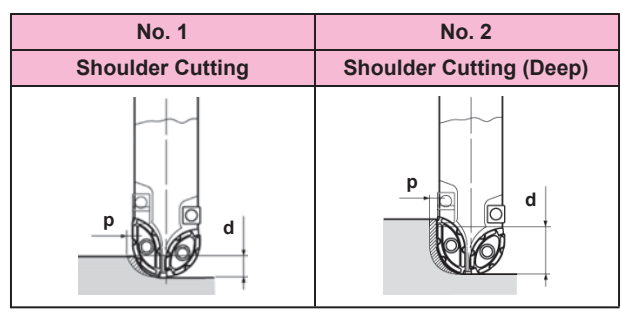




Swing Ball

INCH

Recommended Cutting Data for Swing Ball



Material	Insert	Grade	SFM	Parameters	Tool Diameter			
					3/4"		1"	
					Fig. 1	Fig. 2	Fig. 1	Fig. 2
Gray Cast Iron	Chipbreaker	JC8015	700	IPT	.008"	.005"	.008"	.005"
				DOC (d)	.200"	.625"	.240"	.800"
				WOC (p)	.160"	.080"	.200"	.120"
Nodular Cast Iron	Chipbreaker	JC8015	650	IPT	.007"	.005"	.008"	.005"
				DOC (d)	.200"	.625"	.240"	.800"
				WOC (p)	.160"	.080"	.200"	.120"
Carbon Steel	Chipbreaker	JC5040	600	IPT	.006"	.004"	.007"	.004"
				DOC (d)	.200"	.625"	.240"	.800"
				WOC (p)	.160"	.080"	.200"	.120"
Low Alloy Steel	Chipbreaker	JC5040	550	IPT	.006"	.004"	.007"	.004"
				DOC (d)	.200"	.625"	.240"	.800"
				WOC (p)	.160"	.080"	.200"	.120"
Mold Steel	Chipbreaker	JC5040	500	IPT	.006"	.004"	.006"	.004"
				DOC (d)	.160"	.500"	.200"	.600"
				WOC (p)	.100"	.080"	.120"	.100"
Tool & Die Steel (40-50 HRC)	Chipbreaker	JC8015	400	IPT	.005"	.004"	.005"	.004"
				DOC (d)	.080"	.200"	.120"	.250"
				WOC (p)	.120"	.060"	.160"	.060"
Hardened Die Steel & Welds (50-60 HRC)	MMW/MSW	JC8015	200	IPT	.003"	N/A	.003"	N/A
				DOC (d)	.080"	N/A	.120"	N/A
				WOC (p)	.120"	N/A	.120"	N/A
Stainless Steel	Chipbreaker	JC5040	300	IPT	.004"	N/A	.005"	N/A
				DOC (d)	.080"	N/A	.120"	N/A
				WOC (p)	.120"	N/A	.160"	N/A

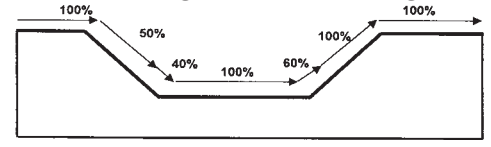
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
 2. RPM = 3.82 x SFM / Dia.
 3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

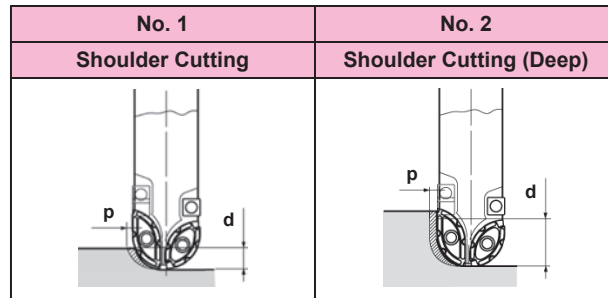


INCH

METRIC

Swing Ball

Recommended Cutting Data for Swing Ball



Material	Insert	Grade	SFM	Parameters	Tool Diameter					
					1-1/4" / 32mm		1-1/2" / 40mm		2" / 50mm	
					Fig. 1	Fig. 2	Fig. 1	Fig. 2	Fig. 1	Fig. 2
Gray Cast Iron	Chipbreaker	JC8015	700	IPT	.010"	.006"	.015"	.007"	.020"	.008"
				DOC (d)	.400"	1.10"	.400"	1.40"	.400"	1.60"
				WOC (p)	.240"	.200"	.320"	.320"	.400"	.400"
Nodular Cast Iron	Chipbreaker	JC8015	650	IPT	.010"	.006"	.015"	.007"	.020"	.008"
				DOC (d)	.400"	1.10"	.400"	1.40"	.400"	1.60"
				WOC (p)	.240"	.200"	.320"	.320"	.400"	.400"
Carbon Steel	Chipbreaker	JC5040	600	IPT	.008"	.005"	.012"	.006"	.015"	.008"
				DOC (d)	.400"	1.10"	.400"	1.40"	.400"	1.60"
				WOC (p)	.240"	.200"	.300"	.320"	.400"	.400"
Low Alloy Steel	Chipbreaker	JC5040	550	IPT	.008"	.005"	.010"	.006"	.015"	.007"
				DOC (d)	.400"	1.10"	.400"	1.40"	.400"	1.60"
				WOC (p)	.240"	.200"	.320"	.320"	.400"	.400"
Mold Steel	Chipbreaker	JC5040	500	IPT	.008"	.004"	.010"	.005"	.012"	.006"
				DOC (d)	.240"	.750"	.300"	1.00"	.340"	1.20"
				WOC (p)	.140"	.100"	.160"	.100"	.180"	.100"
Tool & Die Steel (40-50 HRC)	Chipbreaker	JC8015	400	IPT	.006"	.004"	.010"	.004"	.010"	.005"
				DOC (d)	.160"	.300"	.160"	.360"	.200"	.400"
				WOC (p)	.200"	.060"	.200"	.060"	.240"	.080"
Hardened Die Steel & Welds (50-60 HRC)	MMW/MSW	JC8015	200	IPT	.004"	N/A	.005"	N/A	.007"	N/A
				DOC (d)	.120"	N/A	.120"	N/A	.120"	N/A
				WOC (p)	.200"	N/A	.200"	N/A	.240"	N/A
Stainless Steel	Chipbreaker	JC5040	300	IPT	.006"	N/A	.006"	N/A	.008"	N/A
				DOC (d)	.160"	N/A	.160"	N/A	.200"	N/A
				WOC (p)	.200"	N/A	.200"	N/A	.240"	N/A

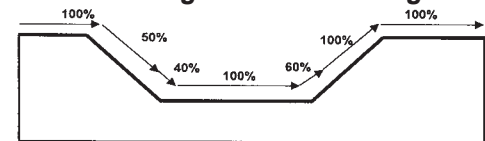
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rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern