LOUIS BELET®
Swiss Cutting tools

INOX

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EXPERT TOOLS

STAINLESS STEEL

LOUIS BÉLET S.A.
Les Gasses 11
CH - 2943 Vendlincourt
www.louisbelet.ch

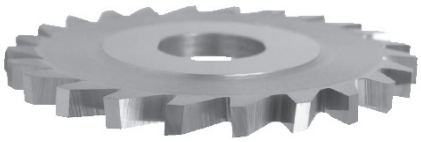
SWISS MADE

- Titanium
- Stainless steel
- Composite
- Brass
- Aluminium

LOUIS BELET
Swiss Cutting tools

EXPERT cutting tools recommended for machining stainless steel

Tool material : **SOLID CARBIDE**
Recommended Coating: **TISI**

Operation	Ref.	Picture	Page
Drilling	**370 / 374**		5 / 7
Milling	**1620**		9
Saw blades	**227**		11
Threading	**5300**		13
Engraving	**119-3**		15
Special Custom tooling	**helical**		Upon request

This table presents only one optimal tool for each operation. You will find other tools suitable for stainless steel machining in our full catalogue.

Index - Stainless steels

N° Wsn	DIN	AFNOR	AISI/ATSM	Gr.
1.2083	X42Cr13	Z40C14		b
1.4000	X6Cr13	Z6C13		c
1.4002	X6CrAl13	Z6CA13		b
1.4005	X12CrS13	Z12CF13		a
1.4006	X10Cr13	Z12C13		a
1.4016	X8Cr17	Z8C17		a
1.4021	X20Cr13	Z20C13		c
1.4028	X30Cr13	Z33C13		c
1.4031	X38Cr13	Z40C14		c
1.4034	X46Cr13	Z40C14		c
1.4057	X22CrNi17	Z15CN16.02		c
1.4104	X12CrMoS17	Z10CF17		a
1.4113	X8CrMo17	Z8CD17.01		a
1.4125	X105CrMo17	Z100CD17		c
1.4301	X5CrNi18 – 10	Z7CN18 – 09		b
1.4301	X5CrNi18.09	Z6CN18.09	304	b
1.4303	X5CrNi1812	Z8CN18.12		b
1.4305	X10CrNiS18 – 9	Z8CNF18 – 09		b
1.4305	X12CrNiS18.08	Z10CNF18.09	303	b
1.4306	X2CrNi19 – 11	Z3CN19 – 11		b
1.4306	X2CrNi18.09	Z2CN18.10	304 L	b
1.4308	G-X6CrNi189	Z6CN18.10M		b
1.4310	X12CrNi177	Z12CN17.07		a
1.4311	X2CrNiN1810	Z2CN18.10		b
1.4313	X5CrNi134	Z5CN13.4		b
1.4401	X5CrNiMo17 – 12 – 2	Z7CND17 – 12 – 2		b
1.4401	X5CrNiMo18.10	Z6CND17.11	316	b
1.4404	X2CrNiMo17 – 13 – 2	Z3CND18 – 11 – 2	316 L	b
1.4404	X2CrNiMo18.10	Z2CND17.12		b
1.4406	X2CrNiMoN17122	Z2CND17.12Az		c
1.4429	X2CrNiMo18.12	Z2CND17.13	316 LN	b
1.4429	X2CrNiMoN17133	Z2CND17.13Az		c
1.4435	X2CrNiMo18143	Z2CND17.13		b
1.4436	X2CrNiMo18.12	Z6CND17.12		b
1.4438	X2CrNiMo18164	Z2CND19.15	317 L	b
1.4462	X2CrNiMoN225	Z2CND225Az		c
1.4510	X8CrTi17	Z8CT17		b
1.4100	X12CrNi177		301	b
1.4441	X2CrNiMo18153	Z2CN18.14.3	316 L	b
1.4511	X8CrNb17	Z8CNb17		b
1.4512	X5CrTi12	Z6CT12		b
1.4539	X2NiCrMoCu25205	Z1CNDU2520	904L	c
1.4541	X10CrNiTi18.09	Z6CNT18.10		b
1.4541	X6CrNiTi18 – 10	Z6CNT18 – 10		b
1.4542	X5CrNiCuNb1714	Z5CNU17.4		c
1.4550	X10CrNiNb18.09	Z6CNNb18.10		b
1.4571	X6CrNiMoTi17122	Z6CNT17.12	316 Ti	b
1.4571	X6CrNiMoTi17-12-2	Z6CNDT17-12		c
1.4571	X10CrNiMoTi18.10	Z6CNDT17.12		c
1.4580	X10CrNiMoNb18.10	Z6CNDNb17.12		b
1.4581	X5CrNiMoNb1810	Z4CNDNb18.12M		b
1.4718	X45CrSi93	Z45CS9		b
1.4724	X10CrAl13	Z10C13		c
1.4747	X80CrNiSi20	Z80CSN20.02		b
1.4828	X15CrNiSi2012	Z15CNS20.12		b
1.4841	X15CrNiSi2520	Z15CNS25.20		c
1.4845	X12CrNi2521	Z12CN25.20		b
1.4864	X12NiCrSi3616	Z12NCS37.18		c
1.4871	X53CrMnNiN219	Z52CMN21.09		c
1.4873	X45CrNiW189	Z35CNWS20.09		c
1.4876	X10NiCrAlTi3320	Z8NC32.21		c
1.4876	X10NiCrAlTi3220	Incoloy800		c
1.4878	X12CrNiTi189	Z6CNT18.12 (B)		b

