

NEW PRODUCT NEWS

STAR MILL



New SED End Mills



KEY POINT

TaeguTec has introduced a new **SED** type solid carbide end mill to the **STARMILL** line.

The **STARMILL**'s **SED** end mills specialize in difficult-to-cut materials such as stainless steel, titanium or Inconel because of its unequally spaced cutting edges, including a high helix angle, which decreases both vibration and cutting noise.

For customer convenience, the new **SED** type end mills have been expanded to meet various machining requirements not included in the earlier **STARMILL** product line.

New Products:

SED 4...U: 4 flute medium flat end mill

- Added diameter range (D3)

SED 4...UL: 4 flute long flat end mill

- New product line

SED 4...U-R: 4 flute medium corner radius end mill

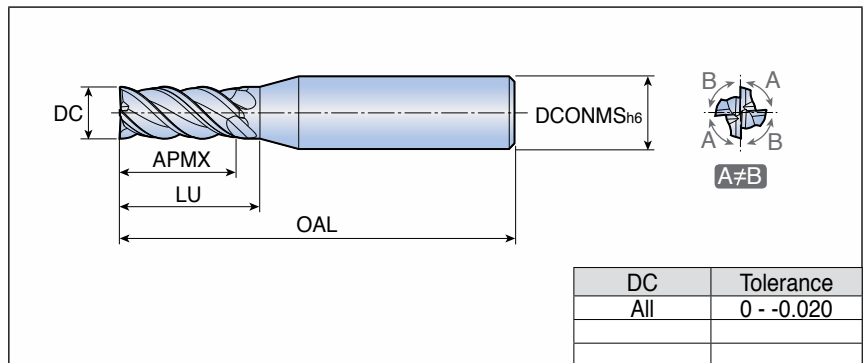
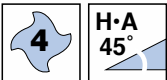
- New product line

SED 4...U

4 flute medium flat



- Excellent chatter damping credit to unequal spacing of cutting edges



Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	OAL	APMX	LU	DCONMS	
SED 4030U new	0.015-0.030	3	57	10	12	6	●
4040U	0.020-0.040	4	57	12	14	6	●
4050U	0.020-0.040	5	57	15	16	6	●
4060U	0.025-0.070	6	57	15	-	6	●
4080U	0.030-0.090	8	70	25	-	8	●
4100U	0.030-0.100	10	72	25	-	10	●
4120U	0.035-0.110	12	83	30	-	12	●
4160U	0.050-0.130	16	100	42	-	16	●
4200U	0.050-0.170	20	104	48	-	20	●

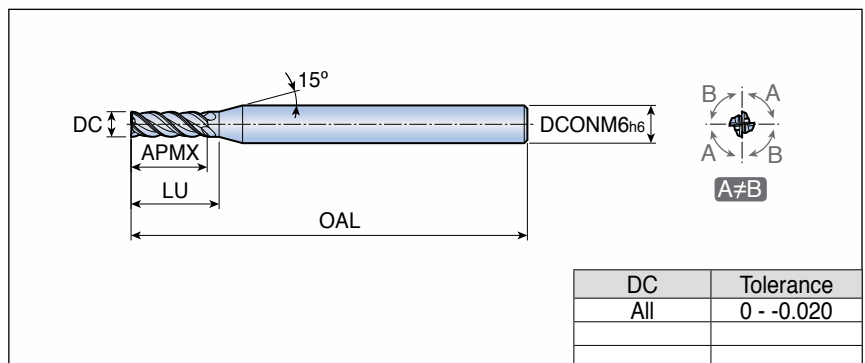
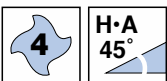
●: Standard item

SED 4...UL **new**

4 flute long flat



- Excellent chatter damping credit to unequal spacing of cutting edges



Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	OAL	APMX	LU	DCONMS	
SED 4030UL	0.015-0.030	3	63	10	12	6	●
4040UL	0.020-0.040	4	63	12	14	6	●
4060UL	0.025-0.070	6	65	20	-	6	●
4080UL	0.030-0.090	8	83	30	-	8	●
4100UL	0.030-0.100	10	83	35	-	10	●
4120UL	0.035-0.110	12	92	40	-	12	●

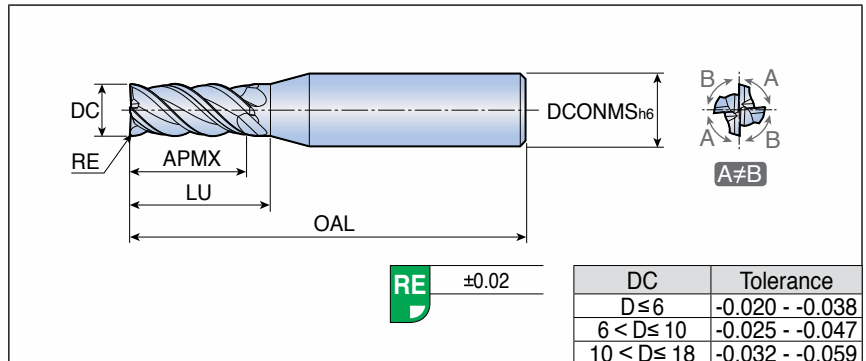
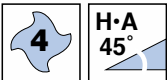
●: Standard item

