

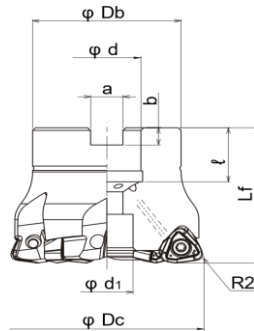
# Multi EXTREME

# EXM/MEX Type

Both high feed machining and Shoulder milling are possible by using different holder with one type of insert.

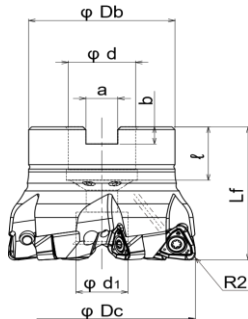
## EXM-HF/EXM-SM Type

■ EXM-HF Type for high feed cutting



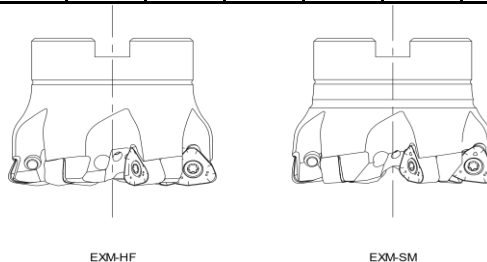
Cat. No.	Stock	No. of flutes	Dimensions(mm)								Parts	
			$\Phi Dc$	$L_f$	$\Phi Db$	$\Phi d$	$\Phi d_1$	a	b	$\ell$	Clamp Screw	Wrench
EXM-5050R-HF-22	●	5	50	50	40	22	16.5	10.4	6.3	20	TSW-410H	A-15
EXM-5052R-HF-22	●	5	52	50	40	22	16.5	10.4	6.3	20	TSW-410H	A-15
EXM-6063R-HF-22	●	6	63	50	48	22	17	10.4	6.3	20	TSW-410H	A-15

■ EXM-SM Type for sholder milling



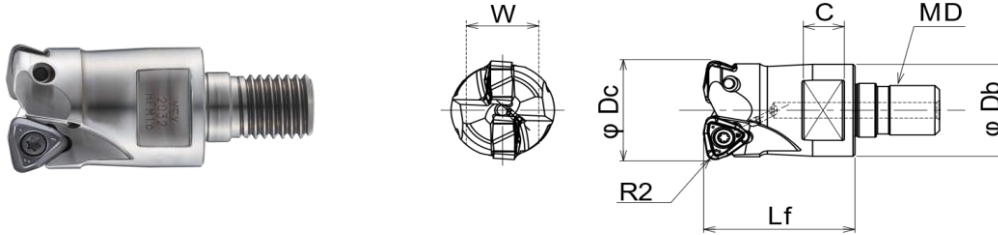
Cat. No.	Stock	No. of flutes	Dimensions(mm)								Parts	
			$\Phi Dc$	$L_f$	$\Phi Db$	$\Phi d$	$\Phi d_1$	a	b	$\ell$	Clamp Screw	Wrench
EXM-5050R-SM-22	●	5	50	50	40	22	16.5	10.4	6.3	20	TSW-410H	A-15
EXM-5052R-SM-22	●	5	52	50	40	22	16.5	10.4	6.3	20	TSW-410H	A-15
EXM-6063R-SM-22	●	6	63	50	48	22	17	10.4	6.3	20	TSW-410H	A-15

Difference of looking in HF type and SM type.



