

S	Nickel alloys	
		Hardness
		Group
		Rm < 1000 [N/mm²]
		Rm > 1000 [N/mm²]
		8a
		8b

1	2	3	4
Machining type	Material group p.III	Recommended tools	Cutting Parameters

Rough milling / contour milling		Group Index p.III	Recommended Reference	Recommended Coating	V _c uncoated [m/min]	V _c coated [m/min]	F _z Ø 0.25 [mm]	F _z Ø 0.5 [mm]	F _z Ø 1 [mm]	F _z Ø 2 [mm]	F _z Ø 4 [mm]	F _z Ø 6 [mm]	F _z Ø 8 [mm]	F _z Ø 10 [mm]	F _z Ø 12 [mm]	F _z Ø 16 [mm]	F _z Ø 20 [mm]
		8a	115-1	Hot	35	45	0.001	0.002	0.004	0.006	0.012	0.02	0.025	0.03	0.04	0.055	0.075
			3000	Hot	55	65	0.001	0.002	0.004	0.006	0.012	0.02	0.025	0.03	0.04	0.055	0.075
		8b	115-1	Hot	25	35	0.001	0.002	0.004	0.006	0.012	0.02	0.025	0.03	0.04	0.055	0.075
			3000	Hot	45	55	0.001	0.002	0.004	0.006	0.012	0.02	0.025	0.03	0.04	0.055	0.075

Finish milling / contour milling		Group Index p.III	Recommended Reference	Recommended Coating	V _c uncoated [m/min]	V _c coated [m/min]	F _z Ø 0.25 [mm]	F _z Ø 0.5 [mm]	F _z Ø 1 [mm]	F _z Ø 2 [mm]	F _z Ø 4 [mm]	F _z Ø 6 [mm]	F _z Ø 8 [mm]	F _z Ø 10 [mm]	F _z Ø 12 [mm]	F _z Ø 16 [mm]	F _z Ø 20 [mm]
		8a	3000	Hot	70	80	0.001	0.003	0.005	0.008	0.014	0.025	0.028	0.034	0.045	0.06	0.08
			110-1	Hot	35	45	0.001	0.002	0.004	0.006	0.012	0.020	0.025	0.030	0.040	0.06	0.08
		8b	3000	Hot	60	70	0.001	0.003	0.005	0.008	0.014	0.025	0.028	0.034	0.045	0.06	0.08
			110-1	Hot	35	40	0.001	0.002	0.004	0.006	0.012	0.020	0.025	0.030	0.040	0.06	0.08

Centering		Group Index p.III	Recommended Reference	Recommended Coating	V _c uncoated [m/min]	V _c coated [m/min]	F [mm]	Pecking
		8a	337	Hot	16	18	Ø/120	-
		8b	337	Hot	16	18	Ø/120	-

Drilling		Group Index p.III	Recommended Reference	Recommended Coating	V _c uncoated [m/min]	V _c coated [m/min]	F [mm]	Pecking
		8a	340/343-6→343-12/352	Hot	20	22	Ø/120	Øx1.0
		8b	340/343-6→343-12/352	Hot	18	20	Ø/120	Øx1.0

Sawing		Group Index p.III	Recommended Reference	Recommended Coating	V _c uncoated [m/min]	V _c coated [m/min]	F _t [mm]
		8a	223-2	Hot	35	45	Ø/10000
		8b	223-2	Hot	30	35	Ø/10000

Engraving		Group Index p.III	Recommended Reference	Recommended Coating	n [rpm]	F _z ↓ [mm]	F _z → [mm]
		8a	119/119-3	Hot	28000	0.0007	0.002
		8b	119/119-3	Hot	28000	0.0007	0.002

Formulas

$$F = F_z \cdot Z$$
$$V_f = F_z \cdot Z \cdot n$$
$$n = \frac{V_c \cdot 1000}{\pi \cdot d_1}$$

$$V_c = \frac{\pi \cdot d_1 \cdot n}{1000}$$
$$f_z = \frac{V_f}{Z \cdot n}$$

Caption

F [mm]: Feed per rotation

F_z [mm]: Feed per tooth

Z : Number of teeth

V_f [mm/min]: Feed speed

n : Spindle speed

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N° Wsn	DIN			Gr.
1.4878	X10NiCrAlTi3220	Z5 NC 35 – 20	Incoloy 800	8b
2.4360	NiCu30Fe	-	Monel 400	8a
2.4375	NiCu30Al	-	Monel K 500	8a
2.4603	NiCr30FeMo	NC22FeD	Hastelloy X	8a
2.4630	NiCr20Ti	NC 20T	Nimonic 75	8a
2.4631	NiCr20TiAl	NC 20TA	Nimonic 80A	8b
2.4632	NiCr20Co18Ti	NCK 20 D	Nimonic 90	8b
2.4634	NiCo20Cr15MoAlTi	NK 20 CDA	Nimonic 105	8b
2.4658	NiCr7030			8a
2.4662	NiCr13Mo6Ti3	Z8 NC DT42	Nimonic 901	8b
2.4668	NiCr19Fe18Nb5Mg	Nc19FeNb	Inconel 718	8b
2.4668	NiCr19Fe19NbMo	NC20K14	Waspaloy	8b
2.4670			Nimocast 713	8b
2.4674			Nimocast PK 24	8b
2.4711	CoCr20Ni15Mo		Phynox (Matthey)	8b
2.4812			Hastelloy C	8a
2.4816	NiCr15Fe	NC 15 Fe	Inconel 600	8a
2.4819	NoMo16Cr15W			8a
2.4856	NiCr22Mo9Nb	NC 22 D Nb	Inconel 625	8b
2.4858	NiCr21Mo	Nfe 32 C20DU	Incoloy 825	8b
2.4964	CoCr20W15Ni			8b
2.4973	NiCr19Co11MoTi	NC19KDT	René 41	8b
2.4983		NCK19DAT	Udimet 500	8b
		NC22FeD	Hastelloy	8b