1.9	12	2
10.70	3	●	DSAS1070X03S120	34.0	54.9	57.9	112.9	111	1.9	12	2
10.70	5	●	DSAS1070X05S120	55.4	75.9	79.9	135.9	134	1.9	12	2
10.72	3	●	DSAS1072X03S120	34.1	57.0	59.0	118.0	116	2.0	12	2
10.72	5	●	DSAS1072X05S120	55.6	79.0	80.0	142.0	140	2.0	12	2
10.80	3	●	DSAS1080X03S120	34.4	57.0	59.0	118.0	116	2.0	12	2
10.80	5	●	DSAS1080X05S120	56.0	79.0	80.0	142.0	140	2.0	12	2

DSAS

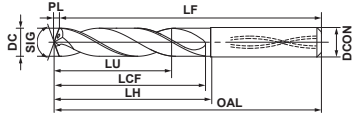


图2

(mm)

DC	L/D	DP9020	型号	LU	LCF	LH	OAL	LF	PL	DCON	图
10.90	3	●	DSAS1090X03S120	34.7	57.0	59.0	118.0	116	2.0	12	2
10.90	5	●	DSAS1090X05S120	56.5	79.0	80.0	142.0	140	2.0	12	2
11.00	3	●	DSAS1100X03S120	35.0	57.0	59.0	118.0	116	2.0	12	2
11.00	5	●	DSAS1100X05S120	57.0	79.0	80.0	142.0	140	2.0	12	2
11.10	3	●	DSAS1110X03S120	35.4	60.1	61.1	118.1	116	2.1	12	2
11.10	5	●	DSAS1110X05S120	57.6	83.1	86.1	142.1	140	2.1	12	2
11.11	3	●	DSAS1111X03S120	35.4	60.1	61.1	118.1	116	2.1	12	2
11.11	5	●	DSAS1111X05S120	57.7	83.1	86.1	142.1	140	2.1	12	2
11.20	3	●	DSAS1120X03S120	35.7	60.1	61.1	118.1	116	2.1	12	2
11.20	5	●	DSAS1120X05S120	58.1	83.1	86.1	142.1	140	2.1	12	2
11.30	3	●	DSAS1130X03S120	36.0	60.1	61.1	118.1	116	2.1	12	2
11.30	5	●	DSAS1130X05S120	58.6	83.1	86.1	142.1	140	2.1	12	2
11.40	3	●	DSAS1140X03S120	36.3	60.1	61.1	118.1	116	2.1	12	2
11.40	5	●	DSAS1140X05S120	59.1	83.1	86.1	142.1	140	2.1	12	2
11.50	3	●	DSAS1150X03S120	36.6	60.1	61.1	118.1	116	2.1	12	2
11.50	5	●	DSAS1150X05S120	59.6	83.1	86.1	142.1	140	2.1	12	2
11.51	3	●	DSAS1151X03S120	36.7	62.2	62.2	118.2	116	2.2	12	2
11.51	5	●	DSAS1151X05S120	59.7	86.2	86.2	142.2	140	2.2	12	2
11.60	3	●	DSAS1160X03S120	37.0	62.2	62.2	118.2	116	2.2	12	2
11.60	5	●	DSAS1160X05S120	60.2	86.2	86.2	142.2	140	2.2	12	2
11.70	3	●	DSAS1170X03S120	37.3	62.2	62.2	118.2	116	2.2	12	2
11.70	5	●	DSAS1170X05S120	60.7	86.2	86.2	142.2	140	2.2	12	2
11.80	3	●	DSAS1180X03S120	37.6	62.2	62.2	118.2	116	2.2	12	2
11.80	5	●	DSAS1180X05S120	61.2	86.2	86.2	142.2	140	2.2	12	2
11.90	3	●	DSAS1190X03S120	37.9	62.2	62.2	118.2	116	2.2	12	2
11.90	5	●	DSAS1190X05S120	61.7	86.2	86.2	142.2	140	2.2	12	2
12.00	3	●	DSAS1200X03S120	38.2	62.2	62.2	118.2	116	2.2	12	2
12.00	5	●	DSAS1200X05S120	62.2	86.2	86.2	142.2	140	2.2	12	2
12.30	3	□	DSAS1230X03S140	39.1	65.2	68.2	124.2	122	2.2	14	2
12.30	5	□	DSAS1230X05S140	63.7	90.2	94.2	150.2	148	2.2	14	2
12.40	3	□	DSAS1240X03S140	39.5	65.3	68.3	124.3	122	2.3	14	2
12.40	5	□	DSAS1240X05S140	64.3	90.3	94.3	150.3	148	2.3	14	2
12.50	3	□	DSAS1250X03S140	39.8	65.3	68.3	124.3	122	2.3	14	2
12.50	5	□	DSAS1250X05S140	64.8	90.3	94.3	150.3	148	2.3	14	2
12.70	3	□	DSAS1270X03S140	40.4	67.3	68.3	128.3	126	2.3	14	2
12.70	5	□	DSAS1270X05S140	65.8	93.3	94.3	156.3	154	2.3	14	2
13.00	3	□	DSAS1300X03S140	41.4	67.4	68.4	128.4	126	2.4	14	2
13.00	5	□	DSAS1300X05S140	67.4	93.4	94.4	156.4	154	2.4	14	2
13.10	3	□	DSAS1310X03S140	41.7	70.4	72.4	128.4	126	2.4	14	2
13.10	5	□	DSAS1310X05S140	67.9	97.4	100.4	156.4	154	2.4	14	2
13.50	3	□	DSAS1350X03S140	43.0	70.5	72.5	128.5	126	2.5	14	2
13.50	5	□	DSAS1350X05S140	70.0	97.5	100.5	156.5	154	2.5	14	2
14.00	3	□	DSAS1400X03S140	44.5	72.5	72.5	128.5	126	2.5	14	2
14.00	5	□	DSAS1400X05S140	72.5	100.5	100.5	156.5	154	2.5	14	2
14.50	3	□	DSAS1450X03S160	46.1	75.6	78.6	137.6	135	2.6	16	2
14.50	5	□	DSAS1450X05S160	75.1	104.6	108.6	167.6	165	2.6	16	2
14.60	3	□	DSAS1460X03S160	46.5	77.7	78.7	137.7	135	2.7	16	2
14.60	5	□	DSAS1460X05S160	75.7	107.7	108.7	167.7	165	2.7	16	2
14.70	3	□	DSAS1470X03S160	46.8	77.7	78.7	137.7	135	2.7	16	2
14.70	5	□	DSAS1470X05S160	76.2	107.7	108.7	167.7	165	2.7	16	2
15.00	3	□	DSAS1500X03S160	47.7	77.7	78.7	137.7	135	2.7	16	2
15.00	5	□	DSAS1500X05S160	77.7	107.7	108.7	167.7	165	2.7	16	2

