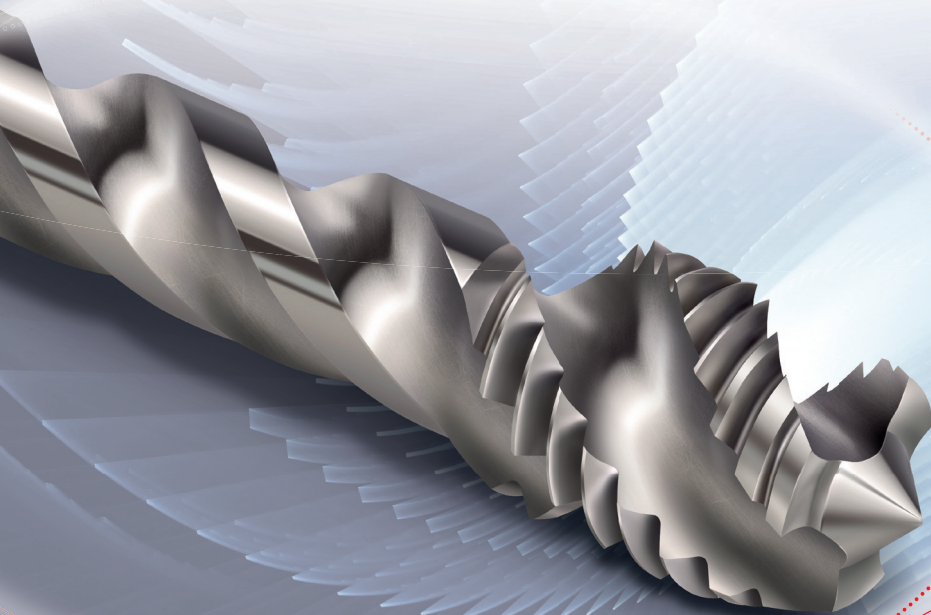




passion for precision

Thread cutting **u-tap**



2014

Process safety thanks to **ideal cutting edge design**



With the new u-tap FRAISA launches a completely new designed universal thread cutting tap. On the basis of a proven cutting geometry the cutting edge design was modified by means of state-of-the-art processes.

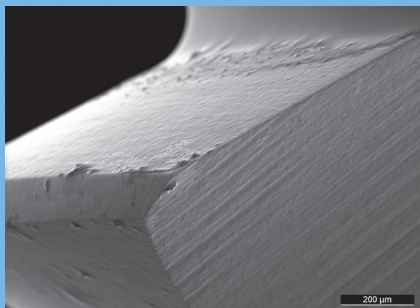
u-tap is a tribute to universal process safe application

Thanks to the new concept of the cutting edge rounding (CER) superior results with regard to process safety, thread quality and cost reduction can be achieved. The performance of the u-tap is demonstrated in the application of various materials – particularly in steel.

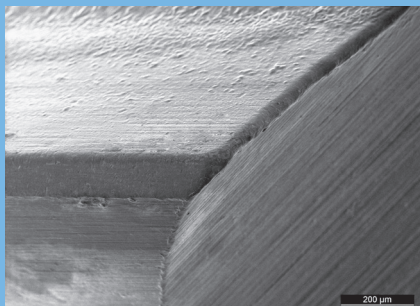
The safe application of the u-tap in the thread cutting process is a result of the combination of new technologies and tried-and-tested concepts: new substrate, new deburring process and new conditioning of the cutting edge with proven FRAISA cutting geometry.

Cutting edge rounding (CER)

Conventional CER



u-tap CER



Longer service life due to greater wear resistance

The ideal and precise design of the cutting edge prevents wear increase at an early stage. This is clearly shown in the application example of a tapped blind hole 2xD in heat-treated steel using u-tap:

Application data u-tap M8-ISO2	
Thread depth	16 mm
Material	42CrMo4
Cutting speed v_c	7 m/min
Number of threads	150
Cooling lubricant	Emulsion 8 %

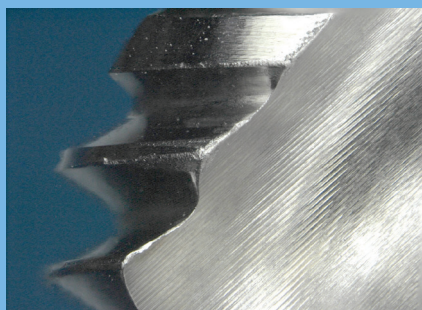
The advantages:

- **High process safety:**
Thanks to the reproducible cutting edge rounding
- **Reduction in manufacturing costs**
- **A tool** for universal application

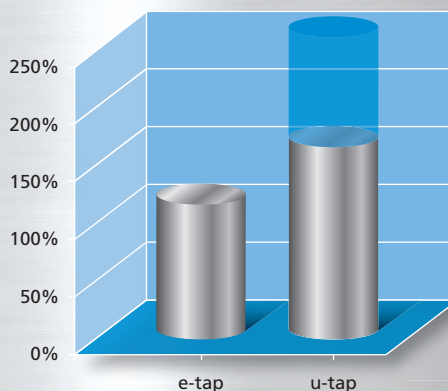
As usual, FRAISA supplies process safe application data for each tool.

u-tap after application of 150 threads

u-tap CER



Increased service life with u-tap



Quick orders, quick deliveries

Simply order, and delivery will be made the next day. You can also order from our e-shop at www.fraisa.com.