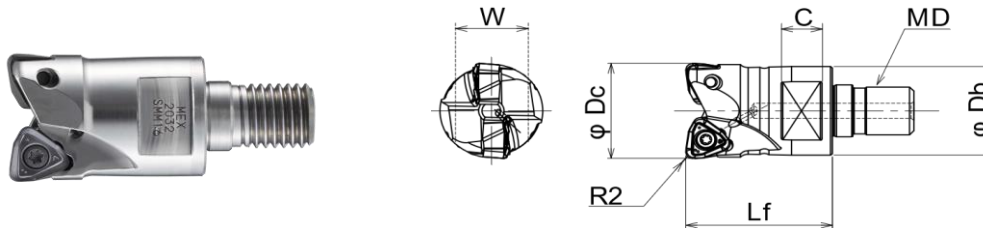
## MEX-HF/MEX-SM Type

### ■ MEX-HF Type modular head for high feed cutting



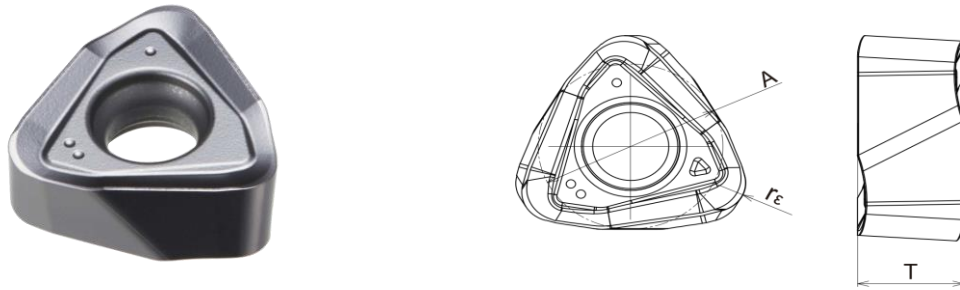
Cat. No.	Stock	No. of flutes	Dimensions(mm)						Parts	
			φDc	Lf	φDb	MD	C	W	Clamp Screw	Wrench
MEX-2032-HF-M16	●	2	32	43	29	M16	12	22	TSW-410H	A-15
MEX-3035-HF-M16	●	3	35	43	29	M16	12	22	TSW-410H	A-15
MEX-4040-HF-M16	●	4	40	43	32	M16	14	26	TSW-410H	A-15
MEX-4042-HF-M16	●	4	42	43	32	M16	14	26	TSW-410H	A-15

### ■ MEX-SM Type modular head for sholder milling



Cat. No.	Stock	No. of flutes	Dimensions(mm)						Parts	
			φDc	Lf	φDb	MD	C	W	Clamp Screw	Wrench
MEX-2032-SM-M16	●	2	32	43	29	M16	12	22	TSW-410H	A-15
MEX-3035-SM-M16	●	3	35	43	29	M16	12	22	TSW-410H	A-15
MEX-4040-SM-M16	●	4	40	43	32	M16	14	26	TSW-410H	A-15
MEX-4042-SM-M16	●	4	42	43	32	M16	14	26	TSW-410H	A-15

■ Inserts



Cat. No.	Tolerance	Dimensions(mm)				PVD Coated	
		A	T	B	rε	JC8050	JC8118
WNMU070620ZER-PM	M	8.5	6.4	2	2	●	●

10 inserts par case.

