



**suttontools** **TECLINE**

### **E604** -4 Flute Endmills - R30 N - Regular - Tecline - Sutton Tools -Techline

4 Flute Endmill R30 N Suitable for materials up to 1600 N/mm<sup>2</sup> TiAlN for longer tool life

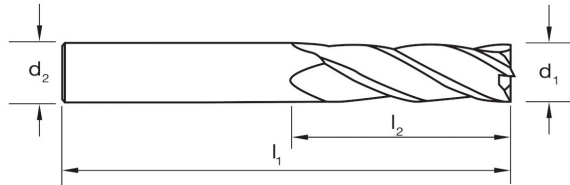
## Features:

- 4 Flute Endmill R30 N
- Suitable for materials up to 1600 N/mm<sup>2</sup>
- TiAlN for longer tool life

## Specifications:

<b>Designation:</b>	N
<b>Material:</b>	VHM
<b>Finish:</b>	TiAlN
<b>Shank Form:</b>	HA
<b>Helix Angle:</b>	R30
<b>Point Tolerance:</b>	h10
<b>Shank Tolerance:</b>	h6
<b>Point Form:</b>	Square End
<b>Standard:</b>	Sutton
<b>Rake Angle:</b>	12

Range:



Item #	Diameter d1 (mm)	Diameter d1 (inch)	Length l1 (mm)	Length l2 (mm)	Diameter d2 (mm)	z
E6040100	1.00	-	38	4	3	4
E6040150	1.50	-	38	4.5	3	4
E6040200	2.00	-	38	6	3	4
E6040250	2.50	-	38	9.5	3	4
E6040300	3.00	-	38	12	3	4
E6040350	3.50	-	50	12	4	4
E6040400	4.00	-	50	14	4	4
E6040450	4.50	-	50	16	6	4
E6040500	5.00	-	50	16	6	4
E6040600	6.00	-	50	19	6	4
E6040700	7.00	-	63	19	8	4
E6040800	8.00	-	63	20	8	4
E6040900	9.00	-	75	22	10	4
E6041000	10.00	-	75	22	10	4
E6041100	11.00	-	75	25	12	4
E6041200	12.00	-	75	25	12	4
E6041400	14.00	-	89	32	14	4
E6041600	16.00	-	89	32	16	4
E6041800	18.00	-	100	38	18	4
E6042000	20.00	-	100	38	20	4
E6042500	25.00	-	100	38	25	4

