



DIE & MOLD SERIES

CATALOG NO. 10018

**HIGH PERFORMANCE
DIE & MOLD MACHINING**

**HIGH FEED
DIEMASTER**



DIJET INCORPORATED
www.dijetusa.com

High Feed Diemaster



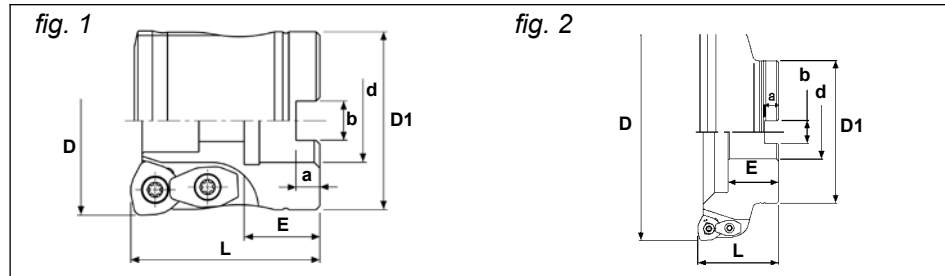
SKS - Face Mill Style



Designed for high feed face milling of molds, dies and other similar type work pieces.



Entering Angle	:-	A.R. : +8°
		R.R. : -2°
Max. D.O.C.		: .060"



Specifications

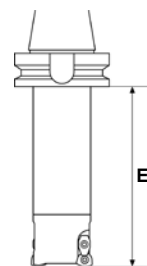
CATALOG NUMBER	DIMENSIONS							FIG.	SCREW	INSERT NUMBER	Q
	D	L	D1	d	a	b	E				
SKS-3200-75R-08	2.00	2.00	1.85	0.75	.197	.319	0.75	1	DSW-4510H	WDHW080520ZTR	3
SKS-4200-75R-08	2.00	2.00	1.85	0.75	.197	.319	0.75	1			4
SKS-4250-100R-08	2.50	2.00	2.36	1.00	.240	.375	0.75	1			4
SKS-5300-100R-08	3.00	2.00	2.85	1.00	.240	.375	0.75	1		5	
SKS-6400-150R-08	4.00	2.25	3.78	1.50	.400	.630	1.00	1		6	
SKS-4250-100R-10	2.50	2.00	2.36	1.00	.240	.375	.75	1		DSW-4512H	WDMW10X620ZTR
SKS-5300-100R-10	3.00	2.00	2.85	1.00	.240	.375	.75	1	5		
SKS-5300-125R-10	3.00	2.48	2.85	1.25	.315	.500	1.26	1	5		
SKS-6400-150R-10	4.00	2.25	3.78	1.50	.400	.630	1.00	1	6		
SKS-6500-150R-10	5.00	2.25	3.35	1.50	.400	.630	1.42	2	6		
SKS-7600-150R-10	6.00	2.25	3.94	1.50	.400	.630	1.42	2	7		

Note: All cutters are supplied without inserts.

Parts

SCREW	CLAMP	WRENCH
DSW-4510H DSW-4512H	DCM-17	A-20

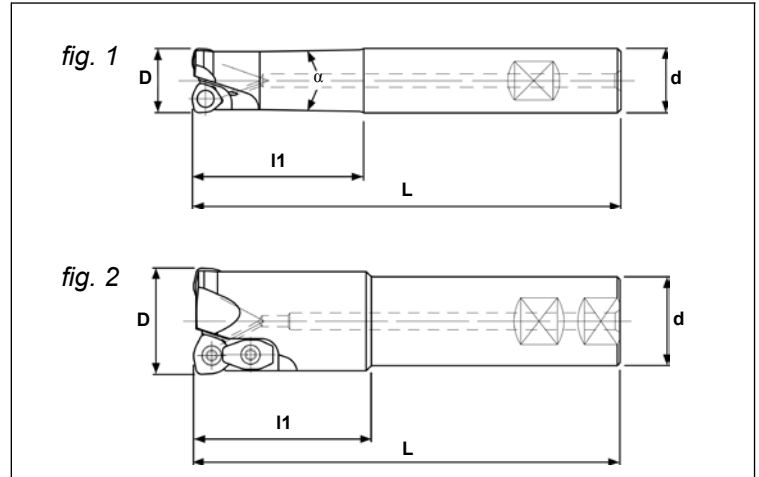
Additional Cutting Data for Extended Reach For Face Mill Style



