

YE-IS16



i-Smart

Y-Coated Modular type End Mill

Ultra-micro Grain Carbide Heads with Carbide & Steel Holders

- ▶ Exchangeable Modular heads for Finishing & Semi-Finishing



i-Smart

Y-Coated Modular type End Mill
(Carbide Heads with
Carbide & Steel Holders)

“The most cost reducing solution with various compatibility.”

- Efficient when changing tools, compared with conventional solid end mills
- Various selections of Square, Corner radius and Ball type with 2, 4, & 6 flutes
- Longer tool life based on YG-1’s advanced coating technology



EFFICIENCY

“You can just change the modular head spending one tenth of which you spent before on conventional solid tools.”

Tool exchanging time per piece

changing modular heads



About just 1 minute

changing conventional
Solid end mills



About 10 minutes

※ Tool changing time may change depending on workers.



VARIOUS SELECTIONS

“Seven different selections of modular heads fit in two different shanks.”



Straight Neck Shank

Taper Neck Shank



LONGER TOOL LIFE

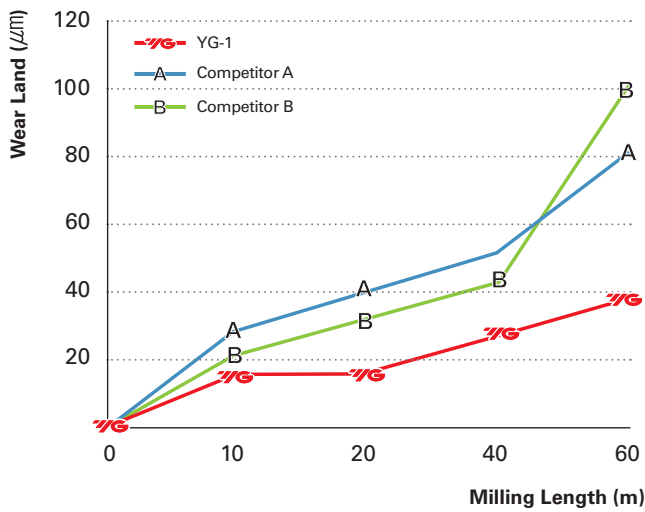


YG-1’s advanced coating technology applied;

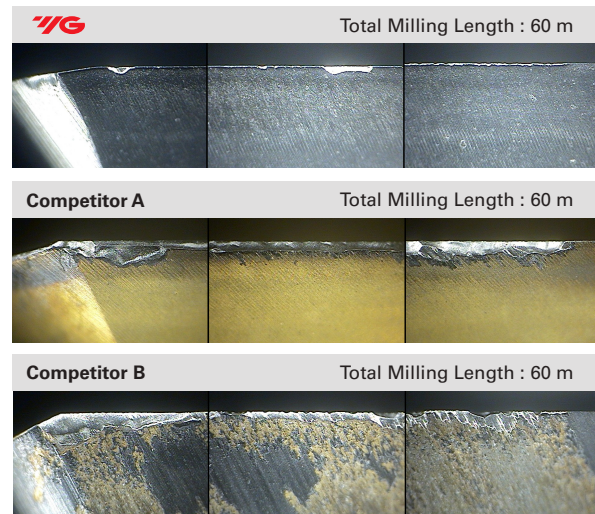
- Outstanding cutting abilities and wear resistance is made from new coating and new tool geometry.

High Tech Geometry applied;

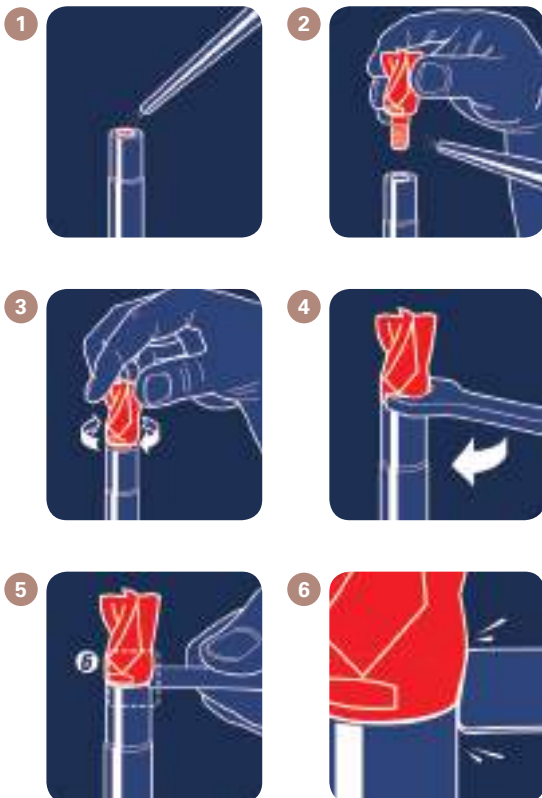
- Multiple Helix applied to minimize vibration when cutting and to increase wear resistance.
- Optimized edge preparation increasing tool life.



