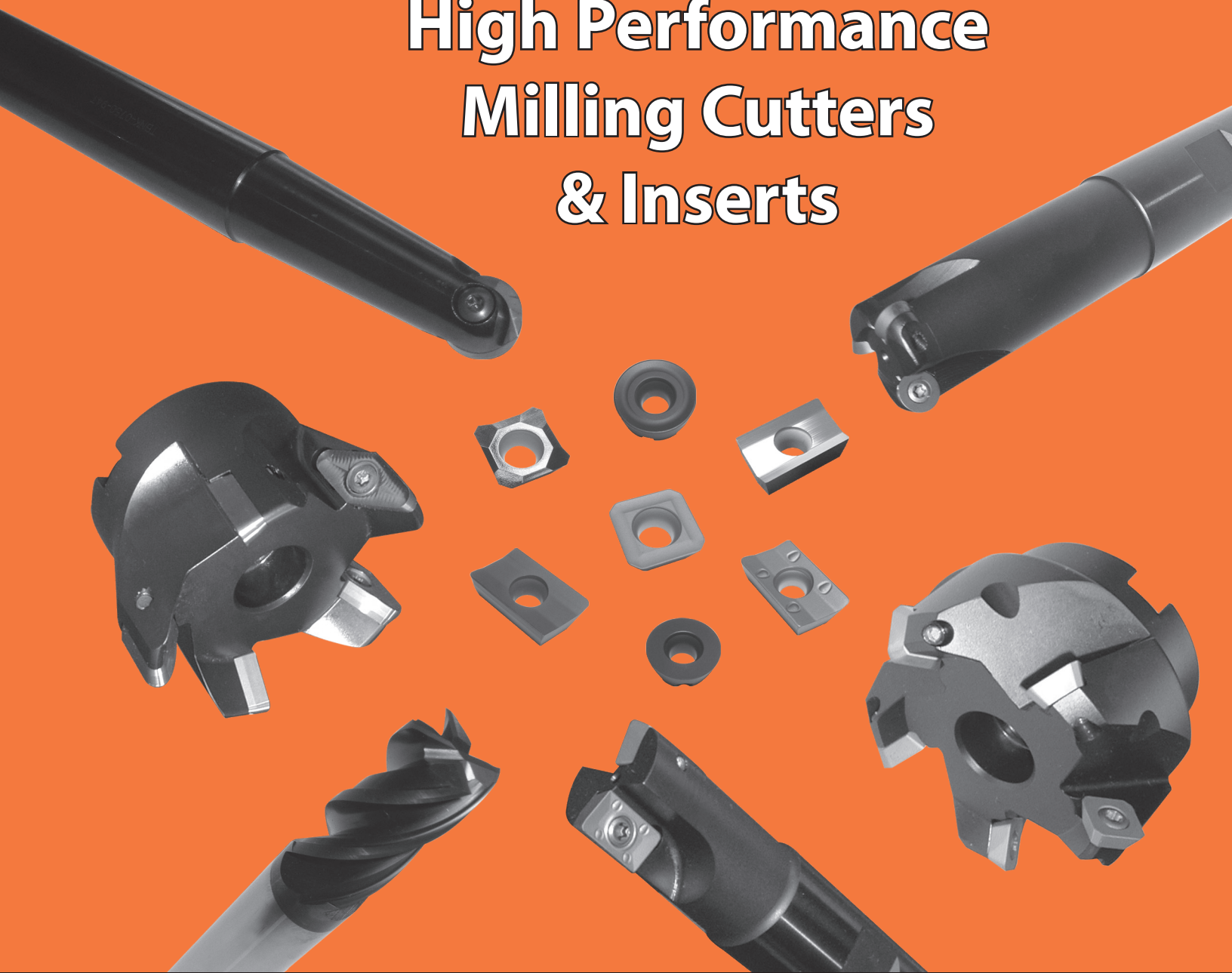




Rani Tool Corp.

High Performance Milling Cutters & Inserts



Rani Tool Corp.

205 Kelsey St., Unit #103, Newington, CT 06111

Tel: (888) 554-RANI or (860) 665-7771 • Fax: (860) 665-7319

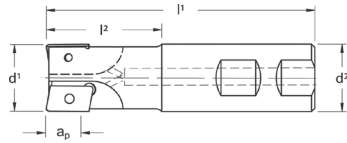
E-mail: sales@ranitool.com • www.ranitool.com

Available From:

Specifications are subject to change without notice. No responsibility for errors and/or printing errors will be accepted.

A90 Square Shoulder Milling Cutters

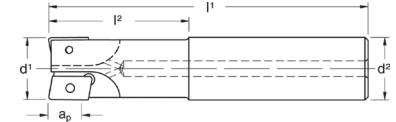
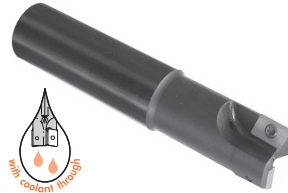
WITH OVER 100 DIFFERENT STANDARD CONFIGURATIONS ... AND STILL GROWING!



Cylindrical Shank End Mills are specifically designed for:

- Milling Chucks
- Hydraulic Chucks
- Shrink-fit Systems

i Inserts for A90 Cutters, please refer to page 7

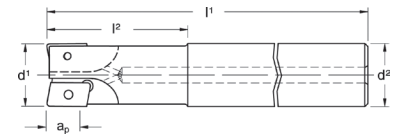


Standard Length End Mills with Coolant

Designation	d ¹	d ²	l ¹	l ²	Max. ap	Flutes
<i>Insert:</i> ADHT-0903						
AD90-0500C	.500	.625	3.00	1.09	.33	1
AD90-0625C	.625	.625	3.00	1.09	.33	2
AD90-0750C	.750	.750	3.50	1.47	.33	2
AD90-0750FC	.750	.750	3.50	1.47	.33	3
AD90-0875C	.875	.750	3.50	1.47	.33	3
AD90-1000C	1.000	.750	3.50	1.47	.33	3
AD90-1000-4C	1.000	1.000	4.00	1.72	.33	3
AD90-1000FC	1.000	1.000	4.00	1.72	.33	4
AD90-1250C	1.250	1.250	4.00	1.72	.33	5
AD90-1500C	1.500	1.250	4.40	2.12	.33	5
<i>Spare Parts:</i> Insert Screw:TX08S / Wrench:T8F						
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604						
AP90-0750C	.750	.750	3.50	1.47	.55	1
AP90-1000C	1.000	.750	3.70	1.67	.55	2
AP90-1000-4C	1.000	1.000	4.00	1.72	.55	2
AP90-1250C	1.250	1.250	4.00	1.72	.55	3
AP90-1500C	1.500	1.250	4.40	2.12	.55	3
AP90-1500FC	1.500	1.250	4.40	2.12	.55	4
AP90-2000EMC	2.000	1.250	4.00	1.72	.55	4
<i>Spare Parts:</i> Insert Screw:TX15S / Wrench:T15F						