Extended Reach

OVERALL	~6"	8"	10"	12"	14"	16"
RPM	100%	85%	85%	85%	70%	50%
FEED	100%	85%	85%	85%	85%	70%
D.O.C.	100%	100%	100%	80%	50%	25%

SKS - End Mill Style



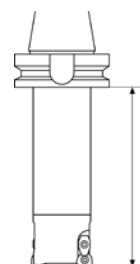
Specifications

CATALOG NUMBER	DIMENSIONS					FIG.	PARTS			INSERT NUMBER	Q
	D	L	l1	d	α		Screw	Wrench	Clamp		
SKS-2075-2.0-S075	.750	5.00	2.00	.750	2°	1	DSW-306H	T-10SD	-	WD*W050316ZTR	2
SKS-2075-4.0-S075	.750	7.00	4.00	.750	1°	1					
SKS-2075-6.0-S075	.750	9.00	6.00	.750	0°30'	1					
SKS-2100-2.5-S100	1.00	6.00	2.50	1.00	2°	1	CSW-408H	T-15SD	DCM-18	WD*W06T320ZTR	2
SKS-2100-4.5-S100	1.00	8.00	4.50	1.00	1°	1					
SKS-2100-6.5-S100	1.00	10.00	6.50	1.00	0°30'	1					
SKS-2125-2.5-S125	1.25	6.00	2.50	1.25	2°	1	DSW-4510H	A-20	DCM-17	WD*080520Z*R	2
SKS-2125-4.5-S125	1.25	8.00	4.50	1.25	1°	1					
SKS-2125-6.5-S125	1.25	10.00	6.50	1.25	1°	1					
SKS-2150-2.5-S125	1.50	6.00	2.50	1.25	-	2	DSW-4510H	A-20	DCM-17	WD*080520Z*R	3
SKS-2150-5.0-S125	1.50	10.00	5.00	1.25	-	2					
SKS-3200-2.5-S200	2.00	6.00	2.50	2.00	-	1	DSW-4510H	A-20	DCM-17	WD*080520Z*R	3
SKS-3200-5.0-S200	2.00	10.00	5.00	2.00	-	1					

Parts

SCREW	WRENCH	CLAMP SET
DSW-306H, CSW-408H DSW-4510H	T-10SD, T-15SD A-20	DCM-18 DCM-17

Additional Cutting Data for Extended Reach For End Mills & Modular Head Styles



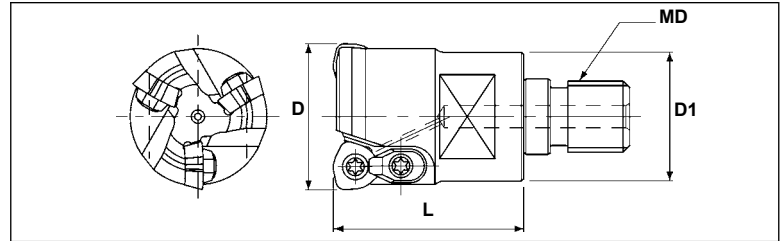
OVERALL	~3"	~5"	Over 5"
RPM	100%	70~80%	50%
FEED	100%	70~80%	50%
D.O.C.	100%	70~80%	50%