■ How to recognize the grade of insert



JC8050



JC8118

## EXM-HF Type

### RECOMMENDED CUTTING CONDITIONS/ EXM-HF FACEMILL

Work Materials	Insert Grades	Tool dia. (mm)									
		50/52					63				
		No. of teeth 5N					No. of teeth 6N				
		ℓ (mm)	ap (mm)	ae (mm)	n (min <sup>-1</sup> )	Vf (mm/min)	ℓ (mm)	ap (mm)	ae (mm)	n (min <sup>-1</sup> )	Vf (mm/min)
Carbon steel S50C, S55C (C50,C55) Below 250HB	JC8050	~150	1.5	~33	950	7130	~150	1.5	~46	760	6840
		200	1.2	~33	950	6180	200	1.2	~46	760	5930
		250	1	~33	830	5400	250	1	~46	660	5150
		300	0.7	~33	760	4180	300	0.7	~46	610	4030
		350	-	-	-	-	350	0.5	~46	610	4030
Die steel SKD61,SKD11 (1.2344,1.2379) Below 255HB	JC8050	~150	1.5	~33	830	6230	~150	1.5	~46	660	5940
		200	1.2	~33	830	5400	200	1.2	~46	660	5150
		250	1	~33	700	4550	250	1	~46	560	4370
		300	0.7	~33	640	3520	300	0.7	~46	510	3370
		350	-	-	-	-	350	0.5	~46	510	3370
Mold steel HPM7, PX5, P20 (1.2311,P20) 30~36HRC	JC8118	~150	1.5	~33	830	6230	~150	1.5	~46	660	5940
		200	1.2	~33	830	5400	200	1.2	~46	660	5150
		250	1	~33	700	4550	250	1	~46	560	4370
		300	0.7	~33	640	3520	300	0.7	~46	510	3370
		350	-	-	-	-	350	0.5	~46	510	3370
Mold Steel NAK80, HPM1, P21 (1.2311,P21) 38~43HRC	JC8118	~150	1.2	~33	700	4550	~150	1.2	~46	560	4370
		200	1	~33	700	3850	200	1	~46	560	3700
		250	0.7	~33	570	3140	250	0.7	~46	450	2970
		300	0.5	~33	510	2550	300	0.5	~46	400	2400
		350	-	-	-	-	350	-	-	-	-
Hardened die steel SKD61, DAC, DHA (1.2344,1.2379) 42~52HRC	JC8118	~150	1	~33	570	2850	~150	1	~46	450	2700
		200	0.8	~33	570	2570	200	0.8	~46	450	2430
		250	0.6	~33	510	2300	250	0.6	~46	400	2160
		300	0.4	~33	450	1800	300	0.4	~46	350	1680
		350	-	-	-	-	350	-	-	-	-
Cast iron FC250 (GG25) 160~260HB	JC8118	~150	2	~33	950	7130	~150	2	~46	760	6840
		200	1.5	~33	950	6180	200	1.5	~46	760	5930
		250	1	~33	830	5400	250	1	~46	660	5150
		300	0.7	~33	760	4180	300	0.7	~46	610	4030
		350	-	-	-	-	350	0.5	~46	610	4030
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	~150	1.5	~33	830	6230	~150	1.5	~46	660	5940
		200	1.2	~33	830	5400	200	1.2	~46	660	5150
		250	1	~33	700	4550	250	1	~46	560	4370
		300	0.7	~33	640	3520	300	0.7	~46	510	3370
		350	-	-	-	-	350	0.5	~46	510	3370
Stainless steel Austenitic SUS304,316,317(17Cr) (AISI 304,316,317)	JC8050	~150	1.2	~33	700	4550	~150	1.2	~46	560	4370
		200	1	~33	700	3850	200	1	~46	560	3700
		250	0.7	~33	570	3140	250	0.7	~46	450	2970
		300	0.5	~33	510	2550	300	0.5	~46	400	2400
		350	-	-	-	-	350	0.4	~46	400	2400
Stainless steel Ferritic/Martensitic SUS403,420J2,430(13Cr) (AISI 403,420J2,430)	JC8118	~150	1.5	~33	830	5400	~150	1.5	~46	660	5150
		200	1.2	~33	830	4570	200	1.2	~46	660	4360
		250	1	~33	700	3850	250	1	~46	560	3700
		300	0.7	~33	640	3200	300	0.7	~46	510	3060
		350	-	-	-	-	350	0.5	~46	510	3060

