

Precision threading technology



since 1991

PENTAGON

Întotdeauna Soluția Potrivită

Pentagon Ltd. is a company with wholly private capital, established in 1991, which promotes and sells high-performance products, as a representative and distributor of companies with a long history and tradition at national and international level.

We are a forward-thinking, flexible company with prudent development and a capable team of specialists to always offer complete technical solutions at a very good price / quality ratio.

Having a range of products with a wide range of uses in all branches of industry and construction, we had the possibility to collaborate with many companies in the country.

In order to keep you informed on the evolution and strategy of our company, we regularly participate in fairs and local and national exhibitions, we distribute catalogs and leaflets, we support an online promotion campaign and we support directly through area representatives.

We have the following trademarks:

“Pentagon Romania”, “PTG”, “Terentex”, “Teraweld”, “Întotdeauna Soluția Potrivită” and logo



Our company has implemented and applies the Quality Management System: ISO 9001-2015



M Metric coarse thread ISO DIN 13



Thread Cutting Kits
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Short Machine Taps
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Hand Tap Sets
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UNI TAP



Machine Taps
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Forming Taps
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Hexagon Die Nuts
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MF Metric fine thread ISO DIN 13



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Round Dies
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Hexagon Die Nuts
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G(BSP) British standard whitworth pipe thread DIN ISO 228



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UNC Unified coarse thread ANSI B1.1



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UNF Unified fine thread ANSI B1.1



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Hexagon Die Nuts
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UNS Unified thread with special threads per inch (TPI)



Machine Taps
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Round Dies
p. 103

UNEF Unified extra fine thread ANSI B1.1



Hand Tap Sets
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Machine Taps
p. 104



Round Dies
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8-UN Unified thread series with 8-threads per inch (TPI)



Hand Tap Sets
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12-UN Unified thread series with 12-threads per inch (TPI)



Hand Tap Sets
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BSW British standard BS 84 whitworth coarse thread



Thread Cutting Kits
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BSF British standard BS 84 whitworth fine thread



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Short Machine
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TR Trapezoidal thread DIN 103



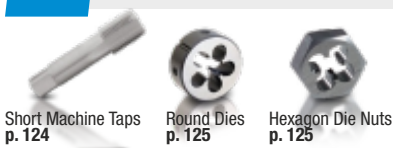
Hand Tap Sets
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NPT National standard taper 1:16 pipe thread ANSI B 1.20.1

NPTF National standard sealing pipe thread ANSI B 1.20.3



Short Machine Taps
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NPS National standard straight pipe thread



Short Machine Taps
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RC (BSPT) Whitworth tapered pipe thread DIN 2999

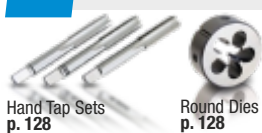
RP(BSPP) British standard whitworth pipe thread ISO 7-1



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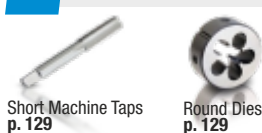
BA British Association thread BS 93



Hand Tap Sets
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W Tapered whitworth DIN 477 for screw sockets taper 3:25



Short Machine Taps
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PG Steel Conduit Thread DIN 40430



Short Machine Taps p. 130
Round Dies p. 130

FG Bicycle thread DIN 79012 **BSC** British bicycle thread RS 811



Machine Taps p. 131
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RD Knuckle thread DIN 405 **RMS** Royal Microscopical Society DIN 58888



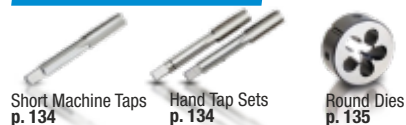
Machine Taps p. 132
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MINI Metric Mini-thread and Nano-thread



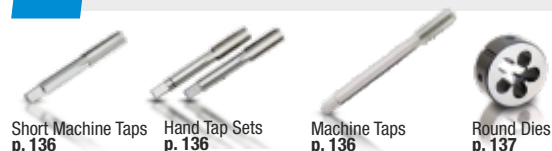
Machine Taps p. 133

CAMERA-Tripod Camera tripod and C-Mount thread DIN 4503



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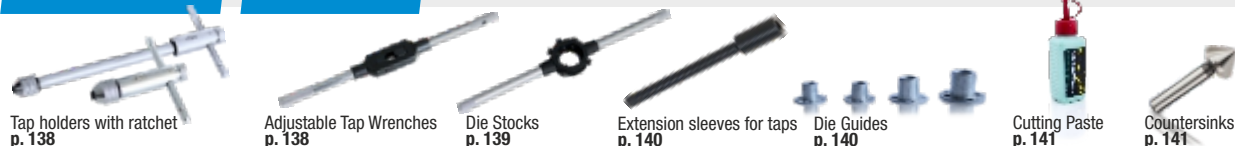
VG Valve thread DIN 7756



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UNiTap - Universal High-End Threading Tap

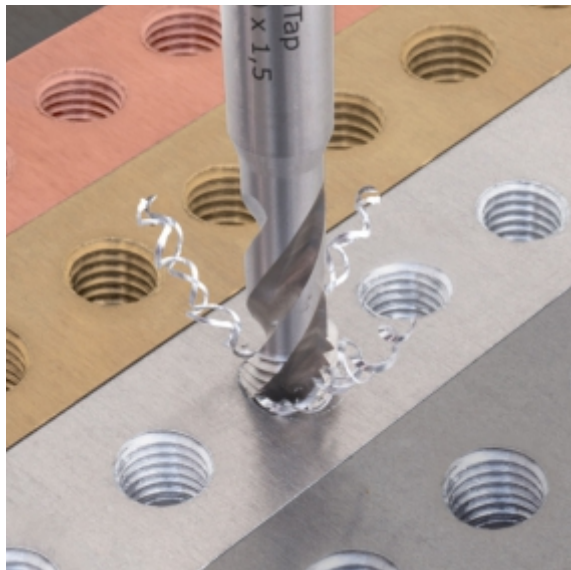
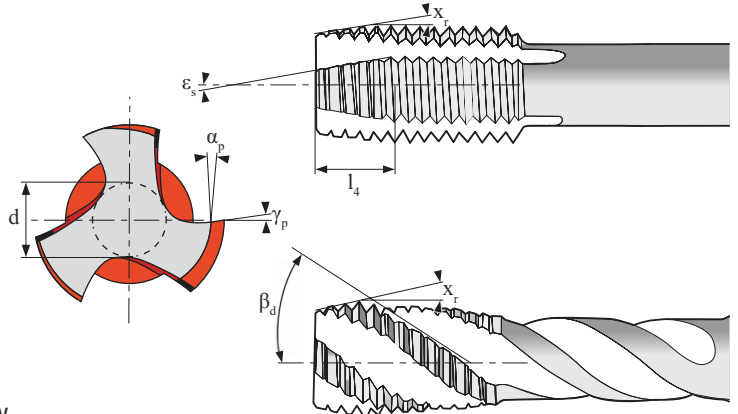
A real revolution in the production of internal threads

UNiTap - Unique cutting geometry

The unique geometry of UNiTap Taps is the result of years of research, which enables the user to machine all materials and makes the tap universally suitable for almost all applications.

During threading an internal thread, the major forces occur at the lead-in chamfer, which is strikingly relieved by structural changes in the UNiTap. The consequence is a reduced torque and a longer life time of the tap. In addition, the areas directly after the lead-in chamfer have been changed to lead the chip optimally and avoid possible jammings. An over-feeding of the thread is also not possible with this profile change.

The design sets new standards in ease of use, durability, and versatility



A professional for all applications and materials

- Steels and Steel alloys up to 1200 N/mm
- Stainless Steels; Inoxidable Steels up to 1000 N/mm; Vasteels; INOX; V2A; V4A
- Pure Aluminium; Aluminium Cast and Wrought Alloys
- Grey Cast Iron; Ductile/Nodular/Spheroidal Graphite Cast
- Iron; Malleable Cast Iron up to 1000 N/mm
- Pure Titanium and Titanium alloys up to 900 N/mm
- Pure Nickel and Nickel alloys up 900 N/mm
- Pure Copper; Copper alloys; Brass; Bronze (all chip lengths)

Cost savings and flexibility

Due to its universal application possibilities, one UNiTap can do the work of several conventional taps. As a result you can save about 90% of expenses.

