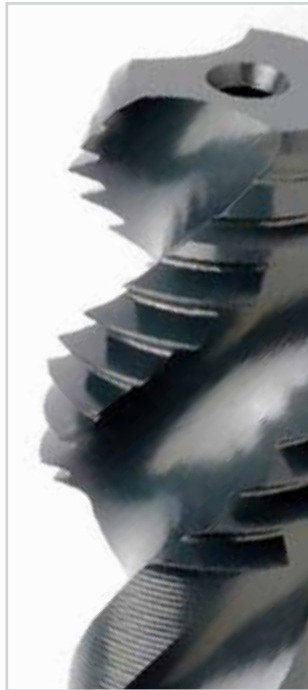


The Right Tool at the Right Time



High Performance Multi-Material Application Taps

to DIN, DIN/ANSI and ISO standards



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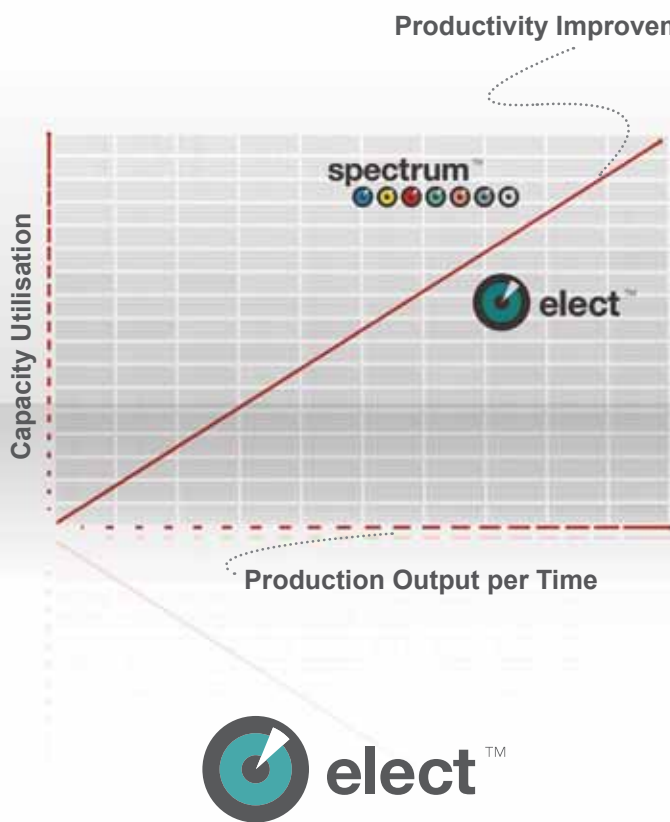
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Your Productivity *Our Vision*

At Dormer, we understand that each customer is different. One customer's priority may be to maximise capacity utilisation, whilst another's may be to increase production output per time.

To help our customers choose the tool that best meets their requirements, Dormer classifies its rotary tooling ranges under one of the following two productivity classes:



	spectrum	elect P	elect M	elect K	elect N	elect S	elect H	elect O
Steel	●	●						
Stainless Steel			●					
Cast Iron				●				
Non ferrous material					●			
Heat resistant super alloys						●		
Hardened Materials							●	
Other								●



Products carrying the **Elect™** brand identify Dormer's best performing tools for one specific material or application, satisfying the need for high output per time.

In the case of material specific tools, a letter, relating to the **ISO** material classifications, will be added to the brand mark to denote material suitability e.g. **Elect P™** denotes that this is a top performing tool for steel. In the case of application specific tools (e.g. deep hole drills or thread milling cutters) the term "APP" will be used to form the brand mark **Elect APP™**.

Tools carrying the **Spectrum™** brand indicate excellent productivity over a multitude of materials, providing high capacity utilisation and versatility.

The brand mark incorporates a visual reference to every **ISO** material colour code, denoting that these products are suitable for a range of applications or material types.

Features & *Benefits*

Spectrum™ Cutting Taps



Material

Manufactured from HSS-XS1 premium quality vanadium powder steel and HSCo for superior toughness and edge strength, to give a high resistance to wear and long tool life.

Surface Treatment

Special gold finish with bright flutes/thread, or steam tempering (blue) guarantee a smooth cutting action with less build up on the cutting edge. TiAlN-Top treatment on E615 & E616 long reach taps gives high toughness.

Flute Geometry

Available in spiral point for through holes and spiral flute for blind holes with 45° spiral angle. The three radii profile, with a constant rake angle all along the flute, is specially designed to give an optimum performance and chip evacuation in materials being threaded.

Thread Depth

Threading to depths of up to 3 x Diameter.

Thread Form

Available in Metric, Metric Fine, UNC, UNF, G and NPT thread forms.

Tool Holding

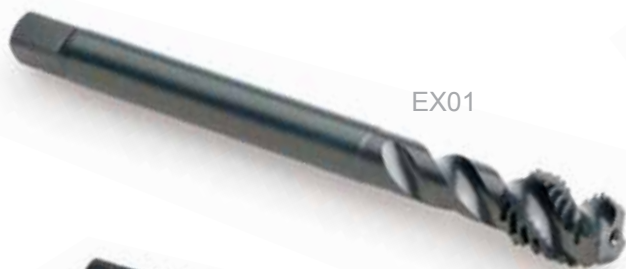
These tap ranges have been designed for use with a high quality floating tool holder. For synchronous tapping on CNC machines with a rigid tapping cycle, Dormer SynchroFlex® tool holders are recommended for a precisely defined minimum compensation in order to maximise machine performance. This is particularly important for larger sizes of spiral flute taps.

Standard

Available in a choice of DIN or ISO standard. E735 NPT have ANSI shank and square with DIN overall length.

Short Thread Length

The short thread length means low torque and better chip evacuation.



SynchroFlex® is a registered trademark of Tapmatic Corp., USA

Customer *Benefits*

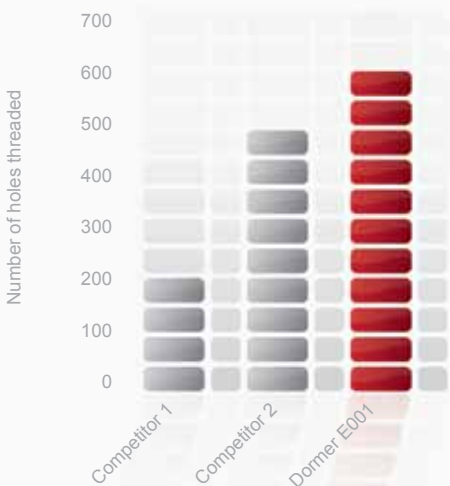


Spectrum™ Cutting Taps

- High performance and productivity in a wide range of materials for blind and through holes.
- Increased tool life as a result of an optimum combination of material and geometry, which gives low material adhesion.
- Narrow, regular chips and adequate flute space mean negligible chip congestion and therefore a continuous production process.
- Threading depths up to 3 x Ø.
- Long reach taps (E615 & E616) designed with long overall length and short thread length for maximum reach and efficient chip evacuation.
- Available to DIN, DIN/ANSI or ISO standard and in thread forms M, MF, UNC, UNF, G and NPT.

Test *Results*

Tool Life comparison, Dormer Spectrum™ E001 spiral point tap v competitor taps



The graph compares the tool life achieved (number of holes threaded) of each tap, threading through holes. At a cutting speed of 10m/min and to a depth of 1.5 x Ø, the Dormer Spectrum™ E001 spiral point tap threaded 28% more holes than its nearest competitor in 41CrMo4/SS2244 (AMG 1.5) Alloy Steel material.

Dormer Spectrum™ spiral point tap, EP01

Industry segment: Small part machining, European customer

Target: To increase tool life

Machine: CNC milling machine

Material: AMG 2.2, 304L

Dimension: M6

Threading depth: 12 mm

Drill diameter: 5 mm

Coolant: Emulsion 6%

Holder: Rigid tap holder

Hole type: Through holes

Cutting speed: 8m/min



Condition of the cutting edge of Dormer Spectrum™ EP01 after 400 threaded holes

Results

The cutting conditions used for the Dormer Spectrum™ EP01 and the competitor tap were identical. However, a tool life of 100 threaded holes was achieved with the competitor tap. After 400 threaded holes with the Dormer Spectrum™ EP01, tool life was still not reached.

Features & Benefits



Spectrum™ Forming Taps

Material

Manufactured from HSS-XS1 premium quality vanadium powder steel and HSCo for superior toughness and edge strength, to give a high resistance to wear and long tool life. The Solid Carbide substrate on T115 and T116 allows these taps to be operated at higher cutting speeds for increased productivity.

Surface Treatment

Titanium Nitride (TiN) coating reduces friction resulting in longer tool life; Chromium Nitride (CrN), with its lower tendency to built up edge, is ideal for softer steel and aluminium alloys. A bright finish option is also available.

Titanium Carbo Nitride (TiCN), with its properties of excellent wear resistance, complements the Solid Carbide substrate on the T115 and T116.

Geometry

The thread profile generates only low torque and gives a smooth surface on the finished thread and a long tool life. Oil grooves on the E096 and E308 facilitate the flow of coolant to the machining area, whilst internal coolant option on the E099 and E315 further increases tool life.

Threading Depth

Threading to depths of up to 3.5 x Diameter.

Thread Form

Available in Metric, Metric Fine, UNC, UNF and EGM thread forms.

Tool Holding

These tap ranges have been designed for use with a high quality floating tool holder. Dormer SynchroFlex® tool holders further ensure a precisely defined minimum compensation so that maximum performance of CNC machines can be fully exploited.

Standard

Available in a choice of DIN or ISO standard.



E301



E302



E308

Customer *Benefits*

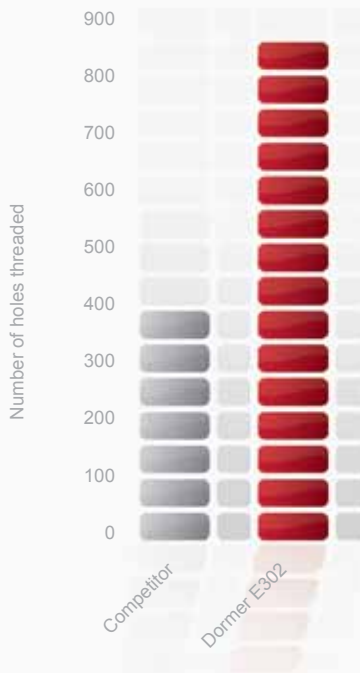


Spectrum™ Forming Taps

- High performance and productivity in a wide range of materials – same tap for threading both blind and through holes.
- Chip-free operation with strong thread for long tool life.
- Smooth surface finish in threaded hole.
- Highly stable design for a lower risk of tap breakage.
- Threading depths up to $3.5 \times \varnothing$.
- Forming tap options with internal coolant or oil grooves facilitate coolant flow to the machining area, for increased tool life.
- Also available in Solid Carbide, with or without internal coolant (T115 & T116), for applications where higher productivity is required.
- Available to DIN or ISO standard and in thread forms M, MF, UNC, UNF and EGM.

Test *Results*

Tool Life comparison, Dormer Spectrum™ E302 forming tap v competitor tap



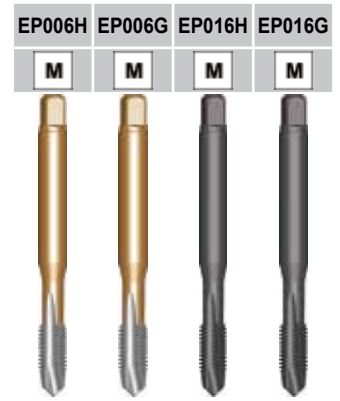
The graph shows that the Dormer Spectrum™ E302 TiN coated tap achieved in excess of double the number of holes threaded by a competitor's equivalent tap in AMG 1.2 Fe37, threading at $2 \times \varnothing$ at a cutting speed of 33 metres per minute.

Application *Material Groups*

- Excellent for Application
 - Good for Application
- (see pages 16 - 82)

Example

25 = Peripheral speed, metres/min. +/- 10%



DIN 371618 375x12	DIN 371618 375x12	DIN 371618 375x12	DIN 371618 375x12
6H	6G	6H	6G
2.5xD	2.5xD	2.5xD	2.5xD
Gold	Gold	ST	ST
HSS XS1	HSS XS1	HSS XS1	HSS XS1
B 3.5 - 5	B 3.5 - 5	B 3.5 - 5	B 3.5 - 5
M2 - M30	M3 - M20	M2 - M30	M3 - M20
NEW 2010.02	NEW 2010.02	NEW 2010.02	NEW 2010.02
16	17	18	19

Application Material Groups (AMG)		Hardness HB	Tensile Strength N/mm ²
1. Steel	1.1 Magnetic soft steel	<120	<400
	1.2 Structural Steel / case carburising steel	<200	<700
	1.3 Plain Carbon steel	<250	<850
	1.4 Alloy steel	<250	<850
	1.5 Alloy steel/ Hardened and tempered steel	>250 <350	>850 <1200
	1.6 Alloy steel/ Hardened and tempered steel	>350	>1200 <1620
	1.7 Alloy steel Hardened	49-55HRC	>1620
	1.8 Alloy steel Hardened	55-63HRC	<1960
2. Stainless Steel	2.1 Free machining Stainless Steel	<250	<850
	2.2 Austenitic	<320	<1100
	2.3 Ferritic + Austenitic, Martensitic	<300	<1000
	2.4 Precipitation Hardened	>320 <410	>1100 <1400
3. Cast Iron	3.1 Lamellar graphite	<150	<500
	3.2 Lamellar graphite	>150 <300	>500 <1000
	3.3 Nodular graphite/ Malleable Cast Iron	<200	<700
	3.4 Nodular graphite/ Malleable Cast Iron	>200 <300	>700 <1000
4. Titanium	4.1 Titanium, unalloyed	<200	<700
	4.2 Titanium, alloyed	<270	<900
	4.3 Titanium, alloyed	>270 <350	>900 <1250
5. Nickel	5.1 Nickel, unalloyed	<150	<500
	5.2 Nickel, alloyed	<270	<900
	5.3 Nickel, alloyed	>270 <350	>900 <1200
6. Copper	6.1 Copper	<100	<350
	6.2 β-Brass, Bronze	<200	<700
	6.3 α-Brass	<200	<700
	6.4 High Strength Bronze	<470	<1500
7. Aluminium Magnesium	7.1 Al, Mg, unalloyed	<100	<350
	7.2 Al alloyed, Si<0.5%	<150	<500
	7.3 Al alloyed, Si>0.5%<10%	<120	<400
	7.4 Al alloyed, Si>10% Whisker reinforced Al-alloys, Mg alloys	<120	<400
8. Synthetic Materials	8.1 Thermoplastics	---	---
	8.2 Thermosetting plastics	---	---
	8.3 Reinforced plastic materials	---	---
9. Hard Materials	9.1 Cermets (Metal-ceramics)	<550	<1700
10. Graphite	10.1 Standard graphite	---	<100



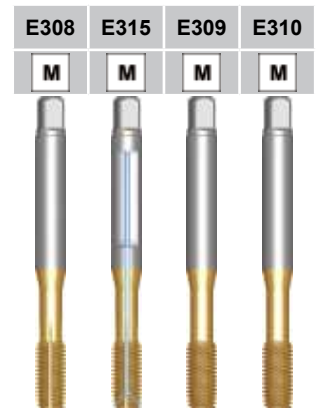
DIN 321618 321612	DIN 321618 321612	DIN 321618 321612	DIN 321618 321612	DIN 321618 321612	DIN 371	DIN 376	DIN 321618 321612	ISO 629	ISO 629	ISO 629	ISO 629	DIN 2174	DIN 2174	DIN 2174	DIN 2174		
6H	6H	6G	6H	6G	6H	6H	6H	6H	6H	6H	6H	6HX	6HX	6HX	6HX		
3xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	3xD	2.5xD	2.5xD	2.5xD	2.5xD	3xD	3xD	3xD	3xD		
TiN Top	Gold	Gold	ST	ST			TiN Top	Gold	ST	Gold	ST		TiN	TiN	CrN		
HSCo	HSS X51	HSS X51	HSS X51	HSS X51	HSCo	HSCo	HSCo	HSS X51	HSS X51	HSS X51	HSS X51	HSCo	HSCo	HSCo	HSCo		
B 3.5 - 5	C 2 - 3	C 2 - 3	C 2 - 3	C 2 - 3	C 2 - 3	C 2 - 3	C 2 - 3	B 3.5 - 5	B 3.5 - 5	C 2 - 3	C 2 - 3	C 2 - 3.5	C 2 - 3.5	E 1.5 - 2	C 2 - 3.5		
M3 - M20	M2 - M64	M3 - M20	M2 - M64	M3 - M20	M4 - M10	M12 - M24	M3 - M20	M1.6 - M24	M1.6 - M24	M2 - M24	M2 - M24	M1 - M24	M1 - M24	M3 - M10	M3 - M12		
NEW 2008.09	NEW 2010.02	NEW 2010.02	NEW 2010.02	NEW 2010.02			NEW 2008.09										
20	21	22	23	24	25	25	26	27	28	29	30	31	32	33	34	AMG	ISO
38	25	25	25	25	22	22	38	25	25	25	25	30	55	55	55	1.1	P
38	22	22	22	22	20	20	38	22	22	22	22	27	50	50	50	1.2	P
30	18	18	18	18	16	16	30	18	18	18	18	23	45	45	45	1.3	P
28	16	16	16	16	12	12	28	16	16	16	16	20	40	40	40	1.4	P
15	10	10	10	10	7	7	15	10	10	10	10	20	40	40	20	1.5	P
10							10	5	5							1.6	P
																1.7	H
																1.8	H
7			7	7			7		7		7	18	18	18		2.1	M
6			6	6			6		6		6	15	15	15		2.2	M
5			4	4			5		4		4	10	10			2.3	M
																2.4	M
20							20	15	15							3.1	K
16							16	8	8							3.2	K
24							24	15	15							3.3	K
16							16	8	8							3.4	K
7	10	10						10		10		35	35	35		4.1	S
7	5	5					7	5		5						4.2	S
																4.3	S
	12	12						12		12		20	20	20		5.1	S
7	5	5					7	5		5		8	8	8		5.2	S
																5.3	S
18							18	12				25	25	25		6.1	N
45							45	30								6.2	N
35							35	20				40	40	40		6.3	N
																6.4	N
28	16	16					28	16		16		22	40	40	40	7.1	N
	35	35						35		35		38	55	55	55	7.2	N
	20	20						20		20		22	40	40	40	7.3	N
	15	15						15		15			25	25	25	7.4	N
								30								8.1	O
																8.2	O
																8.3	O
																9.1	H
																10.1	O

Application *Material Groups*

- Excellent for Application
 - Good for Application
- (see pages 16 - 82)

