

SKS EXTREME

High-feed milling tools with double side inserts which achieve ultimate high-feed machining

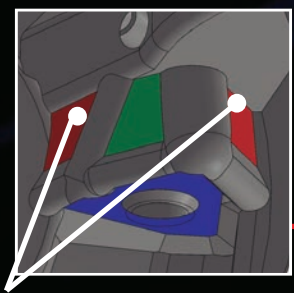
Feature 1

Economical double-side insert (with 6 cutting edges)

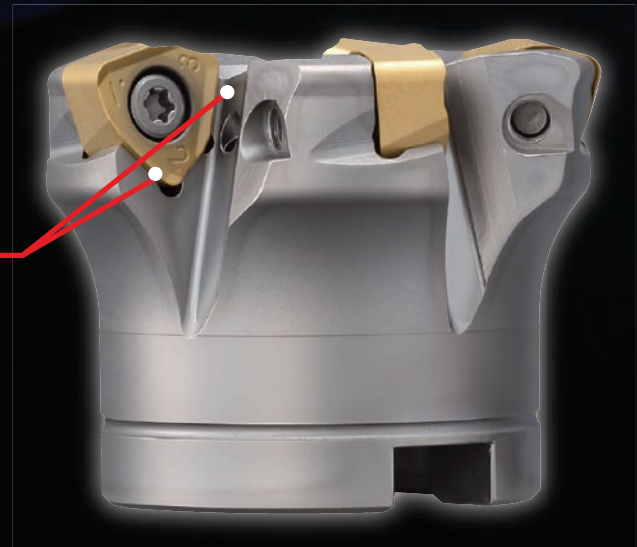


Feature 2

Due to dovetail-shaped binding face, movement of inserts which occur by cutting force is prevented only single screw clamping



Dovetail-shaped



Feature 3

Application

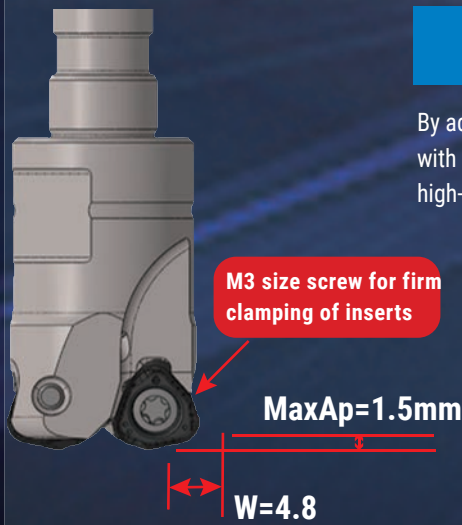
ISO	P					M					K				H		
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	H01	H10	H20
Applicable range			JC8050					JC8050									
		JC8118									JC8118					JC8118	
			JC7560						JC7560								

Adopted 3 insert grades:

PVD coated grade "JC7560" improved fracture toughness & heat impact resistance.

PVD coated grade "JC8118" achieved longer tool life for mold steel, high hardened die steel less than 50HRC & cast iron.

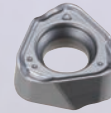
PVD coated grade "JC8050", that adopted carbide substrate with improved fracture toughness & coating layer can be widely applied for carbon steel, mold steel, & stainless steel.



EXSKS-05 type

By adopting multi blade specification with small diameter, high-feed machining is possible.

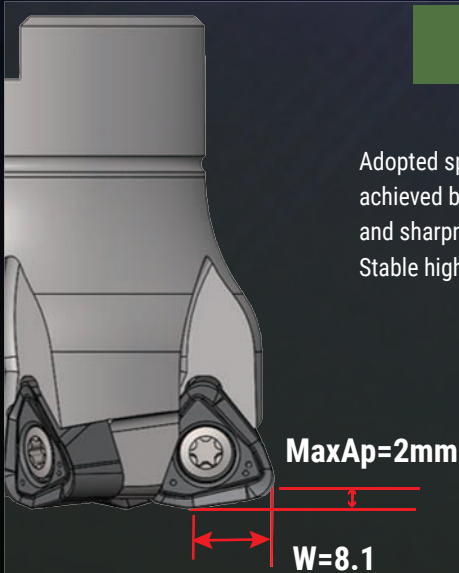
WNMU050320ZER-PM



grade : JC8050
JC8118

Optimal breaker for mold steel & High hardened steel less than 50HRC

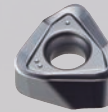
Coner radius for programming	Remains	Over cut
R2	0.59	0
R2.5	0.5	0
R3	0.41	0.13



EXSKS-07type

Adopted specifications which achieved both insert strength and sharpness. Stable high-feed machining is possible.

