Premium Tooling #V22 for the Modern Shop

D'Andrea Boring Kits

Range of .24" to 4.33"

ORDER NO.:

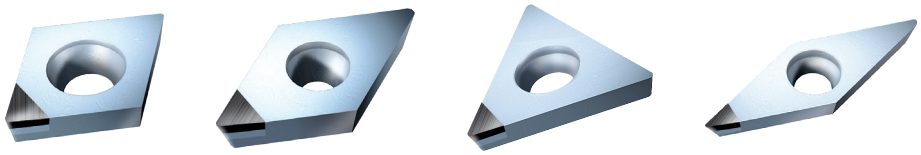
K01-TRM-50/50

$1,969.95

Includes FREE Arbour!

PCD Tipped Flat Top Inserts

$24.95



TAPMATIC

SFT Series Tappers For Rigid Tapping

Starting at

$799.95

TYCarb

High Feed Indexable Milling Cutter Kits

Size Range of 1.0" to 8.0"

Kits Include:

- 1 Cutter
- 10 Inserts
- 1 Wrench

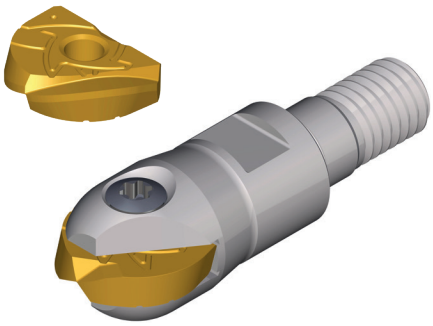
MADE IN CANADA / FABRIQUÉ AU CANADA

High Performace Carbide End Mills

Manufactured in Canada

MADE IN CANADA / FABRIQUÉ AU CANADA

Ball Nose Cutters & Inserts



Inch & Metric Sizes Available

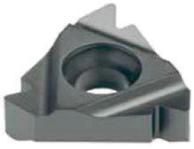
TAPMATIC

RX Series Tapping Attachments

Starting at

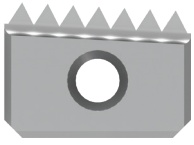
$899.95

Partial Profile Threading Inserts



As low as $9.95 each!

NPT Thread Mill Inserts

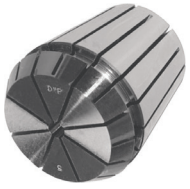


Starting at $24.95 each!

Thread Mill Holders

Starting at $199.95 each!

ER Collets Inch & Metric

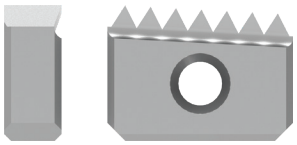


Starting at $16.95 each!

Pricing on this flyer is valid until August 31st, 2022

NPT THREAD MILL INSERTS

TYcarb



External Partial Profile Threading Inserts

Designation	A mm	"P" Pitch	Price
1218NPT-GT25	12	18 TPI	$24.95
1418NPT-GT25	14	18 TPI	$24.95
1414NPT-GT25		14 TPI	$24.95
2114NPT-GT25	21	14 TPI	$34.95
2111.5NPT-GT25		11.5 TPI	$34.95
3011.5NPT-GT25	30	11.5 TPI	$55.95
308NPT-GT25		8 TPI	$55.95
4011.5NPT-GT25	40	11.5 TPI	$89.95
408NPT-GT25		8 TPI	$89.95

These NPT pipe thread Inserts are single sided and may be used for both External and Internal Threading.

GT25 is a TiAlN coated grade with excellent strength while offering improved wear resistance. Ideal choice for alloy, tool, stainless as well as cast steel.

TAPERED END MILLS FOR PRE-PREPPING NPT THREADS

Used for milling the workpiece in preparation of the thread milling or tapping operation of NPT type threads.

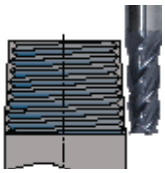
Advantages:

- Increases the tool life of thread milling cutters, indexable inserts or NPT type taps
- Equal and uniform load along the cutting edge of the thread mill cutter
- Shorter machining time during the thread mill operation, due to the preparation of the workpiece

MADE IN CANADA
FABRIQUÉ AU CANADA

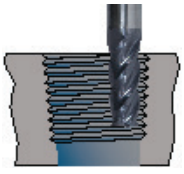
Solid Carbide Tapered End Mills

Designation	Shank Dia.	Tip Dia.	Flute Length	OAL	# of Flutes	Thread Size	Price
Standard Length							
TP4RC-SQ0375	3/8	.32	.95	3.0	4	NPT 1/8" - 1" NPTF 1/8" - 1" BSPT 1/8" - 1"	$43.66
TP4RC-SQ0500	1/2	.42	1.26	3.5	4	NPT 1/4" - 3" NPTF 1/4" - 3" BSPT 1/4" - 3"	$59.79
Extended Length							
TP4LC-SQ0500	1/2	.42	1.26	6.0	4	NPT 1/4" - 3" NPTF 1/4" - 3" BSPT 1/4" - 3"	$82.66



External Preparation

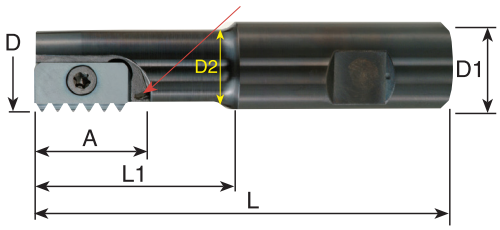
The Ideal Tool to Pre-Prep for NPT Thread Milling Applications



Internal Preparation

THREAD MILL HOLDERS

with internal coolant bore

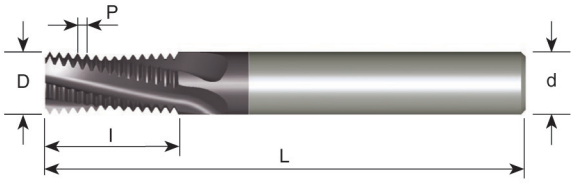


Solid Carbide Tapered End Mills

Designation	A mm	Insert	D	D¹	D²	L	L¹	Price
*SR0390H12	12	1218NPT	.39	.75	.30	3.35	.51	$199.95
SR0750H14	14	1418NPT 1414NPT	.57	.75	.41	3.20	1.00	$199.95
SR0790H21	21	2114NPT 2111.5NPT	.79	.75	.61	3.70	1.57	$229.95
SR0790K21	21	2114NPT 2111.5NPT	.79	.75	.61	5.00	2.25	$299.95
SR1140J30	30	3011.5NPT 308NPT	1.14	1.00	.88	4.27	1.85	$299.95
SR1500P40	40	4011.5NPT 408NPT	1.50	1.25	1.13	7.00	4.25	$579.95

*SR0390H12 for conical inserts: 1218NPT, 1218 NPTF, 1218BSPT

THREAD MILLS FOR NPT THREADS



Need a Thread Mill Program? Give us a call!

- Thread is generated in one pass
- Longer tool life due to special multi-layer coating
- Helical flutes allow smooth cutting action
- Same tool can be used for a variety of materials
- Excellent surface finish

Grade TT7: Sub Micron grade with TiAlN multi layer coating. To be run at medium to high cutting speeds. General purpose for all materials.

NPT Thread Mill- Same tool for internal and external thread

Pitch TPI	Standard NPT	Designation	d	D	# of Flutes	l	L	Price
27	1/16	MTG0250C03 27NPT TT7	1/4	.230	3	.39	2.5	$156.98
27	1/8	MTG0250C04 27NPT TT7	1/4	.250	3	.39	2.5	$156.98
18	1/4 - 3/8	MTG0312C05 18NPT TT7	5/16	.312	3	.58	2.5	$168.44
14	1/2 - 3/4	MTG0500D08 14NPT TT7	1/2	.500	4	.82	3.5	$181.95
11.5	1 - 2	MTG0625D10 11.5NPT TT7	5/8	.625	4	1.09	4.0	$277.29
8	> 2.1/2	MTG0750D15 8NPT TT7	3/4	.750	4	1.56	4.0	$399.95

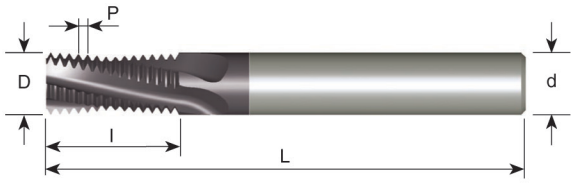
NPTF Thread Mill- Same tool for internal and external thread

Pitch TPI	Standard NPTF	Designation	d	D	# of Flutes	l	L	Price
27	1/16	MTG0250C03 27NPTF TT7	1/4	.230	3	.39	2.5	$156.98
27	1/8	MTG0250C04 27NPTF TT7	1/4	.250	3	.39	2.5	$156.98
18	1/4 - 3/8	MTG0312C05 18NPTF TT7	5/16	.312	3	.58	2.5	$168.44
14	1/2 - 3/4	MTG0500D08 14NPTF TT7	1/2	.500	4	.82	3.5	$181.95
11.5	1 - 2	MTG0625D10 11.5NPTF TT7	5/8	.625	4	1.09	4.0	$277.29
8	> 2.1/2	MTG0750D15 8NPTF TT7	3/4	.750	4	1.56	4.0	$399.95

See Page 3 for a full range of Inch & Metric Thread Mills at Special Pricing!

INCH & METRIC SOLID CARBIDE THREAD MILLS

TyCarb presents a new line of cost effective solid carbide thread mills that provide high performance and increased efficiency



Advantages of MTG Thread Mills

- Thread is generated in one pass
- Longer tool life due to special multi-layer coating
- Helical flutes allow smooth cutting action
- Same tool can be used for a variety of materials
- Shorter machining time due to multi, 3 to 6, flutes
- Excellent surface finish
- 2.2mm and up cutting diameter
- Low cutting pressure allows thin wall machining
- Threads up to shoulder in blind hole

Need a Thread Mill Program?
Give us a call!

Thread Mills for internal threads only

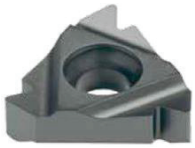
Pitch TPI	UNC	UNF	Designation	d	D	# of Flutes	l	L	Price
32	6		MTG0250C02 32UN TT7	1/4	.100	3	.20	2.5	$156.98
32	8	10	MTG0250C03 32UN TT7	1/4	.126	3	.27	2.5	$156.98
28		1/4	MTG0250C04 28UN TT7	1/4	.197	3	.44	2.5	$156.98
24		5/16	MTG0250C05 24UN TT7	1/4	.250	3	.56	2.5	$156.98
24		3/8	MTG0312D08 24UN TT7	5/16	.312	4	.81	2.5	$168.44
20	1/4		MTG0250C04 20UN TT7	1/4	.185	3	.48	2.5	$156.98
20		7/16	MTG0312C08 20UN TT7	5/16	.312	3	.83	2.5	$168.44
20		1/2	MTG0375D08 20UN TT7	3/8	.375	4	.88	3.0	$175.32
18	5/16		MTG0250C05 18UN TT7	1/4	.236	3	.58	2.5	$156.98
18		9/16 - 5/8	MTG0375D10 18UN TT7	3/8	.375	4	1.03	3.0	$175.32
16	3/8		MTG0250C06 16UN TT7	1/4	.250	3	.66	2.5	$156.98
16		3/4	MTG0500D12 16UN TT7	1/2	.500	4	1.22	3.5	$181.04
14	7/16		MTG0312C08 14UN TT7	5/16	.313	3	.82	2.5	$168.44
14		7/8	MTG0500D12 14UN TT7	1/2	.500	4	1.25	3.5	$181.04
13	1/2		MTG0375D09 13UN TT7	3/8	.375	4	.96	3.0	$175.32
12	9/16		MTG0375C10 12UN TT7	3/8	.375	3	1.04	3.0	$175.32
11	5/8		MTG0500C11 11UN TT7	1/2	.449	3	1.14	3.5	$181.04
10	3/4		MTG0500D13 10UN TT7	1/2	.500	4	1.35	3.5	$181.04
9	7/8		MTG0625C15 9UN TT7	5/8	.625	3	1.50	4.0	$277.29
8	1		MTG0625C17 8UN TT7	5/8	.625	3	1.69	4.0	$277.29
7	1.1/8 - 1.1/4		MTG0750D17 7UN TT7	3/4	.750	4	1.78	4.0	$401.04

Thread Mills for internal threads only

Pitch mm	M Coarse	M Fine mm	Designation	d	D	# of Flutes	l	L	Price
0.5	M3	Ø > 4	MTG0250C02 0.5ISO TT7	1/4	.093	3	.21	2.5	$150.00
0.7	M4	Ø > 5	MTG0250C03 0.7ISO TT7	1/4	.122	3	.29	2.5	$156.98
0.75		Ø > 6	MTG0250C04 0.75ISO TT7	1/4	.177	3	.40	2.5	$156.98
1.0	M6	Ø > 7	MTG0250C04 1.0ISO TT7	1/4	.181	3	.41	2.5	$156.98
1.0	M6	Ø > 7	MTG0250C06 1.0ISO TT7	1/4	.181	3	.60	2.5	$156.98
1.0		Ø > 10	MTG0312D07 1.0ISO TT7	5/16	.312	4	.65	2.5	$168.44
1.25	M8	Ø > 10	MTG0250C05 1.25ISO TT7	1/4	.250	3	.57	2.5	$156.98
1.25	M8	Ø > 10	MTG0250C07 1.25ISO TT7	1/4	.250	3	.76	2.5	$156.98
1.5	M10	Ø > 12	MTG0312C09 1.5ISO TT7	5/16	.307	3	.98	2.5	$168.44
1.5		Ø > 14	MTG0375D09 1.5ISO TT7	3/8	.375	4	.86	3.0	$181.04
1.5		Ø > 20	MTG0625F13 1.5ISO TT7	5/8	.625	6	1.33	4.0	$277.29
1.75	M12	Ø > 14	MTG0312C08 1.75ISO TT7	5/16	.313	3	.79	2.5	$168.44
2.0	M16	Ø > 17	MTG0375C11 2.0ISO TT7	3/8	.375	3	1.06	3.0	$175.32
2.5	M20	Ø > 22	MTG0625E13 2.5ISO TT7	5/8	.591	5	1.33	4.0	$277.29