Cutting Edges



Cutting Conditions			
Tool	4 Flute Corner Radius, Ø16, R1.0	Feed per tooth	0.02 mm/tooth
Work Material	KP4M (HRc35 / DIN 1.2738 Improved)	Milling Method	Down & Side Cutting
Cutting Speed	155.82 m/min.	Milling Depth	Axial : 12 mm Radial : 0.8 mm
RPM	3100 rev./min.	Overhang / Coolant	77 mm / Wet Cut
Feed	280 mm/min.	Machine	Machining Center LCV 650



Step 1, 2 : Clean

Please be sure to remove dirt and debris on all adjoining surfaces before assembling. (air preferred)

Step 3, 4 : Assembly

Mount the modular head onto the shank by hand until it fits then use the supplied wrench to tighten.

Step 5, 6 : Final Check

Re-check that there is no gap.

Mill Diameter (ØD)	Clamping Torque [N·m]
Ø10	6.5
Ø12	6.5
Ø16	10.0
Ø20	12.0
Ø25	15.0
Ø30	20.0
Ø32	20.0

Notice
Please tighten the screw with designated torque, too much torque will damage the screw.

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			Min.	Max.	
XSEMD98		Y-COATED CARBIDE MODULAR HEAD 2 FLUTE BALL NOSE (Center Match)	Ø10	Ø32	5
XSEME59		Y-COATED CARBIDE MODULAR HEAD 3 FLUTE BALL NOSE (Center Match)	Ø10	Ø32	6
XSEME60		Y-COATED CARBIDE MODULAR HEAD 4 FLUTE BALL NOSE (Center Match)	Ø10	Ø32	7
XSEME36		Y-COATED CARBIDE MODULAR HEAD 4 FLUTE MULTIPLE HELIX	Ø10	Ø32	8
XSEME75		Y-COATED CARBIDE MODULAR HEAD 6 FLUTE 45° HELIX	Ø10	Ø32	9
XSEME01		Y-COATED CARBIDE MODULAR HEAD 4 FLUTE MULTIPLE HELIX CORNER RADIUS	Ø10	Ø32	10
XSEME68		Y-COATED CARBIDE MODULAR HEAD 6 FLUTE 45° HELIX CORNER RADIUS	Ø10	Ø32	12
ZMC		CARBIDE HOLDER - Straight Neck Type			13
ZMS		STEEL HOLDER - Straight Neck Type			14
ZMT		STEEL HOLDER - Taper Neck Type			15

ICON GUIDE



The tool is made of Ultra-micro Grain carbide.



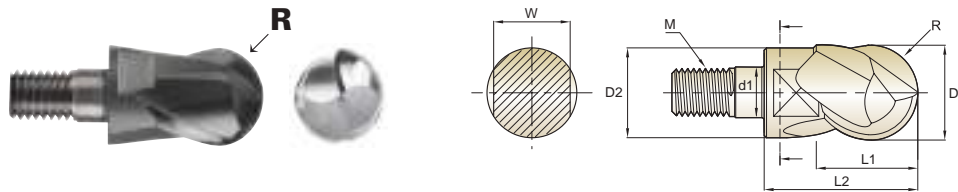
No. of Flute



Helix Angle



Cutting condition of tool see the page 000



XSEMD98 SERIES

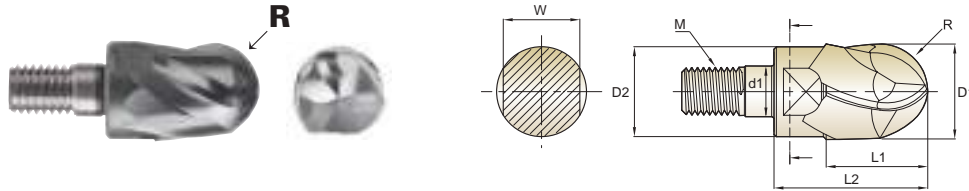


P. 16

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Wrench Width	Coupling Diameter	Thread
	R	D1	D2	L1	L2	W	d1	M
XSEMD98100	R5.0	10.0	9	10	17.5	8	6.5	M6
XSEMD98120	R6.0	12.0	11	12	20.5	10		
XSEMD98160	R8.0	16.0	15	16	25.5	13	8.5	M8
XSEMD98200	R10.0	20.0	19	20	30	17	10.5	M10
XSEMD98250	R12.5	25.0	24	25	37	22	12.5	M12
XSEMD98300	R15.0	30.0	29	30	43	27	16.5	M16
XSEMD98320	R16.0	32.0	31	32	45	27		

