

MC / MP7100 SERIES – 7° POSITIVE INSERTS (FOR EXTERNAL TURNING)

Material	Hardness	Cutting mode	Priority	Grade		Vc	f	ap
Austenitic stainless steel	<200 HB	 F	1	MC7115	FM	160 – 255	0.04 – 0.20	0.2 – 0.9
		 F	2	MC7125	FM	150 – 210	0.04 – 0.20	0.2 – 0.9
		 L	1	MC7125	LM	150 – 210	0.06 – 0.25	0.2 – 1.0
		 L	2	MC7115	LM	160 – 255	0.06 – 0.25	0.2 – 1.0
		 M	1	MC7125	MM	125 – 175	0.08 – 0.30	0.3 – 2.0
		 M	2	MC7125	MV	125 – 175	0.08 – 0.30	0.3 – 2.0
		 M	3	MC7115	MM	135 – 215	0.08 – 0.30	0.3 – 2.0
		 F	1	MC7125	FM	150 – 210	0.04 – 0.20	0.2 – 0.9
		 L	1	MC7125	LM	150 – 210	0.06 – 0.25	0.2 – 1.0
		 L	2	MP7135	LM	115 – 145	0.06 – 0.25	0.2 – 1.0
		 M	1	MC7125	MM	125 – 175	0.08 – 0.30	0.3 – 2.0
		 M	2	MC7125	MV	125 – 175	0.08 – 0.30	0.3 – 2.0
		 F	1	MP7135	FM	115 – 145	0.04 – 0.20	0.2 – 0.9
		 L	1	MP7135	LM	115 – 145	0.06 – 0.25	0.2 – 1.0
		 M	1	MP7135	MM	95 – 120	0.08 – 0.30	0.3 – 2.0
		 M	2	MP7135	MV	95 – 120	0.08 – 0.30	0.3 – 2.0
	200 HB	 F	1	MC7115	FM	135 – 215	0.04 – 0.20	0.2 – 0.9
		 F	2	MC7125	FM	125 – 175	0.04 – 0.20	0.2 – 0.9
		 L	1	MC7125	LM	125 – 175	0.06 – 0.25	0.2 – 1.0
		 L	2	MC7115	LM	135 – 215	0.06 – 0.25	0.2 – 1.0
		 M	1	MC7125	MM	105 – 145	0.08 – 0.30	0.3 – 2.0
		 M	2	MC7125	MV	105 – 145	0.08 – 0.30	0.3 – 2.0
		 M	3	MC7115	MM	110 – 180	0.08 – 0.30	0.3 – 2.0
		 F	1	MC7125	FM	125 – 175	0.04 – 0.20	0.2 – 0.9
		 L	1	MC7125	LM	125 – 175	0.06 – 0.25	0.2 – 1.0
		 L	2	MP7135	LM	95 – 120	0.06 – 0.25	0.2 – 1.0
		 M	1	MC7125	MM	105 – 145	0.08 – 0.30	0.3 – 2.0
		 M	2	MC7125	MV	105 – 145	0.08 – 0.30	0.3 – 2.0
		 F	1	MP7135	FM	95 – 120	0.04 – 0.20	0.2 – 0.9
		 L	1	MP7135	LM	95 – 120	0.06 – 0.25	0.2 – 1.0
		 M	1	MP7135	MM	80 – 100	0.08 – 0.30	0.3 – 2.0
		 M	2	MP7135	MV	80 – 100	0.08 – 0.30	0.3 – 2.0
Ferritic and martensitic stainless steel	<200 HB	 F	1	MC7125	FM	150 – 210	0.04 – 0.20	0.2 – 0.9
		 L	1	MC7125	LM	150 – 210	0.06 – 0.25	0.2 – 1.0
		 L	2	MC7115	LM	160 – 255	0.06 – 0.25	0.2 – 1.0
		 M	1	MC7125	MM	125 – 175	0.08 – 0.30	0.3 – 2.0
		 M	2	MC7125	MV	125 – 175	0.08 – 0.30	0.3 – 2.0
		 M	3	MC7115	MM	135 – 215	0.08 – 0.30	0.3 – 2.0
		 F	1	MC7125	FM	150 – 210	0.04 – 0.20	0.2 – 0.9
		 L	1	MC7125	LM	150 – 210	0.06 – 0.25	0.2 – 1.0
		 L	2	MP7135	LM	115 – 145	0.06 – 0.25	0.2 – 1.0
		 M	1	MC7125	MM	125 – 175	0.08 – 0.30	0.3 – 2.0
		 M	2	MC7125	MV	125 – 175	0.08 – 0.30	0.3 – 2.0
		 F	1	MP7135	FM	115 – 145	0.04 – 0.20	0.2 – 0.9
		 L	1	MP7135	LM	115 – 145	0.06 – 0.25	0.2 – 1.0
		 M	1	MP7135	MM	95 – 120	0.08 – 0.30	0.3 – 2.0
		 M	2	MP7135	MV	95 – 120	0.08 – 0.30	0.3 – 2.0