Extended Reach

High Feed Diemaster



Modular Head

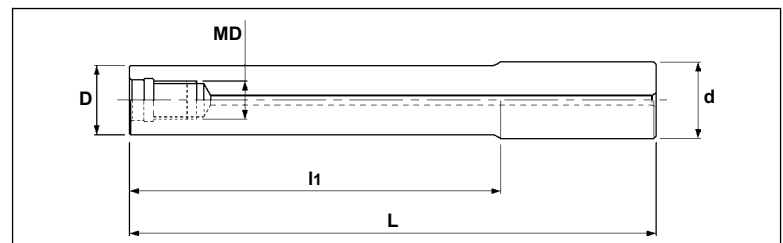


Specifications

CATALOG NUMBER	DIMENSIONS				HEAD TORQUE lbs./ft	CLAMP SET	PARTS		INSERT
	D	L	D1	MD			Screw	Wrench	
MSH-2062-M8	.625	.900	.591	M8	16.9	--	TSW-2556H	T-08SD	WOMW04T215ZER
MSH-2075-M10	.750	.910	.728	M10	33.9	--	DSW-306H	T-10SD	WDMW050316ZTR or WDHW050316ZTR
MSH-2100-M12	1.00	1.38	.945	M12	59	DCM-18	CSW-408H	T-15SD	WDMW06T320ZTR or WDHW06T320ZTR
MSH-2125-M16	1.25	1.69	1.14	M16	66.3	DCM-17	DSW-4510H	A-20	WDMW080520ZTR or WDHW080520ZTR or WDMT080520ZER

Note: All cutters are supplied without inserts.

Modular Head Holders Carbide Holder with Coolant Hole



Specifications

CATALOG NUMBER	DIMENSIONS					APPLICABLE HOLDERS
	D	I1	L	d	MD	
MSN-M8-2.0-S062C	.591	2.00	5.00	.625	M8	MSH-2062-M8
MSN-M8-4.0-S062C	.591	4.00	7.00	.625	M8	
MSN-M8-6.0-S062C	.591	6.00	9.00	.625	M8	
MSN-M10-2.0-S075C	.728	2.00	5.00	.750	M10	MSH-2075-M10
MSN-M10-4.0-S075C	.728	4.00	7.00	.750	M10	
MSN-M10-6.0-S075C	.728	6.00	9.00	.750	M10	
MSN-M12-2.0-S100C	.945	2.00	5.00	1.00	M12	MSH-2100-M12
MSN-M12-4.0-S100C	.945	4.00	7.00	1.00	M12	
MSN-M12-6.0-S100C	.945	6.00	9.00	1.00	M12	
MSN-M12-8.0-S100C	.945	8.00	11.00	1.00	M12	
MSN-M16-2.0-S125C	1.14	2.00	5.00	1.25	M16	MSH-2125-M16
MSN-M16-4.0-S125C	1.14	4.00	7.00	1.25	M16	
MSN-M16-6.0-S125C	1.14	6.00	9.00	1.25	M16	
MSN-M16-8.0-S125C	1.14	8.00	11.00	1.25	M16	

SKS - Inserts

fig. 1
JC5040

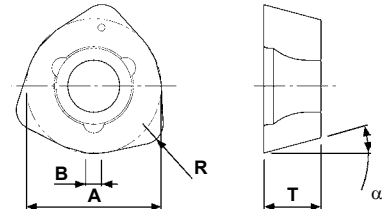


fig. 2
JC5015 /
JC8015

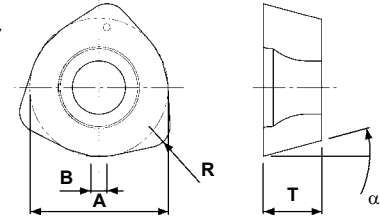


fig. 3
JC600

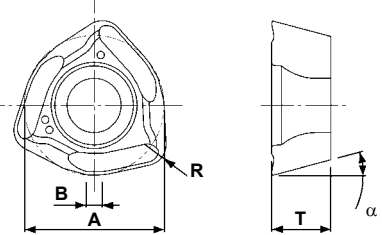
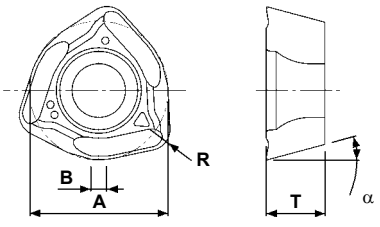