Radius Tolerance (mm)	Mill Dia. Tolerance (mm)
± 0.010	0~-0.015



XSEME59 SERIES

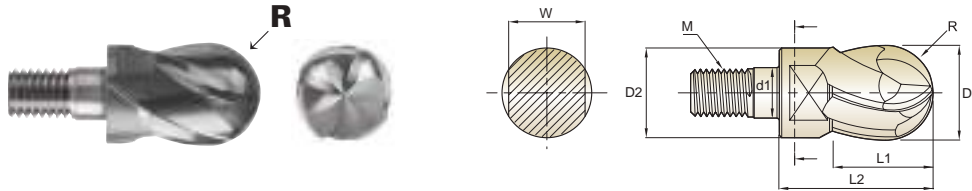


P. 16

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Wrench Width	Coupling Diameter	Thread
	R	D1	D2	L1	L2	W	d1	M
XSEME59100	R5.0	10.0	9	10	17.5	8	6.5	M6
XSEME59120	R6.0	12.0	11	12	20.5	10		
XSEME59160	R8.0	16.0	15	16	25.5	13	8.5	M8
XSEME59200	R10.0	20.0	19	20	30	17	10.5	M10
XSEME59250	R12.5	25.0	24	25	37	22	12.5	M12
XSEME59300	R15.0	30.0	29	30	43	27	16.5	M16
XSEME59320	R16.0	32.0	31	32	45	27		

Radius Tolerance (mm)	Mill Dia. Tolerance (mm)
± 0.010	0~-0.02



XSEME60 SERIES



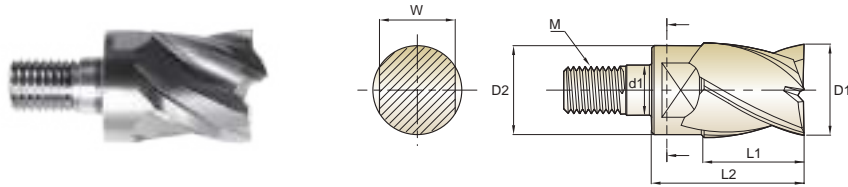
P. 17

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Wrench Width	Coupling Diameter	Thread
	R	D1	D2	L1	L2	W	d1	M
XSEME60100	R5.0	10.0	9	10	17.5	8	6.5	M6
XSEME60120	R6.0	12.0	11	12	20.5	10		
XSEME60160	R8.0	16.0	15	16	25.5	13	8.5	M8
XSEME60200	R10.0	20.0	19	20	30	17	10.5	M10
XSEME60250	R12.5	25.0	24	25	37	22	12.5	M12
XSEME60300	R15.0	30.0	29	30	43	27	16.5	M16
XSEME60320	R16.0	32.0	31	32	45	27		

Radius Tolerance (mm)	Mill Dia. Tolerance (mm)
± 0.010	0~-0.02

Milling



XSEME36 SERIES



P. 17

Unit : mm

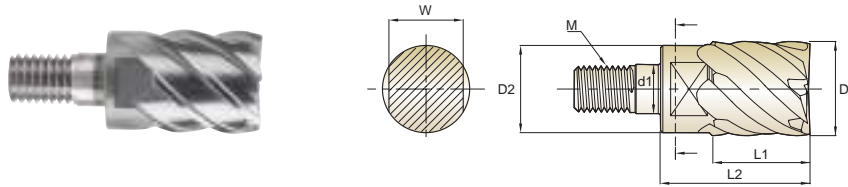
EDP No.	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Wrench Width	Coupling Diameter	Thread
	D1	D2	L1	L2	W	d1	M
XSEME36100	10.0	9	10	17.5	8	6.5	M6
XSEME36120	12.0	11	12	20.5	10		
XSEME36160	16.0	15	16	25.5	13	8.5	M8
XSEME36200	20.0	19	20	30	17	10.5	M10
XSEME36250	25.0	24	25	37	22	12.5	M12
XSEME36300	30.0	29	30	43	27	16.5	M16
XSEME36320	32.0	31	32	45	27		

Mill Dia. Tolerance (mm)

0~-0.03

Y-COATED CARBIDE MODULAR HEAD
6 FLUTE 45° HELIX

i-Smart
 Modular type



XSEME75 SERIES



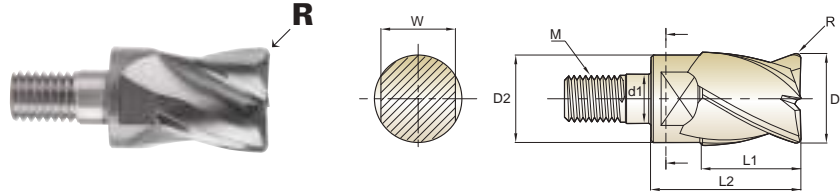
P. 18

Unit : mm

EDP No.	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Wrench Width	Coupling Diameter	Thread
	D1	D2	L1	L2	W	d1	M
XSEME75100	10.0	9	10	17.5	8	6.5	M6
XSEME75120	12.0	11	12	20.5	10		
XSEME75160	16.0	15	16	25.5	13	8.5	M8
XSEME75200	20.0	19	20	30	17	10.5	M10
XSEME75250	25.0	24	25	37	22	12.5	M12
XSEME75300	30.0	29	30	43	27	16.5	M16
XSEME75320	32.0	31	32	45	27		

