

SOLIDMEISTER
TUNGALOY

4EHP - 4 FLUTE, HIGH PERFORMANCE, CHATTER FREE SERIES

4 Flute - Variable Pitch Endmill for High-Performance Milling in General Purpose Applications

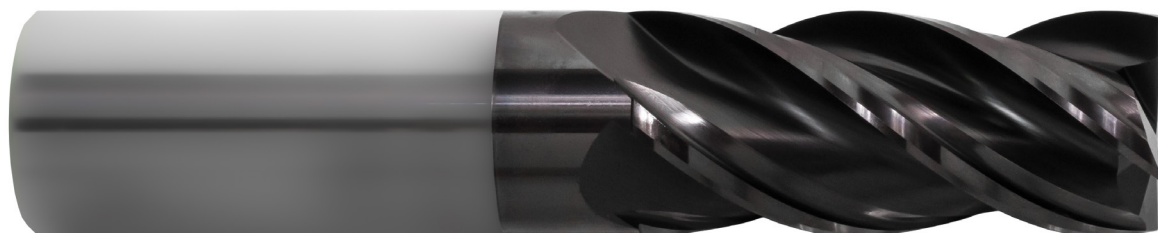




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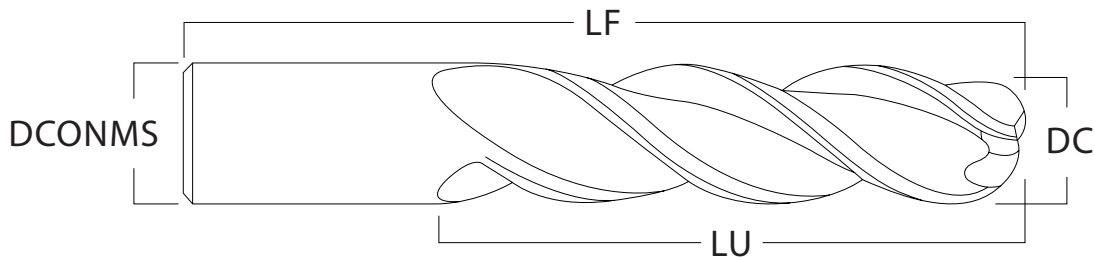
4EHP SERIES
TUNGALOY

4 Flute - Variable Pitch Endmill with
Primary & Secondary Relief Angles
for High Performance Milling



The 4EHP Series is engineered for improved chip
evacuation and maximum metal removal rates

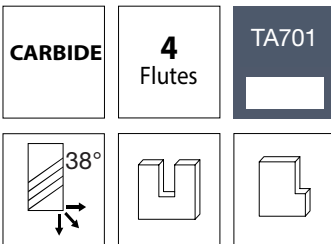
The 4EHP Series design consists of primary and secondary relief angles, with unique edge preparations and a variable pitch. It's ideal for increased metal removal rates and minimal chatter.



4EHP SERIES

TUNGALOY

New



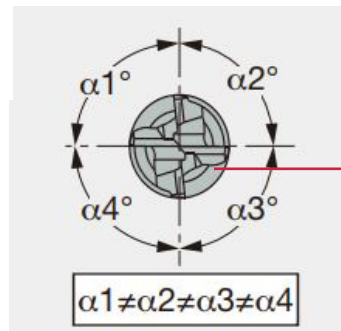
TiAlCN provides higher cutting speeds and excellent wear resistance.

Benefits:

- Increased metal removal rates
- Increased depth-of-cut
- Improved accuracy
- Chatter-free machining
- Higher speeds & feeds
- Superior surface finish on the part

Applications:

- Stainless Steels
- Carbon Steels
- Gray Cast Iron



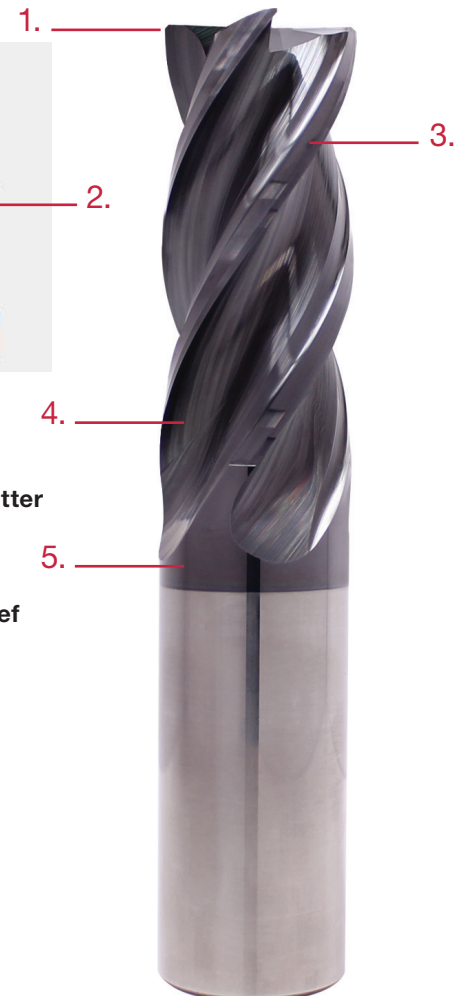
1. Unique Edge Preparation
for edge strength

