

SKS type



“ High-Feed Diemaster ”

“ High-Feed Diemaster Heads ” **NEW**



SKS形 高送り **ダイマスタ**

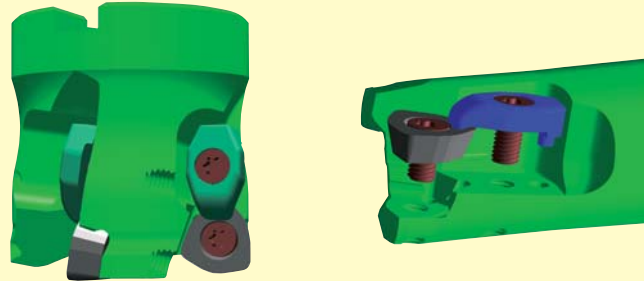
“ High-Feed Diemaster 10 size Inserts ” **NEW**
ACHIEVED SUPER-HIGH FEED AT 4 mm PER INSERT!!!

“ High-Feed Diemaster ”

■ Features

High efficient machining is possible with long overhang tool due to control the change of cutting forces in case of deeper machining.

- Positive axial rake (+8 degree)
- Adopted new double clamp system
- Three edge economy



Series Expansion

■ Modular type series expansion.

Combination with carbide shank gives high efficient machining for deep applications.



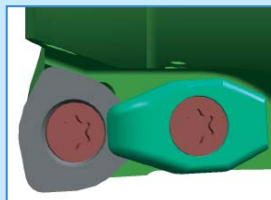
P. 20-22

MSH Head

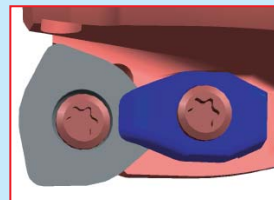
MSN Carbide Adaptor (through Coolant Hole)

■ Inserts and bore type cutter series expansion.

- Larger size Inserts version for severe interrupted cutting and large size cutter.
- In case of over 250mm overhung length and severe interrupted cutting, use 10 type cutter.



WDMW080520ZTR



WDMW10X620ZTR



Type WDMX 08 & WDMX 10X6

P. 23-29

■ Inserts series expansion.

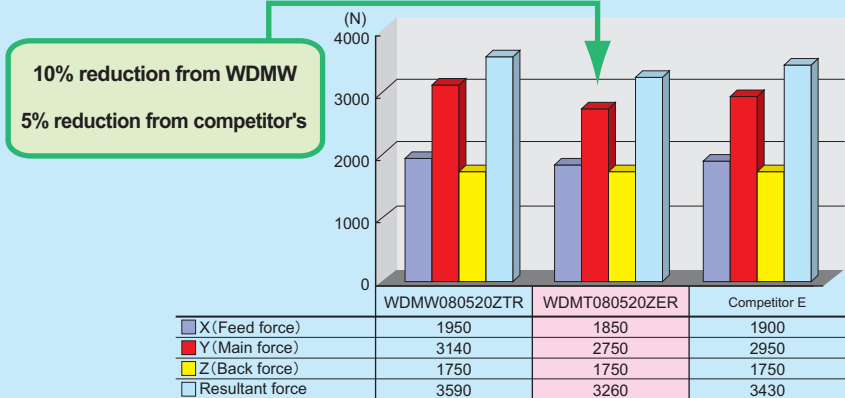
- New positive Insert with chipbreaker **WDMT080520ZER & WDMT10X620ZER** for low rigidity and power machine.
- Adopted CVD coating grade:
 1. JC600, for Cast iron.
 2. JC730U, for Low carbon steel.



P. 24

■ Cutting force comparison.

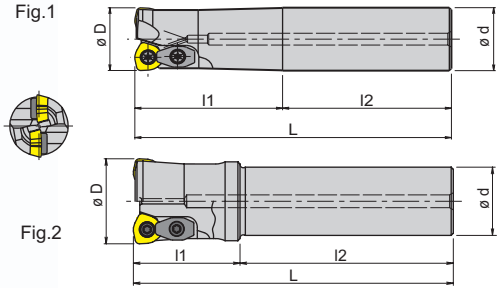
Tool dia.: ϕ 80mm, Material: FC250, Cutting speed: 100m/min, feed: fz=2.5 mm/th, Ap=1.2mm, Ae=64mm, by down cutting.



“ High-Feed Diemaster ”



SKS Indexable End Mill Type (with Through Hole)



Body

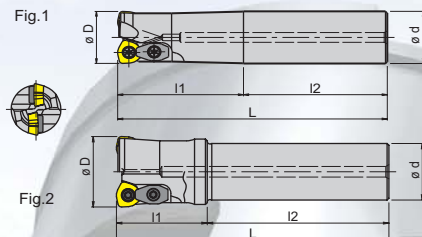
Type	Cat. No.	Stock	No. of inserts	Dimensions (mm)					Fig.	Applicable Inserts	
				øD	l1	l2	L	ød			
Regular Type	NEW SKS-2016-20-S15	●	2	16	20	90	110	15	2	WOMW 04...	
	NEW SKS-2016-50-S16	●	2	16	50	60	110	16	1		
	NEW SKS-2017-20-S16	●	2	17	20	90	110	16	2		
	SKS-2020-50-S20	●	2	20	50	80	130	20	1	WDMW WDHW 05...	
	SKS-2021-50-S20	●	2	21	50	80	130	20	1	WDMW WDHW 06...	
	SKS-2025-60-S25	●	2	25	60	80	140	25	1		
	SKS-2026-60-S25	●	2	26	60	80	140	25	1		
	SKS-2030-70-S32	●	2	30	70	80	150	32	1		
	NEW SKS-3032-70-S32	●	3	32	70	80	150	32	1		
	NEW SKS-3033-70-S32	●	3	33	70	80	150	32	1		
	SKS-2032-70-S32	●	2	32	70	80	150	32	1	WDMW WDHW WDMT 08...	
	SKS-2033-70-S32	●	2	33	70	80	150	32	1		
	SKS-3040-50-S32	●	3	40	50	100	150	32	2		
	SKS-3040-50-S42	●	3	40	50	100	150	42	1		
	NEW SKS-3044-50-S42	●	3	44	50	100	150	42	2		
	NEW SKS-3050-50-S32	●	3	50	50	100	150	32	2		
SKS-3050-50-S42	●	3	50	50	100	150	42	2	Long type		
NEW SKS-2016-20L-S15	●	2	2	16	20	130	150	15		2	WOMW 04...
NEW SKS-2016-70-S16	●	2	2	16	70	80	150	16		1	
NEW SKS-2017-20L-S16	●	2	2	17	20	130	150	16		2	
SKS-2020-100-S20	●	2	2	20	100	80	180	20		1	WDMW WDHW 05...
SKS-2021-50L-S20	●	2	2	21	50	130	180	20		2	WDMW WDHW 06...
NEW SKS-2022-30L-S20	●	2	2	22	30	150	180	20		2	
SKS-2025-120-S25	●	2	2	25	120	80	200	25		1	
SKS-2026-60L-S25	●	2	2	26	60	140	200	25		2	
NEW SKS-2028-40L-S25	●	2	2	28	40	160	200	25		2	
NEW SKS-2030-40L-S28	●	2	2	30	40	160	200	28		1	
SKS-2030-120-S32	●	2	2	30	120	80	200	32		1	WDMW WDHW WDMT 08...
NEW SKS-3032-120-S32	●	3	3	32	120	80	200	32		1	
NEW SKS-3033-70L-S32	●	3	3	33	70	80	200	32		1	
SKS-2032-120-S32	●	2	2	32	120	80	200	32		1	
SKS-2033-70L-S32	●	2	2	33	70	130	200	32		1	
NEW SKS-2035-50L-S32	●	2	2	35	50	150	200	32	2		
SKS-3040-50L-S32	●	3	3	40	50	200	250	32	2		
SKS-3040-130-S42	●	3	3	40	130	120	250	42	1		
NEW SKS-3044-130-S42	●	3	3	44	130	120	250	42	2		
SKS-3050-50L-S42	●	3	3	50	50	200	250	42	2		

Note : See page 25~34 for cutting conditions.