fig. 4
JC730U

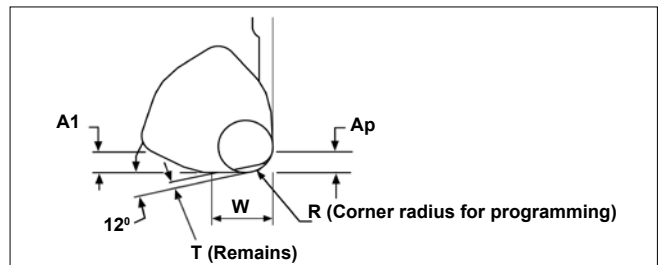


CATALOG NUMBER	TOLERANCE	DIMENSIONS					COATED GRADES				
		A	B	T	R	α	JC5015 (Fig. 2)	JC5040 (Fig. 1)	JC600 (Fig. 3)	JC730U (Fig. 4)	JC8015 (Fig. 2)
WOMW04T215ZER	M	.256	.031	.110	.059	13°		•			•
WDMW050316ZTR		.315	.039	.125	.063	15°	•	•			•
WDMW06T320ZTR		.393	.047	.156	.079	15°	•	•	•		•
WDMT080520ZER		.511	.059	.216	.079	15°				•	
WDMW080520ZTR		.511	.059	.216	.079	15°	•	•	•		•
*WDMT10X620ZER		.630	.078	.236	.079	15°				•	
*WDMW10X620ZTR		.630	.078	.236	.079	15°	•	•			•
WDHW050316ZTR	H	.315	.039	.125	.063	15°	•	•			
WDHW06T320ZTR		.393	.047	.156	.079	15°	•	•			
WDHW080520ZTR		.511	.059	.216	.079	15°	•	•			

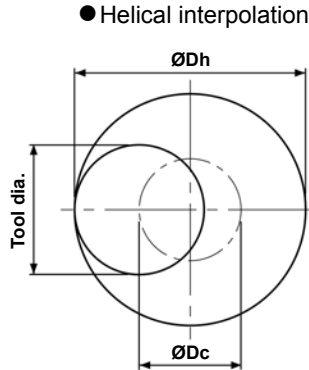
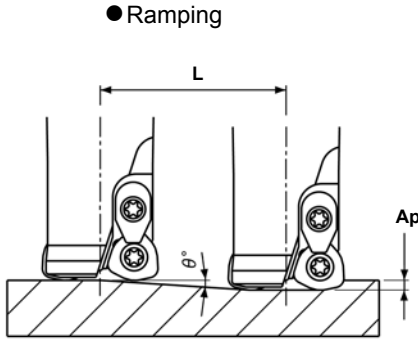
*Note: Use larger insert version for severe interrupted cutting condition.

Definition of Corner Shape for Programming

INSERT SIZE	W	Ap	T	A1	R
04	.106	.031	.011	.031	.059
05	.142	.049	.014	.047	.079
06	.177	.059	.017	.059	.098
08	.236	.079	.025	.079	.118
10	.291	.098	.036	.098	.118



Recommended Conditions For Helical Interpolation



- Calculation of tool pass dia.

$$\text{Tool pass dia. } \varnothing D_c = \text{Bore dia. } \varnothing D_h - \text{Tool Dia. } I$$

- Down cutting is recommended, so tool pass rotation should be counterclockwise.
- Depth of cut per one circuit should not exceed max. depth of cut A_p .
- In case of ramping and helical interpolation, apply 70% or less feed (F) from standard cutting condition table.
- In case of drilling, apply 50% or less Z axis feed (F) from standard cutting condition table.
- Long consecutive chips may result in case of drilling, confirm safe operating conditions.