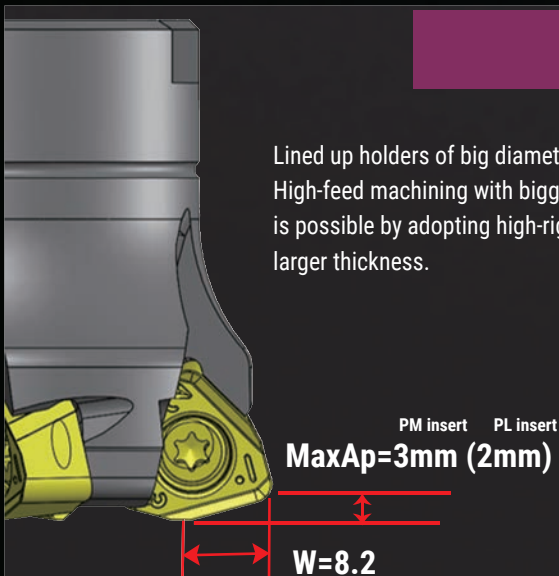
WNMU070620ZER-PM



grade : JC8050
JC8118

Optimal breaker for mold steel & High hardened steel less than 50HRC

Coner radius for programming	Remains	Over cut
R3	0.80	0
R3.5	0.73	0.06
R4	0.66	0.21



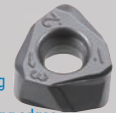
EXSKS-09type

Lined up holders of big diameter. High-feed machining with bigger depth of cut is possible by adopting high-rigid inserts with larger thickness.

WNMU090828ZER-PL

grade: JC8050 / JC8118

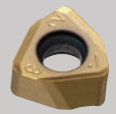
Suitable for machining shapes such as pocket milling with ap = 0.6 mm to ap = 1.2 mm. The composite shape of the straight and radius cutting edges reduces fluctuations in cutting resistance during corner machining, realizing stable machining and extending tool life.



WNMU090720ZER-PM

grade : JC8050/JC8118/JC7560

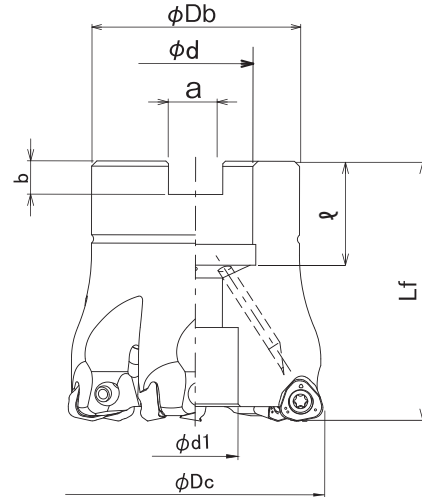
Suitable for face milling of ap=1.4mm or more and shape machining such as pocket machining.



Coner radius for programming	Remains	Over cut
R3	1.41	0
R3.5	1.3	0
R4	1.19	0.025

SKS EXTREME **EXSKS/MEX Type**

- EXSKS-05 Type
- Facemill Type

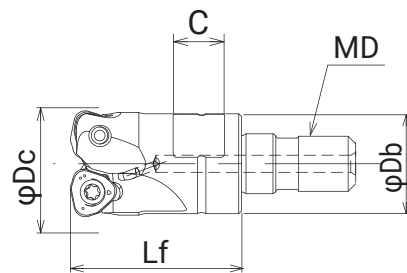
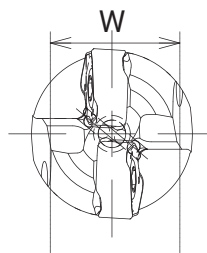


Cat.No.	Stock	No. of inserts	Dimensions (mm)								Arbor set bolt	Weight (kg)	Inserts
			φDc	Lf	φDb	φd	φd1	a	b	φ			
EXSKS-5040R-05-16	●	5	40	45	35	16	13.5	8.4	5.8	19	M8	0.25	WNMU050320ZER-PM
EXSKS-7050R-05-22	●	7	50	50	40	22	16.5	10.4	6.3	20	M10	0.39	
EXSKS-7052R-05-22	●	7	52	50	40	22	16.5	10.4	6.3	20	M10	0.41	
EXSKS-8063R-05-22	□	8	63	50	48	22	17	10.4	6.3	20	M10	0.65	

■ Modular head type



Through coolant hole

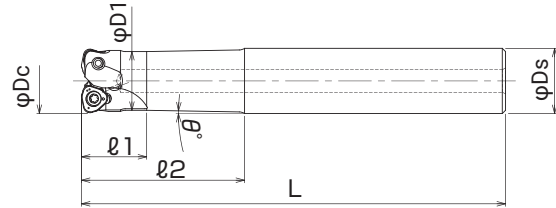


Cat.No.	Stock	No. of inserts	Dimensions (mm)						Inserts
			φDc	Lf	φDb	MD	C	W	
MEX-2020-05-M10	●	2	20	30	18	M10	9	14	WNMU050320ZER-PM
MEX-2021-05-M10	□	2	21	30	18	M10	9	14	
MEX-3025-05-M12	●	3	25	35	23	M12	11	19	
MEX-3026-05-M12	□	3	26	35	23	M12	11	19	
MEX-3028-05-M12	□	3	28	28	23	M12	11	19	
MEX-4030-05-M16	□	4	30	43	27	M16	12	22	
MEX-4032-05-M16	●	4	32	43	29	M16	12	22	
MEX-4033-05-M16	□	4	33	43	29	M16	12	22	
MEX-4035-05-M16	●	4	35	43	29	M16	12	22	
MEX-5040-05-M16	●	5	40	43	32	M16	14	26	