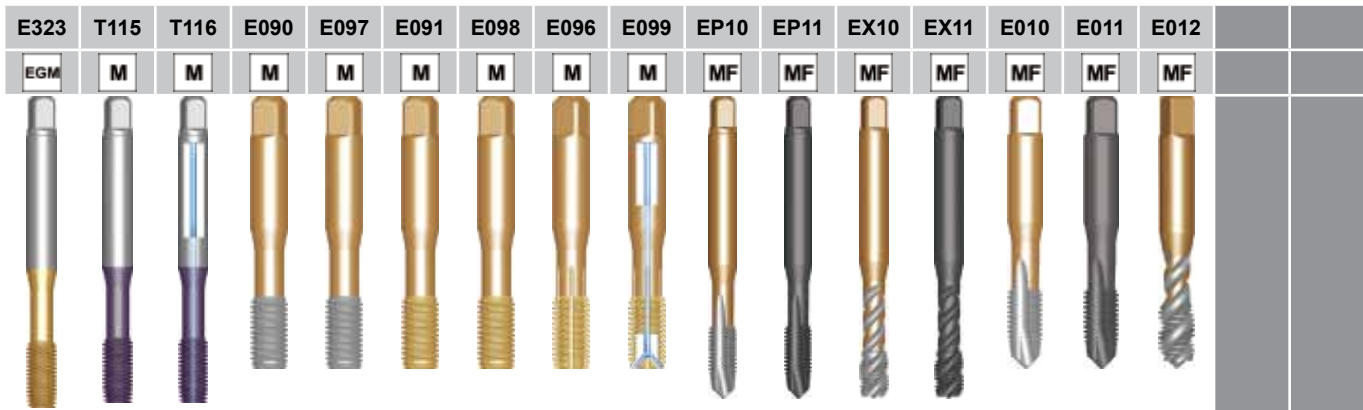
Example

55 = Peripheral speed, metres/min. +/- 10%



DIN 2174	DIN 2174	DIN 2174	DIN 2174
6HX	6HX	6GX	6GX
3.5xD	3.5xD	3xD	3xD
TIN	TIN	TIN	TIN
HSCo	HSCo	HSCo	HSCo
C 2-3.5	C 2-3.5	C 2-3.5	E 1.5-2
M3 - M24	M5 - M12	M3 - M12	M3 - M10

Application Material Groups (AMG)		Hardness HB	Tensile Strength N/mm ²	35	36	36	37
1. Steel	1.1 Magnetic soft steel	<120	<400	55	55	55	55
	1.2 Structural Steel / case carburising steel	<200	<700	50	50	50	50
	1.3 Plain Carbon steel	<250	<850	45	45	45	45
	1.4 Alloy steel	<250	<850	40	40	40	40
	1.5 Alloy steel/ Hardened and tempered steel	>250 <350	>850 <1200	20	20	20	20
	1.6 Alloy steel/ Hardened and tempered steel	>350	>1200 <1620				
	1.7 Alloy steel Hardened	49-55HRC	>1620				
	1.8 Alloy steel Hardened	55-63HRC	<1960				
2. Stainless Steel	2.1 Free machining Stainless Steel	<250	<850	18	18	18	18
	2.2 Austenitic	<320	<1100	15	15	15	15
	2.3 Ferritic + Austenitic, Martensitic	<300	<1000	10	10	10	10
	2.4 Precipitation Hardened	>320 <410	>1100 <1400				
3. Cast Iron	3.1 Lamellar graphite	<150	<500				
	3.2 Lamellar graphite	>150 <300	>500 <1000				
	3.3 Nodular graphite/ Malleable Cast Iron	<200	<700				
	3.4 Nodular graphite/ Malleable Cast Iron	>200 <300	>700 <1000				
4. Titanium	4.1 Titanium, unalloyed	<200	<700	35	35	35	35
	4.2 Titanium, alloyed	<270	<900				
	4.3 Titanium, alloyed	>270 <350	>900 <1250				
5. Nickel	5.1 Nickel, unalloyed	<150	<500	20	20	20	20
	5.2 Nickel, alloyed	<270	<900	8	8	8	8
	5.3 Nickel, alloyed	>270 <350	>900 <1200				
6. Copper	6.1 Copper	<100	<350	25	25	25	25
	6.2 β-Brass, Bronze	<200	<700				
	6.3 α-Brass	<200	<700	40	40	40	40
	6.4 High Strength Bronze	<470	<1500				
7. Aluminium Magnesium	7.1 Al, Mg, unalloyed	<100	<350	40	40	40	40
	7.2 Al alloyed, Si<0.5%	<150	<500	55	55	55	55
	7.3 Al alloyed, Si>0.5%<10%	<120	<400	40	40	40	40
	7.4 Al alloyed, Si>10% Whisker reinforced Al-alloys, Mg alloys	<120	<400	25	25	25	25
8. Synthetic Materials	8.1 Thermoplastics	---	---				
	8.2 Thermosetting plastics	---	---				
	8.3 Reinforced plastic materials	---	---				
9. Hard Materials	9.1 Cermets (Metal-ceramics)	<550	<1700				
10. Graphite	10.1 Standard graphite	---	<100				



DIN 40435	DIN 2174	DIN 2174	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	DIN 374	DIN 374	DIN 374	DIN 374	ISO 529	ISO 529	ISO 529		
6H mod.	6HX	6HX	6HX	6HX	6HX	6HX	6HX	6HX	6H	6H	6H	6H	6H	6H	6H		
3xD	3xD	3xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	3xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD		
TIN	TiCN	TiCN	Gold	CrN	TIN	TIN	TIN	TIN	Gold	ST	Gold	ST	Gold	ST	Gold		
HSCo	HM	HM	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1		
C 2-3.5	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	E 1.5-2	C 2-3	C 2-3	B 3.5-5	B 3.5-5	C 2-3	C 2-3	B 3.5-5	B 3.5-5	C 2-3		
M3 - M12	M3 - M10	M5 - M12	M2 - M16	M2 - M16	M2 - M16	M3 - M10	M3 - M16	M4 - M16	M4 - M30	M4 - M30	M4 - M30	M4 - M30	M4 - M24	M4 - M24	M4 - M22		
									NEW 2010.09	NEW 2010.09	NEW 2010.09	NEW 2010.09					
37	38	38	39	40	41	42	43	44	45	46	47	48	49	50	51	AMG	ISO
55	60	60	30	55	55	55	55	55	25	25	25	25	25	25	25	1.1	P
50	60	60	27	50	50	50	50	50	22	22	22	22	22	22	22	1.2	P
45	60	60	23	45	45	45	45	45	18	18	18	18	18	18	18	1.3	P
40	40	40	20	40	40	40	40	40	16	16	16	16	16	16	16	1.4	P
20	30	30			20	20	20	20	10	10	10	10	10	10	10	1.5	P
									5	5			5	5		1.6	P
																1.7	H
																1.8	H
18	25	25		18	18	18	18	18		7		7		7		2.1	M
15	25	25		15	15	15	15	15		6		6		6		2.2	M
10	25	25		10	10	10	10	10		4		4		4		2.3	M
	25	25														2.4	M
									15	15			15	15		3.1	K
									8	8			8	8		3.2	K
									15	15			15	15		3.3	K
									8	8			8	8		3.4	K
35				35	35	35	35	35	10		10		10		10	4.1	S
									5		5		5		5	4.2	S
																4.3	S
20	35	35		20	20	20	20	20	12		12		12		12	5.1	S
8	15	15		8	8	8	8	8	5		5		5		5	5.2	S
																5.3	S
25	40	40		25	25	25	25	25	12				12			6.1	N
									30				30			6.2	N
40	81	81		40	40	40	40	40	20				20			6.3	N
																6.4	N
40	70	70	22	40	40	40	40	40	16		16		16		16	7.1	N
55	80	80	38	55	55	55	55	55	35		35		35		35	7.2	N
40	80	80	22	40	40	40	40	40	20		20		20		20	7.3	N
25				25	25	25	25	25	15		15		15		15	7.4	N
									30				30		30	8.1	O
																8.2	O
																8.3	O
																9.1	H
																10.1	O



DIN 2194-1	DIN 2194-1	DIN 2194-1	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	ISO 529	DIN 2194-1	DIN 2194-1	DIN 2194-1	DIN 2194-1	ISO 529	ISO 529	ISO 529		
2B	2B	2B	2B	2B	2B	2B	2BX	2BX	2B	2B	2B	2B	2B	2B	2B		
2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD		
ST	Gold	ST	Gold	ST	Gold	ST		CrN	Gold	ST	Gold	ST	Gold	ST	Gold		
HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS	HSS	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSS XS1		
B 3.5-5	C 2-3	C 2-3	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	B 3.5-5	B 3.5-5	C 2-3
No.4 - 1"	No.4 - 1"	No.4 - 1"	No.2 - 1"	No.2 - 1"	No.2 - 1"	No.2 - 1"	No.4 - 3/8	No.4 - 3/8	No.8 - 1"	No.8 - 1"	No.8 - 1"	No.8 - 1"	No.8 - 1"	No.8 - 1"	No.8 - 1"	No.8 - 1"	
NEW 2010.09	NEW 2010.09	NEW 2010.09							NEW 2010.09	NEW 2010.09	NEW 2010.09	NEW 2010.09					
56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	AMG	ISO
25	25	25	25	25	25	25	30	55	25	25	25	25	25	25	25	1.1	P
22	22	22	22	22	22	22	27	50	22	22	22	22	22	22	22	1.2	P
18	18	18	18	18	18	18	23	45	18	18	18	18	18	18	18	1.3	P
16	16	16	16	16	16	16	20	40	16	16	16	16	16	16	16	1.4	P
10	10	10	10	10	10	10			10	10	10	10	10	10	10	1.5	P
5			5	5					5	5			5	5	5	1.6	P
																1.7	H
																1.8	H
7		7		7		7		18		7		7		7		2.1	M
6		6		6		6		15		6		6		6		2.2	M
4		4		4		4				4		4		4		2.3	M
																2.4	M
15			15	15					15	15			15	15		3.1	K
8			8	8					8	8			8	8		3.2	K
15			15	15					15	15			15	15		3.3	K
8			8	8					8	8			8	8		3.4	K
	10		10		10			35	10		10		10		10	4.1	S
	5		5		5				5		5		5		5	4.2	S
																4.3	S
	12		12		12			20	12		12		12		12	5.1	S
	5		5		5			8	5		5		5		5	5.2	S
																5.3	S
			12		12			25	12				12			6.1	N
			30		30				30				30			6.2	N
			20		20			40	20				20			6.3	N
																6.4	N
	16		16		16		22	40	16		16		16		16	7.1	N
	35		35		35		38	55	35		35		35		35	7.2	N
	20		20		20		22	40	20		20		20		20	7.3	N
	15		15		15			25	15		15		15		15	7.4	N
			30		30				30				30		30	8.1	O
																8.2	O
																8.3	O
																9.1	H
																10.1	O

Application *Material Groups*

- Excellent for Application
 - Good for Application
- (see pages 16 - 82)

Example

25 = Peripheral speed, metres/min. +/- 10%



ISO 529	ISO 529	DIN 5196	DIN 5196
2B	2BX	NORMAL	NORMAL
2.5xD	2.5xD	2.5xD	2.5xD
ST		Gold	ST
HSS X51	HSS	HSCo	HSCo
C 2-3	C 2-3	B 3.5-5	B 3.5-5
No.8 - 1"	No.10 - No.8	1/8 - 1"	1/8 - 1"
		NEW 2010.09	NEW 2010.09
72	73	74	75

Application Material Groups (AMG)		Hardness HB	Tensile Strength N/mm ²
1. Steel	1.1 Magnetic soft steel	<120	<400
	1.2 Structural Steel / case carburising steel	<200	<700
	1.3 Plain Carbon steel	<250	<850
	1.4 Alloy steel	<250	<850
	1.5 Alloy steel/ Hardened and tempered steel	>250 <350	>850 <1200
	1.6 Alloy steel/ Hardened and tempered steel	>350	>1200 <1620
	1.7 Alloy steel Hardened	49-55HRC	>1620
	1.8 Alloy steel Hardened	55-63HRC	<1960
2. Stainless Steel	2.1 Free machining Stainless Steel	<250	<850
	2.2 Austenitic	<320	<1100
	2.3 Ferritic + Austenitic, Martensitic	<300	<1000
	2.4 Precipitation Hardened	>320 <410	>1100 <1400
3. Cast Iron	3.1 Lamellar graphite	<150	<500
	3.2 Lamellar graphite	>150 <300	>500 <1000
	3.3 Nodular graphite/ Malleable Cast Iron	<200	<700
	3.4 Nodular graphite/ Malleable Cast Iron	>200 <300	>700 <1000
4. Titanium	4.1 Titanium, unalloyed	<200	<700
	4.2 Titanium, alloyed	<270	<900
	4.3 Titanium, alloyed	>270 <350	>900 <1250
5. Nickel	5.1 Nickel, unalloyed	<150	<500
	5.2 Nickel, alloyed	<270	<900
	5.3 Nickel, alloyed	>270 <350	>900 <1200
6. Copper	6.1 Copper	<100	<350
	6.2 β-Brass, Bronze	<200	<700
	6.3 α-Brass	<200	<700
	6.4 High Strength Bronze	<470	<1500
7. Aluminium Magnesium	7.1 Al, Mg, unalloyed	<100	<350
	7.2 Al alloyed, Si<0.5%	<150	<500
	7.3 Al alloyed, Si>0.5%<10%	<120	<400
	7.4 Al alloyed, Si>10% Whisker reinforced Al-alloys, Mg alloys	<120	<400
8. Synthetic Materials	8.1 Thermoplastics	---	---
	8.2 Thermosetting plastics	---	---
	8.3 Reinforced plastic materials	---	---
9. Hard Materials	9.1 Cermets (Metal-ceramics)	<550	<1700
10. Graphite	10.1 Standard graphite	---	<100



DIN 5156	DIN 5156	ISO	ISO	ISO	ISO	DIN ANSI		
NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL		
2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	1.5xD		
Gold	ST	Gold	ST	Gold	ST	ST		
HSCo	HSCo	HSS XS1	HSS XS1	HSS XS1	HSS XS1	HSCo		
C 2-3	C 2-3	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3		
1/8 - 1.1/2	1/8 - 1.1/2	1/8 - 3/4	1/8 - 3/4	1/8 - 3/4	1/8 - 3/4	1/16 - 1"		
NEW 2010.09	NEW 2010.09							
76	77	78	79	80	81	82	AMG	ISO
25	25	25	25	25	25		1.1	P
22	22	22	22	22	22		1.2	P
18	18	18	18	18	18		1.3	P
16	16	16	16	16	16	6	1.4	P
10	10	10	10	10	10	4	1.5	P
	5	5	5		5	3	1.6	P
							1.7	H
							1.8	H
	7		7		7		2.1	M
	6		6		6		2.2	M
	4		4		4		2.3	M
						3	2.4	M
		15	15			9	3.1	K
		8	8			4	3.2	K
		15	15				3.3	K
		8	8				3.4	K
10		10		10			4.1	S
5		5		5		3	4.2	S
						3	4.3	S
12		12		12			5.1	S
5		5		5		3	5.2	S
						3	5.3	S
		12					6.1	N
		30				15	6.2	N
		20				11	6.3	N
						4	6.4	N
16		16		16			7.1	N
35		35		35			7.2	N
20		20		20		16	7.3	N
15		15		15		12	7.4	N
30		30		30			8.1	O
							8.2	O
							8.3	O
							9.1	H
							10.1	O

EP006H

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

NEW

2010.02



EP006H



- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
2	0.40	50	6	2.8	2.1	5	3	1.6	9	EP00M2 ¹⁾
2.5	0.45	50	8	2.8	2.1	5	3	2.1	12.5	EP00M2.5 ¹⁾
3	0.50	56	9	3.5	2.7	6	3	2.5	18	EP00M3
3	0.50	56	10	2.2	1.8	4	3	2.5		EP00M3DIN376
3.5	0.60	56	11	4.0	3.0	6	3	2.9	20	EP00M3.5
4	0.70	63	12	4.5	3.4	6	3	3.3	21	EP00M4
4	0.70	63	12	2.8	2.1	5	3	3.3		EP00M4DIN376
4.5	0.75	70	13	6.0	4.9	8	3	3.8	25	EP00M4.5
5	0.80	70	13	6.0	4.9	8	3	4.2	25	EP00M5
5	0.80	70	13	3.5	2.7	6	3	4.2		EP00M5DIN376
6	1.00	80	15	6.0	4.9	8	3	5	30	EP00M6
6	1.00	80	15	4.5	3.4	6	3	5		EP00M6DIN376
7	1.00	80	15	7.0	5.5	8	3	6	30	EP00M7
8	1.25	90	18	8.0	6.2	9	3	6.8	35	EP00M8
8	1.25	90	18	6.0	4.9	8	3	6.8		EP00M8DIN376
10	1.50	100	20	10.0	8.0	11	3	8.5	39	EP00M10
10	1.50	100	20	7.0	5.5	8	3	8.5		EP00M10DIN376
12	1.75	110	23	9.0	7.0	10	3	10.3		EP00M12
14	2.00	110	25	11.0	9.0	12	3	12		EP00M14
16	2.00	110	25	12.0	9.0	12	3	14		EP00M16
18	2.50	125	30	14.0	11.0	14	4	15.5		EP00M18 ¹⁾
20	2.50	140	30	16.0	12.0	15	4	17.5		EP00M20 ¹⁾
22	2.50	140	34	18.0	14.5	17	4	19.5		EP00M22 ¹⁾
24	3.00	160	38	18.0	14.5	17	4	21		EP00M24 ¹⁾
27	3.00	160	38	20.0	16.0	19	4	24		EP00M27 ¹⁾
30	3.50	180	45	22.0	18.0	21	4	26.5		EP00M30 ¹⁾

¹⁾ HSCo

EP006G

- Machine Tap Spectrum™
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- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

EP006G



- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
3	0.50	56	9	3.5	2.7	6	3	2.5	18	EP00M36G
4	0.70	63	12	4.5	3.4	6	3	3.3	21	EP00M46G
5	0.80	70	13	6.0	4.9	8	3	4.2	25	EP00M56G
6	1.00	80	15	6.0	4.9	8	3	5	30	EP00M66G
8	1.25	90	18	8.0	6.2	9	3	6.8	35	EP00M86G
10	1.50	100	20	10.0	8.0	11	3	8.5	39	EP00M106G
12	1.75	110	23	9.0	7.0	10	3	10.3		EP00M126G
16	2.00	110	25	12.0	9.0	12	3	14		EP00M166G
20	2.50	140	30	16.0	12.0	15	4	17.5		EP00M206G ¹⁾

¹⁾ HSCo

EP016H

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
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- Spectrum™ Tarauds machine
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- Macho Máquina Spectrum™