2. 4 Flute Variable Pitch, chatter free machining

3. Primary & Secondary Relief
Improved edge strength

4. TA701 Coating
For wet or dry machining operations of steels

5. Extended Neck
Available for deep-pocket applications



DESIGNATION SYSTEM

The designation for the 4EC Series includes tool dimensions for easy product identification.

① No. of flutes	
2	2 flutes
3	3 flutes
4	4 flutes
4M	4 flutes & medium length
4L	4 flutes & long length
4X	4 flutes & extra long length
4MF	4 flutes & medium length for hardened steel
44	4 variable pitch flutes

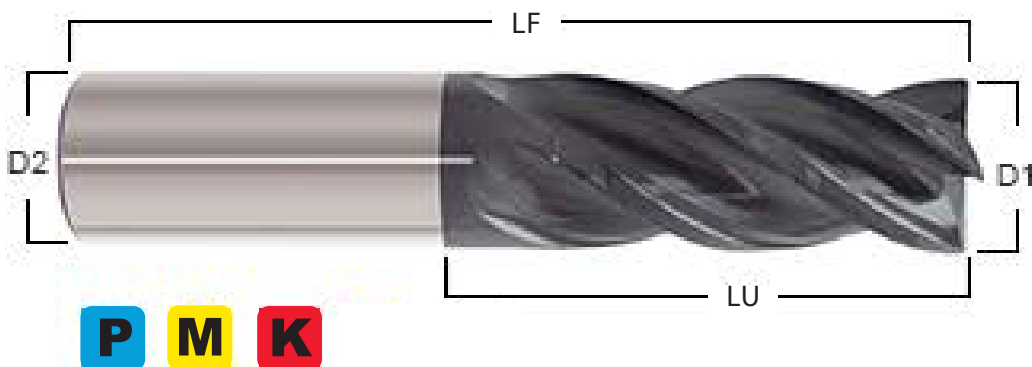
C	Square endmill
B	Ball nose
③ Endmill type	



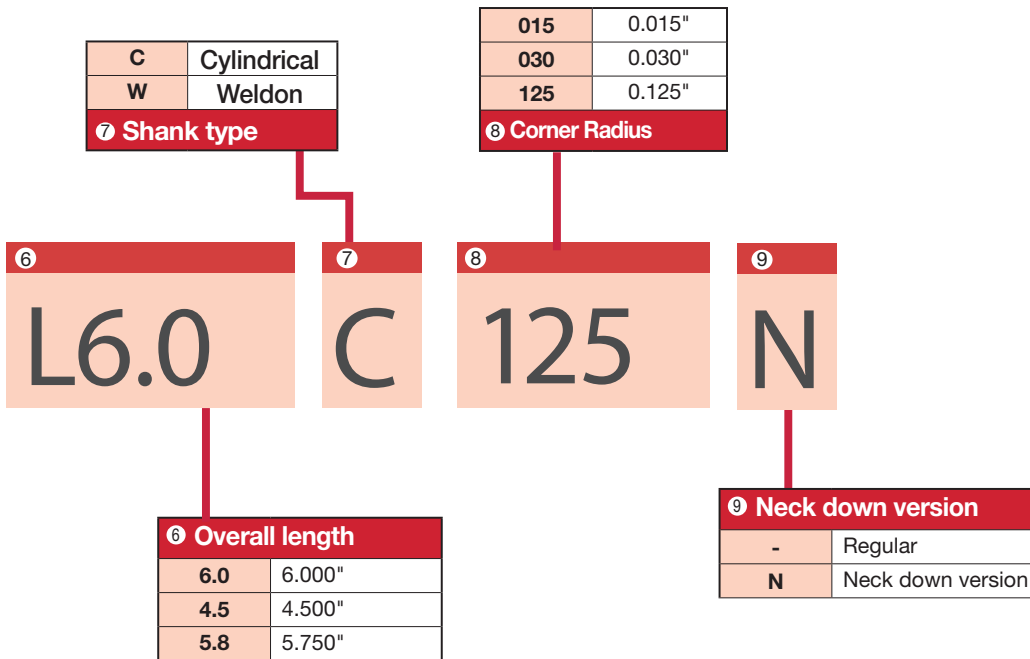
② Helix angle	
N	0°
C	10°
T	20°
A	30°
E	38°
B	45°
D	50°
F	55°
H	Variable Helix