■ RECOMMENDED CUTTING CONDITIONS/ MEX-HF MODULAR HEAD & MSN CARBIDE SHANK HOLDER

Work Materials	Insert Grades	Tool dia. (mm)									
		32					35				
		No. of teeth 2N					No. of teeth 3N				
		ℓ (mm)	ap (mm)	ae (mm)	n (min <sup>-1</sup> )	Vf (mm/min)	ℓ (mm)	ap (mm)	ae (mm)	n (min <sup>-1</sup> )	Vf (mm/min)
Carbon steel S50C, S55C (C50,C55) Below 250HB	JC8050	100	1	~14	1990	5970	100	1	~18	1820	8190
		150	0.8	~14	1990	5570	150	0.8	~18	1820	7640
		210	0.6	~14	1790	4650	210	0.6	~18	1640	6400
Die steel SKD61,SKD11 (1.2344,1.2379) Below 255HB	JC8050	100	1	~14	1790	5370	100	1	~18	1640	7380
		150	0.8	~14	1790	5010	150	0.8	~18	1640	6890
		210	0.6	~14	1590	4130	210	0.6	~18	1460	5690
Mold steel HPM7, PX5, P20 (1.2311,P20) 30~36HRC	JC8118	100	1	~14	1790	5370	100	1	~18	1640	7380
		150	0.8	~14	1790	5010	150	0.8	~18	1640	6890
		210	0.6	~14	1590	4130	210	0.6	~18	1460	5690
Mold Steel NAK80, HPM1, P21 (1.2311,P21) 38~43HRC	JC8118	100	0.8	~14	1290	3100	100	0.8	~18	1180	4250
		150	0.6	~14	1290	2840	150	0.6	~18	1180	3890
		210	0.4	~14	1090	2180	210	0.4	~18	1000	3000
Hardened die steel SKD61, DAC, DHA (1.2344,1.2379) 42~52HRC	JC8118	100	0.8	~14	990	1980	100	0.8	~18	910	2730
		150	0.6	~14	990	1780	150	0.6	~18	910	2460
		210	0.4	~14	800	1280	210	0.4	~18	730	1750
Cast iron FC250 (GG25) 160~260HB	JC8118	100	1.5	~14	1990	5970	100	1.5	~18	1820	8190
		150	1.2	~14	1990	5970	150	1.2	~18	1820	8190
		210	0.8	~14	1790	5010	210	0.8	~18	1640	6890
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	100	1	~14	1690	5070	100	1	~18	1550	6980
		150	0.8	~14	1690	4730	150	0.8	~18	1550	6510
		210	0.6	~14	1490	3870	210	0.6	~18	1360	5300
Stainless steel Austenitic SUS304,316,317(17Cr) (AISI 304,316,317)	JC8050	100	0.8	~14	1490	3580	100	0.8	~18	1360	4900
		150	0.6	~14	1490	3280	150	0.6	~18	1360	4490
		210	0.4	~14	1290	2580	210	0.4	~18	1180	3540
Stainless steel Ferritic/Martensitic SUS403,420J2,430(13Cr) (AISI 403,420J2,430)	JC8118	100	1	~14	1690	4060	100	1	~18	1550	5580
		150	0.8	~14	1690	3720	150	0.8	~18	1550	5120
		210	0.6	~14	1490	2980	210	0.6	~18	1360	4080

## MEX-HF Type

■ RECOMMENDED CUTTING CONDITIONS/ MEX-HF MODULAR HEAD & MSN CARBIDE SHANK HOLDER

Work Materials	Insert Grades	Tool dia. (mm)									
		40/42									
		No. of teeth 4N									
		$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)					
Carbon steel S50C, S55C (C50,C55) Below 250HB	JC8050	100	1	~23	1430	8580					
		150	0.8	~23	1430	8010					
		210	0.6	~23	1270	6600					
Die steel SKD61,SKD11 (1.2344,1.2379) Below 255HB	JC8050	100	1	~23	1270	7620					
		150	0.8	~23	1270	7110					
		210	0.6	~23	1110	5770					
Mold steel HPM7, PX5, P20 (1.2311,P20) 30~36HRC	JC8118	100	1	~23	1270	7620					
		150	0.8	~23	1270	7110					
		210	0.6	~23	1110	5770					
Mold Steel NAK80, HPM1, P21 (1.2311,P21) 38~43HRC	JC8118	100	0.8	~23	880	4220					
		150	0.6	~23	880	3870					
		210	0.4	~23	720	2880					
Hardened die steel SKD61, DAC, DHA (1.2344,1.2379) 42~52HRC	JC8118	100	0.8	~23	720	2880					
		150	0.6	~23	720	2590					
		210	0.4	~23	560	1790					
Cast iron FC250 (GG25) 160~260HB	JC8118	100	1.5	~23	1430	8580					
		150	1.2	~23	1430	8580					
		210	0.8	~23	1270	7110					
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	100	1	~23	1190	7140					
		150	0.8	~23	1190	6660					
		210	0.6	~23	1030	5360					
Stainless steel Austenitic SUS304,316,317(17Cr) (AISI 304,316,317)	JC8050	100	0.8	~23	1030	4940					
		150	0.6	~23	1030	4530					
		210	0.4	~23	880	3520					
Stainless steel Ferritic/Martensitic SUS403,420J2,430(13Cr) (AISI 403,420J2,430)	JC8118	100	1	~23	1190	5710					
		150	0.8	~23	1190	5240					
		210	0.6	~23	1030	4120					