SKS EXTREME **EXSKS/MEX Type**

■ Endmill Shank Type

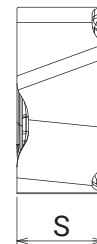
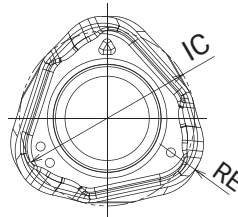
Through coolant hole



Cat.No.	Stock	No. of inserts	Dimensions (mm)							Inserts
			φDc	ℓ1	ℓ2	L	φd1	φDs	θ°	
EXSKS-2020-05-50-S20	●	2	20	20	18	130	18	20	1	WNMU050320ZER-PM
EXSKS-2020-05-80-S20	□	2	20	20	18	160	18	20	0.5	
EXSKS-2021-05-50-S20	□	2	21	20	23	130	18	20	1	
EXSKS-2021-05-80-S20	□	2	21	20	23	160	18	20	0.5	
EXSKS-3025-05-60-S25	●	3	25	25	23	140	23	25	1	
EXSKS-3025-05-100-S25	□	3	25	25	27	180	23	25	0.5	
EXSKS-3026-05-60-S25	□	3	26	25	29	140	23	25	1	
EXSKS-3026-05-100-S25	□	3	26	25	29	180	23	25	0.5	
EXSKS-4032-05-70-S32	●	4	32	30	29	150	29	32	1.5	
EXSKS-4032-05-120-S32	□	4	32	30	32	200	29	32	0.5	

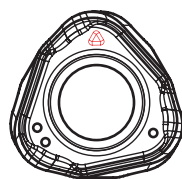
Screw	Torque(N.m)	Wrench
TSW-307H	2.1	A-10

■ Insert

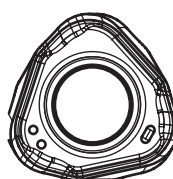


Cat.No.	Tolerance	PVD coated		Dimensions (mm)		
		JC8118	JC8050	RE	IC	S
WNMU050320ZER-PM	M	●	●	2	7.7	3.9

GRADE MARKING



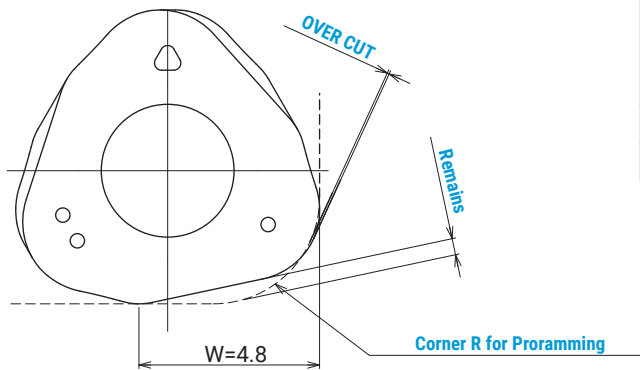
JC8050



JC8118

SKS EXTREME **EXSKS/MEX Type**

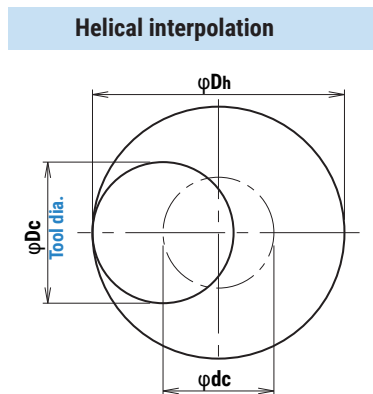
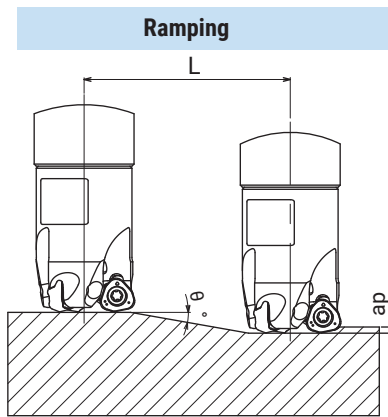
■ **EXSKS-05 type : Definition of corner shape for programming**



Corner radius for programming	Remains	Over cut
R2.0	0.59	0
R2.5 (Std.)	0.5	0
R3.0	0.41	0.13

(mm)

Attention for profile milling



● **Calculation of tool pass dia.**

$$\varphi_{Dc} = \varphi_{Dh} - \varphi_{Dc}$$

Tool pass dia. Bore dia. Tool dia.