CATALOG NUMBER	TOOL DIA. (inch)	EFFECTIVE CUTTING DIA. (inch)	MAX. DEPTH OF CUT: A_p (inch)	RAMPING		HELICAL INTERPOLATION		MAX. DRILLING DEPTH: Z (inch)
				MAX. ANGLE	TOTAL CUTTING LENGTH AT MAX. A_p : L (inch)	MIN BORE DIA.: D_h (inch)	MAX BORE DIA.: D_h (inch)	
MSH-2062-M8	.625	.410	.031	2° 32'	.700	.980	1.13	.011
SKS-2075, MSH-2075-M10	.750	.465	.047	3° 18'	.819	1.11	1.38	.020
SKS-2100, MSH-2100-M12	1.00	.642	.059	3° 45'	.902	1.33	1.80	.039
SKS-2125, MSH-2125-M16	1.25	.780	.079	4° 06'	1.10	1.59	2.34	.059
SKS-2150	1.50	1.03	.079	2° 54'	1.56	2.09	2.84	.059
SKS-*200	2.00	1.53	.079	2°	2.26	3.09	3.84	.059
SKS-4250-*-08	2.50	2.02	.079	1° 30'	3.01	4.09	4.84	.059
SKS-5300-*-08	3.00	2.52	.079	1° 12'	3.76	5.09	5.84	.059
SKS-6400-*-08	4.00	3.52	.079	1°	4.51	7.09	7.84	.059
SKS-4250-*-10	2.50	1.91	.091	2° 42'	1.92	3.86	4.84	.071
SKS-5300-*-10	3.00	2.41	.091	2° 06'	2.47	4.86	5.84	.071
SKS-6400-*-10	4.00	3.41	.091	1° 30'	3.46	6.86	7.84	.071
SKS-6500-*-10	5.00	4.41	.091	1° 12'	4.32	8.86	9.84	.071
SKS-7600-*-10	6.00	5.41	.091	0° 54'	5.76	10.86	11.84	.071

Recommended Cutting Conditions For Face Mill Style (see page 2 for Extended Reach info)

WORK MATERIAL	INSERT GRADE	CUTTING SPEED V (ft / min)	SKS-3200-75R-08			SKS-4200-75R-08			SKS-4250-100R-08			SKS-5300-100R-08			MAX. D.O.C.
			METAL REMOVAL	N r.p.m.	F inch/min	RATE Q inch/min	METAL REMOVAL	N r.p.m.	F inch/min	RATE Q inch/min	METAL REMOVAL	N r.p.m.	F inch/min	RATE Q inch/min	
Gray Cast Iron (HB200 ~ 250)	JC5015, JC600	400	1100	229	21	764	306	28	611	244	28	509	255	34	.060
Nodular Cast Iron (HB180 ~ 250)	JC5015, JC600	350	668	160	14	668	214	19	535	171	19	446	178	24	.060
Carbon Steel (HB180 ~ 280)	JC5040, JC730U	400	1100	229	21	764	306	28	611	244	28	509	255	34	.060
Alloy Steel (HB180 ~ 280)	JC5040, JC730U	400	1100	183	17	764	244	22	611	196	22	509	204	28	.060
Hardened Steel (HRc 38 ~ 50)	JC8015, JC5015	250	477	57	3.4	477	76	4.6	382	61	4.6	318	64	5.7	.040
Tool & Die Steel (HB180 ~ 255)	JC5040, JC8015	400	764	183	17	764	244	22	611	196	22	509	204	28	.060
Stainless Steel (HB150 ~ 250)	JC8015, JC730U	300	573	103	9	573	138	12	458	110	12	382	115	15	.060
Aluminum Alloy (HB30 ~ 100)	JC5015, JC600	800	1,528	458	41	1,528	611	55	1,222	489	55	1,019	509	69	.060
Inconel, Titanium ~HRc 30	JC8015	120	229	13.8	0.8	229	18.3	1.1	183	14.7	1.1	153	15.3	1.4	.040
Maximum Ramping Angle			2°			2°			1° 30'			1° 12'			
Maximum Vertical Cutting Depth			.060			.060			.060			.060			
Maximum Width			1.5			1.5			1.875			2.25			