NEW

2010.02



EP016H



- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3 3.1 3.2 3.3 3.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
2	0.40	50	6	2.8	2.1	5	3	1.6	9	EP01M2 ¹⁾
2.5	0.45	50	8	2.8	2.1	5	3	2.1	12.5	EP01M2.5 ¹⁾
3	0.50	56	9	3.5	2.7	6	3	2.5	18	EP01M3
3	0.50	56	10	2.2	1.8	4	3	2.5		EP01M3DIN376
3.5	0.60	56	11	4.0	3.0	6	3	2.9	20	EP01M3.5
4	0.70	63	12	4.5	3.4	6	3	3.3	21	EP01M4
4	0.70	63	12	2.8	2.1	5	3	3.3		EP01M4DIN376
4.5	0.75	70	13	6.0	4.9	8	3	3.8	25	EP01M4.5
5	0.80	70	13	6.0	4.9	8	3	4.2	25	EP01M5
5	0.80	70	13	3.5	2.7	6	3	4.2		EP01M5DIN376
6	1.00	80	15	6.0	4.9	8	3	5	30	EP01M6
6	1.00	80	15	4.5	3.4	6	3	5		EP01M6DIN376
7	1.00	80	15	7.0	5.5	8	3	6	30	EP01M7
8	1.25	90	18	8.0	6.2	9	3	6.8	35	EP01M8
8	1.25	90	18	6.0	4.9	8	3	6.8		EP01M8DIN376
10	1.50	100	20	10.0	8.0	11	3	8.5	39	EP01M10
10	1.50	100	20	7.0	5.5	8	3	8.5		EP01M10DIN376
12	1.75	110	23	9.0	7.0	10	3	10.3		EP01M12
14	2.00	110	25	11.0	9.0	12	3	12		EP01M14
16	2.00	110	25	12.0	9.0	12	3	14		EP01M16
18	2.50	125	30	14.0	11.0	14	4	15.5		EP01M18 ¹⁾
20	2.50	140	30	16.0	12.0	15	4	17.5		EP01M20 ¹⁾
22	2.50	140	34	18.0	14.5	17	4	19.5		EP01M22 ¹⁾
24	3.00	160	38	18.0	14.5	17	4	21		EP01M24 ¹⁾
27	3.00	160	38	20.0	16.0	19	4	24		EP01M27 ¹⁾
30	3.50	180	45	22.0	18.0	21	4	26.5		EP01M30 ¹⁾

¹⁾ HSCo

EP016G

- Machine Tap Spectrum™
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- Macho Máquina Spectrum™



DIN

EP016G



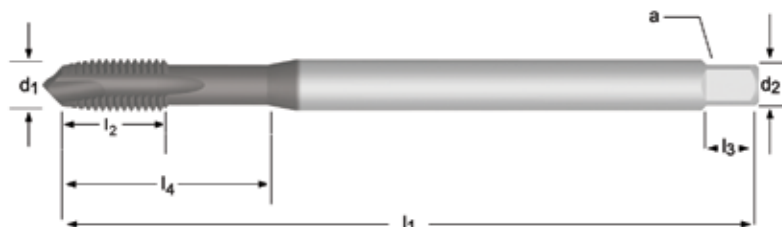
- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3 3.1 3.2 3.3 3.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
3	0.50	56	9	3.5	2.7	6	3	2.5	18	EP01M36G
4	0.70	63	12	4.5	3.4	6	3	3.3	21	EP01M46G
5	0.80	70	13	6.0	4.9	8	3	4.2	25	EP01M56G
6	1.00	80	15	6.0	4.9	8	3	5	30	EP01M66G
8	1.25	90	18	8.0	6.2	9	3	6.8	35	EP01M86G
10	1.50	100	20	10.0	8.0	11	3	8.5	39	EP01M106G
12	1.75	110	23	9.0	7.0	10	3	10.3		EP01M126G
16	2.00	110	25	12.0	9.0	12	3	14		EP01M166G
20	2.50	140	30	16.0	12.0	15	4	17.5		EP01M206G ¹⁾

¹⁾ HSCo

E616

- Machine Tap Spectrum™, Extra Long
- Spectrum™ Maschinen-Gewindebohrer, extra lang
- Spectrum™ Machinetappen, extra lang
- Spectrum™ Tarauds machine, Extra Long
- Spectrum™ Machos de máquina Extra largo
- Macho Máquina Spectrum™ Extra Longo



NEW

2008.09



E616

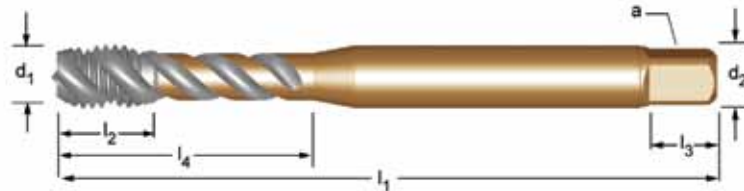


- 1.1 1.2 1.3 1.4 1.5 6.1 6.3
- 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 4.2 5.2 6.2 7.1

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
3	0.50	112	9	3.5	2.7	6	3	2.5	18	E616M3
4	0.70	112	12	4.5	3.4	6	3	3.3	21	E616M4
5	0.80	125	13	6.0	4.9	8	3	4.2	25	E616M5
6	1.00	125	15	6.0	4.9	8	3	5	30	E616M6
8	1.25	140	18	8.0	6.2	9	3	6.8	40	E616M8
10	1.50	160	20	10.0	8.0	11	3	8.5	50	E616M10
12	1.75	180	23	9.0	7.0	10	3	10.2		E616M12
14	2.00	180	25	11.0	9.0	12	3	12		E616M14
16	2.00	200	25	12.0	9.0	12	3	14		E616M16
20	2.50	224	30	16	12.0	15	4	17.5		E616M20

EX006H

- Machine Tap Spectrum™
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- Macho Máquina Spectrum™



DIN

EX006H



- 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4
- 4.1 4.2 5.1 5.2

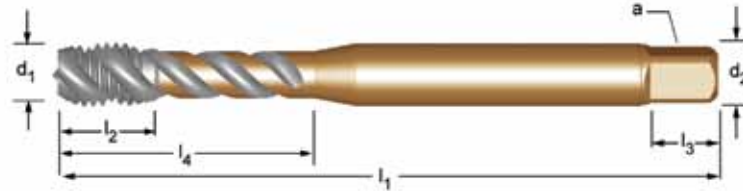
M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
2	0.40	45	4	2.8	2.1	5	3	1.6	9	EX00M2 ¹⁾
2.5	0.45	50	4	2.8	2.1	5	3	2.05	12.5	EX00M2.5 ¹⁾
3	0.50	56	6	3.5	2.7	6	3	2.5	18	EX00M3
3.5	0.60	56	7	4.0	3.0	6	3	2.9	20	EX00M3.5
4	0.70	63	7	4.5	3.4	6	3	3.3	21	EX00M4
5	0.80	70	8	6.0	4.9	8	3	4.2	25	EX00M5
6	1.00	80	10	6.0	4.9	8	3	5	31	EX00M6
6	1.00	80	10	4.5	3.4	6	3	5		EX00M6DIN376
7	1.00	80	10	7.0	5.5	8	3	6	31	EX00M7
8	1.25	90	12	8.0	6.2	9	3	6.8	35	EX00M8
8	1.25	90	13	6.0	4.9	8	3	6.8		EX00M8DIN376
10	1.50	100	15	10.0	8.0	11	3	8.5	39	EX00M10
10	1.50	100	15	7.0	5.5	8	3	8.5		EX00M10DIN376
12	1.75	110	16	9.0	7.0	10	3	10.3		EX00M12
14	2.00	110	20	11.0	9.0	12	3	12		EX00M14
16	2.00	110	20	12.0	9.0	12	4	14		EX00M16
18	2.50	125	25	14.0	11.0	14	4	15.5		EX00M18 ¹⁾
20	2.50	140	25	16.0	12.0	15	4	17.5		EX00M20 ¹⁾
22	2.50	140	25	18.0	14.5	17	4	19.5		EX00M22 ¹⁾
24	3.00	160	30	18.0	14.5	17	4	21		EX00M24 ¹⁾
27	3.00	160	30	20.0	16.0	19	4	24		EX00M27 ¹⁾
30	3.50	180	36	22.0	18.0	21	4	26.5		EX00M30 ¹⁾
33	3.50	180	36	25.0	20.0	23	4	29.5		EX00M33 ¹⁾
36	4.00	200	40	28.0	22.0	25	4	32		EX00M36 ¹⁾
39	4.00	200	40	32.0	24.0	27	4	35		EX00M39 ¹⁾
42	4.50	200	45	32.0	24.0	27	4	37.5		EX00M42 ¹⁾
48	5.00	250	50	36.0	29.0	32	4	43		EX00M48 ¹⁾
52	5.00	250	50	40.0	32.0	35	5	47		EX00M52 ¹⁾
56	5.50	250	55	40.0	32.0	35	5	50.5		EX00M56 ¹⁾
64	6.00	315	60	50.0	39.0	42	6	58		EX00M64 ¹⁾

¹⁾ HSCo

EX006G

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

DIN



NEW

2010.02



EX006G



- 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4
- 4.1 4.2 5.1 5.2

M	P mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
3	0.50	56	6	3.5	2.7	6	3	2.5	18	EX00M36G
4	0.70	63	7	4.5	3.4	6	3	3.3	21	EX00M46G
5	0.80	70	8	6.0	4.9	8	3	4.2	25	EX00M56G
6	1.00	80	10	6.0	4.9	8	3	5	31	EX00M66G
8	1.25	90	12	8.0	6.2	9	3	6.8	35	EX00M86G
10	1.50	100	15	10.0	8.0	11	3	8.5	39	EX00M106G
12	1.75	110	16	9.0	7.0	10	3	10.3		EX00M126G
14	2.00	110	20	11.0	9.0	12	3	12		EX00M146G
16	2.00	110	20	12.0	9.0	12	4	14		EX00M166G
20	2.50	140	25	16.0	12.0	15	4	17.5		EX00M206G ¹⁾

¹⁾ HSCo

EX016H

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

EX016H



- 1.1 1.2 1.3 1.4 1.5 2.1 2.2

- 2.3

M	P mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code	
2	0.40	45	4	2.8	2.1	5	3	1.6	9	EX01M2	¹⁾
2.5	0.45	50	4	2.8	2.1	5	3	2.05	12.5	EX01M2.5	¹⁾
3	0.50	56	6	3.5	2.7	6	3	2.5	18	EX01M3	
3.5	0.60	56	7	4.0	3.0	6	3	2.9	20	EX01M3.5	
4	0.70	63	7	4.5	3.4	6	3	3.3	21	EX01M4	
5	0.80	70	8	6.0	4.9	8	3	4.2	25	EX01M5	
6	1.00	80	10	6.0	4.9	8	3	5	31	EX01M6	
6	1.00	80	10	4.5	3.4	6	3	5		EX01M6DIN376	
7	1.00	80	10	7.0	5.5	8	3	6	31	EX01M7	
8	1.25	90	12	8.0	6.2	9	3	6.8	35	EX01M8	
8	1.25	90	13	6.0	4.9	8	3	6.8		EX01M8DIN376	
10	1.50	100	15	10.0	8.0	11	3	8.5	39	EX01M10	
10	1.50	100	15	7.0	5.5	8	3	8.5		EX01M10DIN376	
12	1.75	110	16	9.0	7.0	10	3	10.3		EX01M12	
14	2.00	110	20	11.0	9.0	12	3	12		EX01M14	
16	2.00	110	20	12.0	9.0	12	4	14		EX01M16	
18	2.50	125	25	14.0	11.0	14	4	15.5		EX01M18	¹⁾
20	2.50	140	25	16.0	12.0	15	4	17.5		EX01M20	¹⁾
22	2.50	140	25	18.0	14.5	17	4	19.5		EX01M22	¹⁾
24	3.00	160	30	18.0	14.5	17	4	21		EX01M24	¹⁾
27	3.00	160	30	20.0	16.0	19	4	24		EX01M27	¹⁾
30	3.50	180	36	22.0	18.0	21	4	26.5		EX01M30	¹⁾
33	3.50	180	36	25.0	20.0	23	4	29.5		EX01M33	¹⁾
36	4.00	200	40	28.0	22.0	25	4	32		EX01M36	¹⁾
39	4.00	200	40	32.0	24.0	27	4	35		EX01M39	¹⁾
42	4.50	200	45	32.0	24.0	27	4	37.5		EX01M42	¹⁾
48	5.00	250	50	36.0	29.0	32	4	43		EX01M48	¹⁾
52	5.00	250	50	40.0	32.0	35	5	47		EX01M52	¹⁾
56	5.50	250	55	40.0	32.0	35	5	50.5		EX01M56	¹⁾
64	6.00	315	60	50.0	39.0	42	6	58		EX01M64	¹⁾

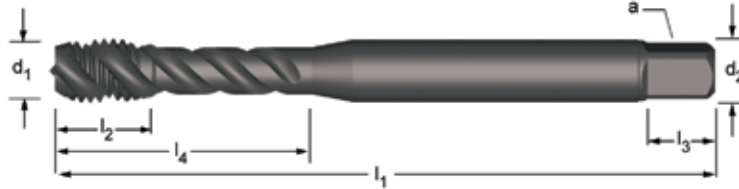
¹⁾ HSCo

EX016G

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

NEW

2010.02



EX016G



- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 2.3

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z	l_4 mm	e-Code
3	0.50	56	6	3.5	2.7	6	3	2.5	EX01M36G
4	0.70	63	7	4.5	3.4	6	3	3.3	EX01M46G
5	0.80	70	8	6.0	4.9	8	3	4.2	EX01M56G
6	1.00	80	10	6.0	4.9	8	3	5	EX01M66G
8	1.25	90	12	8.0	6.2	9	3	6.8	EX01M86G
10	1.50	100	15	10.0	8.0	11	3	8.5	EX01M106G
12	1.75	110	16	9.0	7.0	10	3	10.3	EX01M126G
14	2.00	110	20	11.0	9.0	12	3	12	EX01M146G
16	2.00	110	20	12.0	9.0	12	4	14	EX01M166G
20	2.50	140	25	16.0	12.0	15	4	17.5	EX01M206G ¹⁾

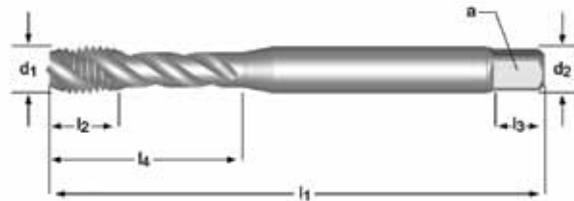
¹⁾ HSCo

E195 / E245

- Machine Tap, Spectrum™ Back Tapered
- Spectrum™ Tarauts machine

- Spectrum™ Maschinen-Gewinde-bohrer, abgeflacht
- Spectrum™ Machos de máquina con rosca acheflanada hacia atras

- Spectrum™ Machinetappen, achtergeslepen
- Macho Máquina Spectrum™, Saída Cônica



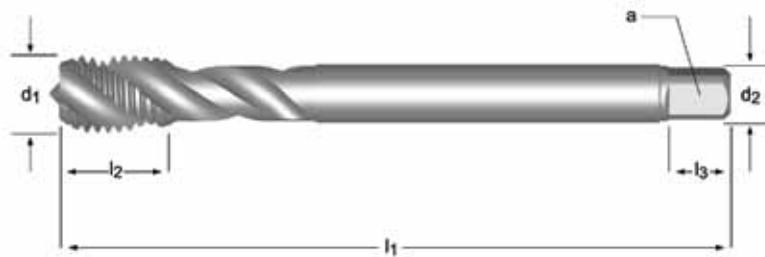
DIN

E195



- 1.3 1.4
- 1.1 1.2 1.5

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z	l_4 mm	e-Code
4	0.70	63	7	4.5	3.4	6	3	21	E195M4
5	0.80	70	8	6.0	4.9	8	3	25	E195M5
6	1.00	80	10	6.0	4.9	8	3	30	E195M6
8	1.25	90	13	8.0	6.2	9	3	35	E195M8
10	1.50	100	15	10.0	8.0	11	3	39	E195M10



E245



- 1.3 1.4
- 1.1 1.2 1.5

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z	e-Code
12	1.75	110	18	9	7.0	10	3	E245M12
14	2.00	110	20	11	9.0	12	3	E245M14
16	2.00	110	20	12	9.0	12	4	E245M16
18	2.50	125	25	14	11.0	14	4	E245M18
20	2.50	140	25	16	12.0	15	4	E245M20
22	2.50	140	25	18	14.5	17	4	E245M22
24	3.00	160	30	18	14.5	17	4	E245M24

E615

- Machine Tap Spectrum™, Extra Long
- Spectrum™ Maschinen-Gewindebohrer, extra lang
- Spectrum™ Machinetappen, extra lang
- Spectrum™ Tarauds machine, Extra Long
- Spectrum™ Machos de máquina Extra largo
- Macho Máquina Spectrum™ Extra Longo



NEW

2008.09

spectrum™

E615

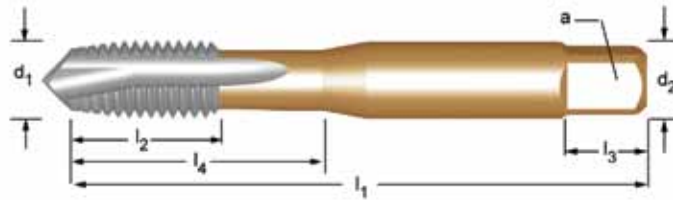


- 1.1 1.2 1.3 1.4 1.5 6.1 6.3
- 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 4.2 5.2 6.2 7.1

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z		l ₄ mm	e-Code
3	0.50	112	6	3.5	2.7	6	3	2.5	18	E615M3
4	0.70	112	7	4.5	3.4	6	3	3.3	21	E615M4
5	0.80	125	8	6.0	4.9	8	3	4.2	25	E615M5
6	1.00	125	10	6.0	4.9	8	3	5	30	E615M6
8	1.25	140	13	8.0	6.2	9	3	6.8	40	E615M8
10	1.50	160	15	10.0	8.0	11	3	8.5	50	E615M10
12	1.75	180	16	9.0	7.0	10	3	10.2		E615M12
14	2.00	180	20	11.0	9.0	12	3	12		E615M14
16	2.00	200	20	12.0	9.0	12	3	14		E615M16
20	2.50	224	25	16	12	15	4	17.5		E615M20

E000

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E000

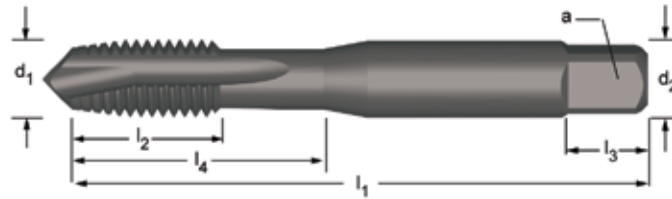


- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z		l_4 mm	e-Code
1.6	0.35	41	7	2.50	2.00	4	3	1.25	7	E000M1.6
2	0.40	41	8	2.50	2.00	4	3	1.6	8	E000M2
2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.5	E000M2.5
3	0.50	48	15	3.15	2.50	5	3	2.5	12.5	E000M3
3.5	0.60	50	16	3.55	2.80	5	3	2.9	14	E000M3.5
4	0.70	53	17	4.00	3.15	6	3	3.3	14	E000M4
5	0.80	58	11	5.00	4.00	7	3	4.2	22	E000M5
6	1.00	66	13	6.30	5.00	8	3	5.0	26	E000M6
7	1.00	66	13	7.10	5.60	8	3	6.0	26	E000M7
8	1.25	72	16	8.00	6.30	9	3	6.8	29	E000M8
10	1.50	80	18	10.00	8.00	11	3	8.5	34	E000M10
12	1.75	89	22	9.00	7.10	10	3	10.3		E000M12
14	2.00	95	24	11.20	9.00	12	3	12.0		E000M14
16	2.00	102	24	12.50	10.00	13	3	14.0		E000M16
18	2.50	112	29	14.00	11.20	14	4	15.5		E000M18
20	2.50	112	29	14.00	11.20	14	4	17.5		E000M20
22	2.50	118	29	16.00	12.50	16	4	19.5		E000M22
24	3.00	130	35	18.00	14.00	18	4	21.0		E000M24

