



TITAN-AX

High Performance

Miniature End Mills

- ***Smoother Cutting***
with better chip evacuation, long tool life, and better finishes
- ***Deeper Pocketing***
clearance with consistent part sizes and surface finish
- ***Ideal for Trochoidal***
milling parts



TITAN-AX

End Mills



Kyocera has developed the TITAN-AX™ line of end mills for machining materials used in Medical, Microwave, Aerospace and other miniature component industries. Equipped with optimized flute geometries, 3 flutes, and increased shank diameters for maximum rigidity, these coated end mills are engineered for precision using aggressive machining parameters. Material applications for the TITAN-AX™ include Kovar®, Stainless Steel, Titanium, Carpenter 49 as well as other ferrous materials.

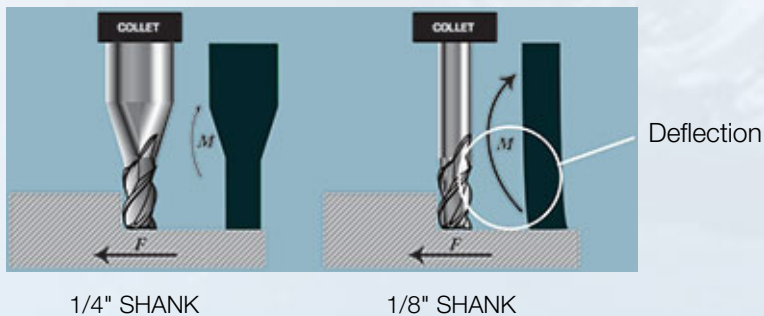
Features

- 3 Flute Optimized Geometry
- Sharp & Corner Radius (Bull Nose)
- AX™ Coating Technology
- Diameter Tolerance $+0 / -.0008"$
- Increased Shank Diameters for Maximum Rigidity
- Long Reach Reduced Neck Design
- Variable Helix

Benefits

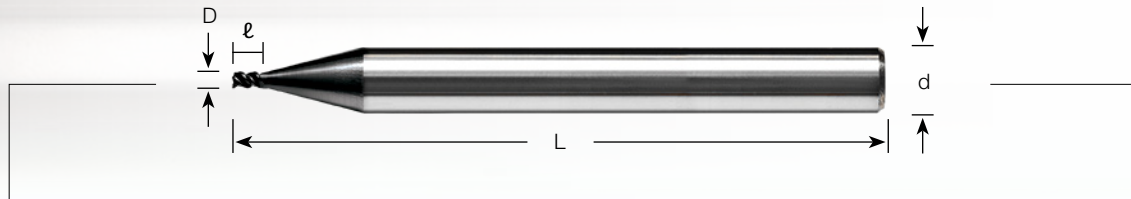
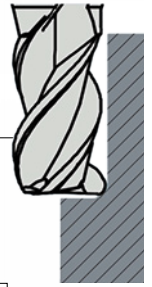
- Smoother Cutting with Better Chip Evacuation
- Corner Radii Programmable for 3D Surfacing
- Better Life and Finishes
- Consistent Part Size and Surface Finish
- Better Clamping Rigidity and T.I.R
- Clearance for Deeper Pocketing Applications
- Ideal for Trochoidal Milling Parts

AX™ PERFORMANCE COATING EXTENDS LIFE RIGID SHANK DIAMETER CONSTRUCTION



1/4" Diameter shank construction minimizes tool deflection compared to similar cutting diameter on 1/8" shanks. This reduction in deflection from the point of cutting to the collet is due to increased mass. Less deflection means better part consistency, reduced tool breakage, and improved tool life.

