DCMT 070204 NN

Machining Conditions

Material Group	Group No	Material Examples*	Brinell hardness HB	d.o.c [mm] min	d.o.c [mm] max	feed [mm/rev] min	feed [mm/rev] max	A max [mm²]	V_c [m/min] min	V_c [m/min] max	Optimal cutting conditions d.o.c	Optimal cutting conditions feed
Low Carbon Steel	1	Ck 15 9SMnPb28	150	0.10	2.0	0.08	0.20	0.36	180	350	0.2 to 1	0.18
			180		2.0		0.18	0.29		280		
			210		2.0		0.16	0.29		250		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.10	2.0	0.08	0.18	0.29	120	280	0.2 to 1	0.15
			230		2.0		0.18	0.24		250		
			280		1.5	0.09	0.16	0.24		210		
			320		1.5		0.14	0.19		180		
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.10	2.0	0.08	0.16	0.24	70	190	0.2 to 1	0.12
			280		1.5		0.14	0.24		150		
			320		1.5		0.13	0.17		130		
			350		1.5		0.13	0.14		100		
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.10	2.0	0.08	0.16	0.22	170	270	0.2 to 1	0.15
	5	316 / 316 L	230 to 270		1.8	0.08	0.14	0.17	120	210	0.2 to 1	0.12
	6	316 Ti 630 (F16PH)	---------		1.5	0.08	0.13	0.14	70	120	0.2 to 1	0.12
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.10	2.0	0.08	0.16	0.20	170	250	0.2 to 1	0.15
Martensitic Stainless Steel	8	410 / 420	Annealed	0.10	2.0	0.08	0.16	0.20	170	250	0.2 to 1	0.15
			Treated						120	210		
Grey Cast Iron	9	EN - GJL 200	140 to 230	0.10	2.0	0.06	0.18	0.38	170	280	0.2 to 1	0.18
		EN - GJL 250						0.36		250		
		EN - GJL 300						0.36		230		
Nodular Cast Iron	10	EN - GJS 400	210	0.10	2.0	0.06	0.16	0.29	120	230	0.2 to 1	0.15
		EN - GJS 600	260					0.24		190		
		EN - GJS 800	310					0.24		150		
Nickel Based Alloys	11	Inconel 625	--------	0.10	1.5	0.08	0.14	0.14	25	35	0.2 to 1	0.12
		Inconel 718						0.14	28	40		
		Hastello y C						0.17	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.10	1.5	0.08	0.14	0.17	35	60	0.2 to 1	0.14
		T40					0.13	0.14	28	40	0.2 to 1	0.12

*For all material types and standards, see pages 240 to 245.

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrupted Cut
DCMT 070204 NN	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

