

REAMING RECOMMENDATIONS

Surface Feet Per Minute (SFM)

Inches Per Revolution (IPR)

Workpiece Material Group			Hardness	(IPR) Reamer Diameter					
				SFM	0.0280 - 0.0625"	0.0626 - 0.1250"	0.1251 - 0.2500"	0.2501 - 0.5000"	0.5001 - 0.7500"
Steels	Free Machining & Low Carbon, 10XX, 11XX, 12XX 12LXX, ASTM A27 ASTM A36	P	≤ 28 Rc	200-300	0.0005 - 0.0030	0.0020 - 0.0060	0.0040 - 0.0100	0.0060 - 0.0150	0.0100 - 0.0300
	Medium Carbon & High Carbon, 1030, 4140, 5115		28 - 38 Rc	125-200	0.0005 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100	0.0100 - 0.0200
Tool & Die Steels	A2, D2, H13, L6, P20, S7	P	28 - 44 Rc	50-125	0.0002 - 0.0010	0.0010 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100
Stainless Steels	Austenitic, 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH		≤ 28 Rc	120-190	0.0005 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100	0.0100 - 0.0200
	Ferritic, 18Cr-2Mo, 26Cr-1Mo, 29Cr-4Mo, 29Cr-4Mo-2Ni	M	≤ 28 Rc	80-120	0.0005 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100	0.0100 - 0.0200
	Moderately Difficult to Machine, Nitronic 50, Nitronic 60, 301, 303, 304, 304L, Incoloy 27-7Mo, 316 316L, 321, 347		≤ 28 Rc	60-100	0.0002 - 0.0020	0.0010 - 0.0040	0.0020 - 0.0060	0.0040 - 0.0100	0.0060 - 0.0100
Super Alloys	Inconel		< 40 Rc	40-70	0.0002 - 0.0010	0.0010 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100
	High Temp, Nimonic, Monel, Hastelloy	S	< 40 Rc	30-45	0.0002 - 0.0010	0.0010 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0200
	Titanium: Ti 3Al-2.5V, Ti 6Al-4V Ti 10V-2Fe-3Al		< 40 Rc	35-50	0.0002 - 0.0020	0.0010 - 0.0040	0.0020 - 0.0060	0.0040 - 0.0100	0.0060 - 0.0200
Hardened Materials			23 - 32 Rc	125-200	0.0002 - 0.0020	0.0010 - 0.0040	0.0020 - 0.0060	0.0040 - 0.0100	0.0060 - 0.0200
			32 - 43 Rc	50-125	0.0005 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100	0.0100 - 0.0200
			43 - 52 Rc	35-50	0.0002 - 0.0010	0.0010 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100
			> 50 Rc	15-35	0.0005 - 0.0030	0.0020 - 0.0060	0.0040 - 0.0100	0.0060 - 0.0150	0.0100 - 0.0300
Cast Iron	Gray, SAE J431, ASTM A48		≤ 240 HB	150-250	0.0005 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100	0.0100 - 0.0200
	Ductile & Malleable, ASTM A536, ASTM 897, ASTM A47, ASTM A220 ASTM A602	K	> 240 HB	125-200	0.0005 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100	0.0100 - 0.0200
	Martensitic (Hard)		> 240 HB	50-75	0.0002 - 0.0010	0.0010 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100
Non-Ferrous	Aluminum, Aluminum Alloys		> 240 HB	500-1000	0.0005 - 0.0020	0.0020 - 0.0060	0.0040 - 0.0100	0.0060 - 0.0150	0.0100 - 0.0300
	Brass, Bronze (Free Machining)		> 240 HB	250-400	0.0005 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100	0.0100 - 0.0200
	Brass, Bronze (Soft)	N	> 240 HB	150-250	0.0010 - 0.0020	0.0010 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100
	Copper, Bronze (Hard)		> 240 HB	100-150	0.0002 - 0.0010	0.0010 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100
	Magnesium, Magnesium Alloys, Plastics		> 240 HB	500-1000	0.0002 - 0.0010	0.0010 - 0.0020	0.0020 - 0.0040	0.0040 - 0.0060	0.0060 - 0.0100

