

HRMDDOUBLE

- High rake angle at the cutting edge reduces cutting load so high feed multifunctional machining is possible and efficient.
- HRMD is more economical due to the use of 6 cutting edges compared to HRM tool with positive inserts.
- Use of negative designed insert geometry provides strong edge strength and allows doubled sided inserts.

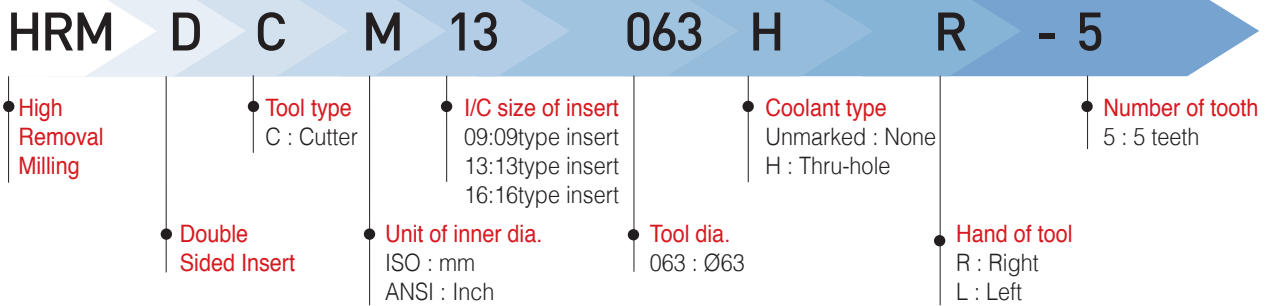


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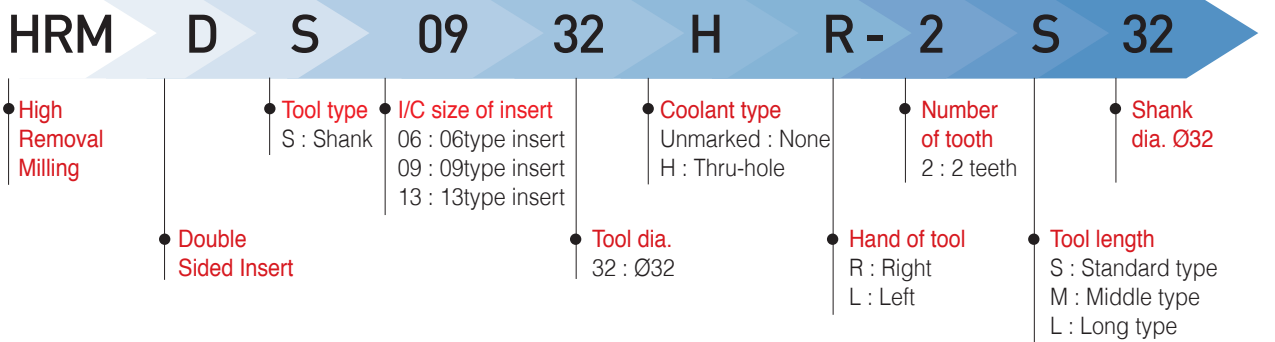


Code system

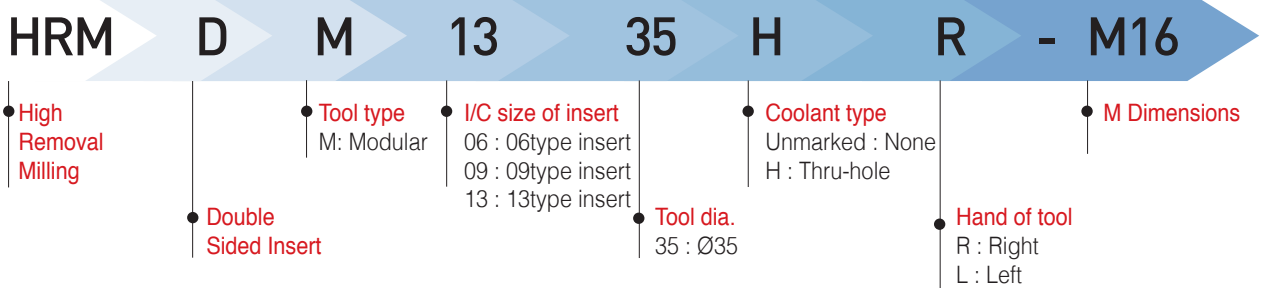
• Cutter type



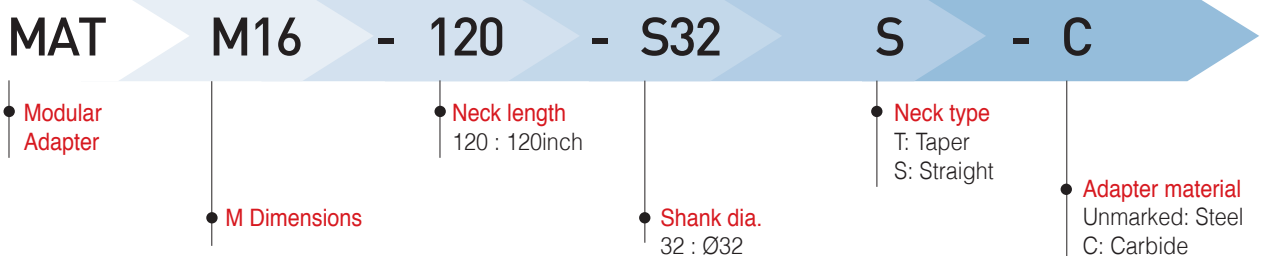
• Shank type



• Modular Head



• Modular Adapter



Features

- HRMD is more economical due to the use of 6 cutting edges compared to HRM tool with positive inserts.
- High rake angle cutting edge and chip breaker reduce cutting load.
- Negative geometry has been designed for rigidity of cutting edge and double sided function.
- Simple screw on system and stable support achieves strong clamping force.
- Unique insert design for high feed and multifunctional machining
- HRMD insert with symmetrical cutting edge is applicable for both RH and LH type machining

Features of Insert

- Nose-R**
 - Security of rigid edge in ramping pocket machining
 - Round edge insert geometry suitable for high feed rates
 - Possible to use RH/LH type machining
- Clamping surface**
 - Designed for stable clamping
 - Designed to prevention chip friction
- Chip breaker**
 - Reduction of cutting loads due to high rake angle
 - Improvement of chip flow and evacuation in various applications and materials
 - Reduces damage on the clamping face of the insert
- Major cutting edge**
 - Symmetrical design insert for RH/LH type tool
 - Superior cutting performance due to high rake angle cutting edge
 - Low cutting resistance in high feeds
 - Special design for decreasing thrust force
- Minor cutting edge**
 - Improvement of surface roughness in high feed machining
 - Special design for decreasing thrust force
 - Symmetrical insert design for RH/LH type tool