④ Cutting diameter	
625	0.625"
300	0.300"
1000	1.000"
1250	1.250"

⑤ Effective length of cut	
0500	0.500"
1000	1.000"
1500	1.500"



DESIGNATION SYSTEM



Variable pitch design with high performance features for chatter free machining at higher speeds and feeds.

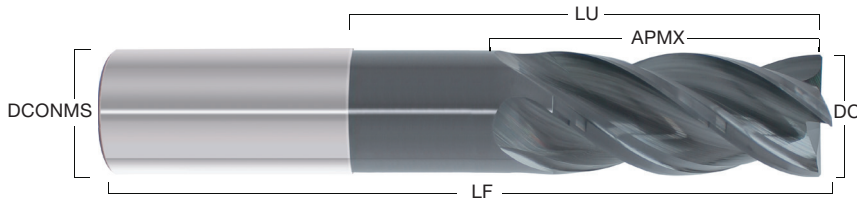
- Extremely versatile tool for roughing, slotting, finishing and heavy profile applications.
- Provides sharper cutting edge for improved shear action with primary and secondary relief angles.
- Excellent tool in job shops for increased metal removal rates.
- TiAlCN provides low coefficient of friction, reducing tool wear for longer tool life. Ideal for materials below 45Rc.

ENDMILL AND BALLNOSE

Insert the corner radius value in the last 3 spaces for full item designation	Corner radius	Item Designation
	Square	4EC125-0500L1.5C000
	0.015	4EC125-0500L1.5C015
	0.030	4EC125-0500L1.5C030
	0.060	4EC125-0500L1.5C060
	0.090	4EC125-0500L1.5C090
	0.125	4EC125-0500L1.5C125