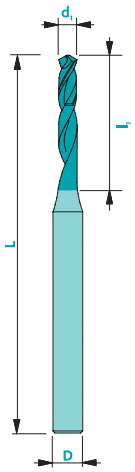
N° Wsn	DIN	AFNOR	AISI/ATSM	Gr.
			302	b
			304 LN	b
			305	b
			309	b
			310 S	b
			314	b
			316 Cb	b
			318	b
			321	b
			329	b
			330	b
			347	b
			348	b

Steels from manufacturers

Böhler	A205	c
Böhler	A500	b
Böhler	A506	a
Böhler	H160	a
Böhler	H525	c
Böhler	M310	c
Böhler	M333	c
Böhler	N350	c
Böhler	N540	b
Böhler	N685	c
Böhler	N700	c
Matthey	Durnico	c

EXPERT drill - stainless steel

Material group (see page 3)	a	b	c
Recommended coating	Nemo	Nemo	Nemo
V_c uncoated [m/min]	25	25	25
V_c coated [m/min]	30	30	30
F [mm]	Ø/50	Ø/50	Ø/50
Pecking	Ø/3	Ø/3	Ø/3



Tolerances

d_1: -0.002/-0.004
D: h5

Nemo coated

135°

Z2

Variable

CARB

Art. n°	d_1	l_1	D	L
370d0.50NM	0.50	4	3	38
370d0.51NM	0.51	4	3	38
370d0.52NM	0.52	4	3	38
370d0.53NM	0.53	4	3	38
370d0.54NM	0.54	4	3	38
370d0.55NM	0.55	4	3	38
370d0.56NM	0.56	4	3	38
370d0.57NM	0.57	4	3	38
370d0.58NM	0.58	4	3	38
370d0.59NM	0.59	4	3	38
370d0.60NM	0.60	5	3	38
370d0.61NM	0.61	5	3	38
370d0.62NM	0.62	5	3	38
370d0.63NM	0.63	5	3	38
370d0.64NM	0.64	5	3	38
370d0.65NM	0.65	5	3	38
370d0.66NM	0.66	5	3	38
370d0.67NM	0.67	5	3	38
370d0.68NM	0.68	5	3	38
370d0.69NM	0.69	5	3	38
370d0.70NM	0.70	5	3	38
370d0.71NM	0.71	5	3	38
370d0.72NM	0.72	5	3	38
370d0.73NM	0.73	5	3	38
370d0.74NM	0.74	5	3	38
370d0.75NM	0.75	5	3	38
370d0.76NM	0.76	5	3	38
370d0.77NM	0.77	5	3	38
370d0.78NM	0.78	5	3	38

Art. n°	d_1	l_1	D	L
370d0.79NM	0.79	5	3	38
370d0.80NM	0.80	6	3	38
370d0.81NM	0.81	6	3	38
370d0.82NM	0.82	6	3	38
370d0.83NM	0.83	6	3	38
370d0.84NM	0.84	6	3	38
370d0.85NM	0.85	6	3	38
370d0.86NM	0.86	6	3	38
370d0.87NM	0.87	6	3	38
370d0.88NM	0.88	6	3	38
370d0.89NM	0.89	6	3	38
370d0.90NM	0.90	6	3	38
370d0.91NM	0.91	8	3	38
370d0.92NM	0.92	8	3	38
370d0.93NM	0.93	8	3	38
370d0.94NM	0.94	8	3	38
370d0.95NM	0.95	8	3	38
370d0.96NM	0.96	8	3	38
370d0.97NM	0.97	8	3	38
370d0.98NM	0.98	8	3	38
370d0.99NM	0.99	8	3	38
370d1.00NM	1.00	8	3	38
370d1.01NM	1.01	8	3	38
370d1.02NM	1.02	8	3	38
370d1.03NM	1.03	8	3	38
370d1.04NM	1.04	8	3	38
370d1.05NM	1.05	8	3	38
370d1.06NM	1.06	8	3	38
370d1.07NM	1.07	8	3	38

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
FZ [mm]: Feed per tooth
Z : Number of teeth
Vf [mm/min]: Feed speed
n : Spindle speed

