



Mirror Radius

High Precision Indexable Radius End Mill

High Precision:

Precision indexable end mill with two effective cutting edges.
Corner radius accuracy within $\pm .0004$ ".
Bottom edge run out from radius to radius below $.0002$ ".



- **Precision clamp screw mounting**

Insert is precisely located using a ground screw to obtain high accuracy.

- **Versatility of insert**

Mirror Radius insert can be used in our Mirror Ball Bodies, only in finishing applications of removing stock below $1/40 \times D$.

- **The High Feed Mirror Radius**

- Insert has positive geometry reducing the cutting force and chatter.
- Smaller side wiper has less deflection when finishing vertical walls, when compared to the neutral geometry.

- **High tolerance**

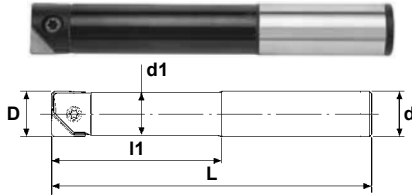
High precision machining giving superior quality when finishing side and bottom face surfaces.



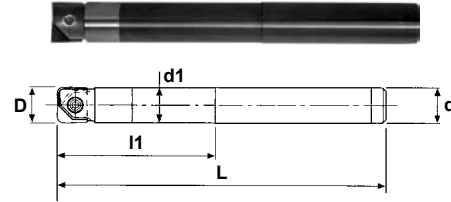
INCH

Mirror Radius

RNM Type - Steel Shank



RNM Type - Carbide Shank



Specifications - Steel Shank

CATALOG NUMBER	STK	DIMENSIONS					INSERT INCH	INSERT METRIC	PARTS	
		D	L	d1	l1	d			Screw	Wrench
RNMM-080057S-S031	•	.312	4.50	.307	2.25	.312	RME-0312	RNM-080	FSW-2506H	T-07
RNML-080088S-S031	•	.312	5.75	.307	3.50	.312				
RNMM-100057S-S037	•	.375	4.50	.366	2.25	.375	RME-0375	RNM-100	FSW-3007H	T-08
RNML-100088S-S037	•	.375	5.75	.366	3.50	.375				
RNMM-120063S-S050	•	.500	4.75	.492	2.50	.500	RME-0500		FSW-3509H	T-10
RNML-120101S-S050	•	.500	6.35	.492	4.00	.500				
RNMM-160063S-S062	•	.625	4.75	.614	2.50	.625	RME-0625	RNM-160	FSW-4013H	T-15
RNML-160114S-S062	•	.625	7.10	.614	4.50	.625				
RNMM-200088S-S075	•	.750	5.75	.740	3.50	.750	RME-0750	RNM-200	FSW-5016H	A-20W
RNML-200127S-S075	•	.750	8.00	.740	5.00	.750				
RNMS-250076S-S100	•	1.000	6.00	.976	3.00	1.00	RME-1000	RNM-250	FSW-6020	T-30
RNMM-250114S-S100	•	1.000	7.50	.976	4.50	1.00				
RNML-250152S-S100	•	1.000	10.00	.976	6.00	1.00				
RNMM-300114S-S125	•	1.250	7.50	1.17	4.50	1.25	RME-1250	RNM-300 RNM-320	FSW-8025	A-40
RNML-300152S-S125	•	1.250	10.00	1.17	6.00	1.25				

Specifications - Carbide Shank

Note: All cutters are supplied without inserts or wrenches.