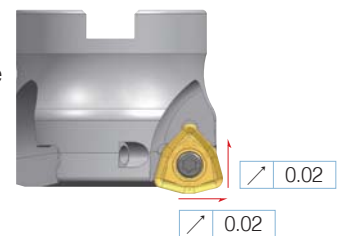
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TECH-NEWS

HRMDouble

Features of Cutter

- Inner coolant system**
 - Improvement of chip control and evacuation
 - Longer tool life due to reduced cutting temperature
- Simple screw on system**
 - Strong clamping
 - Convenient clamping
 - Wide chip pocket for better chip evacuation
- 3-Surface constrained System**
 - Strong clamping
 - Stable clamping against different cutting resistances in various machining applications

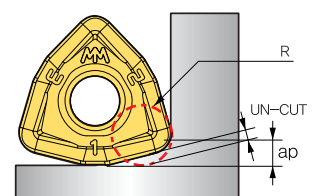


- NOTE :
Some insert feature information is repeated. This occurs because multiple insert features provide the same benefit. Example: Symmetrical design.

Corner R programming

Designation	Cutting condition		Approx. R (mm)	
	Max.ap(mm)	Max.fz(mm/t)	Input. R	Uncut
WNMX060312ZNN-MM	1.0	1.2	1.8	0.4
WNMX09T316ZNN-MM	1.5	2.0	2.5	0.6
WNMX130520ZNN-MM	2.0	3.0	3.0	0.8
WNMX160720ZNN-MM	2.5	3.5	3.5	1.2

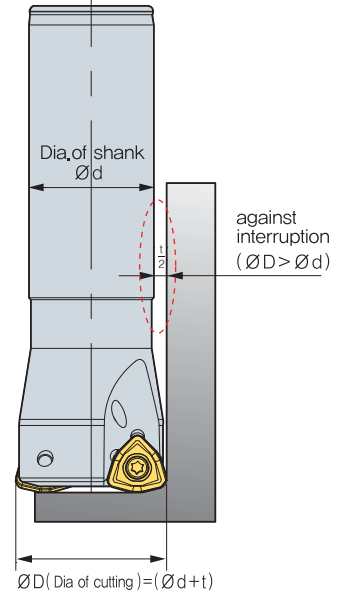
• Information for uncut part by using "Input.R" for CAM program



- Uncut part can be changed by poor machine condition or weak clamp of workpiece, etc

Interference prevent system

Designation	ØD(mm)	Ød(mm)	t(mm)
HRMDS0617HR-2□16	17	16	1
HRMDS0618HR-2□16	18	16	2
HRMDS0621HR-2□20	21	20	1
HRMDS0626HR-3□25	26	25	1
HRMDS0633HR-4□32	33	32	1
HRMDS0926HR-2□25	26	25	1
HRMDS0933HR-3□32	33	32	1
HRMDS0935HR-4□32	35	32	3
HRMDS0940HR-4□32	40	32	8
HRMDS0950HR-5□32	50	32	18
HRMDS0950HR-5□40	50	40	10
HRMDS0950HR-5□42	50	42	8
HRMDS1333HR-3□32	33	32	1
HRMDS1335HR-4□32	35	32	3
HRMDS1340HR-4□30	40	32	8
HRMDS1350HR-4□32	50	32	18
HRMDS1350HR-4□40	50	40	10
HRMDS1350HR-4□42	50	42	8
HRMDS1363HR-5□32	63	32	31
HRMDS1363HR-5□40	63	40	23
HRMDS1363HR-5□42	63	42	21

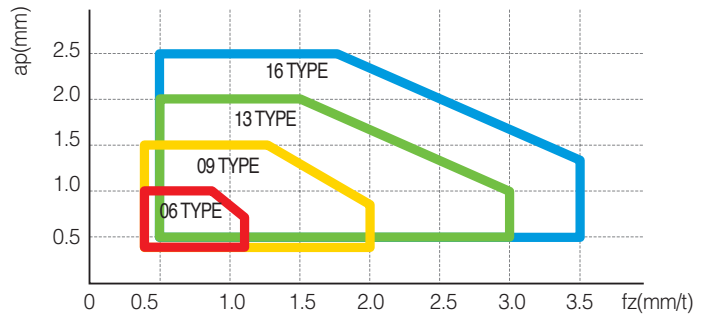
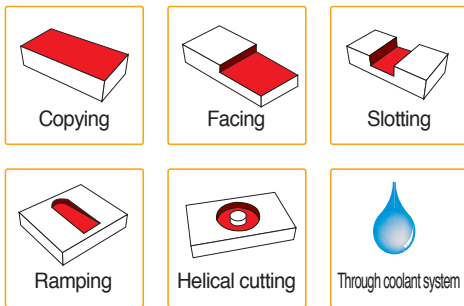


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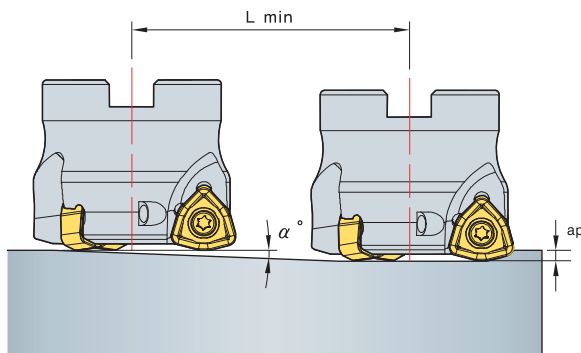
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Application area

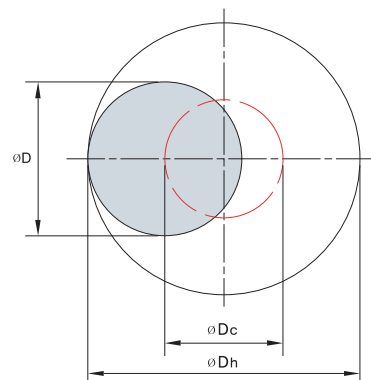


Ramping & Helical cutting technical data

• Ramping



• Helical cutting



• Tool pass dia.

$$L \text{ min} = \frac{ap}{\tan \alpha} \text{ (mm)}$$

$$\text{ØDc} = \text{ØDh} - \text{ØD}$$

ØDc = Tool pass of tool center
 ØDh = Desirable hole dia. on workpiece
 ØD = Tool dia.

- Adjust feed to under 70% of recommended cutting condition when ramping & helical cutting.
- In helical ramping, max. cutting depth per 1 helical revolution of cutter should not exceed max. cutting depth as per insert size.
- in ramping, max. cutting depth for 1 ramping process should not exceed max. depth of cut as per used insert size.