EXPERT drill - stainless steel

Nemo coated

135°

Z2

λ Variable

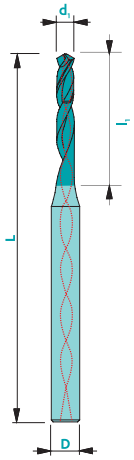
CARB

Art. n°	d_1	l_1	D	L
370d1.08NM	1.08	8	3	38
370d1.09NM	1.09	8	3	38
370d1.10NM	1.10	8	3	38
370d1.11NM	1.11	8	3	38
370d1.12NM	1.12	8	3	38
370d1.13NM	1.13	8	3	38
370d1.14NM	1.14	8	3	38
370d1.15NM	1.15	8	3	38
370d1.16NM	1.16	8	3	38
370d1.17NM	1.17	8	3	38
370d1.18NM	1.18	8	3	38
370d1.19NM	1.19	8	3	38
370d1.20NM	1.20	8	3	38
370d1.21NM	1.21	8	3	38
370d1.22NM	1.22	8	3	38
370d1.23NM	1.23	8	3	38
370d1.24NM	1.24	8	3	38
370d1.25NM	1.25	8	3	38
370d1.26NM	1.26	8	3	38
370d1.27NM	1.27	8	3	38
370d1.28NM	1.28	8	3	38
370d1.29NM	1.29	8	3	38
370d1.30NM	1.30	8	3	38
370d1.31NM	1.31	8	3	38
370d1.32NM	1.32	8	3	38
370d1.33NM	1.33	8	3	38
370d1.34NM	1.34	8	3	38
370d1.35NM	1.35	8	3	38
370d1.36NM	1.36	8	3	38
370d1.37NM	1.37	8	3	38
370d1.38NM	1.38	8	3	38
370d1.39NM	1.39	8	3	38
370d1.40NM	1.40	8	3	38
370d1.41NM	1.41	8	3	38
370d1.42NM	1.42	8	3	38
370d1.43NM	1.43	8	3	38
370d1.44NM	1.44	8	3	38
370d1.45NM	1.45	8	3	38
370d1.46NM	1.46	8	3	38
370d1.47NM	1.47	8	3	38
370d1.48NM	1.48	8	3	38
370d1.49NM	1.49	8	3	38
370d1.50NM	1.50	10	3	38
370d1.55NM	1.55	10	3	38
370d1.60NM	1.60	10	3	38

Art. n°	d_1	l_1	D	L
370d1.65NM	1.65	10	3	38
370d1.70NM	1.70	12	3	38
370d1.75NM	1.75	12	3	38
370d1.80NM	1.80	12	3	38
370d1.85NM	1.85	12	3	38
370d1.90NM	1.90	12	3	38
370d1.95NM	1.95	12	3	38
370d2.00NM	2.00	12	3	38
370d2.05NM	2.05	12	3	38
370d2.10NM	2.10	12	3	38
370d2.15NM	2.15	12	3	38
370d2.20NM	2.20	12	3	38
370d2.25NM	2.25	12	3	38
370d2.30NM	2.30	12	3	38
370d2.35NM	2.35	12	3	38
370d2.40NM	2.40	12	3	38
370d2.45NM	2.45	12	3	38
370d2.50NM	2.50	12	3	38
370d2.60NM	2.60	12	3	38
370d2.70NM	2.70	12	3	38
370d2.80NM	2.80	12	3	38
370d2.90NM	2.90	12	3	38
370d3.00NM	3.00	12	3	38

EXPERT drill for stainless steel - with coolant holes

Material group (see page 3)	a	b	c
Recommended coating	Nemo	Nemo	Nemo
V_c uncoated [m/min]	25	25	25
V_c coated [m/min]	45	45	45
F [mm]	Ø/50	Ø/50	Ø/50
Pecking	2xØ	2xØ	2xØ



Tolerances d_1: -0.002/-0.004 D: h5
l_1: 0.1/-0

Nemo coated

135° Z2

CARB

Art. n°	d_1	l_1	D	L
374d0.70NM	0.70	8	3	51
374d0.71NM	0.71	8	3	51
374d0.72NM	0.72	8	3	51
374d0.73NM	0.73	8	3	51
374d0.74NM	0.74	8	3	51
374d0.75NM	0.75	8	3	51
374d0.76NM	0.76	8	3	51
374d0.77NM	0.77	8	3	51
374d0.78NM	0.78	8	3	51
374d0.79NM	0.79	8	3	51
374d0.80NM	0.80	8	3	51
374d0.81NM	0.81	8	3	51
374d0.82NM	0.82	8	3	51
374d0.83NM	0.83	8	3	51
374d0.84NM	0.84	8	3	51
374d0.85NM	0.85	8	3	51
374d0.86NM	0.86	8	3	51
374d0.87NM	0.87	8	3	51
374d0.88NM	0.88	8	3	51
374d0.89NM	0.89	8	3	51
374d0.90NM	0.90	10	3	51
374d0.91NM	0.91	10	3	51
374d0.92NM	0.92	10	3	51
374d0.93NM	0.93	10	3	51
374d0.94NM	0.94	10	3	51
374d0.95NM	0.95	10	3	51
374d0.96NM	0.96	10	3	51
374d0.97NM	0.97	10	3	51
374d0.98NM	0.98	10	3	51
374d0.99NM	0.99	10	3	51
374d1.00NM	1.00	12	3	51