Standard Length Cylindrical Shank End Mills with Coolant

Designation	d ¹	d ²	l ¹	l ²	Max. ap	Flutes
<i>Insert:</i> ADHT-0903						
AD90CY-0625C	.625	.625	3.00	1.09	.33	2
AD90CY-0750C	.750	.750	3.50	1.46	.33	2
AD90CY-1000-4C	1.000	1.000	4.00	1.71	.33	3
<i>Spare Parts:</i> Insert Screw:TX08S / Wrench:T8F						
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604						
AP90CY-1000-4C	1.000	1.000	4.00	1.71	.55	2
AP90CY-1250-5C	1.250	1.250	4.00	1.71	.55	3
AP90CY-1500-5C	1.500	1.250	4.50	2.00	.55	4
<i>Spare Parts:</i> Insert Screw:TX15S / Wrench:T15F						

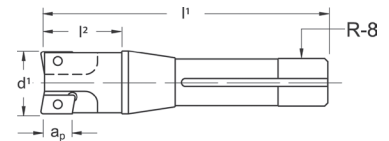


Extended Length Cylindrical Shank End Mills with Coolant

Designation	d ¹	d ²	l ¹	l ²	Max. ap	Flutes
<i>Insert:</i> ADHT-0903						
AD90CY-0625-XXLC	.625	.625	6.00	2.00	.33	2
AD90CY-0750-XXLC	.750	.750	8.00	2.00	.33	2
AD90CY-1000-4XXLC	1.000	1.000	8.00	2.25	.33	3
<i>Spare Parts:</i> Insert Screw:TX08S / Wrench:T8F						
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604						
AP90CY-1000-4XXLC	1.000	1.000	8.00	2.25	.55	2
AP90CY-1250-5XXLC	1.250	1.250	10.00	3.00	.55	3
AP90CY-1500-5XXLC	1.500	1.250	10.00	7.50	.55	3
<i>Spare Parts:</i> Insert Screw:TX15S / Wrench:T15F						

Extended Length End Mills with Coolant

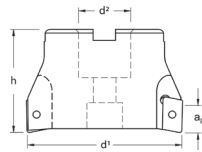
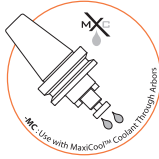
Designation	d ¹	d ²	l ¹	l ²	Max. ap	Flutes
<i>Insert:</i> ADHT-0903						
AD90-0500-XLC	.500	.625	3.91	2.00	.33	1
AD90-0625-XLC	.625	.750	4.53	2.50	.33	2
AD90-0750-LC	.750	.750	3.78	1.75	.33	2
AD90-0750-XLC	.750	1.000	4.81	2.53	.33	2
AD90-0750-XXLC	.750	1.000	6.31	4.03	.33	2
AD90-1000-4XXLC	1.000	1.000	8.00	2.25	.33	3
<i>Spare Parts:</i> Insert Screw:TX08S / Wrench:T8F						
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604						
AP90-1000-4LC	1.000	1.000	5.28	3.00	.55	2
AP90-1000-4XXLC	1.000	1.000	8.00	2.25	.55	2
AP90-1000-5LC	1.000	1.250	5.00	2.72	.55	2
AP90-1000-5XLC	1.000	1.250	6.40	4.12	.55	2
AP90-1000-5XXLC	1.000	1.250	8.40	6.12	.55	2
AP90-1250-LC	1.250	1.250	5.00	2.72	.55	3
AP90-1250-XLC	1.250	1.250	6.40	4.12	.55	3
AP90-1250-5XXLC	1.250	1.250	10.00	3.00	.55	3
AP90-1500-LC	1.500	1.250	6.00	3.72	.55	3
AP90-1500-XLC	1.500	2.000	7.25	4.00	.55	3
AP90-1500-5XXLC	1.500	1.250	10.00	7.72	.55	3
AP90-1500-XXLC	1.500	2.000	9.25	6.00	.55	3
<i>Spare Parts:</i> Insert Screw:TX15S / Wrench:T15F						



R8 End Mills

Designation	d ¹	d ²	l ¹	l ²	Max. ap	Flutes
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604						
AP90-1250-R8	1.250	R-8	5.63	1.50	.55	3
AP90-1500-R8	1.500	R-8	5.63	1.50	.55	3
AP90-2000-R8	2.000	R-8	5.63	1.50	.55	3
<i>Spare Parts:</i> Insert Screw:TX15S / Wrench:T15F						

A90 Square Shoulder Milling Cutters

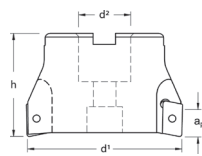
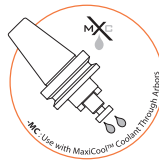
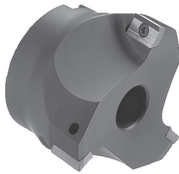


Standard Series Face Mills

Designation	d ¹	d ²	h	Max. ap	Flutes	lbs.
<i>Insert:</i> ADHT-0903						
AD90-1500SM-MC	1.500	.750	1.75	.33	5	.55
AD90-2000-MC	2.000	.750	1.50	.33	7	.70
<i>Spare Parts:</i> Insert Screw: TX08S / Wrench: T8F						
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604						
AP90-1500SM-MC	1.500	.750	1.75	.55	4	.45
AP90-2000-MC	2.000	.750	1.50	.55	4	.60
AP90-2000F-MC	2.000	.750	1.50	.55	5	.60
AP90-2500-MC	2.500	1.000	1.75	.55	5	1.30
AP90-3000-MC	3.000	1.000	2.00	.55	6	2.25
AP90-4000-MC	4.000	1.250	2.00	.55	7	3.20
AP90-4000F	4.000	1.500	2.00	.55	8	3.35
AP90-5000	5.000	1.500	2.00	.55	8	5.15
AP90-6000	6.000	1.500	2.00	.55	9	7.65
AP90-6000F	6.000	2.000	2.50	.55	10	7.95
AP90-8000*	8.000	2.500	2.50	.55	12	14.00
* Cutter supplied with 4 holes on a 4" bolt circle						
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F						

Featuring:

- Specifically designed for aluminum machining
- Allows for full depths of cut and wider widths of cut
- Optimized speeds and feeds while lowering horsepower consumption



Coarse Pitch Face Mills

Designation	d ¹	d ²	h	Max. ap	Flutes	lbs.
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604						
AP90-2000AL-3-MC	2.000	.750	1.50	.55	3	.60
AP90-2500AL-3-MC	2.500	1.000	2.00	.55	3	1.15
AP90-3000AL-3-MC	3.000	1.000	2.00	.55	3	1.90
AP90-4000AL-4-MC	4.000	1.250	2.00	.55	4	2.70
AP90-4000AL-4C	4.000	1.500	2.00	.55	4	2.85
AP90-5000AL-5	5.000	1.500	2.00	.55	5	4.80
AP90-6000AL-6	6.000	2.000	2.50	.55	6	8.45
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F						

HA90 Helical Square Shoulder Milling Cutters

Our HA90 helical cutters are ideal for rough-milling large grooves and shoulders. Large overall cutting edge lengths, and the efficient use of each flute, guarantees a wide range of applications and high performance.