Designation	Tool dia. ØD(mm)	Efficient cutting dia. ØDe(mm)	Ramping			Helical ramping	
			Max. ap (mm)	Max. angle α°	Cutting Length Lmin (mm)	Dh Min. Cutting dia.(mm)	Dh Max. Cutting dia.(mm)
HRMDS0616HR	16	9.5	1	4.8	11	23.8	29.6
HRMDS0617HR	17	10.5	1	4.1	13	25.8	31.6
HRMDS0618HR	18	11.5	1	3.5	16	27.8	33.6
HRMDS0620HR	20	13.5	1	2.5	22	31.8	37.6
HRMDS0621HR	21	14.5	1	2.2	26	33.8	39.6
HRMDS0625HR	25	18.5	1	1.3	44	41.8	47.6
HRMDS0626HR	26	19.5	1	1.2	47	43.8	49.6
HRMDS0632HR	32	25.5	1	0.6	95	55.8	61.6
HRMDS0633HR	33	26.5	1	0.5	114	57.8	63.6
HRMDS0925HR	25	15.4	1.5	5.4	15.8	37.6	46.8
HRMDS0926HR	26	16.4	1.5	5.0	17.0	39.6	48.8
HRMDS0930HR	30	20.4	1.5	3.9	22.0	47.6	56.8
HRMDS0932HR	32	22.3	1.5	3.5	24.5	51.6	60.8
HRMDS0933HR	33	23.3	1.5	3.3	25.8	53.6	62.8
HRMDS0935HR	35	25.4	1.5	3.0	28.3	57.6	66.8
HRMDS0940HR	40	30.2	1.5	2.5	34.5	67.6	76.8
HRMDS0950HR	50	40.2	1.5	1.8	47.0	87.6	96.8
HRMDS1332HR	32	19.3	2	5.7	20.0	47	60
HRMDS1333HR	33	20.3	2	5.4	21.3	49	62
HRMDS1335HR	35	22.3	2	4.8	24.0	53	66
HRMDS1340HR	40	27.2	2	3.7	30.7	63	76
HRMDS1350HR	50	37	2	2.6	44.0	83	96
HRMDS1363HR	63	50	2	1.9	61.3	109	122
HRMDCM09040HR	40	30.2	1.5	2.5	34.5	67.6	76.8
HRMDCM09050HR	50	40.2	1.5	1.8	47.0	87.6	96.8
HRMDCM09063HR	63	53.1	1.5	1.4	63.3	113.6	122.8
HRMDC(M)09080HR	80	70.1	1.5	1.0	84.5	147.6	156.8
HRMDC(M)09100HR	100	90	1.5	0.8	109.5	187.6	196.8
HRMDCM13050HR	50	37	2	2.6	44.0	83	96
HRMDCM13063HR	63	50	2	1.9	61.3	109	122
HRMDC(M)13080HR	80	66.9	2	1.4	84.0	143	156
HRMDC(M)13100HR	100	86.9	2	1.0	110.7	183	196
HRMDC(M)13125HR	125	111.9	2	0.8	144.0	233	246
HRMDC(M)16080HR	80	63.3	2.5	1.4	102	138	156
HRMDC(M)16100HR	100	83.3	2.5	1	143	178	196
HRMDC(M)16125HR	125	108.3	2.5	0.7	204	228	246
HRMDC(M)16160R	160	143.3	2.5	0.5	286	298	316
HRMDC(M)16200R	200	183.3	2.5	0.3	477	378	396
HRMDC(M)16250R	250	233.3	2.5	0.2	716	478	496
HRMDC(M)16315R	315	298.3	2.5	0.1	1432	608	626

Recommended cutting condition

	Workpiece	Hardness	Grades	vc (m/min)	fz (mm/t)
P	General structural steel, Mild steel	Under 200HB	PC3500	200(100~230)	1.0 ~ 2.0
			PC3545		
	Carbon steel, Alloy steel	Under 30HRC	PC3500	180(100~220)	1.0 ~ 1.5
			PC3545		
High Carbon steel, Alloy steel	30~40HRC	PC3500	160(100~200)	0.8 ~ 1.3	
		PC3545			
Pre-hardened steel	40~50HRC	PC3500	120(80~180)	0.6 ~ 1.2	
		PC5300			
M	Stainless steel	Under 270HB	PC5300	120(80~150)	0.8 ~ 1.3
K			Cast iron		
				Under 350N/mm ²	PC5300

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Machining Example - I



- **Workpiece** : SM45C(HRC22)
- **Cutting condition** : vc(m/min)=283(1,803⁻¹), fz(mm/t)=1.4, vf(mm/min)=10,097, ap(mm)=0.8, ae(mm)=35
Coolant : Dry, Machining : Copying
Machine : Horizontal MCT
Overhang of tool : 250mm
- **Tools** : HRMDCM13050HR-4
WNMX130520ZNN-MM(PC3500)
- **Productivity : 40% increase**
- **Tool cost : 80% decrease**

• Test result

In comparing HRMD with our competitor using the same cutting conditions, the cutting speed of HRMD was higher with the same depth of cut (ap*ae), the cycle time was reduced by 40% and the tool life was increased to over 60%. HRMD is economically more efficient due to the use of 6 cutting edges compared to EDNW type with positive insert.

▶ Machining Example - II



- **Workpiece** : STS304
- **Cutting condition** : $vc(m/min)=130(414^{-1})$, $fz(mm/t)=1.2$,
 $vf(mm/min)=2.981$, $ap(mm)=1.0$, $ae(mm)=80$
 Machining : Facing and Slotting
 Machine : Vertical MCT
 Overhang of tool : 250mm
- **Tools** : HRMDCM13100HR-6
 WNMX130520ZNN-MM(PC3500)

- **Productivity : 80% increase**
- **Tool cost : 25% decrease**

• Test result

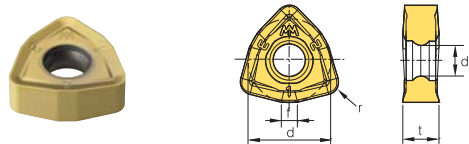
In comparing HRMD with our competitor using the same cutting conditions, the cutting speed of HRMD was higher with the same depth of cut ($ap \cdot ae$), the cycle time was reduced by 80% and the tool life was the same, but HRMD is economically more efficient due to the use of 6 cutting edges compared to SDKN type with positive insert.