Diameter DC	Shank DCONMS	Flute Length APMX	Usable length LU	OAL / LF	Designation	Corner Radii						Ballnose
						Square	0.015	0.030	0.060	0.090	0.125	
1/8	1/8	1/2	1/2	1.5	4EC125-0500L1.5C000	•	•	•				4EB125-0500L1.5C063
3/16	3/16	5/8	5/8	2	4EC187-0625L2.0C000	•	•	•				4EB187-0625L2.0C094
1/4	1/4	3/8	3/8	2	4EC250-0375L2.0C000	•	•	•	•			4EB250-0375L2.0C125
1/4	1/4	3/4	3/4	2.5	4EC250-0750L2.5C000	•	•	•	•			4EB250-0750L2.5C125
1/4	1/4	1	1	3	4EC250-1000L3.0C000	•	•	•	•			4EB250-1000L3.0C125
1/4	1/4	1-1/4	1-1/4	4	4EC250-1250L4.0C000	•	•	•	•			4EB250-1250L4.0C125
1/4	1/4	1-3/4	1-3/4	4	4EC250-1750L4.0C000	•	•	•	•			4EB250-1750L4.0C125
5/16	5/16	1/2	1/2	2	4EC312-0500L2.0C000	•	•	•	•			4EB312-0500L2.0C156
5/16	5/16	7/8	7/8	2.5	4EC312-0875L2.5C000	•	•	•	•			4EB312-0875L2.5C156
5/16	5/16	1	1	3	4EC312-1000L3.0C000	•	•	•	•			4EB312-1000L3.0C156
5/16	5/16	1-1/4	1-1/4	4	4EC312-1250L4.0C000	•	•	•	•			4EB312-1250L4.0C156
5/16	5/16	1-5/8	1-5/8	4	4EC312-1625L4.0C000	•	•	•	•			4EB312-1625L4.0C156
3/8	3/8	1/2	1/2	2	4EC375-0500L2.0C000	•	•	•	•			4EB375-0500L2.0C188
3/8	3/8	1	1	2.5	4EC375-1000L2.5C000	•	•	•	•			4EB375-1000L2.5C188
3/8	3/8	1	1	3	4EC375-1000L3.0C000	•	•	•	•			4EB375-1000L3.0C188
3/8	3/8	1-1/2	1-1/2	4	4EC375-1500L4.0C000	•	•	•	•			4EB375-1500L4.0C188
3/8	3/8	2-1/2	2-1/2	5	4EC375-2500L5.0C000	•	•	•	•			4EB375-2500L5.0C188
7/16	7/16	5/8	5/8	2.75	4EC437-0625L2.7C000	•	•	•	•			4EB437-0625L2.7C219
7/16	7/16	1	1	2.75	4EC437-1000L2.7C000	•	•	•	•			4EB437-1000L2.7C219
7/16	7/16	1-1/2	1-1/2	4	4EC437-1500L4.0C000	•	•	•	•			4EB437-1500L4.0C219
7/16	7/16	3	3	6	4EC437-3000L6.0C000	•	•	•	•			4EB437-3000L6.0C219
1/2	1/2	5/8	5/8	2.5	4EC500-0625L2.5C000	•	•	•	•	•	•	4EB500-0625L2.5C250
1/2	1/2	1	1	3	4EC500-1000L3.0C000	•	•	•	•	•	•	4EB500-1000L3.0C250
1/2	1/2	1-1/4	1-1/4	3	4EC500-1250L3.0C000	•	•	•	•	•	•	4EB500-1250L3.0C250
1/2	1/2	1-1/2	1-1/2	4	4EC500-1500L4.0C000	•	•	•	•	•	•	4EB500-1500L4.0C250
1/2	1/2	2	2	4	4EC500-2000L4.0C000	•	•	•	•	•	•	4EB500-2000L4.0C250
1/2	1/2	2-1/2	2-1/2	5	4EC500-2500L5.0C000	•	•	•	•	•	•	4EB500-2500L5.0C250
1/2	1/2	3	3	6	4EC500-3000L6.0C000	•	•	•	•	•	•	4EB500-3000L6.0C250
5/8	5/8	3/4	3/4	3	4EC625-0750L3.0C000	•	•	•	•	•	•	4EB625-0750L3.0C313
5/8	5/8	1-1/4	1-1/4	3.5	4EC625-1250L3.5C000	•	•	•	•	•	•	4EB625-1250L3.5C313
5/8	5/8	1-3/4	1-3/4	4	4EC625-1750L4.0C000	•	•	•	•	•	•	4EB625-1750L4.0C313
5/8	5/8	2-1/4	2-1/4	5	4EC625-2250L5.0C000	•	•	•	•	•	•	4EB625-2250L5.0C313
5/8	5/8	3	3	6	4EC625-3000L6.0C000	•	•	•	•	•	•	4EB625-3000L6.0C313
3/4	3/4	7/8	7/8	3	4EC750-0875L3.0C000	•	•	•	•	•	•	4EB750-0875L3.0C375
3/4	3/4	1-1/2	1-1/2	4	4EC750-1500L4.0C000	•	•	•	•	•	•	4EB750-1500L4.0C375
3/4	3/4	1-5/8	1-5/8	4	4EC750-1625L4.0C000	•	•	•	•	•	•	4EB750-1625L4.0C375
3/4	3/4	2-1/4	2-1/4	5	4EC750-2250L5.0C000	•	•	•	•	•	•	4EB750-2250L5.0C375
3/4	3/4	3	3	6	4EC750-3000L6.0C000	•	•	•	•	•	•	4EB750-3000L6.0C375
3/4	3/4	4	4	7	4EC750-4000L7.0C000	•	•	•	•	•	•	4EB750-4000L7.0C375
1	1	1-1/2	1-1/2	4	4EC1000-1500L4.0C000	•	•	•	•	•	•	4EB1000-1500L4.0C500
1	1	2	2	4.5	4EC1000-2000L4.5C000	•	•	•	•	•	•	4EB1000-4500L4.5C500
1	1	2-1/4	2-1/4	5	4EC1000-2250L5.0C000	•	•	•	•	•	•	4EB1000-2250L5.0C500
1	1	3	3	6	4EC1000-3000L6.0C000	•	•	•	•	•	•	4EB1000-3000L6.0C500
1	1	4	4	7	4EC1000-4000L7.0C000	•	•	•	•	•	•	4EB1000-4000L7.0C500

NECKDOWN



Insert the corner radius value in the last 3 spaces for full item designation	Corner radius	Item Designation
	Square	4EC125-0500L1.5C000
	0.015	4EC125-0500L1.5C015
	0.030	4EC125-0500L1.5C030
	0.060	4EC125-0500L1.5C060
	0.090	4EC125-0500L1.5C090
	0.125	4EC125-0500L1.5C125

