



DRILLING SPEEDS vs MATERIALS

Material	Speed rpm	Description	Drill bit type
Cast Iron			
	6000 to 6500	1/16 Drill bit	118° Point
	3500 to 4500	1/8 Drill bit	118° Point
	2500 to 3000	3/16 Drill bit	118° Point
	2000 to 2500	1/4 Drill bit	118° Point
	1500 to 2000	5/16 Drill bit	118° Point
	1501 to 2000	3/8 Drill bit	118° Point
	1000 to 1500	> 7/16 Drill bit	118° Point
Glass			
	700	Specialty metal tube drilling	Glass or Ceramics
Plastics			
	6000 to 6500	1/16 Drill bit	60° plastic bit
	5000 to 6000	1/8 Drill bit	60° plastic bit
	3500 to 4500	3/16 Drill bit	60° plastic bit
	3000 to 3500	1/4 Drill bit	60° plastic bit
	2000 to 2500	5/16 Drill bit	60° plastic bit
	1500 to 2000	3/8 Drill bit	60° plastic bit
	500 to 1000	> 7/16 Drill bit	60° plastic bit
Soft Metals			
(Aluminum)	6000 to 6500	1/16 Drill bit	118° Point
	6000 to 6500	1/8 Drill bit	118° Point
	5000 to 6000	3/16 Drill bit	118° Point
	4500 to 5000	1/4 Drill bit	118° Point
	3500 to 4000	5/16 Drill bit	118° Point
	3000 to 3500	3/8 Drill bit	118° Point
	1500 to 2500	> 7/16 Drill bit	118° Point
Steel			
	5000 to 6000	1/16 Drill bit	135° Point
	3000 to 4000	1/8 Drill bit	135° Point
	2000 to 2500	3/16 Drill bit	135° Point
	1500 to 2000	1/4 Drill bit	135° Point
	1000 to 1500	5/16 Drill bit	135° Point
	1000 to 1500	3/8 Drill bit	135° Point
	500 to 1000	> 7/16 Drill bit	135° Point
Wood			
	4000 to 6000	Carving and Routing	118° Point / Brad point
	3800 to 4000	All woods, 0 to 1/4" to 1/2"	118° Point / Brad point
	3100 to 3800	All woods, 0 to 1/4" to 1/2"	118° Point / Brad point
	2300 to 3100	All woods, 0 to 1/2" to 3/4"	118° Point / Brad point
	2000 to 2300	All woods, 3/4 to 1"	118° Point / Brad point
	700 to 2000	All woods, 0 to 1/8	118° Point / Brad point
	< 700	All woods > 1 inch drill, fly cutters	118° Point / Brad point