- Depth of cut per one circuit should not exceed max. depth of cut ap.
- Down cutting is recommended, so tool pass rotation should be counterclockwise.
- To obtain a flat bottom surface when helical milling, it requires to remove "the uncut part" in the center of the work material at a final pass.

- In case of ramping and helical interpolation, apply 70% or less feed speed from standard cutting condition table.
- In case of drilling, apply 50% or less Z axis feed speed from standard cutting condition table.
- Long consecutive chips may come out in case of drilling, confirm the safe condition sufficiently.

Cat. No.	Tool dia. (mm)	EFF. Cutting dia. (mm)	Max. depth of cut (mm) ap	Ramping		Helical interpolation			Max. drilling depth Z (mm)
				Max. ramping angle θ°	Total cutting length at Max ap	Min. bore dia. Dh min (mm)	Max. bore dia. Dh min (mm)	Dh min (mm)	
EXSKS-*020/MEX-*020	20	10	1.5	2.8	31	28	36	31	0.4
EXSKS-*021/MEX-*021	21	11	1.5	2.6	34	30	38	33	0.4
EXSKS-*025/MEX-*025	25	15	1.5	1.8	48	38	46	41	0.4
EXSKS-*026/MEX-*026	26	16	1.5	1.7	51	40	48	43	0.4
EXSKS-*028/MEX-*028	28	18	1.5	1.5	58	44	52	47	0.4
MEX-*030	30	20	1.5	1.3	67	48	56	51	0.4
EXSKS-*032/MEX-*032	32	22	1.5	1.2	72	52	60	55	0.4
MEX-*033	33	23	1.5	1.1	79	54	62	57	0.4
MEX-*035	35	25	1.5	1	86	58	66	61	0.4
EXSKS-*040/MEX-*040	40	30	1.5	0.8	108	68	76	71	0.4
EXSKS-*050	50	40	1.5	0.6	144	88	96	91	0.4
EXSKS-*052	52	42	1.5	0.6	144	92	100	95	0.4
EXSKS-*063	63	53	1.5	0.5	172	114	122	117	0.4

SKS EXTREME**EXSKS/MEX Type**

■ Recommended cutting conditions

● MEX05 Modular Head type + MSN Shank

Material	Grade	Tool dia.(mm)									
		20/21					25/26/28				
		2N					3N				
		ℓ (mm)	a _p (mm)	a _e (mm)	n (min ⁻¹)	V _f (mm/min)	ℓ (mm)	a _p (mm)	a _e (mm)	n (min ⁻¹)	V _f (mm/min)
Carbon steel (S50C, S55C) below 250HB	JC8050 (JC8118)	~60	0.8	~9	3,180	7,630	~75	0.8	~14	2,550	9,180
		100	0.7	~9	3,180	7,000	125	0.7	~14	2,550	8,420
		140	0.5	~9	2,860	5,720	175	0.5	~14	2,290	6,870
Tool & die steel (SKD61, SKD11) below 255HB	JC8050 (JC8118)	~60	0.8	~9	2,860	6,860	~75	0.8	~14	2,290	8,240
		100	0.7	~9	2,860	6,290	125	0.7	~14	2,290	7,560
		140	0.5	~9	2,550	5,100	175	0.5	~14	2,040	6,120
Mold steel (HPM7, PX5, P20) 30-36 HRC	JC8118 (JC8050)	~60	0.8	~9	2,860	6,860	~75	0.8	~14	2,290	8,240
		100	0.7	~9	2,860	6,290	125	0.7	~14	2,290	7,560
		140	0.5	~9	2,550	5,100	175	0.5	~14	2,040	6,120
Mold steel (NAK80, HPM1, P21) 38-43HRC	JC8118 (JC8050)	~60	0.6	~9	2,070	4,140	~75	0.6	~14	1,660	4,980
		100	0.6	~9	2,070	3,310	125	0.6	~14	1,660	3,980
		140	0.5	~9	1,750	2,800	175	0.5	~14	1,400	3,360
Hardened die steel (SKD61, DAC, DHA) 42-52HRC	JC8118	~60	0.6	~9	1,590	2,540	~75	0.6	~14	1,270	3,050
		100	0.6	~9	1,590	2,540	125	0.6	~14	1,270	3,050
		140	0.5	~9	1,430	1,720	175	0.5	~14	1,150	2,070
Grey cast iron (FC250) 160-260HB	JC8118 (JC8050)	~60	1	~9	3,180	8,900	~75	1	~14	2,550	10,710
		100	0.8	~9	3,180	7,630	125	0.8	~14	2,550	9,180
		140	0.6	~9	2,860	5,720	175	0.6	~14	2,290	6,870
Nodular cast iron (FCD700) 170-300HB	JC8118 (JC8050)	~60	1	~9	2,860	6,860	~75	1	~14	2,290	8,240
		100	0.8	~9	2,860	6,290	125	0.8	~14	2,290	7,560
		140	0.6	~9	2,550	5,100	175	0.6	~14	2,040	6,120
Austenitic stainless steel (SUS304, 316, 317) 17Cr	JC8050	~60	0.6	~9	2,390	4,780	~75	0.6	~14	1,910	5,730
		100	0.5	~9	2,390	4,300	125	0.5	~14	1,910	5,160
		140	0.5	~9	2,070	3,310	175	0.5	~14	1,660	3,980
Ferritic & martensitic stainless steel (SUS403 420J2, 430) 13Cr	JC8118 (JC8050)	~60	0.8	~9	2,710	6,500	~75	0.8	~14	2,160	7,780
		100	0.7	~9	2,710	6,500	125	0.7	~14	2,160	7,780
		140	0.5	~9	2,390	4,780	175	0.5	~14	1,910	5,730

Note

1. Please adjust cutting conditions according to machine rigidity or work rigidity. (the above table is guide for cutting on a #50 BT machine.)
2. In case of chatter occurring, recommended to reduce a_p or rpm and keep feed per tooth.
3. a_p should be reduced when using on low rigidity machine.
4. Use air blow.

SKS EXTREME**EXSKS/MEX Type**

- Recommended cutting conditions
- MEX05 Modular Head type + MSN Shank

Material	Grade	Tool dia.(mm)									
		30/32/33/35					40				
		4N					5N				
		ℓ (mm)	a _p (mm)	a _e (mm)	n (min ⁻¹)	V _f (mm/min)	ℓ (mm)	a _p (mm)	a _e (mm)	n (min ⁻¹)	V _f (mm/min)
Carbon steel (S50C, S55C) below 250HB	JC8050 (JC8118)	~90	0.8	~20	1,990	9,550	~120	0.8	~28	1,430	8,580
		150	0.7	~20	1,990	8,760	200	0.7	~28	1,430	7,870
		210	0.5	~20	1,790	7,160	280	0.5	~28	1,270	6,350
Tool & die steel (SKD61, SKD11) below 255HB	JC8050 (JC8118)	~90	0.8	~20	1,790	8,590	~120	0.8	~28	1,270	7,620
		150	0.7	~20	1,790	7,880	200	0.7	~28	1,270	6,990
		210	0.5	~20	1,590	6,360	280	0.5	~28	1,110	5,550
Mold steel (HPM7, PX5, P20) 30-36 HRC	JC8118 (JC8050)	~90	0.8	~20	1,790	8,590	~120	0.8	~28	1,270	7,620
		150	0.7	~20	1,790	7,880	200	0.7	~28	1,270	6,990
		210	0.5	~20	1,590	6,360	280	0.5	~28	1,110	5,550
Mold steel (NAK80, HPM1, P21) 38-43HRC	JC8118 (JC8050)	~90	0.6	~20	1,290	5,160	~120	0.6	~28	880	4,400
		150	0.6	~20	1,290	4,130	200	0.6	~28	880	3,520
		210	0.5	~20	1,090	3,490	280	0.5	~28	720	2,880
Hardened die steel (SKD61, DAC, DHA) 42-52HRC	JC8118	~90	0.6	~20	990	3,170	~120	0.6	~28	720	2,880
		150	0.6	~20	990	3,170	200	0.6	~28	720	2,880
		210	0.5	~20	900	2,160	280	0.5	~28	560	1,680
Grey cast iron (FC250) 160-260HB	JC8118 (JC8050)	~90	1	~20	1,990	11,140	~120	1	~28	1,430	10,010
		150	0.8	~20	1,990	9,550	200	0.8	~28	1,430	8,580
		210	0.6	~20	1,790	7,160	280	0.6	~28	1,270	6,350
Nodular cast iron (FCD700) 170-300HB	JC8118 (JC8050)	~90	1	~20	1,790	8,590	~120	1	~28	1,270	7,620
		150	0.8	~20	1,790	7,880	200	0.8	~28	1,270	6,990
		210	0.6	~20	1,590	6,360	280	0.6	~28	1,110	5,550
Austenitic stainless steel (SUS304, 316, 317) 17Cr	JC8050	~90	0.6	~20	1,490	5,960	~120	0.6	~28	1,030	5,150
		150	0.5	~20	1,490	5,360	200	0.5	~28	1,030	4,640
		210	0.5	~20	1,290	4,130	280	0.5	~28	880	3,520
Ferritic & martensitic stainless steel (SUS403 420J2, 430) 13Cr	JC8118 (JC8050)	~90	0.8	~20	1,690	8,110	~120	0.8	~28	1,190	7,140
		150	0.7	~20	1,690	8,110	200	0.7	~28	1,190	7,140
		210	0.5	~20	1,490	5,960	280	0.5	~28	1,030	5,150

Note

1. Please adjust cutting conditions according to machine rigidity or work rigidity. (the above table is guide for cutting on a #50 BT machine.)
2. In case of chatter occurring, recommended to reduce a_p or rpm and keep feed per tooth.
3. a_p should be reduced when using on low rigidity machine.
4. Use air blow.