DCMT 11T304 NN

Machining Conditions

Material Group	Group No	Material Examples*	Brinell hardness HB	d.o.c [mm]		feed [mm/rev]		A max [mm²]	V_c [m/min]		Optimal cutting conditions	
				min	max	min	max		min	max	d.o.c	feed
Low Carbon Steel	1	Ck 15 9SMnPb28	150	0.20	3.0	0.11	0.23	0.60	180	350	0.5 to 2	0.18
			180		2.5		0.20	0.48		280		
			210		2.5		0.18	0.48		250		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.20	2.5	0.11	0.20	0.48	120	280	0.5 to 1.5	0.15
			230		2.5		0.20	0.40		250		
			280		2.0	0.09	0.18	0.40		210		
			320		2.0		0.16	0.32		180		
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.20	2.5	0.09	0.18	0.40	70	190	0.5 to 1.5	0.12
			280		2.5		0.16	0.40		150		
			320		2.0		0.14	0.28		130		
			350		2.0		0.14	0.24		100		
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.20	2.5	0.10	0.18	0.32	170	270	0.5 to 2	0.15
	5	316 / 316 L	230 to 270		2.0	0.09	0.16	0.24	120	210	0.5 to 1.5	0.12
	6	316 Ti 630 (F16PH)	---------		2.0	0.09	0.14	0.20	70	120	0.5 to 1.5	0.12
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.20	2.0	0.11	0.18	0.28	170	250	0.5 to 1.5	0.15
Martensitic Stainless Steel	8	410 / 420	Annealed	0.20	2.0	0.11	0.18	0.28	170	250	0.5 to 1.5	0.15
			Treated						120	210		
Grey Cast Iron	9	EN - GJL 200	140 to 230	0.20	3.0	0.08	0.20	0.64	170	280	0.5 to 2	0.18
		EN - GJL 250						0.60		250		
		EN - GJL 300						0.60		230		
Nodular Cast Iron	10	EN - GJS 400	210	0.20	2.5	0.08	0.18	0.48	120	230	0.5 to 1.5	0.15
		EN - GJS 600	260					0.40		190		
		EN - GJS 800	310					0.40		150		
Nickel Based Alloys	11	Inconel 625	--------	0.25	2.0	0.10	0.16	0.24	25	35	0.5 to 1.5	0.12
		Inconel 718						0.24	28	40		
		Hastello y C						0.28	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.25	2.0	0.09	0.16	0.28	35	60	0.5 to 1.5	0.14
		T40					0.14	0.24	28	40	0.5 to 1.5	0.12

*For all material types and standards, see pages 240 to 245.

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrupted Cut
DCMT 11T304 NN	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

DCMT 11T308 NN

Machining Conditions

Material Group	Group No	Material Examples*	Brinell hardness HB	d.o.c [mm]		feed [mm/rev]		A max [mm²]	V_c [m/min]		Optimal cutting conditions	
				min	max	min	max		min	max	d.o.c	feed
Low Carbon Steel	1	Ck 15 9SMnPb28	150	0.50	5.0	0.21	0.45	1.3	180	350	1 to 2.5	0.32
			180		4.0		0.40	1.0		280		
			210		4.0		0.35	0.8		250		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.50	4.0	0.21	0.40	1.0	120	280	1 to 2.5	0.30
			230		4.0		0.40	0.8		250		
			280		3.0	0.18	0.35	0.6		210		
			320		3.0		0.32	0.5		180		
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.50	4.0	0.18	0.35	0.8	70	190	1 to 2.5	0.28
			280		4.0		0.32	0.6		150		
			320		3.0		0.28	0.5		130		
			350		3.0		0.28	0.4		100		
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.50	4.0	0.20	0.35	0.8	170	270	1 to 2.5	0.28
	5	316 / 316 L	230 to 270		3.0	0.18	0.32	0.6	120	210	1 to 2.5	0.25
	6	316 Ti 630 (F16PH)	---------		3.0	0.18	0.28	0.5	70	120	1 to 2.5	0.23
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	3.0	0.22	0.35	0.7	170	250	1 to 2.5	0.28
Martensitic Stainless Steel	8	410 / 420	Annealed	0.50	3.0	0.22	0.35	0.7	170	250	1 to 2.5	0.28
			Treated						120	210		
Grey Cast Iron	9	EN - GJL 200	140 to 230	0.50	5.0	0.15	0.40	1.2	170	280	1 to 3	0.32
		EN - GJL 250						1.1		250		
		EN - GJL 300						1.0		230		
Nodular Cast Iron	10	EN - GJS 400	210	0.50	4.0	0.15	0.35	1.0	120	230	1 to 2.5	0.28
		EN - GJS 600	260					0.9		190		
		EN - GJS 800	310					0.8		150		
Nickel Based Alloys	11	Inconel 625	--------	0.50	3.0	0.20	0.32	0.6	25	35	1 to 2.5	0.25
		Inconel 718						0.6	28	40		
		Hastello y C						0.7	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.50	3.0	0.18	0.32	0.7	35	60	1 to 2.5	0.25
		T40					0.28	0.6	28	40	1 to 2.5	0.22

*For all material types and standards, see pages 240 to 245.

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrupted Cut
DCMT 11T308 NN	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4