CORNER RADIUS STUB LENGTH (Inch/Metric)



3 Flute Corner Radius - Stub Length (inch)							Stock
Size	D	d	ℓ	L	CR	Part Number	
1/32	0.0312	1/4	0.063	2 1/2	0.006	T0312O063CR	●
3/64	0.0469	1/4	0.094	2 1/2	0.010	T0469O094CR	●
1/16	0.0625	1/4	0.140	2 1/2	0.010	T0625O140CR	●
5/64	0.0781	1/4	0.140	2 1/2	0.010	T0781O140CR	●
3/32	0.0938	1/4	0.188	2 1/2	0.010	T0938O188CR	●
7/64	0.1094	1/4	0.188	2 1/2	0.010	T1094O188CR	●
1/8	0.1250	1/4	0.250	2 1/2	0.015	T1250O250CR	●
5/32	0.1562	1/4	0.375	2 1/2	0.015	T1562O375CR	●
3/16	0.1875	1/4	0.375	2 1/2	0.015	T1875O375CR	●
7/32	0.2188	1/4	0.375	2 1/2	0.015	T2188O375CR	●
1/4	0.2500	1/4	0.500	2 1/2	0.015	T2500O500CR	●

3 Flute Corner Radius - Stub Length (mm)							Stock
D	d	ℓ	L	CR	Part Number	Stock	
1.00	6	1.5	63.5	0.1	T0394O059CR1	●	●
1.00	6	1.5	63.5	0.2	T0394O059CR2	●	●
1.00	6	1.5	63.5	0.3	T0394O059CR3	●	●
1.50	6	2.5	63.5	0.1	T0591O098CR1	●	●
1.50	6	2.5	63.5	0.2	T0591O098CR2	●	●
1.50	6	2.5	63.5	0.3	T0591O098CR3	●	●
1.50	6	2.5	63.5	0.5	T0591O098CR4	●	●
2.00	6	3.0	63.5	0.2	T0787O118CR1	●	●
2.00	6	3.0	63.5	0.3	T0787O118CR2	●	●
2.00	6	3.0	63.5	0.5	T0787O118CR3	●	●
2.50	6	4.0	63.5	0.2	T0984O157CR1	●	●
2.50	6	4.0	63.5	0.3	T0984O157CR2	●	●
2.50	6	4.0	63.5	0.5	T0984O157CR3	●	●
3.00	6	5.0	63.5	0.2	T1181O197CR1	●	●
3.00	6	5.0	63.5	0.3	T1181O197CR2	●	●
3.00	6	5.0	63.5	0.5	T1181O197CR3	●	●
3.00	6	5.0	63.5	1.0	T1181O197CR4	●	●
4.00	6	6.0	63.5	0.2	T1575O236CR1	●	●
4.00	6	6.0	63.5	0.3	T1575O236CR2	●	●
4.00	6	6.0	63.5	0.5	T1575O236CR3	●	●
4.00	6	6.0	63.5	1.0	T1575O236CR4	●	●
5.00	6	8.0	63.5	0.2	T1969O315CR1	●	●
5.00	6	8.0	63.5	0.3	T1969O315CR2	●	●
5.00	6	8.0	63.5	0.5	T1969O315CR3	●	●
5.00	6	8.0	63.5	1.0	T1969O315CR4	●	●
5.00	6	8.0	63.5	1.5	T1969O315CR5	●	●
6.00	6	9.0	63.5	0.2	T2362O354CR1	●	●
6.00	6	9.0	63.5	0.3	T2362O354CR2	●	●
6.00	6	9.0	63.5	0.5	T2362O354CR3	●	●
6.00	6	9.0	63.5	1.0	T2362O354CR4	●	●
6.00	6	9.0	63.5	1.5	T2362O354CR5	●	●
6.00	6	9.0	63.5	2.0	T2362O354CR6	●	●
8.00	8	12.0	63.5	0.2	T3150O472CR1	●	●
8.00	8	12.0	63.5	0.3	T3150O472CR2	●	●
8.00	8	12.0	63.5	0.5	T3150O472CR3	●	●
8.00	8	12.0	63.5	1.0	T3150O472CR4	●	●
8.00	8	12.0	63.5	1.5	T3150O472CR5	●	●
8.00	8	12.0	63.5	2.0	T3150O472CR6	●	●

● : U.S. Stock

Stocked items available through authorized Kyocera distributors. Visit www.kyoceraprecisiontools.com to locate a distributor near you.