Mill Dia. Tolerance (mm)
0~-0.03

Milling



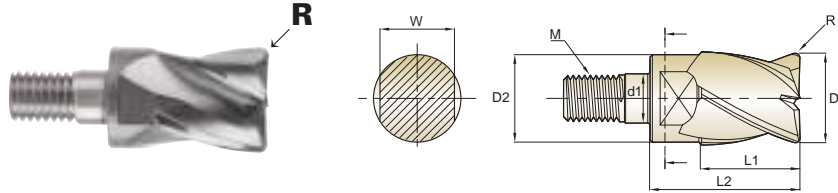
XSEME01 SERIES



Unit : mm

EDP No.	Corner Radius	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Wrench Width	Coupling Diameter	Thread
	R	D1	D2	L1	L2	W	d1	M
XSEME01100 010	R0.1	10.0	9	10	17.5	8	6.5	M6
XSEME01100 020	R0.2		9	10	17.5	8		
XSEME01100 030	R0.3		9	10	17.5	8		
XSEME01100 050	R0.5		9	10	17.5	8		
XSEME01100 100	R1.0		9	10	17.5	8		
XSEME01100 150	R1.5		9	10	17.5	8		
XSEME01100 200	R2.0		9	10	17.5	8		
XSEME01100 250	R2.5		9	10	17.5	8		
XSEME01100 300	R3.0		9	10	17.5	8		
XSEME01100 400	R4.0		9	10	17.5	8		
XSEME01120 010	R0.1	12.0	11	12	20.5	10	6.5	M6
XSEME01120 020	R0.2		11	12	20.5	10		
XSEME01120 030	R0.3		11	12	20.5	10		
XSEME01120 050	R0.5		11	12	20.5	10		
XSEME01120 100	R1.0		11	12	20.5	10		
XSEME01120 150	R1.5		11	12	20.5	10		
XSEME01120 200	R2.0		11	12	20.5	10		
XSEME01120 250	R2.5		11	12	20.5	10		
XSEME01120 300	R3.0		11	12	20.5	10		
XSEME01120 400	R4.0		11	12	20.5	10		
XSEME01120 500	R5.0	11	12	20.5	10	8.5	M8	
XSEME01160 050	R0.5	16.0	15	16	25.5			13
XSEME01160 100	R1.0		15	16	25.5			13
XSEME01160 150	R1.5		15	16	25.5			13
XSEME01160 200	R2.0		15	16	25.5	13		

▶ NEXT PAGE



XSEME01 SERIES



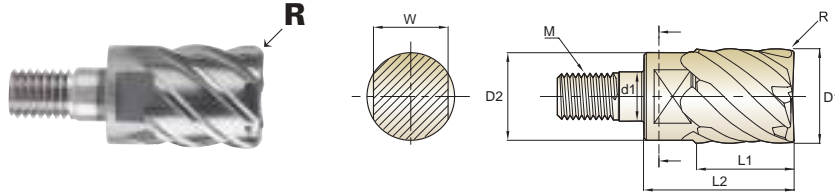
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Unit : mm

EDP No.	Corner Radius	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Wrench Width	Coupling Diameter	Thread
	R	D1	D2	L1	L2	W	d1	M
XSEME01200 050	R0.5	20.0	19	20	30	17	10.5	M10
XSEME01200 100	R1.0		19	20	30	17		
XSEME01200 150	R1.5		19	20	30	17		
XSEME01200 200	R2.0		19	20	30	17		
XSEME01250 050	R0.5	25.0	24	25	37	22	12.5	M12
XSEME01250 100	R1.0		24	25	37	22		
XSEME01250 150	R1.5		24	25	37	22		
XSEME01250 200	R2.0		24	25	37	22		
XSEME01300 050	R0.5	30.0	29	30	43	27	16.5	M16
XSEME01300 100	R1.0		29	30	43	27		
XSEME01300 150	R1.5		29	30	43	27		
XSEME01300 200	R2.0		29	30	43	27		
XSEME01320 050	R0.5	32.0	31	32	45	27	16.5	M16
XSEME01320 100	R1.0		31	32	45	27		
XSEME01320 150	R1.5		31	32	45	27		
XSEME01320 200	R2.0		31	32	45	27		