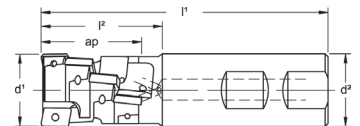
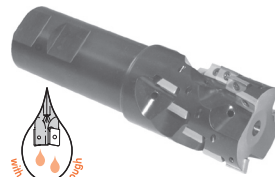
Applications:

- For slot-milling, profiling, shoulder milling and trimming with large axial depths of cut
- For pre-milling and rough-milling steel castings, as well as cast iron materials and titanium alloys

Advantages:

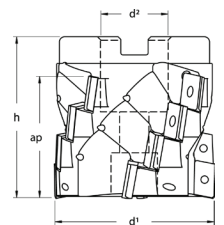
- Robust tools with large flutes for optimum chip removal
- Indexable inserts with reinforced cutting edges for high production reliability
- High performance hardmetal grades give long service life
- Efficient utilization of each flute makes for high feed rates
- Smooth running action and lower cutting forces

Inserts for HA90 Cutters, please refer to page 7



Helical End Mills with Coolant for Profiling & Milling

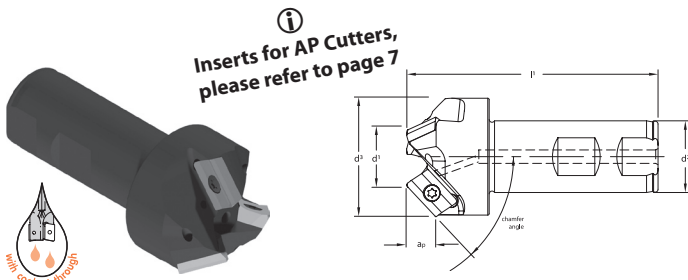
Designation	d ¹	d ²	l ¹	l ²	Max. ap	Flutes	No. of inserts
<i>Insert:</i> ADHT-0903							
HAD90-1000	1.000	1.000	4.00	1.72	1.30	2	8
HAD90-1250	1.250	1.250	4.49	2.21	1.30	3	12
HAD90-1500	1.500	1.250	4.84	2.56	1.61	3	15
<i>Spare Parts:</i> Insert Screw: TX08S / Wrench: T8F							
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604							
HAP90-1250	1.250	1.250	4.63	2.35	1.15	2	4
HAP90-1250L	1.250	1.250	4.84	2.59	1.70	2	6
HAP90-1500	1.500	1.250	5.01	2.73	1.17	3	6
HAP90-1500L	1.500	1.250	5.01	2.73	1.70	3	9
HAP90-1750	1.750	1.250	5.01	2.73	1.17	3	6
HAP90-2000EM	2.000	1.250	5.25	2.97	2.25	3	12
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F							



Helical Shell Mills with Coolant for Profiling & Milling

Designation	d ¹	d ²	h	Max. ap	Flutes	No. of inserts
<i>Insert:</i> APHT-1604 / APHT-1604 -AL / APNT-1604 / APNX-1604						
HAP90-2000-MC	2.000	.750	2.00	1.17	3	6
HAP90-2000L-MC	2.000	.750	2.50	1.65	3	9
HAP90-2500-MC	2.500	1.000	2.50	1.65	3	9
HAP90-2500L-MC	2.500	1.000	3.00	2.13	3	12
HAP90-3000-MC	3.000	1.250	3.00	2.25	4	16
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F						

AP Chamfer Mills



30° Chamfer Mills with Coolant

Designation	d ¹	d ²	d ³	l ¹	Max. ap	Flutes
Insert:	APHT-1604 ___ / APHT-1604 ___-AL / APNT-1604 ___ / APNX-1604 ___					
AP30-0750-CH	.750	.750	1.275	3.00	.50	2
AP30-1000-CH	1.000	1.000	1.525	3.50	.52	3
AP30-1250-CH	1.250	1.250	1.775	3.50	.52	3
Spare Parts:	Insert Screw: TX15S / Wrench: T15F					

41° Chamfer Mills with Coolant

Designation	d ¹	d ²	d ³	l ¹	Max. ap	Flutes
Insert:	APHT-1604 ___ / APHT-1604 ___-AL / APNT-1604 ___ / APNX-1604 ___					
AP41-0688-CH	.688	.750	1.375	3.00	.68	2
AP41-0938-CH	.938	1.000	1.625	3.50	.68	3
AP41-1188-CH	1.188	1.250	1.875	3.50	.68	3
Spare Parts:	Insert Screw: TX15S / Wrench: T15F					

45° Chamfer Mills with Coolant

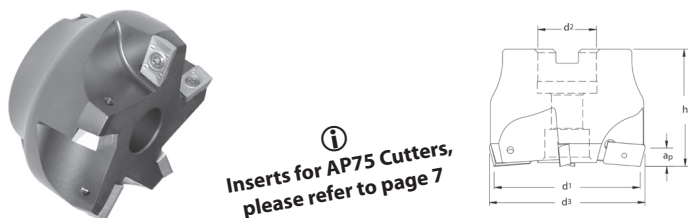
Designation	d ¹	d ²	d ³	l ¹	Max. ap	Flutes
Insert:	APHT-1604 ___ / APHT-1604 ___-AL / APNT-1604 ___ / APNX-1604 ___					
AP45-0688-CH	.688	.750	1.425	3.00	.73	2
AP45-0938-CH	.938	1.000	1.675	3.50	.73	3
AP45-1188-CH	1.188	1.250	1.925	3.50	.73	3
Spare Parts:	Insert Screw: TX15S / Wrench: T15F					

60° Chamfer Mills with Coolant

Designation	d ¹	d ²	d ³	l ¹	Max. ap	Flutes
Insert:	APHT-1604 ___ / APHT-1604 ___-AL / APNT-1604 ___ / APNX-1604 ___					
AP60-0500-CH	.500	.750	1.355	3.00	.85	2
AP60-0750-CH	.750	1.000	1.605	3.50	.85	3
AP60-1000-CH	1.000	1.250	1.855	3.50	.85	3
Spare Parts:	Insert Screw: TX15S / Wrench: T15F					

AP75 Face Mills

AP75 face mills are specifically designed to use the popular APHT / APNT insert and utilizes the opposing unused corners. The 100° corners offer strong cutting edges and allow for a maximum depth of cut. High machining rates can be achieved in semi-finishing and rough-milling operations. There are no additional insert costs for those who currently use APHT / APNT inserts with AP90 style cutters.