EXTERNAL THREADING INSERTS

>> Partial Profile Threading Inserts for as low as $9.95

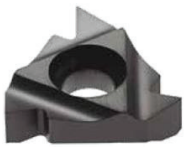


External Partial Profile Threading Inserts

Designation	Insert I.C.	Insert Length	Thread Range	Price
16ERA60 GT30	3/8"	.629"	48 - 16 TPI	$9.95
16ERAG60 GT30	3/8"	.629"	48 - 8 TPI	$9.95
16ERG60 GT30	3/8"	.629"	14 - 8 TPI	$9.95
22ERN60 GT30	1/2"	.866"	7 - 5 TPI	$12.95

INTERNAL THREADING INSERTS

>> Partial Profile Threading Inserts for as low as $9.95



Internal Partial Profile Threading Inserts

Designation	Insert I.C.	Insert Length	Thread Range	Price
16NRA60 GT30	3/8"	.629"	48 - 16 TPI	$9.95
16NRAG60 GT30	3/8"	.629"	48 - 8 TPI	$9.95
16NRG60 GT30	3/8"	.629"	14 - 8 TPI	$9.95
22NRN60 GT30	1/2"	.866"	7 - 5 TPI	$12.95

3/8" I.C. INSERTS $9.95 • 1/2" I.C. INSERTS $12.95

SYNCHROFLEX SFT - TAP HOLDERS FOR SYNCHRONIZED TAPPING CYCLES

Double your Tap Life and Improve Thread Quality

TAPMATIC

Modern CNC machines have the capability of synchronizing the spindle rotation to match the feed advance for a specific tap pitch. The «Rigid» or synchronized tapping cycle is very accurate, but it is impossible to avoid small discrepancies between the machine synchronization and the actual pitch of the specific tap being used. Using a rigid tap holder means that any deviation at all increases the thrust forces acting on the tap and this dramatically reduces tap life.

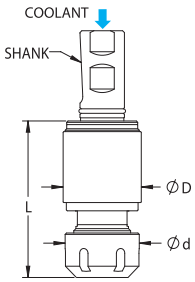
SynchroFlex® – The Unique Solution- Each holder is made with a precisely machined flexure which provides axial and radial compensation for the unavoidable discrepancy between the machine feed advance and the actual tap pitch. By compensating for this error, the thrust forces acting on the tap are dramatically reduced. The result is the longest possible tap life, 100% improvement or more, and much better quality threads.

ER Tap Collets also available

SYNCHROFLEX SFT Modular Straight Shank

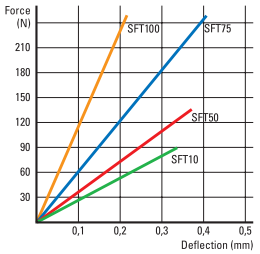
Model No.	Capacity in 1010 Mild Steel	Mount	Collet Series	D	d	L	Axial Comp.	Price
SFT10II-1.00ER11	#2 - #10-32 M2 - M5	1.00" Straight Shank	ER11	.925	.740	2.09	± .020	$799.95
SFT50II-1.00ER20	#8 to 1/2" - 20 M4 - M12		ER20	1.362	1.340	2.49		$799.95
SFT75II-1.00ER25	3/8" to 3/4-10 M10 - M20		ER25	1.733	1.650	3.26		$949.95
SFT100II-1.00ER40	5/8" to 1" M18 - M30		ER40	2.440	2.480	4.39		$1,699.95

Pricing shown for straight shank tools only. Pricing for taper shank tools available on request.
SFT Modular straight shank with quick-change spindle also available.



SynchroFlex ®
Force vs Deflection Rates

Unlike competitors that employ elastomer rings to provide a small amount of axial compensation (±0.5mm), the SynchroFlex ® flexure has a consistent force vs. deflection rate. This means consistently superior tap life and thread quality.

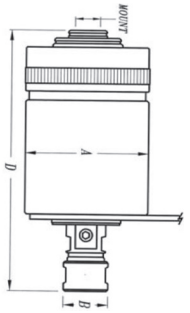


RX SERIES - TAPPING ATTACHMENTS FOR MANUAL TAPPING APPLICATIONS

High production self-reversing tapping attachments with high-reverse and pre-selective torque control

- For hard to machine material and high torque applications like roll form tapping
- Less tap breakage due to pre-selective torque control
- Reduced cycle time through increased 1.75 : 1 reverse speed
- Easy handing, compact design
- Easily adaptation with multiple interchangeable arbors

TAPMATIC

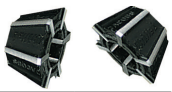


RX Series Reversing Tappers

Model No.	Capacity in 1010 Mild Steel	Mount	Collet Series	*Rec. Max. Speed	Weight	A	B	D	*Self Feed	Price
RX30-33JT	#0 - 1/4" M1.4 - M6	#33 JT	#21000	2000 RPM	1.5lb .70kg	1.5lb .70kg	.750" 19mm	4.58" 116mm	.13" 3mm	$899.95
RX50-33JT	#6 - 1/2" M3 - M12	#33 JT	#22000	1500 RPM	4.0lb 1.8kg	4.0lb 1.8kg	1.070" 27mm	6.20" 157mm	.20" 5mm	$1,149.95
RX70-3JT	#10 - 3/4" M5 - M18	#3 JT	#24000	750 RPM	6.7lb 3.0kg	6.7lb 3.0kg	3.500" 88mm	7.14" 182mm	.27" 7mm	$1,599.95

Torque Bars available

Always mount a torque bar to hold the tapping attachment's stop arm from rotating. The Torque Bar must be mounted securely to the table or quill of your machine. The torque bar installation must be stronger than the largest tap in the tool's capacity.

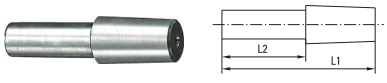


Rubber Flex Multi-range Collets

Collet Series	Cat. No.	Tap Size	Shank Size	Price
#21000 For RX30	21600	#0 - #8 Standard	.098 - .177	$119.95
	21700	#10 - 1/4" Standard	.177 - .256	
#22000 For RX50	22100	#0 - 1/4 Standard	.139 - .257	$119.95
	22200	1/4" - 1/2" Standard	.253 - .383	
#24000 For RX70	24100	#10 - 1/2" Standard	.176 - .383	$129.95
	24000	5/16" - 5/8" Standard	.280 - .500	
	24500	3/4" Standard	.393 - .590	

Morse Taper Arbors to Jacobs Taper

Order Code	Morse Taper	Jacobs Taper	L¹	L²	Price
20233	MT2	33	111	26	$73.95
20203	MT2	3	117	32	$62.95
20333	MT3	33	130	26	$83.95
20303	MT3	3	136	32	$91.95
20433	MT4	33	157	26	$134.95
20403	MT4	3	162	32	$153.95



Straight Shank Arbors to Jacobs Taper

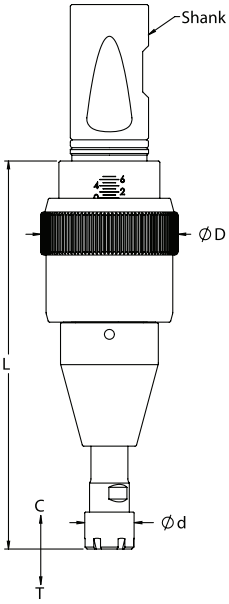
Order Code	Straight Shank Ø inch	Jacobs Taper	Price
26233	5/8"	33	$73.95
26203	5/8"	3	$85.95
27533	3/4"	33	$115.95
27503	3/4"	3	$115.95
20003	1"	3	$119.95

DeBurr-Z CNC Deburring Tool with Compression and Extension Float

- Deburr parts quickly and consistently on the CNC machine eliminating the need for tedious hand work
- The Deburr-Z floats in both compression and extension allowing the cutting tool to follow the top edges or underside edges of the work piece, even when these are not clearly defined like in the case of castings and cross holes
- Adjust the force to increase or decrease the pressure depending on the type of material and desired edge break
- For deburring, and chamfering on CNC machines
- Improves the life of cutting tools thanks to the adjustable compression force
- Speeds up the process by allowing faster approach feed rates
- The compression and extension force can be simultaneously and equally adjusted for increasing or decreasing the pressure of the cutting tool against the work piece
- ER11 collet holds a wide variety of burr cutting tools
- Easy programming and installation on the CNC machine

How to Order

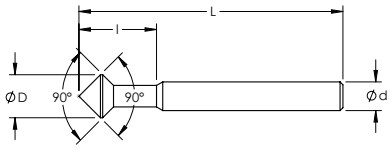
Please select the DeBurr-Z (A) and shank (B) to fit your application. Please order ER11 collets and Burrs separately.

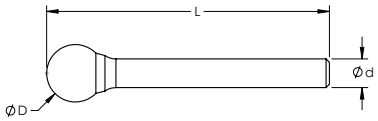


A

Model	Designation	Shank	Collets (Capacity)	Max. RPM	Compression C	Extension T	d	D	L	Weight (KG)	Price
DeBurr-Z	57301	1"	ER11 (2.5 - 6.5)	10,000	.39	.39	.63	1.73	5.04	0.7	$1,298.95

The DeBurr-Z can be used with spherical and angular shaped burrs, made from HSS or Carbide, in a variety of sizes and tooth patterns. These are available from different manufacturers. Tapmatic offers special carbide burrs, like the examples shown here, for topside and underside edge deburring. They also include a sharp point that can be used for engraving. They can be used for a variety of materials including steel, aluminum and cast iron.





Designation	d	D	1	L
52MM20590W	1/4	3/8	.67	2.30
52MM20591W	1/4	1/2	.79	2.42

Spherical burrs are also available

Designation	d	D	L
5250BW	1/4	1/2	2.42

Note! More sizes are available on request

Top Edges

Underside Edges

Intersecting

Deburr-Z Video

TYCARB HIGH FEED MILLING KITS

A comprehensive offering of tooling designed for High Feed Machining

- Exceptional material removal
- Two indexable insert sizes
  - Cost effective 4 corner design
- Two milling cutters in one cutter body design
  - High Feed and / or 90° Square Shoulder

MADE IN CANADA
FABRIQUÉ AU CANADA

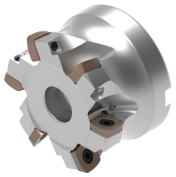
All Kits include 1 cutter body, 10 inserts & 1 Torx Key

HF10 End Mills
End Mills with Weldon Shanks and
Extended Length End Mills with Cylindrical Shanks

Designation	Tool Dia.	Shank Dia.	O.A.L.	Reach	Flutes	Kit Price
All Kits include 1 cutter body, 10 pcs XDMT or XDMW-100415-ANSN inserts & 1 Torx Key						
Weldon Shank Tools						
HF10EM-1000-5.00H2-KIT	1.00	1.00	5.0	2.72	2	$259.00
HF10EM-1000-5.00H3-KIT	1.00	1.00	5.0	2.72	3	$269.00
HF10EM-1250-6.00J3-KIT	1.1/4	1.25	6.0	3.72	3	$299.00
HF10EM-1500-6.00J3-KIT	1.1/2	1.25	6.0	--	3	$329.00
Cylindrical Shank Tools						
HF10CY-1000-8.00H2-KIT	1.00	1.00	8.0	3.00	2	$289.00
HF10CY-1000-10.00H2-KIT	1.00	1.00	10.0	3.00	2	$299.00
HF10CY-1250-8.00J3-KIT	1.1/4	1.25	8.0	3.00	3	$329.00
HF10CY-1250-10.00J3-KIT	1.1/4	1.25	10.0	3.00	3	$339.00
HF10CY-1500-8.00J3-KIT	1.1/2	1.25	8.0	--	3	$349.00

For additional inserts, please see pricing in insert table below

All Kits include 1 cutter body, 10 inserts & 1 Torx Key

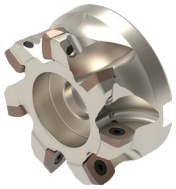


HF10 & HF14 Face Mills
Face Mill Design with Through Coolant

Designation	Dia.	Bore	Height	Flutes	Kit Price
All Kits include 1 cutter body, 10 pcs XDMT or XDMW-100415-ANSN inserts & 1 Torx Key					
HF10SM-2000-1.50F5-KIT	2.00	.75	1.50	5	$332.19
HF10SM-2000-1.50F7-KIT	2.00	.75	1.50	7	$376.63
All Kits include 1 cutter body, 10 pcs XDMT or XDMW-140520-ANSN inserts & 1 Torx Key					
HF14SM-2000-1.50F4-KIT	2.00	.75	1.50	4	$332.19
HF14SM-2000-1.50F5-KIT	2.00	.75	1.50	5	$354.41
HF14SM-2500-1.75H6-KIT	2.50	1.00	1.75	6	$387.74
HF14SM-3000-2.00H6-KIT	3.00	1.00	2.00	6	$421.07
HF14SM-4000-2.00L8-KIT	4.00	1.50	2.00	8	$599.95
HF14SM-6000-2.00L10-KIT	6.00	1.50	2.00	10	$887.69

For additional inserts, please see pricing in insert table

All Kits include 1 cutter body, 10 inserts & 1 Torx Key



HF18 Face Mills
Face Mill Design with Through Coolant

Designation	Dia.	Bore	Height	Flutes	Kit Price
All Kits include 1 cutter body, 10 pcs XDMT or XDMW-180630 inserts & 1 Torx Key					
HF18SM-3000-2.00J5-KIT	3.00	1.25	2.00	5	$439.95
HF18SM-4000-2.00L7-KIT	4.00	1.50	2.00	7	$599.95
HF18SM-5000-2.50L8-KIT	5.00	1.50	2.50	8	$799.95
HF18SM-6000-2.50P8-KIT	6.00	2.00	2.50	8	$887.69
HF18SM-8000-2.50T10-KIT	8.00	2.50	2.50	10	$1,395.95

TyCarb High Feed DOC & Programming Info

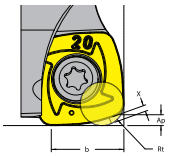
Insert	Rt	Ap	X	b
XDM_-100415	0.089	0.04	0.024	0.316
XDM_-140520	0.136	0.08	0.037	0.428
XDM_-180630	0.190	0.14	0.049	0.542

Rt= Theoretical Radius for Programming X= Material Uncut

Programming

Theoretical Radius

- CAD / CAM systems will require a defined radius dimension in order to program for cavity machining. The "Rt" noted in the table above is defined as the Theoretical Radius to be used for programming of each XDMT/XDMW insert size.



