Safe Starting Conditions for Grooving Applications

MATERIALS	BHN	FEED RATE (Radial/Inch)	FEED RATE (Axial/Inch)	FEED RATE (Radial/Metic)	FEED RATE (Axial/Metric)
NON-FERROUS MATERIALS					
Wrought Aluminum Alloys	140-300	.0005-.002	.0003-.005	.013-.051	.008-.127
Cast Aluminum Alloys	225-363	.0005-.002	.0003-.005	.013-.051	.008-.127
High Silicone Aluminum Alloys	270-425	.0005-.002	.0003-.005	.013-.051	.008-.127
Brass	80-120	.0005-.002	.0003-.005	.013-.051	.008-.127
Bronze	80-120	.0005-.002	.0003-.005	.013-.051	.008-.127
Non-Leaded Copper	80-120	.0005-.002	.0003-.005	.013-.051	.008-.127
Zinc Alloys	80-120	.0005-.002	.0003-.005	.013-.051	.008-.127
Non-Metallics	-	.0005-.002	.0003-.005	.013-.051	.008-.127
Acrylics	-	.0005-.002	.0003-.005	.013-.051	.008-.127
Fiberglass	-	.0005-.002	.0003-.005	.013-.051	.008-.127
Graphites	-	.0005-.002	.0003-.005	.013-.051	.008-.127
Nylons	-	.0005-.002	.0003-.005	.013-.051	.008-.127
Phenolics	-	.0005-.002	.0003-.005	.013-.051	.008-.127
Plastics		.0005-.002	.0003-.005	.013-.051	.008-.127
CAST IRONS					
Cast Iron - Gray	160-260	.0005-.002	.0003-.005	.013-.051	.008-.127
Cast Iron - Ferritic	140-200	.0005-.002	.0003-.005	.013-.051	.008-.127
Cast Iron - Pearlitic	220-260	.0005-.002	.0003-.005	.013-.051	.008-.127
Iron - SG Nodular	160-260	.0005-.002	.0003-.005	.013-.051	.008-.127
STEELS					
Low Carbon - Unalloyed	160-260	.0005-.002	.0003-.005	.013-.051	.008-.127
Medium Carbon - Unalloyed	140-200	.0005-.002	.0003-.005	.013-.051	.008-.127
High Carbon - Unalloyed	220-260	.0005-.002	.0003-.005	.013-.051	.008-.127
Low Carbon Alloys	220-260	.0005-.002	.0003-.005	.013-.051	.008-.127
Medium Carbon Alloys	220-260	.0005-.002	.0003-.005	.013-.051	.008-.127
High Strength Alloys	220-260	.0005-.002	.0003-.005	.013-.051	.008-.127
Tool Steels	220-250	.0005-.002	.0003-.005	.013-.051	.008-.127
Heat Treated Alloys	32-40RC	.0005-.002	.0003-.005	.013-.051	.008-.127
Powder Metal Alloys	230-260	.0005-.002	.0003-.005	.013-.051	.008-.127
STAINLESS STEELS					
300 Series	135-185	.0005-.002	.0003-.005	.013-.051	.008-.127
400 Series	180-220	.0005-.002	.0003-.005	.013-.051	.008-.127
13-8 PH	32-35RC	.0005-.002	.0003-.005	.013-.051	.008-.127
15-5 PH	32-35RC	.0005-.002	.0003-.005	.013-.051	.008-.127
17-4 PH	32-35RC	.0005-.002	.0003-.005	.013-.051	.008-.127
HIGH TEMPERATURE ALLOYS					
Monel 400	140-300	.0005-.002	.0003-.005	.013-.051	.008-.127
Monel 500	140-300	.0005-.002	.0003-.005	.013-.051	.008-.127
K Monel	140-300	.0005-.002	.0003-.005	.013-.051	.008-.127
A286	225-363	.0005-.002	.0003-.005	.013-.051	.008-.127
Hastelloy	225-363	.0005-.002	.0003-.005	.013-.051	.008-.127
Inconel	225-363	.0005-.002	.0003-.005	.013-.051	.008-.127
Rene	225-363	.0005-.002	.0003-.005	.013-.051	.008-.127
Waspalloy	225-363	.0005-.002	.0003-.005	.013-.051	.008-.127
HARDENED MATERIALS					
Titanium Alloys	300-500	.0005-.002	.0003-.005	.013-.051	.008-.127
Extra Hard Steels	45-50RC	.0005-.002	.0003-.005	.013-.051	.008-.127
Hardened and Tempered	51-55RC	.0005-.002	.0003-.005	.013-.051	.008-.127

Machining Data for Speeds, Feeds, and Depth of Cuts are considered to be “safe starting conditions” and may need to be adjusted to obtain optimal performance. For greater Depth of Cuts...reduce the Feed Rates.

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