“ High-Feed Diemaster ”



■ SKS Indexable End Mill Type (with Through Hole)



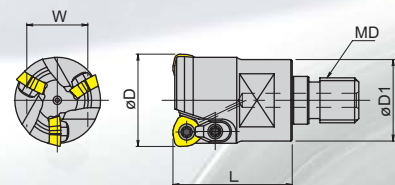
■ Body

Type	Cat. No.	Stock	No. of inserts	Dimensions (mm)					Fig.	Applicable Inserts
				øD	l1	l2	L	ød		
Extra Long Type	SKS-2020-130-S20	●	2	20	130	120	250	20	1	WDMW WDHW 05...
	SKS-2021-50E-S20	●	2	21	50	200	250	20	1	
	NEW SKS-2022-30E-S20	●	2	22	30	220	250	20	1	
	SKS-2025-180-S25	●	2	25	180	120	300	25	1	WDMW WDHW 06...
	SKS-2026-60E-S25	●	2	26	60	240	300	25	1	
	NEW SKS-2028-40E-S25	●	2	28	40	260	300	25	1	
	NEW SKS-2030-40E-S28	●	2	30	40	260	300	28	1	
	SKS-2030-180-S32	●	2	30	180	120	300	32	1	
	NEW SKS-3032-180-S32	●	3	32	180	120	300	32	1	
	NEW SKS-3033-70E-S32	●	3	33	70	230	300	32	1	WDMW WDHW WDMT 08...
	SKS-2032-180-S32	●	2	32	180	120	300	32	1	
	SKS-2033-70E-S32	●	2	33	70	230	300	32	1	
	NEW SKS-2035-50E-S32	●	2	35	50	250	300	32	1	
	SKS-3040-50E-S32	●	3	40	50	250	300	32	2	
	SKS-3040-180-S42	●	3	40	180	120	300	42	1	
NEW SKS-3044-180-S42	●	3	44	180	120	300	42	1	WDMW WDHW WDMT 08...	
SKS-3050-50E-S42	●	3	50	50	250	300	42	2		

Note : See page 25~34 for cutting conditions.

■ MSH Heads type (with Through Hole)

● High Feed rate



■ Body

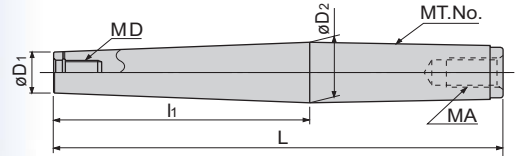
Cat. No.	Stock	No. of inserts	Dimensions (mm)					Applicable inserts	Parts		
			ø D	L	ø D ₁	MD	W		Clamp screw	Clamp set	Wrench
NEW MSH-2016-M8	●	2	16	23	15.5	M8	12	WOMW 04...	TSW-2556H 0.9 N.m	-	A-08SD
NEW MSH-2017-M8	●	2	17								
MSH-2020-M10	●	2	20	30	19	M10	14	WDMW WDHW 05...	DSW-306H 1.8 N.m	-	A-10SD
MSH-2021-M10	●	2	21								
NEW MSH-2022-M10	●	2	22	35	23.6	M12	17	WDMW WDHW 06...	CSW-408H 3.6 N.m	DCM-18	A-15SD
MSH-2025-M12	●	2	25								
MSH-2026-M12	●	2	26	43	29	M16	22	WDMW WDHW WDMT 08...	DSW-4510H 6.0 N.m	DCM-17	A-20
NEW MSH-2028-M12	●	2	28								
MSH-2032-M16	●	2	32	43	29	M16	22	WDMW WDHW 06...	CSW-408H 3.6 N.m	DCM-18	A-15SD
NEW MSH-2033-M16	●	2	33								
NEW MSH-2035-M16	●	2	35	43	29	M16	22	WDMW WDHW 06...	CSW-408H 3.6 N.m	DCM-18	A-15SD
MSH-3032-M16	●	3	32								
MSH-3033-M16	●	3	33	43	29	M16	22	WDMW WDHW 06...	CSW-408H 3.6 N.m	DCM-18	A-15SD
NEW MSH-3035-M16	●	3	35								

Note : See page 25~34 for cutting conditions.

“ High-Feed Diemaster ”



MMT Morse Taper type



Body

Cat. No.	Stock	Dimensions (mm)							Applicable head
		øD1	øD2	l1	L	MD	MT. No.	MA	
MMT-M10-60-MT3	○		24.076	60	146		MT3	M12	MSH-2020-M10 MSH-2021-M10 MSH-2022-M10
MMT-M10-80-MT3	○	19	24.076	80	166	M10	MT3	M12	
MMT-M10-110-MT4	○		31.605	110	219		MT4	M16	
MMT-M12-50-MT3	○		24.076	50	136		MT3	M12	MSH-2025-M12 MSH-2026-M12 MSH-2028-M12
MMT-M12-80-MT3	○	21	24.076	80	166	M12	MT3	M12	
MMT-M12-110-MT4	○		31.605	110	219		MT4	M16	
MMT-M12-140-MT4	○		31.605	140	249		MT4	M16	
MMT-M16-50-MT4	○		31.605	50	159		MT4	M16	MSH-2032-M16 MSH-3032-M16 MSH-2033-M16 MSH-3033-M16 MSH-3035-M16 MSH-3035-M16
MMT-M16-80-MT4	○		31.605	80	189		MT4	M16	
MMT-M16-110-MT5	○	29	44.741	110	246	M16	MT5	M20	
MMT-M16-140-MT5	○		44.741	140	276		MT5	M20	
MMT-M16-180-MT5	○		44.741	180	316		MT5	M20	

Note : See page 25~34 for cutting conditions.

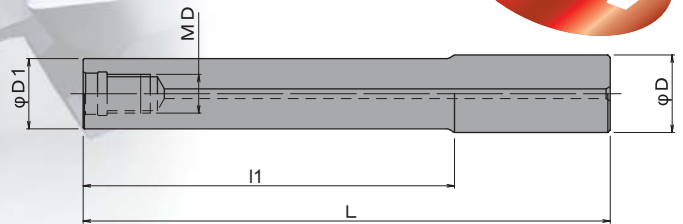
○ Will not be available after current stock exhausted.

MSN Straight Neck type (Through Coolant Hole)

- For high productivity
- High rigidity



C Body
carbide shank



Body

Cat. No.	Stock	Dimensions (mm)					Applicable head
		øD	l1	L	øD1	MD	
MSN-M8-40-S16C	●		40	95			MSH-2016-M8 MSH-2017-M8
MSN-M8-80-S16C	●	16	80	135	15.5	M8	
MSN-M8-120-S12C	●		120	175			
MSN-M10-40-S20C	●		40	100			MSH-2020-M10 MSH-2021-M10 MSH-2022-M10
MSN-M10-90-S20C	●	20	90	150	19.5	M10	
MSN-M10-140-S20C	●		140	200			
MSN-M12-55-S25C	●		55	120			MSH-2025-M12 MSH-2026-M12 MSH-2028-M12
MSN-M12-105-S25C	●	25	105	170	24	M12	
MSN-M12-155-S25C	●		155	220			
MSN-M16-55-S32C	●		55	120			MSH-2032-3032-M16 MSH-2033-3033-M16 MSH-2035-3035-M16
MSN-M16-105-S32C	●	32	105	170	29	M16	
MSN-M16-155-S32C	●		155	220			

“ High-Feed Diemaster ”

