

# Speeds and Feeds



- 1) Select your material in the ISO colored chart.
- 2) Start with the recommended cutting speed,  $v_c$  (ft/min). Adjust the cutting speed based on your cutting conditions.

Group		Material Description	Hardness (HB)	Hardness (HRC)	Recommended Cutting Speed
ISO	VDI 3323				
P	1	Non-Alloyed Steel	125		66-82
	2		190	13	66-82
	3		250	25	59-79
	4		270	28	49-66
	5		300	32	33-46
	6	Low-Alloyed Steel	180	10	49-66
	7		275	29	49-66
	8		300	32	33-46
	9		350	38	16-23
	10		High-Alloyed Steel, and Tool Steel	200	15
	11	325		35	
M	12	Stainless Steel	200	15	33-49
	13		240	23	26-36
	14		180	10	20-26
K	15	Gray Cast Iron	180	10	49-66
	16		260	26	26-36
	17	Nodular Cast Iron	160	3	49-66
	18		250	25	26-36
	19	Malleable Cast Iron	130		
20	230		21		
N	21	Aluminum-Wrought Alloy	60		
	22		100		
	23	Aluminum-Cast, Alloyed	75		66-82
	24		90		
	25		130		
	26		110		115-131
	27	Copper and Copper Alloys (Bronze / Brass)	90		39-56
	28		100		66-82
	29	Non-Metallic Materials			
	30				