CORNER RADIUS STANDARD LENGTH (Inch/Metric)



3 Flute Corner Radius - Standard Length (inch)							Stock
Size	D	d	ℓ	L	CR	Part Number	
1/32	0.0312	1/4	0.094	2 1/2	0.006	T0312O094CR	●
3/64	0.0469	1/4	0.141	2 1/2	0.010	T0469O141CR	●
1/16	0.0625	1/4	0.188	2 1/2	0.010	T0625O188CR	●
5/64	0.0781	1/4	0.234	2 1/2	0.010	T0781O234CR	●
3/32	0.0938	1/4	0.375	2 1/2	0.010	T0938O375CR	●
7/64	0.1094	1/4	0.438	2 1/2	0.010	T1094O438CR	●
1/8	0.1250	1/4	0.500	2 1/2	0.015	T1250O500CR	●
5/32	0.1562	1/4	0.563	2 1/2	0.015	T1562O563CR	●
3/16	0.1875	1/4	0.625	2 1/2	0.015	T1875O625CR	●
7/32	0.2188	1/4	0.625	2 1/2	0.015	T2188O625CR	●
1/4	0.2500	1/4	0.750	2 1/2	0.015	T2500O750CR	●

3 Flute Corner Radius - Standard Length (mm)							Stock
D	d	ℓ	L	CR	Part Number	Stock	
1.00	6	3.0	63.5	0.1	T0394O118CR1	●	●
1.00	6	3.0	63.5	0.2	T0394O118CR2	●	●
1.00	6	3.0	63.5	0.3	T0394O118CR3	●	●
1.50	6	4.5	63.5	0.1	T0591O177CR1	●	●
1.50	6	4.5	63.5	0.2	T0591O177CR2	●	●
1.50	6	4.5	63.5	0.3	T0591O177CR3	●	●
1.50	6	4.5	63.5	0.5	T0591O177CR4	●	●
2.00	6	6.0	63.5	0.2	T0787O236CR1	●	●
2.00	6	6.0	63.5	0.3	T0787O236CR2	●	●
2.00	6	6.0	63.5	0.5	T0787O236CR3	●	●
2.50	6	7.5	63.5	0.2	T0984O295CR1	●	●
2.50	6	7.5	63.5	0.3	T0984O295CR2	●	●
2.50	6	7.5	63.5	0.5	T0984O295CR3	●	●
3.00	6	9.0	63.5	0.2	T1181O354CR1	●	●
3.00	6	9.0	63.5	0.3	T1181O354CR2	●	●
3.00	6	9.0	63.5	0.5	T1181O354CR3	●	●
3.00	6	9.0	63.5	1.0	T1181O354CR4	●	●
4.00	6	12.0	63.5	0.2	T1575O472CR1	●	●
4.00	6	12.0	63.5	0.3	T1575O472CR2	●	●
4.00	6	12.0	63.5	0.5	T1575O472CR3	●	●
4.00	6	12.0	63.5	1.0	T1575O472CR4	●	●
5.00	6	15.0	63.5	0.2	T1969O591CR1	●	●
5.00	6	15.0	63.5	0.3	T1969O591CR2	●	●
5.00	6	15.0	63.5	0.5	T1969O591CR3	●	●
5.00	6	15.0	63.5	1.0	T1969O591CR4	●	●
5.00	6	15.0	63.5	1.5	T1969O591CR5	●	●
6.00	6	18.0	63.5	0.2	T2362O709CR1	●	●
6.00	6	18.0	63.5	0.3	T2362O709CR2	●	●
6.00	6	18.0	63.5	0.5	T2362O709CR3	●	●
6.00	6	18.0	63.5	1.0	T2362O709CR4	●	●
6.00	6	18.0	63.5	1.5	T2362O709CR5	●	●
6.00	6	18.0	63.5	2.0	T2362O709CR6	●	●
8.00	8	24.0	63.5	0.2	T3150O945CR1	●	●
8.00	8	24.0	63.5	0.3	T3150O945CR2	●	●
8.00	8	24.0	63.5	0.5	T3150O945CR3	●	●
8.00	8	24.0	63.5	1.0	T3150O945CR4	●	●
8.00	8	24.0	63.5	1.5	T3150O945CR5	●	●
8.00	8	24.0	63.5	2.0	T3150O945CR6	●	●

● : U.S. Stock

Stocked items available through authorized Kyocera distributors. Visit www.kyoceraprecisiontools.com to locate a distributor near you.

