

Operating Guidelines • Series LPF Tips (Flat Bottom)

ISO	Material	Condition	Tensile Strength RM (N/mm²)	Hardness HB	Matl. Group No.	Cutting Speed Vc (SFM)	Feed vs. Drill Diameter - IPR (inches/rev)*			
							Ø20-29.9 mm (.7874-1.1772")	Ø30-34.9 mm (1.1811-1.3740")	Ø35-41.9 mm (1.3800-1.6496")	
P	Non-alloy steel and cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	260-460	.012-.020	.012-.020	.014-.022
		≥0.25%C	Annealed	650	190	2	260-430			
		<0.55%C	Quenched and tempered	850	250	3	260-400			
		≥0.55%C	Annealed	750	220	4	230-360			
			Quenched and tempered	1000	300	5	165-300			
	Low alloy steel and cast steel (less than 5% alloying elements)	Annealed	600	200	6	260-400	.010-.018	.010-.018	.012-.020	
		Quenched and tempered	930	275	7	230-360				
			1000	300	8	165-300				
			1200	350	9	135-230				
	High alloy steel, cast steel, and tool steel	Annealed	680	200	10	165-300	.010-.014	.010-.014	.012-.016	
		Quenched and tempered	1100	325	11	130-265				
K	Grey cast iron (GG)	Ferritic	-	160	15	300-600	.014-.022	.014-.022	.016-.024	
		Pearlitic	-	250	16	265-460				
	Cast iron nodular (GGG)	Ferritic	-	180	17	300-600				
		Pearlitic	-	260	18	265-460				
	Malleable cast iron	Ferritic	-	130	19	300-525				
		Pearlitic	-	230	20	265-460				

► *Feed rates are based on two effective - DO NOT DOUBLE