Diameter DC	Shank DCONMS	Flute Length APMX	Usable length LU	OAL / LF	Designation	Corner Radii						Ballnose
						Square	0.015	0.030	0.060	0.090	0.125	
1/4	1/4	1/2	1-1/4	3	4EC250-0500L3.0C□□□N	●	●	●	●			4EB250-0500L3.0C125N
1/4	1/4	1/2	2-1/8	4	4EC250-0500L4.0C□□□N	●	●	●	●			4EB250-0500L4.0C125N
3/8	3/8	3/4	1-1/4	3	4EC375-0750L3.0C□□□N	●	●	●	●			4EB375-0750L3.0C188N
3/8	3/8	3/4	2-1/8	4	4EC375-0750L4.0C□□□N	●	●	●	●			4EB375-0750L4.0C188N
1/2	1/2	7/8	1-3/8	3	4EC500-0875L3.0C□□□N	●	●	●	●	●	●	4EB500-0875L3.0C250N
1/2	1/2	7/8	2-1/8	4	4EC500-0875L4.0C□□□N	●	●	●	●	●	●	4EB500-0875L4.0C250N
1/2	1/2	7/8	3-1/8	5	4EC500-0875L5.0C□□□N	●	●	●	●	●	●	4EB500-0875L5.0C250N
1/2	1/2	7/8	4-1/8	6	4EC500-0875L6.0C□□□N	●	●	●	●	●	●	4EB500-0875L6.0C250N
5/8	5/8	1	2	4	4EC625-1000L4.0C□□□N	●	●	●	●	●	●	4EB625-1000L4.0C313N
5/8	5/8	1	3	5	4EC625-1000L5.0C□□□N	●	●	●	●	●	●	4EB625-1000L5.0C313N
5/8	5/8	1	4	6	4EC625-1000L6.0C□□□N	●	●	●	●	●	●	4EB625-1000L6.0C313N
3/4	3/4	1-1/4	2	4	4EC750-1250L4.0C□□□N	●	●	●	●	●	●	4EB750-1250L4.0C375N
3/4	3/4	1-1/4	3	5	4EC750-1250L5.0C□□□N	●	●	●	●	●	●	4EB750-1250L5.0C375N
3/4	3/4	1-1/4	4	6	4EC750-1250L6.0C□□□N	●	●	●	●	●	●	4EB750-1250L6.0C375N
1	1	1-1/2	3	5	4EC1000-1500L5.0C□□□N	●	●	●	●	●	●	4EB1000-1500L5.0C500N
1	1	1-1/2	4	6	4EC1000-1500L6.0C□□□N	●	●	●	●	●	●	4EB1000-1500L6.0C500N
1	1	1-1/2	5	7	4EC1000-1500L7.0C□□□N	●	●	●	●	●	●	4EB1000-1500L7.0C500N

STANDARD CUTTING CONDITIONS

P1	●	Low-Carbon Steel - 1000 Series (>25 HRC)	K1	●	Gray Cast Iron
P2	●	Low-Carbon Steel - 1000 Series (<25 HRC)	K2	●	Ductile Iron (<28 HRC)
P3	●	Alloy Tool Steels - 1300, 2000, 3000 (≤35 HRC)	K3	●	Ductile Iron (<38 HRC)
P4	▲	Alloy Tool Steels - 1300, 2000, 3000 (36-48 HRC)	S1	▲	Iron-Based, Heat-Resistant Alloys - Incoloy 800-802, A-286, N-155
P5	●	Ferritic, Martensitic & PH Stainless Steels - 400's, PH Types (≤35 HRC)	S2	▲	Nickel-Based, Cobalt-Based, Heat-Resistant Alloys - Haynes 188, Haynes 21, Hastelloy, Waspaloy, Inconel 625/718 (≤48HRC)
P6	▲	Ferritic, Martensitic & PH Stainless Steels - 400's, PH Types (36-48 HRC)	S4	▲	Titanium Alloys - Commercially Pure, 6Al-4V, ASTM 1/2/3, Ti-6Al-2Sn-4Zr-2Mo (≤48 HRC)
M1	●	Austenitic Stainless Steel - Inco, 200 Series, 300 Series			
M2	▲	Austenitic Stainless Steel & Cast Stainless Steel - 310, 314, 316 (<25 HRC)			
M3	▲	Duplex Steel (Austenitic & Ferritic) - 323, 329, F55, 2205			