CORNER RADIUS EXTENDED REACH (Inch/Metric)



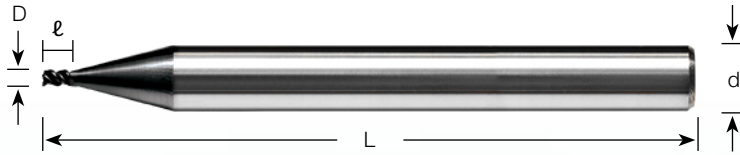
3 Flute Corner Radius - Extended Reach (inch)								Stock
Size	D	d	ℓ	L	L ₁	CR	Part Number	
1/32	0.0312	1/4	0.094	2 1/2	0.155	0.006	T0312O094ERC	●
3/64	0.0469	1/4	0.141	2 1/2	0.230	0.010	T0469O141ERC	●
1/16	0.0625	1/4	0.188	2 1/2	0.312	0.010	T0625O188ERC	●
5/64	0.0781	1/4	0.234	2 1/2	0.390	0.010	T0781O234ERC	●
3/32	0.0938	1/4	0.375	2 1/2	0.465	0.010	T0938O375ERC	●
7/64	0.1094	1/4	0.438	2 1/2	0.545	0.010	T1094O438ERC	●
1/8	0.1250	1/4	0.500	2 1/2	0.625	0.015	T1250O500ERC	●
5/32	0.1562	1/4	0.563	2 1/2	0.781	0.015	T1562O563ERC	●
3/16	0.1875	1/4	0.625	2 1/2	0.938	0.015	T1875O625ERC	●
7/32	0.2188	1/4	0.625	2 1/2	1.093	0.015	T2188O625ERC	●
1/4	0.2500	1/4	0.750	2 1/2	1.250	0.015	T2500O750ERC	●

3 Flute Corner Radius - Extended Reach (mm)								Stock
D	d	ℓ	L	L ₁	CR	Part Number	Stock	
1.00	6	3.0	75	10	0.1	T0394O118ECR1	●	●
1.00	6	3.0	75	10	0.2	T0394O118ECR2	●	●
1.00	6	3.0	75	10	0.3	T0394O118ECR3	●	●
1.50	6	4.5	75	15	0.1	T0591O177ECR1	●	●
1.50	6	4.5	75	15	0.2	T0591O177ECR2	●	●
1.50	6	4.5	75	15	0.3	T0591O177ECR3	●	●
1.50	6	4.5	75	15	0.5	T0591O177ECR4	●	●
2.00	6	6.0	75	20	0.2	T0787O236ECR1	●	●
2.00	6	6.0	75	20	0.3	T0787O236ECR2	●	●
2.00	6	6.0	75	20	0.5	T0787O236ECR3	●	●
2.50	6	7.5	75	25	0.2	T0984O295ECR1	●	●
2.50	6	7.5	75	25	0.3	T0984O295ECR2	●	●
2.50	6	7.5	75	25	0.5	T0984O295ECR3	●	●
3.00	6	9.0	75	30	0.2	T1181O354ECR1	●	●
3.00	6	9.0	75	30	0.3	T1181O354ECR2	●	●
3.00	6	9.0	75	30	0.5	T1181O354ECR3	●	●
3.00	6	9.0	75	30	1.0	T1181O354ECR4	●	●
4.00	6	12.0	75	30	0.2	T1575O472ECR1	●	●
4.00	6	12.0	75	30	0.3	T1575O472ECR2	●	●
4.00	6	12.0	75	30	0.5	T1575O472ECR3	●	●
4.00	6	12.0	75	30	1.0	T1575O472ECR4	●	●
5.00	6	15.0	75	40	0.2	T1969O591ECR1	●	●
5.00	6	15.0	75	40	0.3	T1969O591ECR2	●	●
5.00	6	15.0	75	40	0.5	T1969O591ECR3	●	●
5.00	6	15.0	75	40	1.0	T1969O591ECR4	●	●
5.00	6	15.0	75	40	1.5	T1969O591ECR5	●	●
6.00	6	18.0	75	45	0.2	T2362O709ECR1	●	●
6.00	6	18.0	75	45	0.3	T2362O709ECR2	●	●
6.00	6	18.0	75	45	0.5	T2362O709ECR3	●	●
6.00	6	18.0	75	45	1.0	T2362O709ECR4	●	●
6.00	6	18.0	75	45	1.5	T2362O709ECR5	●	●
6.00	6	18.0	75	45	2.0	T2362O709ECR6	●	●
8.00	8	24.0	100	50	0.2	T3150O945ECR1	●	●
8.00	8	24.0	100	50	0.3	T3150O945ECR2	●	●
8.00	8	24.0	100	50	0.5	T3150O945ECR3	●	●
8.00	8	24.0	100	50	1.0	T3150O945ECR4	●	●
8.00	8	24.0	100	50	1.5	T3150O945ECR5	●	●
8.00	8	24.0	100	50	2.0	T3150O945ECR6	●	●