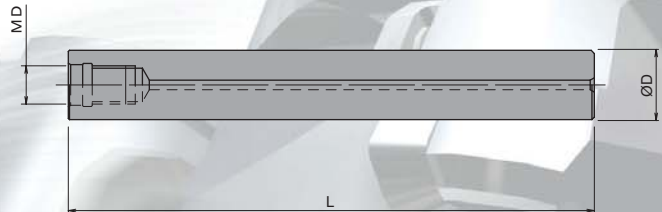


■ MSN Straight Arbor Type (Through Coolant Hole)

- For high productivity
- High rigidity



Body
carbide shank



■ Body

Cat. No.	Stock	Dimensions (mm)			Applicable holders	
		ØD	L	MD		
MSN-M10-130S-S18C	●	18	130	M10	MSH-2020-M10 MSH-2021-M10 MSH-2022-M10	
MSN-M10-190S-S18C	●		190			
MSN-M10-130S-S20C	●	20	130			
MSN-M10-190S-S20C	●		190			
MSN-M10-250S-S20C	●		250			
MSN-M12-185S-S23C	●		23			185
MSN-M12-265S-S23C	●	265				
MSN-M12-145S-S25C	●	145				
MSN-M12-215S-S25C	●	25		215		
MSN-M12-285S-S25C	●			285		
MSN-M16-160S-S28C	●	28	160	M16	MSH-2032-M16 MSH-3032-M16 MSH-2033-M16 MSH-3033-M16 MSH-2035-M16 MSH-3035-M16	
MSN-M16-230S-S28C	●		230			
MSN-M16-310S-S28C	●		310			
MSN-M16-157S-S32C	●		32			157
MSN-M16-217S-S32C	●					217
MSN-M16-287S-S32C	●					287
MSN-M16-357S-S32C	●					375

■ Recommended tightening torque for modular head

Tread Size	Tightening Torque	Wrench Size mm.
M8	23 Nm	10,12
M10	46 Nm	14,15
M12	80 Nm	17
M16	90 Nm	22,26

Attention to mounting head !

Clean the contact surface of head and carbide holder, and also confirm there is no gap between head and holder after tightening.
Please check and try to obtain good run-out.

“ High-Feed Diemaster ”



■ SKS Indexable Face Mill type



Fig.1 With (Through Coolant Hole)

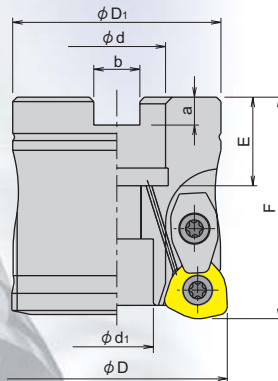
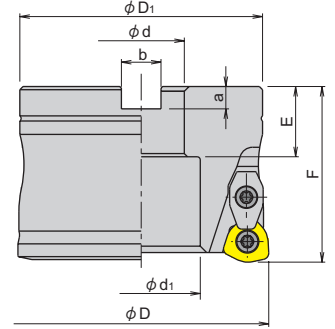


Fig.2



■ Body

Cat. No.	Stock	No. of inserts	Dimensions (mm)									Applicable inserts
			ϕD	F	ϕD_1	ϕd	ϕd_1	a	b	E	Fig.	
SKS-3040R-06-16	●	3	40	45	37	16	14	5.6	8.4	18	1	WDMW / WDHW 06
SKS-3050R-08-22	●	3	50	50	47	22	16.5	6.3	10.4	20	1	WDMW WDHW WDHT 08...
SKS-4050R-08-22	●	4	50	50	47	22	16.5	6.3	10.4	20	1	
SKS-3052R-08-22	●	3	52	50	47	22	17	6.3	10.4	20	1	
SKS-4052R-08-22	●	4	52	50	47	22	17	6.3	10.4	20	1	
SKS-4063R-08-22	●	4	63	50	60	22	17	6.3	10.4	20	1	
SKS-3063R-08-27	●	3	63	50	60	27	20	7	12.4	22	1	
NEW SKS-3063R-08-22	●	3	63	50	60	22	17	6.3	10.4	20	1	
SKS-4063R-08-27	●	4	63	50	60	27	20	7	12.4	22	1	
NEW SKS-4063R-10-22	●	4	63	50	60	22	17	6.3	10.4	20	1	WDMW / WDHT 10...
NEW SKS-4063R-10-27	●	4	63	50	60	27	20	7	12.4	22	1	WDMW / WDHT 10...
SKS-4066R-08-27	●	4	66	50	61	27	20	7	12.4	22	1	WDMW / WDHW / WDHT 08...
SKS-5080R-08-27	●	5	80	55	76	27	37	7	12.4	22	2	WDMW / WDHT 10...
NEW SKS-5080R-10-27	●	5	80	55	76	27	37	7	12.4	22	2	WDMW / WDHT 10...
SKS-6100R-08-32	●	6	100	55	96	32	45	8	14.4	32	2	WDMW / WDHW / WDHT 08...
NEW SKS-6100R-10-32	●	6	100	55	96	32	45	8	14.4	32	2	WDMW WDHT 10...
NEW SKS-6125R-10-40	●	6	125	55	85	40	60	9	16.4	35	2	WDMW WDHT 10...
NEW SKS-7160R-10-40	●	7	160	55	120	40	85	9	16.4	35	2	WDMW WDHT 10...

Note : See page 25~34 for cutting conditions.

“ High-Feed Diemaster ”

SKS Inserts



Fig.1
JC5040

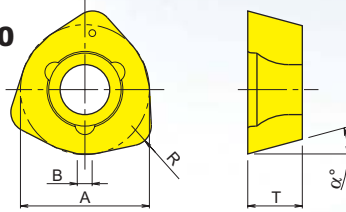


Fig.2
JC5015
JC8015

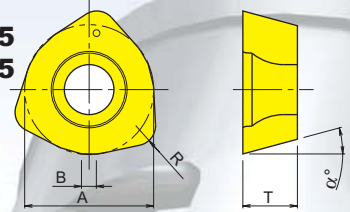


Fig.3
JC600

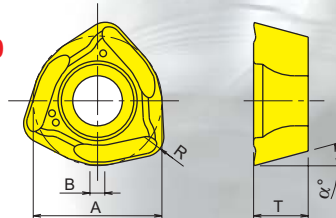
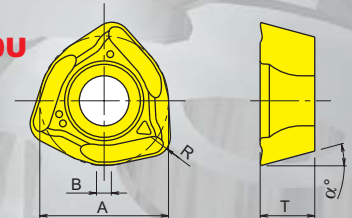


Fig.4
JC730U



Inserts

Cat. No.	Tolerance	Dimensions (mm)					PVD Coated			CVD Coated		Fig.	
		A	T	B	R	α°	JC8015	JC5015	JC5040	JC600	JC730U		
NEW WOMW04T215ZER	M	6.0	2.8	0.8	1.5	13	●		●			1/2	
WDMW050316ZTR		8.0	3.2	1.0	1.6	15	●	●	●			1/2	
WDMW06T320ZTR		10.0	3.97	1.2	2.0	15	●	●	●			1/2	
NEW WDMT080520ZER		13.0	5.5	1.5	2.0	15				●	●	3/4	
WDMW080520ZTR		13.0	5.5	1.5	2.0	15	●	●	●			1/2	
NEW WDMT10X620ZER		16.0	6.0	2.0	2.0	15				●	●	3/4	
NEW WDMW10X620ZTR		16.0	6.0	2.0	2.0	15	●	●	●			1/2	
WDHW050316ZTR		H	8.0	3.2	1.0	1.6	15		●	●			1/2
WDHW06T320ZTR			10.0	3.97	1.2	2.0	15		●	●			1/2
WDHW080520ZTR			13.0	5.5	1.5	2.0	15		●	●			1/2

Note) Each grade shows different mark around the hole for fool proof.