Corner Radius Tolerance (mm)	Mill Dia. Tolerance (mm)
± 0.02	0~-0.03

Milling



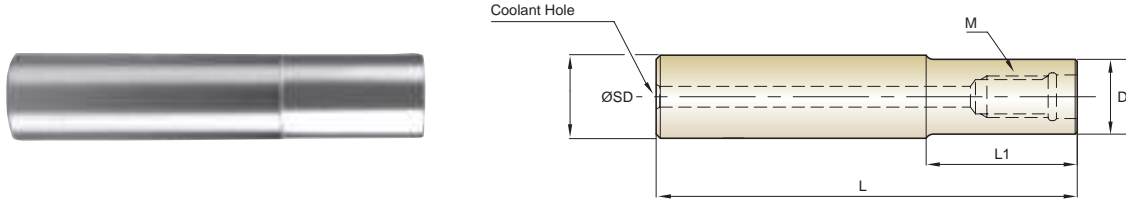
XSEME68 SERIES



Unit : mm

EDP No.	Corner Radius	Mill Diameter	Neck Diameter	Length of Cut	Length Below Shank	Wrench Width	Coupling Diameter	Thread
	R	D1	D2	L1	L2	W	d1	M
XSEME68100 030	R0.3	10.0	9	10	17.5	8	6.5	M6
XSEME68100 050	R0.5		9	10	17.5	8		
XSEME68100 100	R1.0		9	10	17.5	8		
XSEME68120 030	R0.3	12.0	11	12	20.5	10	6.5	M6
XSEME68120 050	R0.5		11	12	20.5	10		
XSEME68120 100	R1.0		11	12	20.5	10		
XSEME68160 050	R0.5	16.0	15	16	25.5	13	8.5	M8
XSEME68160 100	R1.0		15	16	25.5	13		
XSEME68160 150	R1.5		15	16	25.5	13		
XSEME68160 200	R2.0		15	16	25.5	13		
XSEME68200 050	R0.5	20.0	19	20	30	17	10.5	M10
XSEME68200 100	R1.0		19	20	30	17		
XSEME68200 150	R1.5		19	20	30	17		
XSEME68200 200	R2.0		19	20	30	17		
XSEME68250 050	R0.5	25.0	24	25	37	22	12.5	M12
XSEME68250 100	R1.0		24	25	37	22		
XSEME68250 150	R1.5		24	25	37	22		
XSEME68250 200	R2.0		24	25	37	22		
XSEME68300 050	R0.5	30.0	29	30	43	27	16.5	M16
XSEME68300 100	R1.0		29	30	43	27		
XSEME68300 150	R1.5		29	30	43	27		
XSEME68300 200	R2.0		29	30	43	27		
XSEME68320 050	R0.5	32.0	31	32	45	27	16.5	M16
XSEME68320 100	R1.0		31	32	45	27		
XSEME68320 150	R1.5		31	32	45	27		
XSEME68320 200	R2.0		31	32	45	27		

Comer Radius Tolerance (mm)	Mill Dia. Tolerance (mm)
± 0.015	0~-0.03



ZMC SERIES

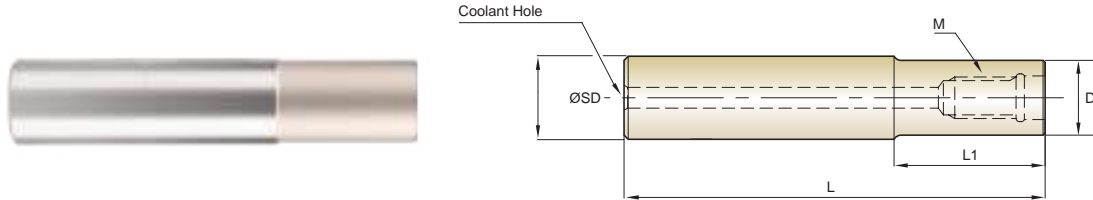
Straight Neck Type

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Overall Length	Neck Length	Neck Diameter	Thread Size	Wrench No.	Coolant Hole
		SD	L	L1	D	M		
ZMC1001100	10.0	10.0	70	20	9.5	M6	SPIS0810	Ø2
ZMC1002100			100	40				
ZMC1003100			130	70				
ZMC1201120	12.0	12.0	80	20	11.5	M6	SPIS0810	Ø2
ZMC1202120			100	40				
ZMC1203120			130	70				
ZMC1601160	16.0	16.0	100	40	15.5	M8	SPIS1300	Ø3
ZMC1602160			150	80				
ZMC1603160			200	120				
ZMC2001200	20.0	20.0	100	40	19.5	M10	SPIS1700	Ø4
ZMC2002200			150	80				
ZMC2003200			200	120				
ZMC2004200			250	160				
ZMC2501250	25.0	25.0	150	70	24.3	M12	SPIS2200	Ø5
ZMC2502250			200	100				
ZMC2503250			250	150				
ZMC2504250			300	200				
ZMC3001320	30.0 / 32.0	32.0	150	70	29.0	M16	SPIS2700	Ø6
ZMC3002320			200	120				
ZMC3003320			250	150				
ZMC3004320			300	200				
ZMC3005320			350	250				

▶ The wrench(1pc) for the relevant item is included.
If more is needed, available for sale.