● : U.S. Stock

Stocked items available through authorized Kyocera distributors. Visit www.kyoceraprecisiontools.com to locate a distributor near you.

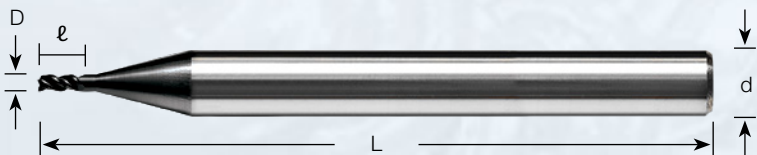
SQUARE END STUB LENGTH (Inch/Metric)



3 Flute Square - Stub Length (inch)						Stock
Size	D	d	ℓ	L	Part Number	
1/32	0.0312	1/4	0.063	2 1/2	T0312O063	●
3/64	0.0469	1/4	0.094	2 1/2	T0469O094	●
1/16	0.0625	1/4	0.140	2 1/2	T0625O140	●
5/64	0.0781	1/4	0.140	2 1/2	T0781O140	●
3/32	0.0938	1/4	0.188	2 1/2	T0938O188	●
7/64	0.1094	1/4	0.188	2 1/2	T1094O188	●
1/8	0.1250	1/4	0.250	2 1/2	T1250O250	●
5/32	0.1562	1/4	0.375	2 1/2	T1562O375	●
3/16	0.1875	1/4	0.375	2 1/2	T1875O375	●
7/32	0.2188	1/4	0.375	2 1/2	T2188O375	●
1/4	0.2500	1/4	0.500	2 1/2	T2500O500	●

3 Flute Square - Stub Length (mm)						Stock
D	d	ℓ	L	Part Number	Stock	
1.00	6	1.5	63.5	T0394O059	●	
1.50	6	2.5	63.5	T0591O098	●	
2.00	6	3.0	63.5	T0787O118	●	
2.50	6	4.0	63.5	T0984O157	●	
3.00	6	5.0	63.5	T1181O197	●	
4.00	6	6.0	63.5	T1575O236	●	
5.00	6	8.0	63.5	T1969O315	●	
6.00	6	9.0	63.5	T2362O354	●	
8.00	8	12.0	63.5	T3150O472	●	

SQUARE END STANDARD LENGTH (Inch/Metric)



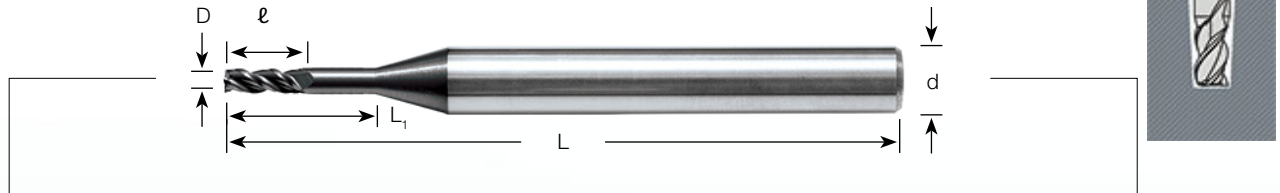
3 Flute Square - Standard Length (inch)						Stock
Size	D	d	ℓ	L	Part Number	
1/32	0.0312	1/4	0.094	2 1/2	T0312O094	●
3/64	0.0469	1/4	0.141	2 1/2	T0469O141	●
1/16	0.0625	1/4	0.188	2 1/2	T0625O188	●
5/64	0.0781	1/4	0.234	2 1/2	T0781O234	●
3/32	0.0938	1/4	0.375	2 1/2	T0938O375	●
7/64	0.1094	1/4	0.438	2 1/2	T1094O438	●
1/8	0.1250	1/4	0.500	2 1/2	T1250O500	●
5/32	0.1562	1/4	0.563	2 1/2	T1562O563	●
3/16	0.1875	1/4	0.625	2 1/2	T1875O625	●
7/32	0.2188	1/4	0.625	2 1/2	T2188O625	●
1/4	0.2500	1/4	0.750	2 1/2	T2500O750	●