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HRMDouble

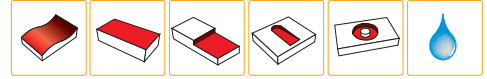
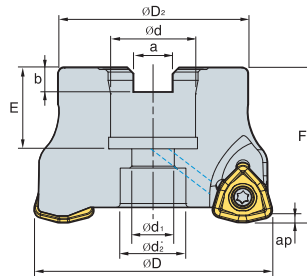
▶ Applicable inserts



	Designation	d	t	r	d ₁	f
WNMX	060312ZNN-MM	6.35	3.18	1.2	2.86	1.2
	09T316ZNN-MM	9.525	3.97	1.6	3.6	1.7
	130520ZNN-MM	12.7	5.56	2.0	4.7	2.5
	160720ZNN-MM	16.0	7.0	2.0	5.8	3.0

HRMDouble

HRMDC(M)09



• AR : -7°
• RR : -12°~18°

AA 14°

(mm)

Designation	ØD	ØD ₂	Ød	Ød ₁	Ød ₂	a	b	E	F	ap	Bolt			
HRMDCM	09040HR-3	3	40	34	16	9	14	8.4	5.6	19	40	1.5	0.2	SB0825
	09040HR-4	4	40	34	16	9	14	8.4	5.6	19	40	1.5	0.2	
	09050HR-4	4	50	42	22	11	18	10.4	6.3	21	40	1.5	0.3	SB1025
	09050HR-5	5	50	42	22	11	18	10.4	6.3	21	40	1.5	0.3	
	09063HR-5	5	63	49	22	11	18	10.4	6.3	21	40	1.5	0.5	SB1025
	09063HR-6	6	63	49	22	11	18	10.4	6.3	21	40	1.5	0.5	
	09080HR-6	6	80	57	27	14	20	12.4	7	23	50	1.5	1.1	SB1230
	09080HR-7	7	80	57	27	14	20	12.4	7	23	50	1.5	1.1	
	09100HR-7	7	100	67	32	18	26	14.4	8	25	50	1.5	1.7	SB1630
	09100HR-8	8	100	67	32	18	26	14.4	8	25	50	1.5	1.7	
HRMDC	09080HR-6	6	80	57	25.4	14	20	9.5	6	24	50	1.5	1.1	SB1230
	09080HR-7	7	80	57	25.4	14	20	9.5	6	24	50	1.5	1.1	
	09080HR-31.75-6	6	80	67	31.75	18	26	12.7	8	32	63	1.5	1.5	SB1630
	09080HR-31.75-7	7	80	67	31.75	18	26	12.7	8	32	63	1.5	1.5	
	09100HR-7	7	100	67	31.75	18	26	12.7	8	32	63	1.5	2.1	SB1630
	09100HR-8	8	100	67	31.75	18	26	12.7	8	32	63	1.5	2.1	

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TECH-NEWS

HRMDouble

• Parts

Screw	Wrench
FTKA0307	TW09S

• Available Inserts

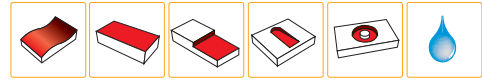
WNNMX-MM



Designation	Coated						Cermet			Uncoated							
	NGM325	NGM335	NG5330	PC3500	PC5300	PC3545	PC9530	PC6510	PC215K	PD2000	CN2000	CN20	CN30	H01	G10E	A30	ST20E
WNNMX_09T316ZNN-MM				●	●	●	●										

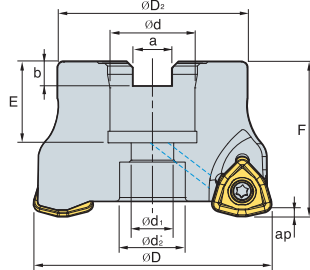
● : Stock item

HRMDC(M)13



• AR : -7°
• RR : -12°~4°

AA14°



(mm)

Designation		ØD	ØD2	Ød	Ød1	Ød2	a	b	E	F	ap	Bolt		
HRMDCM	13050HR-3	3	50	42	22	11	17	10.4	6.3	21	40	2	0.3	SB1025
	13050HR-4	4	50	42	22	11	17	10.4	6.3	21	40	2	0.3	
	13063HR-4	4	63	49	22	11	18	10.4	6.3	21	40	2	0.5	
	13063HR-5	5	63	49	22	11	18	10.4	6.3	21	40	2	0.5	
	13080HR-5	5	80	57	27	14	20	12.4	7	23	50	2	1	SB1230
	13080HR-6	6	80	57	27	14	20	12.4	7	23	50	2	1	
	13100HR-6	6	100	67	32	18	26	14.4	8	25	50	2	1.6	SB1630
	13100HR-7	7	100	67	32	18	26	14.4	8	25	50	2	1.6	
	13125HR-7	7	125	87	40	22	32	16.4	9	29	63	2	3.2	SB2040 MBA-M20
13125HR-8	8	125	87	40	22	32	16.4	9	29	63	2	3.2		
HRMDC	13080HR-5	5	80	57	25.4	14	20	9.5	6	24	50	2	1	SB1230
	13080HR-6	6	80	57	25.4	14	20	9.5	6	24	50	2	1	
	13080HR-31.75-5	5	80	67	31.75	18	26	12.7	8	32	63	2	1.4	SB1630
	13080HR-31.75-6	6	80	67	31.75	18	26	12.7	8	32	63	2	1.4	
	13100HR-6	6	100	67	31.75	18	26	12.7	8	32	63	2	2.1	SB1630
	13100HR-7	7	100	67	31.75	18	26	12.7	8	32	63	2	2.1	
	13125HR-7	7	125	87	38.1	22	32	15.9	10	35	63	2	3.3	SB2040 MBA-M20
13125HR-8	8	125	87	38.1	22	32	15.9	10	35	63	2	3.3		

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TECH-NEWS

HRMDouble

• Parts

Screw	Wrench
FTKA0412B	TW15S

• Available Inserts

WNMX-MM

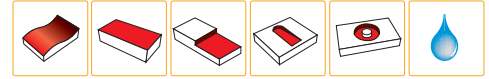
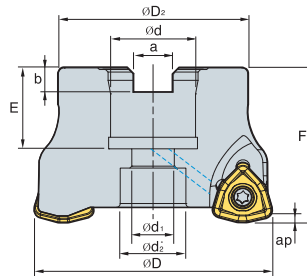


Designation	Coated							Cermet			Uncoated						
	NCM325	NCM335	NC5330	PC3500	PC5300	PC3545	PC9530	PC6610	PC215K	PD2000	CM2000	CM20	CM30	H01	G10E	A30	ST20E
WNMX 130520ZNN-MM				●	●	●	●										

● : Stock item

HRMDouble

HRMDC(M)16



• AR : -7°
• RR : -12°~4°

AA 14°

(mm)