Comparison of expenses:

Machine Taps M6 for	EUR / pc.
normal steels	6,98
stainless steels	11,68
aluminium and alloys	34,57
cast and grey cast iron	19,64
titanium and alloys	47,30
brass and copper	11,81
total:	131,98



same result with



HSE UNiTap Machine Tap for through holes M 6 x 1,0

17,33 EUR over 85% savings

Coatings

On request, taps are also available with a TiN or TiAlN coating. The TiN surface treatment (titanium-nitride gold-yellow) increases the surface hardness (approx. 2300 HV) and the sliding properties. As a result, it provides a better cutting performance and an increased tool life time. The TiAlN surface treatment increases the surface hardness (approx. 3300 HV), the sliding properties (friction coefficient: 0,25) and with the temperature resistance up to 800°C. As a result, it provides a better cutting performance and an increased tool life time.



Examples of application materials and cutting speeds

Soft Iron, Constructional Steel, Free Cutting Steel, Cementation Steel		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
1.1014	RFe80	25 - 50	25 - 50
1.0570	St52-3	25 - 50	25 - 50
1.0718	9SMnPb28	25 - 50	25 - 50
1.6523	20NiCrMo2	6 - 30	6 - 30

Stainless Steel, Inoxable Steel (ferritic, austenitic, martensitic)		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
1.4104	X14CrMoS17	12 - 35	12 - 35
1.4301	X5CrNi18-10 (V2A)	12 - 15	12 - 15
1.4571	X6CrNiMoTi17-12-2 (V4A)	12 - 15	12 - 15
1.4125	X105CrMo17	12 - 15	12 - 15

Grey Cast Iron		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
0.6010	GG10	35 - 50	35 - 50
0.6020	GG20	35 - 50	35 - 50
0.6030	GG30	35 - 50	35 - 50
0.6040	GG40	35 - 50	35 - 50

Pure Titanium and Titanium alloys		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
3.7024	Ti99.5	3 - 15	3 - 15
3.7034	Ti99.7	3 - 15	3 - 15
3.7165	TiAl6V4	1 - 5	1 - 5
3.7174	TiAl6V4Sn2	1 - 5	1 - 5

Pure Aluminium, Aluminium Cast and Wrought Alloys (all chip lengths)		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
3.0205	Al99	50 - 65	50 - 65
3.1645	AlCuMgPb	50 - 65	50 - 65
3.2373	G-AISI9Mg	40 - 65	40 - 65
3.2583	G-AISI12(Cu)	40 - 65	40 - 65

Carbon Steel, Spring Steel, Alloy Steel, Heat-treatable Steel		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
1.0503	C45	20 - 30	20 - 30
1.1269	Ck85	20 - 30	20 - 30
1.7218	25CrMo4	6 - 30	6 - 30
1.2344	X40CrMoV5-1	6 - 30	6 - 30

Pure Nickel and Nickel alloys		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
1.3926	RNi12	3 - 10	3 - 10
2.4668	NiCr19Fe19NbMo (Inconel 718)	3 - 10	3 - 10
2.4630	Ni-Cr20Ti (Nimonic 75)	1 - 5	1 - 5
2.4665	NiCr22Fe18Mo (Hastelloy X)	1 - 5	1 - 5

Ductile/Nodular/ Spheroidal Graphite Cast Iron, Malleable Cast Iron		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
0.7040	GGG40	12 - 45	12 - 45
0.7060	GGG60	12 - 45	12 - 45
0.7070	GGG70	12 - 45	12 - 45
0.8035	GTW35-04	10 - 25	10 - 25

Pure Copper and Copper alloys, Brass, Bronze (all chip lengths)		cutting speed v_c in m/min for machine taps for through holes	cutting speed v_c in m/min for machine taps for blind holes
2.0065	E-Cu 58	50 - 60	50 - 60
2.1247	CuBe2	30 - 65	30 - 65
2.0360	CuZn40	30 - 65	30 - 65
2.1020	CuSn6	12 - 20	12 - 20

$$\text{cutting speed } v_c \text{ [m/min]} = (\text{diameter} * \pi * \text{number of rotations}) / 1000$$

$$\text{number of rotations } n \text{ [1/min]} = (\text{cutting speed in m/min} * 1000) / (\text{diameter} * \pi)$$

$$\text{feed programming [mm/min]} = \text{number of rotations} * \text{pitch}$$

Please keep in mind that the cutting speeds as stated above serve only as guidelines. The right cutting speed depends on lubrication and application.

Cutting paste, cutting oil or emulsion is recommended.

Special tools on request

Our customers benefit from our flexibility and our technical know-how when it comes to design and manufacture special threading tools.

- special thread profiles
- special sizes
- intermediate sizes
- special geometries
- special Taps
- special Dies
- special material
- express-productions

Examples of our custom-made products







M metric coarse thread / ISO DIN 13



Item No.:
UNISD312

UNiTap Set M 3 - M 12

HSSE UNiTap Machine Taps for through holes
incl. HSSE/Co extreme drill bits for core holes



through
holes up to
4 x D



chip removal
(like picture)



Form B with
spiral point



4-5 threads

TOL



ISO2/6H

Set Content

UNiTap HSSE Machine Taps for through holes	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
--	---

HSSE/Co extreme drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
--	--

UNiTap Set M 3 - M 12

HSSE UNiTap Machine Taps for blind holes
incl. HSSE/Co Extreme drill bits for core holes



blind holes
up to 3 x D



chip removal
(like picture)



Form C 40°
right spiral
flutes



2-3 threads

TOL



ISO2/6H

Set Content

UNiTap HSSE Machine Taps for through holes	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
--	---

HSSE/Co extreme drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
--	--



Item No.:
UNISS312

M metric coarse thread / ISO DIN 13

Short Machine Taps Set M 3 - M 12

HSSG Short Machine Taps

incl. HSS drill bits for core holes and tap wrench



through- & blind holes up to 4 x D



chip removal (like picture)



Form B with spiral point



4-5 threads



ISO2/6H



Item No.: B1928

Set Content

HSSG Short Machine Taps	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
-------------------------	--

HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
--------------------------------	---

adjustable Tap Wrenches - zinc die cast	M 1-12 1/16-1/2 G 1/8
---	---------------------------



Item No.: B1929

Short Machine Taps Set M 3 - M 12

HSSG Short Machine Taps (3 pcs. each dimension)

incl. HSS drill bits for core holes



Through- & blind holes up to 4 x D



chip removal (like picture)



Form B with spiral point



4-5 threads



ISO2/6H

Set Content

HSSG Short Machine Taps	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
-------------------------	---

HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
--------------------------------	---

Machine Taps Set M 3 - M 12

HSSE Machine Taps for through hole

incl. HSS Drill bits for core holes



through holes up to 4 x D



Chip removal (like picture)



Form B with spiral point



4-5 threads



ISO2/6H



Item No.: B1933E

Set Content

HSSE Machine Taps through hole	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
--------------------------------	---

HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
--------------------------------	---

M Metric coarse thread / ISO DIN 13



Item No.:
B1935E

Machine Taps Set M 3 - M 12

HSSE Machine Taps for blind holes
incl. HSS Drill bits for core holes



blind holes
up to 3 x D



Chip removal
(like picture)



Form C with
right spiral
flutes



2-3 threads

TOL



ISO2/6H

Set Content

HSSE Machine Taps for blind holes	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm

Machine Taps Set M 3 - M 12

HSSE-TIN Machine Taps for through hole
incl. HSS-TIN Drill bits for core holes



through- &
blind holes
up to 4 x D



chip removal
(like picture)