□ = NEW

● : 标准库存品 □ : 预订生产品

DSAE



P M K N S H

耐热合金

外部供液型



DC=3	3<DC≤6	6<DC≤10	10<DC≤12	
$\begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.022 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.027 \end{smallmatrix}$	
DCON=6	6<DCON≤10	DCON=12		
$\begin{smallmatrix} 0 \\ -0.008 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.009 \end{smallmatrix}$	$\begin{smallmatrix} 0 \\ -0.011 \end{smallmatrix}$		

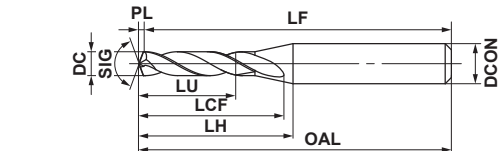


图1

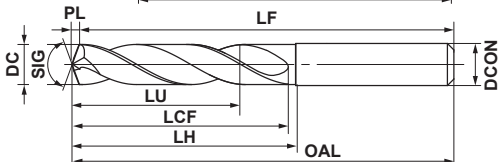


图2

*观察的方向不同, 涂层会有所差异, 但性能方面完全没问题。

(mm)

DC	L/D	DP9020	型号	LU	LCF	LH	OAL	LF	PL	DCON	图
3.0	3	●	DSAE0300X03S060	9.5	21.5	23.5	70.5	70	0.5	6	1
3.4	3	●	DSAE0340X03S060	10.8	21.6	23.6	70.6	70	0.6	6	1
4.0	3	●	DSAE0400X03S060	12.7	22.7	23.7	70.7	70	0.7	6	1
4.3	3	●	DSAE0430X03S060	13.7	24.8	26.8	73.8	73	0.8	6	1
4.5	3	●	DSAE0450X03S060	14.3	24.8	26.8	73.8	73	0.8	6	1
5.0	3	●	DSAE0500X03S060	15.9	28.9	29.9	81.9	81	0.9	6	2
5.1	3	●	DSAE0510X03S060	16.2	28.9	29.9	81.9	81	0.9	6	2
5.4	3	●	DSAE0540X03S060	17.2	29.0	30.0	82.0	81	1.0	6	2
5.5	3	●	DSAE0550X03S060	17.5	29.0	30.0	82.0	81	1.0	6	2
5.6	3	●	DSAE0560X03S060	17.9	31.1	31.1	82.1	81	1.1	6	2
5.9	3	●	DSAE0590X03S060	18.8	31.1	31.1	82.1	81	1.1	6	2
6.0	3	●	DSAE0600X03S060	19.1	31.1	31.1	82.1	81	1.1	6	2
6.1	3	●	DSAE0610X03S080	19.5	34.2	37.2	87.2	86	1.2	8	2
6.2	3	●	DSAE0620X03S080	19.8	34.2	37.2	87.2	86	1.2	8	2
6.4	3	●	DSAE0640X03S080	20.4	34.2	37.2	87.2	86	1.2	8	2
6.8	3	●	DSAE0680X03S080	21.7	36.3	38.3	91.3	90	1.3	8	2
6.9	3	●	DSAE0690X03S080	22.0	36.3	38.3	91.3	90	1.3	8	2
7.0	3	●	DSAE0700X03S080	22.3	36.3	38.3	91.3	90	1.3	8	2
7.1	3	●	DSAE0710X03S080	22.7	39.4	40.4	91.4	90	1.4	8	2
7.8	3	●	DSAE0780X03S080	24.9	41.5	41.5	91.5	90	1.5	8	2
8.0	3	●	DSAE0800X03S080	25.5	41.5	41.5	91.5	90	1.5	8	2