Designation		ØD	ØD ₂	Ød	Ød ₁	Ød ₂	Ød ₃	a	b	E	F	ap	Bolt	
HRMDC(M) 16080HR-4	4	80	65	25.4(27)	14	20	-	9.5(12.4)	6(7)	25(23)	50	2.5	0.99	SB1230
	5	80	65	25.4(27)	14	20	-	9.5(12.4)	6(7)	25(23)	50	2.5	0.91	
16100HR-5	5	100	85	31.75(32)	18	26	-	12.7(14.4)	8	33(25)	63(50)	2.5	1.68	SB1630
	6	100	85	31.75(32)	18	26	-	12.7(14.4)	8	33(25)	63(50)	2.5	1.64	
16125HR-6	6	125	100	38.1(40)	22	32	52	15.9(16.4)	10(9)	36(29)	63	2.5	3.23	SB2040
16125HR-7	7	125	100	38.1(40)	22	32	52	15.9(16.4)	10(9)	36(29)	63	2.5	3.24	MBA-M20
16160R-7	7	160	107	50.8(40)	-	90	-	19(16.4)	11(9)	38(32)	63	2.5	3.73	MBA-M24
	8	160	107	50.8(40)	-	90	-	19(16.4)	11(9)	38(32)	63	2.5	3.77	
16200R-8	8	200	145	47.625(60)	-	132	-	25.4(25.7)	14	38	63	2.5	6.48	-
16200R-10	10	200	145	47.625(60)	-	132	-	25.4(25.7)	14	38	63	2.5	6.61	-
16250R-10	10	250	190	47.625(60)	-	190	-	25.4(25.7)	14	38	63	2.5	11.01	-
16250R-12	12	250	190	47.625(60)	-	190	-	25.4(25.7)	14	38	63	2.5	11.04	-
16315R-12	12	315	250	47.625(60)	-	238	-	25.4(25.7)	14	38	63	2.5	18.34	-
16315R-14	14	315	250	47.625(60)	-	238	-	25.4(25.7)	14	38	63	2.5	18.35	-

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KORLOY
TECH-NEWS

HRMDouble

• Parts

Screw	Wrench
FTGA0513-P	TW20-100

• Available Inserts

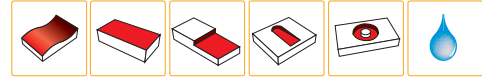
WNMX-MM



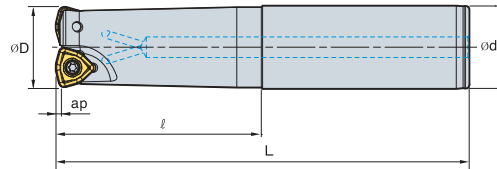
Designation	Coated							Cermet			Uncoated						
	NCM825	NCM635	NG5330	PC3500	PC5300	PC5345	PC9530	PC6810	PC215K	PD2000	CN2000	CN20	CN30	H01	G10E	A30	ST20E
WNMX 160720ZNN-MM																	

● : Stock item

HRMDS06



• AR : -7°
• RR : -17°~25°
AA 14°



(mm)

Designation		ØD	Ød	ℓ	L	ap	
HRMDS 0616HR-2S16	2	16	16	30	110	1.0	0.15
0616HR-2M16	2	16	16	70	150	1.0	0.20
0616HR-2L16	2	16	16	100	200	1.0	0.26
0617HR-2S16	2	17	16	20	110	1.0	0.15
0617HR-2M16	2	17	16	20	150	1.0	0.21
0617HR-2L16	2	17	16	20	200	1.0	0.28
0618HR-2S16	2	18	16	20	110	1.0	0.15
0618HR-2M16	2	18	16	20	150	1.0	0.21
0618HR-2L16	2	18	16	20	200	1.0	0.28
0620HR-2S20	2	20	20	50	130	1.0	0.28
0620HR-2M20	2	20	20	100	180	1.0	0.38
0620HR-2L20	2	20	20	130	250	1.0	0.53
0621HR-2S20	2	21	20	20	130	1.0	0.29
0621HR-2M20	2	21	20	20	180	1.0	0.40
0621HR-2L20	2	21	20	20	250	1.0	0.57
0625HR-3S25	3	25	25	60	140	1.0	0.44
0625HR-3M25	3	25	25	80	180	1.0	0.57
0625HR-3L25	3	25	25	120	250	1.0	0.80
0626HR-3S25	3	26	25	30	140	1.0	0.46
0626HR-3M25	3	26	25	30	180	1.0	0.60
0626HR-3L25	3	26	25	30	250	1.0	0.84
0632HR-4S32	4	32	32	70	150	1.0	0.82
0632HR-4M32	4	32	32	100	200	1.0	1.10
0632HR-4L32	4	32	32	180	300	1.0	1.66
0633HR-4S32	4	33	32	40	200	1.0	1.14
0633HR-4M32	4	33	32	40	250	1.0	1.43
0633HR-4L32	4	33	32	40	300	1.0	1.73

• Parts

Screw	Wrench
ETNA02506	TW07S

• Available Inserts

WNMX-MM

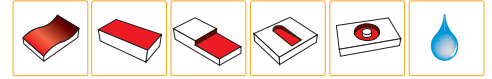


Designation	Coated								Cermet		Uncoated						
	NCM325	NCM335	NC5330	PC9500	PC5000	PC9545	PC9530	PC6510	PC215K	PD2000	CN2000	CN20	CN80	H01	G10E	A30	ST20E
WNMX 060312ZNN-MM																	

● : Stock item

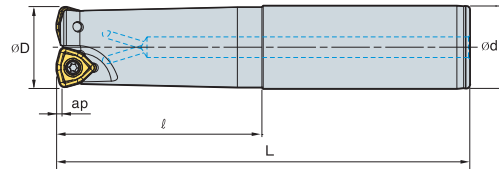
HRMDouble

HRMDS09



• AR : -7°
• RR : -17°~25°

AA 14°



(mm)

Designation			ØD	Ød	l	L	ap	
HRMDS	0925HR-2S25	2	25	25	60	140	1.5	0.5
	0925HR-2M25	2	25	25	120	200	1.5	0.6
	0925HR-2L25	2	25	25	180	300	1.5	1
	0926HR-2S25	2	26	25	60	140	1.5	0.5
	0926HR-2M25	2	26	25	60	200	1.5	0.7
	0926HR-2L25	2	26	25	60	300	1.5	1
	0930HR-3S32	3	30	32	70	150	1.5	0.8
	0930HR-3M32	3	30	32	120	200	1.5	1
	0930HR-3L32	3	30	32	180	300	1.5	1.5
	0932HR-3S32	3	32	32	70	150	1.5	0.8
	0932HR-3M32	3	32	32	120	200	1.5	1.1
	0932HR-3L32	3	32	32	180	300	1.5	1.7
	0933HR-3S32	3	33	32	70	150	1.5	0.8
	0933HR-3M32	3	33	32	70	200	1.5	1.1
	0933HR-3L32	3	33	32	70	300	1.5	1.7
	0935HR-4S32	4	35	32	50	150	1.5	0.9
	0935HR-4M32	4	35	32	50	200	1.5	1.1
	0935HR-4L32	4	35	32	50	300	1.5	1.7
	0940HR-4S32	4	40	32	50	150	1.5	0.9
	0940HR-4M32	4	40	32	50	250	1.5	1.5
0940HR-4L32	4	40	32	50	300	1.5	1.8	
0940HR-4S40	4	40	40	60	150	1.5	1.3	
0940HR-4M40	4	40	40	130	250	1.5	2.2	
0940HR-4L40	4	40	40	180	300	1.5	2.7	