WORK MATERIAL	INSERT GRADE	CUTTING SPEED V (ft / min)	SKS-6400-150R-08			SKS-6500-150R-10			SKS-7600-150R-10			MAX. D.O.C.
			METAL REMOVAL	N r.p.m.	F inch/min	RATE Q inch/min	METAL REMOVAL	N r.p.m.	F inch/min	RATE Q inch/min	METAL REMOVAL	
Gray Cast Iron (HB200 ~ 250)	JC5015, JC600	400	382	229	41	420	177	46	330	164	52	.070
Nodular Cast Iron (HB180 ~ 250)	JC5015, JC600	350	334	160	29	380	160	42	300	148	47	.070
Carbon Steel (HB180 ~ 280)	JC5040, JC730U	400	382	229	41	460	163	37	360	149	40	.060
Alloy Steel (HB180 ~ 280)	JC5040, JC730U	400	382	183	33	400	118	27	320	110	30	.060
Hardened Steel (HRc 38 ~ 50)	JC8015, JC5015	250	239	57	6.9	230	54	8	180	50	9	.040
Tool & Die Steel (HB180 ~ 255)	JC5040, JC8015	400	382	183	33	400	106	24	320	100	27	.060
Stainless Steel (HB150 ~ 250)	JC8015, JC730U	300	286	103	19	380	106	24	300	100	27	.060
Aluminum Alloy (HB30 ~ 100)	JC5015, JC600	800	764	458	83	640	380	100	520	360	113	.070
Inconel, Titanium ~HRc 30	JC8015	120	115	13.8	1.7	100	12	1.8	83	11.6	2.1	.040
Maximum Ramping Angle			1°			30'			30'			
Maximum Vertical Cutting Depth			.060			.060			.060			
Maximum Width			3"			3.75"			4.50"			

- Note:**
1. In case of occurring chatter, the Depth of cut should be reduced by 20%
 2. Recommended Max Width of Cut is less than 3/4 x diameter
 3. If machine does not have enough power, the Depth of Cut, Speeds & Feeds should be reduced 30%
 4. Do not cut over .080" D.O.C.
 5. Use air instead of coolant unless using insert grade JC8015
 6. In case of ramping, vertical plunging, feeds should be reduced 50%

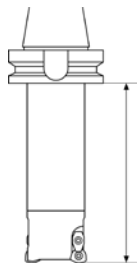
Recommended Cutting Conditions For End Mill & Modular Head Style

