

In the Office Action, the Examiner preliminarily refused registration of the JELCO mark on the grounds that there is a likelihood of confusion with regard to U.S. Reg. No. 2452667 for the JEL mark, which is owned by Komet Group GmbH (“Komet”). Applicant respectfully submits that there is no potential for confusion to occur as the result of the coexistence of the JELCO mark and the JEL mark and requests that the Examiner withdraw the refusal and allow the Application to proceed to publication.

In evaluating the issue of likelihood of confusion, the Trademark Trial and Appeal Board has stated, “[w]here the goods in question are not identical or competitive, and are not related or marketed in such a way that they would be encountered by the same people in situations that could create the incorrect assumption that all the goods come from the same source, . . . even where the marks are identical, confusion is not likely.” *In re Unilever Ltd.*, 222 U.S.P.Q. 981, 982-83 (T.T.A.B. 1984). In this instance, there is simply no overlap of goods/services and consumers such that the same consumers would even encounter both Applicant’s goods and Komet’s goods/services, let alone be confused by the coexistence of the parties’ respective marks.

As demonstrated by Applicant’s revised identification of goods, Applicant uses the JELCO mark in connection with a very specific line of goods, namely, safety harnesses and other fall protection equipment (collectively, the “Fall Protection Equipment”). This Fall Protection Equipment is used by linemen and other workers who will be suspended in the air or in high places and need protection to avoid falling. By way of example, submitted herewith as **Exhibit A** is a screenshot of Applicant’s homepage, which includes more detail about Applicant and its products.<sup>1</sup>

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<sup>1</sup> This screenshot was taken of <http://jelco.ca/en/> on December 12, 2019.

Komet, on the other hand, uses the JEL mark in connection with very different products and services. While the registration covers three classes of goods/services, the identification makes it clear that Komet uses the JEL mark in connection with a variety of machine tool products that are used in boring, drilling, cutting, turning and milling applications, as well as related products, accessories, computer equipment, and services (collectively, the “Machine Tool Products and Services”). This fact is further supported by the most recent specimens that were filed by Komet to maintain the registration (copies of which are submitted herewith as collective **Exhibit B**), as well Komet’s marketing materials for its Machine Tool Products and Services (a copy of a brochure is submitted herewith as **Exhibit C**).<sup>2</sup>

There is not even a tangential relationship between Applicant’s Fall Protection Equipment and Komet’s Machine Tool Products and Services. Applicant’s Fall Protection Equipment is specialized equipment that is used for a particular purpose of protecting workers from falling while suspended or working in high places. This Fall Protection Equipment has absolutely no connection to Komet’s Machine Tool Products and Services, which are used to cut and machine heavy-duty materials, such as aluminum and metal.

In addition to the differences between the parties’ goods/services, the parties’ respective goods/services are also marketed to very different “relevant persons.” *See Electronic Design & Sales, Inc. v. Electronic Data Sys. Corp.*, 21 U.S.P.Q.2d 1388, 1393 (Fed. Cir. 1992) (no likelihood of between appellee’s “EDS” mark and appellant’s “E.D.S.” mark, because appellant’s goods were marketed and sold to different “relevant persons” than appellee’s services). As the Federal Circuit has noted, an essential issue in determining whether consumers are likely to be confused by the coexistence of two marks is “whether there is likely to be sufficient overlap of the respective

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<sup>2</sup> This advertising brochure was downloaded at [http://classic.komet.com/pdf/jel/JEL\\_Tapping.pdf](http://classic.komet.com/pdf/jel/JEL_Tapping.pdf) on December 12, 2019.

purchasers of the parties' goods and services to confuse actual and potential purchasers." *Id.* at 1390.

Here, Applicant's Fall Protection Equipment is promoted to companies that employ workers who will be suspended in the air or working in high places, such as utility companies, tree-trimming companies, and construction companies. Conversely, Komet is marketing its Machine Tool Products and Services to companies who need to cut or machine heavy-duty materials, such as aluminum and metal. These consumers are clearly very different.

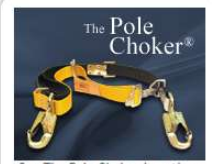
Given the differences between the parties' respective goods/services and consumers, Applicant's JELCO mark and the Komet's JEL mark are unlikely to even be encountered by the same consumers. Even if they were encountered by the same consumers, given the differences between Applicant's Fall Protection Equipment and Komet's Machine Tool Products and Services, no reasonable consumer would conclude that they come from the same source.

As the Federal Circuit has stated, "[w]e are not concerned with the mere theoretical possibilities of confusion, deception, or mistake or with *de minimus* situations but with the practicalities of the commercial world, with which trademark laws deal." *Electronic Design & Sales, Inc. v. Electronic Data Sys. Corp.*, 21 U.S.P.Q.2d 1388, 1391 (Fed. Cir. 1992). In other words, likelihood of confusion must exist as a practical reality, not as a mere possibility. Further, superficial similarities in the marks will not prevent registration where the marketplace realities show that confusion is not likely. In this instance, Applicant submits that the evidence now of record, taken as a whole, establishes that confusion is not likely to occur as a result of the coexistence of the JELCO mark and the JEL mark. Accordingly, Applicant respectfully requests that the Examiner withdraw the likelihood of confusion objection.

# Exhibit A



Welcome to  
**JELCO**  
Quality Fall Protection Equipment  
Since 1892



The Pole Choker®  
See The Pole Choker in action. Click the one of the links below.  
[Pole Choker Tips](#)  
[Pole Choker Demo](#)

*"I have been using Jelco's products for over 20 years. The reliability and workmanship are of the highest quality available."*

Josh Minsky  
Tandam Equipment Inc

**Construction Products**

- Harnesses
- Retractable
- Lines/Lanyards
- Bags, Holsters & Cases
- Hardware

**Utility Products**

- Pole Straps
- Belts
- Harnesses
- Retractable
- Lines/Lanyards
- Bags, Holsters & Cases
- Hardware

**Arborist Products**

- Belts
- Harnesses
- Lines/Lanyards
- Bags, Holsters & Cases
- Hardware

**Tower & Windmill**

- Belts
- Harnesses
- Retractable
- Lines/Lanyards
- Bags, Holsters & Cases
- Hardware

**Pole Choker™ 5**

The Jelco Pole Choker™ is the ultimate and most widely used, wood pole fall restraint device in North America. This device was designed on the principles of a standard pole strap. The 1 3/4 inch wide yellow nylon inner strap "chokes" the pole; while the roller's teeth "dig in" to provide the gripping force required to prevent you from falling to the ground. The yellow choker strap is adjustable, helping the worker to extend his reach in a safe manner. When the choker strap is disconnected, it functions the same as a standard pole strap. The Pole Choker is available in four sizes from the smallest distribution pole to the largest transmission pole.  
[Click Here to view Jelco's line of Pole Chokers™.](#)



**Tradition 4" Belt in Black**

This premium belt is characteristic of the high quality products that Jelco has to offer. The all leather belt offers superior support, while providing a lineman with the softest, most comfortable, and light-weight (under 4 lbs) belt that money can buy. It features a 4" back that fits and feels like your favorite "broken-in" lineman's belt that you have had for years, right out of the box. The tradition belts' full floating design offers linemen the convenience of full range of motion, while performing all tasks and operations. This item comes equipped with leather tool loops, tape holder, chrome accessory clip, and large positioning D-rings for ease of attachment.  
[Click Here to view Jelco's line of Belts.](#)