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KORLOY
TECH-NEWS

HRMDouble

• Parts

 Screw	 Wrench
FTKA0307	TW09S

• Available Inserts

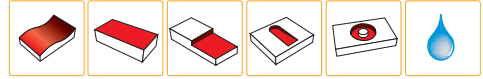
WNMX-MM



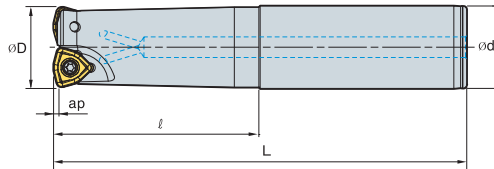
Designation	Coated						Cermet			Uncoated							
	NCM325	NCM335	NC5330	PC9500	PC5300	PC3545	PC9550	PC6510	PC215K	PD2000	CN2000	CN20	CN30	H01	G10E	A30	ST20E
WNMX 09T316ZNN-MM				●	●	●											

● : Stock item

HRMDS09



• AR : -7°
• RR : -17°~25°
AA 14°



(mm)

Designation		ØD	Ød	ℓ	L	ap	
HRMDS 0940HR-4S42	4	40	42	60	150	1.5	1.4
0940HR-4M42	4	40	42	130	250	1.5	2.3
0940HR-4L42	4	40	42	180	300	1.5	2.8
0950HR-4S32	4	50	32	40	150	1.5	1.1
0950HR-4M32	4	50	32	40	250	1.5	1.6
0950HR-4L32	4	50	32	40	300	1.5	2
0950HR-4S40	4	50	40	40	150	1.5	1.4
0950HR-4M40	4	50	40	40	250	1.5	2.4
0950HR-4L40	4	50	40	40	300	1.5	2.9
0950HR-4S42	4	50	42	40	150	1.5	1.6
0950HR-4M42	4	50	42	40	250	1.5	2.6
0950HR-4L42	4	50	42	40	300	1.5	3.1
0950HR-5S32	5	50	32	40	150	1.5	1.1
0950HR-5M32	5	50	32	40	250	1.5	1.6
0950HR-5L32	5	50	32	40	300	1.5	2
0950HR-5S40	5	50	40	40	150	1.5	1.4
0950HR-5M40	5	50	40	40	250	1.5	2.4
0950HR-5L40	5	50	40	40	300	1.5	2.9
0950HR-5S42	5	50	42	40	150	1.5	1.6
0950HR-5M42	5	50	42	40	250	1.5	2.6
0950HR-5L42	5	50	42	40	300	1.5	3.1

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KORLOY
TECH-NEWS

HRMDouble

• Parts

Screw	Wrench
FTKA0307	TW09S

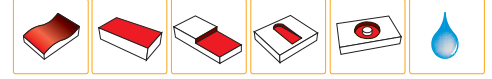
• Available Inserts

Designation	Coated										Cermet			Uncoated			
	NCM825	NCM835	NC5390	PC3500	PC5300	PC3545	PC9530	PC8510	PC215K	PD2000	CN2000	CN20	CN80	H01	G10E	A30	ST20E
WNMX 09T316ZNN-MM				●	●	●	●										

● : Stock item

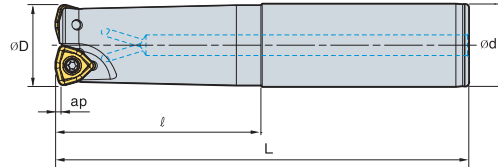
HRMD_{DOUBLE}

HRMDS13



• AR : -7°
• RR : -14°~-16°

AA 14°



(mm)

Designation		ØD	Ød	l	L	ap	
HRMDS 1332HR-2S32	2	32	32	70	150	2	0.8
1332HR-2M32	2	32	32	120	200	2	1
1332HR-2L32	2	32	32	180	300	2	1.6
1333HR-2S32	2	33	32	70	150	2	0.8
1333HR-2M32	2	33	32	70	200	2	1.1
1333HR-2L32	2	33	32	70	300	2	1.7
1335HR-2S32	2	35	32	50	150	2	0.8
1335HR-2M32	2	35	32	50	200	2	1.1
1335HR-2L32	2	35	32	50	300	2	1.7
1340HR-3S32	3	40	32	50	150	2	0.8
1340HR-3M32	3	40	32	50	250	2	1.4
1340HR-3L32	3	40	32	50	300	2	1.7
1340HR-3S40	3	40	40	60	150	2	1.2
1340HR-3M40	3	40	40	130	250	2	2.1
1340HR-3L40	3	40	40	180	300	2	2.6
1340HR-3S42	3	40	42	60	150	2	1.4
1340HR-3M42	3	40	42	130	250	2	2.3
1340HR-3L42	3	40	42	180	300	2	2.7
1350HR-3S32	3	50	32	50	150	2	1.1
1350HR-3M32	3	50	32	50	250	2	1.7
1350HR-3L32	3	50	32	50	300	2	2
1350HR-3S40	3	50	40	50	150	2	1.5
1350HR-3M40	3	50	40	50	250	2	2.4
1350HR-3L40	3	50	40	50	300	2	2.9
1350HR-3S42	3	50	42	50	150	2	1.6
1350HR-3M42	3	50	42	50	250	2	2.6
1350HR-3L42	3	50	42	50	300	2	3.1

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KORLOY
TECH-NEWS

HRMD_{DOUBLE}

• Parts

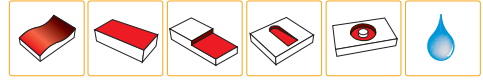
 Screw	 Wrench
FTKA0412B	TW15S

• Available Inserts

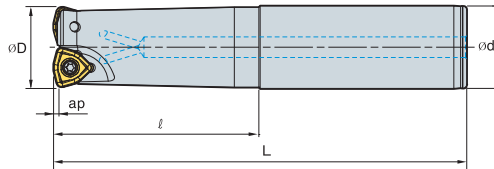
Designation	Coated										Cermet			Uncoated		
	NCM625	NCM635	NC5800	PC5900	PC5945	PC9530	PC6510	PC215K	PD2000	CN2000	CN20	CN90	H01	G10E	A30	ST20E
WNMX130520ZNN-MM				●	●	●	●									

● : Stock item

HRMDS13



• AR : -7°
• RR : -14°~-16°
AA 14°



(mm)