Parts

Applicable Inserts	Clamp screw / Torque	Clamp set	Wrench
NEW WOMW04...	TSW-2556H / (0.9 Nm)	—	A-08SD
WD*W05...	DSW-306H / (1.8 Nm)	—	A-10SD
WD*W06...	CSW-408H / (3.6 Nm)	DCM-18	A-15SD
WD**08...	DSW-4510H / (6.0 Nm)	DCM-17	A-20
NEW WD**10...	DSW-4512H / (6.0 Nm)	DCM-17	A-20

“ High-Feed Diemaster ”

SKS Definition of corner shape for programming

	Ra	W	Ap	T	A1	Corner radius for programming
NEW 04 Type	1.5	2.7	0.8	0.29	0.8	R 1.5
05 Type	1.6	3.6	1.25	0.35	1.2	R 2.0
06 Type	2	4.5	1.5	0.44	1.5	R 2.5
08 Type	2	6.0	2.0	0.63	2.0	R 3.0
NEW 10 Type	2	7.4	2.5	0.91	2.5	R 3.0

SKS Cutting data

1. High efficient machining 1.2311 P20 mold steel

<p>Overhung length: 200mm</p>	Work	Part name	Injection mold
		Material	1.2311 - P20
		Hardness	30HRC
	Tool	Tool No.	SKS-4063R-08
		Insert No.	WDMW080520ZTR JC5040
<p>Result</p> <p>Current feed speed of competitor Y was F=3,000mm/min. SKS could increase the feed speed 1.35 times faster and got 8 hours tool life.</p>	Cutting conditions	Cutting speed	99 m/min (500 min ⁻¹)
		Feed speed	4,064 mm/min 8.1 mm/rev
		Ap	1.5 mm
		Ae	47.6 mm
		Coolant	Air blow
	Machine	Vertical MC 22.5kW	

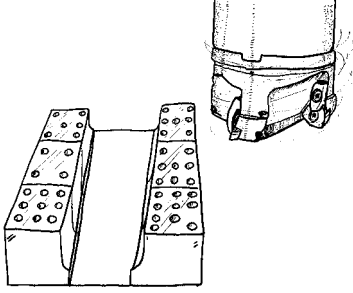
2. Improved the tool life 1.8 times longer

<p>Overhung length: 150mm</p>	Work	Part name	Injection mold
		Material	KTSM22
		Hardness	13HRC
	Tool	Tool No.	SKS-4063R-08
		Insert No.	WDMW080520ZTR JC5040
<p>Result</p> <p>SKS cut smoother than competitor F. Tool life of competitor F was 840 m. (210min.) SKS could cut 1560 m. (390min.) and improved 1.8 times.</p>	Cutting conditions	Cutting speed	158 m/min (800 min ⁻¹)
		Feed speed	4,000 mm/min 5 mm/rev
		Ap	1.0 mm
		Ae	Max.63 mm
		Coolant	Air blow
	Machine	Horizontal MC 15kW	

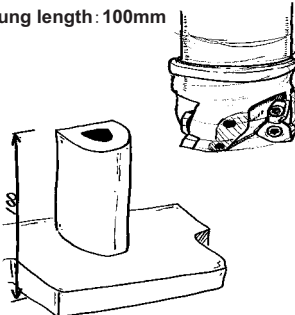
“ High-Feed Diemaster ”

SKS Cutting data

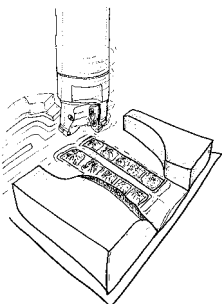
3. Machining tough die steel with bore for stamping die.

Overhung length: 200mm 	Work	Part name	Stamping die
		Material	SKD11-1.2379
Hardness		Low material	
Result Rough machining comparison among 3 companies. Competitors got 60m & 90m tool life, SKS achieved 150m and still able to continue.	Tool	Tool No.	SKS-4063R-08
		Insert No.	WDMW080520ZTR , JC5040
Cutting conditions	Cutting conditions	Cutting speed	178 m/min (900 min ⁻¹)
		Feed speed	2,520 mm/min (0.7 mm/th)
		Ap	1mm
		Ae	40mm
		Coolant	Dry
	Machine	Vertical MC	

4. Improved efficiency & tool life on tough die-casting die.

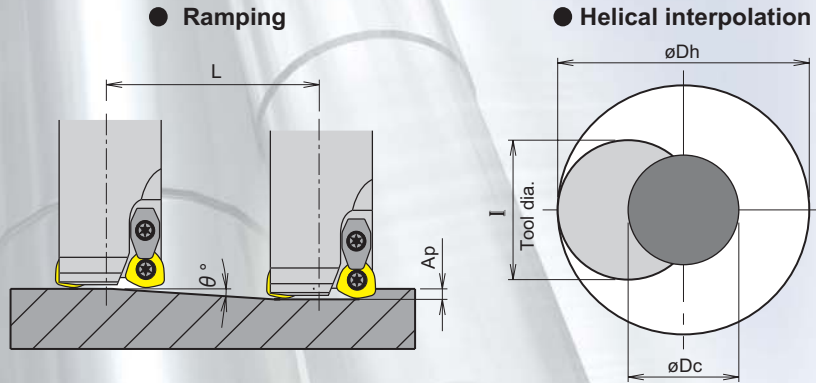
Overhung length: 100mm 	Work	Part name	Core of die-casting die
		Material	DH31-S
Hardness		Low material	
Result Core machining from tough die steel block. Compared with competitor's cutter. SKS reduced the cutting force and increased feed speed by 1.5 times and achieved over 2 times longer life (over 90 min.)	Tool	Tool No.	SKS-3040-50-S32
		Insert No.	WDMW080520ZTR , JC5015
Cutting conditions	Cutting conditions	Cutting speed	88m/min (700 min ⁻¹)
		Feed speed	2,500 mm/min (3.6 mm/rev)
		Ap	1.5mm
		Ae	25mm
		Coolant	Dry
	Machine	Vertical MC	

5. Improved efficiency & tool life on forging die by modular & carbide shank.

Overhung length: 100 mm Radius cutter: Ap=1 mm, F=2,800 mm/min Q=70 cc/min, Tool life: 45-60 min/corner SKS: Q=122.5 cc/min Tool life: 190 min/corner 	Work	Part name	Forging die
		Material	Hot work tool steel
Hardness		285HB	
Result Improved the efficiency by 1.75 times and tool life by 3 times or more compared with radius cutter by combination of modular head & carbide shank.	Tool	Tool No.	MSH-3032-M16 + MSN-N16-55-S32C
		Insert No.	WDMW06T320ZTR , JC5040
Cutting conditions	Cutting conditions	Cutting speed	180m/min (1,790min ⁻¹)
		Feed speed	7,000mm/min (3.9mm/rev)
		Ap	0.7mm
		Ae	25mm
		Coolant	Air blow
	Machine	Vertical MC 11kw	

“ High-Feed Diemaster ”

Attention for profile milling with SKS



● Calculation of tool pass dia.

$$\varnothing Dc = \varnothing Dh - I$$

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.