E001

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauts machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E001

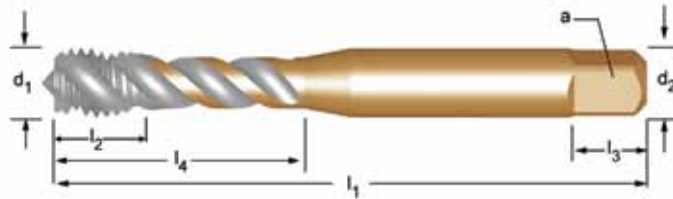


- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3 3.1 3.2 3.3 3.4

M	P	l_1	l_2	d_2	a	l_3	z	\leftrightarrow	l_4	e-Code
	mm	mm	mm	mm	mm	mm			mm	
1.6	0.35	41	7	2.50	2.00	4	3	1.25	7	E001M1.6
2	0.40	41	8	2.50	2.00	4	3	1.6	8	E001M2
2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.5	E001M2.5
3	0.50	48	15	3.15	2.50	5	3	2.5	12.5	E001M3
3.5	0.60	50	16	3.55	2.80	5	3	2.9	14	E001M3.5
4	0.70	53	17	4.00	3.15	6	3	3.3	14	E001M4
5	0.80	58	11	5.00	4.00	7	3	4.2	22	E001M5
6	1.00	66	13	6.30	5.00	8	3	5.0	26	E001M6
7	1.00	66	13	7.10	5.60	8	3	6.0	26	E001M7
8	1.25	72	16	8.00	6.30	9	3	6.8	29	E001M8
10	1.50	80	18	10.00	8.00	11	3	8.5	34	E001M10
12	1.75	89	22	9.00	7.10	10	3	10.3		E001M12
14	2.00	95	24	11.20	9.00	12	3	12.0		E001M14
16	2.00	102	24	12.50	10.00	13	3	14.0		E001M16
18	2.50	112	29	14.00	11.20	14	4	15.5		E001M18
20	2.50	112	29	14.00	11.20	14	4	17.5		E001M20
22	2.50	118	29	16.00	12.50	16	4	19.5		E001M22
24	3.00	130	35	18.00	14.00	18	4	21.0		E001M24

E002

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E002



- 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4
- 4.1 4.2 5.1 5.2

M	P	l_1	l_2	d_2	\square	l_3	z	\leftrightarrow	l_4	e-Code
	mm	mm	mm	mm	mm	mm			mm	
2	0.40	41	8	2.50	2.00	4	3	1.6	8	E002M2
2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.5	E002M2.5
3	0.50	48	6	3.15	2.50	5	3	2.5	12.5	E002M3
3.5	0.60	50	16	3.55	2.80	5	3	2.9	14	E002M3.5
4	0.70	53	7	4.00	3.15	6	3	3.3	19	E002M4
5	0.80	58	8	5.00	4.00	7	3	4.2	22	E002M5
6	1.00	66	10	6.30	5.00	8	3	5.0	27	E002M6
7	1.00	66	13	7.10	5.60	8	3	6	26	E002M7
8	1.25	72	12	8.00	6.30	9	3	6.8	31	E002M8
10	1.50	80	15	10.00	8.00	11	3	8.5	35	E002M10
12	1.75	89	16	9.00	7.10	10	3	10.3		E002M12
14	2.00	95	18	11.20	9.00	12	3	12.0		E002M14
16	2.00	102	18	12.50	10.00	13	4	14.0		E002M16
18	2.50	112	29	14.00	11.20	14	4	15.5		E002M18
20	2.50	112	29	14.00	11.20	14	4	17.5		E002M20
22	2.50	118	29	16.00	12.50	16	4	19.5		E002M22
24	3.00	130	35	18.00	14.00	18	4	21.0		E002M24

E003

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E003

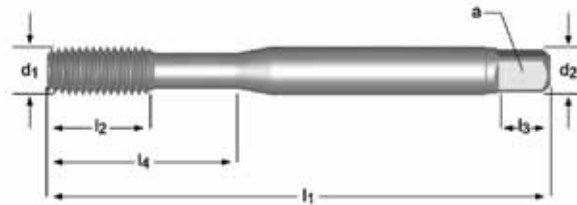


- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 2.3

M	P	l_1	l_2	d_2	\square	l_3	z	\leftrightarrow	l_4	e-Code
	mm	mm	mm	mm	a	mm		mm		
2	0.40	41	8	2.50	2.00	4	3	1.6	8	E003M2
2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.5	E003M2.5
3	0.50	48	6	3.15	2.50	5	3	2.5	12.5	E003M3
3.5	0.60	50	16	3.55	2.80	5	3	2.9	14	E003M3.5
4	0.70	53	7	4.00	3.15	6	3	3.3	19	E003M4
5	0.80	58	8	5.00	4.00	7	3	4.2	22	E003M5
6	1.00	66	10	6.30	5.00	8	3	5.0	27	E003M6
7	1.00	66	13	7.10	5.60	8	3	6	26	E003M7
8	1.25	72	12	8.00	6.30	9	3	6.8	31	E003M8
10	1.50	80	15	10.00	8.00	11	3	8.5	35	E003M10
12	1.75	89	16	9.00	7.10	10	3	10.3		E003M12
14	2.00	95	18	11.20	9.00	12	3	12.0		E003M14
16	2.00	102	18	12.50	10.00	13	4	14.0		E003M16
18	2.50	112	29	14.00	11.20	14	4	15.5		E003M18
20	2.50	112	29	14.00	11.20	14	4	17.5		E003M20
22	2.50	118	29	16.00	12.50	16	4	19.5		E003M22
24	3.00	130	35	18.00	14.00	18	4	21.0		E003M24

E301

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauts machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

E301



- 1.1 1.2 1.3 1.4 7.1 7.2 7.3

M	P mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
1	0.25	40	5.5	2.5	2.1	5	3	0.90	-	E301M1
1.2	0.25	40	5.5	2.5	2.1	5		1.10	-	E301M1.2
1.4	0.30	40	7	2.5	2.1	5		1.25	-	E301M1.4
1.6	0.35	40	8	2.5	2.1	5	3	1.45	-	E301M1.6
1.7	0.35	40	8	2.5	2.1	5		1.26	-	E301M1.7
1.8	0.35	40	8	2.5	2.1	5		1.65	-	E301M1.8
2	0.40	45	6	2.8	2.1	5	3	1.80	11	E301M2
2.2	0.45	45	7	2.8	2.1	5		2.00	12	E301M2.2
2.3	0.40	45	7	2.8	2.1	5		2.1	12	E301M2.3
2.5	0.45	50	8	2.8	2.1	5	3	2.30	14	E301M2.5
2.6	0.45	50	8	2.8	2.1	5		2.4	5	E301M2.6
3	0.50	56	9	3.5	2.7	6	4	2.80	18	E301M3
3.5	0.60	56	11	4.0	3.0	6	4	3.20	20	E301M3.5
4	0.70	63	12	4.5	3.4	6	5	3.70	21	E301M4
5	0.80	70	13	6.0	4.9	8	5	4.60	25	E301M5
6	1.00	80	15	6.0	4.9	8	5	5.50	30	E301M6
8	1.25	90	18	8.0	6.2	9	5	7.40	35	E301M8
10	1.50	100	20	10.0	8.0	11	5	9.30	39	E301M10
12	1.75	110	23	9.0	7.0	10	5	11.20	-	E301M12
16	2.00	110	25	12.0	9.0	12	8	15.10	-	E301M16
20	2.50	140	30	16.0	12.0	15	8	18.90	-	E301M20
24	3.00	160	36	18.0	14.5	17	8	22.7	-	E301M24

E302

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauts machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E302

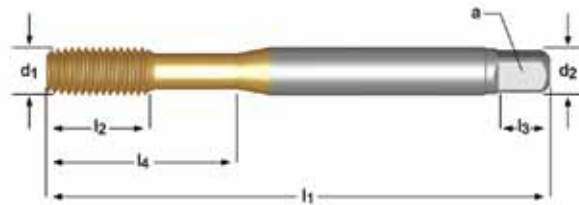


- 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3
- 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
1	0.25	40	5.5	2.5	2.1	5	3	0.90	-	E302M1
1.2	0.25	40	5.5	2.5	2.1	5	3	1.10	-	E302M1.2
1.4	0.30	40	7	2.5	2.1	5	3	1.25	-	E302M1.4
1.6	0.35	40	8	2.5	2.1	5	3	1.45	-	E302M1.6
1.7	0.35	40	8	2.5	2.1	5	3	1.55	-	E302M1.7
1.8	0.35	40	8	2.5	2.1	5	3	1.65	-	E302M1.8
2	0.40	45	6	2.8	2.1	5	3	1.80	11	E302M2
2.2	0.45	45	7	2.8	2.1	5	3	2.0	12	E302M2.2
2.3	0.40	45	7	2.8	2.1	5	3	2.1	12	E302m2.3
2.5	0.45	50	8	2.8	2.1	5	3	2.30	14	E302M2.5
2.6	0.45	50	8	2.8	2.1	5	3	2.4	5	E302M2.6
3	0.50	56	9	3.5	2.7	6	4	2.80	18	E302M3
3.5	0.60	56	11	4.0	3.0	6	4	3.20	20	E302M3.5
4	0.70	63	12	4.5	3.4	6	5	3.70	21	E302M4
5	0.80	70	13	6.0	4.9	8	5	4.60	25	E302M5
6	1.00	80	15	6.0	4.9	8	5	5.50	30	E302M6
8	1.25	90	18	8.0	6.2	9	5	7.40	35	E302M8
10	1.50	100	20	10.0	8.0	11	5	9.30	39	E302M10
12	1.75	110	23	9.0	7.0	10	5	11.20	-	E302M12
16	2.00	110	25	12.0	9.0	12	8	15.10	-	E302M16
20	2.50	140	30	16.0	12.0	15	8	18.9	-	E302M20
24	3.00	160	36	18.0	14.5	17	8	22.70	-	E302M24

E305

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

E305



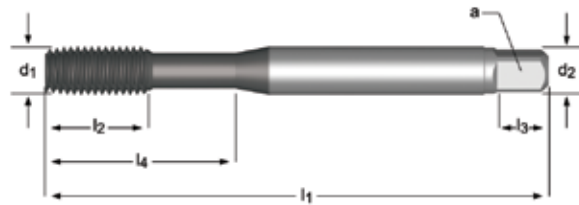
■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

• 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z		l_4 mm	e-Code
3	0.50	56	9	3.5	2.7	6	4	2.80	18	E305M3
4	0.70	63	12	4.5	3.4	6	5	3.70	21	E305M4
5	0.80	70	13	6.0	4.9	8	5	4.60	25	E305M5
6	1.00	80	15	6.0	4.9	8	5	5.50	30	E305M6
8	1.25	90	18	8.0	6.2	9	5	7.40	35	E305M8
10	1.50	100	20	10.0	8.0	11	5	9.30	39	E305M10

E306

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E306

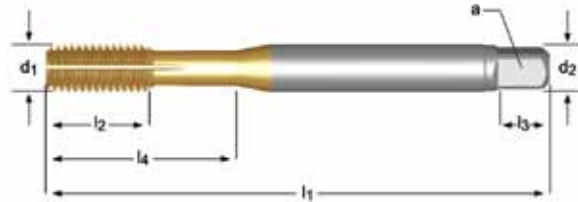


- 1.1 1.2 1.3 1.4 4.1 5.1 7.1 7.2 7.3
- 2.1 2.2 5.2 6.1 6.3 7.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
3	0.50	56	9	3.5	2.7	6	4	2.80	18	E306M3
4	0.70	63	12	4.5	3.4	6	5	3.70	21	E306M4
5	0.80	70	13	6.0	4.9	8	5	4.60	25	E306M5
6	1.00	80	15	6.0	4.9	8	5	5.50	30	E306M6
8	1.25	90	18	8.0	6.2	9	5	7.40	35	E306M8
10	1.50	100	20	10.0	8.0	11	5	9.30	39	E306M10
12	1.75	110	23	9.0	7.0	10	5	11.20	-	E306M12

E308

- Machine Tap, Spectrum™, Oil Grooves
- Spectrum™ Maschinen-Gewindeformer, Ölnoten
- Spectrum™ Machinetappen met smeergroeven
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina, con ranuras de lubricación
- Macho Máquina Spectrum™



DIN

E308



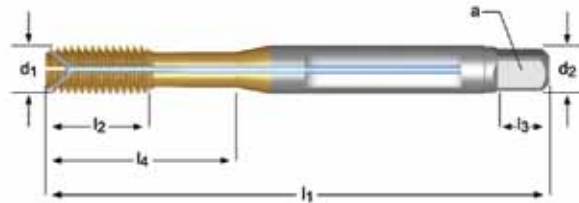
- 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3
- 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
3	0.50	56	9	3.5	2.7	6	4	2.80	18	E308M3
4	0.70	63	12	4.5	3.4	6	5	3.70	21	E308M4
5	0.80	70	13	6.0	4.9	8	5	4.60	25	E308M5
6	1.00	80	15	6.0	4.9	8	5	5.50	30	E308M6
7	1.00	80	15	7.0	5.5	8	5	6.50	30	E308M7
8	1.25	90	18	8.0	6.2	9	5	7.40	35	E308M8
10	1.50	100	20	10.0	8.0	11	5	9.30	39	E308M10
12	1.75	110	23	9.0	7.0	10	5	11.20	-	E308M12
14	2.00	110	25	11.0	9.0	12	6	13.00	-	E308M14
16	2.00	110	25	12.0	9.0	12	6	15.00	-	E308M16
20	2.50	140	30	16.0	12.0	15	-	18.90	-	E308M20
24	3.00	160	36	18.0	14.5	17	-	22.70	-	E308M24

E315 / E309

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

DIN



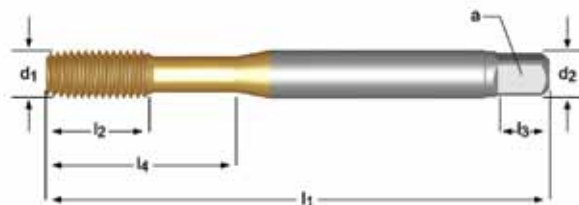
E315



■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

● 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z	l_4 mm	e-Code
5	0.80	70	13	6.0	4.9	8	5	4.60	E315M5
6	1.00	80	15	6.0	4.9	8	5	5.50	E315M6
8	1.25	90	18	8.0	6.2	9	5	7.40	E315M8
10	1.50	100	20	10.0	8.0	11	5	9.30	E315M10
12	1.75	110	23	9.0	7.0	10	5	11.20	E315M12



E309



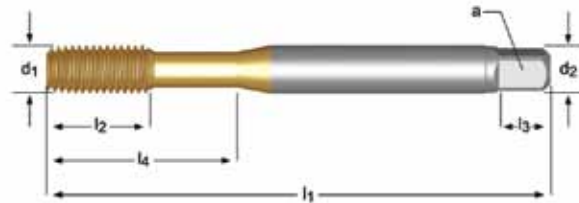
■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

● 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z	l_4 mm	e-Code
3	0.50	56	9	3.5	2.7	6	4	2.80	E309M3
3.5	0.60	56	11	4.0	3.0	6	4	3.20	E309M3.5
4	0.70	63	12	4.5	3.4	6	5	3.70	E309M4
5	0.80	70	13	6.0	4.9	8	5	4.60	E309M5
6	1.00	80	15	6.0	4.9	8	5	5.50	E309M6
8	1.25	90	18	8.0	6.2	9	5	7.40	E309M8
10	1.50	100	20	10.0	8.0	11	5	9.30	E309M10
12	1.75	110	23	9.0	7.0	10	5	11.20	E309M12

E310 / E323

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

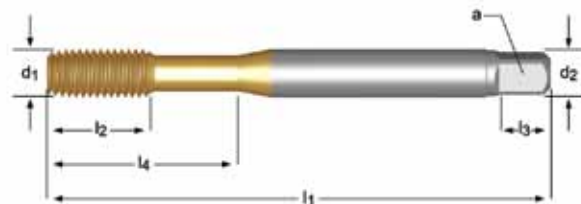
E310



■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

• 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
3	0.50	56	9	3.5	2.7	6	4	2.80	18	E310M3
4	0.70	63	12	4.5	3.4	6	5	3.70	21	E310M4
5	0.80	70	13	6.0	4.9	8	5	4.60	25	E310M5
6	1.00	80	15	6.0	4.9	8	5	5.50	30	E310M6
8	1.25	90	18	8.0	6.2	9	5	7.40	35	E310M8
10	1.50	100	20	10.0	8.0	11	5	9.30	39	E310M10



E323



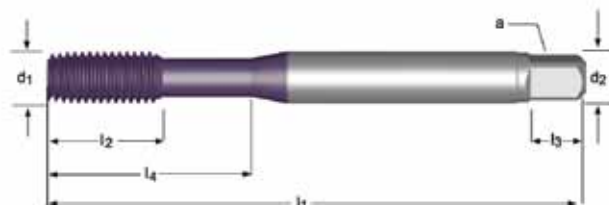
■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

• 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
3	0.50	63	12	4.5	3.4	6	4	3.40	21	E323M3
4	0.70	70	13	6.0	4.9	8	4	4.60	25	E323M4
5	0.80	80	15	6.0	4.9	8	4	5.70	30	E323M5
6	1.00	90	18	8.0	6.2	9	5	6.80	35	E323M6
8	1.25	100	20	10.0	8	11	5	9.10	39	E323M8
10	1.50	100	21	9.0	7	10	5	11.30	-	E323M10
12	1.75	110	25	11.0	9	12	6	13.50	-	E323M12

T115 / T116

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

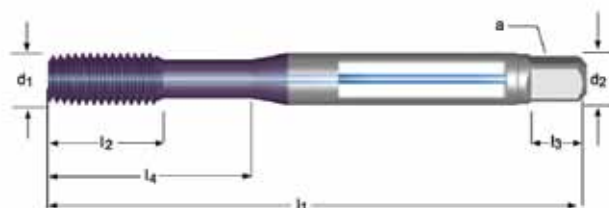


T115



- 1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 5.1 7.1 7.2 7.3
- 2.4 5.2 6.1 6.3

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm		l_4 mm	e-Code
3	0.50	56	10	3.5	2.7	6	2.8		T115M3 ²⁾
4	0.70	63	13	4.5	3.4	6	3.7		T115M4 ²⁾
5	0.80	70	16	6	4.9	8	4.6		T115M5 ²⁾
6	1.00	80	19	6	4.9	8	5.5	30	T115M6
8	1.25	90	22	8	6.2	9	7.4	35	T115M8
10	1.50	100	24	10	8.0	11	9.3	39	T115M10



