FEEDS & SPEEDS CHARTS FOR REAMERS - CARBIDE TIPPED

Feeds & speeds are a starting recommendation only. Factors such as machine, fixture and tooling rigidity, horsepower available, coolant application and others will affect the performance significantly. Please read machine operators instructions and use all safety shields and glasses before performing these operations.

RPM=SFPM*3.82/CUTTER DIAM. IPM=IPT*RPM*#TEETH

CLASSIFICATION	MATERIAL	BRINELL	SPEED IN SFPM	FEED RATE (INCHES PER REVOLUTION)					HOLE DIAMETER IN INCHES			
			GENERAL PURPOSE (G.P.)	1/8	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2
NON-FERROUS (SOFT)	ALUMINUM ALLOY - WROUGHT	30 - 150*	150 - 250	.004	.006	.008	.011	.012	.013	.016	.019	.020
	MAGNESIUM ALLOY	50 - 90*	130 - 190	.005	.010	.012	.015	.016	.017	.020	.022	.025
	LEAD ALLOY	10 - 20*	150 - 250	.002	.006	.008	.012	.014	.015	.018	.021	.022
	NON-METAL AND PLASTIC	-	90 - 250	.004	.005	.007	.008	.009	.012	.014	.016	.018
	ZINC ALLOY - DIE CAST	80 - 100	140 - 210	.005	.007	.008	.010	.011	.012	.015	.018	.020
NON-FERROUS (HARD)	ALUMINUM BRONZE	40 - 175	50 - 90	.004	.006	.010	.012	.014	.016	.018	.020	.022
	BRASS ALLOY - LEADED AND FREE CUTTING	10 - 100Rb	100 - 250	.005	.008	.011	.015	.017	.018	.020	.022	.025
	NICKEL SILVER	10 - 100Rb	50 - 90	.004	.006	.008	.010	.011	.012	.014	.015	.016
	COPPER ALLOY - TOUGH	40 - 200*	50 - 90	.005	.006	.008	.010	.011	.012	.014	.016	.017
CAST IRON	DUCTILE CAST IRON - AUSTENITIC	120 - 275	45 - 70	.004	.006	.007	.008	.010	.013	.015	.018	.020
	DUCTILE CAST IRON - FERRITIC	140 - 270	50 - 90	.004	.005	.008	.010	.012	.014	.017	.020	.023
	DUCTILE CAST IRON - MARTENSITIC	270 - 400	35 - 60	.004	.006	.007	.008	.009	.010	.012	.014	.016
	GRAY - PEARLITIC	220 - 320	45 - 70	.004	.006	.008	.009	.010	.012	.014	.018	.020
	GRAY - FERRITIC	120 - 220	65 - 135	.005	.008	.010	.011	.013	.016	.020	.022	.025
	MALLEABLE CAST IRON - MARTENSITIC	200 - 320	45 - 70	.004	.006	.008	.010	.012	.013	.015	.018	.025
LOW CARBON STEELS	LOW AND MEDIUM CARBON STEEL - FREE MACHINING	100 - 250	70 - 100	.005	.008	.010	.012	.014	.015	.020	.025	.030
	LOW AND MEDIUM CARBON STEEL - WROUGHT	100 - 375	30 - 85	.004	.008	.009	.011	.013	.015	.018	.020	.022
MEDIUM STRENGTH STEELS	LOW AND MEDIUM CARBON ALLOY STEEL - FREE MACHINING	100 - 275	65 - 100	.005	.008	.010	.015	.017	.018	.022	.025	.027
	LOW AND MEDIUM CARBON ALLOY STEEL	85 - 375	40 - 85	.005	.010	.012	.015	.018	.020	.025	.027	.030
	STAINLESS STEEL - 400 SERIES	135 - 325	40 - 90	.003	.005	.006	.007	.008	.008	.010	.011	.012
	STAINLESS STEEL - 400 SERIES FREE MACHINING	135 - 275	65 - 100	.004	.006	.007	.008	.009	.009	.010	.011	.012
HIGH STRENGTH STEELS	HIGH STRENGTH STEEL - WROUGHT & TOOL STEEL	175 - 400	35 - 70	.004	.006	.007	.008	.009	.010	.011	.012	.013
HIGH TEMP. ALLOYS	HIGH TEMP ALLOYS NICKEL & IRON BASE ALLOY	140 - 300	15 - 85	.003	.005	.005	.005	.006	.007	.008	.010	.012
	STAINLESS STEEL - 300 SERIES	135 - 375	40 - 75	.003	.004	.005	.006	.006	.007	.008	.009	.010
	STAINLESS STEEL - PH SERIES	150 - 440	35 - 70	.003	.004	.004	.005	.006	.007	.008	.009	.010
	TITANIUM ALLOY	110 - 380	30 - 45	.004	.006	.008	.010	.011	.011	.012	.013	.014