- 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)	Ramping		Helical interpolation		Z Max. drilling depth (mm)
				Max. ramping angle θ	L (mm) Total cutting length at Max. Ap	Min. bore dia. Dh min (mm)	Max. bore dia. Dh max (mm)	
NEW SKS-2016	16	10.5	0.9	2° 30'	20.6	25	29	0.3
NEW SKS-2017	17	11.5	0.9	2°	25.7	27	31	0.3
SKS-2020	20	12.7	1.2	3°	22.9	30	37	0.5
SKS-2021	21	13.7	1.2	2° 30'	27.5	32	39	0.5
NEW SKS-2022	22	14.7	1.2	2°	34.4	34	41	0.5
SKS-2025	25	15.9	1.5	4°	21.5	33	46	1
SKS-2026	26	16.9	1.5	3° 30'	24.5	35	48	1
NEW SKS-2028	28	18.9	1.5	3°	28.6	39	52	1
SKS-2030	30	20.9	1.5	2° 30'	34.4	43	56	1
SKS-2032	32	20	2	4°	28.6	41	60	1.5
SKS-3032	32	22.8	1.5	2° 15'	38.1	47	60	1
SKS-2033	33	21	2	3° 30'	32.7	43	62	1.5
SKS-3033	33	23.8	1.5	2° 6'	40.9	49	62	1
NEW SKS-2035	35	23	2	3°	38.2	47	66	1.5
NEW SKS-3035	35	25.8	1.5	2°	43	53	66	1
SKS-3040	40	28	2	2° 48'	40.9	57	76	1.5
SKS-3040-06	40	30.8	1.5	1° 36'	53.7	63	76	1
SKS-3044	44	32	2	2° 30'	45.8	65	84	1.5
SKS-*050	50	38	2	2°	57.3	77	96	1.5
SKS-*052	52	40	2	2°	57.3	81	100	1.5
SKS-*063	63	51	2	1° 30'	76.4	103	122	1.5
NEW SKS-*063-10	63	48	2.3	2° 42'	48.8	97	122	1.8
SKS-*066	66	54	2	1° 24'	81.8	109	128	1.5
SKS-*080	80	68	2	1° 12'	95.5	137	156	1.5
NEW SKS-*080-10	80	65	2.3	2°	65.9	131	156	1.8
SKS-*100	100	88	2	1°	114.6	177	196	1.5
NEW SKS-*100-10	100	85	2.3	1° 30'	87.8	171	196	1.8
NEW SKS-*125-10	125	110	2.3	1° 12'	109.8	221	246	1.8
NEW SKS-*160-10	160	145	2.3	0° 54'	146.4	291	316	1.8

“ High-Feed Diemaster ”

SKS Recommended cutting conditions

● End Mill type

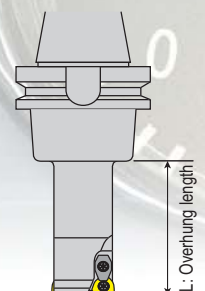
Materials	Grades	Tool dia. (mm)															
		16 / 17				20 / 21				25 / 26				30/32/33			
		No. of teeth 2N				No. of teeth 2N				No. of teeth 2N				No. of teeth 2N			
L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)		
Carbon steel (C50, C55) Below 250HB	JC5040 (JC730U)	30	0.6	3,580	3,580	70	0.7	2,850	4,600	70	0.7	2,300	4,600	70	0.8	1,800	3,600
		70	0.5	2,980	2,380	120	0.5	2,400	3,800	120	0.5	1,900	3,800	120	0.6	1,000	3,000
		100	0.4	2,580	1,550	190	0.3	1,250	1,500	220	0.3	1,000	1,600	220	0.4	500	2,000
Mold steel (1.2311, P20) 30-43HRC	JC5040 (JC5015 or JC8015 above 40HRC)	30	0.6	3,580	3,580	70	0.7	2,850	4,600	70	0.7	2,300	4,600	70	0.8	1,800	3,600
		70	0.5	2,980	2,380	120	0.5	2,400	3,800	120	0.5	1,900	3,800	120	0.6	1,000	3,000
		100	0.4	2,580	1,550	190	0.3	1,250	1,500	220	0.3	1,000	1,600	220	0.3	500	2,000
Die steel (1.2344, 1.2379) Below 255HB	JC5040	30	0.6	3,580	3,580	70	0.7	2,850	4,600	70	0.7	2,300	4,600	70	0.8	1,800	3,600
		70	0.5	2,980	2,380	120	0.5	2,400	3,800	120	0.5	1,900	3,800	120	0.6	1,000	3,000
		100	0.4	2,580	1,550	190	0.3	1,250	1,500	220	0.3	1,000	1,600	220	0.3	500	2,000
Stainless steel Below 250HB	JC5015 (JC8015 (JC730U))	30	0.5	2,980	2,980	70	0.7	2,400	3,840	70	0.7	1,900	3,800	70	0.8	1,500	3,600
		70	0.3	2,980	2,380	120	0.5	2,400	3,840	120	0.5	1,900	3,800	120	0.6	1,250	3,000
		100	0.3	2,580	1,550	190	0.3	1,250	1,500	220	0.3	1,000	1,600	220	0.3	600	1,800
Hardened die steel (1.2344, 1.2379) 40-50HRC	JC5015 (JC8015)	30	0.3	2,380	2,380	70	0.5	1,100	1,100	70	0.6	1,000	1,400	70	0.8	800	1,300
		70	0.2	2,380	1,900	120	0.3	1,100	1,100	120	0.4	1,000	1,200	120	0.6	700	1,100
		100	-	-	-	190	-	-	-	220	-	-	-	220	0.3	500	800
Grey & Nodular cast iron (GG, GGG) Below 300HB	JC5015 (JC8015 (JC 600))	30	0.7	3,580	3,580	70	0.8	1,900	3,000	70	1	1,650	3,300	70	1.2	1,300	3,900
		70	0.6	2,980	2,380	120	0.6	1,750	2,800	120	0.8	1,400	2,800	120	1	1,100	3,300
		100	0.5	2,580	1,550	190	0.4	1,400	2,200	220	0.5	1,150	2,300	220	0.6	900	2,200

L: Overhung length, Ap: Depth of cut, N: Spindle speed, V_F: Feed speed.

NOTE

- 1) The figure to be adjusted according to the machine rigidity or work rigidity.
- 2) In case of chatter occurring, recommend to reduce the depth of cut Ap or Spindle speed and keep feed per tooth.
- 3) If machine does not have enough power, recommend to reduce the depth of cut Ap or Spindle speed and Feed speed.
- 4) Use air blow.
- 5) In case of 50-55HRC, recommend to reduce 30% above Ap, N and F. (In the case of hardened die steel)

● End Mill type



“ High-Feed Diemaster ”

SKS Recommended cutting conditions

● End Mill type

Materials	Grades	Tool dia. (mm)															
		32 / 33				40 (32 Shank)				40,44 (42 Shank)				50			
		No. of teeth 3N				No. of teeth 3N				No. of teeth 3N				No. of teeth 3N			
		L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)
Carbon steel (C50, C55) Below 250HB	JC5040 (JC730U)	70	0.7	1,800	4,300	70	0.8	1,400	4,300	70	1	1,400	5,100	70	1	1,150	4,100
		120	0.5	1,500	3,600	170	0.6	1,000	3,700	170	0.8	1,200	4,300	170	0.8	950	3,400
		220	0.3	900	2,160	220	0.4	800	2,900	220	0.6	1,200	4,300	220	0.6	950	3,400
Mold steel (1.2311, P20) 30-43HRC	JC5040 (JC5015 or JC8015 above 40HRC)	70	0.7	1,800	4,300	70	0.8	1,400	4,300	70	1	1,400	5,100	70	1	1,150	4,100
		120	0.5	1,500	3,600	170	0.6	1,000	3,700	170	0.8	1,200	4,300	170	0.8	950	3,400
		220	0.3	900	2,160	220	0.4	800	2,900	220	0.6	1,200	4,300	220	0.6	950	3,400
Die steel (1.2344, 1.2379) Below 255HB	JC5040	70	0.7	1,800	4,300	70	0.8	1,400	4,300	70	1	1,400	5,100	70	1	1,150	4,100
		120	0.5	1,500	3,600	170	0.6	1,000	3,700	170	0.8	1,200	4,300	170	0.8	950	3,400
		220	0.3	900	2,160	220	0.4	800	2,900	220	0.6	1,200	4,300	220	0.6	950	3,400
Stainless steel Below 250HB	JC5015 (JC8015 (JC730U))	70	0.7	1,500	4,000	70	0.8	1,200	3,600	70	1	1,200	4,300	70	1	1,000	3,600
		120	0.5	1,250	3,400	170	0.6	1,000	3,000	170	0.8	1,200	3,600	170	0.8	950	3,400
		220	0.3	600	1,800	220	0.4	800	2,900	220	0.6	1,000	3,000	220	0.6	830	3,000
Hardened die steel (1.2344, 1.2379) 40-50HRC	JC5015 (JC8015)	70	0.6	800	1,680	70	0.8	640	1,500	70	0.8	640	1,900	70	0.8	500	1,500
		120	0.4	700	1,260	170	0.6	480	1,100	170	0.6	480	1,400	170	0.6	380	1,100
		220	0.2	500	900	220	0.4	480	1,100	220	0.5	480	1,400	220	0.5	380	1,100
Grey & Nodular cast iron (GG, GGG) Below 300HB	JC5015 (JC8015 (JC 600))	70	1	1,300	4,300	70	1.2	1,000	4,600	70	1.5	1,000	5,500	70	1.5	830	4,500
		120	0.8	1,100	3,600	170	1	720	3,200	170	1.2	720	3,900	170	1.2	570	3,100
		220	0.5	900	2,500	220	0.6	720	3,200	220	0.8	720	4,300	220	0.8	570	3,400

L: Overhung length, Ap: Depth of cut, N: Spindle speed, V_F: Feed speed.