Art. n°	d_1	l_1	D	L
374d1.01NM	1.01	12	3	51
374d1.02NM	1.02	12	3	51
374d1.03NM	1.03	12	3	51
374d1.04NM	1.04	12	3	51
374d1.05NM	1.05	12	3	51
374d1.06NM	1.06	12	3	51
374d1.07NM	1.07	12	3	51
374d1.08NM	1.08	12	3	51
374d1.09NM	1.09	12	3	51
374d1.10NM	1.10	12	3	51
374d1.11NM	1.11	12	3	51
374d1.12NM	1.12	12	3	51
374d1.13NM	1.13	12	3	51
374d1.14NM	1.14	12	3	51
374d1.15NM	1.15	12	3	51
374d1.16NM	1.16	12	3	51
374d1.17NM	1.17	12	3	51
374d1.18NM	1.18	12	3	51
374d1.19NM	1.19	12	3	51
374d1.20NM	1.20	14	3	51
374d1.21NM	1.21	14	3	51
374d1.22NM	1.22	14	3	51
374d1.23NM	1.23	14	3	51
374d1.24NM	1.24	14	3	51
374d1.25NM	1.25	14	3	51
374d1.26NM	1.26	14	3	51
374d1.27NM	1.27	14	3	51
374d1.28NM	1.28	14	3	51
374d1.29NM	1.29	14	3	51
374d1.30NM	1.30	14	3	51
374d1.31NM	1.31	14	3	51

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
FZ [mm]: Feed per tooth
Z : Number of teeth
Vf [mm/min]: Feed speed
n : Spindle speed

EXPERT drill for stainless steel - with coolant holes

Continuation

Nemo coated

135°

Z2

CARB

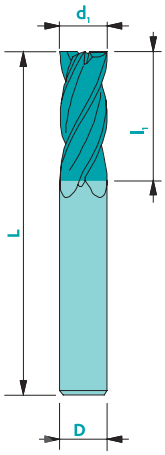
Art. n°	d_1	l_1	D	L
374d1.32NM	1.32	14	3	51
374d1.33NM	1.33	14	3	51
374d1.34NM	1.34	14	3	51
374d1.35NM	1.35	14	3	51
374d1.36NM	1.36	14	3	51
374d1.37NM	1.37	14	3	51
374d1.38NM	1.38	14	3	51
374d1.39NM	1.39	14	3	51
374d1.40NM	1.40	14	3	51
374d1.41NM	1.41	14	3	51
374d1.42NM	1.42	14	3	51
374d1.43NM	1.43	14	3	51
374d1.44NM	1.44	14	3	51
374d1.45NM	1.45	14	3	51
374d1.46NM	1.46	14	3	51
374d1.47NM	1.47	14	3	51
374d1.48NM	1.48	14	3	51
374d1.49NM	1.49	14	3	51
374d1.50NM	1.50	14	3	51
374d1.51NM	1.51	14	3	51
374d1.52NM	1.52	14	3	51
374d1.53NM	1.53	14	3	51
374d1.54NM	1.54	14	3	51
374d1.55NM	1.55	14	3	51
374d1.56NM	1.56	14	3	51
374d1.57NM	1.57	14	3	51
374d1.58NM	1.58	14	3	51
374d1.59NM	1.59	14	3	51
374d1.60NM	1.60	14	3	51
374d1.61NM	1.61	14	3	51
374d1.62NM	1.62	14	3	51
374d1.63NM	1.63	14	3	51
374d1.64NM	1.64	14	3	51
374d1.65NM	1.65	14	3	51
374d1.66NM	1.66	14	3	51
374d1.67NM	1.67	14	3	51
374d1.68NM	1.68	14	3	51
374d1.69NM	1.69	14	3	51
374d1.70NM	1.70	18	3	51
374d1.71NM	1.71	18	3	51
374d1.72NM	1.72	18	3	51
374d1.73NM	1.73	18	3	51
374d1.74NM	1.74	18	3	51
374d1.75NM	1.75	18	3	51
374d1.76NM	1.76	18	3	51

Art. n°	d_1	l_1	D	L
374d1.77NM	1.77	18	3	51
374d1.78NM	1.78	18	3	51
374d1.79NM	1.79	18	3	51
374d1.80NM	1.80	18	3	51
374d1.81NM	1.81	18	3	51
374d1.82NM	1.82	18	3	51
374d1.83NM	1.83	18	3	51
374d1.84NM	1.84	18	3	51
374d1.85NM	1.85	18	3	51
374d1.86NM	1.86	18	3	51
374d1.87NM	1.87	18	3	51
374d1.88NM	1.88	18	3	51
374d1.89NM	1.89	18	3	51
374d1.90NM	1.90	18	3	51
374d1.91NM	1.91	18	3	51
374d1.92NM	1.92	18	3	51
374d1.93NM	1.93	18	3	51
374d1.94NM	1.94	18	3	51
374d1.95NM	1.95	18	3	51
374d1.96NM	1.96	18	3	51
374d1.97NM	1.97	18	3	51
374d1.98NM	1.98	18	3	51
374d1.99NM	1.99	18	3	51
374d2.00NM	2.00	18	3	51
374d2.05NM	2.05	18	3	51
374d2.10NM	2.10	20	4	60
374d2.20NM	2.20	20	4	60
374d2.30NM	2.30	20	4	60
374d2.40NM	2.40	20	4	60
374d2.50NM	2.50	20	4	60
374d2.60NM	2.60	20	4	60
374d2.70NM	2.70	20	4	60
374d2.80NM	2.80	20	4	60
374d2.90NM	2.90	20	4	60
374d3.00NM	3.00	20	4	60
374d3.50NM	3.50	20	4	60
374d4.00NM	4.00	20	4	60