Form B with
spiral point



4-5 threads

TOL



ISO2/6H



Item No.:
B1932

Set Content

HSSE-TIN Machine Taps through hole	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
HSSG-TIN Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm

Machine Taps Set M 3 - M 12

HSSE-TIN Machine Taps for through hole
incl. HSS-TIN Drill bits for core holes



blind holes
up to 3 x D



Chip removal
(like picture)



Form B with
spiral point



2-3 threads

TOL



ISO2/6H

Set Content

HSSE Machine Taps for blind holes	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm



Item No.:
B1934

M metric coarse thread / ISO DIN 13

Machine Taps Set M 3 - M 12 for stainless steel

HSSE Machine Taps for through hole
incl. HSSE/Co Extreme drill bits for core holes



through holes
up to 4 x D



chip removal
(like picture)



Form B with
spiral point



4-5 threads



ISO2/6H



Item No.:
B1931

Set Content

HSSE Stainless steel Machine Taps through hole	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
--	---

HSSE/Co Extreme drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
---	--

Machine Taps Set M 3 - M 12 for stainless steel

HSSE Machine Taps for blind holes
incl. HSSE/Co Extreme drill bits for core holes



blind holes
up to 3 x D



Chip removal
(like picture)



Form C with
right spiral
flutes



2-3 threads



ISO2/6H



Item No.:
B1930

Set Content

HSSE Stainless steel Machine Taps for blind holes	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
---	---

HSSE/Co Extreme drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
--	--

Machine Taps Set M 3 - M 12 Left Hand

HSSE Machine Taps for through hole
incl. HSS Drill bits for core holes



through holes
up to 4 x D



Chip removal
(like picture)



Form B with
spiral point



4-5 threads



ISO2/6H



Item No.:
B1936E

Set Content

HSSE Left Machine Taps through hole	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
---	---

HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
-----------------------------------	--

M

Metric coarse thread / ISO DIN 13



Item No.:
B1937E

Machine Taps Set M 3 - M 12 Left Hand

HSSE Machine Taps for blind holes
incl. HSS Drill bits for core holes



blind holes
up to 3 x D



Chip removal
(like picture)



Form C with
right spiral
flutes



2-3 threads

TOL



ISO2/6H

Set Content

HSSE Left Machine Taps for blind holes	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm

Bit Short Machine Taps Set M 3 - M 10

HSSG-Bit Taps
incl. Bit-Adapter



through- &
blind holes
up to 2 x D



Chip removal
(like picture)



Form D
straight
flutes



3-4 threads

TOL



ISO2/6H



Item No.:
B1938

Set Content

HSSG-Bit Short Machine Taps	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5
1/4" Hexagonal-Bit-Adapter	

Combined Bit Taps Set M 3 - M 10

HSSG-Combined Bit Taps
incl. Bit-Adapter



through hole
up to 1 x D



Chip removal
(like picture)

TOL



ISO2/6H

Set Content

HSSG-Combined Bit-Taps	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5
1/4" Hexagonal-Bit-Adapter	



Item No.:
B1939

M metric coarse thread / ISO DIN 13

Taps and Dies Sets M 3 - M 12 (example picture)



UNITap Set M 3 - M 12 HSSE UNITap Machine Taps through hole & blind hole HSSE Round Dies



UNITap HSSE Machine Taps for through hole (up to 4 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	No.: BB12U
UNITap HSSE Machine Taps for through hole (up to 4 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	
HSSE Round Dies with spiral entry	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	

Set M 3 - M 12 HSSE Machine Taps & Drill bits for core holes HSS Round Dies

HSSE Machine Taps Form C for through hole & blind hole (up to 2 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	No.: BB2E
HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm	
HSS Round Dies	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	

Set M 3 - M 12 HSSE Machine Taps through hole & blind hole HSS Round Dies

HSSE Machine Taps Form B with spiral point for through hole (up to 4 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	No.: BB1E
HSSE Machine Taps Form C with right spiral flutes for blind holes (up to 3 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	
HSS Round Dies	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	

Left Hand Set M 3 - M 12 HSSE Left Hand Machine Taps & Drill bits for core holes HSS Left Hand Round Dies

HSSE Machine Taps Left Form C for through hole & blind hole (up to 2 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	No.: BB7E
HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm	
HSS Round Dies Left	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	

TIN Set M 3 - M 12 HSSE-TIN Machine Taps through hole & blind hole HSS Round Dies

HSSE-TIN Machine Taps Form B with spiral point for through hole (up to 4 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	No.: BB4
HSSE-TIN Machine Taps Form C with right spiral flutes for blind holes (up to 3 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	
HSS Round Dies	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	

Stainless steel Set M 3 - M 12 HSSE-Stainless steel Machine Taps through hole & blind hole HSSE-Stainless steel Round Dies

HSSE Stainless steel Machine Taps for through hole (up to 4 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	No.: BB9
HSSE Stainless steel Machine Taps for blind holes (up to 3 x D)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	
HSSE Stainless steel Round Dies	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75	

M Metric coarse thread / ISO DIN 13



M 3 - 12
Standard

Item No.:
10360009046

M 3 - 12
Left

Item No.:
10360009046LH

M 3 - 12
stainless
steels*

Item No.:
10360009046VA

* contains HSSE Taps and Dies

Hand-Tap Sets, Round Dies and Tools Sets



through- &
blind holes
up to 2 x D



Chip removal
(like picture)



Form C
straight
flutes



2-3 threads

TOL



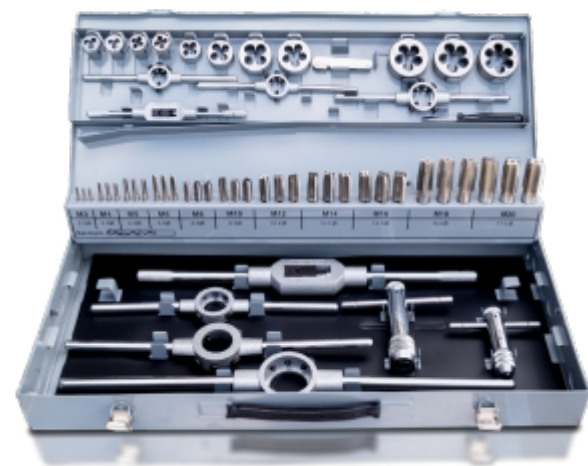
ISO2/6H

Set Content M 3 - M 12

HSSG Hand Tap Sets (3 parts)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
HSS Round Dies acc. to DIN	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75
HSSG Drill bits for core holes	2,5 mm 3,3 mm 4,2 mm 5,0 mm 6,8 mm 8,5 mm 10,2 mm
adjustable Tap Wrenches	M 1-10 1/16-3/8 G 1/8 M 4-12 5/32-1/2 G 1/8
Die Stocks	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14
Tap Holder Ratchet	M 3-10 M 5-12
Thread pitch gauge	for metric threads
Screw extractor	

Set Content M 3 - M 20

HSSG Hand Tap Sets (3 parts)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75 M 14 x 2,0 M 16 x 2,0 M 18 x 2,5 M 20 x 2,5
HSS Round Dies acc. to DIN	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75 M 14 x 2,0 M 16 x 2,0 M 18 x 2,5 M 20 x 2,5
adjustable Tap Wrenches	M 1-10 1/16-3/8 G 1/8 M 5-20 7/32-3/4 G 1/8-G 1/2
Die Stocks	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14 45 x 18
Tap Holder Ratchet	M 3-10 M 5-12
Tap Holder Ratchet	M 3-10 M 5-12
Thread pitch gauge	for metric threads
Screw extractor	



M 3 - 20
Standard

Item No.:
10360009146

M 3 - 20
Left

Item No.:
10360009146LH

M 3 - 20
stainless
steels*

Item No.:
10360009146VA

* contains HSSE Taps and Dies

M metric coarse thread / ISO DIN 13

Hand-Tap Sets, Round Dies and Tools Sets (example picture)