■ RECOMMENDED CUTTING CONDITIONS/ EXM-SM FACEMILL FOR SHOULDER MILLING

Work Materials	Insert Grades	Tool dia. (mm)									
		50/52					63				
		No. of teeth 5N					No. of teeth 6N				
		$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)	$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)
Carbon steel S50C, S55C (C50,C55) Below 250HB	JC8050	~150	3	~15	1150	1730	~150	3	~15	910	1640
		200	2.5	~12	1150	1440	200	2.5	~12	910	1370
		250	1.5	~10	1020	1020	250	1.5	~10	810	970
Die steel SKD61,SKD11 (1.2344,1.2379) Below 255HB	JC8050	~150	3	~15	1020	1530	~150	3	~15	810	1460
		200	2.5	~12	1020	1280	200	2.5	~12	810	1220
		250	1.5	~10	890	890	250	1.5	~10	710	850
Mold steel HPM7, PX5, P20 (1.2311,P20) 30~36HRC	JC8118	~150	3	~15	1020	1530	~150	3	~15	810	1460
		200	2.5	~12	1020	1280	200	2.5	~12	810	1220
		250	1.5	~10	890	890	250	1.5	~10	710	850
Mold Steel NAK80, HPM1, P21 (1.2311,P21) 38~43HRC	JC8118	~150	3	~12	700	880	~150	3	~12	560	840
		200	2	~10	700	700	200	2	~10	560	670
		250	1	~8	640	480	250	1	~8	510	460
Hardened die steel SKD61, DAC, DHA (1.2344,1.2379) 42~52HRC	JC8118	~150	3	~10	570	430	~150	3	~10	450	410
		200	2	~8	570	340	200	2	~8	450	320
		250	1	~6	510	260	250	1	~6	400	240
Cast iron FC250 (GG25) 160~260HB	JC8118	~150	3	~18	1150	1730	~150	3	~18	910	1640
		200	2.5	~15	1150	1440	200	2.5	~15	910	1370
		250	2	~10	1020	1280	250	2	~10	810	1220
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	~150	3	~15	950	1430	~150	3	~15	760	1370
		200	2.5	~12	950	1190	200	2.5	~12	760	1140
		250	1	~10	830	420	250	1	~10	660	400
Stainless steel Austenitic SUS304,316,317(17Cr) (AISI 304,316,317)	JC8050	~150	3	~15	830	1040	~150	3	~15	660	990
		200	2	~12	830	830	200	2	~12	660	790
		250	1	~10	700	530	250	1	~10	560	500
Stainless steel Ferritic/Martensitic SUS403,420J2,430(13Cr) (AISI 403,420J2,430)	JC8118	~150	3	~15	950	1430	~150	3	~15	760	1370
		200	2.5	~12	950	1190	200	2.5	~12	760	1140
		250	1.5	~10	830	830	250	1.5	~10	660	790