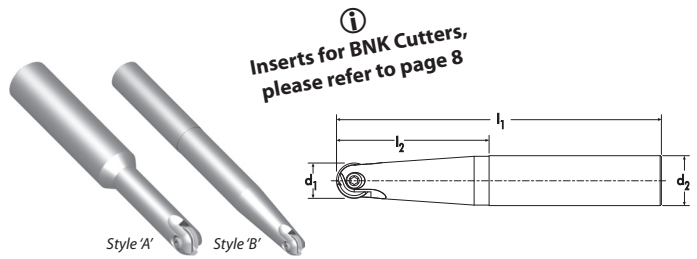


75° Face Mills

Designation	d ¹	d ²	d ³	h	Max. ap	Flutes	lbs.
Insert:	APHT-1604 ___ / APNT-1604 ___ / APNX-1604 ___						
AP75-2500	2.500	1.000	2.60	2.00	.275	4	1.85
AP75-3000	3.000	1.000	3.10	2.00	.275	5	2.60
AP75-4000	4.000	1.250	4.10	2.00	.275	6	3.90
Spare Parts:	Insert Screw: TX15S / Wrench: T15F						

BNK Ball Nose End Mills

- Positive cutting edge geometry for superior surface finishes, especially on inclined surfaces
- Inserts are precision ground to ensure precise milling
- Two cutter styles offer extended reach or extra rigid taper, and are available in diameters from 5/16" to 1-1/4"
- Screw-on mills, ranging in diameters from 3/8" to 1" allows for adaptation to modular screw-on systems
- Tools are designed to perform in conventional copy milling applications
- Leading edge technology produces superior finishes
- Eliminates solid carbide regrinds leading to cost effective machining
- High speed milling for reduced cycle times

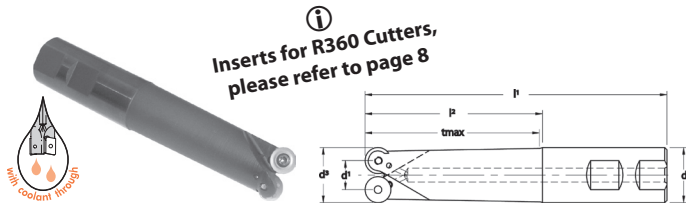


Ball Nose End Mills

Designation	d ¹	d ²	l ¹	l ²	Style
Insert:	XCEG-2.51				
BNK-0312-55T	.312	.500	5.50	1.90	B
Spare Parts:	Insert Screw: KBN-08 / Wrench: T8F				
Insert:	XCCG-31.5 / XCE_-31.5				
BNK-0375-35	.375	.500	3.56	1.34	A
BNK-0375-58T	.375	.500	5.87	1.37	B
Spare Parts:	Insert Screw: KBN10 / Wrench: T10F				
Insert:	XCCG-41.5-HG / XCE_-41.5				
BNK-0500-35	.500	.500	3.56	1.25	A
BNK-0500-51	.500	.500	5.12	1.25	A
BNK-0500-58	.500	.500	5.87	1.81	A
BNK-0500-62T	.500	.625	6.28	2.31	B
Spare Parts:	Insert Screw: KBN15 / Wrench: T15F				
Insert:	XCCG-52-HG / XCE_-52				
BNK-0625-55	.625	.625	5.50	1.37	A
BNK-0625-62	.625	.625	6.28	2.00	A
BNK-0625-68T	.625	.750	6.87	2.56	B
Spare Parts:	Insert Screw: KBN15L / Wrench: T15F				
Insert:	XCCG-62-HG / XCE_-62				
BNK-0750-45	.750	.750	4.50	1.75	A
BNK-0750-62	.750	.750	6.28	1.75	A
BNK-0750-68	.750	.750	6.87	2.37	A
BNK-0750-75T	.750	1.000	7.50	3.00	B
BNK-0750-82	.750	0.750	8.25	2.37	A
BNK-0750-94T	.750	1.000	9.43	3.00	B
Spare Parts:	Insert Screw: KBN20 / Wrench: T20F				
Insert:	XCCG-82.5-HG / XCE_-82.5				
BNK-1000-62	1.000	1.000	6.28	1.75	A
BNK-1000-75	1.000	1.000	7.50	2.75	A
BNK-1000-82T	1.000	1.250	8.25	3.87	B
BNK-1000-90	1.000	1.000	9.06	3.12	A
BNK-1000-94T	1.000	1.250	9.43	3.87	B
Spare Parts:	Insert Screw: KBN25 / Wrench: T25F				
Insert:	XCCG-103-HG / XCE_-103				
BNK-1250-68	1.250	1.250	6.87	2.18	A
BNK-1250-82	1.250	1.250	8.25	3.12	A
BNK-1250-94T	1.250	1.500	9.43	4.75	B
Spare Parts:	Insert Screw: KBN25L / Wrench: T25F				

R360 Copy Milling Cutters

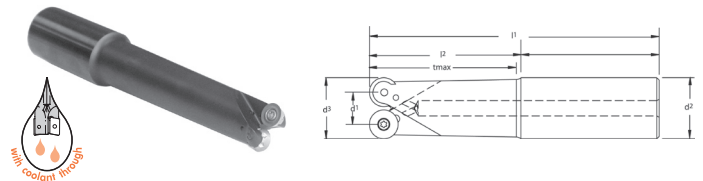
R360 milling inserts are designed to withstand the tremendous forces applied in most contour milling applications. Tough carbide grades and strong cutting edges allow these inserts to be used for ramping and plunging operations as well as helical milling of pockets and roughing in contours. Inserts 12mm and up have an unique locking system which prevents insert movement while engaged in high feed applications.