Set M 3 - M 12 (incl. intermediate sizes) HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 7 x 1,0 M 8 x 1,25 M 9 x 1,25 M 10 x 1,5 M 11 x 1,5 M 12 x 1,75
HSS Round Dies	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 7 x 1,0 M 8 x 1,25 M 9 x 1,25 M 10 x 1,5 M 11 x 1,5 M 12 x 1,75
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 4-12 5/32-1/2 G 1/8
Die Stocks - zinc die cast	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14
Screw extractor	

No.:
264800301

Set M 5 - M 12 (incl. intermediate sizes) HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts)	M 5 x 0,8 M 6 x 1,0 M 7 x 1,0 M 8 x 1,25 M 9 x 1,25 M 10 x 1,5 M 11 x 1,5 M 12 x 1,75
HSS Round Dies	M 5 x 0,8 M 6 x 1,0 M 7 x 1,0 M 8 x 1,25 M 9 x 1,25 M 10 x 1,5 M 11 x 1,5 M 12 x 1,75
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 4-12 5/32-1/2 G 1/8
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14
Screw extractor	

No.:
264800401

Set M 5 - M 20 (incl. intermediate sizes) HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts)	M 5 x 0,8 M 6 x 1,0 M 7 x 1,0 M 8 x 1,25 M 9 x 1,25 M 10 x 1,5 M 11 x 1,5 M 12 x 1,75 M 14 x 2,0 M 16 x 2,0 M 18 x 2,5 M 20 x 2,5
HSS Round Dies	M 5 x 0,8 M 6 x 1,0 M 7 x 1,0 M 8 x 1,25 M 9 x 1,25 M 10 x 1,5 M 11 x 1,5 M 12 x 1,75 M 14 x 2,0 M 16 x 2,0 M 18 x 2,5 M 20 x 2,5
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4 G 1/8-G 1/2
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18
Screw extractor	

No.:
264800501

Set M 3 - M 24 HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts)	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75 M 14 x 2,0 M 16 x 2,0 M 18 x 2,5 M 20 x 2,5 M 22 x 2,5 M 24 x 3,0
HSS Round Dies	M 3 x 0,5 M 4 x 0,7 M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75 M 14 x 2,0 M 16 x 2,0 M 18 x 2,5 M 20 x 2,5 M 22 x 2,5 M 24 x 3,0
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 11-27 7/16-1" G 1/4-G 3/4
Die Stocks - zinc die cast	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22
Screw extractor	

No.:
264800601

Set M 5 - M 30 HSSG Hand Tap Sets & HSS Round Dies & Tools

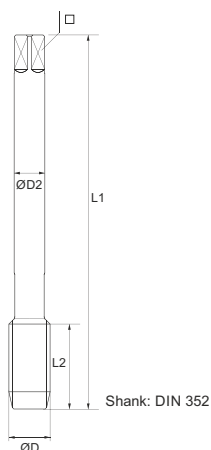
HSSG Hand Tap Sets (3 parts)	M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75 M 14 x 2,0 M 16 x 2,0 M 18 x 2,5 M 20 x 2,5 M 22 x 2,5 M 24 x 3,0 M 27 x 3,0 M 30 x 3,5
HSS Round Dies	M 5 x 0,8 M 6 x 1,0 M 8 x 1,25 M 10 x 1,5 M 12 x 1,75 M 14 x 2,0 M 16 x 2,0 M 18 x 2,5 M 20 x 2,5 M 22 x 2,5 M 24 x 3,0 M 27 x 3,0 M 30 x 3,5
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-G 1/2 & M 13-32 1/2-1.1/4" G 1/4-1"
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22 65 x 25
Screw extractor	

No.:
264800701

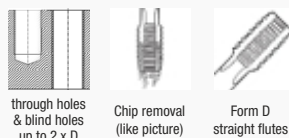
- ✓ Efficient internal thread cutting.
- ✓ The short structural type makes that tap usable by machine and hand.

Application:

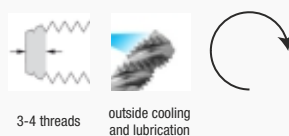
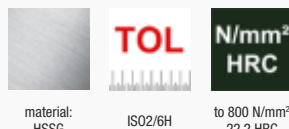
- ⚙ non abrasive material up to 900 N/mm²
- ⚙ unalloyed and low alloyed steel



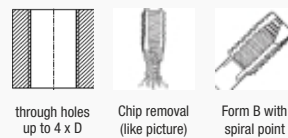
Short Machine Taps Form D for through holes and blind holes



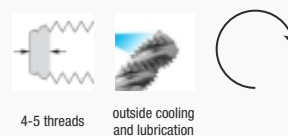
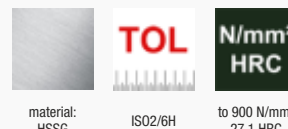
through holes & blind holes up to 2 x D
Chip removal (like picture)
Form D straight flutes



Short Machine Taps Form B for through holes



through holes up to 4 x D
Chip removal (like picture)
Form B with spiral point



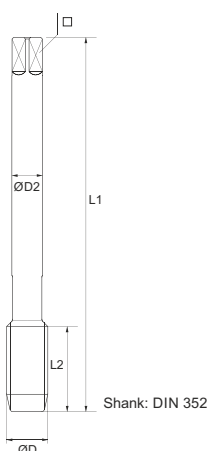
M	D1	D2	L1	L2	□	⚙	No.	No.
M 2 x 0,4	2,0	2,8	36	8	2,1	1,60	110101001	110201001
M 2,5 x 0,45	2,5	2,8	40	9	2,1	2,05	110101002	110201002
M 3 x 0,5	3,0	3,5	40	11	2,7	2,50	110101003	110201003
M 3,5 x 0,6	3,5	4,0	45	13	3,0	2,90	110101004	110201004
M 4 x 0,7	4,0	4,5	45	13	3,4	3,30	110101005	110201005
M 5 x 0,8	5,0	6,0	50	16	4,9	4,20	110101006	110201006
M 6 x 1,0	6,0	6,0	50	19	4,9	5,00	110101007	110201007
M 8 x 1,25	8,0	6,0	56	22	4,9	6,80	110101008	110201008
M 10 x 1,5	10,0	7,0	70	24	5,5	8,50	110101009	110201009
M 12 x 1,75	12,0	9,0	75	29	7,0	10,20	110101010	110201010
M 14 x 2,0	14,0	11,0	80	30	9,0	12,00	110101011	110201011
M 16 x 2,0	16,0	12,0	80	32	9,0	14,00	110101012	110201012
M 18 x 2,5	18,0	14,0	95	40	11,0	15,50	110101013	110201013
M 20 x 2,5	20,0	16,0	95	40	12,0	17,50	110101014	110201014
M 22 x 2,5	22,0	18,0	100	40	14,5	19,50	110101015	110201015
M 24 x 3,0	24,0	18,0	110	50	14,5	21,00	110101016	110201016
M 27 x 3,0	27,0	20,0	110	50	16,0	24,00	110101017	110201017
M 30 x 3,5	30,0	22,0	125	56	18,0	26,50	110101018	110201018

M metric coarse thread / ISO DIN 13

- Efficient internal thread cutting.
- The short structural type makes that tap usable by hand.