**Oval Tool Bucket**

- Oversized oval design
- 18 oz red canvas
- 24 pockets: 14 interior and 10 exterior
- Two hook attachment holes are reinforced with brass grommets
- Molded, reinforced plastic bottom
- 14" L x 7" W x 10" H
- Weight: 2.3 lbs



[Click Here to view Jelco's line of Bags & Holsters.](#)

# Exhibit B

2

XBE

80983011000017

MKG 983 5/8-18 UNF. T1CN. 2XD

JEL® MKG

80983011000017

MKG 5/8-18UNF 2.00 T1CN

1664565


KOMET GROUP

5/8-18UNF-01213-2718076 5

CD Switchboard.indd (SECURED) - Adobe Reader  
File Edit View Document Tools Window Help

Bookmarks  
Options

- Main Menu
- KOMET Information
  - Compass Catalog
  - Core Products Catalog
  - Tools Plus Ideas Brochure - Complete
  - Tools Plus Ideas Brochure - Condensed
  - Milling / Turning Catalog
  - Pentron Brochure
  - KomTronic M042 Brochure
  - KomTronic U-Axis Brochure
  - MicroKom Brochure
  - Drill Trade-In Program
- Videos
- Application Examples
- Dihart Information
  - Dihart Catalog
  - Reamax TS Brochure
  - Compensating Holder Brochure
  - Assembly Instructions
  - Reamer Program
- Videos
- Application Tools
- Application Examples
- JEL Information



**KOMET**  
GROUP

**PRODUCTS**

- KOMET Tooling**
- Dihart Reaming Systems**
- JEL Threading Systems**

TOOLS PLUS IDEAS



**JEL**  
 Produktentwicklung  
 Vertrieb  
 Service  
 Einkauf  
 Personalmanagement  
 Rechnungswesen  
 Rechtswesen  
 Energie  
 IT  
 Logistik  
 Fertigung



- TOOLS
  - Threading
  - Thread milling cutters
  - Drill thread milling cutters
  - PCD tools
  - Thread cutting
  - Thread formers
  - Tapping chuck
  - Viscos
  - Special tools
  - Online tool selection and CNC programming**
  - Reaming
  - Cutting materials
  - Facing slides
  - Mechatronic
  - Honing
  - Adaptors
  - Tool-Shop
  - CHART<sup>®</sup> Onlineshop
- PLUS
  - Project management
  - KOMET SERVICE
  - Sector solutions
  - Materials
  - Success Stories
  - Technology
  - Fan-Shop
- IDEAS
  - IDEEN-FABRIK
  - People
  - Job - career

> Home > TOOLS > Threading > Online tool selection and CNC programming

## Online tool selection and CNC programming software TPT-online

### For all standard (drill) thread milling tools

Tool selection and CNC programmes for standard drill thread milling cutters and thread milling cutters of the KOMET GROUP<sup>®</sup> can be generated quickly and easily, all around the clock and worldwide.

Find the right tool in seconds. Put your CNC programme together in the easiest possible way. This service is free of charge.

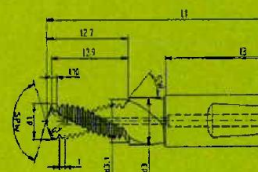
With TPT-online, you simply enter the machining task and then receive a tool suggestion, together with the output of the cutting data and the CNC programme for 6 different controls.

[Link to tpt-online](#)

#### Your PLUS:

- Entry of the machining task
- Output of all possible tools and specification of the machining time
- Presentation of the tool drawing
- CNC programmes available for 6 different controls in 5 different languages, in metric or imperial measurements
- Simple tool selection depending on the machining task
- Centre-point path or external path programming selectable
- Units selectable in mm or inches
- Output of data sheet and tool graphic
- Manual optimisation of the cutting parameters possible

Tool details



Parameter	Value
Description	BCF M10 1,50
Order number	80945601000022
Drawing number	80945601000022.01
Coating	Blank
Total length L1	74.5 mm

Enlarged view

# Exhibit C



JEL® DOREX

JEL® TAREX

JEL® SIREX

JEL® GG

### Example application – grey cast iron

Workpiece: Engine block

Material: GG25

Tool:

JEL® solid carbide taps (CM8-6HX IK VHM)

Thread:

Blind hole M8, drilling depth 20 mm, thread length 16 mm

Machine: Transfer line

Cooling: Emulsion

Cutting speed:  $v_c = 30$  m/min

Tool life: > 75,000 threads





## Machining threads

JEL® tap drills open up a wide range of applications in thread cutting operations. Whether you wish to machine wet, with internal coolant supply, use minimal lubrication or machine dry – we will supply you with the optimum tap drill.

Compared to HSS-E taps carbide taps have substantial advantages:

- Up to 20x longer tool life than HSS-E taps
- Fewer tool change times due to longer tool life
- Higher cutting speeds – so shorter cycle times
- Significant reduction in production costs due to longer tool life, higher cutting speeds and fewer tool changes

## Taps

Page

### Taps HSS

#### M – Metric ISO thread DIN 13

DOREX, TINIB, FEDUB	96 – 97
GG	98
FEDUC	99
TAREX	100

### Taps HSS with central coolant supply

#### M – Metric ISO thread DIN 13

GG	102
TAREX	103

### Solid carbide taps

#### M – Metric ISO thread DIN 13

SIREX, SIREX SR, GG	104 – 105
DOREX	106
SIREX XH (hard machining $\geq 45$ HRC)	107

#### MF – Metric fine ISO thread DIN 13

SIREX	108
SIREX SR	109

### Tap drill diameters

148 – 150

### Technical notes

110

Guideline values for tapping

### Problems – Causes – Solutions

111

1



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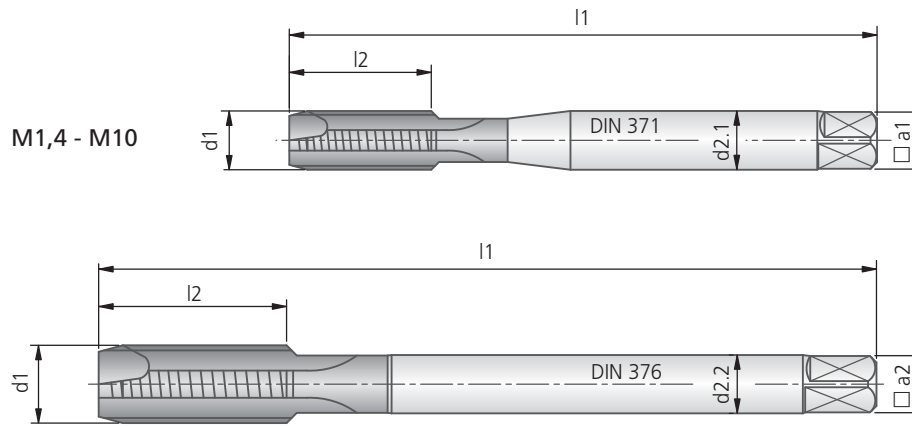


## Chamfer form

Type of flute	straight flutes	straight flutes spiral point	straight or helical flutes		
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
No. of threads l4	6 - 8	3,5 - 5,5	2 - 3	3,5 - 5	1,5 - 2
Application mainly for	short through hole threads	through hole threads	blind and through hole threads in short chipping materials	blind hole threads with long thread run-out (plug tap) and through hole threads	blind hole threads with short thread run-out (bottoming taps)