End Mills using 15° Positive Inserts for Profiling & Milling

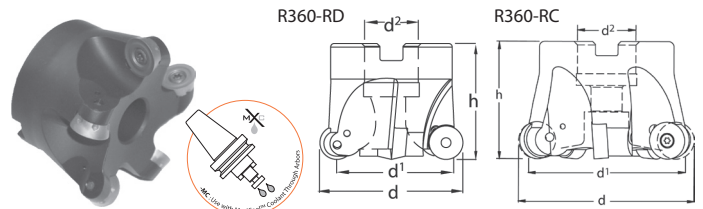
Designation	d ³	d ¹	d ²	l ¹	l ²	tmax	ramp angle	flutes
<i>Insert:</i> RDMW-0802MOT / RDGT-0802MO-AL								
R360-0500-36	.500	.185	.625	3.65	1.74	1.64	10°	1
R360-0500-44	.500	.185	.625	4.40	2.49	2.39	10°	1
R360-0500-51	.500	.185	.625	5.15	3.24	3.14	10°	1
R360-0625-36A	.625	.310	.625	3.65	1.74	1.74	10°	1
R360-0625-36	.625	.310	.625	3.65	1.74	1.74	60°	2
R360-0625-44A	.625	.310	.625	4.40	2.49	2.49	10°	1
R360-0625-44	.625	.310	.625	4.40	2.49	2.49	60°	2
R360-0625-52A	.625	.310	.750	5.28	3.25	3.14	10°	1
R360-0625-52	.625	.310	.750	5.28	3.25	3.14	60°	2
R360-0625-60	.625	.310	.750	6.03	4.00	3.89	60°	2
R360-0625-70	.625	.310	1.000	7.03	4.75	1.65	60°	2
R360-0750-37X	.750	.435	.750	3.78	1.75	1.74	22°	2
R360-0750-45X	.750	.435	.750	4.53	2.50	2.40	22°	2
R360-0750-55X	.750	.435	1.000	5.53	3.25	3.06	22°	2
R360-0750-70X	.750	.435	1.000	7.03	4.75	4.56	22°	2
R360-1000R08-47	1.000	.685	1.000	4.78	2.50	2.50	6°	3
R360-1000R08-55	1.000	.685	1.000	5.53	3.25	3.25	6°	3
R360-1000R08-67	1.000	.685	1.000	6.78	4.50	4.50	6°	3
R360-1250R08-47	1.250	.935	1.250	4.78	2.50	2.50	4°	5
R360-1250R08-62	1.250	.935	1.250	6.28	4.00	4.00	4°	5
<i>Spare Parts:</i> Insert Screw: TX8S / Wrench: T8F								
<i>Insert:</i> RDMW-1003MOT / RDGT-1003MO-AL								
R360-0750-37	.750	.356	.750	3.78	1.75	1.74	40°	2
R360-0750-45	.750	.356	.750	4.53	2.50	2.49	40°	2
R360-0750-55	.750	.356	1.000	5.53	3.25	3.06	40°	2
R360-0750-62	.750	.356	1.000	6.28	4.00	3.81	40°	2
R360-0750-70	.750	.356	1.000	7.03	4.75	4.56	40°	2
R360-1000-52X	1.000	.606	1.000	5.28	3.00	2.94	17°	2
R360-1000-67X	1.000	.606	1.250	6.78	4.50	4.44	17°	2
R360-1000-74X	1.000	.606	1.250	7.46	5.19	5.12	17°	2
R360-1000R10-40	1.000	.606	1.000	4.00	1.71	1.67	10°	3
R360-1000R10-52	1.000	.606	1.000	5.28	3.00	2.95	10°	3
R360-1000R10-67	1.000	.606	1.000	6.78	4.50	4.45	10°	3
R360-1250R10-40	1.250	.856	1.250	4.00	1.71	1.67	6°	4
R360-1250R10-52	1.250	.856	1.250	5.28	3.00	2.95	6°	4
R360-1250R10-67	1.250	.856	1.250	6.78	4.50	4.45	6°	4
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F								
<i>Insert:</i> RDMW-1204MOT-X								
R360-1000-47	1.000	.528	1.000	4.78	2.50	2.49	50°	2
R360-1000-55	1.000	.528	1.000	5.53	3.25	3.19	50°	2
R360-1000-64	1.000	.528	1.250	6.40	4.12	3.93	50°	2
R360-1000-71	1.000	.528	1.250	7.15	4.87	4.68	50°	2
R360-1250-54	1.250	.778	1.250	5.40	3.12	3.11	23°	2
R360-1250-61	1.250	.778	1.250	6.15	3.87	3.86	23°	2
R360-1250-72	1.250	.778	1.500	7.25	4.56	4.34	23°	2
R360-1250-80	1.250	.778	1.500	8.00	5.31	5.09	23°	2
R360-1500-56X	1.500	1.028	1.250	5.65	3.37	3.25	27°	3
R360-1500-71X	1.500	1.028	1.250	7.15	4.87	4.75	27°	3
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F								

R360 Copy Milling Cutters



Cylindrical Shank End Mills using 15° Positive Inserts for Profiling & Milling

Designation	d ³	d ¹	d ²	l ¹	l ²	tmax	ramp angle	flutes
<i>Insert:</i> RDMW-0802MOT / RDGT-0802MO-AL								
R360CY-0500-36	.500	.185	.625	3.65	1.74	1.64	10°	1
R360CY-0500-51	.500	.185	.625	5.15	3.24	3.14	10°	1
R360CY-0625-36	.625	.310	.625	3.65	1.74	1.74	60°	2
R360CY-0625-44	.625	.310	.625	4.40	2.49	2.49	60°	2
R360CY-0625-60	.625	.310	.750	6.03	4.00	3.89	60°	2
R360CY-0750-37X	.750	.435	.750	3.78	1.75	1.74	22°	2
R360CY-0750-45X	.750	.435	.750	4.53	2.50	2.49	22°	2
R360CY-0750-62X	.750	.435	.750	6.28	4.25	4.24	22°	2
<i>Spare Parts:</i> Insert Screw: TX8S / Wrench: T8F								
<i>Insert:</i> RDMW-1204MOT-X								
R360CY-1000-47	1.000	.528	1.000	4.78	2.50	2.49	50°	2
R360CY-1000-71	1.000	.528	1.250	7.15	4.87	4.68	50°	2
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F								



Face Mills using 15° Positive Inserts for Copying & Face Milling

Designation	d	d ¹	d ²	h	ramp angle	flutes	lbs
<i>Insert:</i> RDMW-0802MOT / RDGT-0802MO-AL							
R360-2RD08-MC	2.000	1.685	.750	1.63	1.8°	7	.85
<i>Spare Parts:</i> Insert Screw: TX8S / Wrench: T8F							
<i>Insert:</i> RDMW-1003MOT / RDGT-1003MO-AL							
R360-2R10-MC	2.000	1.606	.750	1.63	4°	5	.65
R360-2.5R10-MC	2.500	2.106	1.000	1.74	3°	6	1.20
R360-3R10-MC	3.000	2.606	1.000	2.00	2.5°	7	2.00
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F							
<i>Insert:</i> RDMW-1204MOT-X							
R360-2RD12-MC	2.000	1.530	.750	1.63	10°	4	.65
R360-2RD12F-MC	2.000	1.530	.750	1.63	10°	5	.65
R360-2.5RD12F-MC	2.500	2.028	1.000	1.75	8°	6	1.20
R360-3RD12F-MC	3.000	2.528	1.000	2.00	5°	7	2.00
<i>Spare Parts:</i> Insert Screw: TX15S / Wrench: T15F							