▶ Please refer to the wrench table on page 14.



ZMS SERIES

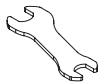




Straight Neck Type

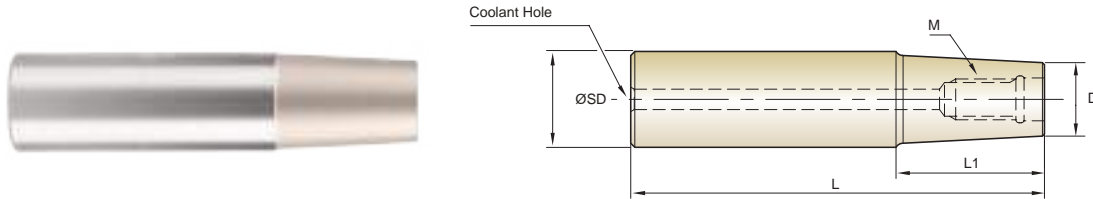
Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Overall Length	Neck Length	Neck Diameter	Thread Size	Wrench No.	Coolant Hole
		SD	L	L1	D	M		
ZMS1001100	10.0	10.0	70.0	20.0	9.0	M6	SPIS0810	Ø3
ZMS1201120	12.0	12.0	90.0	30.0	11.0	M6		Ø3
ZMS1601160	16.0	16.0	100.0	30.0	15.0	M8	SPIS1300	Ø4
ZMS2001200	20.0	20.0	100.0	30.0	19.0	M10	SPIS1700	Ø5
ZMS2501250	25.0	25.0	115.0	40.0	24.0	M12	SPIS2200	Ø5
ZMS3001320	30.0 / 32.0	32.0	125.0	40.0	29.0	M16	SPIS2700	Ø6

► The wrench(1pc) for the relevant item is included.
If more is needed, available for sale.

Wrench

Model	Wrench No.	Wrench Width	Mill Diameter	Clamping Torque [N·m]
	SPIS0810	8	Ø10.0	6.5
		10	Ø12.0	6.5
	SPIS1300	13	Ø16.0	10
	SPIS1700	17	Ø20.0	12
	SPIS2200	22	Ø25.0	15
	SPIS2700	27	Ø30.0 Ø32.0	20



ZMT SERIES






Taper Neck Type

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Overall Length	Neck Length	Neck Diameter	Thread Size	Wrench No.	Coolant Hole
		SD	L	L1	D	M		
ZMT1001120	10.0	12.0	100.0	50.0	9.0	M6	SPIS0810	Ø3
ZMT1201160	12.0	16.0	130.0	70.0	11.0	M6		Ø3
ZMT1601200	16.0	20.0	150.0	90.0	15.0	M8	SPIS1300	Ø4
ZMT2001250	20.0	25.0	170.0	100.0	19.0	M10	SPIS1700	Ø5
ZMT2501320	25.0	32.0	200.0	110.0	24.0	M12	SPIS2200	Ø5
ZMT3001320	30.0 / 32.0	32.0	200.0	110.0	29.0	M16	SPIS2700	Ø6

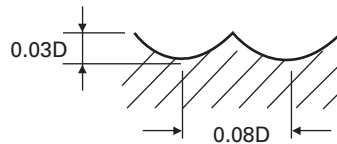
► The wrench(1pc) for the relevant item is included.
If more is needed, available for sale.

Wrench

Model	Wrench No.	Wrench Width	Mill Diameter	Clamping Torque [N·m]
	SPIS0810	8	Ø10.0	6.5
		10	Ø12.0	6.5
	SPIS1300	13	Ø16.0	10
	SPIS1700	17	Ø20.0	12
	SPIS2200	22	Ø25.0	15
	SPIS2700	27	Ø30.0 Ø32.0	20

XSEMD98 - 2 FLUTE BALL NOSE (Center Match)