HSS-E Taps

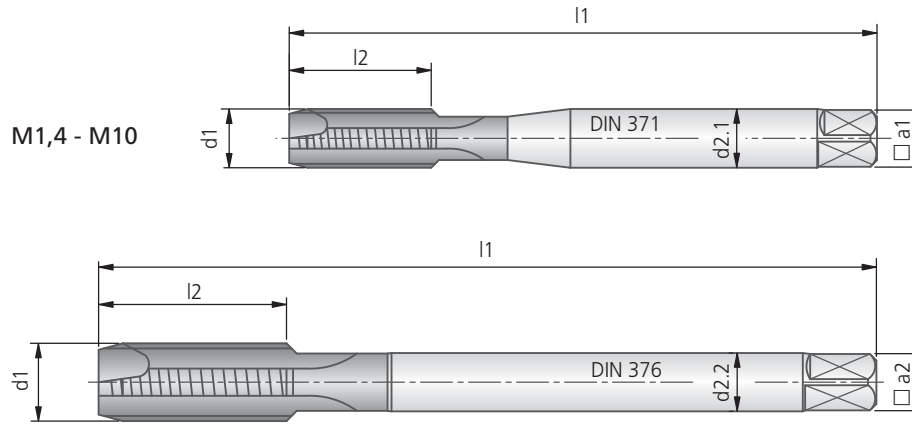
- for metric ISO thread DIN 13
- tools without internal coolant supply
- tolerance field ISO 2
- chamfer form B







						DOREX	DOREX <sub>VAV</sub>	DOREX <sub>TiN</sub>
Cutting material ▶						HSS-E	HSS-E	HSS-E
Surface ▶						uncoated	vaporized	TiN
Shank Ø DIN 371 ▶								
Nominal Ø d1	P	l1	l2	d2.1	a1	Order No.	Order No.	Order No.
M1,4	0,30	40		2,5	2,1			
M1,6	0,35	40	8,0	2,5	2,1	20122001000005	20136001000005	
M1,7	0,35	40		2,5	2,1			
M1,8	0,35	40		2,5	2,1			
M2	0,40	45	8,0	2,8	2,1	20122001000008	20136001000008	
M2,2	0,45	45		2,8	2,1			
M2,3	0,40	45		2,8	2,1			
M2,5	0,45	50	9,0	2,8	2,1	20122001000011	20136001000011	
M2,6	0,45	50		2,8	2,1			
M3	0,50	56	11,0	3,5	2,7	20122001000013	20136001000013	20322001000013
M3,5	0,60	56		4,0	3,0			
M4	0,70	63	13,0	4,5	3,4	20122001000015	20136001000015	20322001000015
M4,5	0,75	70		6,0	4,9			
M5	0,80	70	16,0	6,0	4,9	20122001000017	20136001000017	20322001000017
M6	1,00	80	18,0	6,0	4,9	20122001000018	20136001000018	20322001000018
M7	1,00	80	18,0	7,0	5,5	20122001000019		
M8	1,25	90	18,0	8,0	6,2	20122001000020	20136001000020	20322001000020
M9	1,25	90		9,0	7,0			
M10	1,50	100	21,0	10,0	8,0	20122001000022	20136001000022	20322001000022
Shank Ø DIN 376 ▶								
Nominal Ø d1	P	l1	l2	d2.2	a2	Order No.	Order No.	Order No.
M11	1,50	100		8,0	6,2			
M12	1,75	110	24,0	9,0	7,0	20123001000024	20137001000024	20323001000024
M14	2,00	110	24,0	11,0	9,0	20123001000025	20137001000025	
M16	2,00	110	27,0	12,0	9,0	20123001000026	20137001000026	
M18	2,50	125	32,0	14,0	11,0	20123001000027	20137001000027	
M20	2,50	140	32,0	16,0	12,0	20123001000028	20137001000028	
M22	2,50	140	32,0	18,0	14,5	20123001000029		
M24	3,00	160	38,0	18,0	14,5	20123001000030		
M27	3,00	160		20,0	16,0			
M30	3,50	180		22,0	18,0			

HSS-PM Taps

- for metric ISO thread DIN 13 ■
- tools without internal coolant supply ■
- tolerance field ISO 2 ■
- chamfer form B ■



\* without neck

						TINIB	FEDUB
Cutting material ▶						HSS-PM vaporized	HSS-PM vaporized
Surface ▶							
Shank Ø DIN 371 ▶						Order No.	Order No.
Nominal Ø d1	P	l1	l2	d2.1	a1		
M1,4	0,30	40		2,5	2,1		
M1,6	0,35	40		2,5	2,1		
M1,7	0,35	40		2,5	2,1		
M1,8	0,35	40		2,5	2,1		
M2	0,40	45	8,0	2,8	2,1	20194001000008*	
M2,2	0,45	45		2,8	2,1		
M2,3	0,40	45		2,8	2,1		
M2,5	0,45	50	9,0	2,8	2,1	20194001000011*	
M2,6	0,45	50		2,8	2,1		
M3	0,50	56	11,0	3,5	2,7	20194001000013*	20186001000013*
M3,5	0,60	56		4,0	3,0		
M4	0,70	63	13,0	4,5	3,4	20194001000015*	20186001000015*
M4,5	0,75	70		6,0	4,9		
M5	0,80	70	16,0	6,0	4,9	20194001000017*	20186001000017*
M6	1,00	80	18,0	6,0	4,9	20194001000018*	20186001000018*
M7	1,00	80		7,0	5,5		
M8	1,25	90	18,0	8,0	6,2	20194001000020	20186001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100	21,0	10,0	8,0	20194001000022	20186001000022
Shank Ø DIN 376 ▶							
Nominal Ø d1	P	l1	l2	d2.2	a2	Order No.	Order No.
M11	1,50	100		8,0	6,2		
M12	1,75	110	24,0	9,0	7,0		20187001000024
M14	2,00	110		11,0	9,0		
M16	2,00	110		12,0	9,0		
M18	2,50	125		14,0	11,0		
M20	2,50	140		16,0	12,0		
M22	2,50	140		18,0	14,5		
M24	3,00	160		18,0	14,5		
M27	3,00	160		20,0	16,0		
M30	3,50	180		22,0	18,0		



1



2



3



4



5



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9



HSS-E Taps

- for metric ISO thread DIN 13
- tools without internal coolant supply
- tolerance field ISO 2X
- chamfer form C

1



2



3



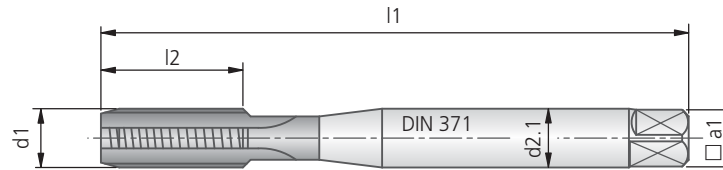
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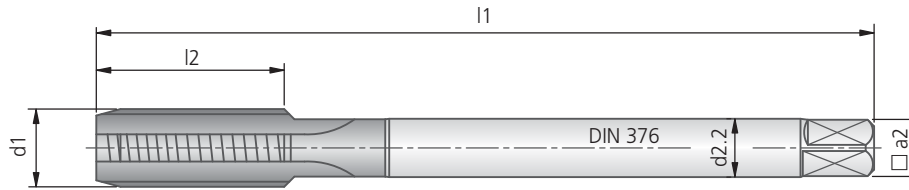
5