Overcutting and Material left Uncut

- When programming for high feed inserts with a Theoretical Radius, overcutting is a normal occurrence. The "X" value as detailed in the table indicates the value of material that will remain uncut.

Application Recommendations

Extended Length Tools

- When using TyCarb High Feed tools with extended lengths (such as HF10CY tools or HF10TS tools threaded onto long extensions), reduce the cutting conditions to 70% of recommended cutting data of standard length tools.

Machine Power and Workpiece Rigidity

- As machining conditions vary greatly based on machine power and workpiece stability, begin by using half of the recommended values in the Cutting Data tables and progressively increase values as the machine proves to operate within normal conditions.

Cutting Forces of High Feed vs Round Copy Mills

- TyCarb High Feed milling tools are designed to transfer the majority of the cutting forces axially to ensure the most stable cutting conditions. Typical milling with the use of round copy milling style cutters exert greater tangential forces, thereby increasing vibration and lowering productivity.

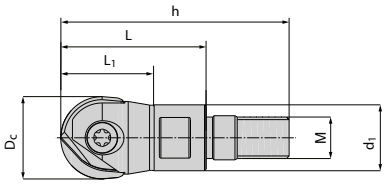
Air Blast

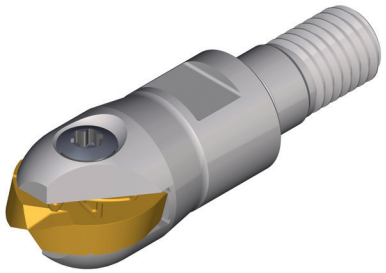
- Effective high feed machining will create large amounts of metal chips- use air blasts to prevent re-cutting of chips when pocketing or slotting.

High Feed XDMT / XDMW Inserts

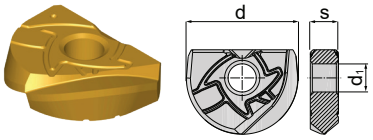
Designation	P20 NP20MC	P25 NP25MP	P30 NP30MC	P35 NP35MP	P40 NP40MP	M35 NM35MP	M40 NM40MP	K15 NK15MC	K25 NK20MP	H10 NH10MP	H30 NH30MP
XDMT-100415SR-PH	10.99	10.99	10.99	10.99							
XDMT-100415ER-MH						10.99	10.99				
XDMT-100415SR-H										10.99	
XDMT-140520SR-PH	12.99	12.99	12.99	12.99							
XDMT-140520ER-MH						12.99	12.99				
XDMT-140520SR-H										12.99	
XDMW-100415SR-PH	10.99	10.99	10.99	10.99							
XDMW-100415SR-KH								10.99	10.99		
XDMW-100415SR-H										10.99	10.99
XDMW-140520SR-PH	12.99	12.99	12.99	12.99							
XDMW-140520SR-KH								12.99	12.99		
XDMW-140520SR-H										12.99	12.99
XDMW-180630SR-PH				16.99	16.99						
XDMW-180630SR-KH								16.99	16.99		
XDMW-180630SR-H											16.99
XDMT-180630SR-PH		16.99		16.99							
XDMT-180630SR-MH						16.99	16.99				

Purchase 10 Ball Nose Style BN Inserts and receive a 50% discount on the cutter





Model	Dc (Inch)	Dc (mm)	d1	h	L	L1	M	z	List	with Purchase of 10 Inserts
BNC-TS-5/16-8MM-M6	5/16	8mm	.382	1.437	.906	.630	M6	2	231.61	$115.80
BNC-TS-3/8-10MM-M6	3/8	10mm	.382	1.437	.906	.906	M6	2	238.52	$119.26
BNC-TS-1/2-12MM-M6	1/2	12mm	.382	1.437	.906	.906	M6	2	245.30	$122.65
BNC-TS-5/8-16MM-M8	5/8	16mm	.500	1.732	1.102	1.102	M8	2	265.77	$132.89
BNC-TS-3/4-20MM-M10	3/4	20mm	.697	1.811	1.102	1.102	M10	2	286.25	$143.12
BNC-TS-1.0-25MM-M12	1.0	25mm	.815	2.165	1.378	1.378	M12	2	313.50	$156.75
BNC-TS-1.1/4-32MM-M16	1.1/4	32mm	1.130	2.559	1.693	1.378	M16	2	354.32	$177.16



FH - Positive / Helical

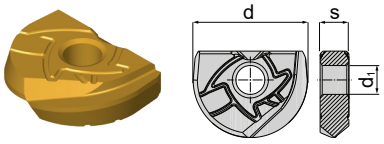
FH is our first choice geometry for semi-finish to finishing applications in all steel materials up to 62Rc

Inch

Insert Code	d	s	d1	NH13MP	Price
BN-0.312-FH	5/16	.094	.098	■	$25.37
BN-0.375-FH	3/8	.100	.118	■	$26.65
BN-0.500-FH	1/2	.118	.138	■	$28.37
BN-0.625-FH	5/8	.157	.157	■	$31.87
BN-0.750-FH	3/4	.196	.196	■	$37.98

Metric

Insert Code	d	s	d1	NH13MP	Price
BN-8MM-FH	8	2.39	2.5	■	$25.37
BN-10MM-FH	10	2.59	3.0	■	$26.65
BN-12MM-FH	12	2.99	3.5	■	$28.37
BN-16MM-FH	16	3.99	4.0	■	$31.87
BN-20MM-FH	20	4.99	5.0	■	$37.98
BN-25MM-FH	25	5.99	6.0	■	$50.58
BN-32MM-FH	32	6.99	8.0	■	$71.13



SP - Positive

SP geometry is designed for semi-finish applications in all steels. Alternate choices in this design include MP (medium roughing) & FP (finishing).

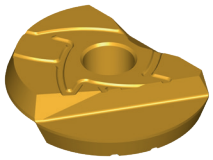
Inch

Insert Code	d	s	d1	NH10MP	NH23MP	Price
BN-0.312-SP	5/16	.094	.098	■	■	$20.49
BN-0.375-SP	3/8	.100	.118	■	■	$21.52
BN-0.500-SP	1/2	.118	.138	■	■	$24.78
BN-0.625-SP	5/8	.157	.157	■	■	$27.78
BN-0.750-SP	3/4	.196	.196	■	■	$33.00
BN-1.000-SP	1.00	.236	.236	■	■	$43.98
BN-1.250-SP	1.25	.275	.315	■	■	$62.06

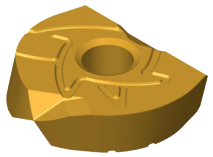
Metric

Insert Code	d	s	d1	NH10MP	NH23MP	Price
BN-12MM-SP	12	2.99	3.5	■	■	$24.78
BN-16MM-SP	16	3.99	4.0	■	■	$27.78
BN-20MM-SP	20	4.99	5.0	■	■	$33.00
BN-25MM-SP	25	5.99	6.0	■	■	$43.98
BN-32MM-SP	32	6.99	8.0	■	■	$62.06

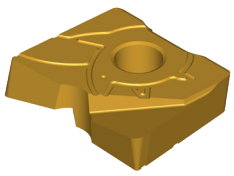
Additional Inserts available on request



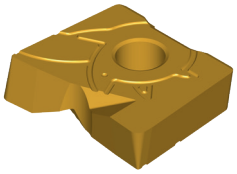
Geometry- RF, SF



Geometry- FN, RN & SN



Geometry- SP



Geometry- RF

NH13MP

For finishing and semi-finishing of materials up to max. 62 HRC, at stable or moderately unstable conditions. High wear resistant ultrafine carbide grade with an excellent hardness / bending ratio. Moreover this grade fulfils highest performace requirements compared to process secureness, through the usage of wear resistant state of the art PVD coating technology.

NH10MP

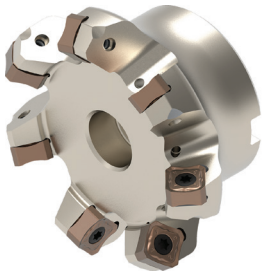
Grade for the machining of steel materials in the area up to maximum 58 HRC, PVD coated. Standard submicron grade for monocrystalline, wear resistant PVD coating.

NH23MP

For finishing and semi-finishing of materials up to maximum 60 HRC. Tough ultrafine carbide grade for good wear resistance and at the same time good breakage and cutting edge stability. Wear and temperature resistant PVD coating.

45° FACE MILLING KITS

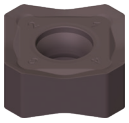
All kits include 1 cutter,
10pcs. SNMX-1206 Inserts
& 1 Torx Key



SN12 Face Mills

Designation	Tool Dia.	Bore	Height	Flutes	Kit Price
All Kits include 1 Cutter body, 10 pcs SNMX-1206 ANSN Inserts & 1 Torx Key					
SN12SM-2000-1.75F5-KIT	2.00	.75	1.75	5	$332.00
SN12SM-2500-2.00H6-KIT	2.50	1.00	2.00	6	$438.00
SN12SM-3000-2.00H7-KIT	3.00	1.00	2.00	7	$498.00
SN12SM-4000-2.50L8-KIT	4.00	1.50	2.50	8	$659.00
SN12SM-6000-2.50P10-KIT	6.00	2.00	2.50	10	$859.00

For additional inserts, please see pricing in insert table below



SNMX Inserts

Designation	P20 NP20MC	P25 NP25MP	P30 NP30MC	P35 NP35MP	M35 NM35MP	M40 NM40MP	K15 NK15MC	K25 NK20MP
SNMX-1206ANSN-P	11.95	11.95	11.95	11.95				
SNMX-1206ANSN-M					11.95	11.95		
SNMX-1206ANSN-K							11.95	11.95

90° SQUARE SHOULDER MILLING KITS

The 2" to 4" Kits include 1 cutter,
10pcs. XNEX-080608 Inserts & 1 Torx Key.
The 6" Kit includes 15 pcs. XNEX Inserts

XN08 Face Mills

Designation	Dia.	Bore	Height	Flutes	Kit Price
All Kits include 1 Cutter body, 10 pcs XNEX-08 Inserts & 1 Torx Key					
XN08SM-2000-1.75F5-KIT	2.00	.75	1.75	5	$345.00
XN08SM-2500-2.00H6-KIT	2.50	1.00	2.00	6	$419.00
XN08SM-3000-2.00H7-KIT	3.00	1.00	2.00	7	$498.00
XN08SM-4000-2.50L8-KIT	4.00	1.50	2.50	8	$595.00
All Kits include 1 Cutter body, 15 pcs XNEX-08 Inserts & 1 Torx Key					
XN08SM-6000-2.00L12-KIT	6.00	2.00	2.50	12	$895.00

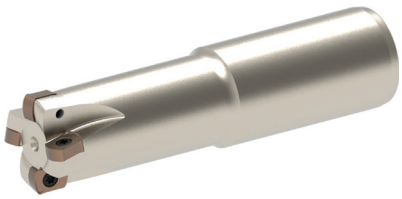
For additional inserts, please see pricing in insert table below

XNEX Inserts

Designation	P25 NP25MP	P35 NP35MP	M35 NM35MP	M40 NM40MP	K25 NK20MP	M20 RTK20
XNEX-080608-TP	15.95	15.95				
XNEX-080608-TM			15.95	15.95		
XNEX-080608-TK					15.95	
XNEX-080608-TN						21.95

BN90 HIGH FEED MILLING CUTTER KITS

All kits include 1 cutter,
10 BNMX-0603 Inserts,
1 Torx Key & 1 Tube MolySlip



BN90 High Feed End Mills

Please Note: These cutters are a quality Import

Designation	Tool Dia.	Shank Dia.	O.A.L.	Reach	Flutes	Kit Price
All Kits include 1 Cutter body, 10 pcs BNMX-0603 Inserts, 1 Torx Key & 1 tube MolySlip						
Cylindrical Shank Tools - Inch Dimensions						
BN90CY-0625-4.00E2-KIT	5/8	.625	4	1.1/4	2	$179.00
BN90CY-0750-5.00F3-KIT	3/4	.750	5	1.1/2	3	$199.00
BN90CY-1000-6.00H4-KIT	1.0	1.00	6	2.00	4	$229.00
Cylindrical Shank Tools - Metric Dimensions						
BN90CY-16MM-130Z2-KIT	16MM	16	130	26	2	$179.00
BN90CY-20MM-150Z3-KIT	20MM	20	150	40	3	$199.00
BN90CY-25MM-150Z4-KIT	25MM	25	150	40	4	$229.00

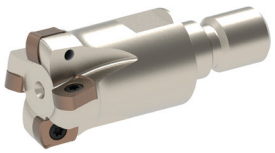
Recommended Cutting Conditions for BNMX-0603

Working Material	SFM	fz (inch / tooth)	ap (inch)	First Choice Grade
Carbon Steel (HB85-225)	395 - 720	0.016 - 0.063	0.012 - 0.035	WP30MP
Stainless 300 Series	230 - 490	0.012 - 0.047	0.012 - 0.028	WP30MP
Cast Iron (HB140-220)	395 - 720	0.016 - 0.063	0.012 - 0.035	WP35MP
Titanium	130 - 260	0.012 - 0.047	0.012 - 0.028	WP30MP
High temp. Titanium Alloy	130 - 260	0.012 - 0.031	0.012 - 0.024	WP40MP
Hardened Steel	165 - 330	0.012 - 0.039	0.012 - 0.024	WP35MP

The BN90 High Feed cutters are designed for high volume metal removal rates.