EXPERT end mill stainless steel Z4

Material group (see page 3)	a	b	c
Recommended coating	TISI	TISI	TISI
V_c uncoated [m/min]	90	80	55
V_c coated [m/min]	110	100	70
F_z Ø 0.25 [mm]	0.003	0.003	0.003
F_z Ø 0.50 [mm]	0.0035	0.0035	0.0035
F_z Ø 1.00 [mm]	0.0040	0.0035	0.0030
F_z Ø 2.00 [mm]	0.008	0.007	0.006
F_z Ø 4.00 [mm]	0.015	0.013	0.012
F_z Ø 6.00 [mm]	0.020	0.020	0.017
F_z Ø 8.00 [mm]	0.030	0.027	0.025
F_z Ø 10.00 [mm]	0.040	0.037	0.032
F_z Ø 12.00 [mm]	0.050	0.047	0.045
F_z Ø 16.00 [mm]	0.070	0.065	0.060
F_z Ø 20.00 [mm]	0.090	0.080	0.075

Tolerances $d_1 \leq 1$ mm ▶ +0/-0.01 $d_1 > 1$ mm ▶ +0/-0.02 d_1=D ▶ d_1: e8 D: h5



Available uncoated or coated

Z4

λ 35-45°

γ 8°

CARB

ap=1xd$_1$ ae=1xd$_1$ ap=2.0xd$_1$

Art. n°	d_1	l_1	⌟	D	L
1620d1.00	1.0	2	0.02	6	51
1620d1.50	1.5	3	0.02	6	51
1620d2.00	2.0	4	0.02	6	51
1620d2.50	2.5	5	0.02	6	51
1620d3.00	3.0	6	0.02	6	51
1620d3.50	3.5	7	0.03	6	51
1620d4.00	4.0	8	0.03	6	51
1620d5.00	5.0	10	0.04	6	51
1620d6.00	6.0	12	0.05	6	51
1620d8.00	8.0	16	0.05	8	61
1620d10.00	10.0	20	0.05	10	72
1620d12.00	12.0	24	0.05	12	83
1620d14.00	14.0	28	0.06	14	83
1620d16.00	16.0	32	0.06	16	92

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

FZ [mm]: Feed per tooth

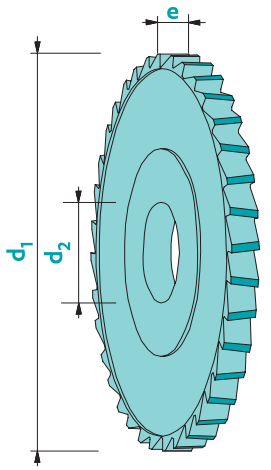
Z : Number of teeth

Vf [mm/min]: Feed speed

n : Spindle speed

Slitting saw - staggered teeth - 3 cuts

Material group (see page 3)	a	b	c
Recommended coating	TISI	TISI	TISI
V_c uncoated [m/min]	90	75	45
V_c coated [m/min]	100	90	50
F_z [mm]	Ø/10000	Ø/10000	Ø/10000



Tolerance e: +0/-0.01
d_2: H5

Available uncoated or coated

Art. n°	d_1	e	d_2	Z
227d15e1.0A5Z##	15	1.0	5	12 - 18
227d15e1.5A5Z##	15	1.5	5	12 - 18
227d15e2.0A5Z##	15	2.0	5	12 - 18
227d15e2.5A5Z##	15	2.5	5	12 - 18
227d15e3.0A5Z##	15	3.0	5	12 - 18
227d15e3.5A5Z##	15	3.5	5	12 - 18
227d15e4.0A5Z##	15	4.0	5	12 - 18
227d15e4.5A5Z##	15	4.5	5	12 - 18
227d15e5.0A5Z##	15	5.0	5	12 - 18
227d15e5.5A5Z##	15	5.5	5	12 - 18
227d15e6.0A5Z##	15	6.0	5	12 - 18
227d20e1.0A5Z##	20	1.0	5	20 - 24
227d20e1.5A5Z##	20	1.5	5	20 - 24
227d20e2.0A5Z##	20	2.0	5	20 - 24
227d20e2.5A5Z##	20	2.5	5	20 - 24
227d20e3.0A5Z##	20	3.0	5	20 - 24
227d20e3.5A5Z##	20	3.5	5	20 - 24
227d20e4.0A5Z##	20	4.0	5	20 - 24
227d20e4.5A5Z##	20	4.5	5	20 - 24
227d20e5.0A5Z##	20	5.0	5	20 - 24
227d20e5.5A5Z##	20	5.5	5	20 - 24
227d20e6.0A5Z##	20	6.0	5	20 - 24
227d25e1.0A8Z##	25	1.0	8	24 - 28
227d25e1.5A8Z##	25	1.5	8	24 - 28
227d25e2.0A8Z##	25	2.0	8	24 - 28
227d25e2.5A8Z##	25	2.5	8	24 - 28
227d25e3.0A8Z##	25	3.0	8	24 - 28
227d25e3.5A8Z##	25	3.5	8	24 - 28
227d25e4.0A8Z##	25	4.0	8	24 - 28
227d25e4.5A8Z##	25	4.5	8	24 - 28