CATALOG NUMBER	STK	DIMENSIONS					INSERT INCH	INSERT METRIC	PARTS	
		D	L	d1	l1	d			Screw	Wrench
RNMS-080035U-S031C	•	.312	3.62	.295	1.37	.312	RME-0312 HRE-0312	RNM-080 HRM-080 HRM-090 FRM-080	FSW-2506H	T-07
RNMM-080057S-S031C	•	.312	4.50	.307	2.25	.312				
RNML-080088S-S031C	•	.312	5.75	.307	3.50	.312				
RNMS-100035U-S037C	•	.375	3.62	.354	1.37	.375	RME-0375 HRE-0375	RNM-100 HRM-100 HRM-110 FRM-100	FSW-3007H	T-08
RNMM-100057S-S037C	•	.375	4.50	.366	2.25	.375				
RNML-100088S-S037C	•	.375	5.75	.366	3.50	.375				
RNMS-120029U-S050C	•	.500	3.28	.480	1.14	.500	RME-0500 HRE-0500 FRE-0500	HRM-130	FSW-3509H	T-10
RNMM-120063S-S050C	•	.500	4.75	.492	2.50	.500				
RNML-120101S-S050C	•	.500	6.35	.492	4.00	.500				
RNMS-160034U-S062C	•	.625	3.70	.602	1.33	.625	RME-0625 HRE-0625 FRE-0625	RNM-160, RNM-170 HRM-160, HRM-170 FRM-160, FRM-170	FSW-4013H	T-15
RNMM-160063S-S062C	•	.625	4.75	.614	2.50	.625				
RNML-160114S-S062C	•	.625	7.10	.614	4.50	.625				
RNMS-200038U-S075C	•	.750	4.09	.728	1.49	.750	RME-0750 HRE-0750 FRE-0750	RNM-200, RNM-210 HRM-200, HRM-220 FRM-200, FRM-210	FSW-5016H	A-20W
RNMM-200088S-S075C	•	.750	5.75	.740	3.50	.750				
RNML-200127S-S075C	•	.750	8.00	.740	5.00	.750				
RNMS-250076S-100C	•	1.000	6.00	.976	3.00	1.00	RME-1000 HRE-1000 FRE-1000	RNM-250 RNM-260 FRM-250	FSW-6020	T-30
RNMM-250114S-S100C	•	1.000	7.50	.976	4.50	1.00				
RNML-250152S-S100C	•	1.000	10.00	.976	6.00	1.00				
RNMM-300114S-S125C	•	1.250	7.50	1.17	4.50	1.25	RME-1250	RNM-300, RNM-320 FRM-300, FRM-320	FSW-8025	A-40
RNML-300152S-S125C	•	1.250	10.00	1.17	6.00	1.25				

Note: All cutters are supplied without inserts or wrenches.



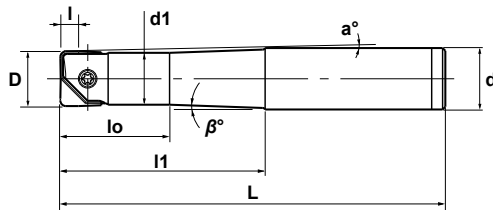
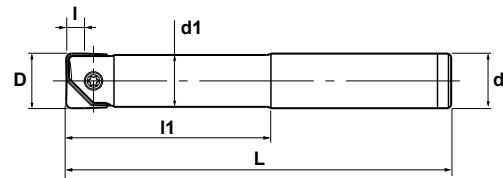
Mirror Radius

METRIC

STEEL SHANK

RNM Type RNM-S - Straight Reach

RNM-T - Tapered Reach


Fig. 1

Fig. 2


Specifications

CATALOG NUMBER	STK	DIMENSIONS										FIG.	INSERT (INCH)	PARTS	
		D	L	I	lo	l1	d1	d	a°	β°	Screw			Wrench	
RNMM-080053T-S12	•	8	110	2.7	18.5	53	7.2	12	2°10'	2°30'	1	RNM-080 (RME-0312)	FSW-2506H	T-07	
RNML-080075T-S12	•	8	140	2.7	18.5	75	7.2	12	1°32'	2°	1				
RNMM-100053T-S12	•	10	110	3.3	21	53	9	12	1°5'	2°	1	RNM-100 (RME-0375)	FSW-3007H	T-08	
RNML-100075T-S12	•	10	140	3.3	21	75	9	12	0°46'	1°	1				
RNMM-120053S-S12	•	12	110	4	-	53	11	12	-	-	2	RNM-120 RNM-130 (RME-0500)	FSW-3509H	T-10	
RNML-120095T-S16	•	12	160	4	22	95	11	16	1°12'	1°15'	1				
RNMM-160070S-S16	•	16	140	5.3	-	70	15	16	-	-	2	RNM-160 RNM-170 (RME-0625)	FSW-4013H	T-15	
RNMM-160090S-S16	•	16	160	5.3	-	90	15	16	-	-	2				
RNML-160100S-S16	•	16	200	5.3	-	100	15	16	-	-	2				
RNMM-200075S-S20	•	20	141	6.7	-	75	19	20	-	-	2	RNM-200 RNM-210 (RME-0750)	FSW-5016H	A-20W	
RNMM-200105S-S20	•	20	180	6.7	-	105	19	20	-	-	2				
RNML-200125S-S20	•	20	250	6.7	-	125	19	20	-	-	2				
RNMM-250090S-S25	•	25	166	8.3	-	90	24	25	-	-	2	RNM-250 RNM-260 (RME-1000)	FSW-6020	T-30	
RNMM-250140S-S25	•	25	220	8.3	-	140	24	25	-	-	2				
RNML-250150S-S25	•	25	250	8.3	-	150	24	25	-	-	2				
RNMM-300106S-S32	•	30	186	10	-	106	29	32	-	-	2	RNM-300 (RME-1250)	FSW-8025	A-40	
RNMM-300140S-S32	•	30	220	10	-	140	29	32	-	-	2				
RNMM-320106S-S32	•	32	186	10.7	-	106	31	32	-	-	2	RNM-320 (RME-1250)	FSW-8025	A-40	
RNMM-320140S-S32	•	32	220	10.7	-	140	31	32	-	-	2				