Their applications include:

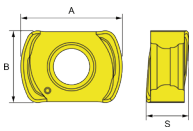
- Facing
- Slotting
- Ramping
- Pocket Milling



BN90 High Feed Thread-On Mills

Please Note: These cutters are a quality Import

Designation	Tool Dia.	Shank Thread	Head Length	Flutes	Kit Price
All Kits include 1 Cutter body, 10 pcs BNMX-0603 Inserts, 1 Torx Key & 1 tube MolySlip					
Threaded Shank Tools - Inch Dimensions					
BN90TS-0625-M8-2C-KIT	5/8	M8	1.0	2	$219.00
BN90TS-0750-M10-3C-KIT	3/4	M10	1.2	3	$249.00
BN90TS-1000-M12-4C-KIT	1.0	M12	1.4	4	$299.00
Threaded Shank Tools - Metric Dimensions					
BN90TS-16MM-M8-2C-KIT	16MM	M8	26mm	2	$179.00
BN90TS-20MM-M10-3C-KIT	20MM	M10	30mm	3	$199.00
BN90TS-25MM-M12-4C-KIT	25MM	M12	35mm	4	$239.00



BNMX Inserts

■ Primary application □ Secondary application

Designation	A	B	D	d1	P	M	K	S	H	Price
BNMX-0603-TM WP30MP	.354	.251	.148	.126	■	■	■		□	$9.99 Each
BNMX-0603-TM WP35MP	.354	.251	.148	.126	■	■	■	□	□	
BNMX-0603-TR WP30MP	.354	.251	.148	.126	■	■	■			
BNMX-0603-TR WP35MP	.354	.251	.148	.126	■	□	■	□	□	
BNMX-0603-TR WS40MP	.354	.251	.148	.126	■	□	□	■		

D'ANDREA SHELL ARBOUR CLEARANCE

>> Pricing valid for existing inventory only!

Made in Italy!

D'ANDREA®
TECHNOLOGY FOR HIGH PRECISION

All Arbours Are Through Coolant For Improved Performance!

CV40 MONOd' Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
CV40SM-0750-2.00	14	.75"	2	$79.95
CV40SM-1000-2.00	6	1.00"	2	$79.95
CV40SM-1000-4.00	9	1.00"	4	$89.95
CV40SM-1250-2.25	6	1.25"	2.25	$79.95
CV40SM-1250-4.00	26	1.25"	4	$99.95
CV40SM-1500-2.25	24	1.50"	2.25	$89.95
CV40SM-1500-4.00	90	1.50"	4	$99.95

CV50 MONOd' Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
CV50SM-0750-2.00	39	.75"	2	$99.95
CV50SM-0750-6.00	19	.75"	6	149.95
CV50SM-1000-2.00	35	1.00"	2	$99.95
CV50SM-1000-6.00	7	1.00"	6	$149.95
CV50SM-1250-2.25	44	1.25"	2.25	$99.95
CV50SM-1250-4.00	26	1.25"	4	$129.95
CV50SM-1250-6.00	55	1.25"	6	$149.95
CV50SM-1500-2.25	16	1.50"	2.25	$109.95
CV50SM-1500-6.00	29	1.50"	6	$159.95

BT40 MONOd' Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
BT40SM-0750-2.00	114	.75"	2	$69.95
BT40SM-1000-2.00	9	1.00"	2	$69.95
BT40SM-1000-4.00	66	1.00"	4	$89.95
BT40SM-1250-2.17	16	1.25"	2.17	$79.95
BT40SM-1250-2.25	77	1.25"	2.25	$79.95
BT40SM-1250-4.00	74	1.25"	4	$99.95

BT50 MONOd' Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
BT50SM-1000-2.00	7	1.00"	2	$79.95
BT50SM-1500-2.25	6	1.50"	2.25	$99.95
BT50SM-1875-2.50	1	1.875"	2.5	$99.95
BT50SM-2000-2.75	6	2.00"	2.75	$119.95

HSK-A63 MONOd' Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
HSK-A63SM-1000-2.00	9	1.00"	2	$99.95
HSK-A63SM-1000-4.00	8	1.00"	4	$109.95
HSK-A63SM-1250-2.25	5	1.25"	2.25	$99.95
HSK-A63SM-1250-4.00	12	1.25"	4	$109.95

HSK-A100 MONOd' Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
HSK-A100SM-0750-2.25	14	.75"	2.25	$139.95
HSK-A100SM-1000-2.25	14	1.00"	2.25	$149.95
HSK-A100SM-1000-4.00	5	1.00"	4	$169.95
HSK-A100SM-1250-2.50	15	1.25"	2.5	$159.95
HSK-A100SM-1250-4.00	14	1.25"	4	$169.95
HSK-A100SM-1500-2.50	15	1.50"	2.5	$169.95

Balanceable Shell Arbours facilitate the balancing of complete cutter assemblies for improved performance!

Balanceable Shell Arbours

CV40 TOPRUN Balanceable Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
CV40SM-1000-TR	26	1.00"	2.36	$99.95
CV40SM-1250-TR	36	1.25"	2.76	$99.95

CV50 TOPRUN Balanceable Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
CV50SM-0750-TR	28	.75"	2.17	$119.95
CV50SM-1000-TR	30	1.00"	2.36	$119.95
CV50SM-1250-TR	48	1.25"	2.76	$129.95
CV50SM-1500-TR	29	1.50"	2.76	$139.95

Balanceable Shell Arbours

Balanceable Shell Arbours facilitate the balancing of complete cutter assemblies for improved performance!

HSK-A63 TOPRUN Balanceable Shell Mill Holders

Designation	Qty.	Pilot Dia.	Gage Lgth	Price Ea.
HSK-A63SM-0750-TR	5	.75"	1.97	$129.95
HSK-A63SM-1000-TR	27	1.00"	2.17	$129.95
HSK-A63SM-1250-TR	45	1.25"	2.36	$129.95

D'ANDREA TRM-MHD PRECISION BORING KITS

>> Kit includes a FREE Arbour! Your choice of either CV40 or CV50, or HSK-A63

Boring Range of Kit: Ø .24 - 4.33

ORDER NO.:

K01-TRM-50/50

$1,969.95

The Following K01-TRM-50/50 Kit Includes:		
1pc. TRM-50	1pc. B3.06	1pc. SFTP-25
1pc. P-25.63	1pc. B3.08	1pc. SFTP-32
1pc. BM10	1pc. B3.11	1pc. SFTP-50
1pc. PS-31.24	1pc. B3.16	
1pc. CW32	1pc. B3.22	
1pc. TPGX-110302L DC100		
5pcs. TPGX-090202L DC100		
2pcs. WCGT-020102L DC100		

GP4 VARIABLE 4 FLUTE END MILLS

The TyCarb GP Series of 4 flute end mills have been specifically designed for today's difficult materials as well as the modern machinery now available. From Micro Grain Carbide Rod to differential fluting and superior PVD coating the GP Series excels in all materials and applications.

The unique design enables true chatter-free machining. Excellent performance is achievable in slotting as well as profiling applications. The GP family is ideal for heavily interrupted cuts and when machining carbon, die, alloy and stainless steels, also titanium as well as other materials that generate high temperatures.

GP 4 Flute End Mills (Variable Flute / Center Cutting)

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Corner Rad.	Price
GP4S-SQ0125 TL25	1/8	1/8	1/4	1.1/2	---	$12.93
GP4S-SQ0125-010 TL25	1/8	1/8	1/4	1.1/2	.010	$13.97
GP4S-SQ0125-015 TL25	1/8	1/8	1/4	1.1/2	.015	$13.97
GP4R-SQ0125 TL25	1/8	1/8	1/2	2	---	$13.21
GP4R-SQ0125-010 TL25	1/8	1/8	1/2	2	.010	$14.37
GP4S-SQ0187 TL25	3/16	3/16	5/16	1.1/2	---	$15.04
GP4S-SQ0187-015 TL25	3/16	3/16	5/16	1.1/2	.015	$15.98
GP4R-SQ0187 TL25	3/16	3/16	5/8	2	---	$14.43
GP4R-SQ0187-015 TL25	3/16	3/16	5/8	2	.015	$16.61
GP4E-SQ0187 TL25	3/16	3/16	7/8	2.1/2	---	$18.10
GP4S-SQ0250 TL25	1/4	1/4	3/8	2	---	$17.14
GP4S-SQ0250-015 TL25	1/4	1/4	3/8	2	.015	$18.95
GP4S-SQ0250-030 TL25	1/4	1/4	3/8	2	.030	$18.95
GP4R-SQ0250 TL25	1/4	1/4	3/4	2.1/2	---	$18.94
GP4R-SQ0250-020 TL25	1/4	1/4	3/4	2.1/2	.020	$20.95
GP4R-SQ0250-030 TL25	1/4	1/4	3/4	2.1/2	.030	$20.95
GP4R-SQ0250-060 TL25	1/4	1/4	3/4	2.1/2	.060	$20.95
GP4L-SQ0250 TL25	1/4	1/4	1.1/4	3	---	$22.29
GP4L-SQ0250-020 TL25	1/4	1/4	1.1/4	3	.020	$24.08
GP4S-SQ0312 TL25	5/16	5/16	1/2	2	---	$21.86
GP4S-SQ0312-020 TL25	5/16	5/16	1/2	2	.020	$22.46
GP4R-SQ0312 TL25	5/16	5/16	13/16	2.1/2	---	$24.47
GP4R-SQ0312-020 TL25	5/16	5/16	13/16	2.1/2	.020	$25.01
GP4S-SQ0375 TL25	3/8	3/8	1/2	2	---	$26.25
GP4S-SQ0375-020 TL25	3/8	3/8	1/2	2	.020	$28.50
GP4S-SQ0375-030 TL25	3/8	3/8	1/2	2	.030	$28.50
GP4R-SQ0375 TL25	3/8	3/8	7/8	2.1/2	---	$29.08
GP4R-SQ0375-020 TL25	3/8	3/8	7/8	2.1/2	.020	$30.71
GP4R-SQ0375-030 TL25	3/8	3/8	7/8	2.1/2	.030	$30.71
GP4R-SQ0375-060 TL25	3/8	3/8	7/8	2.1/2	.060	$30.71
GP4R-SQ0375-120 TL25	3/8	3/8	7/8	2.1/2	.120	$30.71
GP4E-SQ0375 TL25	3/8	3/8	1.1/8	3	---	$33.64
GP4E-SQ0375-020 TL25	3/8	3/8	1.1/8	3	.020	$35.80
GP4L-SQ0375 TL25	3/8	3/8	1.1/2	3.1/2	---	$38.68
GP4L-SQ0375-030 TL25	3/8	3/8	1.1/2	3.1/2	.030	$38.68
GP4R-SQ0437 TL25	7/16	7/16	1	2.3/4	---	$38.02
GP4S-SQ0500 TL25	1/2	1/2	5/8	2.1/2	---	$43.24
GP4S-SQ0500-020 TL25	1/2	1/2	5/8	2.1/2	.020	$44.39
GP4S-SQ0500-030 TL25	1/2	1/2	5/8	2.1/2	.030	$44.39
GP4R-SQ0500 TL25	1/2	1/2	1	3	---	$44.88
GP4R-SQ0500-030 TL25	1/2	1/2	1	3	.030	$50.45
GP4R-SQ0500-060 TL25	1/2	1/2	1	3	.060	$50.45
GP4E-SQ0500 TL25	1/2	1/2	1.1/4	3	---	$48.68
GP4E-SQ0500-020 TL25	1/2	1/2	1.1/4	3	.020	$52.29
GP4E-SQ0500-030 TL25	1/2	1/2	1.1/4	3	.030	$52.29
GP4E-SQ0500-060 TL25	1/2	1/2	1.1/4	3	.060	$52.29
GP4E-SQ0500-090 TL25	1/2	1/2	1.1/4	3	.090	$52.29
GP4E-SQ0500-120 TL25	1/2	1/2	1.1/4	3	.120	$52.29
GP4M-SQ0500 TL25	1/2	1/2	1.5/8	3.1/2	---	$52.07
GP4L-SQ0500 TL25	1/2	1/2	2	4	---	$61.30
GP4L-SQ0500-030 TL25	1/2	1/2	2	4	.030	$64.32
GP4R-SQ0562 TL25	9/16	9/16	1.1/4	3.1/2	---	$72.92
GP4R-SQ0625 TL25	5/8	5/8	1.1/4	3.1/2	---	$81.50
GP4R-SQ0625-030 TL25	5/8	5/8	1.1/4	3.1/2	.030	$87.35
GP4R-SQ0625-060 TL25	5/8	5/8	1.1/4	3.1/2	.060	$87.35
GP4E-SQ0625 TL25	5/8	5/8	1.5/8	3.1/2	---	$88.25
GP4E-SQ0625-030 TL25	5/8	5/8	1.5/8	3.1/2	.030	$91.87
GP4S-SQ0750 TL25	3/4	3/4	7/8	3	---	$103.33
GP4S-SQ0750-030 TL25	3/4	3/4	7/8	3	.030	$108.93
GP4S-SQ0750-060 TL25	3/4	3/4	7/8	3	.060	$108.93
GP4R-SQ0750 TL25	3/4	3/4	1.1/2	4	---	$113.50
GP4R-SQ0750-030 TL25	3/4	3/4	1.1/2	4	.030	$121.07
GP4R-SQ0750-060 TL25	3/4	3/4	1.1/2	4	.060	$121.07
GP4R-SQ0750-090 TL25	3/4	3/4	1.1/2	4	.090	$121.07
GP4R-SQ0750-120 TL25	3/4	3/4	1.1/2	4	.120	$121.07
GP4E-SQ0750 TL25	3/4	3/4	1.3/4	4	---	$123.69
GP4E-SQ0750-030 TL25	3/4	3/4	1.3/4	4	.030	$127.82
GP4E-SQ0750-060 TL25	3/4	3/4	1.3/4	4	.060	$127.82
GP4E-SQ0750-120 TL25	3/4	3/4	1.3/4	4	.120	$127.82
GP4M-SQ0750 TL25	3/4	3/4	2.3/8	5	---	$143.34
GP4R-SQ1000 TL25	1	1	1.1/2	4	---	$179.35
GP4R-SQ1000-030 TL25	1	1	1.1/2	4	.030	$194.30
GP4R-SQ1000-060 TL25	1	1	1.1/2	4	.060	$194.30
GP4R-SQ1000-120 TL25	1	1	1.1/2	4	.120	$194.30