A Hand-Tap-Set includes 3 taps:

- Taper Tap
- Intermediate Tap
- Finish Tap



Hand Tap Sets for general use

through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes

material: HSSG

ISO2/6H

to 900 N/mm² 27,1 HRC

2-3 threads

outside cooling and lubrication

Hand Tap Sets for general use Left Hand

through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes

material: HSSG

ISO2/6H

to 900 N/mm² 27,1 HRC

2-3 threads

outside cooling and lubrication

Hand Tap Sets for stainless steels

through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes

material: HSSE steam tempered

ISO2/6H

to 1400 N/mm² 44,5 HRC

2-3 threads

outside cooling and lubrication

Taper Tap with plide nose

M	D1	D2	L1	L2	□	▽	No.	No.	No.
M 1 x 0,25	1,0	2,5	32	6	2,1	0,75	110301001		
M 1,1 x 0,25	1,1	2,5	32	6	2,1	0,85	110301002		
M 1,2 x 0,25	1,2	2,5	32	6	2,1	0,95	110301003		
M 1,4 x 0,3	1,4	2,5	32	7	2,1	1,10	110301004		
M 1,6 x 0,35	1,6	2,5	32	8	2,1	1,25	110301005		
M 1,7 x 0,35	1,7	2,5	32	8	2,1	1,30	110301006		
M 1,8 x 0,35	1,8	2,5	32	8	2,1	1,45	110301007		
M 2 x 0,4	2,0	2,8	36	8	2,1	1,60	110301008		
M 2,2 x 0,45	2,2	2,8	36	9	2,1	1,75	110301009		
M 2,3 x 0,4	2,3	2,8	36	9	2,1	1,90	110301010		
M 2,5 x 0,45	2,5	2,8	40	9	2,1	2,05	110301011		
M 2,6 x 0,45	2,6	2,8	40	9	2,1	2,10	110301012		
M 3 x 0,5	3,0	3,5	40	11	2,7	2,50	110301013	110302001	110305001
M 3 x 0,6	3,0	3,5	40	11	2,7	2,40	110301014		
M 3,5 x 0,6	3,5	4,0	45	13	3,0	2,90	110301015		
M 3,5 x 0,75	3,5	4,0	45	13	3,0	2,75	110301016		
M 4 x 0,7	4,0	4,5	45	13	3,4	3,30	110301017	110302002	110305002
M 4 x 0,75	4,0	4,5	45	13	3,4	3,25	110301018		
M 4,5 x 0,75	4,5	6,0	50	16	4,9	3,70	110301019		
M 5 x 0,8	5,0	6,0	50	16	4,9	4,20	110301020	110302003	110305003
M 5 x 0,9	5,0	6,0	50	16	4,9	4,10	110301021		
M 5,5 x 0,9	5,5	6,0	50	18	4,9	4,60	110301022		
M 6 x 1,0	6,0	6,0	50	19	4,9	5,00	110301023	110302004	110305004
M 7 x 1,0	7,0	6,0	50	19	4,9	6,00	110301024		
M 8 x 1,25	8,0	6,0	56	22	4,9	6,80	110301025	110302005	110305005
M 9 x 1,25	9,0	7,0	63	22	5,5	7,80	110301026		
M 10 x 1,5	10,0	7,0	70	24	5,5	8,50	110301027	110302006	110305006
M 11 x 1,5	11,0	8,0	70	24	6,2	9,50	110301028		
M 12 x 1,75	12,0	9,0	75	29	7,0	10,20	110301029	110302007	110305007
M 14 x 2,0	14,0	11,0	80	30	9,0	12,00	110301030	110302008	

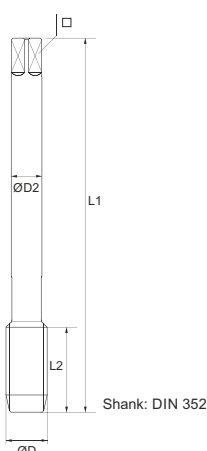
* special pitch

M metric coarse thread / ISO DIN 13

- Efficient internal thread cutting.
- The short structural type makes that tap usable by hand.

A Hand-Tap-Set includes 3 taps:

- Taper Tap
- Intermediate Tap
- Finish Tap



Hand Tap Sets for general use

through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes

material: HSSG
ISO2/6H
to 900 N/mm²
27,1 HRC

2-3 threads outside cooling and lubrication

Hand Tap Sets for general use Left Hand

through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes

material: HSSG
ISO2/6H
to 900 N/mm²
27,1 HRC

2-3 threads outside cooling and lubrication

Hand Tap Sets for stainless steels

through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes

material: HSSE steam tempered
ISO2/6H
to 1400 N/mm²
44,5 HRC

2-3 threads outside cooling and lubrication

M	D1	D2	L1	L2	□		No.	No.
M 15 x 2,0	15,0	12,0	80	32	9,0	13,00	110301031	
M 16 x 2,0	16,0	12,0	80	32	9,0	14,00	110301032	110302009
M 18 x 2,5	18,0	14,0	95	40	11,0	15,50	110301033	110302010
M 20 x 2,5	20,0	16,0	95	40	12,0	17,50	110301034	110302011
M 22 x 2,5	22,0	18,0	100	40	14,5	19,50	110301035	110302012
M 24 x 3,0	24,0	18,0	110	50	14,5	21,00	110301036	110302013
M 27 x 3,0	27,0	20,0	110	50	16,0	24,00	110301037	110302014
M 30 x 3,5	30,0	22,0	125	56	18,0	26,50	110301038	110302015
M 33 x 3,5	33,0	25,0	125	56	20,0	29,50	110301039	110302016
M 36 x 4,0	36,0	28,0	150	63	22,0	32,00	110301040	110302017
M 39 x 4,0	39,0	32,0	150	63	24,0	35,00	110301041	110302018
M 42 x 4,5	42,0	32,0	150	63	24,0	37,50	110301042	110302019
M 45 x 4,5	45,0	36,0	160	70	29,0	40,50	110301043	110302020
M 48 x 5,0	48,0	36,0	180	75	29,0	43,00	110301044	110302021
M 52 x 5,0	52,0	40,0	180	75	32,0	47,00	110301045	110302022
M 56 x 5,5	56,0	45,0	200	85	35,0	50,50	110301046	
M 60 x 5,5	60,0	45,0	200	85	35,0	54,50	110301047	
M 64 x 6,0	64,0	50,0	220	90	39,0	58,00	110301048	
M 68 x 6,0	68,0	50,0	220	90	39,0	62,00	110301049	
M 72 x 6,0	72,0	50,0	240	80	39,0	66,00	110301050	
M 76 x 6,0	76,0	50,0	240	80	39,0	70,00	110301051	
M 80 x 6,0	80,0	50,0	260	85	39,0	74,00	110301052	
M 84 x 6,0	84,0	50,0	260	85	39,0	78,00	110301053	
M 88 x 6,0	88,0	50,0	260	85	39,0	82,00	110301054	
M 90 x 6,0	90,0	50,0	260	85	39,0	84,00	110301055	
M 92 x 6,0	92,0	56,0	280	90	44,0	86,00	110301056	
M 96 x 6,0	96,0	56,0	280	90	44,0	90,00	110301057	
M 100 x 6,0	100,0	56,0	280	90	44,0	94,00	110301058	

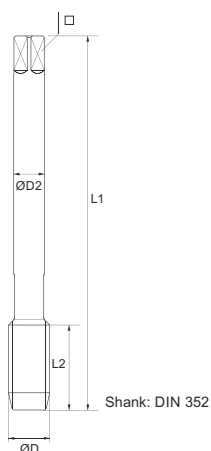
* special pitch

M Metric coarse thread / ISO DIN 13

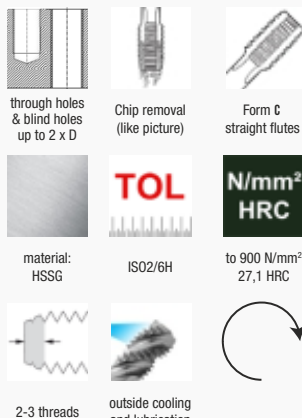
- ✓ Efficient internal thread cutting.
- ✓ The short structural type makes that tap usable by machine and hand.