Note: All cutters are supplied without inserts or wrenches.

**METRIC**

Mirror Radius

CARBIDE SHANK

RNM Type RNM-S - Straight Reach**RNM-T - Tapered Reach**

Fig. 1

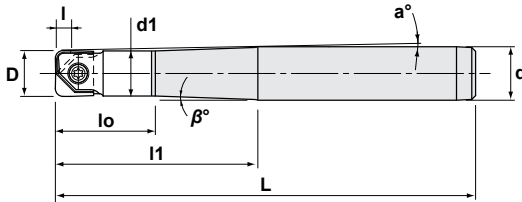
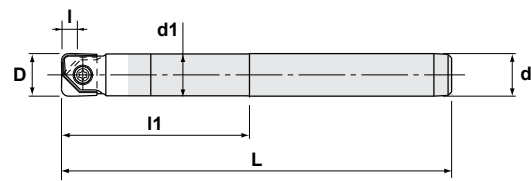


Fig. 2



Specifications

CATALOG NUMBER	STK	DIMENSIONS									FIG.	INSERT (INCH)	PARTS	
		D	L	l	l _o	l ₁	d ₁	d	a°	β°			Screw	Wrench
RNMM-080053T-S12C	•	8	110	2.7	20	53	7.2	12	2°12'	2°	1	RNM-080, (RME-0312) HRM-080, HRM-090 FRM-080, (HRE-0312)	FSW-2506H	T-07
RNML-080075S-S08C	•	8	140	2.7	-	75	7.2	8	-	-	2			
RNMM-100050S-S10C	•	10	110	3.3	-	50	9	10	-	-	2	RNM-100, (RME-0375) HRM-100, HRM-110 FRM-100, (HRE-0375)	FSW-3007H	T-08
RNMM-100053T-S12C	•	10	110	3.3	22.5	53	9	12	1°7'	1°	1			
RNML-100075S-S10C	•	10	140	3.3	-	75	9	10	-	-	2			
RNMM-120053S-S12C	•	12	110	4	-	53	11	12	-	-	2	RNM-120, RNM-130 (RME-0500), HRM-120 HRM-130, FRM-120 (HRE-0500, FRE-0500)	FSW-3509H	T-10
RNML-120095S-S12C	•	12	160	4	-	95	11	12	-	-	2			
RNMM-160070S-S16C	•	16	140	5.3	-	70	15	16	-	-	2	RNM-160, RNM-170 (RME-0625) HRM-160, HRM-170 FRM-160, FRM-170 (HRE-0625, FRE-0625)	FSW-4013H	T-15
RNMM-160090S-S16C	•	16	160	5.3	-	90	15	16	-	-	2			
RNML-160120S-S16C	•	16	210	5.3	-	120	15	16	-	-	2			
RNML-160150S-S16C	•	16	220	5.3	-	150	15	16	-	-	2			
RNMM-200075S-S20C	•	20	141	6.7	-	75	19	20	-	-	2	RNM-200, RNM-210 HRM-200, HRM-220 FRM-200, FRM-210	FSW-5016H	A-20W
RNMM-200105S-S20C	•	20	180	6.7	-	105	19	20	-	-	2			
RNML-200150S-S20C	•	20	220	6.7	-	150	19	20	-	-	2			
RNML-200170S-S20C	•	20	250	6.7	-	170	19	20	-	-	2			
RNMM-250090S-S25C	•	25	166	8.3	-	90	24	25	-	-	2	RNM-250, RNM-260 FRM-250 (RME-1000, FRE-1000)	FSW-6020	T-30
RNMM-250140S-S25C	•	25	220	8.3	-	140	24	25	-	-	2			
RNML-250190S-S25C	•	25	260	8.3	-	190	24	25	-	-	2			
RNMM-300106S-S32C	•	30	186	10	-	106	29	32	-	-	2	RNM-320, RNM-320 FRM-300, (RME-1250)	FSW-8025	A-40
RNMM-320106S-S32C	•	32	186	10.7	-	106	31	32	-	-	2	RNM-320, FRM-320 (RME-1250)	FSW-8025	A-40