For the full TyCarb End Mill Catalogue please visit:
http://www.tysontool.com/2020TyCarbEndMills_Interactive.pdf

4 FLUTE ROUGHING END MILLS

The TyCarb Roughing end mill is recommended for use in most materials from carbon, tool, die, alloy steels as well as cast iron and even stainless steel. The unique chipbreaker and flute configuration achieves higher productivity with less H.P. than other High Performance end mills. The specially designed chipbreaker creates smaller chips, ensuring rapid evacuation and helping reduce potential tool chatter. Added features include differential flute spacing to achieve even higher productivity.

- Cutting edges protected with 45 deg. chamfer
- Next generation AlCrN PVD coating
- Differential flute spacing
- Available with cylindrical or weldon style shanks

4 Flute Roughing End Mills (Variable Flute / Center Cutting / Weldon)

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Chamfer	Price
RC4EW-SQ0500-C20 TL30	1/2	1/2	1.1/4	3	.020	$60.54
RC4RW-SQ0625-C30 TL30	5/8	5/8	1.1/4	3.1/2	.030	$104.12
RC4RW-SQ0750-C30 TL30	3/4	3/4	1.1/2	4	.030	$139.95
RC4RW-SQ1000-C30 TL30	1	1	1.1/2	4	.030	$218.00

4 Flute Roughing End Mills (Variable Flute / Center Cutting)

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Chamfer	Price
RC4RC-SQ0250-C10 TL30	1/4	1/4	3/4	2.1/2	.010	$26.14
RC4RC-SQ0375-C10 TL30	3/8	3/8	7/8	2.1/2	.010	$37.27
RC4EC-SQ0500-C20 TL30	1/2	1/2	1.1/4	3	.020	$60.54
RC4RC-SQ0625-C30 TL30	5/8	5/8	1.1/4	3.1/2	.030	$101.07
RC4RC-SQ0750-C30 TL30	3/4	3/4	1.1/2	4	.030	$137.50
RC4RC-SQ1000-C30 TL30	1	1	1.1/2	4	.030	$212.48

ORION
End Mills for Machining Aluminum

- Orion 3 flute End Mills specifically designed for Aluminum
- Differential flute spacing for chatter free performance
- New Polished flute design for effective chip evacuation
- One tool for roughing, semi-finishing as well as finishing operations
- Effective for slotting up to 1xD axial depth
- For Side or profile milling capable of 0.5xD radial and 1.5xD axial depth
- Cutting speeds only limited by your machine (Tool Balancing for Higher speeds recommended)
- These end mills are available with a DLC coating on request

ORION 3 Flute Solid Carbide End Mills (Center Cutting)

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Corner Rad.	Price
OR3RC-SQ0125 UK20	1/8	1/8	3/8	1.1/2	---	$11.30
OR3EC-SQ0125 UK20	1/8	1/8	1/2	1.1/2	---	$12.29
OR3LC-SQ0125 UK20	1/8	1/8	3/4	2.1/2	---	$16.18
OR3RC-SQ0187 UK20	3/16	3/16	5/16	2	---	$13.32
OR3EC-SQ0187 UK20	3/16	3/16	9/16	2	---	$14.81
OR3RC-SQ0250 UK20	1/4	1/4	1/2	2.1/2	---	$19.21
OR3RC-SQ0250-015 UK20	1/4	1/4	1/2	2.1/2	.015	$21.11
OR3RC-SQ0250-030 UK20	1/4	1/4	1/2	2.1/2	.030	$21.00
OR3RC-SQ0250-060 UK20	1/4	1/4	1/2	2.1/2	.060	$21.00
OR3EC-SQ0250 UK20	1/4	1/4	3/4	2.1/2	---	$20.21
OR3EC-SQ0250-015 UK20	1/4	1/4	3/4	2.1/2	.015	$22.19
OR3EC-SQ0250-030 UK20	1/4	1/4	3/4	2.1/2	.030	$22.19
OR3LC-SQ0250 UK20	1/4	1/4	1.1/8	2.1/2	---	$23.87
OR3LC-SQ0250-015 UK20	1/4	1/4	1.1/8	2.1/2	.015	$27.14
OR3LC-SQ0250-030 UK20	1/4	1/4	1.1/8	2.1/2	.030	$27.14
OR3RC-SQ0312 UK20	5/16	5/16	5/8	2.1/2	---	$24.94
OR3RC-SQ0312-030 UK20	5/16	5/16	5/8	2.1/2	.030	$27.41
OR3LC-SQ0312 UK20	5/16	5/16	1.1/8	3	---	$29.58
OR3LC-SQ0312-030 UK20	5/16	5/16	1.1/8	3	.030	$33.24
OR3RC-SQ0375 UK20	3/8	3/8	3/4	2.1/2	---	$28.32
OR3RC-SQ0375-030 UK20	3/8	3/8	3/4	2.1/2	.030	$31.29
OR3RC-SQ0375-060 UK20	3/8	3/8	3/4	2.1/2	.060	$31.31
OR3EC-SQ0375 UK20	3/8	3/8	1.1/8	3	---	$32.35
OR3EC-SQ0375-030 UK20	3/8	3/8	1.1/8	3	.030	$38.72
OR3EC-SQ0375-060 UK20	3/8	3/8	1.1/8	3	.060	$38.72
OR3LC-SQ0375 UK20	3/8	3/8	2	4	---	$42.98
OR3LC-SQ0375-030 UK20	3/8	3/8	2	4	.030	$49.00
OR3LC-SQ0375-060 UK20	3/8	3/8	2	4	.060	$49.00
OR3RC-SQ0500 UK20	1/2	1/2	1	3	---	$44.79
OR3RC-SQ0500-030 UK20	1/2	1/2	1	3	.030	$48.39
OR3RC-SQ0500-060 UK20	1/2	1/2	1	3	.060	$48.84
OR3EC-SQ0500 UK20	1/2	1/2	1.1/4	3	---	$46.59
OR3EC-SQ0500-030 UK20	1/2	1/2	1.1/4	3	.030	$51.91
OR3EC-SQ0500-060 UK20	1/2	1/2	1.1/4	3	.060	$51.91
OR3EC-SQ0500-090 UK20	1/2	1/2	1.1/4	3	.090	$51.91

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Corner Rad.	Price
OR3EC-SQ0500-120 UK20	1/2	1/2	1.1/4	3	.120	$51.91
OR3LC-SQ0500 UK20	1/2	1/2	2	4	---	$56.92
OR3LC-SQ0500-030 UK20	1/2	1/2	2	4	.030	$64.12
OR3LC-SQ0500-060 UK20	1/2	1/2	2	4	.060	$64.12
OR3RC-SQ0625 UK20	5/8	5/8	1.1/4	3.1/2	---	$78.34
OR3RC-SQ0625-030 UK20	5/8	5/8	1.1/4	3.1/2	.030	$84.24
OR3RC-SQ0625-060 UK20	5/8	5/8	1.1/4	3.1/2	.060	$84.24
OR3EC-SQ0625 UK20	5/8	5/8	1.5/8	3.1/2	---	$86.23
OR3EC-SQ0625-030 UK20	5/8	5/8	1.5/8	3.1/2	.030	$92.17
OR3EC-SQ0625-060 UK20	5/8	5/8	1.5/8	3.1/2	.060	$92.74
OR3LC-SQ0625 UK20	5/8	5/8	2	4	---	$101.80
OR3LC-SQ0625-030 UK20	5/8	5/8	2	4	.030	$105.40
OR3LC-SQ0625-060 UK20	5/8	5/8	2	4	.060	$105.40
OR3RC-SQ0750 UK20	3/4	3/4	1.1/2	4	---	$123.42
OR3RC-SQ0750-030 UK20	3/4	3/4	1.1/2	4	.030	$125.41
OR3RC-SQ0750-060 UK20	3/4	3/4	1.1/2	4	.060	$125.41
OR3RC-SQ0750-090 UK20	3/4	3/4	1.1/2	4	.090	$126.88
OR3RC-SQ0750-120 UK20	3/4	3/4	1.1/2	4	.120	$125.41
OR3EC-SQ0750 UK20	3/4	3/4	1.3/4	4	---	$126.88
OR3EC-SQ0750-030 UK20	3/4	3/4	1.3/4	4	.030	$123.91
OR3EC-SQ0750-060 UK20	3/4	3/4	1.3/4	4	.060	$123.91
OR3LC-SQ0750 UK20	3/4	3/4	3	6	---	$174.51
OR3LC-SQ0750-030 UK20	3/4	3/4	3	6	---	$183.51
OR3LC-SQ0750-060 UK20	3/4	3/4	3	6	.060	$183.51
OR3RC-SQ1000 UK20	1	1	1.1/2	4	---	$186.77
OR3RC-SQ1000-030 UK20	1	1	1.1/2	4	.030	$200.64
OR3RC-SQ1000-060 UK20	1	1	1.1/2	4	.060	$200.64
OR3RC-SQ1000-090 UK20	1	1	1.1/2	4	.090	$200.64
OR3RC-SQ1000-120 UK20	1	1	1.1/2	4	.120	$206.43
OR3EC-SQ1000 UK20	1	1	2	4.1/2	---	$221.08
OR3EC-SQ1000-030 UK20	1	1	2	4.1/2	.030	$230.08
OR3EC-SQ1000-060 UK20	1	1	2	4.1/2	.060	$230.08
OR3LC-SQ1000 UK20	1	1	3	6	---	$280.49
OR3LC-SQ1000-030 UK20	1	1	3	6	.030	$289.49
OR3LC-SQ1000-060 UK20	1	1	3	6	.060	$289.49

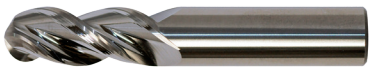
ORION 2 & 3 FLUTE BALL NOSE END MILLS

The unique design characteristics of the ORION End Mills provide exceptional performance & outstanding tool life. These end mills are available as uncoated UK20 or with a DLC coating on request.