Art. n°	d_1	e	d_2	Z
227d25e5.0A8Z##	25	5.0	8	24 - 28
227d25e5.5A8Z##	25	5.5	8	24 - 28
227d25e6.0A8Z##	25	6.0	8	24 - 28
227d25e6.5A8Z##	25	6.5	8	24 - 28
227d25e7.0A8Z##	25	7.0	8	24 - 28
227d25e7.5A8Z##	25	7.5	8	24 - 28
227d25e8.0A8Z##	25	8.0	8	24 - 28
227d30e1.0A8Z##	30	1.0	8	24 - 28
227d30e1.5A8Z##	30	1.5	8	24 - 28
227d30e2.0A8Z##	30	2.0	8	24 - 28
227d30e2.5A8Z##	30	2.5	8	24 - 28
227d30e3.0A8Z##	30	3.0	8	24 - 28
227d30e3.5A8Z##	30	3.5	8	24 - 28
227d30e4.0A8Z##	30	4.0	8	24 - 28
227d30e4.5A8Z##	30	4.5	8	24 - 28
227d30e5.0A8Z##	30	5.0	8	24 - 28
227d30e5.5A8Z##	30	5.5	8	24 - 28
227d30e6.0A8Z##	30	6.0	8	24 - 28
227d30e6.5A8Z##	30	6.5	8	24 - 28
227d30e7.0A8Z##	30	7.0	8	24 - 28
227d30e7.5A8Z##	30	7.5	8	24 - 28
227d30e8.0A8Z##	30	8.0	8	24 - 28
227d30e8.5A8Z##	30	8.5	8	24 - 28
227d30e9.0A8Z##	30	9.0	8	24 - 28
227d30e9.5A8Z##	30	9.5	8	24 - 28
227d30e10.0A8Z##	30	10.0	8	24 - 28
227d30e12.0A8Z##	30	12.0	8	24 - 28
227d40e1.0A10Z##	40	1.0	10	28 - 32
227d40e1.5A10Z##	40	1.5	10	28 - 32
227d40e2.0A10Z##	40	2.0	10	28 - 32

Z 12-36

λ ALT

γ 8°

CARB

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
FZ [mm]: Feed per tooth
Z : Number of teeth
Vf [mm/min]: Feed speed
n : Spindle speed

Slitting saw - staggered teeth - 3 cuts

Available uncoated or coated

Z 12-36

λ ALT

γ 8°

CARB

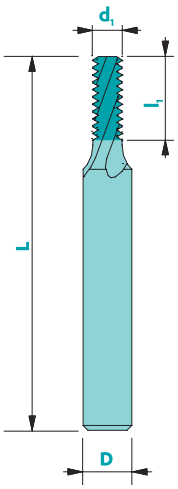
Art. n°	d_1	e	d_2	Z
227d40e2.5A10Z##	40	2.5	10	28 - 32
227d40e3.0A10Z##	40	3.0	10	28 - 32
227d40e3.5A10Z##	40	3.5	10	28 - 32
227d40e4.0A10Z##	40	4.0	10	28 - 32
227d40e4.5A10Z##	40	4.5	10	28 - 32
227d40e5.0A10Z##	40	5.0	10	28 - 32
227d40e5.5A10Z##	40	5.5	10	28 - 32
227d40e6.0A10Z##	40	6.0	10	28 - 32
227d40e6.5A10Z##	40	6.5	10	28 - 32
227d40e7.0A10Z##	40	7.0	10	28 - 32
227d40e7.5A10Z##	40	7.5	10	28 - 32
227d40e8.0A10Z##	40	8.0	10	28 - 32
227d40e8.5A10Z##	40	8.5	10	28 - 32
227d40e9.0A10Z##	40	9.0	10	28 - 32
227d40e9.5A10Z##	40	9.5	10	28 - 32
227d40e10.0A10Z##	40	10.0	10	28 - 32
227d40e12.0A10Z##	40	12.0	10	28 - 32
227d50e1.5A13Z##	50	1.5	13	28 - 32
227d50e2.0A13Z##	50	2.0	13	28 - 32
227d50e2.5A13Z##	50	2.5	13	28 - 32
227d50e3.0A13Z##	50	3.0	13	28 - 32
227d50e3.5A13Z##	50	3.5	13	28 - 32
227d50e4.0A13Z##	50	4.0	13	28 - 32
227d50e4.5A13Z##	50	4.5	13	28 - 32
227d50e5.0A13Z##	50	5.0	13	28 - 32
227d50e5.5A13Z##	50	5.5	13	28 - 32
227d50e6.0A13Z##	50	6.0	13	28 - 32
227d50e6.5A13Z##	50	6.5	13	28 - 32
227d50e7.0A13Z##	50	7.0	13	28 - 32
227d50e7.5A13Z##	50	7.5	13	28 - 32
227d50e8.0A13Z##	50	8.0	13	28 - 32
227d50e8.5A13Z##	50	8.5	13	28 - 32
227d50e9.0A13Z##	50	9.0	13	28 - 32
227d50e9.5A13Z##	50	9.5	13	28 - 32
227d50e10.0A13Z##	50	10.0	13	28 - 32
227d50e12.0A13Z##	50	12.0	13	28 - 32
227d63e1.5A16Z##	63	1.5	16	28 - 36
227d63e2.0A16Z##	63	2.0	16	28 - 36
227d63e2.5A16Z##	63	2.5	16	28 - 36
227d63e3.0A16Z##	63	3.0	16	28 - 36
227d63e3.5A16Z##	63	3.5	16	28 - 36
227d63e4.0A16Z##	63	4.0	16	28 - 36
227d63e4.5A16Z##	63	4.5	16	28 - 36
227d63e5.0A16Z##	63	5.0	16	28 - 36