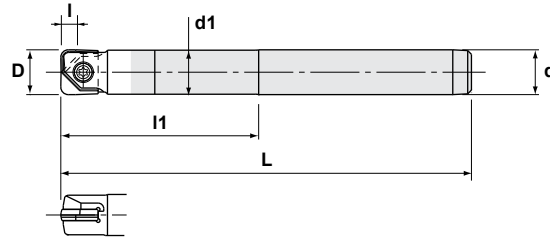
Note: All cutters are supplied without inserts or wrenches.



Mirror Radius

METRIC

CARBIDE SHANK RNMS-U Type

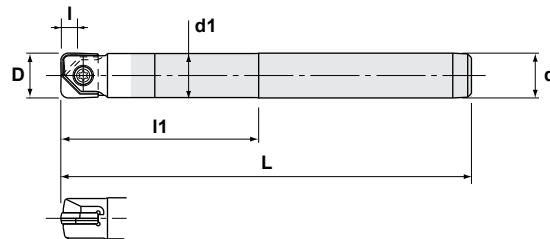


Specifications

CATALOG NUMBER	STK	DIMENSIONS						INSERT (INCH)	PARTS	
		D	L	I	I1	d1	d		Screw	Wrench
RNMS-060015U-S06C	•	6	60	2	15	5.7	6	RNM-060, HRM-060, FRM-060	FSW-2005H	T-06
RNMS-080020U-S08C	•	8	70	2.7	20	7.6	8	RNM-080, HRM-080, HRM-090, FRM-080 (RME-0312, HRE-0312)	FSW-2506H	T-07
RNMS-100025U-S10C	•	10	75	3.3	25	9.5	10	RNM-100, HRM-100 HRM-110, FRM-100	FSW-3007H	T-08
RNMS-120030U-S12C	•	12	80	4	30	11.5	12	RNM-120, RNM-130 HRM-120, HRM-130, FRM-120 (RME-0500, HRE-0500, FRE-0500)	FSW-3509H	T-10
RNMS-160035U-S16C	•	16	90	5.3	35	15.5	16	RNM-160, RNM-170, HRM-160 HRM-170, FRM-160, FRM-170 (RME-0625, HRE-0625, FRE-0625)	FSW-4013H	T-15
RNMS-200040U-S20C	•	20	105	6.7	40	19.5	20	RNM-200, RNM-210, HRM-200 HRM-220, FRM-200, FRM-210	FSW-5016	A-20W

Note: All cutters are supplied without inserts or wrenches.