WORK MATERIAL	INSERT GRADE	CUTTING SPEED V (ft/min)	MSH-2062-M8			METAL REMOVAL	SKS-2075-2.0-S075 MSH-2075-M10			METAL REMOVAL	SKS-2100-2.5-S100 MSH-2100-M12			METAL REMOVAL	SKS-2125-2.5-S125 MSH-2125-M16			METAL REMOVAL	SKS-2150-2.5-S150			METAL REMOVAL
			N r.p.m.	F inch/min	DOC	RATE Q inch ³ /min	N r.p.m.	F inch/min	DOC	RATE Q inch ³ /min	N r.p.m.	F inch/min	DOC	RATE Q inch ³ /min	N r.p.m.	F inch/min	DOC	RATE Q inch ³ /min	N r.p.m.	F inch/min	DOC	RATE Q inch ³ /min
Gray Cast Iron (HB200 ~ 250)	JC5015	400	2,440	210	.02	1.9	2,038	217	.04	4.9	1,529	206	.04	6.2	1,223	193	.05	9.0	1,019	201	.06	13.5
Nodular Cast Iron (HB180 ~ 250)	JC5015	350	2,140	185	.02	1.7	1,783	190	.03	3.2	1,338	181	.04	5.4	1,070	169	.05	7.9	892	176	.06	11.8
Carbon Steel (HB180 ~ 280)	JC5040	550	3,360	235	.015	1.6	2,803	298	.03	5.0	2,102	284	.03	6.4	1,682	226	.03	6.4	1,401	221	.04	9.9
Alloy Steel (HB180 ~ 280)	JC5040	550	3,360	235	.015	1.6	2,803	238	.03	4.0	2,102	227	.03	5.1	1,682	181	.03	5.1	1,401	181	.04	8.1
Hardened Steel (HRc 38 ~ 50)	JC8015, JC5015	250	1,520	65	.007	0.2	1,274	50	.02	.6	955	53	.02	0.8	764	48	.03	1.4	637	50	.04	2.3
Die Steel (HB180 ~ 255)	JC5040, JC8015	550	3,360	235	.015	1.6	2,803	238	.03	4.0	2,102	227	.03	5.1	1,682	181	.03	5.1	1,401	181	.03	6.1
Stainless Steel (HB200 ~ 250)	JC8015	300	1,830	125	.010	0.6	1,529	97	.03	1.6	1,146	93	.03	2.1	917	74	.03	2.1	764	72	.04	3.2
Aluminum Alloy (HB150 ~ 250)	JC5015	800	4,880	440	.020	4.1	4,076	433	.04	9.7	3,057	413	.04	12.4	2,446	385	.05	18.1	2,038	401	.06	27.1
Inconel, Titanium ~HRc 30	JC8015	120	730	24	.007	0.1	611	19.3	.02	.2	459	18.1	.02	0.3	367	14.4	.03	0.4	306	12.0	.03	0.4
Maximum Ramping Angle			2°			3°			4°			4°			2° 48'							
Maximum Width of Cut			.46"			.56"			.75"			.94"			1.13"							

WORK MATERIAL	INSERT GRADE	CUTTING SPEED V (ft/min)	SKS-3200-2.5-S200			METAL REMOVAL
			N r.p.m.	F inch/min	DOC	RATE Q inch ³ /min
Gray Cast Iron (HB200 ~ 250)	JC5015	400	764	226	.06	20.3
Nodular Cast Iron (HB180 ~ 250)	JC5015	350	669	197	.06	17.8
Carbon Steel (HB180 ~ 280)	JC5040	550	1,051	248	.06	22.3
Alloy Steel (HB180 ~ 280)	JC5040	550	1,051	204	.06	18.3
Hardened Steel (HRc 38 ~ 50)	JC8015, JC5015	250	478	56	.06	5.1
Die Steel (HB180 ~ 255)	JC5040, JC8015	550	1,051	204	.04	12.2
Stainless Steel (HB200 ~ 250)	JC8015	300	573	81	.06	7.3
Aluminum Alloy (HB150 ~ 250)	JC5015	800	1,529	451	.06	40.6
Inconel, Titanium ~HRc 30	JC8015	120	229	13.5	.04	0.8
Maximum Ramping Angle			2°			
Maximum Width of Cut			1.5"			

- Note:**
1. In case of occurring chatter, the Depth of cut should be reduced by 20%.
 2. Recommended Max Width of Cut is less than 3/4 x diameter.
 3. If machine does not have enough power, the Depth of Cut, Speeds & Feeds should be reduced 30%.
 4. Do not cut over .080" D.O.C.
 5. Use air instead of coolant unless using insert grade JC8015.
 6. In case of ramping, vertical plunging, feeds should be reduced 50%.
 7. User grade JC8015 when encountering high hard materials, high speed conditions, or coolant is being used.

Additional Cutting Data for Extended Reach For End Mills & Modular Head Styles



Extended Reach

OVERALL	~3"	~5"	Over 5"
RPM	100%	70~80%	50%
FEED	100%	70~80%	50%
D.O.C.	100%	70~80%	50%

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