T116



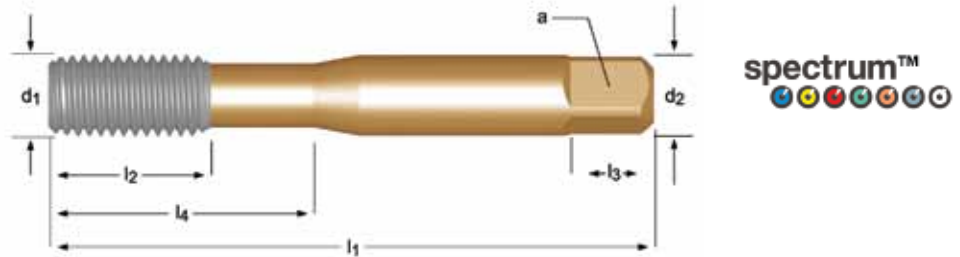
- 1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 5.1 7.1 7.2 7.3
- 2.4 5.2 6.1 6.3

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm		l_4 mm	e-Code
5	0.80	70	16	6	4.9	8	4.6		T116M5
6	1.00	80	19	6	4.9	8	5.5	30	T116M6
8	1.25	90	22	8	6.2	9	7.4	35	T116M8
10	1.50	100	24	10	8.0	11	9.3	39	T116M10
12	1.75	110	23	9	7.0	10	11.2		T116M12

²⁾ Without neck / ohne "Hals" / Zonder verjonging / sans détalonnage / Sin Desahogo / Sem Pescoço

E090

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E090



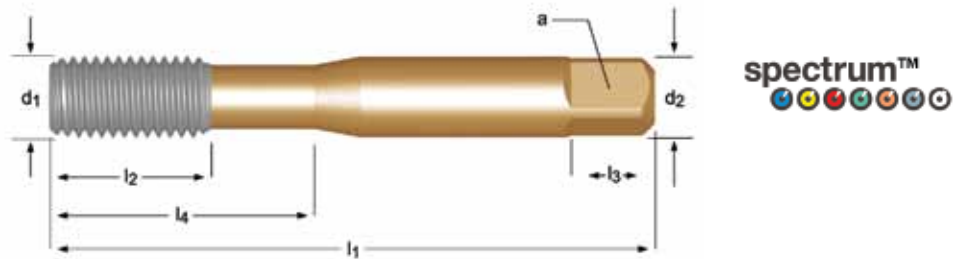
- 1.1 1.2 1.3 1.4 7.1 7.2 7.3

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	l_4 mm	e-Code
2	0.40	41	8	2.50	2.00	4	8	E090M2 ¹⁾
2.5	0.45	44.5	9.5	2.80	2.24	5	9.5	E090M2.5 ¹⁾
3	0.50	48	12.5	3.15	2.50	5	12.5	E090M3
3.5	0.60	50	14	3.55	2.80	5	14	E090M3.5
4	0.70	53	14	4.00	3.15	6	14	E090M4
5	0.80	58	11	5.00	4.00	7	22	E090M5
6	1.00	66	13	6.30	5.00	8	26	E090M6
8	1.25	72.0	16	8.00	6.30	9	29	E090M8
10	1.50	80.0	18	10.00	8.00	11	34	E090M10
12	1.75	89.0	22	9.00	7.10	10	-	E090M12
16	2.00	102.0	24	12.50	10.00	13	-	E090M16

¹⁾ HSCo

E097

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E097



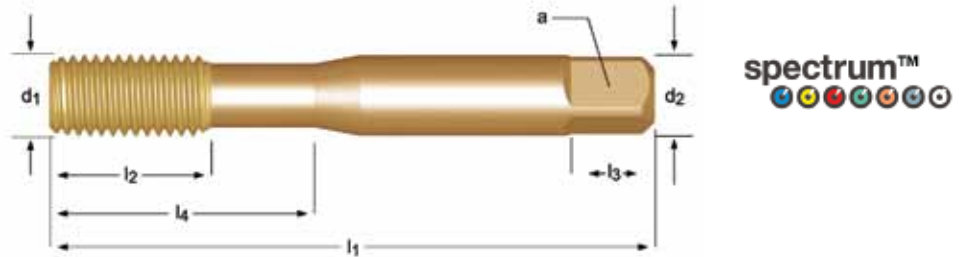
- 1.1 1.2 1.3 4.1 5.1 7.1 7.2 7.3
- 1.4 2.1 2.2 5.2 6.1 6.3 7.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	↔	l ₄ mm	e-Code
2	0.40	41	8	2.50	2.00	4	1.8	8	E097M2 ¹⁾
2.5	0.45	44.5	9.5	2.80	2.24	5	2.3	9.5	E097M2.5 ¹⁾
3	0.50	48	12.5	3.15	2.50	5	2.8	12.5	E097M3
4	0.70	53	14	4.00	3.15	6	3.7	14	E097M4
5	0.80	58	11	5.00	4.00	7	4.6	22	E097M5
6	1.00	66	13	6.30	5.00	8	5.5	26	E097M6
8	1.25	72.0	16	8.00	6.30	9	7.4	29	E097M8
10	1.50	80.0	18	10.00	8.00	11	9.3	34	E097M10
12	1.75	89.0	22	9.00	7.10	10	11.2		E097M12
16	2.00	102.0	24	12.50	10.00	13	15		E097M16

¹⁾ HSCo

E091

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E091



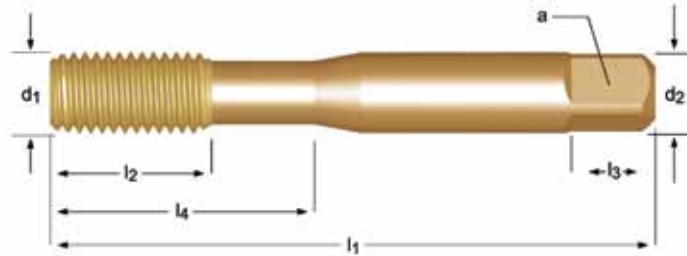
- 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3
- 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	↔	l ₄ mm	e-Code
2	0.40	41	8	2.50	2.00	4	1.8	8	E091M2 ¹⁾
2.5	0.45	44.5	9.5	2.80	2.24	5	2.3	9.5	E091M2.5 ¹⁾
3	0.50	48	12.5	3.15	2.50	5	2.8	12.5	E091M3
3.5	0.60	50	14	3.55	2.80	5	3.2	14	E091M3.5
4	0.70	53	14	4.00	3.15	6	3.7	14	E091M4
5	0.80	58	11	5.00	4.00	7	4.6	22	E091M5
6	1.00	66	13	6.30	5.00	8	5.5	26	E091M6
8	1.25	72	16	8.00	6.30	9	7.4	29	E091M8
10	1.50	80	18	10.00	8.00	11	9.3	34	E091M10
12	1.75	89	22	9.00	7.10	10	11.2		E091M12
16	2.00	102	24	12.50	10.00	13	15		E091M16

¹⁾ HSCo

E098

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E098



■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

• 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm		l_4 mm	e-Code
3	0.50	48	12.5	3.15	2.50	5	2.8	12.5	E098M3
4	0.70	53	14	4.00	3.15	6	3.7	14	E098M4
5	0.80	58	11	5.00	4.00	7	4.6	22	E098M5
6	1.00	66	13	6.30	5.00	8	5.5	26	E098M6
8	1.25	72	16	8.00	6.30	9	7.4	29	E098M8
10	1.50	80	18	10.00	8.00	11	9.3	34	E098M10

ISO

E096

- Machine Tap, Spectrum™, Oil Grooves
- Spectrum™ Maschinen-Gewindeformer, Ölnoten
- Spectrum™ Machinetappen met smeergroeven
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina, con ranuras de lubricación
- Macho Máquina Spectrum™



ISO

E096



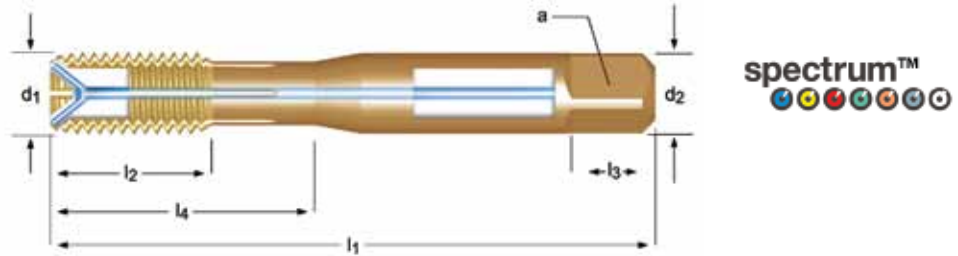
■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

● 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	l_4 mm	e-Code
3	0.50	48	12.5	3.15	2.50	5	12.5	E096M3
4	0.70	53	14	4.00	3.15	6	14	E096M4
5	0.80	58	11	5.00	4.00	7	22	E096M5
6	1.00	66	13	6.30	5.00	8	26	E096M6
8	1.25	72	16	8.00	6.30	9	29	E096M8
10	1.50	80	18	10.00	8.00	11	34	E096M10
12	1.75	89	22	9.00	7.10	10	11.2	E096M12
16	2.00	102	24	12.50	10.00	13	15	E096M16

E099

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E099



■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

• 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

M	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	l_4 mm	e-Code
4	0.70	53	14	4.00	3.15	6	14	E099M4
5	0.80	58	11	5.00	4.00	7	22	E099M5
6	1.00	66	13	6.30	5.00	8	26	E099M6
8	1.25	72	16	8.00	6.30	9	29	E099M8
10	1.50	80	18	10.00	8.00	11	34	E099M10
12	1.75	89	22	9.00	7.10	10	11.2	E099M12
16	2.00	102	24	12.50	10.00	13	15	E099M16

EP10

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



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EP10



- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

MF	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z	\leftrightarrow	e-Code
4	0.50	63	12	2.8	2.1	5	3	3.5	EP10M4X.5
5	0.50	70	13	3.5	2.7	6	3	4.5	EP10M5X.5
6	0.75	80	15	4.5	3.4	6	3	5.3	EP10M6X.75
8	0.75	80	15	6.0	4.9	8	3	7.3	EP10M8X.75
8	1.00	90	18	6.0	4.9	8	3	7	EP10M8X1.0
10	0.75	90	18	7.0	5.5	8	3	9.3	EP10M10X.75
10	1.00	90	18	7.0	5.5	8	3	9	EP10M10X1.0
10	1.25	100	20	7.0	5.5	8	3	8.8	EP10M10X1.25
12	1.00	100	21	9.0	7.0	10	3	11	EP10M12X1.0
12	1.25	100	21	9.0	7.0	10	3	10.8	EP10M12X1.25
12	1.50	100	21	9.0	7.0	10	3	10.5	EP10M12X1.5
14	1.00	100	21	11.0	9.0	12	3	13	EP10M14X1.0
14	1.25	100	21	11.0	9.0	12	3	13	EP10M14X1.25
14	1.50	100	21	11.0	9.0	12	3	12.5	EP10M14X1.5
16	1.00	100	21	12.0	9.0	12	3	15	EP10M16X1.0
16	1.50	100	21	12.0	9.0	12	3	14.5	EP10M16X1.5
18	1.00	110	24	14.0	11.0	14	4	17	EP10M18X1.0
18	1.50	110	24	14.0	11.0	14	4	16.5	EP10M18X1.5 ¹⁾
20	1.00	125	24	16.0	12.0	15	4	19	EP10M20X1.0 ¹⁾
20	1.50	125	24	16.0	12.0	15	4	18.5	EP10M20X1.5 ¹⁾
22	1.50	125	25	18.0	14.5	17	4	20.5	EP10M22X1.5 ¹⁾
24	1.50	140	28	18.0	14.5	17	4	22.5	EP10M24X1.5 ¹⁾
24	2.00	140	28	18.0	14.5	17	4	22	EP10M24X2.0 ¹⁾
25	1.50	140	28	18.0	14.5	17	4	23.5	EP10M25X1.5 ¹⁾
26	1.50	140	28	18.0	14.5	17	4	24.5	EP10M26X1.5 ¹⁾
27	1.50	140	28	20.0	16.0	19	4	25.5	EP10M27X1.5 ¹⁾
27	2.00	140	28	20.0	16.0	19	4	25	EP10M27X2.0 ¹⁾
28	1.50	140	28	20.0	16.0	19	4	26.5	EP10M28X1.5 ¹⁾
30	1.50	150	28	22.0	18.0	21	4	28.5	EP10M30X1.5 ¹⁾
30	2.00	150	28	22.0	18.0	21	4	28	EP10M30X2.0 ¹⁾

¹⁾ HSCo

EP11

- Machine Tap Spectrum™
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spectrum™



EP11



■ 1.1 1.2 1.3 1.4 1.5 2.1 2.2

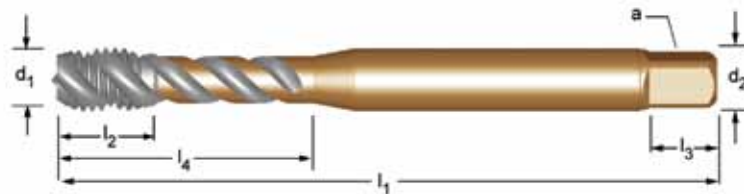
● 1.6 2.3 3.1 3.2 3.3 3.4

MF	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z	\leftrightarrow	e-Code
4	0.50	63	12	2.8	2.1	5	3	3.5	EP11M4X.5
5	0.50	70	13	3.5	2.7	6	3	4.5	EP11M5X.5
6	0.75	80	15	4.5	3.4	6	3	5.3	EP11M6X.75
8	0.75	80	15	6.0	4.9	8	3	7.3	EP11M8X.75
8	1.00	90	18	6.0	4.9	8	3	7	EP11M8X1.0
10	0.75	90	18	7.0	5.5	8	3	9.3	EP11M10X.75
10	1.00	90	18	7.0	5.5	8	3	9	EP11M10X1.0
10	1.25	100	20	7.0	5.5	8	3	8.8	EP11M10X1.25
12	1.00	100	21	9.0	7.0	10	3	11	EP11M12X1.0
12	1.25	100	21	9.0	7.0	10	3	10.8	EP11M12X1.25
12	1.50	100	21	9.0	7.0	10	3	10.5	EP11M12X1.5
14	1.00	100	21	11.0	9.0	12	3	13	EP11M14X1.0
14	1.25	100	21	11.0	9.0	12	3	13	EP11M14X1.25
14	1.50	100	21	11.0	9.0	12	3	12.5	EP11M14X1.5
16	1.00	100	21	12.0	9.0	12	3	15	EP11M16X1.0
16	1.50	100	21	12.0	9.0	12	3	14.5	EP11M16X1.5
18	1.00	110	24	14.0	11.0	14	4	17	EP11M18X1.0
18	1.50	110	24	14.0	11.0	14	4	16.5	EP11M18X1.5 ¹⁾
20	1.00	125	24	16.0	12.0	15	4	19	EP11M20X1.0 ¹⁾
20	1.50	125	24	16.0	12.0	15	4	18.5	EP11M20X1.5 ¹⁾
22	1.50	125	25	18.0	14.5	17	4	20.5	EP11M22X1.5 ¹⁾
24	1.50	140	28	18.0	14.5	17	4	22.5	EP11M24X1.5 ¹⁾
24	2.00	140	28	18.0	14.5	17	4	22	EP11M24X2.0 ¹⁾
25	1.50	140	28	18.0	14.5	17	4	23.5	EP11M25X1.5 ¹⁾
26	1.50	140	28	18.0	14.5	17	4	24.5	EP11M26X1.5 ¹⁾
27	1.50	140	28	20.0	16.0	19	4	25.5	EP11M27X1.5 ¹⁾
27	2.00	140	28	20.0	16.0	19	4	25	EP11M27X2.0 ¹⁾
28	1.50	140	28	20.0	16.0	19	4	26.5	EP11M28X1.5 ¹⁾
30	1.50	150	28	22.0	18.0	21	4	28.5	EP11M30X1.5 ¹⁾
30	2.00	150	28	22.0	18.0	21	4	28	EP11M30X2.0 ¹⁾

¹⁾ HSCo

EX10

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



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EX10



■ 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4

● 4.1 4.2 5.1 5.2

MF	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z		e-Code
4	0.50	63	7	2.8	2.1	5	3	3.5	EX10M4X.50
5	0.50	70	8	3.5	2.7	6	3	4.5	EX10M5X.50
6	0.75	80	10	4.5	3.4	6	3	5.3	EX10M6X.75
8	0.75	80	13	6.0	4.9	8	3	7.3	EX10M8X.75
8	1.00	90	13	6.0	4.9	8	3	7	EX10M8X1.0
10	0.75	90	13	7.0	5.5	8	3	9.3	EX10M10X.75
10	1.00	90	13	7.0	5.5	8	3	9	EX10M10X1.0
10	1.25	100	15	7.0	5.5	8	3	8.8	EX10M10X1.25
12	1.00	100	15	9.0	7.0	10	3	11	EX10M12X1.0
12	1.25	100	15	9.0	7.0	10	3	10.8	EX10M12X1.25
12	1.50	100	15	9.0	7.0	10	3	10.5	EX10M12X1.5
14	1.00	100	15	11.0	9.0	12	3	13	EX10M14X1.0
14	1.25	100	15	11.0	9.0	12	3	12.8	EX10M14X1.25
14	1.50	100	15	11.0	9.0	12	3	12.5	EX10M14X1.5
16	1.00	100	15	12.0	9.0	12	4	15	EX10M16X1.0
16	1.50	100	15	12.0	9.0	12	4	14.5	EX10M16X1.5
18	1.00	110	17	14.0	11.0	14	4	17	EX10M18X1.0 ¹⁾
18	1.50	110	17	14.0	11.0	14	4	16.5	EX10M18X1.5 ¹⁾
20	1.00	125	17	16.0	12.0	15	4	19	EX10M20X1.0 ¹⁾
20	1.50	125	17	16.0	12.0	15	4	18.5	EX10M20X1.5 ¹⁾
22	1.50	125	17	18.0	14.5	17	4	20.5	EX10M22X1.5 ¹⁾
24	1.50	140	20	18.0	14.5	17	4	22.5	EX10M24X1.5 ¹⁾
24	2.00	140	20	18.0	14.5	17	4	22	EX10M24X2.0 ¹⁾
25	1.50	140	20	18.0	14.5	17	4	23.5	EX10M25X1.5 ¹⁾
26	1.50	140	20	18.0	14.5	17	4	24.5	EX10M26X1.5 ¹⁾
27	1.50	140	20	20.0	16.0	19	4	25.5	EX10M27X1.5 ¹⁾
27	2.00	140	20	20.0	16.0	19	4	25	EX10M27X2.0 ¹⁾
28	1.50	140	20	20.0	16.0	19	4	26.5	EX10M28X1.5 ¹⁾
30	1.50	150	20	22.0	18.0	21	4	28.5	EX10M30X1.5 ¹⁾
30	2.00	150	20	22.0	18.0	21	4	28	EX10M30X2.0 ¹⁾