● : First Priority ▲ : Second Priority

Slotting

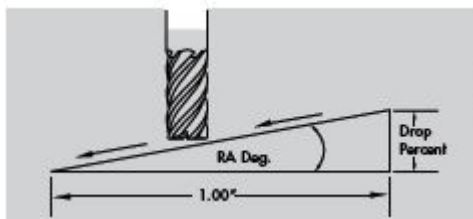
		Chipload Per Tooth Recommendations (CPT)											Profiling Radial		Slotting Axial
		SFM (Vc)	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"	ADC	RDC	ADC
P1	●	400	.001	.001	.001	.001	.001	.002	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
P2	●	400	.001	.001	.001	.001	.001	.002	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
P3	●	350	.001	.001	.001	.001	.001	.002	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
P4	▲	200	.000	.001	.001	.001	.001	.001	.001	.001	.002	.003	N/A	N/A	.6-1.25xD
P5	●	300	.001	.001	.001	.001	.002	.002	.002	.003	.003	.004	N/A	N/A	.6-1.25xD
P6	▲	300	.001	.001	.001	.001	.002	.002	.002	.003	.003	.004	N/A	N/A	.6-1.25xD
M1	●	175-250	.001	.001	.001	.001	.001	.002	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
M2	▲	175-250	.001	.001	.001	.001	.001	.002	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
M3	▲	120-225	.000	.001	.001	.001	.001	.001	.001	.002	.002	.003	N/A	N/A	.6-1.25xD
K1	●	350-450	.001	.001	.002	.002	.003	.003	.004	.005	.006	.008	N/A	N/A	.6-1.25xD
K2	●	275	.001	.001	.001	.001	.001	.001	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
K3	●	275	.001	.001	.001	.001	.001	.001	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
S1	▲	90-175	.001	.001	.001	.001	.001	.001	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
S2	▲	90-175	.001	.001	.001	.001	.001	.001	.002	.002	.003	.004	N/A	N/A	.6-1.25xD
S4	▲	140-200	.000	.001	.001	.001	.001	.001	.002	.002	.003	.004	N/A	N/A	.6-1.25xD

● : First Priority ▲ : Second Priority

We recommend using air blast to cool the tool anytime you are running over 500 SFM

MILL PROCESS	ADOC	RDOC
Slotting	50% - 100% Diameter	100%
Roughing	200% Diameter	30-40%
Finish or HEM	225% Diameter	2-15%

Must use chip thinning calculations when developing feed rates for FINISH OR HEM toolpaths.



Use this guide to determine the maximum ramp length

Ramp Angle	Drop (per inch)	Drop (per min)
2.5"	0.0438	1.113

Tool	Max Ramp Angle	SFM / MMPM	Feed	Max Ramp Depth	Max Ramp Length
4EC	2.5"	Slotting speed	Slotting IPT or CPT x .75	50% of D	(.5 x D) / drop per inch or mm

D = Tool Diameter

STANDARD CUTTING CONDITIONS

Heavy Peripheral

			Chipload Per Tooth Recommendations (CPT)										Profiling Radial		Slotting Axial
		SFM (Vc)	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"	ADC	RDC	ADC
P1	●	400	.001	.001	.001	.001	.002	.002	.003	.003	.004	.005	.75-1.5xD	.25-.4xD	N/A
P2	●	400	.001	.001	.001	.001	.002	.002	.003	.003	.004	.005	.75-1.5xD	.25-.4xD	N/A
P3	●	350	.0006	.001	.001	.001	.002	.002	.002	.003	.003	.005	.75-1.5xD	.25-.4xD	N/A
P4	▲	200	.0004	.0007	.001	.001	.001	.001	.002	.002	.003	.003	.75-1.5xD	.25-.4xD	N/A
P5	●	300	.0007	.001	.001	.002	.002	.002	.003	.004	.004	.006	.75-1.5xD	.25-.4xD	N/A
P6	▲	300	.0007	.001	.001	.002	.002	.002	.003	.004	.004	.006	.75-1.5xD	.25-.4xD	N/A
M1	●	175-250	.0005	.0007	.001	.001	.001	.002	.002	.002	.003	.004	.75-1.5xD	.25-.4xD	N/A
M2	▲	175-250	.0005	.0007	.001	.001	.001	.002	.002	.002	.003	.004	.75-1.5xD	.25-.4xD	N/A
M3	▲	120-225	.0005	.0007	.001	.001	.001	.001	.002	.002	.003	.004	.75-1.5xD	.25-.4xD	N/A
K1	●	350-450	.001	.001	.001	.002	.003	.003	.004	.005	.006	.008	.75-1.5xD	.25-.4xD	N/A
K2	●	275	.0006	.001	.001	.001	.002	.002	.002	.003	.004	.005	.75-1.5xD	.25-.4xD	N/A
K3	●	275	.0006	.001	.001	.001	.002	.002	.002	.003	.004	.005	.75-1.5xD	.25-.4xD	N/A
S1	▲	90-175	.0007	.001	.001	.001	.002	.002	.003	.003	.004	.005	.75-1.5xD	.25-.4xD	N/A
S2	▲	90-175	.0007	.001	.001	.001	.002	.002	.003	.003	.004	.005	.75-1.5xD	.25-.4xD	N/A
S4	▲	140-200	.0006	.001	.001	.001	.002	.002	.002	.002	.003	.004	.75-1.5xD	.25-.4xD	N/A