A Hand-Tap-Set includes 3 taps:

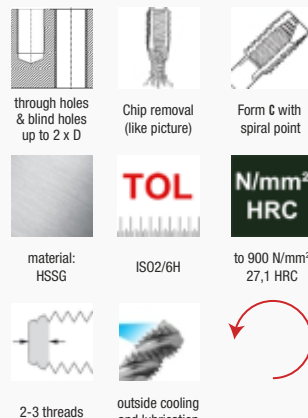
- ⚙ Taper Tap
- ⚙ Intermediate Tap
- ⚙ Finish Tap



Hand Tap Sets with conical profile



Hand Tap Sets HSSE for higher demands

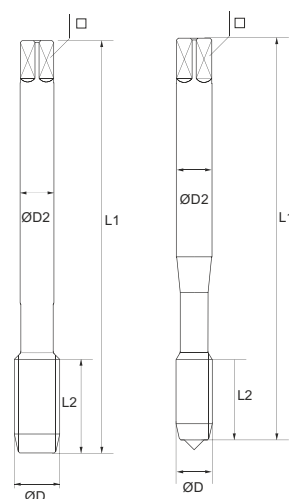


M	D1	D2	L1	L2	□	⚙	N . o	No.
M 2 x 0,4	2,0	2,8	36	8	2,1	1,60	110313001	
M 2,5 x 0,45	2,5	2,8	40	9	2,1	2,05	110313002	
M 3 x 0,5	3,0	3,5	40	11	2,7	2,50	110313003	110304001
M 4 x 0,7	4,0	4,5	45	13	3,4	3,30	110313004	110304002
M 5 x 0,8	5,0	6,0	50	16	4,9	4,20	110313005	110304003
M 6 x 1,0	6,0	6,0	50	19	4,9	5,00	110313006	110304004
M 8 x 1,25	8,0	6,0	56	22	4,9	6,80	110313007	110304005
M 9 x 1,25	9,0	7,0	63	22	5,5	7,80	110313008	
M 10 x 1,5	10,0	7,0	70	24	5,5	8,50	110313009	110304006
M 11 x 1,5	11,0	8,0	70	24	6,2	9,50	110313010	
M 12 x 1,75	12,0	9,0	75	29	7,0	10,20	110313011	110304007
M 13 x 1,75	12,0	9,0	75	29	7,0	11,20	110313012	
M 14 x 2,0	14,0	11,0	80	30	9,0	12,00	110313013	110304008
M 16 x 2,0	16,0	12,0	80	32	9,0	14,00	110313014	110304009
M 18 x 2,5	18,0	14,0	95	40	11,0	15,50	110313015	110304010
M 19 x 2,5	18,0	14,0	95	40	11,0	16,50	110313016	
M 20 x 2,5	20,0	16,0	95	40	12,0	17,50	110313017	110304011
M 22 x 2,5	22,0	18,0	100	40	14,5	19,50	110313018	110304012
M 24 x 3,0	24,0	18,0	110	50	14,5	21,00	110313019	110304013
M 27 x 3,0	27,0	20,0	110	50	16,0	24,00	110313020	110304014
M 30 x 3,5	30,0	22,0	125	56	18,0	26,50	110313021	110304015
M 33 x 3,5	33,0	25,0	125	56	20,0	29,50	110313022	
M 36 x 4,0	36,0	28,0	150	63	22,0	32,00	110313023	
M 39 x 4,0	39,0	32,0	150	63	24,0	35,00	110313024	
M 42 x 4,5	42,0	32,0	150	63	24,0	37,50	110313025	

Machine Taps - Form B for through holes

M metric coarse thread / ISO DIN 13

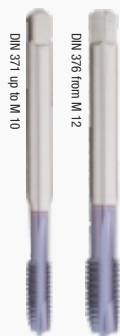
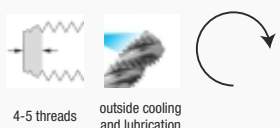
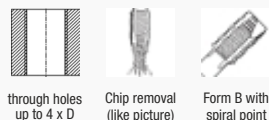
- ✓ Tap for machine use in through hole.
- ✓ The spiral point pushes the chips ahead.



Shank: DIN 376

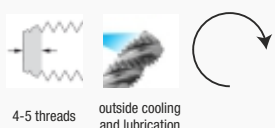
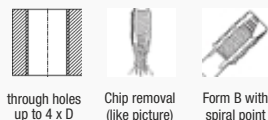
Shank: DIN 371

Machine Tap for universal use



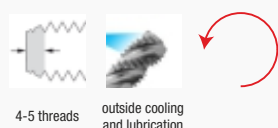
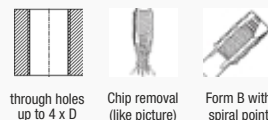
Machine Tap for general use

UNITAP



Machine Tap for general use

Left-hand thread

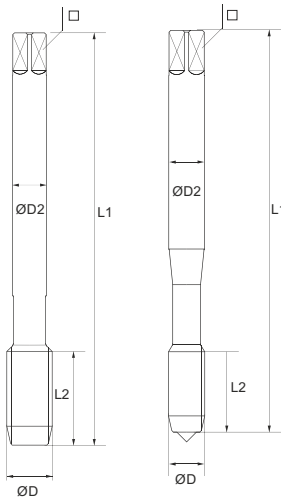


M

	D1	D2	L1	L2			No.	No.	No.
DIN 371									
M 2 x 0,4	2,0	2,8	45	8	2,1	1,60	110403001	110401001	
M 2,2 x 0,45	2,2	2,8	45	8	2,1	1,75	110403002		
M 2,5 x 0,45	2,5	2,8	50	9	2,1	2,05	110403003	110401002	
M 3 x 0,5	3,0	3,5	56	11	2,7	2,50	110403004	110401003	110402001
M 3,5 x 0,6	3,5	4,0	56	13	3,0	2,90	110403005	110401004	
M 4 x 0,7	4,0	4,5	63	13	3,4	3,30	110403006	110401005	110402002
M 5 x 0,8	5,0	6,0	70	16	4,9	4,20	110403007	110401006	110402003
M 6 x 1,0	6,0	6,0	80	19	4,9	5,00	110403008	110401007	110402004
M 7 x 1,0	7,0	7,0	80	19	5,5	6,00	110403009	110401008	110402005
M 8 x 1,25	8,0	8,0	90	22	6,2	6,80	110403009	110401009	110402006
M 10 x 1,5	10,0	10,0	100	24	8,0	8,50	110403010	110401010	110402007
DIN 376									
M 3 x 0,5	3,0	2,2	56	11	-	2,50		110401011	110402008
M 4 x 0,7	4,0	2,8	63	13	2,1	3,30		110401012	110402009
M 5 x 0,8	5,0	3,5	70	16	2,7	4,20		110401013	110402010
M 6 x 1,0	6,0	4,5	80	19	3,4	5,00		110401014	110402011
M 8 x 1,25	8,0	6,0	90	22	4,9	6,80		110401015	110402012
M 10 x 1,5	10,0	7,0	100	24	5,5	8,50		110401016	110402013
M 12 x 1,75	12,0	9,0	110	29	7,0	10,20	110403011	110401017	110402014
M 14 x 2,0	14,0	11,0	110	30	9,0	12,00	110403012	110401018	110402015
M 16 x 2,0	16,0	12,0	110	32	9,0	14,00	110403013	110401019	110402016
M 18 x 2,5	18,0	14,0	125	34	11,0	15,50	110403014	110401020	110402017
M 20 x 2,5	20,0	16,0	140	34	12,0	17,50	110403015	110401021	110402018
M 22 x 2,5	22,0	18,0	140	34	14,5	19,50	110403016	110401022	110402019
M 24 x 3,0	24,0	18,0	160	38	14,5	21,00	110403017	110401023	110402020
M 27 x 3,0	27,0	20,0	160	38	16,0	24,00	110403018	110401024	110402021
M 30 x 3,5	30,0	22,0	180	45	18,0	26,50	110403019	110401025	110402022
M 33 x 3,5	33,0	25,0	180	50	20,0	29,50		110401026	110402023
M 36 x 4,0	36,0	28,0	200	56	22,0	32,00		110401027	110402024
M 39 x 4,0	39,0	32,0	200	60	24,0	35,00		110401028	110402025
M 42 x 4,5	42,0	32,0	200	60	24,0	37,50		110401029	110402026
M 45 x 4,5	45,0	36,0	220	65	29,0	40,50		110401030	110402027
M 48 x 5,0	48,0	36,0	250	70	29,0	43,00		110401031	110402028
M 52 x 5,0	52,0	40,0	250	70	32,0	47,00		110401032	110402029

M metric coarse thread / ISO DIN 13

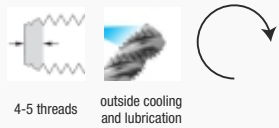
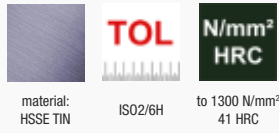
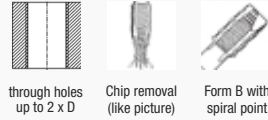
- Tap for machine use in through hole.
- The spiral point pushes the chips ahead.