SKS EXTREME**EXSKS/MEX Type**

■ Recommended cutting conditions

● EXSKS05 Endmill type

Material	Grade	Tool dia.(mm)									
		20/21					25/26				
		2N					3N				
		ℓ (mm)	a _p (mm)	a _e (mm)	n (min ⁻¹)	V _f (mm/min)	ℓ (mm)	a _p (mm)	a _e (mm)	n (min ⁻¹)	V _f (mm/min)
Carbon steel (S50C, S55C) below 250HB	JC8050 (JC8118)	~60	0.7	~9	3,180	7,630	~70	0.7	~14	2,550	9,180
		60~100	0.6	~9	3,180	7,000	70~120	0.6	~14	2,550	8,420
		-	-	-	-	-	-	-	-	-	-
Tool & die steel (SKD61, SKD11) below 255HB	JC8050 (JC8118)	~60	0.7	~9	2,860	6,860	~70	0.7	~14	2,290	8,240
		60~100	0.6	~9	2,860	6,290	70~120	0.6	~14	2,290	7,560
		-	-	-	-	-	-	-	-	-	-
Mold steel (HPM7, PX5, P20) 30-36 HRC	JC8118 (JC8050)	~60	0.6	~9	2,860	6,860	~70	0.6	~14	2,290	8,240
		60~100	0.5	~9	2,860	6,290	70~120	0.5	~14	2,290	7,560
		-	-	-	-	-	-	-	-	-	-
Mold steel (NAK80, HPM1, P21) 38-43HRC	JC8118 (JC8050)	~60	0.5	~9	2,070	4,140	~70	0.5	~14	1,660	4,980
		60~100	0.4	~9	2,070	3,310	70~120	0.4	~14	1,660	3,980
		-	-	-	-	-	-	-	-	-	-
Hardened die steel (SKD61, DAC, DHA) 42-52HRC	JC8118	~60	0.5	~9	1,590	2,540	~70	0.5	~14	1,270	3,050
		60~100	0.4	~9	1,590	2,540	70~120	0.4	~14	1,270	3,050
		-	-	-	-	-	-	-	-	-	-
Grey cast iron (FC250) 160-260HB	JC8118 (JC8050)	~60	0.8	~9	3,180	8,900	~70	0.8	~14	2,550	10,710
		60~100	0.7	~9	3,180	7,630	70~120	0.7	~14	2,550	9,180
		-	-	-	-	-	-	-	-	-	-
Nodular cast iron (FCD700) 170-300HB	JC8118 (JC8050)	~60	0.8	~9	2,860	6,860	~70	0.8	~14	2,290	8,240
		60~100	0.7	~9	2,860	6,290	70~120	0.7	~14	2,290	7,560
		-	-	-	-	-	-	-	-	-	-
Austenitic stainless steel (SUS304, 316, 317) 17Cr	JC8050	~60	0.6	~9	2,390	4,780	~70	0.6	~14	1,910	5,730
		60~100	0.5	~9	2,390	4,300	70~120	0.5	~14	1,910	5,160
		-	-	-	-	-	-	-	-	-	-
Ferritic & martensitic stainless steel (SUS403 420J2, 430) 13Cr	JC8118 (JC8050)	~60	0.7	~9	2,710	6,500	~70	0.7	~14	2,160	7,780
		60~100	0.6	~9	2,710	6,500	70~120	0.6	~14	2,160	7,780
		-	-	-	-	-	-	-	-	-	-

Note

1. Please adjust cutting conditions according to machine rigidity or work rigidity. (the above table is guide for cutting on a #50 BT machine.)
2. In case of chatter occurring, recommended to reduce a_p or rpm and keep feed per tooth.
3. a_p should be reduced when using on low rigidity machine.
4. Use air blow.