8.1	3	●	DSAE0810X03S100	25.8	44.5	47.5	97.5	96	1.5	10	2
8.2	3	●	DSAE0820X03S100	26.1	44.5	47.5	97.5	96	1.5	10	2
8.4	3	●	DSAE0840X03S100	26.7	44.5	47.5	97.5	96	1.5	10	2
8.5	3	●	DSAE0850X03S100	27.0	44.5	47.5	97.5	96	1.5	10	2
9.0	3	●	DSAE0900X03S100	28.6	46.6	48.6	102.6	101	1.6	10	2
10.0	3	●	DSAE1000X03S100	31.8	51.8	51.8	102.8	101	1.8	10	2
10.5	3	●	DSAE1050X03S120	33.4	54.9	57.9	112.9	111	1.9	12	2
10.7	3	●	DSAE1070X03S120	34.0	56.9	57.9	112.9	111	1.9	12	2
11.0	3	●	DSAE1100X03S120	35.0	57.0	59.0	118.0	116	2.0	12	2
11.5	3	●	DSAE1150X03S120	36.6	60.1	61.1	118.1	116	2.1	12	2
12.0	3	●	DSAE1200X03S120	38.2	62.2	62.2	118.2	116	2.2	12	2

DC = 加工直径
LU = 可使用长度
LCF = 槽长

LH = 颈长
OAL = 全长
LF = 功能长度

PL = 顶端与肩部的尺寸差
DCON = 安装部直径

DSAS/DSAE

推荐切削条件

(mm)

工件材料		耐热合金		钛合金	
		Inconel718等		Ti-6Al-4V等	
DC	L/D	转速 n (min^{-1})	每转进给量 f_r (Min.—Max.) (mm/rev.)	转速 n (min^{-1})	每转进给量 f_r (Min.—Max.) (mm/rev.)
3	≤ 5	1000	0.06 (0.04—0.10)	4200	0.08 (0.06—0.12)
4	≤ 5	790	0.06 (0.04—0.10)	3100	0.10 (0.08—0.16)
5	≤ 5	760	0.08 (0.06—0.12)	2500	0.12 (0.08—0.20)
6	≤ 5	790	0.10 (0.08—0.15)	2100	0.14 (0.10—0.20)
8	≤ 5	590	0.10 (0.08—0.15)	1600	0.18 (0.15—0.25)
10	≤ 5	570	0.10 (0.08—0.15)	1300	0.22 (0.18—0.28)
12	≤ 5	530	0.12 (0.08—0.15)	1100	0.24 (0.20—0.30)
14	≤ 5	450	0.12 (0.08—0.15)	910	0.24 (0.20—0.30)

注1) 为实现稳定加工, 推荐内冷供液型供给高压冷却液。

注2) 推荐使用乳化液型的水溶性冷却液。

注3) 使用非水溶性冷却液时, 请将切削速度降低10%~20%。

注4) 外部供液型加工DC×1以上的深孔时, 为断屑推荐DC×0.5D左右的步进加工。

关于安全

●请勿用手直接触摸切削刀、切屑。●请在推荐条件范围内使用, 及早更换刀具。●有时会有高温的切屑飞出, 伸长的切屑排出。请使用防护罩、防护镜等防护用具。●使用非水溶性切削液时, 务必采取防火措施。

●安装刀片或零部件时, 请使用附带的扳手稳妥安装。●使用旋转刀具时, 务必进行试运转, 确认有无振摆、振动、异常声音。

 三菱综合材料株式会社

 MITSUBISHI MATERIALS CORPORATION

 三菱综合材料管理(上海)有限公司

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(规格若有更改, 恕不事先通知)

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