- Highly polished design
- 3 Flute end mill has differential pitch
- Premium Micro-Grain Carbide
- Special Diameters or lengths available on request

ORION 2 Flute Ball Nose End Mills

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Price
OR2RC-BN0250 UK20	1/4	1/4	3/4	2.1/2	$24.31
OR2RC-BN0312 UK20	5/16	5/16	13/16	2.1/2	$31.55
OR2RC-BN0375 UK20	3/8	3/8	3/4	2.1/2	$35.68
OR2EC-BN0500 UK20	1/2	1/2	1.1/4	3	$58.65
OR2RC-BN0625 UK20	5/8	5/8	1.1/4	3.1/2	$99.05
OR2RC-BN0750 UK20	3/4	3/4	1.1/2	4	$156.13



ORION 3 Flute Ball Nose End Mills

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Price
OR3RC-BN0250 UK20	1/4	1/4	3/4	2.1/2	$24.31
OR3RC-BN0312 UK20	5/16	5/16	13/16	2.1/2	$31.55
OR3RC-BN0375 UK20	3/8	3/8	3/4	2.1/2	$35.68
OR3EC-BN0500 UK20	1/2	1/2	1.1/4	3	$58.65
OR3RC-BN0625 UK20	5/8	5/8	1.1/4	3.1/2	$99.05
OR3RC-BN0750 UK20	3/4	3/4	1.1/2	4	$156.13

ORION 3 FLUTE ROUGHING END MILLS

- Orion 3 flute Roughing End Mills specifically designed for Aluminum
- Differential flute spacing for chatter free performance
- Polished flute design for effective chip evacuation
- Designed for aggressive feed rates while maintaining good surface finishes
- Specially designed chipbreaker creates smaller chips and reduces cutting loads on lighter duty machines
- These end mills are available with a DLC coating on request
- 3 Flute to center end cut design for improved plunging capbilities

ORION 3 Flute Roughing End Mills (Variable Flute / Center Cutting / Cylindrical Shank)

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Corner Rad.	Price
RCOR3RC-SQ0250-R020 UK20	1/4	1/4	3/4	2.1/2	.020	$24.77
RCOR3RC-SQ0375-R030 UK20	3/8	3/8	7/8	2.1/2	.030	$37.27
RCOR3EC-SQ0375-R030 UK20	3/8	3/8	1.1/8	3	.030	$36.55
RCOR3MC-SQ0375-R030 UK20	3/8	3/8	1.1/2	3	.030	$44.53
RCOR3EC-SQ0500-R030 UK20	1/2	1/2	1.1/4	3	.030	$58.13
RCOR3LC-SQ0500-R030 UK20	1/2	1/2	2	4	.030	$66.86
RCOR3RC-SQ0625-R030 UK20	5/8	5/8	1.1/4	3.1/2	.030	$93.29
RCOR3LC-SQ0625-R030 UK20	5/8	5/8	2	4	.030	$115.85
RCOR3RC-SQ0750-R060 UK20	3/4	3/4	1.1/2	4	.060	$141.94
RCOR3SP-SQ0750-R060 UK20	3/4	3/4	1.5/8	4	.060	$141.94
RCOR3EC-SQ0750-R060 UK20	3/4	3/4	1.3/4	4	.060	$169.16
RCOR3MC-SQ0750-R060 UK20	3/4	3/4	2.1/4	4.1/2	.060	$163.69
RCOR3LC-SQ0750-R060 UK20	3/4	3/4	3	6	.060	$205.51
RCOR3EC-SQ1000-R060 UK20	1	1	1.1/2	4	.060	$211.65
RCOR3MC-SQ1000-R060 UK20	1	1	2	4.1/2	.060	$230.08
RCOR3LC-SQ1000-R060 UK20	1	1	3	6	.060	$309.72

STRATUS 2xD, 3xD & 4xD 7 FLUTE END MILLS

- Differential Flute spacing
- Eccentric Relief for improved edge strength
- Tapered core for added stability
- Next Generation AlCrN PVD Coating
- Post Process treatment after coating
- Designed for HSC (High Speed Cutting)
- Extended Cut length of 2, 3 or 4 times diameter
- Ideal tool for dynamic / trochoidal milling
- Supplied with Chip Management Grooves

Tycarb

Designed for Trochoidal & Dynamic Milling!

MADE IN CANADA
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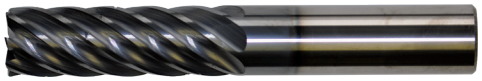

STRATUS 7 Flute End Mills (2xD)

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Corner Rad.	Price
ST7X2C-SQ0375 TL30	3/8	3/8	3/4	2.1/2	---	$44.47
ST7X2C-SQ0375-030 TL30	3/8	3/8	3/4	2.1/2	.030	$47.77
ST7X2C-SQ0375-060 TL30	3/8	3/8	1	2.1/2	.060	$48.48
ST7X2C-SQ0500 TL30	1/2	1/2	1	3	---	$65.21
ST7X2C-SQ0500-030 TL30	1/2	1/2	1	3	.030	$73.46
ST7X2C-SQ0500-060 TL30	1/2	1/2	1	3	.060	$74.48
ST7X2C-SQ0500-090 TL30	1/2	1/2	1	3	.090	$74.48
ST7X2C-SQ0500-120 TL30	1/2	1/2	1.1/4	3	.120	$74.48
ST7X2C-SQ0625 TL30	5/8	5/8	1.1/4	3.1/2	---	$107.30
ST7X2C-SQ0625-030 TL30	5/8	5/8	1.1/4	3.1/2	.030	$112.27
ST7X2C-SQ0750 TL30	3/4	3/4	1.1/2	4	---	$155.69
ST7X2C-SQ0750-030 TL30	3/4	3/4	1.1/2	4	.030	$162.57
ST7X2C-SQ0750-060 TL30	3/4	3/4	1.1/2	4	.060	$163.27
ST7X2C-SQ0750-090 TL30	3/4	3/4	1.1/2	4	.090	$163.27
ST7X2C-SQ0750-120 TL30	3/4	3/4	1.1/2	4	.120	$163.27

DRILL MILLS

Drill Mills provide versatility in multiple applications. These tools can be applied on carbon & alloy steels as well as Stainless Steels, cast iron and non-ferrous materials. Operations that can be performed with these tools include:

- Drilling
- Chamfering
- Spot Drilling
- Side Milling
- Countersinking

Drill Mill- 2 Flute 120° & 90°

Drill Mill- 2 Flute 120°

Designation	Angle	Cutter Dia.	Shank Dia.	LOC	OAL	Price
DRM2RC-DP0125-A120 TL25	120°	1/8	1/8	3/16	1.1/2	$22.06
DRM2RC-DP0187-A120 TL25	120°	3/16	3/16	5/8	2.00	$22.06
DRM2RC-DP0250-A120 TL25	120°	1/4	1/4	3/4	2.1/2	$36.60
DRM2RC-DP0312-A120 TL25	120°	5/16	5/16	13/16	2.1/2	$40.10
DRM2RC-DP0375-A120 TL25	120°	3/8	3/8	1	2.1/2	$49.96
DRM2RC-DP0437-A120 TL25	120°	7/16	7/16	1	2.3/4	$65.53
DRM2RC-DP0500-A120 TL25	120°	1/2	1/2	1	3.00	$71.56

Drill Mill- 2 Flute 90°

Designation	Angle	Cutter Dia.	Shank Dia.	LOC	OAL	Price
DRM2RC-DP0125-A90 TL25	90°	1/8	1/8	3/16	1.1/2	$22.06
DRM2RC-DP0187-A90 TL25	90°	3/16	3/16	5/8	2.00	$22.06
DRM2RC-DP0250-A90 TL25	90°	1/4	1/4	3/4	2.1/2	$36.60
DRM2RC-DP0312-A90 TL25	90°	5/16	5/16	13/16	2.1/2	$40.10
DRM2RC-DP0375-A90 TL25	90°	3/8	3/8	1	2.1/2	$49.96
DRM2RC-DP0437-A90 TL25	90°	7/16	7/16	1	2.3/4	$65.53
DRM2RC-DP0500-A90 TL25	90°	1/2	1/2	1	3.00	$71.56

STRATUS 7 Flute End Mills (3xD)

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Corner Rad.	Price
ST7X3C-SQ0375 TL30	3/8	3/8	1.1/8	3	---	$44.89
ST7X3C-SQ0375-015 TL30	3/8	3/8	1.1/8	3	.015	$48.14
ST7X3C-SQ0375-030 TL30	3/8	3/8	1.1/8	3	.030	$48.12
ST7X3C-SQ0375-060 TL30	3/8	3/8	1.1/8	3	.060	$48.77
ST7X3C-SQ0500 TL30	1/2	1/2	1.1/2	3.1/2	---	$69.76
ST7X3C-SQ0500-030 TL30	1/2	1/2	1.1/2	3.1/2	.030	$73.75
ST7X3C-SQ0500-060 TL30	1/2	1/2	1.1/2	3.1/2	.060	$74.69
ST7X3C-SQ0500-090 TL30	1/2	1/2	1.1/2	3.1/2	.090	$74.69
ST7X3C-SQ0500-120 TL30	1/2	1/2	1.1/2	3.1/2	.120	$74.69
ST7X3C-SQ0625 TL30	5/8	5/8	1.7/8	4.1/2	---	$107.82
ST7X3C-SQ0625-030 TL30	5/8	5/8	1.7/8	4.1/2	.030	$112.87
ST7X3C-SQ0750 TL30	3/4	3/4	2.1/4	5	---	$156.69
ST7X3C-SQ0750-030 TL30	3/4	3/4	2.1/4	5	.030	$163.62
ST7X3C-SQ0750-060 TL30	3/4	3/4	2.1/4	5	.060	$164.32
ST7X3C-SQ0750-090 TL30	3/4	3/4	2.1/4	5	.090	$164.32
ST7X3C-SQ0750-120 TL30	3/4	3/4	2.1/4	5	.120	$164.32
ST7X3C-SQ1000 TL30	1	1	3	6	---	$290.76
ST7X3C-SQ1000-030 TL30	1	1	3	6	.030	$297.43
ST7X3C-SQ1000-060 TL30	1	1	3	6	.060	$297.43
ST7X3C-SQ1000-090 TL30	1	1	3	6	.090	$297.43
ST7X3C-SQ1000-120 TL30	1	1	3	6	.120	$297.43

STRATUS 7 Flute End Mills (4xD)

Designation	Cutter Dia.	Shank Dia.	Lgth of Cut	OAL	Corner Rad.	Price
ST7X4C-SQ0375 TL30	3/8	3/8	1.1/2	3.1/2	---	$50.37
ST7X4C-SQ0375-030 TL30	3/8	3/8	1.1/2	3.1/2	.030	$53.24
ST7X4C-SQ0375-060 TL30	3/8	3/8	1.1/2	3.1/2	.060	$54.17
ST7X4C-SQ0500 TL30	1/2	1/2	2	4	---	$76.22
ST7X4C-SQ0500-030 TL30	1/2	1/2	2	4	.030	$81.22
ST7X4C-SQ0500-060 TL30	1/2	1/2	2	4	.060	$81.22
ST7X4C-SQ0500-090 TL30	1/2	1/2	2	4	.090	$81.22
ST7X4C-SQ0500-120 TL30	1/2	1/2	2	4	.120	$81.22
ST7X4C-SQ0625 TL30	5/8	5/8	2.1/2	5	---	$125.41
ST7X4C-SQ0625-030 TL30	5/8	5/8	2.1/2	5	.030	$130.41
ST7X4C-SQ0750 TL30	3/4	3/4	3	6	---	$190.02
ST7X4C-SQ0750-030 TL30	3/4	3/4	3	6	.030	$196.15
ST7X4C-SQ0750-060 TL30	3/4	3/4	3	6	.060	$197.05
ST7X4C-SQ0750-090 TL30	3/4	3/4	3	6	.090	$197.05
ST7X4C-SQ0750-120 TL30	3/4	3/4	3	6	.120	$197.05
ST7X4C-SQ1000 TL30	1	1	4	7	---	$320.81
ST7X4C-SQ1000-030 TL30	1	1	4	7	.030	$327.48
ST7X4C-SQ1000-060 TL30	1	1	4	7	.060	$327.48
ST7X4C-SQ1000-090 TL30	1	1	4	7	.090	$327.48
ST7X4C-SQ1000-120 TL30	1	1	4	7	.120	$327.48

SPOTTING DRILLS

Used for drilling spotting holes for High Performance drills in most steels, including stainless as well as cast iron and high temp alloys. The 145° point angle prevents damage to the corners of the follow-up drill.

MADE IN CANADA
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- 2 Flute, Right Hand Spiral, Right-Hand Cut
- 145° Point
- Short Length
- TiAlN coated standard, additional coatings on request

145° Point Spotting Drill

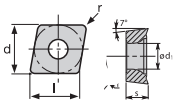
145° Spotting Drills

Designation	Cutter Dia.	Shank Dia.	LOC	OAL	Price
SD2RC-DP0125-A145 TL25	1/8	1/8	3/8	2.1/2	$25.14
SD2RC-DP0250-A145 TL25	1/4	1/4	1/2	2.1/2	$35.91
SD2RC-DP0375-A145 TL25	3/8	3/8	3/4	2.1/2	$47.32
SD2RC-DP0500-A145 TL25	1/2	1/2	1	3	$66.46
SD2RC-DP0750-A145 TL25	3/4	3/4	1.1/2	4	$120.87

PRECISION GROUND INSERTS FOR TURNING & BORING ALUMINUM

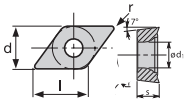
RTK20- Premium Uncoated Grade
TK10MP- Premium TiAlN Coated Grade

CCGT- ... -RAL



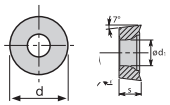
Designation	l	d	s	d1	r	RTK20	TK10MP
CCGT-21.50.5-RAL	.252	1/4	.094	.110	.008	$8.10	$9.72
CCGT-21.51-RAL	.252	1/4	.094	.110	1/64	$8.10	$9.72
CCGT-32.50.5-RAL	.382	3/8	.156	.173	.008	$8.68	$9.99
CCGT-32.51-RAL	.382	3/8	.156	.173	1/64	$8.68	$9.99
CCGT-32.52-RAL	.382	3/8	.156	.173	1/32	$8.68	$9.99
CCGT-431-RAL	.504	1/2	.187	.217	1/64	$9.93	$12.71
CCGT-432-RAL	.504	1/2	.187	.217	1/32	$9.93	$12.17