M1,4 - M10



M11 - M30



						GG TiN
						Cutting material ▶ Surface ▶
						Shank Ø DIN 371 ▶
Nominal Ø d1	P	l1	l2	d2.1	a1	Order No.
M1,4	0,30	40		2,5	2,1	
M1,6	0,35	40		2,5	2,1	
M1,7	0,35	40		2,5	2,1	
M1,8	0,35	40		2,5	2,1	
M2	0,40	45		2,8	2,1	
M2,2	0,45	45		2,8	2,1	
M2,3	0,40	45		2,8	2,1	
M2,5	0,45	50		2,8	2,1	
M2,6	0,45	50		2,8	2,1	
M3	0,50	56	11,0	3,5	2,7	20356001000013
M3,5	0,60	56		4,0	3,0	
M4	0,70	63	13,0	4,5	3,4	20356001000015
M4,5	0,75	70		6,0	4,9	
M5	0,80	70	16,0	6,0	4,9	20356001000017
M6	1,00	80	18,0	6,0	4,9	20356001000018
M7	1,00	80		7,0	5,5	
M8	1,25	90	18,0	8,0	6,2	20356001000020
M9	1,25	90		9,0	7,0	
M10	1,50	100	21,0	10,0	8,0	20356001000022
						Shank Ø DIN 376 ▶
Nominal Ø d1	P	l1	l2	d2.2	a2	Order No.
M11	1,50	100		8,0	6,2	
M12	1,75	110	24,0	9,0	7,0	20357001000024
M14	2,00	110		11,0	9,0	
M16	2,00	110		12,0	9,0	
M18	2,50	125		14,0	11,0	
M20	2,50	140		16,0	12,0	
M22	2,50	140		18,0	14,5	
M24	3,00	160		18,0	14,5	
M27	3,00	160		20,0	16,0	
M30	3,50	180		22,0	18,0	

- for metric ISO thread DIN 13 ■
- tools without internal coolant supply ■
- tolerance field ISO 2 ■
- chamfer form C ■



1



2



3



4



5



6



7



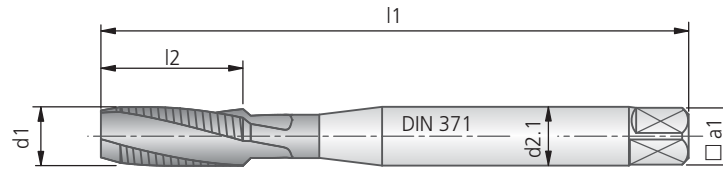
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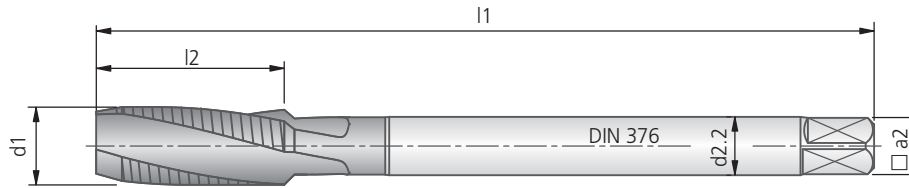
9





M1,4 - M10



M11 - M30



\* without neck

						FEDUC
Nominal ∅ d1	P	l1	l2	d2.1	a1	Cutting material ▶ Surface ▶ Shank ∅ DIN 371 ▶
						HSS-PM vaporized  Order No.
M1,4	0,30	40		2,5	2,1	
M1,6	0,35	40		2,5	2,1	
M1,7	0,35	40		2,5	2,1	
M1,8	0,35	40		2,5	2,1	
M2	0,40	45	8,0	2,8	2,1	20192001000008*
M2,2	0,45	45		2,8	2,1	
M2,3	0,40	45		2,8	2,1	
M2,5	0,45	50	9,0	2,8	2,1	20192001000011*
M2,6	0,45	50		2,8	2,1	
M3	0,50	56	11,0	3,5	2,7	20192001000013*
M3,5	0,60	56		4,0	3,0	
M4	0,70	63	13,0	4,5	3,4	20192001000015*
M4,5	0,75	70		6,0	4,9	
M5	0,80	70	16,0	6,0	4,9	20192001000017*
M6	1,00	80	18,0	6,0	4,9	20192001000018*
M7	1,00	80		7,0	5,5	
M8	1,25	90	18,0	8,0	6,2	20192001000020
M9	1,25	90		9,0	7,0	
M10	1,50	100	21,0	10,0	8,0	20192001000022
Nominal ∅ d1	P	l1	l2	d2.2	a2	Cutting material ▶ Surface ▶ Shank ∅ DIN 376 ▶
						HSS-PM vaporized  Order No.
M11	1,50	100		8,0	6,2	
M12	1,75	110	24,0	9,0	7,0	20193001000024
M14	2,00	110		11,0	9,0	
M16	2,00	110		12,0	9,0	
M18	2,50	125		14,0	11,0	
M20	2,50	140		16,0	12,0	
M22	2,50	140		18,0	14,5	
M24	3,00	160		18,0	14,5	
M27	3,00	160		20,0	16,0	
M30	3,50	180		22,0	18,0	



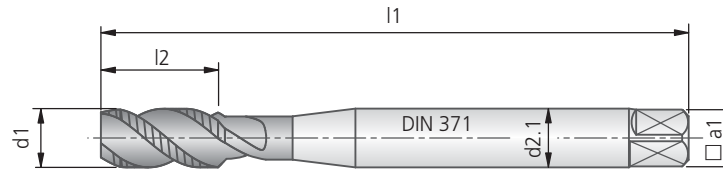
HSS-E / HSS-PM Taps

- for metric ISO thread DIN 13
- tools without internal coolant supply
- tolerance field ISO 2
- chamfer form C

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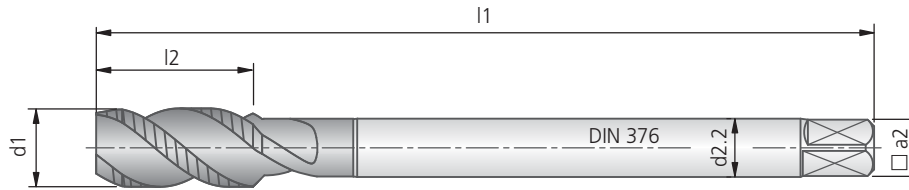
M1,4 - M10