Face Mills using 7° Positive Inserts for Milling, Duplicating, & Drilling

Designation	d	d ¹	d ²	h	ramp angle	flutes	lbs
<i>Insert:</i> RCMT-1606MOT-X							
R360-2RC16-MC	2.000	1.370	.750	1.63	12°	3	.60
R360-2.5RC16-MC	2.500	1.870	1.000	1.75	8°	4	1.10
R360-3RC16-MC	3.000	2.370	1.000	2.00	11°	5	1.70
R360-3RC16X-MC	3.000	2.370	1.250	2.00	11°	5	2.60
R360-4RC16-MC	4.000	3.370	1.250	2.00	7°	7	2.60
R360-4RC16X	4.000	3.370	1.500	2.00	7°	7	2.65
R360-6RC16	6.000	5.370	1.500	2.00	7°	9	6.60
R360-6RC16X	6.000	5.370	2.000	2.50	7°	9	7.15
R360-8RC16*	8.000	7.370	2.000	2.50	8°	11	14.25
<i>* Cutter supplied with 4 holes on a 4" bolt circle</i>							
<i>Spare Parts:</i> Insert Screw: TX20S / Wrench: T20F							

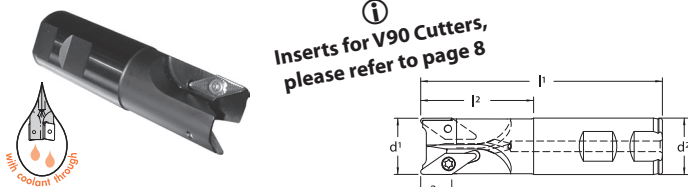
V90 Milling Cutters

Applications:

- High speed milling of aluminum alloys, copper alloys, plastic materials
- Can be used for edge and slot milling, as well as axial plunge milling
- Suitable for soft non-ferrous materials

Features / Benefits:

- High positive geometry insert with wave shape topography eliminates edge build-up and provides efficient chip removal
- End mills designed with coolant bore holes directed toward cutting edges
- New insert grade TK10MP is specifically designed for the machining of aluminum and non-ferrous materials that require high cutting speeds

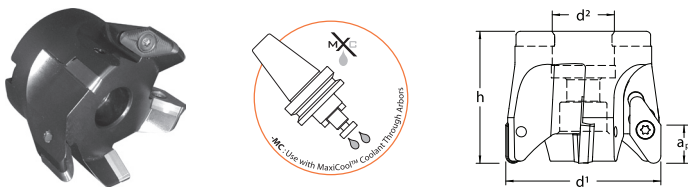


End Mills Optimized Design for Aluminum

Designation	d ¹	d ²	l ¹	l ²	Max. ap	Max Plunge	flutes
<i>Insert: VPGT-221-ALM</i>							
VP90-0750C	.750	.750	3.28	1.25	.40	.200	2
VP90-1000XC	1.000	1.000	4.28	2.00	.40	.200	3
<i>Spare Parts: Insert Screw: LF-89972 / Wrench: T8F</i>							
<i>Insert: VPGT-333-ALM</i>							
VP90-1000C	1.000	1.000	4.28	2.00	.53	.250	2
VP90-1250C	1.250	1.250	4.28	2.00	.53	.250	2
VP90-1500C	1.500	1.250	4.28	2.00	.53	.250	3
<i>Spare Parts: Insert Screw: LF-51706 / Wrench: T15F</i>							

Extra Length Cylindrical Shank End Mills Optimized Design for Aluminum

Designation	d ¹	d ²	l ¹	l ²	Max. ap	Max Plunge	flutes
<i>Insert: VPGT-221-ALM</i>							
VP90CY-0750-XLC	.750	.750	6.75	1.25	.40	.200	2
VP90CY-1000X-XLC	1.000	1.000	8.00	2.00	.40	.200	3
<i>Spare Parts: Insert Screw: LF-89972 / Wrench: T8F</i>							
<i>Insert: VPGT-333-ALM</i>							
VP90CY-1000-XLC	1.000	1.000	8.00	2.00	.53	.250	2
VP90CY-1250-XLC	1.250	1.250	8.00	2.00	.53	.250	2
VP90CY-1500-XLC	1.500	1.250	8.00	2.00	.53	.250	3
<i>Spare Parts: Insert Screw: LF-51706 / Wrench: T15F</i>							



Face Mills Optimized Design for Aluminum

Designation	d ¹	d ²	h	Max. ap	Max Plunge	No. of inserts
<i>Insert: VPGT-333-ALM</i>						
VP90-2000-MC	2.00	.750	2.12	.53	.250	4
<i>Spare Parts: Insert Screw: LF-51706 / Wrench: T15F</i>						
<i>Insert: VCGT-43.58-ALM</i>						
VC90-2000-MC	2.00	.750	2.12	.59	.300	3
VC90-2500-MC	2.50	1.000	2.12	.59	.300	4
VC90-2500AL-3-MC	2.50	1.000	2.12	.59	.300	3
VC90-3000-MC	3.00	1.000	2.12	.59	.300	5
VC90-3000AL-3-MC	3.00	1.000	2.12	.59	.300	3
VC90-4000	4.00	1.500	2.12	.59	.300	6
VC90-4000AL-4	4.00	1.500	2.12	.59	.300	4
<i>Spare Parts: Insert Screw: C-1250 / Wrench: T20F</i>						

S45F Super Positive Milling Cutters

Super milling cutter with 45° entering angle that decreases cutting forces and allows a high feed on limited capacity machines. Inserts are mounted using Torx® locking screws for uninterrupted chip flow.

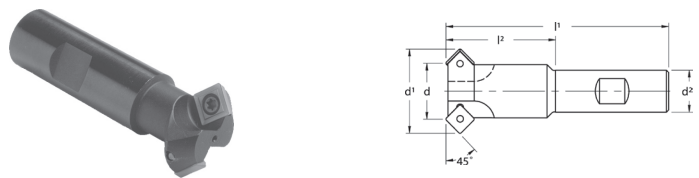
S45F cutters use thicker inserts, allowing for high feed rates. This face milling cutter works well on steels, stainless steels, alloyed steels, cast iron and aluminum alloys.