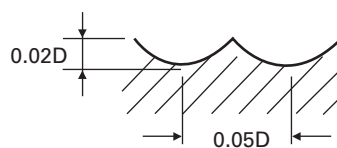
Material	P											
	Non-Alloyed Steels Alloy Steels Cast Iron				Alloy Steels Heat Resistant Steels				Hardened Steels			
Hardness	~ HRC35				HRC35 ~ HRC45				HRC45 ~ HRC55			
Strength	~ 1100N/mm ²				1100 ~ 1500N/mm ²				1500 ~ 2000N/mm ²			
Diameter	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
10.0	5580	2220	175	0.199	5340	1860	168	0.174	4500	1440	141	0.160
12.0	4170	1770	157	0.212	4000	1500	151	0.188	3360	1140	127	0.170
16.0	3340	1590	168	0.238	3210	1320	161	0.206	2700	1020	136	0.189
20.0	2670	1410	168	0.264	2580	1170	162	0.227	2160	900	136	0.208
25.0	2130	1150	167	0.270	2060	950	162	0.231	1730	730	136	0.211
30.0	1770	1060	167	0.299	1720	860	162	0.250	1440	660	136	0.229
32.0	1660	995	167	0.300	1610	805	162	0.250	1350	620	136	0.230



RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth

XSEME59 - 3 FLUTE BALL NOSE (Center Match)

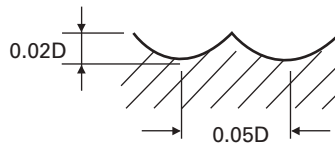
Material	P											
	Non-Alloyed Steels Alloy Steels Cast Iron				Alloy Steels Heat Resistant Steels				Hardened Steels			
Strength	~ 1100N/mm ²				1100 ~ 1500N/mm ²				1500 ~ 2000N/mm ²			
Diameter	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
10	9720	5870	305	0.201	8190	4130	257	0.168	6620	3100	208	0.156
12	8150	5490	307	0.225	6830	3830	257	0.187	5520	2870	208	0.173
16	6100	4280	307	0.234	5110	3050	257	0.199	4140	2240	208	0.180
20	4880	3490	307	0.238	4090	2560	257	0.209	3310	1890	208	0.190
25	3910	2910	307	0.248	3270	2150	257	0.219	2650	1590	208	0.200
30	3260	2530	307	0.259	2730	1880	257	0.230	2210	1390	208	0.210
32	3050	2450	307	0.268	2560	1800	257	0.234	2070	1370	208	0.221



RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth

XSEME60 - 4 FLUTE BALL NOSE (Center Match)

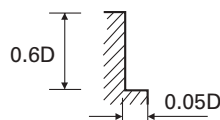
Material	P											
	Non-Alloyed Steels Alloy Steels Cast Iron				Alloy Steels Heat Resistant Steels				Hardened Steels			
Strength	~ 1100N/mm ²				1100 ~ 1500N/mm ²				1500 ~ 2000N/mm ²			
Diameter	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
10	10850	6430	341	0.148	9100	4590	286	0.126	7350	3450	231	0.117
12	9050	5960	341	0.165	7590	4260	286	0.140	6130	3190	231	0.130
16	6780	4750	341	0.175	5680	3390	286	0.149	4600	2490	231	0.135
20	5430	3880	341	0.179	4550	2840	286	0.156	3680	2100	231	0.143
25	4340	3230	341	0.186	3640	2390	286	0.164	2940	1760	231	0.150
30	3620	2810	341	0.194	3030	2090	286	0.172	2450	1540	231	0.157
32	3390	2720	341	0.201	2840	2000	286	0.176	2300	1520	231	0.165



RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth

XSEME36 - 4 FLUTE MULTIPLE HELIX

Material	P												M			
	Non-Alloyed Steels Alloy Steels Cast Iron				Alloy Steels Heat Resistant Steels				Hardened Steels				Stainless Steels			
Hardness	~ HRc35				HRc35 ~ HRc45				HRc45 ~ HRc55							
Strength	~ 1100N/mm ²				1100 ~ 1500N/mm ²				1500 ~ 2000N/mm ²							
Diameter	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
10.0	4080	640	128	0.039	2500	300	79	0.030	1700	90	53	0.013	2100	300	66	0.036
12.0	3430	545	129	0.040	2100	250	79	0.030	1450	80	55	0.014	1700	240	64	0.035
16.0	2750	440	138	0.040	1700	205	85	0.030	1130	60	57	0.013	1380	200	69	0.036
20.0	2100	335	132	0.040	1330	160	84	0.030	850	40	53	0.012	1050	150	66	0.036
25.0	1700	265	134	0.039	1050	130	82	0.031	680	30	53	0.011	850	120	67	0.035
30.0	1420	230	134	0.040	870	110	82	0.032	560	25	53	0.011	710	100	67	0.035
32.0	1330	215	134	0.040	820	105	82	0.032	530	25	53	0.012	670	95	67	0.035



RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth

XSEME75 - 6 FLUTE 45° HELIX

NORMAL SPEED

Material	P											
	Non-Alloyed Steels Alloy Steels Cast Iron				Alloy Steels Heat Resistant Steels				Hardened Steels			
Hardness	~ HRc35				HRc35 ~ HRc45				HRc45 ~ HRc55			
Strength	~ 1100N/mm ²				1100 ~ 1500N/mm ²				1500 ~ 2000N/mm ²			
Diameter	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
10.0	3530	2100	111	0.099	2435	1370	76	0.094	1050	210	33	0.033
12.0	2980	1765	112	0.099	2100	1160	79	0.092	880	180	33	0.034
16.0	2205	1325	111	0.100	1555	880	78	0.094	670	130	34	0.032
20.0	1765	1060	111	0.100	1220	690	77	0.094	525	110	33	0.035
25.0	1410	845	111	0.100	980	555	77	0.094	420	85	33	0.034
30.0	1180	710	111	0.100	820	460	77	0.093	350	75	33	0.036
32.0	1100	660	111	0.100	765	430	77	0.094	330	70	33	0.035

0.8D
0.1D

0.8D
0.05D

0.6D
0.05D

RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth

HIGH SPEED

Material	P							
	Non-Alloyed Steels Alloy Steels Cast Iron				Hardened Steels			
Hardness	~ HRc50				HRc50~ HRc60			
Strength	1750N/mm ²				1750 ~ 2080N/mm ²			
Diameter	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
10.0	10480	5990	329	0.095	5290	3050	166	0.096
12.0	8820	5040	333	0.095	4410	2520	166	0.095
16.0	6615	3780	333	0.095	3320	1890	167	0.095
20.0	5290	3050	332	0.096	2645	1470	166	0.093
25.0	4230	2400	332	0.095	2114	1200	166	0.095
30.0	3520	2000	332	0.095	1761	1000	166	0.095
32.0	3300	1890	332	0.095	1651	940	166	0.095

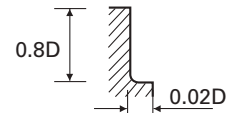
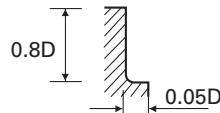
0.6D
0.05D

0.4D
0.05D

RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth

XSEME01 - 4 FLUTE MULTIPLE HELIX CORNER RADIUS

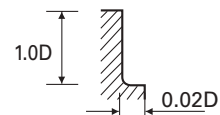
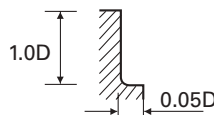
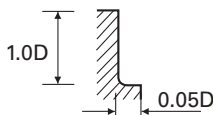
Material	P											
	Non-Alloyed Steels Alloy Steels Cast Iron				Alloy Steels Heat Resistant Steels				Hardened Steels			
Hardness	~ HRc35				HRc35 ~ HRc45				HRc45 ~ HRc55			
Strength	~ 1100N/mm ²				1100 ~ 1500N/mm ²				1500 ~ 2000N/mm ²			
Diameter	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
10.0	5040	460	158	0.023	3280	360	103	0.027	2020	170	63	0.021
12.0	4120	360	155	0.022	2780	320	105	0.029	1680	140	63	0.021
16.0	3100	280	156	0.023	2100	230	106	0.027	1280	115	64	0.022
20.0	2520	230	158	0.023	1640	180	103	0.027	1000	90	63	0.023
25.0	1990	180	156	0.023	1340	145	105	0.027	800	75	63	0.023
30.0	1650	150	156	0.023	1110	120	105	0.027	670	65	63	0.024
32.0	1550	140	156	0.023	1040	110	105	0.026	630	60	63	0.024



RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth

XSEME68 - 6 FLUTE 45° HELIX CORNER RADIUS

Material	P											
	Non-Alloyed Steels Alloy Steels Cast Iron				Alloy Steels Heat Resistant Steels				Hardened Steels			
Hardness	~ HRc35				HRc35 ~ HRc45				HRc45 ~ HRc55			
Strength	~ 1100N/mm ²				1100 ~ 1500N/mm ²				1500 ~ 2000N/mm ²			
Diameter	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz	RPM	FEED	Vc	Fz
10.0	9600	2940	302	0.051	9300	1370	292	0.025	5700	210	179	0.006
12.0	7800	2700	294	0.058	7500	1160	283	0.026	4800	180	181	0.006
16.0	6000	2400	302	0.067	5820	880	293	0.025	3600	130	181	0.006
20.0	4800	2010	302	0.070	4680	690	294	0.025	2880	110	181	0.006
25.0	3850	1615	302	0.070	3740	600	294	0.027	2305	90	181	0.007
30.0	3200	1440	302	0.075	3120	540	294	0.029	1920	85	181	0.007
32.0	3000	1350	302	0.075	2920	525	294	0.030	1800	80	181	0.007



RPM = rev./min.
FEED = mm/min.
Vc = m/min.
Fz = mm/tooth



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Note The new address above has currently been updated since Korean new postal standard was valid from 2014.
Be noticed that the physical Headquarter location is NOT changed.

You Tube  

Tool specifications are subject to change without prior notice.