¹⁾ HSCo

EX11

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

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2010.09



EX11



- 1.1 1.2 1.3 1.4 1.5 2.1 2.2

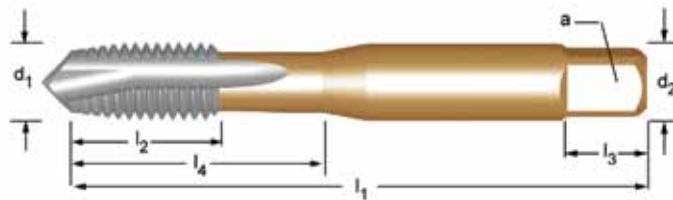
- 2.3

MF	P mm	l_1 mm	l_2 mm	d_2 \varnothing mm	a mm	l_3 mm	z	\leftrightarrow	e-Code
4	0.50	63	7	2.8	2.1	5	3	3.5	EX11M4X.50
5	0.50	70	8	3.5	2.7	6	3	4.5	EX11M5X.50
6	0.75	80	10	4.5	3.4	6	3	5.3	EX11M6X.75
8	0.75	80	13	6.0	4.9	8	3	7.3	EX11M8X.75
8	1.00	90	13	6.0	4.9	8	3	7	EX11M8X1.0
10	0.75	90	13	7.0	5.5	8	3	9.3	EX11M10X.75
10	1.00	90	13	7.0	5.5	8	3	9	EX11M10X1.0
10	1.25	100	15	7.0	5.5	8	3	8.8	EX11M10X1.25
12	1.00	100	15	9.0	7.0	10	3	11	EX11M12X1.0
12	1.25	100	15	9.0	7.0	10	3	10.8	EX11M12X1.25
12	1.50	100	15	9.0	7.0	10	3	10.5	EX11M12X1.5
14	1.00	100	15	11.0	9.0	12	3	13	EX11M14X1.0
14	1.25	100	15	11.0	9.0	12	3	12.8	EX11M14X1.25
14	1.50	100	15	11.0	9.0	12	3	12.5	EX11M14X1.5
16	1.00	100	15	12.0	9.0	12	4	15	EX11M16X1.0
16	1.50	100	15	12.0	9.0	12	4	14.5	EX11M16X1.5
18	1.00	110	17	14.0	11.0	14	4	17	EX11M18X1.0 ¹⁾
18	1.50	110	17	14.0	11.0	14	4	16.5	EX11M18X1.5 ¹⁾
20	1.00	125	17	16.0	12.0	15	4	19	EX11M20X1.0 ¹⁾
20	1.50	125	17	16.0	12.0	15	4	18.5	EX11M20X1.5 ¹⁾
22	1.50	125	17	18.0	14.5	17	4	20.5	EX11M22X1.5 ¹⁾
24	1.50	140	20	18.0	14.5	17	4	22.5	EX11M24X1.5 ¹⁾
24	2.00	140	20	18.0	14.5	17	4	22	EX11M24X2.0 ¹⁾
25	1.50	140	20	18.0	14.5	17	4	23.5	EX11M25X1.5 ¹⁾
26	1.50	140	20	18.0	14.5	17	4	24.5	EX11M26X1.5 ¹⁾
27	1.50	140	20	20.0	16.0	19	4	25.5	EX11M27X1.5 ¹⁾
27	2.00	140	20	20.0	16.0	19	4	25	EX11M27X2.0 ¹⁾
28	1.50	140	20	20.0	16.0	19	4	26.5	EX11M28X1.5 ¹⁾
30	1.50	150	20	22.0	18.0	21	4	28.5	EX11M30X1.5 ¹⁾
30	2.00	150	20	22.0	18.0	21	4	28	EX11M30X2.0 ¹⁾

¹⁾ HSCo

E010

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E010

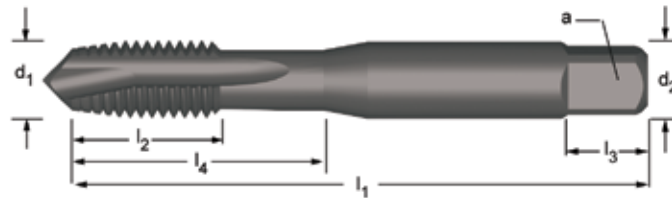


- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

MF	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
4	0.50	53	17	4.00	3.15	6	3	3.5	14	E010M4X.5
5	0.50	58	11	5.00	4.00	7	3	4.5	22	E010M5X.5
6	0.50	66	13	6.30	5.00	8	3	5.5	26	E010M6X.5
6	0.75	66	13	6.30	5.00	8	3	5.3	26	E010M6X.75
8	0.75	72	16	8.00	6.30	9	3	7.3	29	E010M8X.75
8	1.00	72	16	8.00	6.30	9	3	7.0	29	E010M8X1.0
10	1.00	80	18	10.00	8.00	11	3	9.0	34	E010M10X1.0
10	1.25	80	18	10.00	8.00	11	3	8.8	34	E010M10X1.25
12	1.00	89	22	9.00	7.10	10	3	11.0		E010M12X1.0
12	1.25	89	22	9.00	7.10	10	3	10.8		E010M12X1.25
12	1.50	89	22	9.00	7.10	10	3	10.5		E010M12X1.5
14	1.00	95	24	11.20	9.00	12	3	13.0		E010M14X1.0
14	1.25	95	24	11.20	9.00	12	3	12.8		E010M14X1.25
14	1.50	95	24	11.20	9.00	12	3	12.5		E010M14X1.5
16	1.00	102	24	12.50	10.00	13	3	15.0		E010M16X1.0
16	1.50	102	24	12.50	10.00	13	3	14.5		E010M16X1.5
18	1.00	112	29	14.00	11.20	14	4	17.0		E010M18X1.0
18	1.50	112	29	14.00	11.20	14	4	16.5		E010M18X1.5
20	1.00	112	29	14.00	11.20	14	4	19.0		E010M20X1.0
20	1.50	112	29	14.00	11.20	14	4	18.5		E010M20X1.5
20	2.00	112	29	14.00	11.20	14	4	18.0		E010M20X2.0
22	1.50	118	29	16.00	12.50	16	4	20.5		E010M22X1.5
24	1.50	130	35	18.00	14.00	18	4	22.5		E010M24X1.5
24	2.00	130	35	18.00	14.00	18	4	22.0		E010M24X2.0

E011

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
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- Macho Máquina Spectrum™



E011

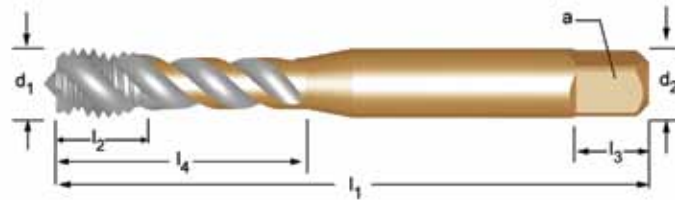


- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3 3.1 3.2 3.3 3.4

MF	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
4	0.50	53	17	4.00	3.15	6	3	3.5	14	E011M4X.5
5	0.50	58	11	5.00	4.00	7	3	4.5	22	E011M5X.5
6	0.50	66	13	6.30	5.00	8	3	5.5	26	E011M6X.5
6	0.75	66	13	6.30	5.00	8	3	5.3	26	E011M6X.75
8	0.75	72	16	8.00	6.30	9	3	7.3	29	E011M8X.75
8	1.00	72	16	8.00	6.30	9	3	7.0	29	E011M8X1.0
10	1.00	80	18	10.00	8.00	11	3	9.0	34	E011M10X1.0
10	1.25	80	18	10.00	8.00	11	3	8.8	34	E011M10X1.25
12	1.00	89	22	9.00	7.10	10	3	11.0		E011M12X1.0
12	1.25	89	22	9.00	7.10	10	3	10.8		E011M12X1.25
12	1.50	89	22	9.00	7.10	10	3	10.5		E011M12X1.5
14	1.00	95	24	11.20	9.00	12	3	13.0		E011M14X1.0
14	1.25	95	24	11.20	9.00	12	3	12.8		E011M14X1.25
14	1.50	95	24	11.20	9.00	12	3	12.5		E011M14X1.5
16	1.00	102	24	12.50	10.00	13	3	15.0		E011M16X1.0
16	1.50	102	24	12.50	10.00	13	3	14.5		E011M16X1.5
18	1.00	112	29	14.00	11.20	14	4	17.0		E011M18X1.0
18	1.50	112	29	14.00	11.20	14	4	16.5		E011M18X1.5
20	1.00	112	29	14.00	11.20	14	4	19.0		E011M20X1.0
20	1.50	112	29	14.00	11.20	14	4	18.5		E011M20X1.5
20	2.00	112	29	14.00	11.20	14	4	18.0		E011M20X2.0
22	1.50	118	29	16.00	12.50	16	4	20.5		E011M22X1.5
24	1.50	130	35	18.00	14.00	18	4	22.5		E011M24X1.5
24	2.00	130	35	18.00	14.00	18	4	22.0		E011M24X2.0

E012

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ISO

E012



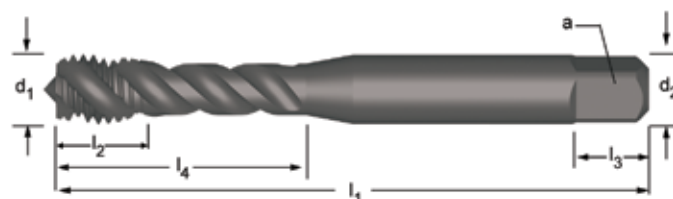
■ 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4

● 4.1 4.2 5.1 5.2 8.1

MF	P mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
4	0.50	53	7	4.0	3.15	6	3	3.5	19	E012M4X.5
5	0.50	58	8	5.0	4.0	7	3	4.5	22	E012M5X.5
6	0.50	66	10	6.3	5.0	8	3	5.5	27	E012M6X.5
6	0.75	66	10	6.3	5.0	8	3	5.3	27	E012M6X.75
8	0.75	72	12	8.0	6.3	9	3	7.3	31	E012M8X.75
8	1.00	72	12	8.0	6.3	9	3	7.0	31	E012M8X1.0
10	1.00	80	15	10.0	8.0	11	3	9.0	35	E012M10X1.0
10	1.25	80	15	10.0	8.0	11	3	8.8	35	E012M10X1.25
12	1.00	89	16	9.0	7.1	10	3	11.0		E012M12X1.0
12	1.25	89	16	9.0	7.1	10	3	10.8		E012M12X1.25
12	1.50	89	16	9.0	7.1	10	3	10.5		E012M12X1.5
14	1.50	95	18	11.2	9.0	12	3	12.5		E012M14X1.5
16	1.00	102	18	12.5	10.0	13	4	15.0		E012M16X1.0
16	1.50	102	18	12.5	10.0	13	4	14.5		E012M16X1.5
18	1.50	112	29	14.0	11.2	14	4	16.5		E012M18X1.5
20	1.50	112	29	14.0	11.2	14	4	18.5		E012M20X1.5
22	1.50	118	29	16.0	12.5	16	4	20.5		E012M22X1.5

E013

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E013

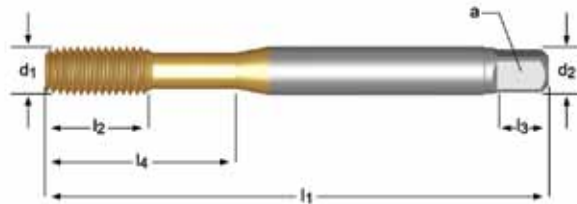


- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 2.3

MF	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z	\leftrightarrow	l_4 mm	e-Code
4	0.50	53	7	4.0	3.15	6	3	3.5	19	E013M4X.5
5	0.50	58	8	5.0	4.0	7	3	4.5	22	E013M5X.5
6	0.50	66	10	6.3	5.0	8	3	5.5	27	E013M6X.5
6	0.75	66	10	6.3	5.0	8	3	5.3	27	E013M6X.75
8	0.75	72	12	8.0	6.3	9	3	7.3	31	E013M8X.75
8	1.00	72	12	8.0	6.3	9	3	7.0	31	E013M8X1.0
10	1.00	80	15	10.0	8.0	11	3	9.0	35	E013M10X1.0
10	1.25	80	15	10.0	8.0	11	3	8.8	35	E013M10X1.25
12	1.00	89	16	9.0	7.1	10	3	11.0		E013M12X1.0
12	1.25	89	16	9.0	7.1	10	3	10.8		E013M12X1.25
12	1.50	89	16	9.0	7.1	10	3	10.5		E013M12X1.5
14	1.50	95	18	11.2	9.0	12	3	12.5		E013M14X1.5
16	1.00	102	18	12.5	10.0	13	4	15.0		E013M16X1.0
16	1.50	102	18	12.5	10.0	13	4	14.5		E013M16X1.5
18	1.50	112	29	14.0	11.2	14	4	16.5		E013M18X1.5
20	1.50	112	29	14.0	11.2	14	4	18.5		E013M20X1.5
22	1.50	118	29	16.0	12.5	16	4	20.5		E013M22X1.5

E317

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

E317

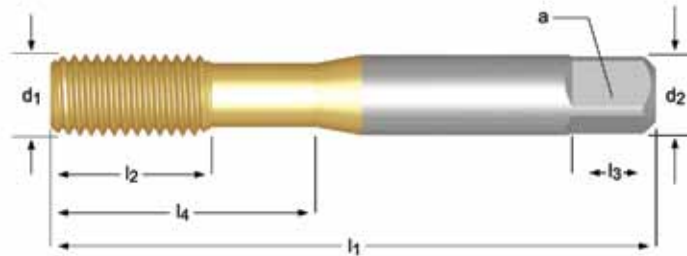


- 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3
- 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

MF	P mm	l_1 mm	l_2 mm	d_2 Ø mm	a mm	l_3 mm	z		l_4 mm	e-Code
5	0.50	70	13	6.0	4.9	8	5	4.80	25	E317M5X0.5
6	0.75	80	15	6.0	4.9	8	5	5.70	30	E317M6X0.75
7	0.75	80	15	7.0	5.5	8	5	6.70	30	E317M7X0.75
8	1.00	90	18	8.0	6.2	9	5	7.50	35	E317M8X1
10	1.00	100	20	10.0	8.0	11	5	9.50	39	E317M10X1
10	1.25	100	20	10.0	8.0	11	5	9.40	39	E317M10X1.25

E564

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E564



■ 1.1 1.2 1.3 1.4 2.1 2.2 4.1 5.1 7.3

● 1.5 2.3 5.2 6.1 6.3 7.1 7.2 7.4

MF	P mm	l_1 mm	l_2 mm	d_2 Ø mm	□ a mm	l_3 mm		l_4 mm	e-Code
5	0.50	58	11	5.00	4.00	7	4.8	22	E564M5X.5
6	0.75	66	13	6.30	5.00	8	5.7	26	E564M6X.75
8	0.75	72	16	8.00	6.30	9	7.7	29	E564M8X.75
8	1.00	72	16	8.00	6.30	9	7.5	29	E564M8X1.0
10	1.00	80	18	10.00	8.00	11	9.5	34	E564M10X1.0
10	1.25	80	18	10.00	8.00	11	9.4	34	E564M10X1.25
12	1.00	89	22	9.00	7.10	10	11.5		E564M12X1.0
12	1.25	89	22	9.00	7.10	10	11.4		E564M12X1.25
12	1.50	89	22	9.00	7.10	10	11.3		E564M12X1.5
14	1.00	95	24	11.20	9.00	12	13.5		E564M14X1.0
14	1.25	95	24	11.20	9.00	12	13.4		E564M14X1.25
14	1.50	95	24	11.20	9.00	12	13.3		E564M14X1.5
16	1.50	102	24	12.50	10.00	13	15.25		E564M16X1.5

EP20

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

EP20



- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
4	40	2.845	56	9	3.5	2.7	6	3	2.35	18	EP204-40
5	40	3.175	56	10	3.5	2.7	6	3	2.65	18	EP205-40
6	32	3.505	56	11	4.0	3.0	6	3	2.85	20	EP206-32
8	32	4.166	63	12	4.5	3.4	8	3	3.5	21	EP208-32
10	24	4.826	70	13	6.0	4.9	8	3	3.9	25	EP2010-24
12	24	5.486	80	15	6.0	4.9	8	3	4.5	30	EP2012-24
1/4	20	6.350	80	15	7.0	5.5	8	3	5.1	30	EP201/4
5/16	18	7.938	90	18	8.0	6.2	9	3	6.6	35	EP205/16
3/8	16	9.525	100	20	10.0	8.0	11	3	8	39	EP203/8
7/16	14	11.112	100	20	8.0	6.2	9	3	9.4		EP207/16
1/2	13	12.700	110	23	9.0	7.0	10	3	10.8		EP201/2
5/8	11	15.875	110	25	12.0	9.0	12	3	13.5		EP205/8
3/4	10	19.050	125	30	14.0	11.0	14	4	16.5		EP203/4 ¹⁾
7/8	9	22.225	140	34	18.0	14.5	17	4	19.5		EP207/8 ¹⁾
1	8	25.400	160	38	18.0	14.5	17	4	22.25		EP201 ¹⁾

¹⁾ HSCo

EP21

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

NEW

2010.09

spectrum™



EP21



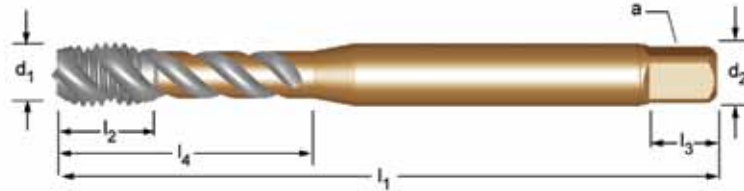
- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3 3.1 3.2 3.3 3.4

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
4	40	2.845	56	9	3.5	2.7	6	3	2.35	18	EP214-40
5	40	3.175	56	10	3.5	2.7	6	3	2.65	18	EP215-40
6	32	3.505	56	11	4.0	3.0	6	3	2.85	20	EP216-32
8	32	4.166	63	12	4.5	3.4	8	3	3.5	21	EP218-32
10	24	4.826	70	13	6.0	4.9	8	3	3.9	25	EP2110-24
12	24	5.486	80	15	6.0	4.9	8	3	4.5	30	EP2112-24
1/4	20	6.350	80	15	7.0	5.5	8	3	5.1	30	EP211/4
5/16	18	7.938	90	18	8.0	6.2	9	3	6.6	35	EP215/16
3/8	16	9.525	100	20	10.0	8.0	11	3	8	39	EP213/8
7/16	14	11.112	100	20	8.0	6.2	9	3	9.4		EP217/16
1/2	13	12.700	110	23	9.0	7.0	10	3	10.8		EP211/2
5/8	11	15.875	110	25	12.0	9.0	12	3	13.5		EP215/8
3/4	10	19.050	125	30	14.0	11.0	14	4	16.5		EP213/4 ¹⁾
7/8	9	22.225	140	34	18.0	14.5	17	4	19.5		EP217/8 ¹⁾
1	8	25.400	160	38	18.0	14.5	17	4	22.25		EP211 ¹⁾