DCGT- ... -RAL



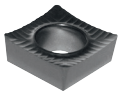
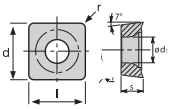
Designation	l	d	s	d1	r	RTK20	TK10MP
DCGT-21.50.5-RAL	.305	1/4	.094	.148	.008	$8.10	$9.72
DCGT-21.51-RAL	.305	1/4	.094	.148	1/64	$8.10	$9.72
DCGT-32.50.5-RAL	.457	3/8	.156	.173	.008	$8.68	$10.33
DCGT-32.51-RAL	.457	3/8	.156	.173	1/64	$8.68	$10.33
DCGT-32.52-RAL	.457	3/8	.156	.173	1/32	$8.68	$10.33

RCGT- ... -RAL



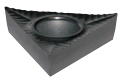
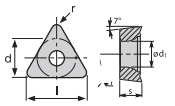
Designation	l	d	s	d1	r	RTK20	TK10MP
RCGT-0602MO-RAL	--	6mm	.094	.110	--	$5.43	$6.50
RCGT-0803MO-RAL	--	8mm	.125	.134	--	$5.69	$7.32
RCGT-1003MO-RAL	--	10mm	.125	.157	--	$7.32	$8.93

SCGT- ... -RAL

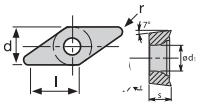
Designation	l	d	s	d1	r	RTK20	TK10MP
SCGT-432-RAL	.500	1/2	.187	.217	1/32	$9.93	$12.14

TCGT- ... -RAL

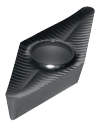
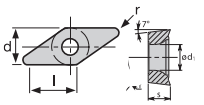
Designation	l	d	s	d1	r	RTK20	TK10MP
TCGT-21.51-RAL	.433	1/4	.094	.110	1/64	8.53	9.34
TCGT-32.51-RAL	.650	3/8	.156	.173	1/64	8.93	9.76

VCGT- ... -RAL



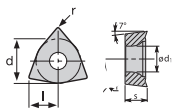
Designation	l	d	s	d1	r	RTK20	TK10MP
VCGT-220.5-RAL	.437	1/4	.125	.110	.008	$10.76	$12.71
VCGT-221-RAL	.437	1/4	.125	.110	1/64	$10.76	$12.71
VCGT-330.5-RAL	.654	3/8	.187	.173	.008	$11.75	$13.69
VCGT-331-RAL	.654	3/8	.187	.173	1/64	$11.75	$13.69
VCGT-332-RAL	.654	3/8	.187	.173	1/32	$11.75	$13.69
VCGT-333-RAL	.654	3/8	.187	.173	3/64	$11.75	$13.69
VCGT-43.58-RAL	.870	1/2	.219	.217	.118	$16.60	$19.32

VPGT- ... -RAL

Designation	l	d	s	d1	r	RTK20	TK10MP
VPGT-43.54-RAL	.870	1/2	.219	.217	1/16	$16.26	--

WCGT- ... -RAL



Designation	l	d	s	d1	r	RTK20	TK10MP
WCGT-32.50.5-RAL	.256	3/8	.156	.173	.008	$9.60	$12.15
WCGT-32.51-RAL	.256	3/8	.156	.173	1/64	$9.60	$12.15
WCGT-32.52-RAL	.256	3/8	.156	.173	1/32	$9.60	$12.15
WCGT-431-RAL	.339	1/2	.187	.217	1/64	$10.90	$14.72
WCGT-432-RAL	.339	1/2	.187	.217	1/32	$10.90	$14.72

THE AD SERIES OF 90° CUTTERS. YOUR FIRST CHOICE FOR SQUARE SHOULDER MACHINING.

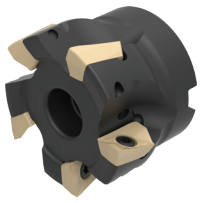
AD90- 90° End Mills

Designation	Tool Dia.	Shank Dia.	O.A.L.	Reach	Flutes	Kit Price
KIT Includes 1 Cutter, 10 pcs ADET-11T308-AL Inserts for Aluminum & 1 Torx Key						
AD11EM-0625-3.00E2-KIT	5/8	5/8	3.00	1.09	2	$232.00
AD11EM-0750-3.50F2-KIT	3/4	3/4	3.50	1.47	2	$249.00
AD11EM-1000-3.50F3-KIT	1.00	3/4	3.50	1.47	3	$259.00
AD11EM-1000-4.00H2-KIT	1.00	1.00	4.00	1.72	2	$259.00
AD11EM-1000-4.00H3-KIT	1.00	1.00	4.00	1.72	3	$269.00
AD11EM-1000-4.00H4-KIT	1.00	1.00	4.00	1.72	4	$279.00
AD11EM-1250-4.00J4-KIT	1.25	1.25	4.00	1.72	4	$299.00
AD11EM-1500-4.00J5-KIT	1.50	1.25	4.00	1.72	5	$349.00
KIT Includes 1 Cutter, 10 pcs ADET-160608-AL Inserts for Aluminum & 1 Torx Key						
AD16EM-1000-4.00H2-KIT	1.00	1.00	4.00	1.72	2	$279.00
AD16EM-1250-4.00J3-KIT	1.25	1.25	4.00	1.72	3	$299.00
AD16EM-1500-4.00J4-KIT	1.50	1.25	4.00	1.72	4	$339.00

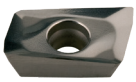
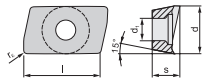
All AD kits include 1 cutter, 10pcs. ADMT OR ADET Inserts & 1 Torx Key

AD90- 90° Face Mills

Designation	Dia.	Bore	Height	Flutes	Kit Price
KIT Includes 1 Cutter, 10 pcs ADET-11T308-AL Inserts for Aluminum & 1 Torx Key					
AD11SM-2000-1.50F5-KIT	2.00	.75	1.50	5	$329.00
KIT Includes 1 Cutter, 10 pcs ADET-160608-AL Inserts for Aluminum & 1 Torx Key					
AD16SM-2000-1.50F3-KIT	2.00	.75	1.50	3	$349.00
AD16SM-2000-1.50F4-KIT	2.00	.75	1.50	4	$359.00
AD16SM-2500-1.75H6-KIT	2.50	1.00	1.75	6	$399.00
AD16SM-3000-2.00H7-KIT	3.00	1.00	2.00	7	$459.00
AD16SM-4000-2.00L8-KIT	4.00	1.50	2.00	8	$599.00

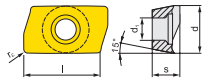


ADET Inserts Designed for Aluminum

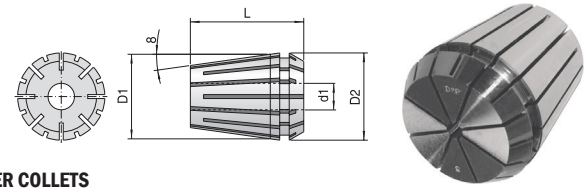
Designation	l	d	s	d1	r	P25MC	P30MP	P40MP	M40MC	TK10M
ADET-11T304-AL	.433	.257	.156	.114	.016					●
ADET-11T308-AL	.433	.257	.156	.114	.032					●
ADET-11T316-AL	.433	.257	.156	.114	.063					●
ADET-160608-AL	.630	.392	.246	.177	.032					●

ADMT Inserts Designed for Milling Steel



Designation	l	d	s	d1	r	P25MC	P30MP	P40MP	M40MC	TK10M
ADMT-11T304-TRM	.433	.257	.156	.114	.016	●	●			
ADMT-11T308-TRM	.433	.257	.156	.114	.032	●	●	●	●	
ADMT-11T316-TRM	.433	.257	.156	.114	.063		●			
ADMT-11T330-TRM	.433	.257	.156	.114	.118		●			
ADMT-11T308-TRR	.433	.257	.156	.114	.032		●			
ADMT-160608-TRM	.630	.392	.246	.177	.032	●	●	●	●	
ADMT-160616-TRM	.630	.392	.246	.177	.063		●			
ADMT-160632-TRM	.630	.392	.246	.177	.126		●			
ADMT-160608-TRR	.630	.392	.246	.177	.032		●			

INCH & METRIC ER COLLETS



INCH CAPACITY ER COLLETS

	ER16	ER20	ER25	ER32	ER40
Range d[1]	1/16 - 13/32	1/16 - 1/2	1/16 - 5/8	1/16 - 3/4	1/8 - 1.0
D[1]	0.629	0.787	0.984	1.259	1.574
D[2]	0.669	0.826	1.023	1.299	1.614
L	1.082	1.240	1.338	1.574	1.811
CAPACITY	ER16	ER20	ER25	ER32	ER40
1/16	ER16P-0063	ER20P-0063	ER25P-0063	ER32P-0063	
3/32	ER16P-0094	ER20P-0094	ER25P-0094	ER32P-0094	
1/8	ER16P-0125	ER20P-0125	ER25P-0125	ER32P-0125	ER40P-0125
5/32	ER16P-0156	ER20P-0156	ER25P-0156	ER32P-0156	ER40P-0156
3/16	ER16P-0188	ER20P-0188	ER25P-0188	ER32P-0188	ER40P-0188
7/32	ER16P-0219	ER20P-0219	ER25P-0219	ER32P-0219	ER40P-0219
1/4	ER16P-0250	ER20P-0250	ER25P-0250	ER32P-0250	ER40P-0250
9/32	ER16P-0281	ER20P-0281	ER25P-0281	ER32P-0281	ER40P-0281
5/16	ER16P-0313	ER20P-0313	ER25P-0313	ER32P-0313	ER40P-0313
11/32	ER16P-0344	ER20P-0344	ER25P-0344	ER32P-0344	ER40P-0344
3/8	ER16P-0375	ER20P-0375	ER25P-0375	ER32P-0375	ER40P-0375
13/32	ER16P-0406	ER20P-0406	ER25P-0406	ER32P-0406	ER40P-0406
7/16		ER20P-0438	ER25P-0438	ER32P-0438	ER40P-0438
15/32		ER20P-0469	ER25P-0469	ER32P-0469	ER40P-0469
1/2		ER20P-0500	ER25P-0500	ER32P-0500	ER40P-0500
17/32			ER25P-0531	ER32P-0531	ER40P-0531
9/16			ER25P-0563	ER32P-0563	ER40P-0563
19/32			ER25P-0594	ER32P-0594	ER40P-0594
5/8			ER25P-0625	ER32P-0625	ER40P-0625
21/32				ER32P-0656	ER40P-0656
11/16				ER32P-0688	ER40P-0688
23/32				ER32P-0719	ER40P-0719
3/4				ER32P-0750	ER40P-0750
25/32					ER40P-0781
13/16					ER40P-0813
27/32					ER40P-0844
7/8					ER40P-0875
29/32					ER40P-0906
15/16					ER40P-0938
31/32					ER40P-0969
1					ER40P-1000

Please note special pricing on TyCarb ER collets. Range shown is for the complete offering of each Collet size, example the ER16P covers the Inch range from 1/16 to 13/32 or the metric range of 0.5 to 10.0 mm. Total number of collets in these ranges is 22.

METRIC CAPACITY ER COLLETS

	ER16	ER20	ER25	ER32	ER40
Range d[1]	0.5 - 10.0	1.0 - 13.0	1.0 - 16.0	2.0 - 20.0	3.0 - 26.0
D[1]	0.629	0.787	0.984	1.259	1.574
D[2]	0.669	0.826	1.023	1.299	1.614
L	1.082	1.240	1.338	1.574	1.811
CAPACITY	ER16	ER20	ER25	ER32	ER40
1.0 - 0.5	ER16P-010				
2.0 - 1.0	ER16P-020	EP20P-020	ER25P-020		
3.0 - 2.0	ER16P-030	EP20P-030	ER25P-030	ER32P-030	
4.0 - 3.0	ER16P-040	EP20P-040	ER25P-040	ER32P-040	ER40P-040
5.0 - 4.0	ER16P-050	EP20P-050	ER25P-050	ER32P-050	ER40P-050
6.0 - 5.0	ER16P-060	EP20P-060	ER25P-060	ER32P-060	ER40P-060
7.0 - 6.0	ER16P-070	EP20P-070	ER25P-070	ER32P-070	ER40P-070
8.0 - 7.0	ER16P-080	EP20P-080	ER25P-080	ER32P-080	ER40P-080
9.0 - 8.0	ER16P-090	EP20P-090	ER25P-090	ER32P-090	ER40P-090
10.0 - 9.0	ER16P-100	EP20P-100	ER25P-100	ER32P-100	ER40P-100
11.0 - 10.0		EP20P-110	ER25P-110	ER32P-110	ER40P-110
12.0 - 11.0		EP20P-120	ER25P-120	ER32P-120	ER40P-120
13.0 - 12.0		EP20P-130	ER25P-130	ER32P-130	ER40P-130
14.0 - 13.0			ER25P-140	ER32P-140	ER40P-140
15.0 - 14.0			ER25P-150	ER32P-150	ER40P-150
16.0 - 15.0			ER25P-160	ER32P-160	ER40P-160
17.0 - 16.0				ER32P-170	ER40P-170
18.0 - 17.0				ER32P-180	ER40P-180
19.0 - 18.0				ER32P-190	ER40P-190
20.0 - 19.0				ER32P-200	ER40P-200
21.0 - 20.0					ER40P-210
22.0 - 21.0					ER40P-220
23.0 - 22.0					ER40P-230
24.0 - 23.0					ER40P-240
25.0 - 24.0					ER40P-250
26.0 - 25.0					ER40P-260

Special Offer on ER Collets (Price per Collet)

Collet Size	Range Inch	Range Metric	Price
ER16P	1/16 - 1/32	0.5 - 10.0	$16.95
ER20P	1/16 - 1/2	1.0 - 13.0	$16.95
ER25P	1/16 - 5/8	1.0 - 16.0	$19.95
ER32P	1/16 - 3/4	2.0 - 20.0	$19.95
ER40P	1/8 - 1.0	3.0 - 26.0	$23.95

Price shown is special promotional pricing per collet.