● : First Priority ▲ : Second Priority

Light Peripheral

			Chipload Per Tooth Recommendations (CPT)										Profiling Radial		Slotting Axial
			SFM (Vc)	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"	ADC	RDC
P1	●	400	.0005	.0008	.001	.001	.001	.001	.002	.002	.002	.003	1xD	.05xD	N/A
P2	●	400	.0005	.0008	.001	.001	.001	.001	.002	.002	.002	.003	1xD	.05xD	N/A
P3	●	350	.0005	.0007	.001	.001	.001	.001	.002	.002	.003	.004	1xD	.05xD	N/A
P4	▲	200	.0003	.0004	.0005	.0006	.0008	.0009	.001	.001	.001	.002	1xD	.05xD	N/A
P5	●	300	.0004	.0007	.001	.001	.001	.001	.002	.002	.003	.003	1xD	.05xD	N/A
P6	▲	300	.0004	.0007	.001	.001	.001	.001	.002	.002	.003	.003	1xD	.05xD	N/A
M1	●	175-250	.0004	.0005	.0007	.001	.001	.001	.001	.001	.002	.003	1xD	.05xD	N/A
M2	▲	175-250	.0004	.0005	.0007	.001	.001	.001	.001	.001	.002	.003	1xD	.05xD	N/A
M3	▲	120-225	.0003	.0004	.0005	.0006	.0008	.001	.001	.001	.001	.002	1xD	.05xD	N/A
K1	●	350-450	.001	.001	.002	.002	.003	.003	.003	.004	.005	.007	1xD	.05xD	N/A
K2	●	275	.0004	.0006	.0008	.001	.001	.001	.001	.002	.002	.003	1xD	.05xD	N/A
K3	●	275	.0004	.0006	.0008	.001	.001	.001	.001	.002	.002	.003	1xD	.05xD	N/A
S1	▲	90-175	.0003	.0004	.0006	.0007	.0008	.001	.001	.001	.002	.002	1xD	.05xD	N/A
S2	▲	90-175	.0003	.0004	.0006	.0007	.0008	.001	.001	.001	.002	.002	1xD	.05xD	N/A
S4	▲	140-200	.0003	.0004	.0006	.0007	.001	.001	.001	.001	.002	.002	1xD	.05xD	N/A

● : First Priority ▲ : Second Priority

HELICAL RAMP TO CREATE AN ENTRY HOLE

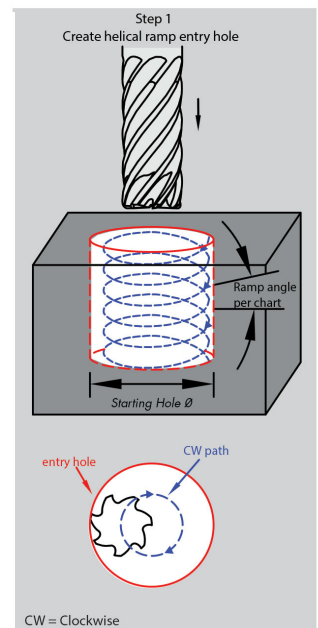
Using a helical ramp move to generate an entry hole is a preferred method to enter the middle of a part. The creation of the entry hole can be either a one-step or a two-step process depending on the number of flutes on the end mill.