SKS EXTREME
EXSKS/MEX Type
■ Recommended cutting conditions
● EXSKS05 Endmill type

Material	Grade	Tool dia.(mm)				
		32				
		4N				
		ℓ (mm)	ap (mm)	ae (mm)	n (min ⁻¹)	Vf (mm/min)
Carbon steel (S50C, S55C) below 250HB	JC8050 (JC8118)	~200	0.7	~20	1,990	9,550
		90~140	0.6	~20	1,990	8,760
		-	-	-	-	-
Tool & die steel (SKD61, SKD11) below 255HB	JC8050 (JC8118)	~200	0.7	~20	1,790	8,590
		90~140	0.6	~20	1,790	7,880
		-	-	-	-	-
Mold steel (HPM7, PX5, P20) 30-36 HRC	JC8118 (JC8050)	~200	0.6	~20	1,790	8,590
		90~140	0.5	~20	1,790	7,880
		-	-	-	-	-
Mold steel (NAK80, HPM1, P21) 38-43HRC	JC8118 (JC8050)	~200	0.5	~20	1,290	5,160
		90~140	0.4	~20	1,290	4,130
		-	-	-	-	-
Hardened die steel (SKD61, DAC, DHA) 42-52HRC	JC8118	~200	0.5	~20	990	3,170
		90~140	0.4	~20	990	3,170
		-	-	-	-	-
Grey cast iron (FC250) 160-260HB	JC8118 (JC8050)	~200	0.8	~20	1,990	11,140
		90~140	0.7	~20	1,990	9,550
		-	-	-	-	-
Nodular cast iron (FCD700) 170-300HB	JC8118 (JC8050)	~200	0.8	~20	1,790	8,590
		90~140	0.7	~20	1,790	7,880
		-	-	-	-	-
Austenitic stainless steel (SUS304, 316, 317) 17Cr	JC8050	~200	0.6	~20	1,490	5,960
		90~140	0.5	~20	1,490	5,360
		-	-	-	-	-
Ferritic & martensitic stainless steel (SUS403 420J2, 430) 13Cr	JC8118 (JC8050)	~200	0.7	~20	1,690	8,110
		90~140	0.6	~20	1,690	8,110
		-	-	-	-	-

Note

1. Please adjust cutting conditions according to machine rigidity or work rigidity.
2. In case of chatter occurring, recommended to reduce ap or rpm and keep feed per tooth.
3. ap should be reduced when using on low rigidity machine.
4. Use air blow.

SKS EXTREME**EXSKS/MEX Type**

■ Recommended cutting conditions

● EXSKS05 Facemill type

Material	Grade	Tool dia.(mm)									
		40					50/52				
		5N					7N				
		ℓ (mm)	a _p (mm)	a _e (mm)	n (min ⁻¹)	V _f (mm/min)	ℓ (mm)	a _p (mm)	a _e (mm)	n (min ⁻¹)	V _f (mm/min)
Carbon steel (S50C, S55C) below 250HB	JC8050 (JC8118)	~150	1	~28	1,270	7,620	~150	1	~38	1,020	8,570
		200	0.8	~28	1,270	6,990	200	0.8	~38	1,020	7,850
		250	0.6	~28	1,110	5,550	250	0.6	~38	890	6,230
		300	-	-	-	-	300	0.5	~38	830	4,650
		350	-	-	-	-	350	-	-	-	-
Tool & die steel (SKD61, SKD11) below 255HB	JC8050 (JC8118)	~150	1	~28	1,190	7,140	~150	1	~38	950	7,980
		200	0.8	~28	1,190	6,550	200	0.8	~38	950	7,320
		250	0.6	~28	1,030	5,150	250	0.6	~38	830	5,810
		300	-	-	-	-	300	0.5	~38	760	4,260
		350	-	-	-	-	350	-	-	-	-
Mold steel (HPM7, PX5, P20) 30-36 HRC	JC8118 (JC8050)	~150	1	~28	1,190	7,140	~150	1	~38	950	7,980
		200	0.8	~28	1,190	6,550	200	0.8	~38	950	7,320
		250	0.6	~28	1,030	5,150	250	0.6	~38	830	5,810
		300	-	-	-	-	300	0.5	~38	760	4,260
		350	-	-	-	-	350	-	-	-	-
Mold steel (NAK80, HPM1, P21) 38-43HRC	JC8118 (JC8050)	~150	0.8	~28	880	4,400	~150	0.8	~38	700	4,900
		200	0.6	~28	880	3,520	200	0.6	~38	700	3,920
		250	0.5	~28	720	2,880	250	0.5	~38	570	3,190
		300	-	-	-	-	300	0.4	~38	510	2,860
		350	-	-	-	-	350	-	-	-	-
Hardened die steel (SKD61, DAC, DHA) 42-52HRC	JC8118	~150	0.7	~28	720	2,880	~150	0.7	~38	570	3,190
		200	0.6	~28	720	2,880	200	0.6	~38	570	3,190
		250	0.5	~28	560	1,680	250	0.5	~38	450	1,890
		300	-	-	-	-	300	-	-	-	-
		350	-	-	-	-	350	-	-	-	-
Grey cast iron (FC250) 160-260HB	JC8118 (JC8050)	~150	1	~28	1,430	10,010	~150	1	~38	1,150	11,270
		200	0.8	~28	1,430	8,580	200	0.8	~38	1,150	9,660
		250	0.6	~28	1,270	6,350	250	0.6	~38	1,020	7,140
		300	-	-	-	-	300	0.5	~38	890	6,230
		350	-	-	-	-	350	-	-	-	-
Nodular cast iron (FCD700) 170-300HB	JC8118 (JC8050)	~150	1	~28	1,270	7,620	~150	1	~38	1,020	8,570
		200	0.8	~28	1,270	6,990	200	0.8	~38	1,020	7,850
		250	0.6	~28	1,110	5,550	250	0.6	~38	890	6,230
		300	-	-	-	-	300	0.5	~38	760	4,790
		350	-	-	-	-	350	-	-	-	-
Austenitic stainless steel (SUS304, 316, 317) 17Cr	JC8050	~150	0.8	~28	1,030	5,150	~150	0.8	~38	830	5,810
		200	0.6	~28	1,030	4,640	200	0.6	~38	830	5,230
		250	0.5	~28	880	3,520	250	0.5	~38	700	3,920
		300	-	-	-	-	300	0.4	~38	640	3,580
		350	-	-	-	-	350	-	-	-	-
Ferritic & martensitic stainless steel (SUS403 420J2, 430) 13Cr	JC8118 (JC8050)	~150	1	~28	1,190	7,140	~150	1	~38	950	7,980
		200	0.8	~28	1,190	7,140	200	0.8	~38	950	7,980
		250	0.6	~28	1,030	5,150	250	0.6	~38	830	5,810
		300	-	-	-	-	300	0.5	~38	-	-
		350	-	-	-	-	350	-	-	-	-