You can also use the order function from our e-shop.

Steel
< 500 N/mm²

Steel
< 500 N/mm²

[illegible]

Wrought aluminium alloys Si < 6% hardened

Recommendation:
uncoated

Wrought aluminium alloys Si < 6% hardened

Recommendation: untreated

Stainless steel
[Cr-Ni/1.4301]

Stainless steel
[Cr-Ni/1.4301]



Taps u-tap



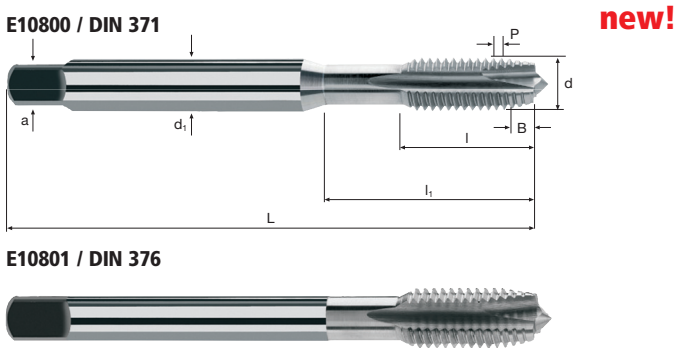
M

ISO 2
(6H)

HSS-E
Co5

Form B

OIL Emul



Suitable for the machining of:

Rm
< 850 N/mm²

Inox
Stainless

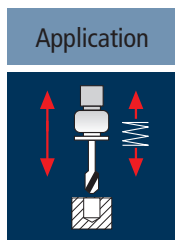
Al
Aluminium

GG(G)
Cast iron

Cu
Copper

Example: Order-N°.										VAP	
Article-N°.										E10800	EV10800
ø-Code											
Ø	d	P	L	l	l ₁	d ₁	a				
.034	M 2	0.40	45	8	12.5	2.8	2.1	2	1.60	●	●
.040	M 2.5	0.45	50	9	15.0	2.8	2.1	2	2.05	●	●
.044	M 3	0.50	56	12	18.0	3.5	2.7	3	2.50	●	●
.058	M 4	0.70	63	13	21.0	4.5	3.4	3	3.30	●	●
.084	M 5	0.80	70	15	25.0	6.0	4.9	3	4.20	●	●
.088	M 6	1.00	80	17	30.0	6.0	4.9	3	5.00	●	●
.160	M 8	1.25	90	20	35.0	8.0	6.2	3	6.80	●	●
.174	M10	1.50	100	22	39.0	10.0	8.0	3	8.50	●	●

Example: Order-N°.										VAP	
Article-N°.										E10801	EV10801
ø-Code											
Ø	d	P	L	l	l ₁	d ₁	a				
.240	M12	1.75	110	24	40.0	9.0	7.0	3	10.20	●	●
.244	M14	2.00	110	26	40.0	11.0	9.0	3	12.00	●	●
.246	M16	2.00	110	27	40.0	12.0	9.0	3	14.00	●	●



Application

Material

Steel
< 500 N/mm²

Steel
< 500 N/mm²

Steel
500 - 850 N/mm²

Steel
500 - 850 N/mm²

M	ø	P	V _c	n	v _f	V _c	n	v _f	V _c	n	v _f
	[mm]	[mm]	1.0 x d	[min ⁻¹]	[100%]	1.5 x d	[min ⁻¹]	[100%]	2.0 x d	[min ⁻¹]	[100%]
M 2	2.0	0.40	11	1750	700	10	1590	636	8	1275	510
M 2.5	2.5	0.45	11	1400	630	10	1275	574	8	1020	459
M 3	3.0	0.50	14	1485	743	12	1275	638	10	1060	530
M 4	4.0	0.70	14	1115	781	12	955	669	10	795	557
M 5	5.0	0.80	14	890	712	12	765	612	10	635	508
M 6	6.0	1.00	14	745	745	12	635	635	10	530	530
M 8	8.0	1.25	14	555	694	12	475	594	10	400	500
M10	10.0	1.50	14	445	668	12	380	570	10	320	480
M12	12.0	1.75	14	370	648	12	320	560	10	265	464
M14	14.0	2.00	14	320	640	12	275	550	10	225	450
M16	16.0	2.00	14	280	560	12	240	480	10	200	400
M 2	2.0	0.40	8	1275	510	7	1115	446	6	955	382
M 2.5	2.5	0.45	8	1020	459	7	890	401	6	765	344
M 3	3.0	0.50	9	955	478	8	850	425	7	745	373
M 4	4.0	0.70	9	715	500	8	635	445	7	555	389
M 5	5.0	0.80	9	575	460	8	510	408	7	445	356
M 6	6.0	1.00	9	475	475	8	425	425	7	370	370
M 8	8.0	1.25	9	360	450	8	320	400	7	280	350
M10	10.0	1.50	9	285	428	8	255	383	7	225	338
M12	12.0	1.75	9	240	420	8	210	368	7	185	324
M14	14.0	2.00	9	205	410	8	180	360	7	160	320
M16	16.0	2.00	9	180	360	8	160	320	7	140	280