Step 1: Create helical ramp entry hole

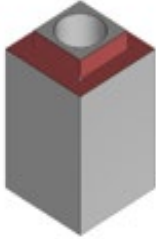
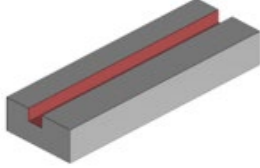
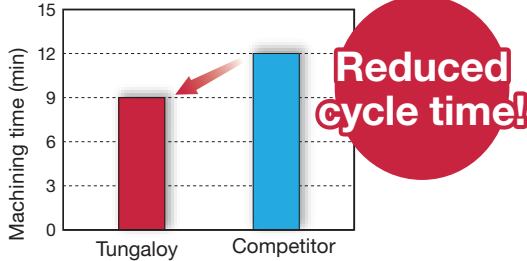
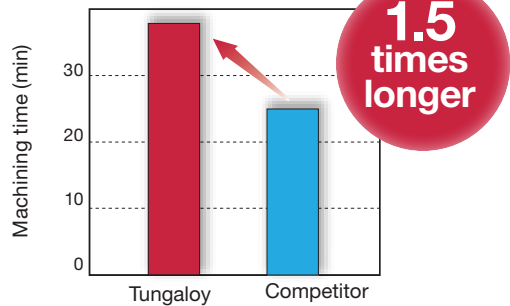
The diameter of the starting hole will be: $(\text{tool diameter} \times 2) - (\text{corner radius} \times 2)$

Use the following guide for speed, feed and ramp angle parameters. Note that the terms "Same as chart", "Slotting speed in chart", "Slotting feed in chart" and IPT and CPT reference the data that is shown in the speed and feed charts located in each tool series section.

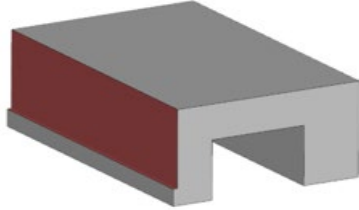

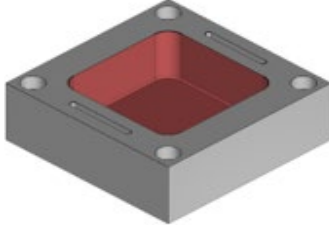

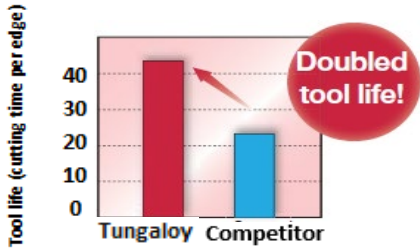
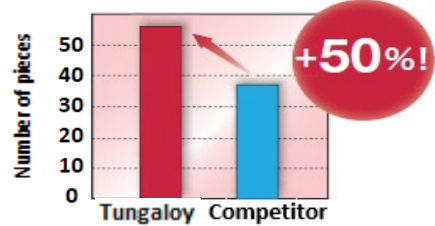
Tool	Speed	Feed Adjustment	Ramp angle
4EC	Slotting speed in chart	Slotting feed in chart	1" - 1.25"



PRACTICAL EXAMPLES

Workpiece type	Collet Block	Machine part
Cutter	3/8 X 3/8 X 1/2 X 2 - 4F	5/8 X 5/8 X 3/4 X 3 - 4F
Description	4HC375-0500L2.0C030	4HC625-0750L3.0C015
Workpiece material	A2 300BHN	4140 Alloy Steel (28 HRC)
		
Cutting speed: Vc (sfm)	350	350
Feed per tooth: fz (ipt)	0.001"	0.008"
Feed speed: Vf (ipm)	15.67"	17"
Depth of cut: ap (inch)	0.38"	0.300"
Width of cut: ae (inch)	0.375"	0.625"
Machining	Shoulder Milling	Slotting
Coolant	Wet	Wet
Machine	Okuma Vertical	Mazak I-800
Results	 <p>Variable design allows chatter free machining at higher speeds and feeds to reduce cycle time.</p>	 <p>Unique flute design and coating improve tool life in slotting applications.</p>

PRACTICAL EXAMPLES

Workpiece type	Housing	Base Plate
Cutter	5/8 X 5/8 X 3/4 X 3 - 4F	5/8 X 5/8 X 1 X 5 - 4F Neck Down
Description	4HC625-0750L3.0C060	4HC625-1000L5.0C030N
	422 ss (36HRC)	304ss 275 Brinell
Workpiece material	 	 
Cutting speed: Vc (sfm)	630	800
Feed per tooth: fz (ipt)	0.0021"	0.0027"
Feed speed: Vf (ipm)	54.65"	112"
Depth of cut: ap (inch)	1.7"	1.75"
Width of cut: ae (inch)	0.0625"	0.03"
Machining	Shoulder Milling	Pocketing
Coolant	Air	Air
Machine	Mazak I-800	Mazak I-800
Results	 <p>Variable pitch eliminates chatter and TiALCN coating provides both heat and oxidation resistance improving tool life.</p>	 <p>High Performance 4 flute solid carbide endmill is designed for improved chip evacuation and maximum metal removal rates. Extended reach provides more stable option in deep pocketing operations.</p>

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