## Applications:

ISO	VDI	Description	Condition	Hardness	Strength	Optimal
P	1	Steel - Non-alloy, cast & free cutting (~ 0.15 %C)	Annealed	125MPa	440MPa	●
P	2	Steel - Non-alloy, cast & free cutting (~ 0.45 %C)	Annealed	190MPa	640MPa	●
P	3	Steel - Non-alloy, cast & free cutting (~ 0.45 %C)	Quenched & Tempered	250MPa	840MPa	●
P	4	Steel - Non-alloy, cast & free cutting (~ 0.75 %C)	Annealed	270MPa	910MPa	●
P	5	Steel - Non-alloy, cast & free cutting (~ 0.75 %C)	Quenched & Tempered	300MPa	1010MPa	○
P	6	Steel - Low alloy & cast < 5% of alloying elements	Annealed	180MPa	610MPa	●
P	7	Steel - Low alloy & cast < 5% of alloying elements	Quenched & Tempered	275MPa	930MPa	●
P	8	Steel - Low alloy & cast < 5% of alloying elements	Quenched & Tempered	300MPa	1010MPa	○
P	9	Steel - Low alloy & cast < 5% of alloying elements	Quenched & Tempered	350MPa	1180MPa	○
P	10	Steel - High alloy, cast & tool	Annealed	200MPa	680MPa	●
P	11	Steel - High alloy, cast & tool	Hardened & Tempered	325MPa	1100MPa	○
P	12	Steel - Corrosion resistant & cast - Ferritic / Martensitic	Annealed	200HB	680MPa	
P	13	Steel - Corrosion resistant & cast - Martensitic	Quenched & Tempered	240HB	810MPa	
M	14.1	Stainless Steel - Austenitic	Age Hardened	180MPa	610MPa	○
M	14.2	Stainless Steel - Duplex		250MPa	840MPa	○
M	14.3	Stainless Steel - Precipitation Hardening		250HB	840MPa	
K	15	Cast Iron, Grey (GG) - Ferritic / Pearlitic		180MPa	610MPa	○
K	16	Cast Iron, Grey (GG) - Pearlitic		260MPa	880MPa	○
K	17	Cast Iron, Nodular (GGG) - Ferritic		160MPa	570MPa	○
K	18	Cast Iron, Nodular (GGG) - Pearlitic		250MPa	840MPa	○
K	19	Cast Iron, Malleable - Ferritic		130MPa	460MPa	○
K	20	Cast Iron, Malleable - Pearlitic		230MPa	780MPa	○
N	21	Aluminum & Magnesium, wrought alloy - Non Heat Treatable		60HB	210MPa	
N	22	Aluminum & Magnesium, wrought alloy - Heat Treatable	Age Hardened	100HB	360MPa	
N	23	Aluminum & Magnesium, cast alloy ≤12% Si - Non Heat Treatabl		75HB	270MPa	
N	24	Aluminum & Magnesium, cast alloy ≤12% Si - Heat Treatable	Age Hardened	90HB	320MPa	
N	25	Aluminum & Magnesium, cast alloy >12% Si - Non Heat Treatabl		130HB	460MPa	
N	26	Copper & Copper alloys (Brass/Bronze) - Free cutting, Pb > 1		110HB	390MPa	
N	27	Copper & Copper alloys (Brass/Bronze) - Brass (CuZn, CuSnZn)		90HB	320MPa	
N	28	Copper & Copper alloys (Brass/Bronze) - Bronze (CuSn)		100HB	360MPa	
N	29	Non-metallic - Thermosetting & fiber-reinforced plastics				
N	30	Non-metallic - Hard rubber, wood etc.				
S	31	High temperature alloys - Fe based	Annealed	200HB	680MPa	
S	32	High temperature alloys - Fe based	Age Hardened	280HB	950MPa	
S	33	High temperature alloys - Ni / Co based	Annealed	250HB	840MPa	
S	34	High temperature alloys - Ni / Co based	Age Hardened	350HB	1180MPa	
S	35	High temperature alloys - Ni / Co based	Cast	320HB	1080MPa	
S	36	Titanium & Titanium alloys - CP Titanium			400MPa	
S	37.1	Titanium & Titanium alloys - Alpha alloys			860MPa	
S	37.2	Titanium & Titanium alloys - Alpha / Beta alloys	Annealed		960MPa	
S	37.3	Titanium & Titanium alloys - Alpha / Beta alloys	Age Hardened		1170MPa	
S	37.4	Titanium & Titanium alloys - Beta alloys	Annealed		830MPa	
S	37.5	Titanium & Titanium alloys - Beta alloys	Age Hardened		1400MPa	
H	38.1	Hardened steel	Hardened & Tempered	45HRC		
H	38.2	Hardened steel	Hardened & Tempered	55HRC		

### KEY

● Optimal ○ Effective



Steel



Stainless



Cast Iron



Non-Ferous Metals



Titanium & Super Alloys



Hard Materials

### Applications:

ISO	VDI	Description	Condition	Hardness	Strength	Optimal
H	39.1	Hardened steel	Hardened & Tempered	58HRC		
H	39.2	Hardened steel	Hardened & Tempered	62HRC		
H	40	Cast Iron - Chilled	Cast	400HB	1350MPa	
H	41	Cast Iron	Hardened & Tempered	55HRC		

### KEY

● Optimal    ○ Effective    ||
 P Steel
 M Stainless
 K Cast Iron
 N Non-Ferrous Metals
 S Titanium & Super Alloys
 H Hard Materials