Face Mills

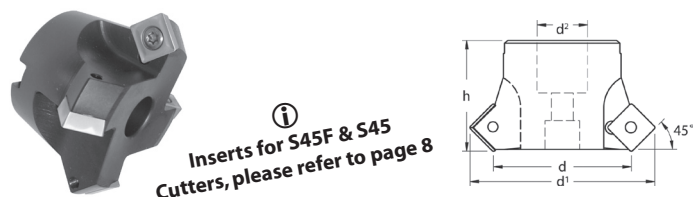
Designation	d ¹	d ²	h	Flutes	lbs.
<i>Insert: SEHT-43 / SEKT-43 / SEKW-43</i>					
S45F-20SE43X-MC	2.000	.750	1.75	4	1.05
S45F-25SE43X-MC	2.500	1.000	2.00	5	2.00
S45F-30SE43X-MC	3.000	1.000	2.00	6	2.65
S45F-40SE43X-MC	4.000	1.250	2.00	7	3.50
S45F-40SE43X	4.000	1.250	2.00	7	3.50
S45F-50SE43X	5.000	1.500	2.00	8	5.95
S45F-60SE43X	6.000	1.500	2.00	9	8.90
<i>Spare Parts: Insert Screw: TX20S / Wrench: T20F</i>					

S45 45° Chamfer Milling Cutters



End Mills

Designation	d	d ¹	d ²	l ¹	l ²	flutes	chamfer min-max
<i>Insert: SDNT-322 / SDMW-322</i>							
<i>Regular Length</i>							
SD45-0625	.625	1.13	.750	3.00	.97	2	.67-1.11
SD45-0750	.750	1.25	.750	3.30	1.27	2	.79-1.23
SD45-1000	1.000	1.50	.750	4.00	1.97	2	1.04-1.48
SD45-1250	1.250	1.75	1.250	4.00	1.72	3	1.29-1.73
<i>Extended Length</i>							
SD45-0625-L	.625	1.13	.750	8.00	1.49	2	.67-1.11
SD45-1000-L	1.000	1.50	1.000	8.00	1.49	2	1.04-1.48
<i>Spare Parts: Insert Screw: TX15SS / Wrench: T15F</i>							
<i>Insert: SPNT-432 / SPMW-432</i>							
<i>Regular Length</i>							
SP45-1500	1.500	2.18	1.250	4.00	1.72	3	1.54-2.11
<i>Spare Parts: Insert Screw: TX20S / Wrench: T20F</i>							

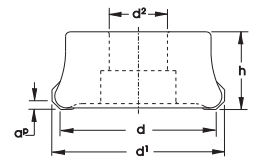


Face Mills

Designation	d	d ¹	d ²	l ¹	flutes	chamfer min-max
<i>Insert: SPNT-432 / SPMW-432</i>						
SP45-2000	2.000	2.68	.750	1.60	4	2.04-2.66
<i>Spare Parts: Insert Screw: TX20S / Wrench: T20F</i>						

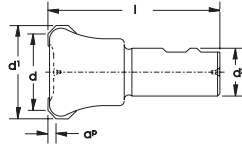
RT45V For High Speed Milling

Smooth cutting positive / negative geometry delivers high feed facing of parts in a full range of machining environments. Suitable for Bridgeport style tool room machines as well as more powerful CNC machining centers. Up to 8 indexes per insert lowers per edge cost. Cutter bodies hold both octagon and round inserts for even more versatility.



Cutters hold both Round & Octagonal Inserts!

Inserts for RT45V Cutters, please refer to page 8



End Mills

Designation	d	d ¹	d ²	l	Max. ap	Flutes
Insert: OECX-432 / RECX-43						
RT45VE-125-075-OE4C	1.250	1.55	.750	4.25	.140 - .250	3
RT45VE-150-075-OE4C	1.500	1.80	.750	4.25	.140 - .250	3
Spare Parts: Insert Screw: CE73382 / Wrench: T15F						
Insert: OECX-534 / RECX-53						
RT45VE-125-100-OE5C	1.250	1.61	1.000	4.50	.173 - .312	2
RT45VE-150-100-OE5C	1.500	1.86	1.000	4.50	.173 - .312	3
Spare Parts: Insert Screw: CE73921 / Wrench: T20F						

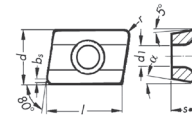
Face Mills

Designation	d	d ¹	d ²	h	Max. ap	Flutes	lbs
Insert: OECX-432 / RECX-43							
RT45VF-200-075-OE4	2.000	2.30	.750	2.00	.140 - .250	4	2.00
RT45VF-250-100-OE4	2.500	2.80	1.000	2.00	.140 - .250	5	2.75
RT45VF-300-100-OE4	3.000	3.30	1.000	2.00	.140 - .250	6	3.50
RT45VF-400-150-OE4	4.000	4.29	1.500	2.00	.140 - .250	6	5.00
Spare Parts: Insert Screw: CE73382 / Wrench: T15F							
Insert: OECX-534 / RECX-53							
RT45VF-200-075-OE5	2.000	2.36	.750	2.00	.173 - .312	3	2.00
RT45VF-250-100-OE5	2.500	2.86	1.000	2.00	.173 - .312	4	2.75
RT45VF-300-100-OE5	3.000	3.36	1.000	2.00	.173 - .312	5	3.50
RT45VF-400-150-OE5	4.000	4.36	1.500	2.00	.173 - .312	6	5.00
RT45VF-500-150-OE5	5.000	5.36	1.500	2.00	.173 - .312	6	7.75
RT45VF-800-200-OE5	8.000	8.38	2.000	2.00	.173 - .312	9	21.00
Spare Parts: Insert Screw: CE73921 / Wrench: T20F							
Insert: OECX-634 / RECX-63							
RT45VF-200-075-OE6	2.000	2.44	.750	2.00	.208 - .375	3	2.00
RT45VF-250-100-OE6	2.500	2.94	1.000	2.00	.208 - .375	4	2.75
RT45VF-300-100-OE6	3.000	3.44	1.000	2.00	.208 - .375	4	3.50
RT45VF-400-150-OE6	4.000	4.44	1.500	2.00	.208 - .375	5	5.00
RT45VF-500-150-OE6	5.000	5.44	1.500	2.00	.208 - .375	6	7.75
RT45VF-600-200-OE6	6.000	6.44	2.000	2.00	.208 - .375	7	9.00
Spare Parts: Insert Screw: CE73921 / Wrench: T20F							

Inserts for Square Shoulder Milling Cutters For A90, HA90, AP, & AP75 Milling Cutters

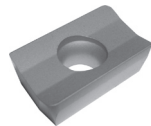
Insert Geometry Descriptions:

Inserts with optimized geometries and large selection of radii from .008" - .250" for steel, cast steel and aluminum alloys. Very effective with high metal removal rates in medium and heavy duty milling.



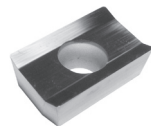
ADHT - APHT

High shear radial angles allow for good performance in all applications and materials. Precision ground.



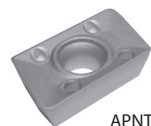
APHT-AL

Sharp rake angles on this precision ground insert make these inserts the first choice for all aluminum machining applications, as well as other nonferrous materials.



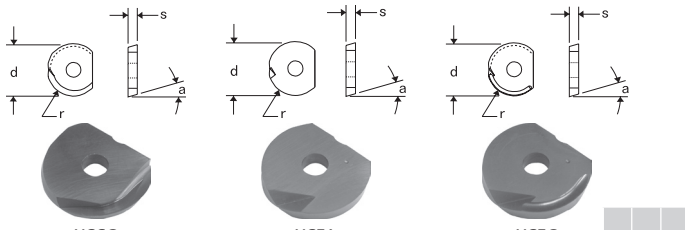
APNT-APNX

This pressed insert has extra chip control molded into the top of the insert allowing for high machining rates in semi-finishing and rough milling operations.




