

Recommended Cutting Conditions

Negative Inserts (For External Turning)

(mm)

Work Material	Properties	Cutting Range	Priority	Grade	Chip Breaker	Cutting Speed vc (m/min)	Feed f (mm/rev)	Depth of Cut ap		
P	Carbon and Alloy Steels	180–280HB	●	L	1	MC6115	LP	250–480	0.10–0.40	0.30–2.00
			●	L	2	MC6125	LP	275–425	0.10–0.40	0.30–2.00
			●	L	3	MC6115	SH	250–480	0.10–0.40	0.30–2.00
			●	L	4	MC6125	SH	275–425	0.10–0.40	0.30–2.00
			●	L	5	MC6115	SA	250–480	0.10–0.40	0.30–2.00
			●	L	6	MC6125	SA	275–425	0.10–0.40	0.30–2.00
			●	L	7	MC6115	SW	250–480	0.10–0.50	0.30–2.50
			●	L	8	MC6125	SW	275–425	0.10–0.50	0.30–2.50
			●	M	1	MC6115	MP	230–440	0.16–0.50	0.30–4.00
			●	M	2	MC6125	MP	250–390	0.16–0.50	0.30–4.00
			●	M	3	MC6115	MA	230–440	0.2–0.500	0.30–4.00
			●	M	4	MC6125	MA	250–390	0.20–0.50	0.30–4.00
			●	M	5	MC6115	Std	230–440	0.25–0.60	1.50–5.00
			●	M	6	MC6125	Std	250–390	0.25–0.60	1.50–5.00
			●	M	7	MC6115	MW	230–440	0.20–0.60	0.90–4.00
			●	M	8	MC6125	MW	250–390	0.20–0.60	0.90–4.00
			●	R	1	MC6115	RP	215–415	0.25–0.60	1.50–6.00
			●	R	2	MC6125	RP	235–370	0.25–0.60	1.50–6.00
			●	R	3	MC6115	GH	215–415	0.25–0.60	1.50–6.00
			●	R	4	MC6125	GH	235–370	0.25–0.60	1.50–6.00
			●	L	1	MC6115	LP	250–480	0.10–0.40	0.30–2.00
			●	L	2	MC6125	LP	275–425	0.10–0.40	0.30–2.00
			●	L	3	MC6115	SH	250–480	0.10–0.40	0.30–2.00
			●	L	4	MC6125	SH	275–425	0.10–0.40	0.30–2.00
			●	L	5	MC6115	SA	250–480	0.10–0.40	0.30–2.00
			●	L	6	MC6125	SA	275–425	0.10–0.40	0.30–2.00
			●	L	7	MC6115	SW	250–480	0.10–0.50	0.30–2.50
			●	L	8	MC6125	SW	275–425	0.10–0.50	0.30–2.50
			●	M	1	MC6125	MP	250–390	0.16–0.50	0.30–4.00
			●	M	2	MC6115	MP	230–440	0.16–0.50	0.30–4.00
			●	M	3	MC6125	MA	250–390	0.20–0.50	0.30–4.00
			●	M	4	MC6115	MA	230–440	0.20–0.50	0.30–4.00
			●	M	5	MC6125	MH	250–390	0.20–0.55	1.00–4.00
			●	M	6	MC6115	MH	230–440	0.20–0.55	1.00–4.00
			●	M	7	MC6125	Std	250–390	0.25–0.60	1.50–5.00
			●	M	8	MC6115	Std	230–440	0.25–0.60	1.50–5.00
			●	M	9	MC6125	MW	250–390	0.20–0.60	0.90–4.00
			●	M	10	MC6115	MW	230–440	0.20–0.60	0.90–4.00
			●	R	1	MC6125	RP	235–370	0.25–0.60	1.50–6.00
			●	R	2	MC6115	RP	215–415	0.25–0.60	1.50–6.00
			●	R	3	MC6125	GH	235–370	0.25–0.60	1.50–6.00
			●	R	4	MC6115	GH	215–415	0.25–0.60	1.50–6.00
			✚	L	1	MC6125	LP	275–425	0.10–0.40	0.30–2.00
			✚	L	2	MC6125	SH	275–425	0.10–0.40	0.30–2.00
			✚	L	3	MC6125	SA	275–425	0.10–0.40	0.30–2.00
			✚	M	1	MC6125	MP	250–390	0.16–0.50	0.30–4.00
			✚	M	2	MC6125	MA	250–390	0.20–0.50	0.30–4.00
			✚	M	3	MC6125	MH	250–390	0.20–0.55	1.00–4.00
✚	M	4	MC6125	Std	250–390	0.25–0.60	1.50–5.00			
✚	M	5	MC6125	MW	250–390	0.20–0.60	0.90–4.00			
✚	R	1	MC6125	RP	235–370	0.25–0.60	1.50–6.00			
✚	R	2	MC6125	GH	235–370	0.25–0.60	1.50–6.00			

*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.

Cutting Conditions : ● : Stable Cutting ● : General Cutting ✚ : Unstable Cutting

Cutting Area : L : Light Cutting M : Medium Cutting R : Rough Cutting