SED 4...U-R new

4 flute medium corner radius



- Excellent chatter damping credit to unequal spacing of cutting edges



Designation	Feed (mm/tooth)	Dimension (mm)						Grade TT5515
		DC	RE	OAL	APMX	LU	DCONMS	
SED 4020U-R0.1	0.010-0.020	2	0.1	42	6	8	6	●
4030U-R0.2	0.015-0.030	3	0.2	57	10	12	6	●
4040U-R0.1	0.020-0.040	4	0.1	57	12	14	6	●
4040U-R0.2	0.020-0.040	4	0.2	57	12	14	6	●
4040U-R0.5	0.020-0.040	4	0.5	57	12	14	6	●
4050U-R0.15	0.020-0.040	5	0.15	57	15	16	6	●
4050U-R0.2	0.020-0.040	5	0.2	57	15	16	6	●
4060U-R0.2	0.025-0.070	6	0.2	57	15	-	6	●
4060U-R0.3	0.025-0.070	6	0.3	57	15	-	6	●
4060U-R0.5	0.025-0.070	6	0.5	57	15	-	6	●
4080U-R0.2	0.030-0.090	8	0.2	70	25	-	8	●
4080U-R0.3	0.030-0.090	8	0.3	70	25	-	8	●
4080U-R0.5	0.030-0.090	8	0.5	70	25	-	8	●
4100U-R0.2	0.030-0.100	10	0.2	72	25	-	10	●
4100U-R0.3	0.030-0.100	10	0.3	72	25	-	10	●
4100U-R0.5	0.030-0.100	10	0.5	72	25	-	10	●
4100U-R1.0	0.030-0.100	10	1.0	72	25	-	10	●
4120U-R0.3	0.035-0.110	12	0.3	83	30	-	12	●
4120U-R0.5	0.035-0.110	12	0.5	83	30	-	12	●
4120U-R1.0	0.035-0.110	12	1.0	83	30	-	12	●
4160U-R0.5	0.050-0.130	16	0.5	100	42	-	16	●
4160U-R1.0	0.050-0.130	16	1.0	100	42	-	16	●
4160U-R2.0	0.050-0.130	16	2.0	100	42	-	16	●
4160U-R3.0	0.050-0.130	16	3.0	100	42	-	16	●

●: Standard item

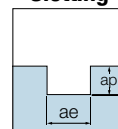
Recommended cutting conditions

ISO	Material	Condition	V min (m/min)	V max (m/min)
P	Non-alloy steel and cast steel, free cutting steel	0.1 - 0.25 %C Annealed	260	280
		0.25 - 0.25 %C Annealed	200	230
		0.25 - 0.25 %C Quenched and tempered	160	220
		0.55 - 0.80 %C Annealed	160	220
		0.55 - 0.80 %C Quenched and tempered	140	180
	Low alloy steel and cast steel (less than 5% of alloying elements)	Annealed	160	220
		Quenched and tempered	120	180
		Quenched and tempered	130	180
		Quenched and tempered	140	180
	High alloy steel, cast steel and tool steel	Annealed	130	180
Quenched and tempered		70	120	
M	Stainless steel and cast steel	Ferritic/martensitic	80	160
		Martensitic	60	150
		Austenitic	60	120
K	Gray cast iron (GG)	Ferritic	150	280
		Pearlitic	90	280
	Cast iron nodular (GGG)	Ferritic	80	260
		Pearlitic	130	240
	Malleable cast iron	Ferritic	150	280
		Pearlitic	140	240
S	High temp alloys	Fe based Annealed	20	40
		Fe based Cured	20	30
		Ni or Co based Annealed	20	30
		Ni or Co based Cured	20	30
		Cast	30	70
	Titanium, Ti alloys		30	70

Recommended feed

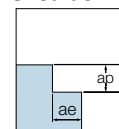
D(mm)	Fz(min)	Fz(max)	D(mm)	Fz(min)	Fz(max)
6	0.025	0.06	6	0.025	0.07
8	0.03	0.08	8	0.03	0.09
10	0.03	0.09	10	0.03	0.1
12	0.035	0.1	12	0.035	0.11
16	0.05	0.12	16	0.05	0.13
20	0.05	0.15	20	0.05	0.17

Slotting



ae = max 1D

Shouldering



- * Fz: feed per tooth
- * ae: Width of cut
- * ap: Depth of cut