3 Flute Square - Standard Length (mm)						Stock
D	d	ℓ	L	Part Number	Stock	
1.00	6	3.0	63.5	T0394O118	●	
1.50	6	4.5	63.5	T0591O177	●	
2.00	6	6.0	63.5	T0787O236	●	
2.50	6	7.5	63.5	T0984O295	●	
3.00	6	9.0	63.5	T1181O354	●	
4.00	6	12.0	63.5	T1575O472	●	
5.00	6	15.0	63.5	T1969O591	●	
6.00	6	18.0	63.5	T2362O709	●	
8.00	8	24.0	63.5	T3150O945	●	

● : U.S. Stock

Stocked items available through authorized Kyocera distributors. Visit www.kyoceraprecisiontools.com to locate a distributor near you.

SQUARE END EXTENDED REACH (Inch/Metric)



3 Flute Square - Extended Reach (inch)							Stock
Size	D	d	ℓ	L	L ₁	Part Number	
1/32	0.0312	1/4	0.063	2 1/2	0.155	T0312O063ER	●
3/64	0.0469	1/4	0.094	2 1/2	0.230	T0469O094ER	●
1/16	0.0625	1/4	0.140	2 1/2	0.312	T0625O140ER	●
5/64	0.0781	1/4	0.140	2 1/2	0.390	T0781O140ER	●
3/32	0.0938	1/4	0.188	2 1/2	0.465	T0938O188ER	●
7/64	0.1094	1/4	0.188	2 1/2	0.545	T1094O188ER	●
1/8	0.1250	1/4	0.250	2 1/2	0.625	T1250O250ER	●
5/32	0.1562	1/4	0.375	2 1/2	0.781	T1562O375ER	●
3/16	0.1875	1/4	0.375	2 1/2	0.938	T1875O375ER	●
7/32	0.2188	1/4	0.375	2 1/2	1.093	T2188O375ER	●
1/4	0.2500	1/4	0.500	2 1/2	1.250	T2500O500ER	●

3 Flute Square - Extended Reach (mm)							Stock
D	d	ℓ	L	L ₁	Part Number	Stock	
1.00	6	3.0	75	10	T0394O118ER	●	
1.50	6	4.5	75	15	T0591O177ER	●	
2.00	6	6.0	75	20	T0787O236ER	●	
2.50	6	7.5	75	25	T0984O295ER	●	
3.00	6	9.0	75	30	T1181O354ER	●	
4.00	6	12.0	75	30	T1575O472ER	●	
5.00	6	15.0	75	40	T1969O591ER	●	
6.00	6	18.0	75	45	T2362O709ER	●	
8.00	8	24.0	100	50	T3150O945ER	●	

● : U.S. Stock

Stocked items available through authorized Kyocera distributors. Visit www.kyoceraprecisiontools.com to locate a distributor near you.



KYOCERA Precision Tools, Inc.

102 Industrial Park Road
Hendersonville, NC 28792
Customer Service | 800.823.7284 - Option 1
Technical Support | 800.823.7284 - Option 2



W | Official Website | www.kyoceraprecisiontools.com
W | Distributor Website | <http://mykpti.kyocera.com>
E | cuttingtools@kyocera.com

©KYOCERA Precision Tools, Inc.
12/14, 7.5K Printed in U.S.A.