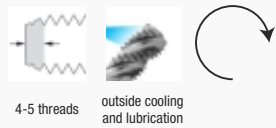
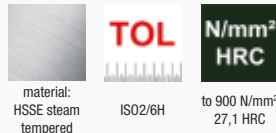
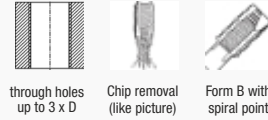
Shank: DIN 376

Shank: DIN 371

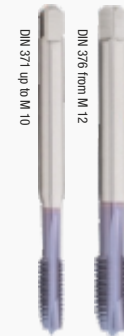
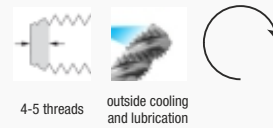
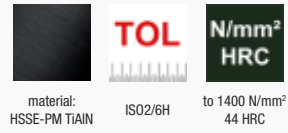
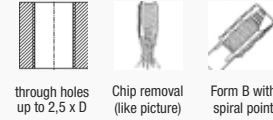
Machine Tap for high-alloyed steels and longer tool life time



Machine Tap ECO for stainless steels with high tool life time



Machine Tap for high alloyed stainless steels and high-tensile materials

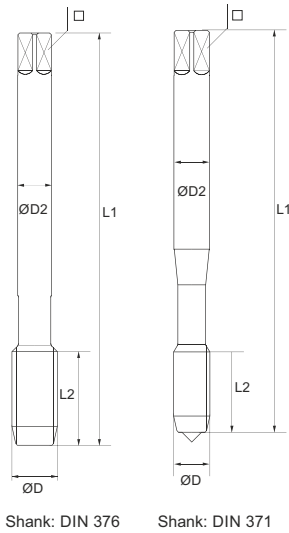


M	D1	D2	L1	L2	□	⊕	No.	No.	No.
M 2 x 0,4	2,0	2,8	45	8	2,1	1,60	110404001	110405001	110406001
M 2,5 x 0,45	2,5	2,8	50	9	2,1	2,05	110404002	110405002	110406002
M 3 x 0,5	3,0	3,5	56	11	2,7	2,50	110404003	110405003	110406003
M 3,5 x 0,6	3,5	4,0	56	13	3,0	2,90	110404004		
M 4 x 0,7	4,0	4,5	63	13	3,4	3,30	110404005	110405004	110406004
M 5 x 0,8	5,0	6,0	70	16	4,9	4,20	110404006	110405005	110406005
M 6 x 1,0	6,0	6,0	80	19	4,9	5,00	110404007	110405006	110406006
M 7 x 1,0	7,0	7,0	80	19	5,5	6,00	110404008		
M 8 x 1,25	8,0	8,0	90	22	6,2	6,80	110404009	110405007	110406007
M 9 x 1,25	9,0	9,0	90	18	6,2	7,80	110404010		
M 10 x 1,5	10,0	10,0	100	24	8,0	8,50	110404011	110405008	110406008
M 12 x 1,75	12,0	9,0	110	29	7,0	10,20	110404012	110405009	110406009
M 14 x 2,0	14,0	11,0	110	30	9,0	12,00	110404013	110405010	110406010
M 16 x 2,0	16,0	12,0	110	32	9,0	14,00	110404014	110405011	110406011
M 18 x 2,5	18,0	14,0	125	34	11,0	15,50	110404015	110405012	110406012
M 20 x 2,5	20,0	16,0	140	34	12,0	17,50	110404016	110405013	110406013
M 22 x 2,5	22,0	18,0	140	34	14,5	19,50	110404017	110405014	110406014
M 24 x 3,0	24,0	18,0	160	38	14,5	21,00	110404018	110405015	110406015
M 27 x 3,0	27,0	20,0	160	38	16,0	24,00	110404019		
M 30 x 3,5	30,0	22,0	180	45	18,0	26,50	110404020		

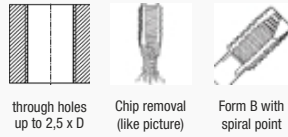
Machine Taps - Form B for through holes

M Metric coarse thread / ISO DIN 13

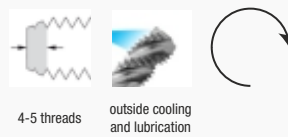
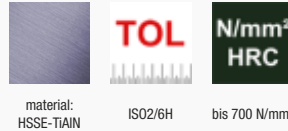
- ✓ Tap for machine use in through hole.
- ✓ The spiral point pushes the chips ahead.



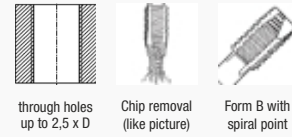
Machine Tap for aluminum



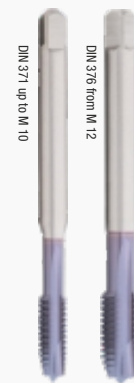
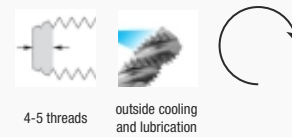
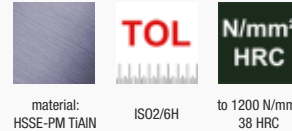
through holes up to 2,5 x D
Chip removal (like picture)
Form B with spiral point



Machine Tap for special alloys (Inconel, Hastelloy etc.)



through holes up to 2,5 x D
Chip removal (like picture)
Form B with spiral point

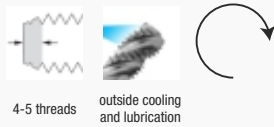
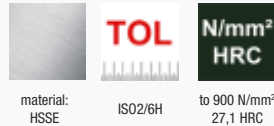
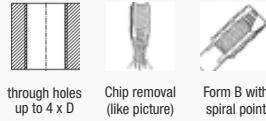


M	D1	D2	L1	L2	□	▣	No.	No.
M 2 x 0,4	2,0	2,8	45	8	2,1	1,60		110412001
M 2,5 x 0,45	2,5	2,8	50	9	2,1	2,05		110412002
M 3 x 0,5	3,0	3,5	56	11	2,7	2,50	110407001	110412003
M 4 x 0,7	4,0	4,5	63	13	3,4	3,30	110407002	110412004
M 5 x 0,8	5,0	6,0	70	16	4,9	4,20	110407003	110412005
M 6 x 1,0	6,0	6,0	80	19	4,9	5,00	110407004	110412006
M 8 x 1,25	8,0	8,0	90	22	6,2	6,80	110407005	110412007
M 10 x 1,5	10,0	10,0	100	24	8,0	8,50	110407006	110412008
M 12 x 1,75	12,0	9,0	110	29	7,0	10,20	110407007	110412009
M 14 x 2,0	14,0	11,0	110	30	9,0	12,00	110407008	110412010
M 16 x 2,0	16,0	12,0	110	32	9,0	14,00	110407009	110412011
M 18 x 2,5	18,0	14,0	125	34	11,0	15,50		110412012
M 20 x 2,5	20,0	16,0	140	34	12,0	17,50		110412013
M 24 x 3,0	24,0	18,0	160	38	14,5	21,00		110412014
M 27 x 3,0	27,0	20,0	160	38	16,0	24,00		110412015
M 30 x 3,5	30,0	22,0	180	45	18,0	26,50		110412016

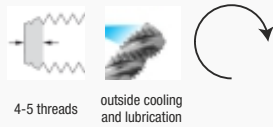
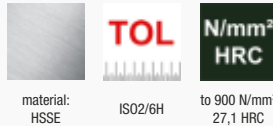
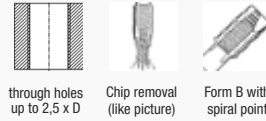
M metric coarse thread / ISO DIN 13

- ✓ Tap for machine use in through hole.
- ✓ The spiral point pushes the chips ahead.