Designation		ØD	Ød	ℓ	L	ap	
HRMDS							
1350HR-4S32	4	50	32	50	150	2	1.1
1350HR-4M32	4	50	32	50	250	2	1.7
1350HR-4L32	4	50	32	50	300	2	2
1350HR-4S40	4	50	40	50	150	2	1.5
1350HR-4M40	4	50	40	50	250	2	2.4
1350HR-4L40	4	50	40	50	300	2	2.9
1350HR-4S42	4	50	42	50	150	2	1.6
1350HR-4M42	4	50	42	50	250	2	2.6
1350HR-4L42	4	50	42	50	300	2	3.1
1363HR-4S32	4	63	32	50	150	2	1.4
1363HR-4M32	4	63	32	50	250	2	2.1
1363HR-4L32	4	63	32	50	300	2	2.4
1363HR-4S40	4	63	40	50	150	2	1.8
1363HR-4M40	4	63	40	50	250	2	2.8
1363HR-4L40	4	63	40	50	300	2	3.2
1363HR-4S42	4	63	42	50	150	2	1.9
1363HR-4M42	4	63	42	50	250	2	3
1363HR-4L42	4	63	42	50	300	2	3.5
1363HR-5S32	5	63	32	50	150	2	1.5
1363HR-5M32	5	63	32	50	250	2	2
1363HR-5L32	5	63	32	50	300	2	2.3
1363HR-5S40	5	63	40	50	150	2	1.8
1363HR-5M40	5	63	40	50	250	2	2.8
1363HR-5L40	5	63	40	50	300	2	3.2
1363HR-5S42	5	63	42	50	150	2	1.9
1363HR-5M42	5	63	42	50	250	2	3
1363HR-5L42	5	63	42	50	300	2	3.5

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KORLOY
TECH-NEWS

HRMDouble

• Parts

Screw	Wrench
FTKA0412B	TW15S

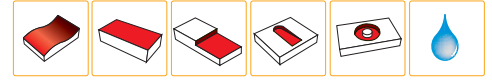
• Available Inserts

Designation	Coated										Cemet			Uncoated			
	NCM25	NCM35	NC530	PC3500	PC3300	PC3545	PC9550	PC6510	PC215K	PD2000	CN2000	CN20	CN30	H01	G10E	A30	ST20E
WNNX130520ZNN-MM				●	●	●	●										

● : Stock item

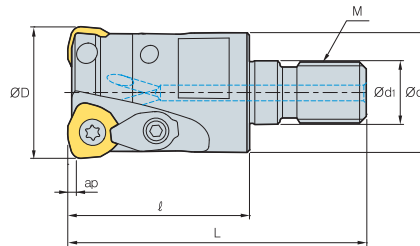
HRMDouble

HRMDM06



• AR : -7°
• RR : -18°~25°

AA 14°



(mm)

Designation		ØD	Ød	Ødi	l	L	M	ap	
HRMDM 0616HR-M08	2	16	14.5	8.5	25	42	M08	1.0	0.03
0617HR-M08	2	17	14.5	8.5	25	42	M08	1.0	0.03
0618HR-M08	2	18	14.5	8.5	25	42	M08	1.0	0.03
0620HR-M10	2	20	18	10.5	30	51	M10	1.0	0.06
0621HR-M10	2	21	18	10.5	30	51	M10	1.0	0.07
0625HR-M12	3	25	23	12.5	35	59	M12	1.0	0.10
0626HR-M12	3	26	23	12.5	35	59	M12	1.0	0.11
0632HR-M16	4	32	29	17	40	67	M16	1.0	0.21
0633HR-M16	4	33	29	17	40	67	M16	1.0	0.22

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KORLOY
TECH-NEWS

HRMDouble

• Parts

Screw	Wrench
 ETNA02506	 TW07S

• Available Inserts

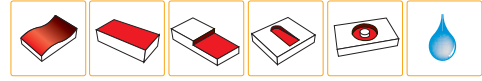
WNMX-MM



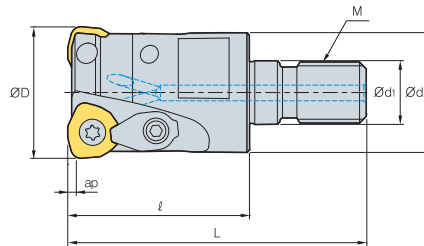
Designation	Coated							Cermet		Uncoated							
	NCM325	NCM335	NC5330	PC3500	PC5300	PC3545	PC9530	PC6510	PC215K	PD2000	CN2000	CN20	CN30	H01	G10E	A30	ST20E
WNMX 060312ZNN-MM																	

• : Stock item

HRMDM09/13



• AR : -7°
• RR : -18°~25°
AA 14°



(mm)

Designation			ØD	Ød	Ød1	ℓ	L	M	ap	
HRMDM	0925HR-M12	2	25	23	12.5	35	59	M12	1.5	0.10
	0926HR-M12	2	26	23	12.5	35	59	M12	1.5	0.11
	0930HR-M16	3	30	29	17	40	67	M16	1.5	0.19
	0932HR-M16	3	32	29	17	40	67	M16	1.5	0.20
	0933HR-M16	3	33	29	17	40	67	M16	1.5	0.21
	0935HR-M16	4	35	29	17	40	67	M16	1.5	0.22
	0940HR-M16	4	40	29	17	40	67	M16	1.5	0.25
HRMDM	1332HR-M16	2	32	29	17	40	67	M16	2	0.20
	1333HR-M16	2	33	29	17	40	67	M16	2	0.20
	1335HR-M16	2	35	29	17	40	67	M16	2	0.22
	1340HR-M16	3	40	29	17	45	72	M16	2	0.26

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KORLOY
TECH-NEWS

HRMDouble

• Parts

	Screw	Wrench
09 Type	FTKA0307	TW09S
13 Type	FTKA0412B	TW15S

• Available Inserts

WNNX-MM



Type	Designation	Coated								Cermet			Uncoated					
		NCM225	NCM335	NC5330	PC3500	PC5300	PC3545	PC9530	PC6510	PC215K	PD2000	CN2000	CN20	CN90	H01	G10E	A30	ST20E
09 Type	WNNX 09T316ZNN-MM				●	●	●	●										
13 Type	130520ZNN-MM				●	●	●	●										

● : Stock item

▶ MAT (Steel Shank type)

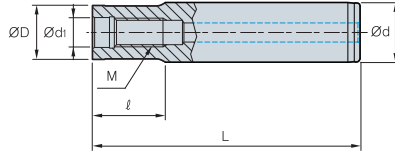


Fig. 1

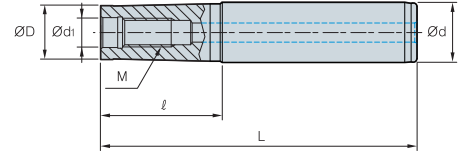


Fig. 2

(mm)

