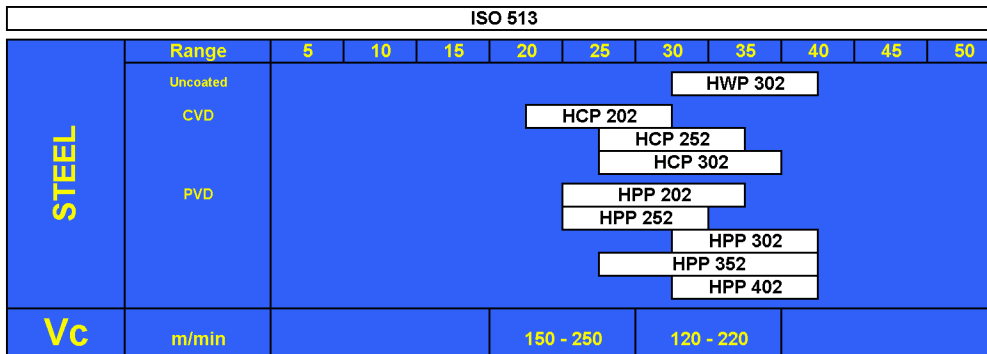


MILLING GRADE OVERVIEW IN STEEL OPERATION



Finishing

Roughing

Vc increasing
Vf small
ap small
Wear resistance increasing
Toughness decreasing



Vc decreasing
Vf large
ap large
Wear resistance decreasing
Toughness increasing

TECHNICAL GUIDE

HM - GRADE	SCALE 0-10=RANGE OF										APPLICATION		APPLICATION		
	TN Toughness / WR Wear resistance										Cutting condition		Machining condition		
	2	3	4	5	6	7	8	9	10	DRY	WET	F	M	R	
HWP 302	TN	■	■	■	■	■	■	■	■		●		●	○	
	WR	■													
HCP 202	TN	■	■	■	■	■	■	■	■	●	○	○	●	○	
	WR	■	■	■	■	■	■	■	■						
HCP 252	TN	■	■	■	■	■	■	■	■	○	●	○	●	●	
	WR	■	■	■	■	■	■	■	■						
HCP 302	TN														
	WR														
HPP 202	TN	■	■	■	■	■	■	■	■						
	WR	■	■	■	■	■	■	■	■						
HPP 252	TN	■	■	■	■	■	■	■	■	●	○	●	●	○	
	WR	■	■	■	■	■	■	■	■						
HPP 302	TN	■	■	■	■	■	■	■	■	●	○	○	●	●	
	WR	■	■	■	■	■	■	■	■						
HPP 352	TN	■	■	■	■	■	■	■	■	●	○	●	●	○	
	WR	■	■	■	■	■	■	■	■						
HPP 402	TN														
	WR														

Cutting conditions	Machining conditions	Recommendation
DRY = without COOLING	F Finishing	● Ideal
	M Medium machining	○ Still recommended
WET = with COOLING	R Roughing	— Not recommended