¹⁾ HSCo

EX20

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

EX20



- 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4
- 4.1 4.2 5.1 5.2

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
4	40	2.845	56	6	3.5	2.7	6	3	2.35	18	EX204-40
5	40	3.175	56	6	3.5	2.7	6	3	2.65	18	EX205-40
6	32	3.505	56	7	4.0	3.0	6	3	2.85	20	EX206-32
8	32	4.166	63	7	4.5	3.4	8	3	3.5	21	EX208-32
10	24	4.826	70	8	6.0	4.9	8	3	3.9	25	EX2010-24
12	24	5.486	80	10	6.0	4.9	8	3	4.5	30	EX2012-24
1/4	20	6.350	80	10	7.0	5.5	8	3	5.1	30	EX201/4
5/16	18	7.938	90	12	8.0	6.2	9	3	6.6	35	EX205/16
3/8	16	9.525	100	15	10.0	8.0	11	3	8	39	EX203/8
7/16	14	11.112	100	15	8.0	6.2	9	3	9.4		EX207/16
1/2	13	12.700	110	18	9.0	7.0	10	3	10.8		EX201/2
5/8	11	15.875	110	20	12.0	9.0	12	4	13.5		EX205/8
3/4	10	19.050	125	25	14.0	11.0	14	4	16.5		EX203/4 ¹⁾
7/8	9	22.225	140	25	18.0	14.5	17	4	19.5		EX207/8 ¹⁾
1	8	25.400	160	30	18.0	14.5	17	4	22.25		EX201 ¹⁾

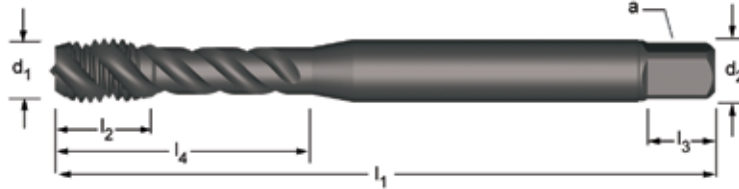
¹⁾ HSCo

EX21

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

NEW

2010.09



EX21



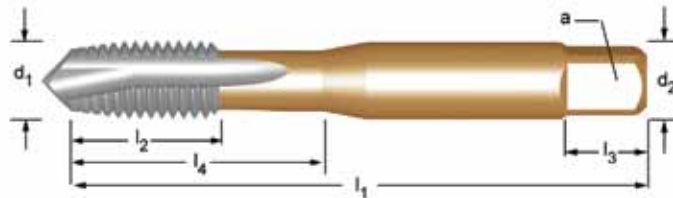
- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 2.3

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
4	40	2.845	56	6	3.5	2.7	6	3	2.35	18	EX214-40
5	40	3.175	56	6	3.5	2.7	6	3	2.65	18	EX215-40
6	32	3.505	56	7	4.0	3.0	6	3	2.85	20	EX216-32
8	32	4.166	63	7	4.5	3.4	8	3	3.5	21	EX218-32
10	24	4.826	70	8	6.0	4.9	8	3	3.9	25	EX2110-24
12	24	5.486	80	10	6.0	4.9	8	3	4.5	30	EX2112-24
1/4	20	6.350	80	10	7.0	5.5	8	3	5.1	30	EX211/4
5/16	18	7.938	90	12	8.0	6.2	9	3	6.6	35	EX215/16
3/8	16	9.525	100	15	10.0	8.0	11	3	8	39	EX213/8
7/16	14	11.112	100	15	8.0	6.2	9	3	9.4		EX217/16
1/2	13	12.700	110	18	9.0	7.0	10	3	10.8		EX211/2
5/8	11	15.875	110	20	12.0	9.0	12	4	13.5		EX215/8
3/4	10	19.050	125	25	14.0	11.0	14	4	16.5		EX213/4 ¹⁾
7/8	9	22.225	140	25	18.0	14.5	17	4	19.5		EX217/8 ¹⁾
1	8	25.400	160	30	18.0	14.5	17	4	22.25		EX211 ¹⁾

¹⁾ HSCo

E020

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E020

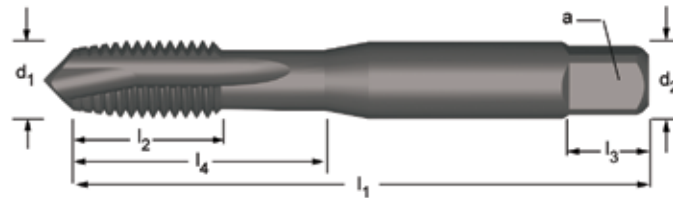


- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
2	56	2.184	44.5	9.5	2.80	2.24	5	3	1.85	9.5	E0202-56
4	40	2.845	48	14	3.15	2.50	5	3	2.35	14	E0204-40
5	40	3.175	48	12.5	3.15	2.50	5	3	2.65	12.5	E0205-40
6	32	3.505	50	16	3.55	2.80	5	3	2.85	16	E0206-32
8	32	4.166	53	9.5	4.50	3.55	6	3	3.50	17	E0208-32
10	24	4.826	58	11	5.00	4.00	7	3	3.90	20	E02010-24
12	24	5.486	62	12	5.60	4.50	7	3	4.50	21	E02012-24
1/4	20	6.350	66	13	6.30	5.00	8	3	5.10	26	E0201/4
5/16	18	7.938	72	16	8.00	6.30	9	3	6.60	29	E0205/16
3/8	16	9.525	80	18	10.00	8.00	11	3	8.00	32	E0203/8
7/16	14	11.112	85	19	8.00	6.30	9	3	9.40		E0207/16
1/2	13	12.700	89	22	9.00	7.10	10	3	10.80		E0201/2
5/8	11	15.875	102	24	12.50	10.00	13	3	13.50		E0205/8
3/4	10	19.050	112	29	14.00	11.20	14	4	16.50		E0203/4
7/8	9	22.225	118	29	16.00	12.50	16	4	19.50		E0207/8
1"	8	25.400	130	35	18.00	14.00	18	4	22.25		E0201

E021

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E021

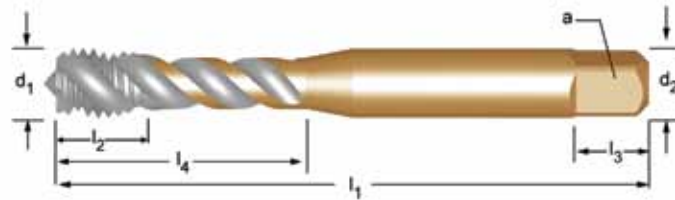


- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3 3.1 3.2 3.3 3.4

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
2	56	2.184	44.5	9.5	2.80	2.24	5	3	1.85	9.5	E0212-56
4	40	2.845	48	14	3.15	2.50	5	3	2.35	14	E0214-40
5	40	3.175	48	12.5	3.15	2.50	5	3	2.65	12.5	E0215-40
6	32	3.505	50	16	3.55	2.80	5	3	2.85	16	E0216-32
8	32	4.166	53	9.5	4.50	3.55	6	3	3.50	17	E0218-32
10	24	4.826	58	11	5.00	4.00	7	3	3.90	20	E02110-24
12	24	5.486	62	12	5.60	4.50	7	3	4.50	21	E02112-24
1/4	20	6.350	66	13	6.30	5.00	8	3	5.10	26	E0211/4
5/16	18	7.938	72	16	8.00	6.30	9	3	6.60	29	E0215/16
3/8	16	9.525	80	18	10.00	8.00	11	3	8.00	32	E0213/8
7/16	14	11.112	85	19	8.00	6.30	9	3	9.40		E0217/16
1/2	13	12.700	89	22	9.00	7.10	10	3	10.80		E0211/2
5/8	11	15.875	102	24	12.50	10.00	13	3	13.50		E0215/8
3/4	10	19.050	112	29	14.00	11.20	14	4	16.50		E0213/4
7/8	9	22.225	118	29	16.00	12.50	16	4	19.50		E0217/8
1"	8	25.400	130	35	18.00	14.00	18	4	22.25		E0211

E022

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E022

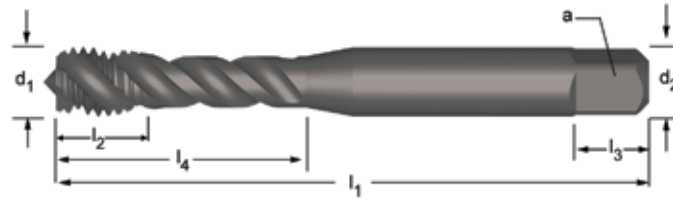


- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 4.1 4.2 5.1 5.2 6.2 8.1

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
2	56	2.184	44.5	9.5	2.80	2.24	5	2	1.85	9.5	E0222-56
4	40	2.845	48	6	3.15	2.50	5	3	2.35	14	E0224-40
5	40	3.175	48	6	3.15	2.50	5	3	2.65	12.5	E0225-40
6	32	3.505	50	6	3.55	2.80	5	3	2.85	16	E0226-32
8	32	4.166	53	7	4.50	3.55	6	3	3.50	17	E0228-32
10	24	4.826	58	8	5.00	4.00	7	3	3.90	20	E02210-24
12	24	5.486	62	12	5.60	4.50	7	3	4.50	21	E02212-24
1/4	20	6.350	66	10	6.30	5.00	8	3	5.10	28	E0221/4
5/16	18	7.938	72	12	8.00	6.30	9	3	6.60	31	E0225/16
3/8	16	9.525	80	15	10.00	8.00	11	3	8.00	34	E0223/8
7/16	14	11.112	85	19	8.00	6.30	9	3	9.40		E0227/16
1/2	13	12.700	89	19	9.00	7.10	10	3	10.80		E0221/2
5/8	11	15.875	102	24	12.50	10.00	13	4	13.50		E0225/8
3/4	10	19.050	112	29	14.00	11.20	14	4	16.50		E0223/4
7/8	9	22.225	118	29	16.00	12.50	16	4	19.50		E0227/8
1	8	25.400	130	35	18.00	14.00	18	4	22.25		E0221

E023

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E023



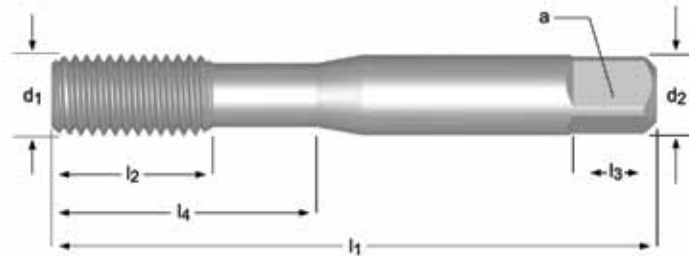
- 1.1 1.2 1.3 1.4 1.5 2.1 2.2

- 2.3

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
2	56	2.184	44.5	9.5	2.80	2.24	5	2	1.85	9.5	E0232-56
4	40	2.845	48	6	3.15	2.50	5	3	2.35	14	E0234-40
5	40	3.175	48	6	3.15	2.50	5	3	2.65	12.5	E0235-40
6	32	3.505	50	6	3.55	2.80	5	3	2.85	16	E0236-32
8	32	4.166	53	7	4.50	3.55	6	3	3.50	17	E0238-32
10	24	4.826	58	8	5.00	4.00	7	3	3.90	20	E02310-24
12	24	5.486	62	12	5.60	4.50	7	3	4.50	21	E02312-24
1/4	20	6.350	66	10	6.30	5.00	8	3	5.10	28	E0231/4
5/16	18	7.938	72	12	8.00	6.30	9	3	6.60	31	E0235/16
3/8	16	9.525	80	15	10.00	8.00	11	3	8.00	34	E0233/8
7/16	14	11.112	85	19	8.00	6.30	9	3	9.40		E0237/16
1/2	13	12.700	89	19	9.00	7.10	10	3	10.80		E0231/2
5/8	11	15.875	102	24	12.50	10.00	13	4	13.50		E0235/8
3/4	10	19.050	112	29	14.00	11.20	14	4	16.50		E0233/4
7/8	9	22.225	118	29	16.00	12.50	16	4	19.50		E0237/8
1	8	25.400	130	35	18.00	14.00	18	4	22.25		E0231

E523

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E523

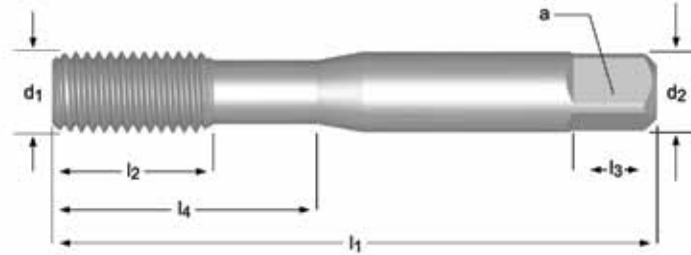


- 1.1 1.2 1.3 1.4 7.1 7.2 7.3

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	↔	l ₄ mm	e-Code
4	40	2.845	48	12.5	3.15	2.50	5	2.6	12.5	E5234-40BRIGHT
6	32	3.505	50	14	3.55	2.80	5	3.2	14	E5236-32BRIGHT
8	32	4.166	53	9.5	4.50	3.55	6	3.8	18	E5238-32BRIGHT
10	24	4.826	58	11	5.00	4.00	7	4.4	20	E52310-24BRIGHT
1/4	20	6.350	66	13	6.30	5.00	8	5.8	26	E5231/4BRIGHT
5/16	18	7.938	72	16	8.00	6.30	9	7.3	29	E5235/16BRIGHT
3/8	16	9.525	80	18	10.00	8.00	11	8.8	32	E5233/8BRIGHT

E596

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E596



- 1.1 1.2 1.3 4.1 5.1 7.1 7.2 7.3
- 1.4 2.1 2.2 5.2 6.1 6.3 7.4

UNC	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	↔	l ₄ mm	e-Code
4	40	2.845	48	12.5	3.15	2.50	5	2.6	12.5	E5964-40
6	32	3.505	50	14	3.55	2.80	5	3.2	14	E5966-32
8	32	4.166	53	9.5	4.50	3.55	6	3.8	18	E5968-32
10	24	4.826	58	11	5.00	4.00	7	4.4	20	E59610-24
1/4	20	6.350	66	13	6.30	5.00	8	5.8	26	E5961/4
5/16	18	7.938	72	16	8.00	6.30	9	7.3	29	E5965/16
3/8	16	9.525	80	18	10.00	8.00	11	8.8	32	E5963/8

EP30

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



NEW

2010.09



DIN

EP30



- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
8	36	4.166	63	12	4.5	3.4	8	3	3.5	21	EP308-36
10	32	4.826	70	13	6.0	4.9	8	3	4.1	25	EP3010-32
1/4	28	6.350	80	15	7.0	5.5	8	3	5.5	30	EP301/4
5/16	24	7.938	90	18	8.0	6.2	9	3	6.9	35	EP305/16
3/8	24	9.525	100	20	10.0	8.0	11	3	8.5	39	EP303/8
7/16	20	11.112	100	20	8.0	6.2	9	3	9.9		EP307/16
1/2	20	12.700	110	23	9.0	7.0	10	3	11.5		EP301/2
5/8	18	15.875	110	25	12.0	9.0	12	3	14.5		EP305/8
3/4	16	19.050	125	30	14.0	11.0	14	4	17.5		EP303/4 ¹⁾
7/8	14	22.225	140	34	18.0	14.5	17	4	20.4		EP307/8 ¹⁾
1	12	25.400	160	38	18.0	14.5	17	4	23.25		EP301 ¹⁾

¹⁾ HSCo

EP31

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

NEW

2010.09

spectrum™



EP31



■ 1.1 1.2 1.3 1.4 1.5 2.1 2.2

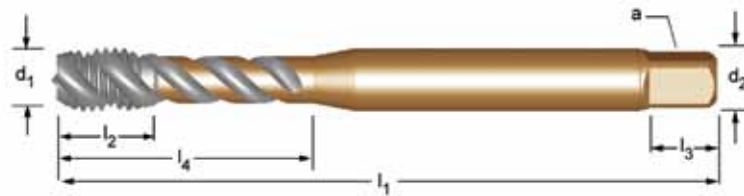
● 1.6 2.3 3.1 3.2 3.3 3.4

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
8	36	4.166	63	12	4.5	3.4	8	3	3.5	21	EP318-36
10	32	4.826	70	13	6.0	4.9	8	3	4.1	25	EP3110-32
1/4	28	6.350	80	15	7.0	5.5	8	3	5.5	30	EP311/4
5/16	24	7.938	90	18	8.0	6.2	9	3	6.9	35	EP315/16
3/8	24	9.525	100	20	10.0	8.0	11	3	8.5	39	EP313/8
7/16	20	11.112	100	20	8.0	6.2	9	3	9.9		EP317/16
1/2	20	12.700	110	23	9.0	7.0	10	3	11.5		EP311/2
5/8	18	15.875	110	25	12.0	9.0	12	3	14.5		EP315/8
3/4	16	19.050	125	30	14.0	11.0	14	4	17.5		EP313/4 ¹⁾
7/8	14	22.225	140	34	18.0	14.5	17	4	20.4		EP317/8 ¹⁾
1	12	25.400	160	38	18.0	14.5	17	4	23.25		EP311 ¹⁾

¹⁾ HSCo

EX30

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



NEW

2010.09



DIN

EX30



- 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4
- 4.1 4.2 5.1 5.2

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
8	36	4.166	63	7	4.5	3.4	8	3	3.5	21	EX308-36
10	32	4.826	70	8	6.0	4.9	8	3	4.1	25	EX3010-32
1/4	28	6.350	80	10	7.0	5.5	8	3	5.5	30	EX301/4
5/16	24	7.938	90	12	8.0	6.2	9	3	6.9	35	EX305/16
3/8	24	9.525	100	15	10.0	8.0	11	3	8.5	39	EX303/8
7/16	20	11.112	100	15	8.0	6.2	9	3	9.9		EX307/16
1/2	20	12.700	110	18	9.0	7.0	10	3	11.5		EX301/2
5/8	18	15.875	110	20	12.0	9.0	12	4	14.5		EX305/8
3/4	16	19.050	125	25	14.0	11.0	14	4	17.5		EX303/4 ¹⁾
7/8	14	22.225	140	25	18.0	14.5	17	4	20.4		EX307/8 ¹⁾
1	12	25.400	160	30	18.0	14.5	17	4	23.25		EX301 ¹⁾

