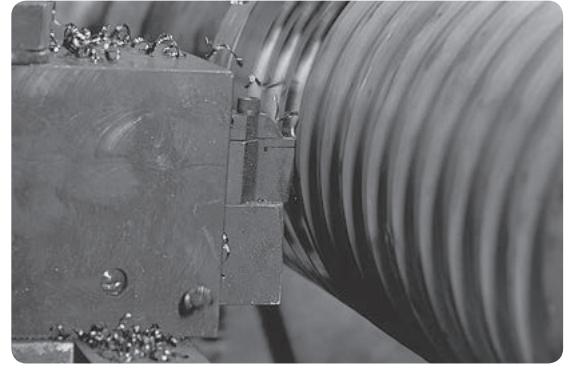


# Machining Mill Rolls with NTK Ceramics and CBNs

## Features

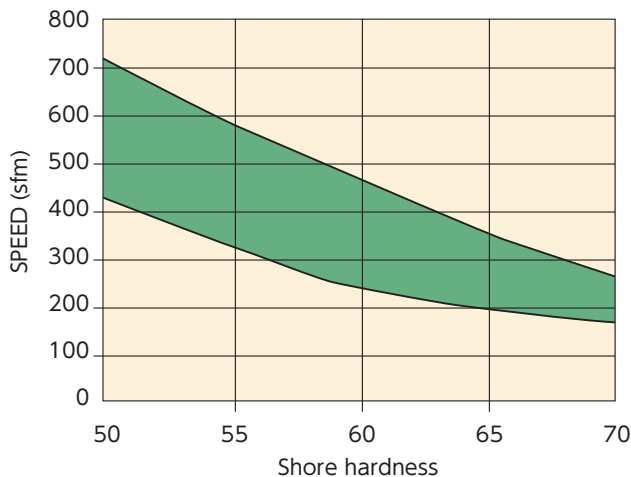
- In addition to our general purpose ceramic HC2 grade, NTK offers HC5, and HC7 for higher productivity
- WA1's wear resistance is an advantage when roughing carbide and hardened rolls
- ZC7 covers a wide range of applications such as carburized or induction hardened steels.
- ZC4 performs the best in hardened material applications from 74-97 Shore hardness



## Recommended Cutting Conditions

Roll Material	Grade		Cutting speed (SFM)	Shore Hardness Scale			Feed (IPR)	Depth of cut (inch)	DRY	WET
				55-65	65-72	72-				
				Steel ex. D2	Ceramic <b>HC7</b>	450-600				
	Ceramic <b>HC5</b>	450-600	100%	80%	60%	.004-.012	.025-.075	●		
	Ceramic <b>HC2</b>	350-450	100%	80%	60%	.004-.012	.025-.075	●		
Chilled Cast Iron	Ceramic <b>HC7</b>	450-600	100%	80%	60%	.004-.012	.025-.075	●		
	Ceramic <b>HC5</b>	450-600	100%	80%	60%	.004-.012	.025-.075	●		
	Ceramic <b>HC2</b>	350-450	100%	80%	60%	.004-.012	.025-.075	●		
Ductile Cast iron	Ceramic <b>HC7</b>	300-600	100%	80%	60%	.004-.012	.025-.075	●		
	Ceramic <b>HC5</b>	300-600	100%	80%	60%	.004-.012	.025-.075	●		
	Ceramic <b>HC2</b>	250-450				.004-.012	.025-.075	●		
Carbide	CBN <b>B30,B99</b>	100-200				.004-.012	.010	●		
	Whisker <b>WA1</b>	150-500				.004-.012	.010-.080	●		
CPM Rolls ex. Powdered Metal	Ceramic <b>ZC4</b>	400-500				.004-.012	.025-.075	●		
	Ceramic <b>HC5</b>	400-500				.004-.012	.025-.075	●		
	Ceramic <b>HC7</b>	400-500				.004-.012	.025-.075	●		
Continuous cuts 42-86 Shore hardness	Ceramic <b>ZC7</b>	130-700		Finish		.003-.008	.005-.030	●	●	
Continuous cuts 74-97 Shore hardness	Ceramic <b>ZC4</b>	130-700		Finish		.003-.008	.005-.030	●	●	

## Recommended Speed Chart



## Recommended Feed Chart

Nose radius	Depth of cut (inch)	Feed (IPR)	
		30 micro	60 micro
1/64	-.007	.002-.003	.003-.004
1/32	-.015	.003-.004	.004-.005
3/64	-.020	.004-.005	.005-.0065
1/16	-.030	.004-.0055	.006-.0075
1/4	-.080	.007-.010	.010-.014