INCH & METRIC COLLET SETS

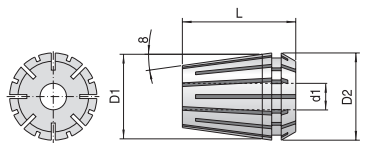
INCH COLLET SETS	Collet Size	# of Collets	Collets Included	For Shank Size	Price
ER16P-SET-I-10PC-T	ER16	10	3/32 - 3/8 by 32nds	1/16 - 3/8	$169.95
ER20P-SET-I-12PC-T	ER20	12	5/32 - 1/2 by 32nds	1/8 - 1/2	$199.95
ER25P-SET-I-16PC-T	ER25	16	5/32 - 5/8 by 32nds	1/8 - 5/8	$299.95
ER32P-SET-I-18PC-T	ER32	18	7/32 - 3/4 by 32nds	3/16 - 3/4	$339.95
ER40P-SET-I-13PC-T	ER40	13	1/8 - 1.0 by 16ths	1/8 - 1.0	$299.95

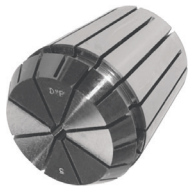
Note! ER40 collet set does not include 13/16 & 15/16 size collets

METRIC COLLET SETS	Collet Size	# of Collets	Collets Included	For Shank Size	Price
ER16P-SET-M-10PC-T	ER16	10	1 - 10 by 1mm	.5 - 10 mm	$169.95
ER20P-SET-M-12PC-T	ER20	12	2 - 13 by 1mm	1.0 - 13mm	$199.95
ER25P-SET-M-15PC-T	ER25	15	2 - 16 by 1mm	1.0 - 16mm	$279.95
ER32P-SET-M-18PC-T	ER32	18	3 - 20 by 1mm	2.0 - 20mm	$339.95
ER40P-SET-M-23PC-T	ER40	23	4 - 26 by 1mm	3.0 - 26mm	$499.95

Price shown is special promotional pricing per set.

INCH & METRIC "Steel Sealed" ER Coolant Collets





INCH CAPACITY ER COLLETS

	ER16	ER20	ER25	ER32	ER40
Range d[1]	3/32 - 13/32	1/8 - 1/2	7/32 - 5/8	7/32 - 3/4	3/8 - 1.0
D[1]	0.629	0.787	0.984	1.259	1.574
D[2]	0.669	0.826	1.023	1.299	1.614
L	1.082	1.240	1.338	1.574	1.811
CAPACITY	ER16	ER20	ER25	ER32	ER40
3/32	ER16P-SIK-0094				
1/8	ER16P-SIK-0125	ER20P-SIK-0125			
5/32	ER16P-SIK-0156	ER20P-SIK-0156			
3/16	ER16P-SIK-0188	ER20P-SIK-0188			
7/32	ER16P-SIK-0219	ER20P-SIK-0219	ER25P-SIK-0219	ER32P-SIK-0219	
1/4	ER16P-SIK-0250	ER20P-SIK-0250	ER25P-SIK-0250	ER32P-SIK-0250	
9/32	ER16P-SIK-0281	ER20P-SIK-0281	ER25P-SIK-0281	ER32P-SIK-0281	
5/16	ER16P-SIK-0313	ER20P-SIK-0313	ER25P-SIK-0313	ER32P-SIK-0313	
11/32	ER16P-SIK-0344	ER20P-SIK-0344	ER25P-SIK-0344	ER32P-SIK-0344	
3/8	ER16P-SIK-0375	ER20P-SIK-0375	ER25P-SIK-0375	ER32P-SIK-0375	ER40P-SIK-0375
13/32	ER16P-SIK-0406	ER20P-SIK-0406	ER25P-SIK-0406	ER32P-SIK-0406	ER40P-SIK-0406
7/16		ER20P-SIK-0438	ER25P-SIK-0438	ER32P-SIK-0438	ER40P-SIK-0438
15/32		ER20P-SIK-0469	ER25P-SIK-0469	ER32P-SIK-0469	ER40P-SIK-0469
1/2		ER20P-SIK-0500	ER25P-SIK-0500	ER32P-SIK-0500	ER40P-SIK-0500
17/32			ER25P-SIK-0531	ER32P-SIK-0531	ER40P-SIK-0531
9/16			ER25P-SIK-0563	ER32P-SIK-0563	ER40P-SIK-0563
19/32			ER25P-SIK-0594	ER32P-SIK-0594	ER40P-SIK-0594
5/8			ER25P-SIK-0625	ER32P-SIK-0625	ER40P-SIK-0625
21/32				ER32P-SIK-0656	ER40P-SIK-0656
11/16				ER32P-SIK-0688	ER40P-SIK-0688
23/32				ER32P-SIK-0719	ER40P-SIK-0719
3/4				ER32P-SIK-0750	ER40P-SIK-0750
27/32					ER40P-SIK-0844
7/8					ER40P-SIK-0875
29/32					ER40P-SIK-0906
31/32					ER40P-SIK-0969
1					ER40P-SIK-1000

METRIC CAPACITY ER COLLETS

	ER16	ER20	ER25	ER32	ER40
Range d[1]	3 - 10mm	3 - 13mm	3 - 16mm	3 - 20mm	6 - 25mm
D[1]	0.629	0.787	0.984	1.259	1.574
D[2]	0.669	0.826	1.023	1.299	1.614
L	1.082	1.240	1.338	1.574	1.811
CAPACITY	ER16	ER20	ER25	ER32	ER40
3mm	ER16P-SIK-030	EP20P-SIK-030	ER25P-SIK-030	ER32P-SIK-030	
4mm	ER16P-SIK-040	EP20P-SIK-040	ER25P-SIK-040	ER32P-SIK-040	
5mm	ER16P-SIK-050	EP20P-SIK-050	ER25P-SIK-050	ER32P-SIK-050	
6mm	ER16P-SIK-060	EP20P-SIK-060	ER25P-SIK-060	ER32P-SIK-060	ER40P-SIK-060
7mm	ER16P-SIK-070	EP20P-SIK-070	ER25P-SIK-070	ER32P-SIK-070	ER40P-SIK-070
8mm	ER16P-SIK-080	EP20P-SIK-080	ER25P-SIK-080	ER32P-SIK-080	ER40P-SIK-080
9mm	ER16P-SIK-090	EP20P-SIK-090	ER25P-SIK-090	ER32P-SIK-090	ER40P-SIK-090
10mm	ER16P-SIK-100	EP20P-SIK-100	ER25P-SIK-100	ER32P-SIK-100	ER40P-SIK-100
11mm		EP20P-SIK-110	ER25P-SIK-110	ER32P-SIK-110	ER40P-SIK-110
12mm		EP20P-SIK-120	ER25P-SIK-120	ER32P-SIK-120	ER40P-SIK-120
13mm		EP20P-SIK-130	ER25P-SIK-130	ER32P-SIK-130	ER40P-SIK-130
14mm			ER25P-SIK-140	ER32P-SIK-140	ER40P-SIK-140
15mm			ER25P-SIK-150	ER32P-SIK-150	ER40P-SIK-150
16mm			ER25P-SIK-160	ER32P-SIK-160	ER40P-SIK-160
17mm				ER32P-SIK-170	ER40P-SIK-170
18mm				ER32P-SIK-180	ER40P-SIK-180
19mm				ER32P-SIK-190	ER40P-SIK-190
20mm				ER32P-SIK-200	ER40P-SIK-200
21mm					
22mm					
23mm					
24mm					
25mm					ER40P-SIK-250
26mm					

Please note special pricing on TyCarb ER collets. Range shown is for the complete offering of each Collet size, example the ER16P covers the Inch range from 1/16 to 13/32 or the metric range of 0.5 to 10.0 mm. Total number of collets in these ranges is 22.

Coolant Pressure up to 2,000 PSI

Special Offer on ER SIK Sealed Coolant Collets (Price per Collet)

Collet Size	Range Inch	Range Metric	Price
ER16P-SIK	3/32 - 13/32	3 - 10mm	37.95
ER20P-SIK	1/8 - 1/2	3 - 13mm	39.95
ER25P-SIK	7/32 - 5/8	3 - 16mm	42.95
ER32P-SIK	7/32 - 3/4	3 - 20mm	43.95
ER40P-SIK	3/8 - 1.0	6 - 25mm	58.95

Price shown is special promotional pricing per collet.

INCH & METRIC "Steel Sealed" ER Collet Sets

INCH COLLET SETS	Collet Size	# of Collets	Collets Included	Price
ER16P-SIK-SET-I-10PC-T	ER16	10	3/32 - 3/8"	$379.95
ER20P-SIK-SET-I-12PC-T	ER20	12	5/32 - 1/2"	$469.95
ER25P-SIK-SET-I-14PC-T	ER25	14	7/32 - 5/8"	$595.95
ER32P-SIK-SET-I-18PC-T	ER32	18	7/32 - 3/4"	$785.95
ER40P-SIK-SET-I-15PC-T	ER40	15	3/8 - 1.0"	$886.95

Note! ER40 collet set does not include 13/16 & 15/16 size collets.

METRIC COLLET SETS	Collet Size	# of Collets	Collets Included	Price
ER16P-SIK-SET-M-8PC-T	ER16	8	3 - 10 by 1mm	$299.95
ER20P-SIK-SET-M-11PC-T	ER20	11	3 - 13 by 1mm	$429.95
ER25P-SIK-SET-M-14PC-T	ER25	14	3 - 16 by 1mm	$595.95
ER32P-SIK-SET-M-18PC-T	ER32	18	3 - 20 by 1mm	$785.95
ER40P-SIK-SET-M-16PC-T	ER40	16	6 - 25 by 1mm	$939.95

Price shown is special promotional pricing per collet.

PCD EDGE

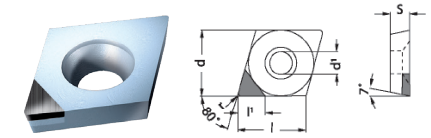
FLAT TOP PCD INSERTS

$24.95

PCD EDGE Grade PDK

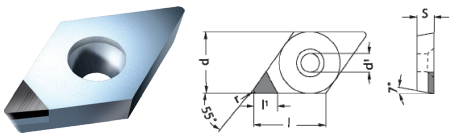
PCD inserts are widely used to machine practically all non-ferrous materials, ranging from soft aluminum through cemented tungsten carbide. They are also used to machine plastics, including plastics filled or reinforced with difficult to machine materials. Grade PDK excels in machining of medium to high Silicon Aluminum. The polycrystalline diamond layer resists wear far better than many ordinary tool materials, and resists chipping and cracking. Because of their high resistance to shock & vibration PCD EDGE inserts are being successfully applied in tough machining applications, such as work-pieces with interrupted cuts and can also handle parts with hard inclusions which cause excessive edge wear on ordinary tools. PCD EDGE inserts tend to maintain their sharp edges, even when removing material at rates far above those possible with carbide inserts. This means that close dimensional and surface finish tolerances can be held through long production runs.

CCGW



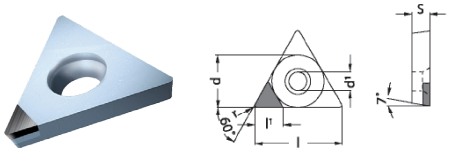
Designation	d	l¹	d¹	s	l	r	Price
CCGW-21.50.5-PDK	.250	.122	.110	.094	.254	.008	$24.95
CCGW-21.51-PDK		.118				.016	
CCGW-21.52-PDK		.110				.031	
CCGW-32.50.5-PDK	.375	.140	.173	.156	.382	.008	$24.95
CCGW-32.51-PDK		.138				.016	
CCGW-32.52-PDK		.130				.031	

DCGW



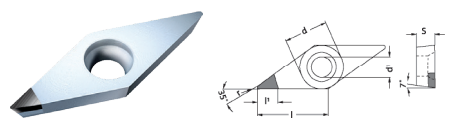
Designation	d	l¹	d¹	s	l	r	Price
DCGW-21.50.5-PDK	.250	.130	.110	.094	.305	.008	$24.95
DCGW-21.51-PDK		.122				.016	
DCGW-21.52-PDK		.106				.031	
DCGW-32.50.5-PDK	.375	.173	.173	.156	.457	.008	$24.95
DCGW-32.51-PDK		.165				.016	
DCGW-32.52-PDK		.150				.031	

TCGW



Designation	d	l¹	d¹	s	l	r	Price
TCGW-1.81.50.5-PDK	.219	.110	.098	.094	.378	.008	$24.95
TCGW-1.81.51-PDK		.102				.016	
TCGW-1.81.52-PDK		.075				.031	
TCGW-21.50.5-PDK	.250	.130	.110	.094	.433	.008	$24.95
TCGW-21.51-PDK		.122				.016	
TCGW-21.52-PDK		.110				.031	
TCGW-32.50.5-PDK	.375	.181	.173	.156	.650	.008	$24.95
TCGW-32.51-PDK		.173				.016	
TCGW-32.52-PDK		.161				.031	

VCGW



Designation	d	l¹	d¹	s	l	r	Price
VCGW-220.5-PDK	.250	.138	.114	.125	.437	.008	$24.95
VCGW-221-PDK		.122				.016	
VCGW-222-PDK		.114				.031	
VCGW-330.5-PDK	.375	.204	.173	.187	.654	.008	$24.95
VCGW-331-PDK		.185				.016	
VCGW-332-PDK		.154				.031	

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