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1. Recommended cutting conditions for 5° / 7° / 11° positive inserts are provided as a guideline only.
Verify the recommended conditions for each boring bar as cutting conditions for internal machining will vary depending on the length of overhang.

MC/MP7100 SERIES – 7° POSITIVE INSERTS (FOR EXTERNAL TURNING)

Material	Hardness	Cutting mode	F L M R H	Priority	Grade		Vc	f	ap
Ferritic and martensitic stainless steel	>200 HB		F	1	MC7125	FM	125 – 175	0.04 – 0.20	0.2 – 0.9
			F	2	MC7115	FM	135 – 215	0.04 – 0.20	0.2 – 0.9
			L	1	MC7125	LM	125 – 175	0.06 – 0.25	0.2 – 1.0
			L	2	MC7115	LM	135 – 215	0.06 – 0.25	0.2 – 1.0
			M	1	MC7125	MM	105 – 145	0.08 – 0.30	0.3 – 2.0
			M	2	MC7125	MV	105 – 145	0.08 – 0.30	0.3 – 2.0
			M	3	MC7115	MM	110 – 180	0.08 – 0.30	0.3 – 2.0
			F	1	MC7125	FM	125 – 175	0.04 – 0.20	0.2 – 0.9
			L	1	MC7125	LM	125 – 175	0.06 – 0.25	0.2 – 1.0
			L	2	MP7135	LM	95 – 120	0.06 – 0.25	0.2 – 1.0
			M	1	MC7125	MM	105 – 145	0.08 – 0.30	0.3 – 2.0
			M	2	MC7125	MV	105 – 145	0.08 – 0.30	0.3 – 2.0
			F	1	MP7135	FM	95 – 120	0.04 – 0.20	0.2 – 0.9
			L	1	MP7135	LM	95 – 120	0.06 – 0.25	0.2 – 1.0
			M	1	MP7135	MM	80 – 100	0.08 – 0.30	0.3 – 2.0
			M	2	MP7135	MV	80 – 100	0.08 – 0.30	0.3 – 2.0
Two-phase stainless steel	<280 HB		F	1	MP7135	FM	75 – 100	0.04 – 0.20	0.2 – 0.9
			L	1	MP7135	LM	75 – 100	0.06 – 0.25	0.2 – 1.0
			L	2	MC7125	LM	100 – 140	0.06 – 0.25	0.2 – 1.0
			L	3	MC7115	LM	110 – 175	0.06 – 0.25	0.2 – 1.0
			M	1	MP7135	MM	65 – 80	0.08 – 0.30	0.3 – 2.0
			M	2	MC7125	MM	85 – 115	0.08 – 0.30	0.3 – 2.0
			M	3	MC7125	MV	85 – 115	0.08 – 0.30	0.3 – 2.0
			M	4	MC7115	MM	90 – 145	0.08 – 0.30	0.3 – 2.0
			F	1	MC7125	FM	100 – 140	0.04 – 0.20	0.2 – 0.9
			L	1	MC7125	LM	100 – 140	0.06 – 0.25	0.2 – 1.0
			M	1	MC7125	MM	85 – 115	0.08 – 0.30	0.3 – 2.0
			M	2	MC7125	MV	85 – 115	0.08 – 0.30	0.3 – 2.0
			F	1	MP7135	FM	75 – 100	0.04 – 0.20	0.2 – 0.9
			L	1	MP7135	LM	75 – 100	0.06 – 0.25	0.2 – 1.0
			M	1	MP7135	MM	65 – 80	0.08 – 0.30	0.3 – 2.0
			M	2	MP7135	MV	65 – 80	0.08 – 0.30	0.3 – 2.0
Precipitation-hardening stainless steel	450 HB		F	1	MC7115	FM	95 – 140	0.04 – 0.20	0.2 – 0.9
			L	1	MC7115	LM	95 – 140	0.06 – 0.20	0.2 – 1.0
			L	2	MC7125	LM	85 – 105	0.06 – 0.20	0.2 – 1.0
			M	1	MC7115	MM	80 – 120	0.08 – 0.25	0.3 – 2.0
			M	2	MC7125	MM	70 – 85	0.08 – 0.25	0.3 – 2.0
			F	1	MC7125	FM	85 – 105	0.04 – 0.20	0.2 – 0.9
			F	2	MP7135	FM	60 – 85	0.04 – 0.20	0.2 – 0.9
			L	1	MC7125	LM	85 – 105	0.06 – 0.20	0.2 – 1.0
			L	2	MP7135	LM	60 – 85	0.06 – 0.20	0.2 – 1.0
			M	1	MC7125	MM	70 – 85	0.08 – 0.25	0.3 – 2.0
			M	2	MC7125	MV	70 – 85	0.08 – 0.30	0.3 – 2.0
			M	3	MP7135	MM	50 – 70	0.08 – 0.25	0.3 – 2.0
			F	1	MP7135	FM	60 – 85	0.04 – 0.20	0.2 – 0.9
			L	1	MP7135	LM	60 – 85	0.06 – 0.20	0.2 – 1.0
			M	1	MP7135	MM	50 – 70	0.08 – 0.25	0.3 – 2.0
			M	2	MP7135	MV	50 – 70	0.08 – 0.30	0.3 – 2.0