Art. n°	d_1	e	d_2	Z
227d63e5.5A16Z##	63	5.5	16	28 - 36
227d63e6.0A16Z##	63	6.0	16	28 - 36
227d63e6.5A16Z##	63	6.5	16	28 - 36
227d63e7.0A16Z##	63	7.0	16	28 - 36
227d63e7.5A16Z##	63	7.5	16	28 - 36
227d63e8.0A16Z##	63	8.0	16	28 - 36
227d63e8.5A16Z##	63	8.5	16	28 - 36
227d63e9.0A16Z##	63	9.0	16	28 - 36
227d63e9.5A16Z##	63	9.5	16	28 - 36
227d63e10.0A16Z##	63	10.0	16	28 - 36
227d63e12.0A16Z##	63	12.0	16	28 - 36
227d80e4.0A22Z##	80	4.0	22	28 - 36
227d80e4.5A22Z##	80	4.5	22	28 - 36
227d80e5.0A22Z##	80	5.0	22	28 - 36
227d80e5.5A22Z##	80	5.5	22	28 - 36
227d80e6.0A22Z##	80	6.0	22	28 - 36
227d80e6.5A22Z##	80	6.5	22	28 - 36

Helical thread mill - ISO 60°

Internal and external threading

Material group (see page 3)	a	b	c
Recommended coating	TISI	TISI	TISI
V_c uncoated [m/min]	90	80	55
V_c coated [m/min]	110	100	70



Tolerances

$d_1 \leq 1$mm ▶ +0/-0.01 D: h5
$d_1 > 1$mm ▶ +0/-0.02
$d_1 = D$ ▶ d_1:e8

Available uncoated or coated

Art. n°	Ø nominal	Pitch	d_1	l_1	D	L	Z
5300M1.20	M1.20	0.25	0.85	2.4	3	38	2
5300M1.40	M1.40	0.30	1.00	2.8	3	38	3
5300M1.60/1.80	M1.60/1.80	0.35	1.10	3.6	3	38	3
5300M2.00	M2.00	0.40	1.40	4.0	3	38	3
5300M2.50	M2.50	0.45	1.80	5.0	3	38	3
5300M3.00	M3.00	0.50	2.30	6.0	3	38	3
5300M4.00	M4.00	0.70	3.00	8.0	6	57	3
5300M5.00	M5.00	0.80	3.80	10.0	6	57	4
5300M6.00	M6.00	1.00	4.50	12.0	6	57	4
5300M8.00	M8.00	1.25	5.00	16.0	6	57	4
5300M10.00	M10.00	1.50	6.00	20.0	6	57	5

Z2-5

λ 20°

γ 8°

CARB

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

FZ [mm]: Feed per tooth

Z : Number of teeth

Vf [mm/min]: Feed speed

n : Spindle speed

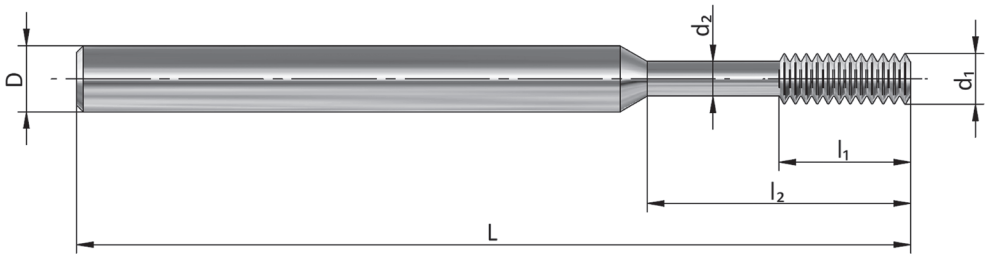
5300

Continuation

Helical thread mill - ISO 60°

Internal and external threading

Upon request



Available uncoated or coated

Z2-5

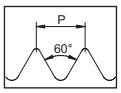
λ **20°**

γ **8°**

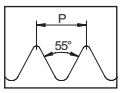
CARB

☐ **Order** ☐ **Quotation request**

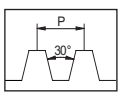
Norm :