## MEX-SM Type

■ RECOMMENDED CUTTING CONDITIONS

■ MEX-SM MODULAR HEAD & MSN CARBIDE SHANK HOLDER FOR SHOULDER MILLING

Work Materials	Insert Grades	Tool dia. (mm)									
		32					35				
		No. of teeth 2N					No. of teeth 3N				
		$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)	$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)
Carbon steel S50C, S55C (C50, C55) Below 250HB	JC8050	100	3	~10	1990	1000	100	3	~10	1820	1370
		150	2	~8	1990	800	150	2	~8	1820	1090
		210	1	~6	1790	540	210	1	~6	1640	740
Die steel SKD61, SKD11 (1.2344, 1.2379) Below 255HB	JC8050	100	3	~10	1790	900	100	3	~10	1640	1230
		150	2	~8	1790	720	150	2	~8	1640	980
		210	1	~6	1590	480	210	1	~6	1460	660
Mold steel HPM7, PX5, P20 (1.2311, P20) 30~36HRC	JC8118	100	3	~10	1790	900	100	3	~10	1640	1230
		150	2	~8	1790	720	150	2	~8	1640	980
		210	1	~6	1590	480	210	1	~6	1460	660
Mold Steel NAK80, HPM1, P21 (1.2311, P21) 38~43HRC	JC8118	100	2	~10	1290	520	100	2	~10	1180	710
		150	1.5	~8	1290	390	150	1.5	~8	1180	530
		210	1	~6	1090	220	210	1	~6	1000	300
Hardened die steel SKD61, DAC, DHA (1.2344, 1.2379) 42~52HRC	JC8118	100	1.5	~8	990	240	100	1.5	~8	910	330
		150	1	~6	990	200	150	1	~6	910	270
		210	-	-	-	-	210	-	-	-	-
Cast iron FC250 (GG25) 160~260HB	JC8118	100	3	~10	1990	1000	100	3	~10	1820	1370
		150	2.5	~8	1990	800	150	2.5	~8	1820	1090
		210	2	~6	1790	720	210	2	~6	1640	980
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	100	3	~10	1690	850	100	3	~10	1550	1160
		150	2	~8	1690	680	150	2	~8	1550	930
		210	1	~6	1490	450	210	1	~6	1360	610
Stainless steel Austenitic SUS304, 316, 317(17Cr) (AISI 304, 316, 317)	JC8050	100	2	~10	1490	600	100	2	~10	1360	820
		150	1.5	~8	1490	450	150	1.5	~8	1360	610
		210	1	~6	1290	260	210	1	~6	1180	350
Stainless steel Ferritic/Martensitic SUS403, 420J2, 430(13Cr) (AISI 403, 420J2, 430)	JC8118	100	3	~10	1690	850	100	3	~10	1550	1160
		150	2	~8	1690	680	150	2	~8	1550	930
		210	1	~6	1490	450	210	1	~6	1360	610



# MEX-SM Type



■ RECOMMENDED CUTTING CONDITIONS

■ MEX-SM MODULAR HEAD & MSN CARBIDE SHANK HOLDER FOR SHOULDER MILLING

Work Materials	Insert Grades	Tool dia. (mm)									
		40/42									
		No. of teeth 4N									
		$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)					
Carbon steel S50C, S55C (C50,C55) Below 250HB	JC8050	100	3	~12	1590	1590					
		150	2	~10	1590	1270					
		210	1	~8	1430	860					
Die steel SKD61,SKD11 (1.2344,1.2379) Below 255HB	JC8050	100	3	~12	1430	1430					
		150	2	~10	1430	1140					
		210	1	~8	1270	760					
Mold steel HPM7, PX5, P20 (1.2311,P20) 30~36HRC	JC8118	100	3	~12	1430	1430					
		150	2	~10	1430	1140					
		210	1	~8	1270	760					
Mold Steel NAK80, HPM1, P21 (1.2311,P21) 38~43HRC	JC8118	100	2	~12	1030	820					
		150	1.5	~10	1030	620					
		210	1	~8	880	350					
Hardened die steel SKD61, DAC, DHA (1.2344,1.2379) 42~52HRC	JC8118	100	1.5	~10	800	380					
		150	1	~8	800	320					
		210	-	-	-	-					
Cast iron FC250 (GG25) 160~260HB	JC8118	100	3	~12	1590	1590					
		150	2.5	~10	1590	1270					
		210	2	~8	1430	1140					
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	100	3	~12	1350	1350					
		150	2	~10	1350	1080					
		210	1	~8	1190	710					
Stainless steel Austenitic SUS304,316,317(17Cr) (AISI 304,316,317)	JC8050	100	2	~12	1190	950					
		150	1.5	~10	1190	710					
		210	1	~8	1030	410					
Stainless steel Ferritic/Martensitic SUS403,420J2,430(13Cr) (AISI 403,420J2,430)	JC8118	100	3	~12	1350	1350					
		150	2	~10	1350	1080					
		210	1	~8	1190	710					