Material

Wrought aluminium alloys Si < 6% hardened

Recommendation: uncoated

Wrought aluminium alloys Si < 6% hardened

Recommendation: uncoated

Stainless steel [Cr-Ni/1.4301]

Stainless steel [Cr-Ni/1.4301]

M	ø	P	V _c	n	v _f	V _c	n	v _f	V _c	n	v _f
	[mm]	[mm]	1.0 x d	[min ⁻¹]	[100%]	1.5 x d	[min ⁻¹]	[100%]	2.0 x d	[min ⁻¹]	[100%]
M 2	2.0	0.40	8	1275	510	6	955	382	5	795	318
M 2.5	2.5	0.45	8	1020	459	6	765	344	5	635	286
M 3	3.0	0.50	10	1060	530	8	850	425	6	635	318
M 4	4.0	0.70	10	795	557	8	635	445	6	475	333
M 5	5.0	0.80	10	635	508	8	510	408	6	380	304
M 6	6.0	1.00	10	530	530	8	425	425	6	320	320
M 8	8.0	1.25	10	400	500	8	320	400	6	240	300
M10	10.0	1.50	10	320	480	8	255	383	6	190	285
M12	12.0	1.75	10	265	464	8	210	368	6	160	280
M14	14.0	2.00	10	225	450	8	180	360	6	135	270
M16	16.0	2.00	10	200	400	8	160	320	6	120	240
M 2	2.0	0.40	3	475	190	2	320	128	2	320	128
M 2.5	2.5	0.45	3	380	171	2	255	115	2	255	115
M 3	3.0	0.50	4	425	213	3	320	160	3	320	160
M 4	4.0	0.70	4	320	224	3	240	168	3	240	168
M 5	5.0	0.80	4	255	204	3	190	152	3	190	152
M 6	6.0	1.00	4	210	210	3	160	160	3	160	160
M 8	8.0	1.25	4	160	200	3	120	150	3	120	150
M10	10.0	1.50	4	125	188	3	95	143	3	95	143
M12	12.0	1.75	4	105	184	3	80	140	3	80	140
M14	14.0	2.00	4	90	180	3	70	140	3	70	140
M16	16.0	2.00	4	80	160	3	60	120	3	60	120

Taps u-tap



M

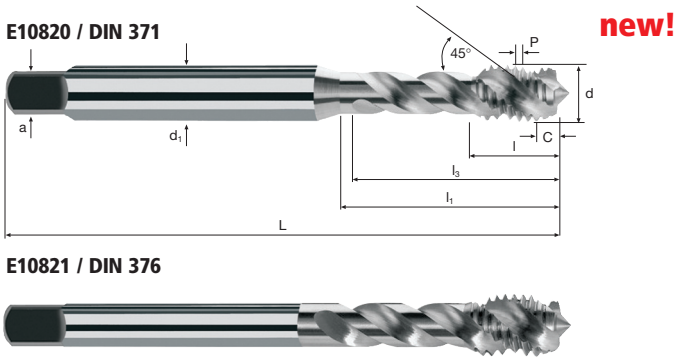
ISO 2
(6H)

HSS-E
Co5

DIN
371/376

Form C

OIL Emul



Suitable for the machining of:

Rm
< 850 N/mm²

Inox
Stainless

Al
Aluminium

GG(G)
Cast iron

Cu
Copper

Example: Order-N°.												VAP
Article-N°.											E10820	EV10820
ø-Code												
Ø Code	d	P	L	l	l1	l3	d1	a				
.034	M 2	0.40	45	8.0	12.5	10.5	2.8	2.1	3	1.60	●	●
.040	M 2.5	0.45	50	9.0	15.0	13.0	2.8	2.1	3	2.05	●	●
.044	M 3	0.50	56	4.0	18.0	16.0	3.5	2.7	3	2.50	●	●
.058	M 4	0.70	63	5.6	21.0	19.0	4.5	3.4	3	3.30	●	●
.084	M 5	0.80	70	6.4	25.0	23.0	6.0	4.9	3	4.20	●	●
.088	M 6	1.00	80	8.0	30.0	28.0	6.0	4.9	3	5.00	●	●
.160	M 8	1.25	90	10.0	35.0	33.0	8.0	6.2	3	6.80	●	●
.174	M10	1.50	100	12.0	39.0	37.0	10.0	8.0	3	8.50	●	●

Example: Order-N°.												VAP
Article-N°.											E10821	EV10821
ø-Code												
Ø Code	d	P	L	l	l1	l3	d1	a				
.240	M12	1.75	110	14.0	50.0	48.0	9.0	7.0	3	10.20	●	●
.244	M14	2.00	110	16.0	58.0	56.0	11.0	9.0	4	12.00	●	●
.246	M16	2.00	110	16.0	58.0	56.0	12.0	9.0	4	14.00	●	●