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Cutting Conditions : ● : Stable cutting ● : General cutting ✖ : Unstable cutting

MC/MP7100 SERIES – 11° POSITIVE INSERTS (FOR EXTERNAL TURNING)

Material	Hardness	Cutting mode			Grade		Vc	f	ap
M Two-phase stainless steel	<280 HB	●	L	1	MC7125	LM	100 – 140	0.06 – 0.25	0.2 – 1.0
		●	L	2	MC7115	LM	110 – 175	0.06 – 0.25	0.2 – 1.0
		●	M	1	MC7125	MM	85 – 115	0.08 – 0.30	0.3 – 2.0
		●	M	2	MC7125	MV	85 – 115	0.08 – 0.30	0.3 – 2.0
		●	M	3	MC7115	MM	90 – 145	0.08 – 0.30	0.3 – 2.0
		●	L	1	MP7135	LM	75 – 100	0.06 – 0.25	0.2 – 1.0
		●	L	2	MC7125	LM	100 – 140	0.06 – 0.25	0.2 – 1.0
		●	M	1	MC7125	MM	85 – 115	0.08 – 0.30	0.3 – 2.0
		●	M	2	MC7125	MV	85 – 115	0.08 – 0.30	0.3 – 2.0
		⚡	L	1	MP7135	LM	75 – 100	0.06 – 0.25	0.2 – 1.0
		⚡	M	1	MP7135	MM	65 – 80	0.08 – 0.30	0.3 – 2.0
		⚡	M	2	MP7135	MV	65 – 80	0.08 – 0.30	0.3 – 2.0
		●	L	1	MC7125	LM	85 – 105	0.06 – 0.20	0.2 – 1.0
		●	L	2	MC7115	LM	95 – 140	0.06 – 0.20	0.2 – 1.0
		●	M	1	MC7125	MM	70 – 85	0.08 – 0.25	0.3 – 2.0
		●	M	2	MC7125	MV	70 – 85	0.08 – 0.30	0.3 – 2.0
		●	L	1	MC7125	LM	85 – 105	0.06 – 0.20	0.2 – 1.0
		●	M	1	MC7125	MM	70 – 85	0.08 – 0.25	0.3 – 2.0
		●	M	2	MC7125	MV	70 – 85	0.08 – 0.30	0.3 – 2.0
		⚡	L	1	MP7135	LM	60 – 85	0.06 – 0.20	0.2 – 1.0
		⚡	M	1	MC7125	MM	70 – 85	0.08 – 0.25	0.3 – 2.0
		⚡	M	2	MC7125	MV	70 – 85	0.08 – 0.30	0.3 – 2.0

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