CLASSIFICATION	MATERIAL	BRINELL	SPEED IN SFPM	FEED RATE (INCHES PER REVOLUTION)					HOLE DIAMETER IN INCHES			
			COOLANT FED (C.F.)	1/8	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2
NON-FERROUS (SOFT)	ALUMINUM ALLOY - WROUGHT	30 - 150*	200 - 300	–	.008	.010	.013	.015	.017	.021	.022	.024
	MAGNESIUM ALLOY	50 - 90*	150 - 250	–	.012	.015	.018	.019	.020	.024	.026	.028
	LEAD ALLOY	10 - 20*	200 - 300	–	.008	.010	.016	.017	.018	.022	.024	.026
	NON-METAL AND PLASTIC	-	125 - 300	–	.006	.008	.009	.010	.014	.016	.018	.020
	ZINC ALLOY - DIE CAST	80 - 100	170 - 240	–	.009	.011	.013	.014	.016	.020	.022	.025
NON-FERROUS (HARD)	ALUMINUM BRONZE	40 - 175	70 - 105	–	.008	.013	.015	.016	.018	.021	.024	.028
	BRASS ALLOY - LEADED AND FREE CUTTING	10 - 100Rb	125 - 300	–	.010	.014	.020	.022	.024	.026	.028	.032
	NICKEL SILVER	10 - 100Rb	70 - 190	–	.007	.010	.012	.013	.014	.017	.018	.018
	COPPER ALLOY - TOUGH	40 - 200*	70 - 105	–	.008	.010	.013	.014	.016	.018	.019	.020
CAST IRON	DUCTILE CAST IRON - AUSTENITIC	120 - 275	65 - 100	–	.008	.009	.011	.014	.016	.018	.020	.025
	DUCTILE CAST IRON - FERRITIC	140 - 270	70 - 105	–	.007	.010	.012	.015	.017	.022	.024	.027
	DUCTILE CAST IRON - MARTENSITIC	270 - 400	50 - 85	–	.008	.009	.010	.011	.013	.014	.017	.019
	GRAY - PEARLITIC	220 - 320	55 - 100	–	.008	.010	.012	.014	.015	.018	.020	.026
	GRAY - FERRITIC	120 - 220	95 - 190	–	.010	.013	.014	.017	.020	.024	.028	.030
	MALLEABLE CAST IRON - MARTENSITIC	200 - 320	65 - 100	–	.008	.010	.012	.014	.015	.020	.023	.030
LOW CARBON STEELS	LOW AND MEDIUM CARBON STEEL - FREE MACHINING	100 - 250	100 - 150	–	.012	.014	.016	.018	.020	.025	.030	.035
	LOW AND MEDIUM CARBON STEEL - WROUGHT	100 - 375	40 - 110	–	.009	.011	.013	.015	.017	.022	.024	.026
MEDIUM STRENGTH STEELS	LOW AND MEDIUM CARBON ALLOY STEEL - FREE MACHINING	100 - 275	90 - 135	–	.010	.012	.018	.020	.022	.025	.027	.030
	LOW AND MEDIUM CARBON ALLOY STEEL	85 - 375	65 - 100	–	.012	.015	.018	.022	.024	.028	.030	.033
	STAINLESS STEEL - 400 SERIES	135 - 325	50 - 100	–	.007	.007	.008	.009	.009	.012	.014	.015
	STAINLESS STEEL - 400 SERIES FREE MACHINING	135 - 275	90 - 135	–	.008	.009	.010	.011	.012	.013	.013	.014
HIGH STRENGTH STEELS	HIGH STRENGTH STEEL - WROUGHT & TOOL STEEL	175 - 400	50 - 100	–	.007	.008	.009	.011	.012	.014	.015	.016
HIGH TEMP. ALLOYS	HIGH TEMP ALLOYS NICKEL & IRON BASE ALLOY	140 - 300	20 - 115	–	.006	.007	.007	.008	.008	.010	.012	.015
	STAINLESS STEEL - 300 SERIES	135 - 375	60 - 90	–	.006	.007	.008	.008	.009	.010	.011	.012
	STAINLESS STEEL - PH SERIES	150 - 440	50 - 90	–	.006	.006	.007	.008	.009	.010	.012	.014
	TITANIUM ALLOY	110 - 380	40 - 60	–	.008	.010	.013	.014	.014	.016	.016	.018