NOTE

1) The figure to be adjusted according to the machine rigidity or work rigidity.

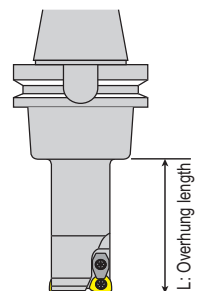
● End Mill type

2) In case of chatter occurring, recommend to reduce the depth of cut Ap or Spindle speed and keep feed per tooth.

3) If machine does not have enough power, recommend to reduce the depth of cut Ap or Spindle speed and Feed speed.

4) Use air blow.

5) In case of 50-55HRC, recommend to reduce 30% above Ap, N and F. (In the case of hardened die steel)



“ High-Feed Diemaster ”

SKS Recommended cutting conditions

● MSH head type and MSN type carbide shank holder

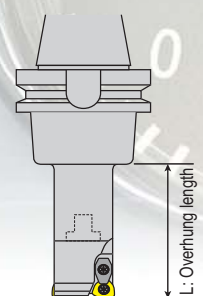
Materials	Grades	Tool dia. (mm)											
		16 / 17				20 / 21 / 22				25 / 26 / 28			
		No. of teeth 2N				No. of teeth 2N				No. of teeth 2N			
		L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)
Carbon steel (C50, C55) Below 250HB	JC5040 (JC730U)	70	0.4	3,580	6,440	70	0.6	2,850	5,700	90	0.7	2,300	5,500
		120	0.3	3,180	5,090	120	0.5	2,600	5,200	140	0.5	2,300	5,100
		160	0.2	2,980	4,760	190	0.3	2,400	4,800	210	0.3	1,900	3,800
Mold steel (1.2311, P20) 30-43HRC	JC5040 (JC5015 or JC8015 above 40HRC)	70	0.4	3,180	5,720	70	0.5	2,850	5,700	90	0.7	2,300	5,500
		120	0.3	3,180	5,090	120	0.4	2,600	5,200	140	0.5	2,300	5,100
		160	0.2	2,980	4,760	190	0.3	2,400	4,800	210	0.3	1,900	3,800
Die steel (1.2344, 1.2379) Below 255HB	JC5040	70	0.4	3,180	5,720	70	0.5	2,850	5,700	90	0.7	2,300	5,500
		120	0.3	3,180	5,090	120	0.4	2,600	5,200	140	0.5	2,300	5,100
		160	0.2	2,980	4,760	190	0.3	2,400	4,800	210	0.3	1,900	3,800
Stainless steel Below 250HB	JC5015 (JC8015 (JC730U))	70	0.3	3,180	5,720	70	0.5	2,500	5,000	90	0.7	2,000	4,400
		120	0.3	2,980	4,760	120	0.4	2,400	4,800	140	0.5	2,000	4,000
		160	0.2	2,980	4,760	190	0.3	2,400	4,800	210	0.3	1,900	3,800
Hardened die steel (1.2344, 1.2379) 40-50HRC	JC5015 (JC8015)	70	0.2	2,380	2,610	70	0.4	1,300	1,600	90	0.6	1,100	1,500
		120	0.2	2,380	2,380	120	0.3	1,200	1,400	140	0.4	1,000	1,400
		160	–	–	–	190	–	–	–	210	–	–	–
Grey & Nodular cast iron (GG, GGG) Below 300HB	JC5015 (JC8015 (JC 600))	70	0.5	2,980	6,550	70	0.6	2,400	5,800	90	1	1,900	4,500
		120	0.3	2,980	5,960	120	0.5	2,400	5,300	140	0.8	1,900	4,300
		160	0.4	2,500	5,000	190	0.4	2,000	4,800	210	0.5	1,600	3,800

L: Overhung length, Ap: Depth of cut, N: Spindle speed, V_F: Feed speed.

NOTE

- 1) The figure to be adjusted according to the machine rigidity or work rigidity.
- 2) In case of chatter occurring, recommend to reduce the depth of cut Ap or Spindle speed and keep feed per tooth.
- 3) If machine does not have enough power, recommend to reduce the depth of cut Ap or Spindle speed and Feed speed.
- 4) Use air blow.
- 5) In case of 50-55HRC, recommend to reduce 30% above Ap, N and F. (In the case of hardened die steel)

● End Mill type



“ High-Feed Diemaster ”

SKS Recommended cutting conditions

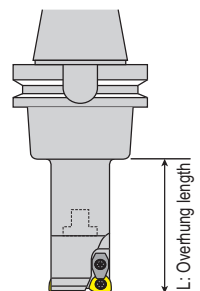
● MSH head type and MSN type carbide shank holder

Materials	Grades	Tool dia. (mm)											
		32 / 33 / 35				32 / 33 / 35				No. of teeth			
		No. of teeth 2N		No. of teeth 3N		No. of teeth		No. of teeth		No. of teeth		No. of teeth	
L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	L (mm)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)		
Carbon steel (C50, C55) Below 250HB	JC5040 (JC730U)	100	0.8	1,800	4,600	100	0.7	1,800	6,000				
		150	0.6	1,800	4,300	150	0.5	1,800	5,400				
		210	0.4	1,500	3,900	210	0.3	1,500	4,500				
Mold steel (1.2311, P20) 30-43HRC	JC5040 (JC5015 or JC8015 above 40HRC)	100	0.8	1,800	4,600	100	0.7	1,800	6,000				
		150	0.6	1,800	4,300	150	0.5	1,800	5,400				
		210	0.4	1,500	3,900	210	0.3	1,500	4,500				
Die steel (1.2344, 1.2379) Below 255HB	JC5040	100	0.8	1,800	4,600	100	0.7	1,800	6,000				
		150	0.6	1,800	4,300	150	0.5	1,800	5,400				
		210	0.4	1,500	3,900	210	0.3	1,500	4,500				
Stainless steel Below 250HB	JC5015 (JC8015 (JC730U))	100	0.8	1,600	3,800	100	0.7	1,600	5,200				
		150	0.6	1,600	3,500	150	0.5	1,600	4,800				
		210	0.4	1,500	3,000	210	0.3	1,500	4,500				
Hardened die steel (1.2344, 1.2379) 40-50HRC	JC5015 (JC8015)	100	0.8	800	1,600	100	0.6	800	2,200				
		150	0.6	700	1,400	150	0.4	700	1,900				
		210	0.3	600	1,200	210	0.2	600	1,500				
Grey & Nodular cast iron (GG, GGG) Below 300HB	JC5015 (JC8015 (JC 600))	100	1.2	1,500	4,200	100	1	1,500	5,200				
		150	1	1,500	3,900	150	0.8	1,500	5,000				
		210	0.6	1,250	3,000	210	0.5	1,250	4,000				

L: Overhung length, Ap: Depth of cut, N: Spindle speed, Vf: Feed speed.