# EXM-SM Type

## RECOMMENDED CUTTING CONDITIONS/ EXM-SM FACEMILL FOR FACE MILLING

Work Materials	Insert Grades	Tool dia. (mm)									
		50/52					63				
		No. of teeth 5N					No. of teeth 6N				
		$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)	$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)
Carbon steel S50C, S55C (C50,C55) Below 250HB	JC8050	~150	1.5	~46	950	1430	~150	1.5	~59	760	1370
		200	1.2	~46	950	1190	200	1.2	~59	760	1140
		250	1	~46	830	830	250	1	~59	660	790
Die steel SKD61,SKD11 (1.2344,1.2379) Below 255HB	JC8050	~150	1.5	~46	830	1250	~150	1.5	~59	660	1190
		200	1.2	~46	830	1040	200	1.2	~59	660	990
		250	1	~46	700	700	250	1	~59	560	670
Mold steel HPM7, PX5, P20 (1.2311,P20) 30~36HRC	JC8118	~150	1.5	~46	830	1250	~150	1.5	~59	660	1190
		200	1.2	~46	830	1040	200	1.2	~59	660	990
		250	1	~46	700	700	250	1	~59	560	670
Mold Steel NAK80, HPM1, P21 (1.2311,P21) 38~43HRC	JC8118	~150	1.2	~46	700	880	~150	1.2	~59	560	840
		200	1	~46	700	700	200	1	~59	560	670
		250	0.7	~46	570	430	250	0.7	~59	450	410
Hardened die steel SKD61, DAC, DHA (1.2344,1.2379) 42~52HRC	JC8118	~150	1	~46	570	430	~150	1	~59	450	410
		200	0.8	~46	570	340	200	0.8	~59	450	320
		250	0.6	~46	510	260	250	0.6	~59	400	240
Cast iron FC250 (GG25) 160~260HB	JC8118	~150	2	~46	950	1430	~150	2	~59	760	1370
		200	1.5	~46	950	1190	200	1.5	~59	760	1140
		250	1	~46	830	1040	250	1	~59	660	990
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	~150	1.5	~46	830	1250	~150	1.5	~59	660	1190
		200	1.2	~46	830	1040	200	1.2	~59	660	990
		250	1	~46	700	350	250	1	~59	560	340
Stainless steel Austenitic SUS304,316,317(17Cr) (AISI 304,316,317)	JC8050	~150	1.2	~46	700	880	~150	1.2	~59	560	840
		200	1	~46	700	700	200	1	~59	560	670
		250	0.7	~46	570	430	250	0.7	~59	450	410
Stainless steel Ferritic/Martensitic SUS403,420J2,430(13Cr) (AISI 403,420J2,430)	JC8118	~150	1.5	~46	830	1250	~150	1.5	~59	660	1190
		200	1.2	~46	830	1040	200	1.2	~59	660	990
		250	1	~46	700	700	250	1	~59	560	670