Designation	Dimensions							RP350	RP354	RM352	TP30MC	RK150	ALP-XL	RP35	HMF
	l	s	r	d	d1	bs	a								
ADHT-090304			1/64			--	15°								
ADHT-090308	.381	1/8	1/32	1/4	.110	--	15°								
ADHT-090312			3/64			--	15°								
ADHT-090316			1/16			--	15°								
ADHT-090302-AL			.008			--	15°								
ADHT-090304-AL			1/64			--	15°								
ADHT-090308-AL	.381	1/8	1/32	.264	.110	--	15°								
ADHT-090312-AL			3/64			--	15°								
ADHT-090316-AL			1/16			--	15°								
APHT-160408			1/32			.071	11°								
APHT-160412			3/64			.059	11°								
APHT-160416	.635	3/16	1/16	3/8	.173	.031	11°								
APHT-160432			1/8			--	11°								
APHT-160402-AL			.008			--	11°								
APHT-160404-AL			1/64			--	11°								
APHT-160408-AL			1/32			.067	11°								
APHT-160412-AL			3/64			.055	11°								
APHT-160416-AL	.635	.183	1/16	.386	.173	.035	11°								
APHT-160420-AL			5/64			.016	11°								
APHT-160424-AL			3/32			--	11°								
APHT-160432-AL			1/8			--	11°								
APHT-160464-AL			1/4			--	11°								
APNT-160412	.635	3/16	3/64	3/8	.173	.047	11°								
APNX-160412	.635	3/16	3/64	3/8	.173	.047	11°								

Inserts for BNK Ball Nose End Mills



Designation	Dimensions				SLK	SLX	MPX
	d	r	s	a			
XCCG							
XCEA							
XCEG							
Designation	d	r	s	a	CTD		
XCCG-31.5-HG	.375	3/16	.098	7°			
XCCG-41.5-HG	.500	1/4	.098	7°			
XCCG-52-HG	.625	5/16	.118	7°			
XCCG-62-HG	.750	3/8	.118	7°			
XCCG-82.5-HG	1.000	1/2	.157	7°			
XCCG-103-HG	1.250	5/8	.197	7°			
XCEA-31.5	.375	3/16	.098	7°			
XCEA-41.5	.500	1/4	.098	7°			
XCEA-52	.625	5/16	.118	7°			
XCEA-62	.750	3/8	.118	7°			
XCEA-82.5	1.000	1/2	.157	7°			
XCEA-103	1.250	5/8	.197	7°			
XCEG-2.51	.312	5/32	.078	7°			
XCEG-31.5	.375	3/16	.098	7°			
XCEG-41.5	.500	1/4	.098	7°			
XCEG-52	.625	5/16	.118	7°			
XCEG-62	.750	3/8	.118	7°			
XCEG-82.5	1.000	1/2	.157	7°			
XCEG-103	1.250	5/8	.197	7°			

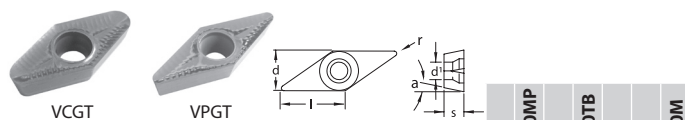
Inserts for R360 Copy Milling Cutters



Designation	Dimensions						RP350	RP354	RM352	ALP-XL	RP35	HMF	TK20
	l	s	r	d	d ¹	a							
7° Inserts													
RCMT-1606MOT-X*	--	1/4	--	.630	.217	7°							
15° Inserts													
RDGT-0802M0-AL	--	3/32	--	.315	.134	15°							
RDGT-1003M0-AL	--	1/8	--	.394	.173	15°							
RDMW-0802MOT	--	3/32	--	.315	.134	15°							
RDMW-1003MOT	--	1/8	--	.394	.173	15°							
RDMW-1204MOT-X*	--	3/16	--	.472	.173	15°							


*Inserts have integrated anti-rotation lock

Inserts for V90 Milling Cutters




Designation	Dimensions						TK10MP	TK10TB	TK10M
	l	s	r	d	d ¹	a			
VCGT									
VPGT									
Designation	l	s	r	d	d ¹	a	CTD	DIA. CTD	UNCTD
VCGT-43.58-ALM	.87	7/32	.118	1/2	.216	7°			
VPGT-221-ALM	.437	1/8	1/64	1/4	.110	11°			
VPGT-333-ALM	.654	3/16	3/64	3/8	.173	11°			

Inserts for S45F Super Positive Milling Cutters



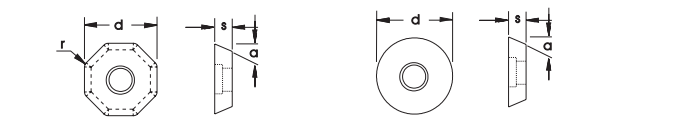
Designation	Dimensions						TP30MC	RM350	TK10MP	ALP-XL	TK10M
	l	s	r	d	d ¹	b					
SEHT-43 AFSN	.500	3/16	---	1/2	.217	.062					
SEHT-43 AFFN-ALC	.500	3/16	---	1/2	.217	.062					
SEKT-43 AFSN	.500	3/16	---	1/2	.217	.062					
SEKW-43 AFSN	.500	3/16	---	1/2	.217	.062					

Inserts for S45 45° Chamfer Milling Cutters



Designation	Dimensions							RP15K	RP25K
	l	s	r	d	d ¹	m	a		
SDMW-322	.375	1/8	1/32	3/8	.173	.065	15°		
SPMW-432	.500	3/16	1/32	1/2	.217	.091	11°		
SDNT-322	.375	1/8	1/32	3/8	.173	.065	15°		
SPNT-432	.500	3/16	1/32	1/2	.217	.091	11°		

Inserts for RT45V Milling Cutters



Designation	Dimensions				SLK	SLX	ALP-XL
	d	s	r	a			
Geometry: K = K-Land Edge							
OEEX-432-K	.500	.188	.032	23°			
OEEX-534-K	.625	.188	.062	23°			
OEEX-634-K	.750	.188	.062	23°			
Geometry: P = Dish Face							
OEEX-432-P	.500	.188	.032	23°			
OEEX-534-P	.625	.188	.062	23°			
OEEX-634-P	.750	.188	.062	23°			
Geometry: K = K-Land Edge							
RECX-43-K	.500	.188	.250	23°			
RECX-53-K	.625	.188	.312	23°			
RECX-63-K	.750	.188	.375	23°			
Geometry: P = Dish Face							
RECX-43-P	.500	.188	.250				
RECX-53-P	.625	.188	.312				
RECX-63-P	.750	.188	.375				

For more information on the selection of milling cutters and inserts in this catalog, and more of the items we carry, please visit us online @ www.ranitool.com