CARBIDE SHANK RNMM-U Type



Specifications

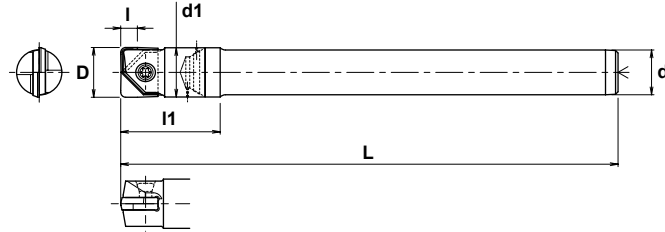
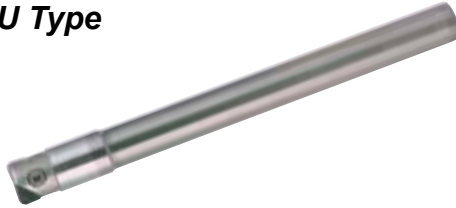
CATALOG NUMBER	STK	DIMENSIONS						INSERT (INCH)	PARTS	
		D	L	I	I1	d1	d		Screw	Wrench
RNMM-060030U-S06C	•	6	80	2	30	5.7	6	RNM-060, HRM-060, FRM-060	FSW-2005H	T-06
RNMM-080040U-S08C	•	8	90	2.7	40	7.6	8	RNM-080, HRM-080, HRM-090, FRM-080 (RME-0312, HRE-0312)	FSW-2506H	T-07
RNMM-100050U-S10C	•	10	100	3.3	50	9.5	10	RNM-100, HRM-100 HRM-110, FRM-100	FSW-3007H	T-08
RNMM-120060U-S12C	•	12	110	4	60	11.5	12	RNM-120, RNM-130 HRM-120, HRM-130, FRM-120 (RME-0500, HRE-0500, FRE-0500)	FSW-3509H	T-10

Note: All cutters are supplied without inserts or wrenches.

**METRIC**

Mirror Radius

CARBIDE SHANK RNMU Type



Specifications

CATALOG NUMBER	STK	DIMENSIONS						INSERT (INCH)	PARTS	
		D	L	I	I1	d1	d		Screw	Wrench
RNMU-080075S-S7.8C	•	8	75	2.7	25	7.8	7.8	RNM-080 (RME-0312) HRM-080, HRM-090 FRM-080 (HRE-0312)	FSW-2506H	T-07
RNMU-080110S-S7.8C	•	8	110	2.7	25	7.8	7.8			
RNMU-090090S-S08C	•	9	90	2.7	25	7.8	8	HRM-090-R20	FSW-2506H	T-07
RNMU-090130S-S08C	•	9	130	2.7	25	7.8	8			
RNMU-100085S-S9.8C	•	10	85	3.3	27	9.8	9.8	RNM-100 HRM-100 HRM-110 FRM-100	FSW-3007H	T-08
RNMU-100130S-S9.8C	•	10	130	3.3	27	9.8	9.8			
RNMU-110100S-S10C	•	11	100	3.3	27	9.8	10	HRM-110-R20	FSW-3007H	T-08
RNMU-110150S-S10C	•	11	150	3.3	27	9.8	10			
RNMU-120110S-S11C	•	12	110	4	30	11.8	11	RNM-120, RNM-130 (RME-0500) HRM-120, HRM-130 FRM-120 (HRE-0500, FRE-0500)	FSW-3509H	T-10
RNMU-120160S-S11C	•	12	160	4	30	11.8	11			
RNMU-130110S-S12C	•	13	110	4	30	11.8	12	RNM-130 (RME-0500) (HRE-0500, FRE-0500) HRM-130	FSW-3509H	T-10
RNMU-130160S-S12C	•	13	160	4	30	11.8	12			
RNMU-160120S-S15C	•	16	120	5.3	35	15.8	15	RNM-160, RNM-170 HRM-160, HRM-170 FRM-160, FRM-170	FSW-4013H	T-15
RNMU-160170S-S15C	•	16	170	5.3	35	15.8	15			
RNMU-170130S-S16C	•	17	130	5.3	35	15.8	16	RNM-170 HRM-170 FRM-170	FSW-4013H	T-15
RNMU-170180S-S16C	•	17	180	5.3	35	15.8	16			
RNMU-200140S-S18C	•	20	140	6.7	40	19.8	18	RNM-200, RNM-210 HRM-200, HRM-220 FRM-200, FRM-210	FSW-5016H	A-20W
RNMU-200200S-S18C	•	20	200	6.7	40	19.8	18			
RNMU-220150S-S20C	•	22	150	6.7	40	19.8	20	HRM-220-R30	FSW-5016H	A-20W
RNMU-220220S-S20C	•	22	220	6.7	40	19.8	20			

Note: All cutters are supplied without inserts or wrenches.