Speed and Feed Recommendations for Cutting Die Molds *(Fractional)*

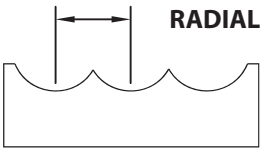
Roughing

(Reference series: 350MX)

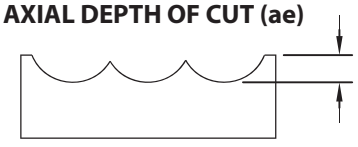
	RPM		CHIPLOAD PER FLUTE (Fz)	
DIAMETER	40 - 50 HRc	50 - 60 HRc	40 - 50 HRc	50 - 60 HRc
1/32"	20,000 - 40,000	20,000 - 40,000	.0005" - .0007"	.0004" - .0005"
1/16"	20,000 - 40,000	20,000 - 40,000	.0010" - .0015"	.0008" - .0010"
3/32"	20,000 - 32,000	20,000 - 30,000	.0015" - .0020"	.0010" - .0015"
1/8"	18,000 - 24,000	15,000 - 20,000	.0020" - .0025"	.0015" - .0020"
3/16"	12,000 - 16,000	10,000 - 14,000	.0030" - .0040"	.0020" - .0030"
1/4"	9,000 - 12,000	7,500 - 10,000	.0040" - .0050"	.0025" - .0040"
5/16"	7,000 - 10,000	6,000 - 8,500	.0050" - .0065"	.0035" - .0050"
3/8"	6,000 - 8,000	5,000 - 7,000	.0060" - .0075"	.0045" - .0060"
1/2"	4,500 - 6,000	4,000 - 5,500	.0080" - .0100"	.0055" - .0080"
5/8"	3,500 - 5,000	3,000 - 4,500	.0090" - .0110"	.0065" - .0090"
3/4"	3,000 - 4,000	2,500 - 3,500	.0100" - .0120"	.0075" - .0100"
1"	2,300 - 3,000	2,000 - 2,500	.0110" - .0130"	.0085" - .0110"

Semi-Finishing and Finishing

	RPM		CHIPLOAD PER FLUTE (Fz)	
DIAMETER	40 - 50 HRc	50 - 60 HRc	40 - 50 HRc	50 - 60 HRc
1/32"	20,000 - 40,000	20,000 - 40,000	.0004" - .0005"	.0003" - .0004"
1/16"	20,000 - 40,000	20,000 - 40,000	.0008" - .0010"	.0005" - .0008"
3/32"	20,000 - 40,000	20,000 - 40,000	.0010" - .0015"	.0008" - .0012"
1/8"	20,000 - 40,000	20,000 - 36,000	.0015" - .0020"	.0010" - .0015"
3/16"	20,000 - 32,000	20,000 - 25,000	.0020" - .0030"	.0015" - .0020"
1/4"	18,000 - 25,000	15,000 - 18,000	.0025" - .0040"	.0020" - .0030"
5/16"	14,000 - 19,000	12,000 - 14,000	.0035" - .0050"	.0025" - .0040"
3/8"	12,000 - 16,000	10,000 - 12,000	.0045" - .0060"	.0030" - .0045"
1/2"	9,000 - 12,000	7,500 - 9,000	.0055" - .0080"	.0040" - .0060"
5/8"	6,500 - 9,000	5,000 - 7,000	.0065" - .0090"	.0050" - .0070"
3/4"	5,500 - 7,500	4,000 - 6,000	.0075" - .0100"	.0060" - .0080"
1"	4,000 - 6,000	3,500 - 5,500	.0085" - .0110"	.0070" - .0090"



RADIAL STEP OVER (ap)



AXIAL DEPTH OF CUT (ae)

Roughing	
Axial (ae)	15% - 25% of Dia.
Radial (ap)	20% - 30% of Dia.

Semi-Finishing	
Axial (ae)	5% - 8% of Dia.
Radial (ap)	2% - 5% of Dia.

Finishing	
Axial (ae)	1% - 3% of Dia.
Radial (ap)	.5% - 1% of Dia.

High pressure air is recommended for clearing chips away from the cut.

NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.

Speed and Feed Recommendations for Cutting Die Molds *(Metric)*

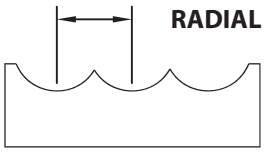
Roughing

(Reference series: 950MX)

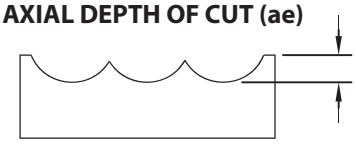
	RPM		CHIPLOAD PER FLUTE (Fz)	
DIAMETER	40 - 50 HRc	50 - 60 HRc	40 - 50 HRc	50 - 60 HRc
1.0	20,000 - 40,000	20,000 - 40,000	.013 - .018	.010 - .013
1.5	20,000 - 40,000	20,000 - 40,000	.025 - .038	.020 - .025
2.0	20,000 - 32,000	20,000 - 30,000	.038 - .050	.025 - .038
3.0	18,000 - 24,000	15,000 - 20,000	.050 - .065	.038 - .050
4.0	12,000 - 16,000	10,000 - 14,000	.075 - .100	.050 - .075
6.0	9,000 - 12,000	7,500 - 10,000	.100 - .125	.065 - .100
8.0	7,000 - 10,000	6,000 - 8,500	.125 - .165	.088 - .125
10.0	6,000 - 8,000	5,000 - 7,000	.150 - .190	.110 - .150
12.0	4,500 - 6,000	4,000 - 5,500	.200 - .250	.140 - .200
16.0	3,500 - 5,000	3,000 - 4,500	.225 - .275	.165 - .225
20.0	3,000 - 4,000	2,500 - 3,500	.250 - .300	.190 - .250
25.0	2,300 - 3,000	2,000 - 2,500	.275 - .325	.215 - .275

Semi-Finishing and Finishing

	RPM		CHIPLOAD PER FLUTE (Fz)	
DIAMETER	40 - 50 HRc	50 - 60 HRc	40 - 50 HRc	50 - 60 HRc
1.0	20,000 - 40,000	20,000 - 40,000	.010 - .013	.008 - .010
1.5	20,000 - 40,000	20,000 - 40,000	.020 - .025	.013 - .020
2.0	20,000 - 40,000	20,000 - 40,000	.025 - .038	.020 - .030
3.0	20,000 - 40,000	20,000 - 36,000	.038 - .050	.025 - .038
4.0	20,000 - 32,000	20,000 - 25,000	.050 - .075	.038 - .050
6.0	18,000 - 25,000	15,000 - 18,000	.065 - .100	.050 - .075
8.0	14,000 - 19,000	12,000 - 14,000	.088 - .125	.065 - .100
10.0	12,000 - 16,000	10,000 - 12,000	.110 - .150	.075 - .110
12.0	9,000 - 12,000	7,500 - 9,000	.140 - .200	.100 - .150
16.0	6,500 - 9,000	5,000 - 7,000	.165 - .225	.125 - .175
20.0	5,500 - 7,500	4,000 - 6,000	.190 - .250	.150 - .200
25.0	4,000 - 6,000	3,500 - 5,500	.215 - .275	.175 - .225



RADIAL STEP OVER (ap)



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Roughing	
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Finishing	
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Radial (ap)	.5% - 1% of Dia.

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