■ RECOMMENDED CUTTING CONDITIONS

■ MEX-SM MODULAR HEAD & MSN CARBIDE SHANK HOLDER FOR FACE MILLING

Work Materials	Insert Grades	Tool dia. (mm)									
		32					35				
		No. of teeth 2N					No. of teeth 3N				
		ℓ (mm)	ap (mm)	ae (mm)	n (min <sup>-1</sup> )	Vf (mm/min)	ℓ (mm)	ap (mm)	ae (mm)	n (min <sup>-1</sup> )	Vf (mm/min)
Carbon steel S50C, S55C (C50,C55) Below 250HB	JC8050	100	1	~28	1990	1190	100	1	~31	1820	1640
		150	0.8	~28	1990	1000	150	0.8	~31	1820	1370
		210	0.6	~28	1790	720	210	0.6	~31	1640	980
Die steel SKD61,SKD11 (1.2344,1.2379) Below 255HB	JC8050	100	1	~28	1790	1070	100	1	~31	1640	1480
		150	0.8	~28	1790	900	150	0.8	~31	1640	1230
		210	0.6	~28	1590	640	210	0.6	~31	1460	880
Mold steel HPM7, PX5, P20 (1.2311,P20) 30~36HRC	JC8118	100	1	~28	1790	1070	100	1	~31	1640	1480
		150	0.8	~28	1790	900	150	0.8	~31	1640	1230
		210	0.6	~28	1590	640	210	0.6	~31	1460	880
Mold Steel NAK80, HPM1, P21 (1.2311,P21) 38~43HRC	JC8118	100	0.8	~28	1290	650	100	0.8	~31	1180	890
		150	0.6	~28	1290	520	150	0.6	~31	1180	710
		210	0.4	~28	1090	330	210	0.4	~31	1000	450
Hardened die steel SKD61, DAC, DHA (1.2344,1.2379) 42~52HRC	JC8118	100	0.8	~28	990	300	100	0.8	~31	910	410
		150	0.6	~28	990	240	150	0.6	~31	910	330
		210	0.4	~28	800	160	210	0.4	~31	730	220
Cast iron FC250 (GG25) 160~260HB	JC8118	100	1.5	~28	1990	1190	100	1.5	~31	1820	1640
		150	1.2	~28	1990	1000	150	1.2	~31	1820	1370
		210	0.8	~28	1790	900	210	0.8	~31	1640	1230
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	100	1	~28	1690	1010	100	1	~31	1550	1400
		150	0.8	~28	1690	850	150	0.8	~31	1550	1160
		210	0.6	~28	1490	300	210	0.6	~31	1360	410
Stainless steel Austenitic SUS304,316,317(17Cr) (AISI 304,316,317)	JC8050	100	0.8	~28	1490	750	100	0.8	~31	1360	1020
		150	0.6	~28	1490	600	150	0.6	~31	1360	820
		210	0.4	~28	1290	390	210	0.4	~31	1180	530
Stainless steel Ferritic/Martensitic SUS403,420J2,430(13Cr) (AISI 403,420J2,430)	JC8118	100	1	~28	1690	1010	100	1	~31	1550	1400
		150	0.8	~28	1690	850	150	0.8	~31	1550	1160
		210	0.6	~28	1490	600	210	0.6	~31	1360	820

■ RECOMMENDED CUTTING CONDITIONS

■ MEX-SM MODULAR HEAD & MSN CARBIDE SHANK HOLDER FOR FACE MILLING

Work Materials	Insert Grades	Tool dia. (mm)									
		40/42									
		No. of teeth 4N									
		$\ell$ (mm)	$a_p$ (mm)	$a_e$ (mm)	$n$ ( $\text{min}^{-1}$ )	$V_f$ (mm/min)					
Carbon steel S50C, S55C (C50, C55) Below 250HB	JC8050	100	1	~36	1430	1720					
		150	0.8	~36	1430	1430					
		210	0.6	~36	1270	1020					
Die steel SKD61, SKD11 (1.2344, 1.2379) Below 255HB	JC8050	100	1	~36	1270	1520					
		150	0.8	~36	1270	1270					
		210	0.6	~36	1110	890					
Mold steel HPM7, PX5, P20 (1.2311, P20) 30~36HRC	JC8118	100	1	~36	1270	1520					
		150	0.8	~36	1270	1270					
		210	0.6	~36	1110	890					
Mold Steel NAK80, HPM1, P21 (1.2311, P21) 38~43HRC	JC8118	100	0.8	~36	880	880					
		150	0.6	~36	880	700					
		210	0.4	~36	720	430					
Hardened die steel SKD61, DAC, DHA (1.2344, 1.2379) 42~52HRC	JC8118	100	0.8	~36	720	430					
		150	0.6	~36	720	350					
		210	0.4	~36	560	220					
Cast iron FC250 (GG25) 160~260HB	JC8118	100	1.5	~36	1430	1720					
		150	1.2	~36	1430	1430					
		210	0.8	~36	1270	1270					
Nodular cast iron FCD700 (GGG70) 170~300HB	JC8118	100	1	~36	1190	1430					
		150	0.8	~36	1190	1190					
		210	0.6	~36	1030	410					
Stainless steel Austenitic SUS304, 316, 317(17Cr) (AISI 304, 316, 317)	JC8050	100	0.8	~36	1030	1030					
		150	0.6	~36	1030	820					
		210	0.4	~36	880	530					
Stainless steel Ferritic/Martensitic SUS403, 420J2, 430(13Cr) (AISI 403, 420J2, 430)	JC8118	100	1	~36	1190	1430					
		150	0.8	~36	1190	1190					
		210	0.6	~36	1030	820					