Note

1. Please adjust cutting conditions according to machine rigidity or work rigidity. (the above table is guide for cutting on a #50 BT machine.)
2. In case of chatter occurring, recommended to reduce a_p or rpm and keep feed per tooth.
3. a_p should be reduced when using on low rigidity machine.
4. Use air blow.

SKS EXTREME**EXSKS/MEX Type**

■ Recommended cutting conditions

● EXSKS05 Facemill type

Material	Grade	Tool dia.(mm)				
		63				
		8N				
		ℓ (mm)	a_p (mm)	a_e (mm)	n (min ⁻¹)	V_f (mm/min)
Carbon steel (S50C, S55C) below 250HB	JC8050 (JC8118)	~150	1	~46	810	6,800
		200	0.8	~46	810	6,240
		250	0.6	~46	710	4,970
		300	0.5	~46	660	3,700
		350	0.4	~46	610	3,420
Tool & die steel (SKD61, SKD11) below 255HB	JC8050 (JC8118)	~150	1	~46	760	6,380
		200	0.8	~46	760	5,850
		250	0.6	~46	660	4,620
		300	0.5	~46	610	3,420
		350	0.4	~46	560	3,140
Mold steel (HPM7, PX5, P20) 30-36 HRC	JC8118 (JC8050)	~150	1	~46	760	6,380
		200	0.8	~46	760	5,850
		250	0.6	~46	660	4,620
		300	0.5	~46	610	3,420
		350	0.4	~46	560	3,140
Mold steel (NAK80, HPM1, P21) 38-43HRC	JC8118 (JC8050)	~150	0.8	~46	560	3,920
		200	0.6	~46	560	3,140
		250	0.5	~46	450	2,520
		300	0.4	~46	400	2,240
		350	-	-	-	-
Hardened die steel (SKD61, DAC, DHA) 42-52HRC	JC8118	~150	0.7	~46	450	2,520
		200	0.6	~46	450	2,520
		250	0.5	~46	350	1,470
		300	-	-	-	-
		350	-	-	-	-
Grey cast iron (FC250) 160-260HB	JC8118 (JC8050)	~150	1	~46	910	8,920
		200	0.8	~46	910	7,640
		250	0.6	~46	810	5,670
		300	0.5	~46	710	4,970
		350	0.5	~46	660	4,160
Nodular cast iron (FCD700) 170-300HB	JC8118 (JC8050)	~150	1	~46	810	6,800
		200	0.8	~46	810	6,240
		250	0.6	~46	710	4,970
		300	0.5	~46	610	3,840
		350	0.5	~46	560	3,140
Austenitic stainless steel (SUS304, 316, 317) 17Cr	JC8050	~150	0.8	~46	660	4,620
		200	0.6	~46	660	4,160
		250	0.5	~46	560	3,140
		300	0.4	~46	510	2,860
		350	0.4	~46	450	2,520
Ferritic & martensitic stainless steel (SUS403 420J2, 430) 13Cr	JC8118 (JC8050)	~150	1	~46	760	6,380
		200	0.8	~46	760	6,380
		250	0.6	~46	660	4,620
		300	0.5	~46	560	3,920
		350	0.5	~46	510	3,570

Note

1. Please adjust cutting conditions according to machine rigidity or work rigidity. (the above table is guide for cutting on a #50 BT machine.)
2. In case of chatter occurring, recommended to reduce a_p or rpm and keep feed per tooth.
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