	Designation	ØD	Ød	Ød ₁	ℓ	L	M	Fig.
MAT	M06-020-S10S	9.5	10	6.5	20	70	M06	1
	M6B-020-S12S	11.0	12	6.5	20	76	M06	1
	M6B-040-S12S	11.0	12	6.5	40	96	M06	1
	M08-020-S16S	14.5	16	8.5	20	80	M08	1
	M10-030-S20S	18.0	20	10.5	30	100	M10	1
	M12-030-S25S	22.5	25	12.5	29	110	M12	1
	M16-035-S32S	28.5	32	17.0	35	125	M16	1
	M06-040-S12T	9.5	12	6.5	40	96	M06	2
	M06-065-S16T	9.5	16	6.5	65	125	M06	2
	M6B-065-S16T	11.0	16	6.5	65	125	M06	2
	M6B-080-S16T	11.0	16	6.5	80	140	M06	2
	M08-040-S16T	14.5	16	8.5	40	100	M08	2
	M08-065-S16T	14.5	16	8.5	65	125	M08	2
	M08-080-S20T	14.5	20	8.5	80	150	M08	2
	M08-110-S25T	14.5	25	8.5	110	190	M08	2
	M10-050-S20T	18.0	20	10.5	50	120	M10	2
	M10-070-S20T	18.0	20	10.5	70	140	M10	2
	M10-090-S25T	18.0	25	10.5	90	170	M10	2
	M10-110-S25T	18.0	25	10.5	110	190	M10	2
	M10-130-S32T	18.0	32	10.5	130	220	M10	2
	M12-050-S25T	22.5	25	12.5	50	130	M12	2
	M12-070-S25T	22.5	25	12.5	70	150	M12	2
	M12-090-S25T	22.5	25	12.5	90	170	M12	2
	M12-110-S32T	22.5	32	12.5	110	200	M12	2
	M12-175-S40T	22.5	40	12.5	175	300	M12	2
	M16-055-S32T	28.5	32	17.0	55	145	M16	2
	M16-080-S32T	28.5	32	17.0	80	170	M16	2
	M16-120-S32T	28.5	32	17.0	120	210	M16	2
	M16-175-S40T	28.5	40	17.0	175	300	M16	2

- S : Straight Neck Adapter
- T : Taper Neck Adapter

▶ MAT-C (Carbide Shank type)

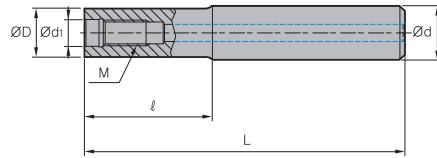


Fig. 1

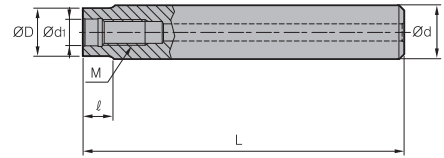


Fig. 2

(mm)

	Designation	ØD	Ød	Ød1	ℓ	L	M	Fig.
MAT	M08-080-S16S-C	14.5	16	8.5	80	150	M08	1
	M08-110-S16S-C	14.5	16	8.5	110	180	M08	1
	M08-150-S16S-C	14.5	16	8.5	150	250	M08	1
	M08-010-S16S-C-150	14.5	16	8.5	10	150	M08	2
	M08-010-S16S-C-180	14.5	16	8.5	10	180	M08	2
	M08-010-S16S-C-250	14.5	16	8.5	10	250	M08	2
	M10-090-S20S-C	18.0	20	10.5	90	170	M10	1
	M10-110-S20S-C	18.0	20	10.5	110	200	M10	1
	M10-175-S20S-C	18.0	20	10.5	175	300	M10	1
	M10-010-S20S-C-170	18.0	20	10.5	10	170	M10	2
	M10-010-S20S-C-200	18.0	20	10.5	10	200	M10	2
	M10-010-S20S-C-300	18.0	20	10.5	10	300	M10	2
	M12-090-S25S-C	22.5	25	12.5	90	170	M12	1
	M12-110-S25S-C	22.5	25	12.5	110	200	M12	1
	M12-175-S25S-C	22.5	25	12.5	175	300	M12	1
	M12-015-S25S-C-170	22.5	25	12.5	15	170	M12	2
	M12-015-S25S-C-200	22.5	25	12.5	15	200	M12	2
	M12-015-S25S-C-300	22.5	25	12.5	15	300	M12	2
	M16-090-S32S-C	28.5	32	17.0	90	180	M16	1
	M16-120-S32S-C	28.5	32	17.0	120	210	M16	1
M16-175-S32S-C	28.5	32	17.0	175	300	M16	1	
M16-020-S32S-C-180	28.5	32	17.0	20	180	M16	2	
M16-020-S32S-C-210	28.5	32	17.0	20	210	M16	2	
M16-020-S32S-C-300	28.5	32	17.0	20	300	M16	2	



KORLOY Inc.

HEAD OFFICE

Holystar B/D, 953-1, Doksanbon-Dong,
Geumcheon-Gu, Seoul, 153-823, Korea
Tel : +82-2-522-3181
Fax : +82-2-522-3184, +82-2-3474-4744
Web : www.korloy.com E-mail : export@korloy.com

CHEONGJU FACTORY

53-16, Songjeong-Dong,
Heungdeok-Gu, Cheongju-Si,
Chungcheongbuk-Do, 361-290, Korea
Tel : +82-43-262-0141 Fax : +82-43-262-0146

JINCHEON FACTORY

767-1, Kwanghyewon-Ri, Kwanghyewon-Myun,
Jincheon-Gun, Chungcheongbuk-Do, 365-830, Korea
Tel : +82-43-535-0141 Fax : +82-43-535-0144

R&D INSTITUTE

53-16, Songjeong-Dong, Heungdeok-Gu,
Cheongju-Si, Chungcheongbuk-Do, 361-290, Korea
Tel : +82-43-262-0141 Fax : +82-43-262-0711



KORLOY AMERICA Inc.

620 Maple Avenue, Torrance, CA90503, USA
Tel : +1-310-782-3800 Toll Free : +1-888-711-0001
Fax : +1-310-782-3885
Web : www.korloyamerica.com E-mail : sales@korloy.us

KORLOY EUROPE GmbH

Heinrich-Lanz-Allee 12, 60437 Frankfurt am Main, Germany
Tel : +49-69-5069-887-0 Fax : +49-69-5069-887-29
Web : www.korloyeurope.com E-mail : europe@korloy.com

KORLOY INDIA TOOLING Pvt.Ltd.

Ground Floor, Property No. 217, Udyog Vihar Phase 4,
Gurgaon 122001, Haryana, INDIA
Tel : +91-124-4050030 Fax : +91-124-4050032
E-mail : indiasales@korloyindia.com