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M11 - M30



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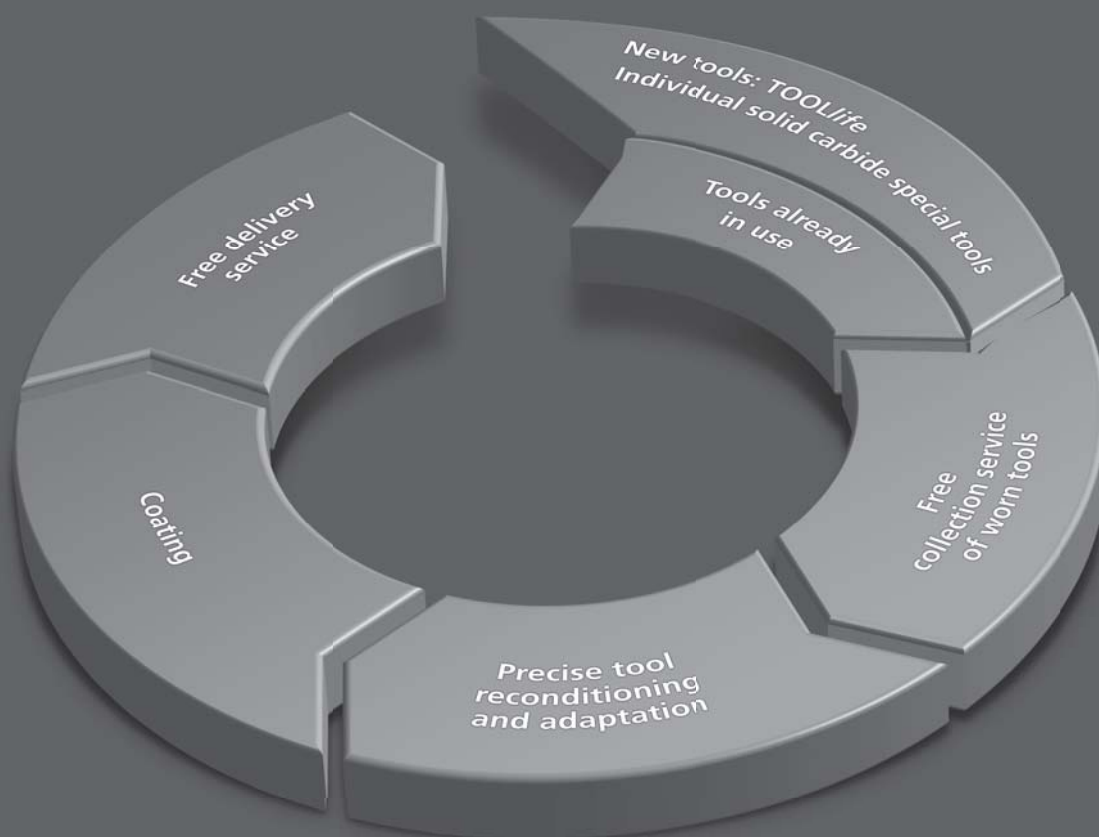
\* without neck

							TAREX	TAREX VAV	TAREX TiN	TAREX OT TiN
Cutting material ▶							HSS-E	HSS-E	HSS-E	HSS-PM
Surface ▶							uncoated	vaporized	TiN	TiN
Shank Ø DIN 371 ▶										
Nom. Ø	P	l1	l2	d2.1	a1	Order No.	Order No.	Order No.	Order No.	
M1,4	0,30	40		2,5	2,1					
M1,6	0,35	40		2,5	2,1					
M1,7	0,35	40		2,5	2,1					
M1,8	0,35	40		2,5	2,1					
M2	0,40	45	4,0	2,8	2,1	20146001000008	20170001000008			
M2,2	0,45	45		2,8	2,1					
M2,3	0,40	45		2,8	2,1					
M2,5	0,45	50	4,0	2,8	2,1	20146001000011	20170001000011			
M2,6	0,45	50		2,8	2,1					
M3	0,50	56	5,0	3,5	2,7	20146001000013	20170001000013	20346001000013	20342001000013*	
M3,5	0,60	56	5,0	4,0	3,0	20146001000014	20170001000014			
M4	0,70	63	7,0	4,5	3,4	20146001000015	20170001000015	20346001000015	20342001000015*	
M4,5	0,75	70		6,0	4,9					
M5	0,80	70	8,0	6,0	4,9	20146001000017	20170001000017	20346001000017	20342001000017*	
M6	1,00	80	10,0	6,0	4,9	20146001000018	20170001000018	20346001000018	20342001000018*	
M7	1,00	80		7,0	5,5					
M8	1,25	90	12,0	8,0	6,2	20146001000020	20170001000020	20346001000020	20342001000020	
M9	1,25	90		9,0	7,0					
M10	1,50	100	14,0	10,0	8,0	20146001000022	20170001000022	20346001000022	20342001000022	
Shank Ø DIN 376 ▶										
Nom. Ø	P	l1	l2	d2.2	a2	Order No.	Order No.	Order No.	Order No.	
M11	1,50	100		8,0	6,2					
M12	1,75	110	16,0	9,0	7,0	20147001000024	20171001000024	20347001000024	20343001000024	
M14	2,00	110	20,0	11,0	9,0	20147001000025	20171001000025	20347001000025		
M16	2,00	110	20,0	12,0	9,0	20147001000026	20171001000026	20347001000026		
M18	2,50	125	24,0	14,0	11,0	20147001000027	20171001000027	20347001000027		
M20	2,50	140	24,0	16,0	12,0	20147001000028	20171001000028	20347001000028		
M22	2,50	140	24,0	18,0	14,5	20147001000029				
M24	3,00	160	28,0	18,0	14,5	20147001000030				
M27	3,00	160		20,0	16,0					
M30	3,50	180		22,0	18,0					

Using KOMET SERVICE®, we provide our customers with additional service benefits in order to ensure that tools are consistently high-quality so that maximum process reliability can be provided in production.

#### BENEFITS for you:

- Standard tools and solid carbide special tools directly from your KOMET SERVICE® partner
- Personal attention from a regrinding expert in your local area
- Process reliability due to original quality and coating, if required
- Reduction in manufacturing and unit costs thanks to low new procurement volumes
- Save time using short channels
- Flexibility thanks to uncomplicated processing of orders
- Access to an efficient partner network (regrinding of solid carbide saw blades, prickers and various cutting tools for the wood, paper and plastics industry)



Further information can be found in section 9 or at [www.kometservice.com](http://www.kometservice.com)



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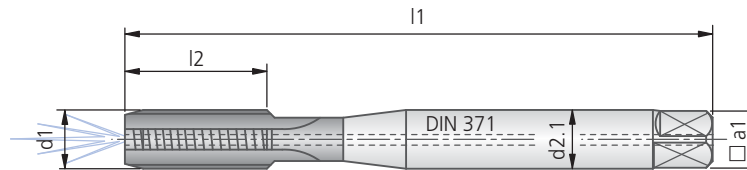


HSS-E Taps

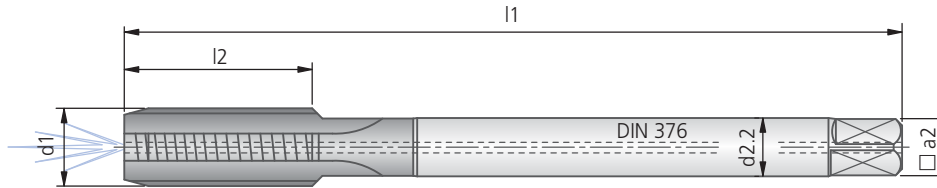
- for metric ISO thread DIN 13
- with central coolant supply
- tolerance field ISO 2X
- chamfer form C





M4 - M10



M11 - M16



						GG IK TiN
Cutting material ▶						HSS-E
Surface ▶						TiN
Shank Ø DIN 371 ▶						
Nominal Ø d1	P	l1	l2	d2.1	a1	Order No.
M4	0,70	63		4,5	3,4	
M4,5	0,75	70		6,0	4,9	
M5	0,80	70		6,0	4,9	
M6	1,00	80	18,0	6,0	4,9	20556001000018
M7	1,00	80		7,0	5,5	
M8	1,25	90	18,0	8,0	6,2	20556001000020
M9	1,25	90		9,0	7,0	
M10	1,50	100	21,0	10,0	8,0	20556001000022
Shank Ø DIN 376 ▶						
Nominal Ø d1	P	l1	l2	d2.2	a2	Order No.
M11	1,50	100		8,0	6,2	
M12	1,75	110	24,0	9,0	7,0	20557001000024
M14	2,00	110		11,0	9,0	
M16	2,00	110		12,0	9,0	