Workpiece Material Group		Drill Diameter									
		0.0135	0.0290/0.0280	0.0550/0.0520	0.1130	0.2380	0.3594	0.4844	0.6094	0.7344	
		Reamer Diameter									
		0.0150	0.0320	0.0625	0.1250	0.2500	0.3750	0.5000	0.625	0.75	
		TOTAL STOCK ALLOWANCE									
Steels	Low Carbon ≤ 35% C	0.0012	0.0025	0.0049	0.0089	0.0100	0.0120	0.0130	0.0150	0.0170	
	Medium/High Carbon ≥ 35% C	0.0013	0.0028	0.0055	0.0099	0.0110	0.0130	0.0140	0.0160		
Tool & Die Steels	A2, D2, H13, L6, P20, S7	0.0012	0.0025	0.0049	0.0089	0.0100	0.0120	0.0130	0.0150		
Stainless Steels	Easy, Moderate & Difficult to Machine	0.0012	0.0025	0.0049	0.0089	0.0100	0.0120	0.0130	0.0150	0.0160	
Super Alloys	Soft	0.0012	0.0025	0.0049	0.0089	0.0100	0.0110	0.0130	0.0140	0.0160	
	Hard	0.0010	0.0023	0.0044	0.0081	0.0090	0.0100	0.0120	0.0130	0.0140	
	Titanium: Ti 3Al-2.5V, Ti 6Al-4V Ti 10V-2Fe-3Al	0.0013	0.0028	0.0055	0.0099	0.0110	0.0130	0.0140	0.0160	0.0170	
Hardened Materials		0.0009	0.0020	0.0040	0.0072	0.0080	0.0100	0.0110	0.0130	0.0140	
Cast Iron	Cast	0.0013	0.0028	0.0055	0.0099	0.0110	0.0130	0.0140	0.0160	0.0180	
	Ductile								0.0150	0.0170	
Non-Ferrous	Magnesium	0.0014	0.0030	0.0060	0.0110	0.0120	0.0150	0.0160	0.0180	0.0200	
	Aluminum ≥ 5% Si						0.0130	0.0150	0.0160	0.0180	0.0190
	Aluminum ≤ 5% Si										
	Brass										
Bronze, Copper											



CARBIDE CHUCKING REAMERS SPIRAL FLUTE

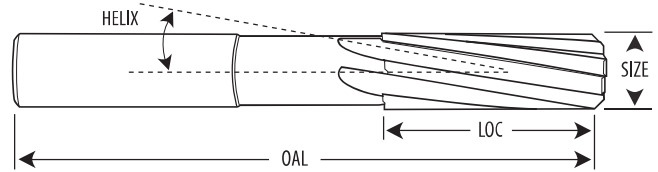


Expand an existing hole to a precise size or create a perfect hole finish

Special decimal sizes and tolerances available with fast turnaround

Best suited for blind holes - spiral flute geometry pulls chips out of the hole

45° chamfer angle naturally guides and eases the reamer into the hole



† Full shank reduction in lieu of reduced neck

DIAMETER TOLERANCES: ≤ 1/4" DIA: +0.0000 / +0.0002" > 1/4" DIA: +0.0000 / +0.0003"

Flutes	SIZE	LOC	OAL	Helix	Bright	
	3/64 †	0.0469	3/8	1-1/2	15°	550-001003
	1/16	0.0625	3/8	1-1/2	15°	550-001004
	5/64	0.0781	1/4	1-3/4	15°	550-001005
	3/32	0.0938	1/2	2	15°	550-001006
	7/64	0.1094	5/8	2-1/4	15°	550-001007
	1/8	0.1250	5/8	2-1/4	15°	550-001008
	9/64	0.1406	.75	2-1/2	10°	550-001009
	5/32	0.1563	3/4	2-1/2	10°	550-001010
	11/64	0.1719	7/8	2-3/4	10°	550-001011
	3/16	0.1875	7/8	2-3/4	10°	550-001012
	13/64	0.2031	1	3	10°	550-001013
	7/32	0.2188	1	3	10°	550-001014
	15/64	0.2344	1	3	10°	550-001015
	1/4	0.2500	1	3	10°	550-001016
	17/64	0.2656	1-1/8	3-1/4	10°	550-001017
	9/32	0.2813	1-1/8	3-1/4	10°	550-001018
	5/16	0.3125	1-1/8	3-1/4	10°	550-001020
	3/8	0.3750	1-1/4	3-1/2	10°	550-001024
	13/32	0.4063	1-1/4	3-1/2	10°	550-001026
	7/16	0.4375	1-3/8	4	10°	550-001028
	1/2	0.5000	1-1/2	4	10°	550-001032