☐ 

ISO 60°

☐ 

ISO 55°

☐ 

ISO trapézoïdal

☐ Other : _____

Dimensions :

d_1 : _____ l_1 : _____

d_2 : _____ l_2 : _____

D* : _____ L* : _____

Coating :

☐ Coated** : _____

☐ Uncoated

Machined material : _____

Order No : _____

Quantity : _____

Contact person : _____

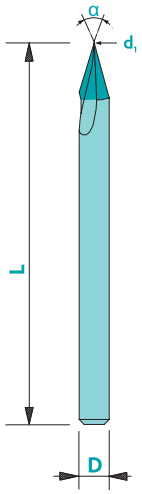
Company's stamp & date : _____

*Standard dimensions of the bars : Ø 3x L 38, Ø 4x L 38, Ø 6x L 38, Ø 6x L 51, Ø 8x L 61, Ø 10x L 72, Ø 12x L 83, Ø 16x L 92, Ø 20x L 104

** Without information, the most suitable Coating will be applied.

Engraving mill- ¾ - flat tip

Material group (see page 3)	a	b	c
Recommended coating	TISI	TISI	TISI
n [rpm]	28000	28000	28000
Fz↓ [mm]	0.002	0.002	0.002
Fz→ [mm]	0.006	0.006	0.006



Tolerances d_1: +/- 0.01
D: h5

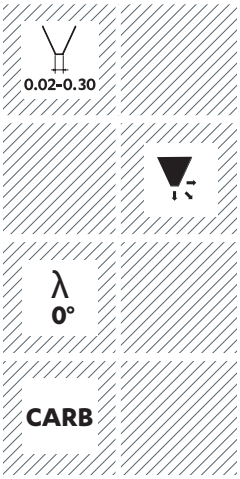
Available uncoated or coated

Article number : 119-3a##d#.##
Example: End mill ref. 119-3 with 25° angle and tip diameter 0.05 mm: 119-3a25d0.05

α**	d_1**	D	L
15-45°	0.02-0.09	3	33
15-45°	0.10-0.30	3	33
50-140°	0.02-0.09	3	33
50-140°	0.10-0.30	3	33

* Available angles: every 5° between 15° and 45°; every 10° between 50° and 140°
** Available diameters: every 0.01 mm between 0.02 and 0.09 mm; every 0.05 mm between 0.10 and 0.30 mm

Other dimensions (angle, tip diameter, shank) upon request



Formulas

$F = F_z \cdot Z$

$V_F = F_z \cdot Z \cdot n$

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

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

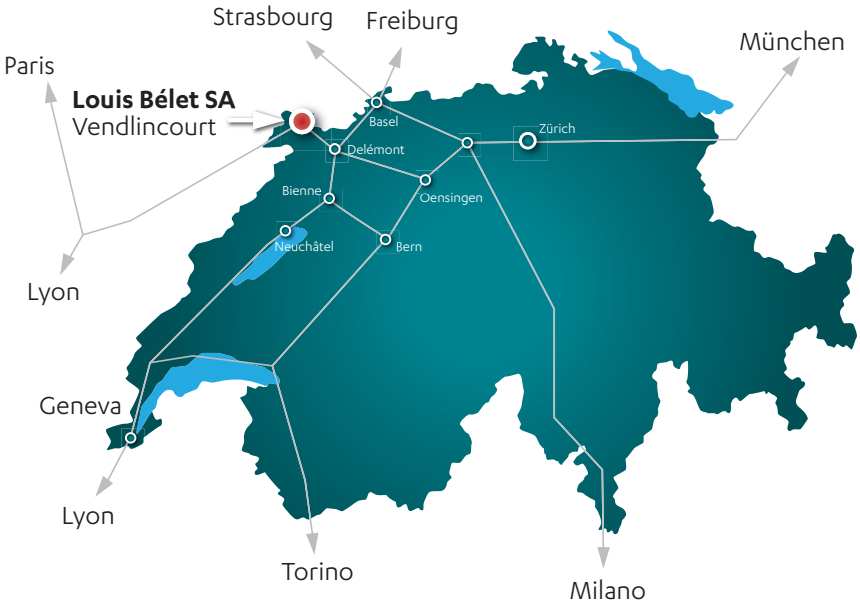
$f_z = \frac{V_f}{Z \cdot n}$

Caption

F [mm]:Feed per rotation
FZ [mm]: Feed per tooth
Z : Number of teeth
Vf [mm/min]: Feed speed
n : Spindle speed

Since 1948

Louis BELET SA is a family business of about 150 employees. The company is run by the two grandchildren of the founder, Mrs Roxane Piquerez and Mr Arnaud Maître.



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The quest of excellence

Bélet's spirit relies on the quest of excellence. In all our activities, we constantly focus on finding the best solutions, for our customers and our employees.

Quality and environmental management are testified by our ISO 9001:2008 and ISO 14001:2004 certifications.

List of authorized distributors available on www.louisbelet.ch

12.2021