- for metric ISO thread DIN 13 ■
- with central coolant supply ■
- tolerance field ISO 2 ■
- chamfer form C ■



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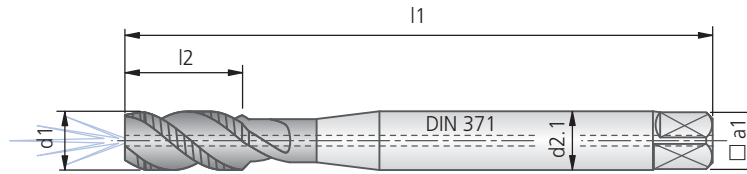
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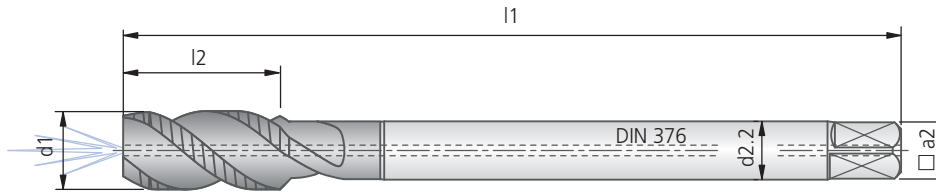
9





M4 - M10



M11 - M16



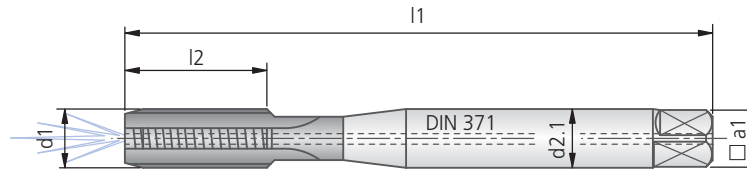
						TAREX IK TiN
Cutting material ▶						HSS-E
Surface ▶						TiN
Shank Ø DIN 371 ▶						
Nominal Ø d1	P	l1	l2	d2.1	a1	Order No.
M4	0,70	63		4,5	3,4	
M4,5	0,75	70		6,0	4,9	
M5	0,80	70		6,0	4,9	
M6	1,00	80	10,0	6,0	4,9	20546001000018
M7	1,00	80		7,0	5,5	
M8	1,25	90	12,0	8,0	6,2	20546001000020
M9	1,25	90		9,0	7,0	
M10	1,50	100	14,0	10,0	8,0	20546001000022
Shank Ø DIN 376 ▶						
Nominal Ø d1	P	l1	l2	d2.2	a2	Order No.
M11	1,50	100		8,0	6,2	
M12	1,75	110	16,0	9,0	7,0	20547001000024
M14	2,00	110		11,0	9,0	
M16	2,00	110		12,0	9,0	

Solid Carbide Taps

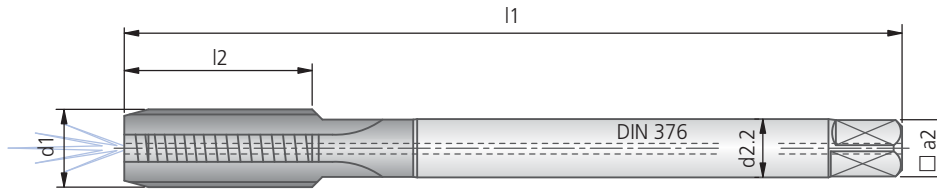
- for metric ISO thread DIN 13
- from nominal Ø M4 with central coolant supply
- tolerance field SIREX = ISO 2, GG = ISO 2X
- chamfer form C



M3 - M3,5 without central coolant supply  
M4 - M10



M11 - M16

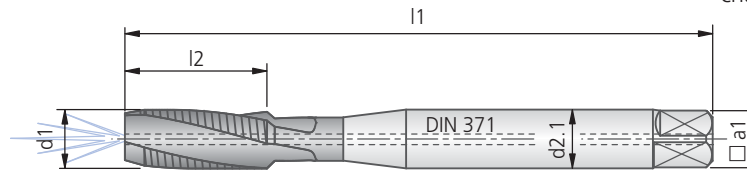


						SIREX	GG
Cutting material ▶						solid carbide	solid carbide
Surface ▶						uncoated	uncoated
Shank Ø DIN 371 ▶							
Nominal Ø d1	P	l1	l2	d2.1	a1	Order No.	Order No.
M3	0,50	56	11,0	3,5	2,7	80420001000013	
M3,5	0,60	56		4,0	3,0		
M4	0,70	63	13,0	4,5	3,4	80420001000015	80456001000015
M5	0,80	70	16,0	6,0	4,9	80420001000017	80456001000017
M6	1,00	80	18,0	6,0	4,9	80420001000018	80456001000018
M7	1,00	80		7,0	5,5		
M8	1,25	90	18,0	8,0	6,2	80420001000020	80456001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100	21,0	10,0	8,0	80420001000022	80456001000022
Shank Ø DIN 376 ▶							
Nominal Ø d1	P	l1	l2	d2.2	a2	Order No.	Order No.
M11	1,50	100		8,0	6,2		
M12	1,75	110	24,0	9,0	7,0	80421001000024	80457001000024
M14	2,00	110		11,0	9,0		
M16	2,00	110		12,0	9,0		

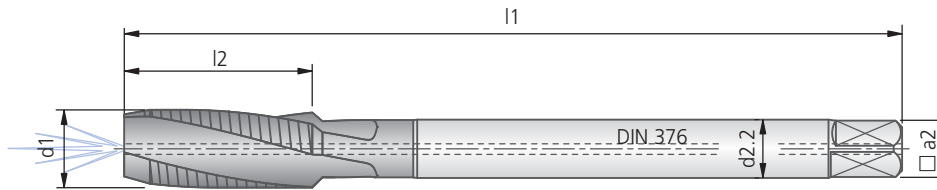
Solid Carbide Taps

- for metric ISO thread DIN 13 ■
- from nominal Ø M4 with central coolant supply ■
- tolerance field ISO 2 ■
- chamfer form C / E ■

M3 - M3,5 without central coolant supply  
M4 - M10



M11 - M16



						SIREX SR	SIREX SR
Cutting material ▶						solid carbide	solid carbide
Surface ▶						uncoated	uncoated
Shank Ø DIN 371 ▶							
Nominal Ø d1	P	l1	l2	d2.1	a1	Order No. chamfer form C	Order No. chamfer form E
M3	0,50	56	11,0	3,5	2,7	80444001000013	
M3,5	0,60	56		4,0	3,0		
M4	0,70	63	13,0	4,5	3,4	80444001000015	
M5	0,80	70	16,0	6,0	4,9	80444001000017	
M6	1,00	80	18,0	6,0	4,9	80444001000018	80416001000018
M7	1,00	80		7,0	5,5		
M8	1,25	90	18,0	8,0	6,2	80444001000020	80416001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100	21,0	10,0	8,0	80444001000022	80416001000022
Shank Ø DIN 376 ▶							
Nominal Ø d1	P	l1	l2	d2.2	a2	Order No.	Order No.
M11	1,50	100		8,0	6,2		
M12	1,75	110	24,0	9,0	7,0	80445001000024	
M14	2,00	110		11,0	9,0		
M16	2,00	110		12,0	9,0		