NOTE

- 1) The figure to be adjusted according to the machine rigidity or work rigidity. ● End Mill type
- 2) In case of chatter occurring, recommend to reduce the depth of cut Ap or Spindle speed and keep feed per tooth.
- 3) If machine does not have enough power, recommend to reduce the depth of cut Ap or Spindle speed and Feed speed.
- 4) Use air blow.
- 5) In case of 50-55HRC, recommend to reduce 30% above Ap, N and F. (In the case of hardened die steel)



“ High-Feed Diemaster ”

SKS Recommended cutting conditions

● Face Mill type

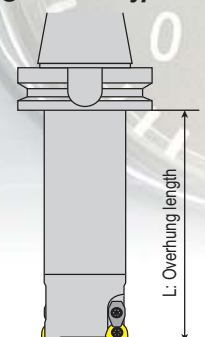
Materials	Grades	Overhung length (mm)	Tool dia. (mm)											
			40mm				50mm, (52mm)							
			No. of teeth 3N				No. of teeth 3N				No. of teeth 4N			
			Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _C (kW)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _C (kW)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _C (kW)
Carbon steel (C50, C55) Below 250HB	JC5040 (JC730U)	150	0.8	1,200	3,600	4	1.2	830	3,730	8	1.2	830	4,970	10.7
		200	0.6	800	3,000	2.5	1	700	3,150	5.6	1	700	4,200	7.5
		250	0.4	600	2,700	1.5	1	570	2,570	4.6	1	570	3,420	6.1
		300	–	–	–	–	0.6	570	3,420	3.7	0.6	570	3,990	4.3
		350	–	–	–	–	0.4	570	3,420	2.5	0.4	570	3,990	2.9
		400	–	–	–	–	–	–	–	–	–	–	–	–
Mold steel (1.2311, P20) 30-43HRC	JC5040 (JC5015 or JC8015 above 40HRC)	150	0.8	1,200	3,600	4.4	1.2	830	3,730	8.6	1.2	830	4,980	11.5
		200	0.6	800	3,000	2.8	1	700	3,150	6.1	1	700	4,200	8.1
		250	0.3	600	2,700	1.2	0.8	570	2,570	4	0.8	570	3,420	5.3
		300	–	–	–	–	0.5	570	2,900	2.8	0.5	570	3,420	3.3
		350	–	–	–	–	0.3	570	2,900	1.7	0.3	570	3,420	2
		400	–	–	–	–	–	–	–	–	–	–	–	–
Die steel (1.2344, 1.2379) Below 255HB	JC5040	150	0.8	1,200	3,600	4.1	1.2	830	3,730	8	1.2	830	4,980	10.7
		200	0.6	800	3,000	2.6	1	700	3,150	5.6	1	700	4,200	7.5
		250	0.3	600	2,700	1.2	0.8	570	2,570	3.7	0.8	570	3,420	4.9
		300	–	–	–	–	0.5	570	2,900	2.6	0.5	570	3,420	3.1
		350	–	–	–	–	0.3	570	2,900	1.6	0.3	570	3,420	1.8
		400	–	–	–	–	–	–	–	–	–	–	–	–
Hardened die steel (1.2344, 1.2379) 40-50HRC	JC5015 JC8015	100	0.8	640	1,500	2.7	1	570	1,720	4.8	1	570	2,280	6.3
		150	0.6	500	1,200	1.6	0.8	450	1,340	3	0.8	450	1,800	4
		200	0.3	400	960	0.6	0.6	380	1,150	1.9	0.6	380	1,520	2.5
		250	–	–	–	–	0.4	380	920	1	0.4	380	1,220	1.4
		300	–	–	–	–	–	–	–	–	–	–	–	–
Grey & Nodular cast iron (GG, GGG) Below 300HB	JC5015 JC8015 (JC 600)	150	1.2	1,000	4,500	5.5	1.5	830	4,480	8.6	1.5	830	5,980	11.5
		200	0.8	800	3,600	3	1.2	700	3,780	6.1	1.2	700	5,040	8.1
		250	0.5	600	2,700	1.4	1.2	570	3,080	4.7	1.2	570	4,100	6.3
		300	–	–	–	–	0.8	570	3,420	3.5	0.8	570	4,560	4.7
		350	–	–	–	–	0.6	570	3,420	2.6	0.6	570	4,560	3.5
		400	–	–	–	–	–	–	–	–	–	–	–	–
Stainless steel Below 250HB	JC5015 JC8015 (JC730U)	150	0.8	1,200	3,600	4.4	1.2	950	3,730	8.6	1.2	950	4,980	11.5
		200	0.6	800	3,000	2.8	1	800	3,150	6	1	800	4,200	8.1
		250	0.3	600	2,250	1	0.8	570	2,250	3.5	0.8	570	3,000	4.6
		300	–	–	–	–	0.5	570	2,250	2.2	0.5	570	3,000	2.9
		350	–	–	–	–	0.3	570	2,250	1.3	0.3	570	3,000	1.7
		400	–	–	–	–	–	–	–	–	–	–	–	–

Ap: Depth of cut, N: Spindle speed, V_F: Feed speed, P_C: Net power consumption.

NOTE

- 1) The figure to be adjusted according to the machine rigidity or work rigidity.
- 2) In case of chatter occurring, recommend to reduce the depth of cut Ap or Spindle speed and keep feed per tooth.
- 3) If machine does not have enough power, recommend to reduce the depth of cut Ap or Spindle speed and Feed speed.

● Facemill type



“ High-Feed Diemaster ”

SKS Recommended cutting conditions

● Face Mill type

Materials	Grades	Overhung length (mm)	Tool dia. (mm)											
			63mm				63mm, (66mm)				80mm			
			No. of teeth 3N				No. of teeth 4N				No. of teeth 5N			
Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _c (kW)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _c (kW)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _c (kW)			
Carbon steel (C50, C55) Below 250HB	JC5040 (JC730U)	150	1.2	760	4,050	13.8	1.2	760	5,400	14.6	1.2	720	5,400	18.5
		200	1.2	680	3,060	9	1.2	680	4,090	11	1.2	600	4,500	15.4
		250	1	600	2,700	6.1	1	600	3,600	8.1	1.2	520	3,900	13.4
		300	1	460	2,050	5.1	1	460	2,730	6.8	1	440	3,300	9.4
		350	0.8	460	2,390	4.3	0.8	460	3,190	5.7	1	360	2,700	7.7
		400	0.4	460	2,730	2.5	0.4	460	3,640	3.3	0.6	360	2,700	4.6
Mold steel (1.2311, P20) 30-43HRC	JC5040 (JC5015 or JC8015 above 40HRC)	150	1.2	760	3,420	9.9	1.2	760	4,560	13.3	1.2	600	4,500	16.6
		200	1.2	680	3,060	8.9	1.2	680	4,080	11.9	1.2	520	3,900	14.4
		250	1	600	2,700	6.5	1	600	3,600	8.7	1.2	440	3,300	12.2
		300	0.8	460	2,050	4	0.8	460	2,730	5.3	1	360	2,700	8.3
		350	0.6	460	2,390	3.5	0.6	460	3,090	4.5	0.8	360	2,700	6.6
		400	0.4	460	2,390	2.3	0.4	460	3,090	3	0.6	360	2,700	5
Die steel (1.2344, 1.2379) Below 255HB	JC5040	150	1.2	760	3,420	9.2	1.2	760	4,560	12.3	1.2	600	4,500	15.4
		200	1.2	680	3,060	8.3	1.2	680	4,080	11	1.2	520	3,900	13.4
		250	1	600	2,700	6.1	1	600	3,600	8.1	1.2	440	3,300	11.3
		300	0.8	460	2,050	3.7	0.8	460	2,730	4.9	1	360	2,700	7.7
		350	0.6	460	2,390	3.2	0.6	460	3,090	4.2	0.8	360	2,700	6.2
		400	0.4	460	2,390	2.2	0.4	460	3,090	2.8	0.6	360	2,700	4.6
Hardened die steel (1.2344, 1.2379) 40-50HRC	JC5015 JC8015	100	1	450	1,350	4.7	1	450	1,800	6.3	1	360	1,800	8
		150	1	380	1,140	4	1	380	1,520	5.3	1	360	1,800	8
		200	0.8	380	1,140	3.2	0.8	380	1,520	4.3	1	300	1,500	6.7
		250	0.7	300	900	2.2	0.7	300	1,200	2.9	0.9	240	1,200	4.8
		300	0.5	300	720	1.3	0.5	300	960	1.7	0.7	240	960	3
Grey & Nodular cast iron (GG, GGG) Below 300HB	JC5015 JC8015 (JC 600)	150	1.5	910	4,910	11.9	1.5	910	6,550	15.9	1.5	720	6,480	19.9
		200	1.5	680	3,670	8.9	1.5	680	4,900	11.9	1.5	600	5,400	16.6
		250	1.5	600	3,150	7.6	1.5	600	4,200	10.2	1.5	520	4,680	14.4
		300	1.2	460	2,480	4.8	1.2	460	3,310	6.4	1.5	440	3,960	12.2
		350	1	460	2,760	4.5	1	460	3,680	5.9	1.2	360	4,320	10.6
		400	0.6	460	2,760	2.7	0.6	460	3,680	3.6	0.8	360	4,320	7.1
Stainless steel Below 250HB	JC5015 JC8015 (JC730U)	150	1.2	760	3,000	8.7	1.2	760	4,000	11.6	1.2	600	3,900	14.4
		200	1.2	680	2,670	7.8	1.2	680	3,560	10.3	1.2	520	3,380	12.5
		250	1	600	2,350	5.7	1	600	3,130	7.6	1.2	440	2,860	10.5
		300	0.8	460	1,800	3.5	0.8	460	2,400	4.6	1	360	2,340	7.2
		350	0.6	460	1,800	2.6	0.6	460	2,400	3.5	0.8	360	2,340	5.8
		400	0.4	460	1,800	1.8	0.4	460	2,400	2.3	0.6	360	2,340	4.3