¹⁾ HSCo

EX31

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™

NEW

2010.09

spectrum™





EX31



- 1.1 1.2 1.3 1.4 1.5 2.1 2.2

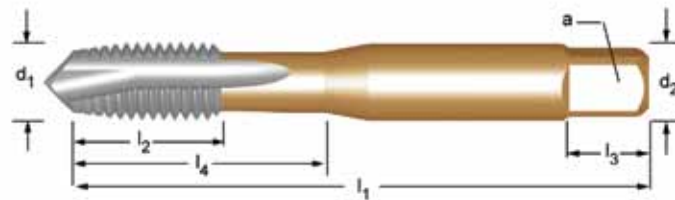
- 2.3

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z		l ₄ mm	e-Code
8	36	4.166	63	7	4.5	3.4	8	3	3.5	21	EX318-36
10	32	4.826	70	8	6.0	4.9	8	3	4.1	25	EX3110-32
1/4	28	6.350	80	10	7.0	5.5	8	3	5.5	30	EX311/4
5/16	24	7.938	90	12	8.0	6.2	9	3	6.9	35	EX315/16
3/8	24	9.525	100	15	10.0	8.0	11	3	8.5	39	EX313/8
7/16	20	11.112	100	15	8.0	6.2	9	3	9.9		EX317/16
1/2	20	12.700	110	18	9.0	7.0	10	3	11.5		EX311/2
5/8	18	15.875	110	20	12.0	9.0	12	4	14.5		EX315/8
3/4	16	19.050	125	25	14.0	11.0	14	4	17.5		EX313/4 ¹⁾
7/8	14	22.225	140	25	18.0	14.5	17	4	20.4		EX317/8 ¹⁾
1	12	25.400	160	30	18.0	14.5	17	4	23.25		EX311 ¹⁾

¹⁾ HSCo

E030

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E030

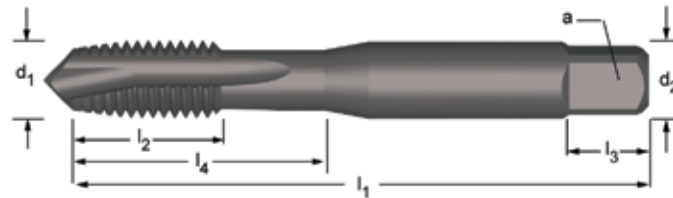


- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
8	36	4.166	53	9.5	4.50	3.55	6	3	3.50	17	E0308-36
10	32	4.826	58	11	5.00	4.00	7	3	4.10	20	E03010-32
1/4	28	6.350	66	13	6.30	5.00	8	3	5.50	26	E0301/4
5/16	24	7.938	72	16	8.00	6.30	9	3	6.90	29	E0305/16
3/8	24	9.525	80	18	10.00	8.00	11	3	8.50	32	E0303/8
7/16	20	11.112	85	19	8.00	6.30	9	3	9.90		E0307/16
1/2	20	12.700	89	22	9.00	7.10	10	3	11.50		E0301/2
9/16	18	14.288	95	24	11.20	9.00	12	3	12.90		E0309/16
5/8	18	15.875	102	24	12.50	10.00	13	3	14.50		E0305/8
3/4	16	19.050	112	29	14.00	11.20	14	4	17.50		E0303/4
7/8	14	22.225	118	29	16.00	12.50	16	4	20.40		E0307/8
1"	12	25.400	130	35	18.00	14.00	18	4	23.25		E0301

E031

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E031



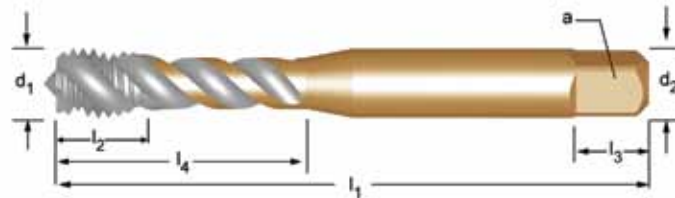
■ 1.1 1.2 1.3 1.4 1.5 2.1 2.2

• 1.6 2.3 3.1 3.2 3.3 3.4

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
8	36	4.166	53	9.5	4.50	3.55	6	3	3.50	17	E0318-36
10	32	4.826	58	11	5.00	4.00	7	3	4.10	20	E03110-32
1/4	28	6.350	66	13	6.30	5.00	8	3	5.50	26	E0311/4
5/16	24	7.938	72	16	8.00	6.30	9	3	6.90	29	E0315/16
3/8	24	9.525	80	18	10.00	8.00	11	3	8.50	32	E0313/8
7/16	20	11.112	85	19	8.00	6.30	9	3	9.90		E0317/16
1/2	20	12.700	89	22	9.00	7.10	10	3	11.50		E0311/2
9/16	18	14.288	95	24	11.20	9.00	12	3	12.90		E0319/16
5/8	18	15.875	102	24	12.50	10.00	13	3	14.50		E0315/8
3/4	16	19.050	112	29	14.00	11.20	14	4	17.50		E0313/4
7/8	14	22.225	118	29	16.00	12.50	16	4	20.40		E0317/8
1"	12	25.400	130	35	18.00	14.00	18	4	23.25		E0311

E032

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E032

UNF HSS XS1 Gold ISO 529 ↻ ↙ 2B 2.5xD C 2-3 48°

■ 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4

● 1.6 4.1 4.2 5.1 5.2 8.1

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
8	36	4.166	53	7	4.50	3.55	6	3	3.50	17	E0328-36
10	32	4.826	58	8	5.00	4.00	7	3	4.10	20	E03210-32
1/4	28	6.350	66	10	6.30	5.00	8	3	5.50	28	E0321/4
5/16	24	7.938	72	12	8.00	6.30	9	3	6.90	31	E0325/16
3/8	24	9.525	80	15	10.00	8.00	11	3	8.50	34	E0323/8
7/16	20	11.112	85	19	8.00	6.30	9	3	9.90		E0327/16
1/2	20	12.700	89	22	9.00	7.10	10	3	11.50		E0321/2
9/16	18	14.288	95	24	11.20	9.00	12	3	12.90		E0329/16
5/8	18	15.875	102	24	12.50	10.00	13	4	14.50		E0325/8
3/4	16	19.050	112	29	14.00	11.20	14	4	17.50		E0323/4
7/8	14	22.225	118	29	16.00	12.50	16	4	20.40		E0327/8
1"	12	25.400	130	35	18.00	14.00	18	4	23.25		E0321

E033

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E033

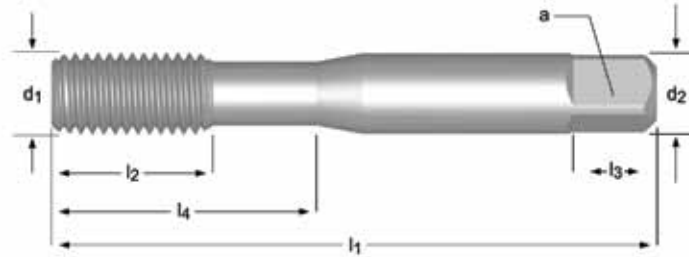


- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	l ₄ mm	e-Code
8	36	4.166	53	7	4.50	3.55	6	3	3.50	17	E0338-36
10	32	4.826	58	8	5.00	4.00	7	3	4.10	20	E03310-32
1/4	28	6.350	66	10	6.30	5.00	8	3	5.50	28	E0331/4
5/16	24	7.938	72	12	8.00	6.30	9	3	6.90	31	E0335/16
3/8	24	9.525	80	15	10.00	8.00	11	3	8.50	34	E0333/8
7/16	20	11.112	85	19	8.00	6.30	9	3	9.90		E0337/16
1/2	20	12.700	89	22	9.00	7.10	10	3	11.50		E0331/2
9/16	18	14.288	95	24	11.20	9.00	12	3	12.90		E0339/16
5/8	18	15.875	102	24	12.50	10.00	13	4	14.50		E0335/8
3/4	16	19.050	112	29	14.00	11.20	14	4	17.50		E0333/4
7/8	14	22.225	118	29	16.00	12.50	16	4	20.40		E0337/8
1"	12	25.400	130	35	18.00	14.00	18	4	23.25		E0331

E530

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindeformer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



ISO

E530

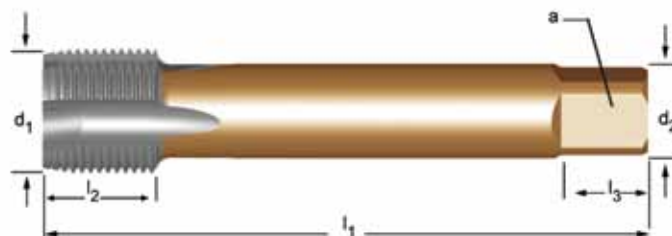


- 1.1 1.2 1.3 1.4 7.1 7.2 7.3

UNF	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	↔	l ₄ mm	e-Code
10	32	4.826	58	11	5.00	4.00	7	4.5	20	E53010-32BRIGHT
1/4	28	6.350	66	13	6.30	5.00	8	6	26	E5301/4BRIGHT
5/16	24	7.938	72	16	8.00	8.00	9	7.5	29	E5305/16BRIGHT
3/8	24	9.525	80	18	10.00	10.00	11	9.1	32	E5303/8BRIGHT
7/16	20	11.112	85	19	8.00	8.00	9	10.6		E5307/16BRIGHT

EP40

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



EP40



■ 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4

• 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

G(BSP)	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	e-Code
1/8	28	9.728	90	18	7	5.5	8	3	8.8	EP401/8
1/4	19	13.157	100	21	11	9.0	12	3	11.8	EP401/4
3/8	19	16.662	100	21	12	9.0	12	4	15.25	EP403/8
1/2	14	20.955	125	24	16	12.0	15	4	19	EP401/2
5/8	14	22.911	125	24	18	14.5	17	4	21	EP405/8
3/4	14	26.441	140	28	20	16.0	19	4	24.5	EP403/4
7/8	14	30.201	150	28	22	18.0	21	4	28.25	EP407/8
1	11	33.249	160	30	25	20.0	23	4	30.75	EP401

EP41

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
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- Macho Máquina Spectrum™



DIN

EP41

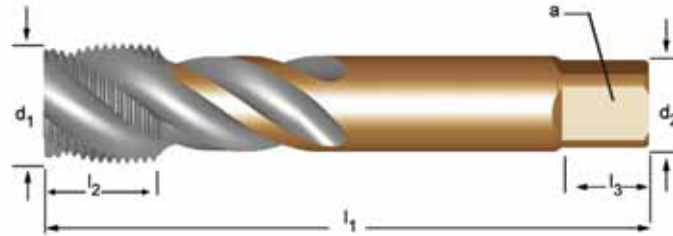


- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3 3.1 3.2 3.3 3.4

G(BSP)	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	e-Code
1/8	28	9.728	90	18	7	5.5	8	3	8.8	EP411/8
1/4	19	13.157	100	21	11	9.0	12	3	11.8	EP411/4
3/8	19	16.662	100	21	12	9.0	12	4	15.25	EP413/8
1/2	14	20.955	125	24	16	12.0	15	4	19	EP411/2
5/8	14	22.911	125	24	18	14.5	17	4	21	EP415/8
3/4	14	26.441	140	28	20	16.0	19	4	24.5	EP413/4
7/8	14	30.201	150	28	22	18.0	21	4	28.25	EP417/8
1	11	33.249	160	30	25	20.0	23	4	30.75	EP411

EX40

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- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
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- Macho Máquina Spectrum™



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2010.09



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EX40



- 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4
- 4.1 4.2 5.1 5.2 8.1

G(BSP)	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	e-Code
1/8	28	9.728	90	13	7	5.5	8	3	8.8	EX401/8
1/4	19	13.157	100	15	11	9.0	12	3	11.8	EX401/4
3/8	19	16.662	100	15	12	9.0	12	4	15.25	EX403/8
1/2	14	20.955	125	18	16	12.0	15	4	19	EX401/2
5/8	14	22.911	125	18	18	14.5	17	4	21	EX405/8
3/4	14	26.441	140	20	20	16.0	19	4	24.5	EX403/4
7/8	14	30.201	150	20	22	18.0	21	4	28.25	EX407/8
1	11	33.249	160	22	25	20.0	23	4	30.75	EX401
1.1/8	11	37.897	170	22	28	22.0	25	4	35	EX401.1/8
1.1/4	11	41.910	170	22	32	24.0	27	4	39.5	EX401.1/4
1.1/2	11	47.803	190	23	36	29.0	32	4	45	EX401.1/2

EX41

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



DIN

EX41

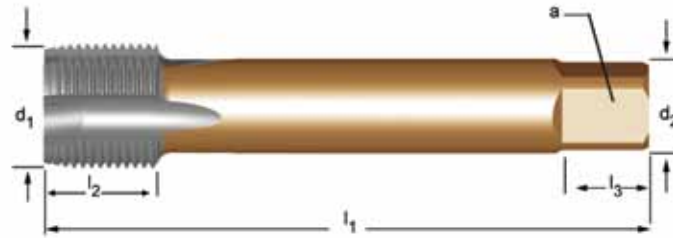


- 1.1 1.2 1.3 1.4 1.5 2.1 2.2
- 1.6 2.3

G(BSP)	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	e-Code
1/8	28	9.728	90	13	7	5.5	8	3	8.8	EX411/8
1/4	19	13.157	100	15	11	9.0	12	3	11.8	EX411/4
3/8	19	16.662	100	15	12	9.0	12	4	15.25	EX413/8
1/2	14	20.955	125	18	16	12.0	15	4	19	EX411/2
5/8	14	22.911	125	18	18	14.5	17	4	21	EX415/8
3/4	14	26.441	140	20	20	16.0	19	4	24.5	EX413/4
7/8	14	30.201	150	20	22	18.0	21	4	28.25	EX417/8
1	11	33.249	160	22	25	20.0	23	4	30.75	EX411
1.1/8	11	37.897	170	22	28	22.0	25	4	35	EX411.1/8
1.1/4	11	41.910	170	22	32	24.0	27	4	39.5	EX411.1/4
1.1/2	11	47.803	190	23	36	29.0	32	4	45	EX411.1/2

E040

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E040



- 1.1 1.2 1.3 1.4 1.5 6.1 6.3 7.1 7.2 7.3 7.4
- 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.2 8.1

G(BSP)	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z	↔	e-Code
1/8	28	9.728	90	15	8	6.3	9	3	8.80	E0401/8
1/4	19	13.157	100	19	10	8	11	3	11.80	E0401/4
3/8	19	16.662	100	21	12.5	10	13	3	15.25	E0403/8
1/2	14	20.955	125	26	16	12.5	16	4	19.00	E0401/2
3/4	14	26.441	140	28	20	16	20	4	24.50	E0403/4

E041

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E041



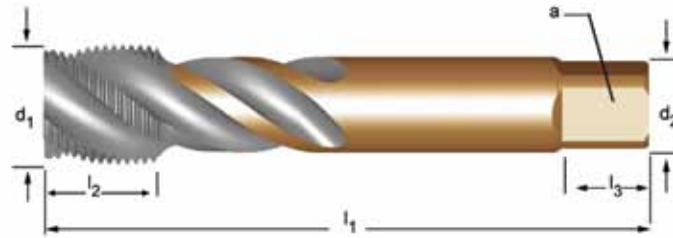
■ 1.1 1.2 1.3 1.4 1.5 2.1 2.2

• 1.6 2.3 3.1 3.2 3.3 3.4

G(BSP)	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	z	↔	e-Code
1/8	28	9.728	90	15	8	6.3	9	3	8.80	E0411/8
1/4	19	13.157	100	19	10	8	11	3	11.80	E0411/4
3/8	19	16.662	100	21	12.5	10	13	3	15.25	E0413/8
1/2	14	20.955	125	26	16	12.5	16	4	19.00	E0411/2
3/4	14	26.441	140	28	20	16	20	4	24.50	E0413/4

E042

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E042



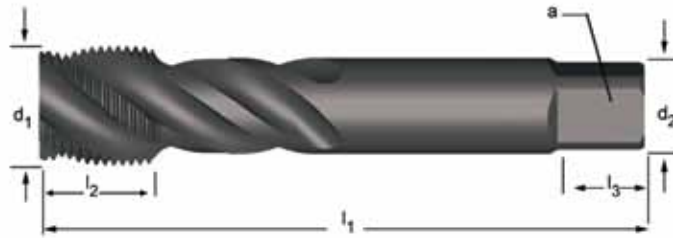
■ 1.1 1.2 1.3 1.4 1.5 7.1 7.2 7.3 7.4

• 4.1 4.2 5.1 5.2 8.1

G(BSP)	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ ∅ mm	a mm	l ₃ mm	z		e-Code
1/8	28	9.728	90	15	8	6.3	9	3	8.80	E0421/8
1/4	19	13.157	100	19	10	8	11	3	11.80	E0421/4
3/8	19	16.662	100	21	12.5	10	13	4	15.25	E0423/8
1/2	14	20.955	125	26	16	12.5	16	4	19.00	E0421/2
3/4	14	26.441	140	28	20	16	20	4	24.50	E0423/4

E043

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



Dormer/ISO

E043



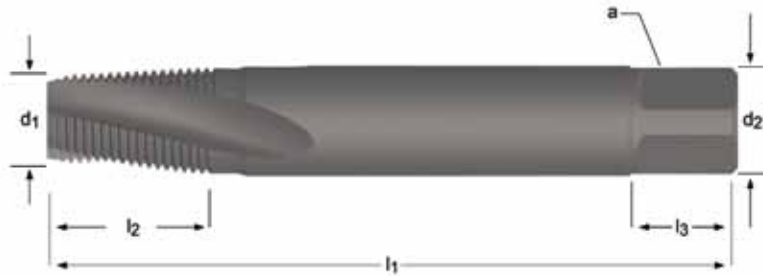
■ 1.1 1.2 1.3 1.4 1.5 2.1 2.2

• 1.6 2.3

G(BSP)	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	□ a mm	l ₃ mm	z	↔	e-Code
1/8	28	9.728	90	15	8	6.3	9	3	8.80	E0431/8
1/4	19	13.157	100	19	10	8	11	3	11.80	E0431/4
3/8	19	16.662	100	21	12.5	10	13	4	15.25	E0433/8
1/2	14	20.955	125	26	16	12.5	16	4	19.00	E0431/2
3/4	14	26.441	140	28	20	16	20	4	24.50	E0433/4

E735

- Machine Tap Spectrum™
- Spectrum™ Maschinen-Gewindebohrer
- Spectrum™ Machinetappen
- Spectrum™ Tarauds machine
- Spectrum™ Machos de máquina
- Macho Máquina Spectrum™



E735



- 1.4 1.5 1.6 2.4 3.1 3.2 4.2 4.3 5.2 5.3 6.2 6.4
- 6.3 7.3 7.4

NPT	TPI	d ₁ nom mm	l ₁ mm	l ₂ mm	d ₂ Ø mm	a mm	l ₃ mm	z	↔	↔	e-Code
1/16	27	7.72	80	14	7.9	5.9	9	3	6.30	D	E7351/16
1/8	27	10.06	90	14	11.1	8.3	9	4	8.50	R	E7351/8
1/4	18	13.36	100	20	14.3	10.7	11	4	11.00	7/16	E7351/4
3/8	18	16.81	110	20	17.8	13.5	13	5	14.50	37/64	E7353/8
1/2	14	20.96	125	26	17.5	13.1	16	5	18.00	23/32	E7351/2
3/4	14	26.29	140	26	23.0	17.2	18	5	23.00	59/64	E7353/4
1"	11.5	32.92	150	31	28.6	21.4	21	5	29.00	1.5/32	E7351

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