Cutting data recommendations for solid carbide drills

Feed and cutting speed

ECU-Drill-Uni | SCD350, 351

MMG*		Workpiece material	Strength/hardness [N/mm²] [HRC]		Cutting speed v_c [m/min]				Feed f [mm] for drill diameter					
					Internal cooling	External cooling	MQL	Air	1.00	1.82	3.31	6.03	10.99	20.00
P	P1 P1.1	Structural, free-cutting, case hardened and heat-treated steels, non-alloy	< 700		**75**	**70**	**70**		0.03	0.05	0.07	0.10	0.16	0.21
	P1.2	Structural, free-cutting, case hardened and heat-treated steels, non-alloy	< 1,200		**70**	**55**	**55**		0.04	0.06	0.08	0.13	0.20	0.27
	P2 P2.1	Nitrided, case hardened and heat-treated steels, alloy	< 900		**75**	**65**	**65**		0.04	0.05	0.08	0.12	0.18	0.25
	P2.2	Nitrided, case hardened and heat-treated steels, alloy	< 1,400		**55**	**45**	**45**		0.04	0.05	0.07	0.10	0.15	0.20
	P3 P3.1	Tool, bearing, spring and high-speed steels**	< 800		**55**	**50**	**50**		0.03	0.05	0.07	0.11	0.17	0.23
	P3.2	Tool, bearing, spring and high-speed steels**	< 1,000		**45**	**40**	**40**		0.03	0.04	0.06	0.09	0.14	0.18
	P3.3	Tool, bearing, spring and high-speed steels**	< 1,500		**45**	**35**	**40**		0.03	0.04	0.05	0.07	0.11	0.14
	P5 P5.1	Cast steel			**75**	**65**	**65**		0.04	0.05	0.08	0.12	0.18	0.25
M	M1 M1.1	Stainless steels, austenitic	< 700		**45**	**30**	**30**		0.03	0.04	0.06	0.09	0.14	0.19
	M1.2	Stainless steels, ferritic/austenitic (duplex)	< 1,000		**45**	**25**	**25**		0.02	0.03	0.05	0.08	0.12	0.16
	M2 M2.1	Stainless/heat-resistant cast steel, austenitic	< 700		**45**	**30**	**30**		0.03	0.04	0.06	0.09	0.14	0.19
	M3 M3.1	Stainless cast steel, ferritic/austenitic (duplex)	< 1,000		**45**	**25**	**25**		0.02	0.03	0.05	0.08	0.12	0.16
K	K2.1	Cast iron with spheroidal graphite, GJS	< 500		**120**	**75**	**90**	**90**	0.05	0.07	0.12	0.19	0.30	0.41
	K2 K2.2	Cast iron with spheroidal graphite, GJS	≤ 800		**75**	**55**	**55**		0.04	0.07	0.11	0.17	0.26	0.35
	K2.3	Cast iron with spheroidal graphite, GJS	> 800											

* MAPAL machining groups
** If the alloy parts Cr, Mo, Ni, V, W in total > 8% then select the next highest MAPAL machining group.

The specified cutting values are guide values.
The optimum data for the respective machining task should be determined during the test or machining.