

Length	Diameter	Low Carbon Steels 1018, 1045, 1144, C45		Alloy Steels <32 Rc 4140, 4340, 8620		PH & Tool Steels <40 Rc 17-4, 5-5, D2, S7		Austenitic Stainless Steels 302, 303, 304		Austenitic Stainless Steels 310, 316, 321		Duplex Stainless 323, 329, F55, 2205		Titanium Alloys, Ti6Al4V, Ti1100	
		P1 SFM	P1 IPR	P2 SFM	P2 IPR	P3 SFM	P3 IPR	M1 SFM	M1 IPR	M2 SFM	M2 IPR	M3 SFM	M3 IPR	S4 SFM	S4 IPR
3xD	0.125	375	0.0030	275	0.0030	230	0.0023	230	0.0023	180	0.0023	150	0.0020	150	0.0020
	0.250	375	0.0050	275	0.0050	230	0.0047	230	0.0047	180	0.0040	150	0.0035	150	0.0030
	0.375	375	0.0075	275	0.0075	230	0.0070	230	0.0070	180	0.0060	150	0.0045	150	0.0040
	0.500	375	0.0100	275	0.0100	230	0.0094	230	0.0094	180	0.0080	150	0.0050	150	0.0050
	0.625	375	0.0130	275	0.0130	230	0.0126	230	0.0126	180	0.0110	150	0.0055	150	0.0065
	0.750	375	0.0160	275	0.0160	230	0.0140	230	0.0140	180	0.0125	150	0.0060	150	0.0080
5xD	0.125	375	0.0030	275	0.0030	230	0.0023	230	0.0023	165	0.0023	140	0.0020	140	0.0020
	0.250	375	0.0050	275	0.0050	230	0.0047	230	0.0047	165	0.0040	140	0.0035	140	0.0030
	0.375	375	0.0075	275	0.0075	230	0.0070	230	0.0070	165	0.0060	140	0.0045	140	0.0040
	0.500	375	0.0100	275	0.0100	230	0.0094	230	0.0094	165	0.0080	140	0.0050	140	0.0050
	0.625	375	0.0130	275	0.0130	230	0.0126	230	0.0126	165	0.0110	140	0.0055	140	0.0065
	0.750	375	0.0160	275	0.0160	230	0.0140	230	0.0140	165	0.0125	140	0.0060	140	0.0080
8xD	0.125	375	0.0030	275	0.0030	220	0.0023	220	0.0023	165	0.0020	130	0.0016	135	0.0020
	0.250	375	0.0050	275	0.0050	220	0.0047	220	0.0047	165	0.0038	130	0.0028	135	0.0030
	0.375	375	0.0075	275	0.0075	220	0.0070	220	0.0070	165	0.0055	130	0.0033	135	0.0040
	0.500	375	0.0100	275	0.0100	220	0.0094	220	0.0094	165	0.0075	130	0.0038	135	0.0050
	0.625	375	0.0130	275	0.0130	220	0.0126	220	0.0126	165	0.0105	130	0.0043	135	0.0065
	0.750	375	0.0160	275	0.0160	220	0.0140	220	0.0140	165	0.0120	130	0.0050	135	0.0080
12xD	0.125	375	0.0030	275	0.0030	220	0.0023	220	0.0023	150	0.0018	125	0.0010	125	0.0018
	0.250	375	0.0050	275	0.0050	220	0.0047	220	0.0047	150	0.0035	125	0.0024	125	0.0025
	0.375	375	0.0075	275	0.0075	220	0.0070	220	0.0070	150	0.0053	125	0.0029	125	0.0030
	0.500	375	0.0100	275	0.0100	220	0.0094	220	0.0094	150	0.0070	125	0.0033	125	0.0035
	0.625	375	0.0130	275	0.0130	220	0.0126	220	0.0126	150	0.0094	125	0.0036	125	0.0040
	0.750	375	0.0160	275	0.0160	220	0.0140	220	0.0140	150	0.0100	125	0.0040	125	0.0045

TIPS & TRICKS FOR DEEP HOLE DRILLING

Using a G73 Peck Cycle Helps Chip Evacuation in deep hole drilling & materials which have a poor chip formation

If there are scratches on the outside of the chip, increase coolant pressure and or reduce feedrate

TIR, SFM, & tool alignment with the material are the most important factors in deep hole drilling

Use high pressure coolant when deep hole drilling

Lower coolant pressure can help surface finish in 3xD & 5xD holes in P1 & P2 materials

Slow the feedrate to 50% when breaking through the material