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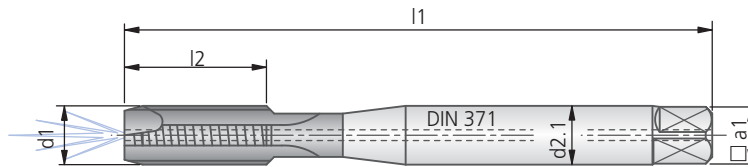



Solid Carbide Taps

- for metric ISO thread DIN 13
- from nominal Ø M4 with central coolant supply
- tolerance field ISO 2
- chamfer form B



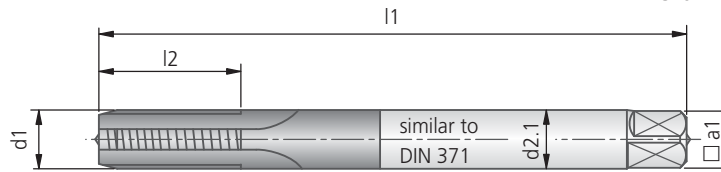
M3 - M3,5 without central coolant supply  
M4 - M10



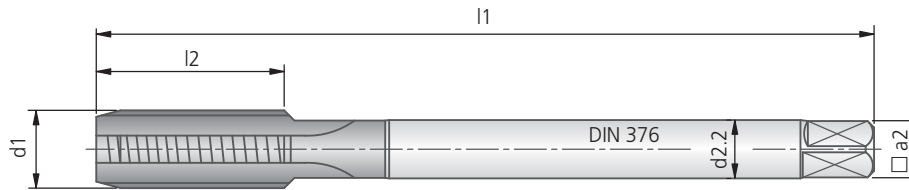
						DOREX
						solid carbide uncoated
						
						Order No.
Nominal Ø d1	P	l1	l2	d2.1	a1	
M3	0,50	56		3,5	2,7	
M3,5	0,60	56		4,0	3,0	
M4	0,70	63		4,5	3,4	
M5	0,80	70		6,0	4,9	
M6	1,00	80	18,0	6,0	4,9	80418001000018
M7	1,00	80		7,0	5,5	
M8	1,25	90	18,0	8,0	6,2	80418001000020
M9	1,25	90		9,0	7,0	
M10	1,50	100	21,0	10,0	8,0	80418001000022





- for metric ISO thread DIN 13 ■
- for hard machining from 45 HRC hardness ■
- tolerance field ISO 2X ■
- chamfer form C and D ■

M3 - M10



M11 - M16



						SIREX XH ≤ 58 HRC	SIREX XH ≤ 52 HRC
Cutting material ▶						solid carbide	solid carbide
Surface ▶						TiAlN	TiAlN
Shank Ø similar to DIN 371 ▶							
Nominal Ø d1	P	l1	l2	d2.1	a1	Order No. chamfer form D	Order No. chamfer form C
M3	0,50	56		3,5	2,7		
M3,5	0,60	56		4,0	3,0		
M4	0,70	63	18,0	4,5	3,4	80126001000015	80128001000015
M5	0,80	70	20,0	6,0	4,9	80126001000017	80128001000017
M6	1,00	80	24,0	6,0	4,9	80126001000018	80128001000018
M7	1,00	80		7,0	5,5		
M8	1,25	90	24,0	8,0	6,2	80126001000020	80128001000020
M9	1,25	90		9,0	7,0		
M10	1,50	100	26,0	10,0	8,0	80126001000022	80128001000022
Shank Ø DIN 376 ▶							
Nominal Ø d1	P	l1	l2	d2.2	a2	Order No.	Order No.
M11	1,50	100		8,0	6,2		
M12	1,75	110	26,0	9,0	7,0	80127001000024	80129001000024
M14	2,00	110	26,0	11,0	9,0	80127001000025	80129001000025
M16	2,00	110	27,0	12,0	9,0	80127001000026	80129001000026



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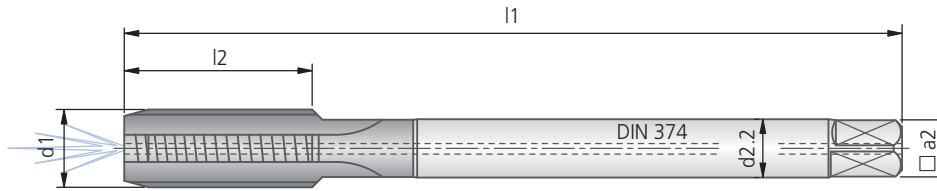
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Solid Carbide Taps

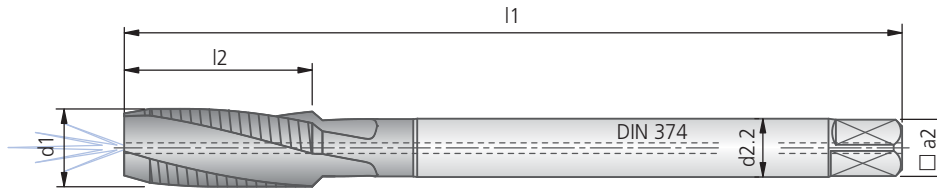
- for metric fine ISO thread DIN 13
- with central coolant supply
- tolerance field ISO 2
- chamfer form C





					SIREX
Nominal Ø d1 x P	l1	l2	d2.1	Cutting material ▶	solid carbide uncoated
				Surface ▶	
				Shank Ø DIN 374 ▶	
				a1	Order No.
M4x0,5	63	10	4,5	3,4	80420002000029
M5x0,5	70		6,0	4,9	
M6x0,5	80		6,0	4,9	
M6x0,75	80	14	6,0	4,9	80420002000048
M8x0,5	80		8,0	4,9	
M8x0,75	80		8,0	4,9	
M8x1	90	18	8,0	4,9	80420002000070
Nominal Ø d1 x P	l1	l2	d2.2	Shank Ø DIN 374 ▶	
				a2	
M10x0,75	90		7,0	5,5	
M10x1	90	18	7,0	5,5	80421002000094
M10x1,25	100		7,0	5,5	
M11x1	90		8,0	6,2	
M12x1	100		9,0	7,0	
M12x1,25	100		9,0	7,0	
M12x1,5	100	20	9,0	7,0	80421002000113
M14x1	100		11,0	9,0	
M14x1,25	100		11,0	9,0	
M14x1,5	100	20	11,0	9,0	80421002000131
M15x1	100		12,0	9,0	
M15x1,5	100		12,0	9,0	
M16x1	100		12,0	9,0	
M16x1,5	100	20	12,0	9,0	80421002000147
M18x1	110		14,0	11,0	
M18x1,5	110		14,0	11,0	
M20x1,5	125		16,0	12,0	

Solid Carbide Taps

- for metric fine ISO thread DIN 13 ■
- with central coolant supply ■
- tolerance field ISO 2 ■
- chamfer form C ■



					SIREX SR
Nominal Ø d1 x P	l1	l2	d2.1	Cutting material ▶	solid carbide uncoated
				Surface ▶	
				Shank Ø DIN 374 ▶	
				a1	Order No.
M4x0,5	63	10	4,5	3,4	80444002000029
M5x0,5	70		6,0	4,9	
M6x0,5	80		6,0	4,9	
M6x0,75	80	14	6,0	4,9	80444002000048
M8x0,5	80		8,0	4,9	
M8x0,75	80		8,0	4,9	
M8x1	90	18	8,0	4,9	80444002000070
Nominal Ø d1 x P	l1	l2	d2.2	Shank Ø DIN 374 ▶	
				a2	
M10x0,75	90		7,0	5,5	
M10x1	90	18	7,0	5,5	80445002000094
M10x1,25	100		7,0	5,5	
M11x1	90		8,0	6,2	
M12x1	100		9,0	7,0	
M12x1,25	100		9,0	7,0	
M12x1,5	100	20	9,0	7,0	80445002000113
M14x1	100		11,0	9,0	
M14x1,25	100		11,0	9,0	
M14x1,5	100	20	11,0	9,0	80445002000131
M15x1	100		12,0	9,0	
M15x1,5	100		12,0	9,0	
M16x1	100		12,0	9,0	
M16x1,5	100	20	12,0	9,0	80445002000147
M18x1	110		14,0	11,0	
M18x1,5	110		14,0	11,0	
M20x1,5	125		16,0	12,0	