Ap: Depth of cut, N: Spindle speed, V_F: Feed speed, P_c: Net power consumption

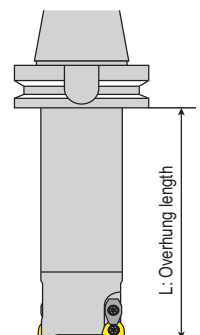
NOTE (continue)

4) Use air blow.

5) In case of 50-55HRC, recommend to reduce 30% above Ap, N and F. (In the case of hardened die steel)

6) In case of over 250mm overhung length and severe interrupted cutting, use 10 type cutter.

● Facemill type



“ High-Feed Diemaster ”

SKS Indexable Face Mill type

● Face Mill type

Materials	Grades	Overhung length (mm)	Tool dia. (mm)											
			100mm				125				160mm			
			No. of teeth 6N				No. of teeth 6N				No. of teeth 7N			
Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _c (kW)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _c (kW)	Ap (mm)	N (min ⁻¹)	V _F (mm/min)	P _c (kW)			
Carbon steel (C50, C55) Below 250HB	JC5040 (JC730U)	150	1.2	570	5,130	22	1.5	460	4,140	27.7	1.5	360	3,780	32.4
		200	1.2	480	4,320	18.5	1.5	460	4,140	27.7	1.5	360	3,780	32.4
		250	1.2	420	3,730	16	1.5	400	3,600	24.1	1.5	360	3,780	32.4
		300	1	350	3,150	11.3	1.5	380	3,420	22.9	1.5	320	3,360	28.8
		350	1	290	2,610	9.3	1.2	380	3,420	18.3	1.5	300	3,150	27
		400	0.6	290	2,610	5.6	1	380	3,420	15.3	1.2	300	3,150	21.6
Mold steel (1.2311, P20) 30-43HRC	JC5040 (JC5015 or JC8015 above 40HRC)	150	1.2	480	4,320	19.9	1.5	400	3,000	21.6	1.5	320	2,800	25.8
		200	1.2	420	3,780	17.4	1.5	400	3,000	21.6	1.5	320	2,800	25.8
		250	1.2	350	3,150	14.5	1.5	380	2,850	20.6	1.5	320	2,800	25.8
		300	1	290	2,610	10	1.2	350	2,630	15.2	1.5	280	2,450	22.6
		350	0.8	290	2,610	8	1	350	2,630	12.6	1.2	280	2,450	18.1
		400	0.6	290	2,610	6	0.8	350	2,630	10.1	1	280	2,450	15.1
Die steel (1.2344, 1.2379) Below 255HB	JC5040	150	1.2	480	4,320	18.5	1.5	400	3,000	20.1	1.5	320	2,800	24
		200	1.2	420	3,780	16.2	1.5	400	3,000	20.1	1.5	320	2,800	24
		250	1.2	350	3,150	13.5	1.5	380	2,850	19.1	1.5	320	2,800	24
		300	1	290	2,610	9.3	1.2	350	2,630	14.1	1.5	280	2,450	21
		350	0.8	290	2,610	7.5	1	350	2,630	11.7	1.2	280	2,450	16.8
		400	0.6	290	2,610	5.6	0.8	350	2,630	9.4	1	280	2,450	14
Hardened die steel (1.2344, 1.2379) 40-50HRC	JC5015 JC8015	100	1	290	1,740	9.7	1	230	1,380	9.6	1	180	1,260	11.2
		150	1	290	1,740	9.7	1	230	1,380	9.6	1	180	1,260	11.2
		200	1	240	1,440	8	1	230	1,380	9.6	1	180	1,260	11.2
		250	0.9	190	1,140	5.7	1	190	1,140	7.9	1	150	1,050	9.3
		300	0.7	190	910	3.5	0.8	190	1,140	6.3	0.8	150	1,050	7.4
Grey & Nodular cast iron (GG, GGG) Below 300HB	JC5015 JC8015 (JC 600)	150	1.5	570	6,160	23.7	1.8	420	4,500	26	1.8	330	4,160	30.7
		200	1.5	480	5,180	19.9	1.8	420	4,500	26	1.8	330	4,160	30.7
		250	1.5	420	4,480	17.2	1.8	380	4,100	23.7	1.8	330	4,160	30.7
		300	1.5	350	3,780	14.5	1.5	380	4,100	19.7	1.8	300	3,780	27.9
		350	1.2	290	4,180	12.9	1.2	350	3,780	14.5	1.5	300	3,780	23.3
		400	0.8	290	4,180	8.6	1	350	3,780	12.1	1.2	270	3,400	16.7
Stainless steel Below 250HB	JC5015 JC8015 (JC730U)	150	1.2	480	3,750	17.3	1.5	380	2,850	20.6	1.5	300	2,630	24.3
		200	1.2	420	3,280	15.1	1.5	380	2,850	20.6	1.5	300	2,630	24.3
		250	1.2	350	2,730	12.6	1.5	350	2,630	19	1.5	300	2,630	24.3
		300	1	290	2,270	8.7	1.2	320	2,400	13.8	1.5	270	2,360	21.8
		350	0.8	290	2,270	7	1	320	2,400	11.5	1.2	270	2,360	17.4
		400	0.6	290	2,270	5.2	0.8	320	2,400	9.2	1	270	2,360	14.5

Ap: Depth of cut, N: Spindle speed, V_F: Feed speed, P_c: Net power consumption

NOTE

- 1) The figure to be adjusted according to the machine rigidity or work rigidity.
- 2) In case of chatter occurring, recommend to reduce the depth of cut Ap or Spindle speed and keep feed per tooth.
- 3) If machine does not have enough power, recommend to reduce the depth of cut Ap or Spindle speed and Feed speed.
- 4) Use air blow.
- 5) In case of 50-55HRC, recommend to reduce 30% above Ap, N and F. (In the case of hardened die steel)
- 6) In case of over 250mm overhung length and severe interrupted cutting, use 10 type cutter.

● Facemill type