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# JEL® Taps

## Technical notes

Guideline values for tapping				Cutting speed				Coolant				
Material group	Strength Rm (N/mm <sup>2</sup> )	Hardness HB	Cutting material Surface	HSS-E		Solid carbide		Emulsion	Oil	Dry	Air	
				uncoated	coated	uncoated	coated					
			Material	V <sub>C</sub> m/min	V <sub>C</sub> m/min	V <sub>C</sub> m/min	V <sub>C</sub> m/min					
P	1.1	≤400	≤120	magnetic soft iron	15 - 30	20 - 50			✓	✓		
	1.2	≤700	≤200	structural, case hardened steel	15 - 25	20 - 40			✓	✓		
	1.3	≤850	≤250	carbon steel	15 - 20	20 - 35			✓	✓		
	1.4	≤850	≤250	alloy steel	10 - 15	20 - 30			✓	✓		
	1.5	>850 ≤1200	>250 ≤350	alloy/heat treated steel	5 - 10	15 - 20			✓	✓		
	1.6	>1200	>350	alloy/heat treated steel	2 - 5	10 - 15				✓		
H	1.7	≤1400	≤400	hardened steel to 45 HRC				2 - 8		✓		
	1.8	≤2200	≤600	hardened steel to 58 HRC				2 - 5		✓		
M	2.1	≤850	≤250	stainless steel, sulphuretted	5 - 10	10 - 25				✓		
	2.2	≤850	≤250	austenitic	4 - 8	10 - 20				✓		
	2.3	≤1000	≤300	ferritic, ferritic & austenitic, martensitic	3 - 5	7 - 12				✓		
K	3.1	≤500	≤150	grey cast iron	10 - 20	20 - 25	20 - 50		✓		✓	
	3.2	>500 ≤1000	>150 ≤300	grey cast iron, heat treated	5 - 10	15 - 20	20 - 50		✓			
	3.3	400-500	200-250	vermicular cast iron								
	3.4	≤700	≤200	spheroidal graphite cast iron	10 - 20	20 - 40	20 - 50		✓			
	3.5	>700 ≤1000	>200 ≤300	spheroidal graphite cast iron, heat treated	5 - 10	10 - 15	20 - 50		✓	✓		
	3.6	≤700	≤200	malleable iron	10 - 15	30 - 40	20 - 50		✓	✓		
	3.7	>700 ≤1000	>200 ≤300	malleable iron heat treated	5 - 10	10 - 20	20 - 50		✓	✓		
S	4.1	≤700	≤200	pure titanium	5 - 15	10 - 15			✓	✓		
	4.2	≤900	≤270	titanium alloys	3 - 10	10 - 15			✓	✓		
	4.3	>900 ≤1250	>270 ≤300	titanium alloys	1 - 5	5 - 10				✓		
	5.1	≤500	≤150	pure nickel	7 - 10	10 - 15				✓		
	5.2	≤900	<270	nickel alloys, heat resistant	4 - 8	5 - 10				✓		
	5.3	>900 ≤1200	>270 ≤350	nickel alloys, high heat resistance	3 - 5	4 - 7				✓		
N	6.1	≤350	≤100	non-alloy copper	10 - 15	15 - 20			✓	✓		
	6.2	≤700	≤200	short chip, brass, bronze, red brass	25 - 30	40 - 50	25 - 60		✓		✓	
	6.3	≤700	≤200	long chip brass	10 - 20	30 - 40			✓	✓		
	6.4	≤500	≤470	Cu-Al-Fe alloy (Ampco)	2 - 5	5 - 8	5 - 9		✓	✓		
	7.1	≤350	≤100	Al, Mg non-alloy	10 - 15	20 - 50			✓			
	7.2	≤600	≤180	Al wrought alloy, breaking strain (A 5) <14 %	15 - 20	20 - 40			✓			
	7.3	≤600	≤180	Al wrought alloy, breaking strain (A 5) ≥14 %	10 - 15	20 - 40			✓			
	7.4	≤600	≤180	Al cast alloy, Si <10 %	20 - 30	25 - 50	25 - 80		✓			
7.5	≤600	≤180	Al cast alloy, Si ≥10 %	15 - 25	20 - 30	20 - 60		✓				
8.1			thermoplastics	15 - 25	20 - 30			✓		✓		
8.2			thermosetting plastics	5 - 10	10 - 15	10 - 30		✓			✓	
8.3			fibre reinforced plastics	3 - 5	8 - 12	8 - 25		✓				



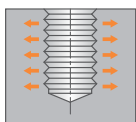
1



**Oversized thread**

- wrong tools → select the right tools as shown in the catalogue
- cutting edge geometry not suitable for materials to be machined → select the right tools as shown in the catalogue
- material built-up at tap flanks → improve coolant system → use coated tap
- minor diameter too small, tool is cutting full profile → select correct core diameter
- chip jam → blind bore: increase spindle speed. Correct tool selection (spiral flute) → through hole: correct tool selection (spiral point)
- tolerance of tap drill to thread gauge does not agree → use tap drill with right tolerance
- angular or positional error in core bore → adjust workpiece clamping, use tapping chuck with axis parallel float

1.



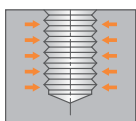
2



**Thread too tight**

- tolerance of tap drill to thread gauge does not agree → use tap drill with right tolerance
- wrong tool type → select the right tools as shown in the catalogue

2.



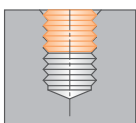
3



**Thread is cut wrongly axially**

- cutting lead pressure on tapping chuck too great → select the right cutting lead pressure

3.



4

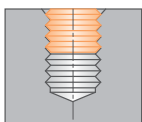


**Pitch distortion**

(plug gauge cannot be screwed in over full thread length on the workpiece)

- tap is not cutting true to pitch → select right tool → select right cutting lead pressure → with length adjustment chucks reduce feed to 95%

4.



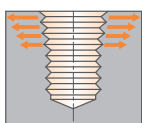
5



**Thread oversize at the entry**

- wrong cutting lead pressure → use compensation chuck(tension) → use lead screw → select right tool

5.



6



**Thread surface not clean**

- wrong tool type → select right tool
- chip jam → see "thread too large – chip jam"
- core diameter too small → select right core diameter
- material built-up on thread flanks → use tools with surface treatment → improve coolant system
- cutting speed too low → increase cutting speed

6.



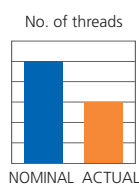
7



**Tool life too short**

- wrong tool type → select right tool type
- cutting speed too high or too low → adjust cutting speed
- composition and supply of coolant inadequate → provide suitable, sufficient coolant
- premature wear due to lack of or unsuitable surface treatment → use coated tools, if necessary solid carbide tools

7.



8



9