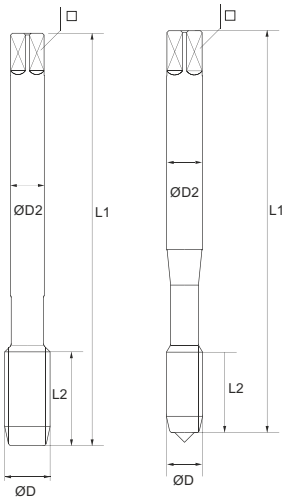
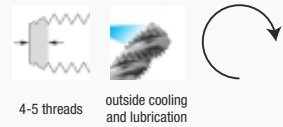
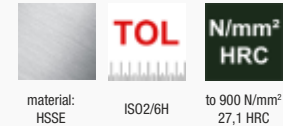
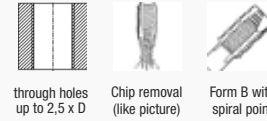
Machine Tap for general use **overlengthed (long shank)**



Machine Tap for general use **oversized (diameter)**



Machine Tap for general use **undersized (diameter)**



Shank: DIN 376

Shank: DIN 371

M

D1 D2 L1 L2

No.

No.

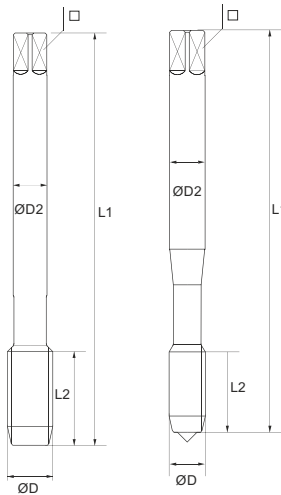
No.

M	D1	D2	L1	L2		No.	Total length L1 = 100 mm	
							Tol. 6G: threads with large clearance	Tol. 4H: threads with small clearance
M 2 x 0,4	2,0	2,8	45	8	2,1	1,60		110420001
M 2,5 x 0,45	2,5	2,8	50	9	2,1	2,05	110417001	110420002
M 3 x 0,5	3,0	3,5	56	11	2,7	2,50	110414001	110420003
M 4 x 0,7	4,0	4,5	63	13	3,4	3,30	110414002	110420004
M 5 x 0,8	5,0	6,0	70	16	4,9	4,20	110414003	110420005
M 6 x 1,0	6,0	6,0	80	19	4,9	5,00	110414004	110420006
M 8 x 1,25	8,0	8,0	90	22	6,2	6,80	110414005	110420007
M 10 x 1,5	10,0	10,0	100	24	8,0	8,50	110414006	110420008
M 12 x 1,75	12,0	9,0	110	29	7,0	10,20	110414007	110420009
M 14 x 2,0	14,0	11,0	110	30	9,0	12,00	110417009	110420010
M 16 x 2,0	16,0	12,0	110	32	9,0	14,00	110417010	110420011
M 18 x 2,5	18,0	14,0	125	34	11,0	15,50	110417011	
M 20 x 2,5	20,0	16,0	140	34	12,0	17,50	110417012	
							Total length L1 = 120 mm	
							Tol. 7G: for disorted threads (heat treatment)	
M 3 x 0,5	3,0	3,5	56	11	2,7	2,50	110415001	110418001
M 4 x 0,7	4,0	4,5	63	13	3,4	3,30	110415002	110418002
M 5 x 0,8	5,0	6,0	70	16	4,9	4,20	110415003	110418003
M 6 x 1,0	6,0	6,0	80	19	4,9	5,00	110415004	110418004
M 8 x 1,25	8,0	8,0	90	22	6,2	6,80	110415005	110418005
M 10 x 1,5	10,0	10,0	100	24	8,0	8,50	110415006	110418006
M 12 x 1,75	12,0	9,0	110	29	7,0	10,20	110415007	110418007
							Total length L1 = 150 mm	
							Tol. 6H +0,1 mm: for electroplating allowance	
M 3 x 0,5	3,0	3,5	56	11	2,7	2,50	110416001	110419001
M 4 x 0,7	4,0	4,5	63	13	3,4	3,30	110416002	110419002
M 5 x 0,8	5,0	6,0	70	16	4,9	4,20	110416003	110419003
M 6 x 1,0	6,0	6,0	80	19	4,9	5,00	110416004	110419004
M 8 x 1,25	8,0	8,0	90	22	6,2	6,80	110416005	110419005
M 10 x 1,5	10,0	10,0	100	24	8,0	8,50	110416006	110419006
M 12 x 1,75	12,0	9,0	110	29	7,0	10,20	110416007	110419007

Machine Taps - Form C (straight flutes) for through holes and blind holes

M metric coarse thread / ISO DIN 13

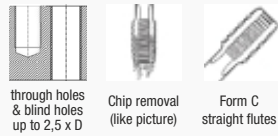
- ✓ Tap for machine use in through hole and blind hole.
- ✓ The short lead-in chamfer makes that tap universal in application. The flutes can hold the most part of the chips.



Shank: DIN 376

Shank: DIN 371

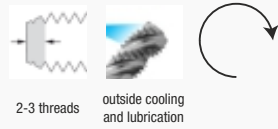
Machine Tap for general use



through holes & blind holes up to 2,5 x D
Chip removal (like picture)
Form C straight flutes



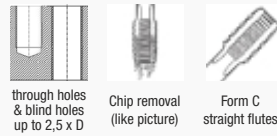
material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication



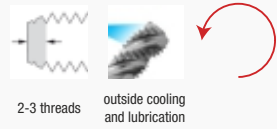
Machine Tap for general use Left-hand thread



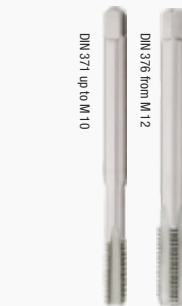
through holes & blind holes up to 2,5 x D
Chip removal (like picture)
Form C straight flutes



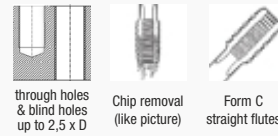
material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication



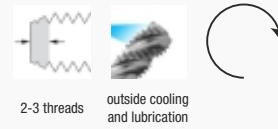
Machine Tap with longer tool life time



through holes & blind holes up to 2,5 x D
Chip removal (like picture)
Form C straight flutes



material: HSSE TIN
ISO2/6H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication

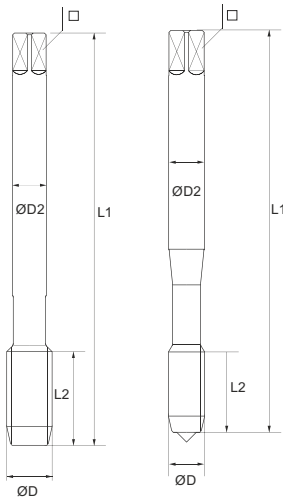


M

	D1	D2	L1	L2			No.	No.	No.
DIN 371									
M 2 x 0,4	2,0	2,8	45	8	2,1	1,60	110501001		110504001
M 2,2 x 0,45	2,2	2,8	45	8	2,1	1,75			110504002
M 2,3 x 0,4	2,3	2,8	45	9	2,1	1,90	110501002		110504003
M 2,5 x 0,45	2,5	2,8	50	9	2,1	2,05	110501003		110504004
M 2,6 x 0,45	2,6	2,8	50	9	2,1	2,10	110501004		110504005
M 3 x 0,5	3,0	3,5	56	11	2,7	2,50	110501005	110502001	110504006
M 3,5 x 0,6	3,5	4,0	56	13	3,0	2,90	110501006		110504007
M 4 x 0,7	4,0	4,5	63	13	3,4	3,30	110501007	110502002	110504008
M 5 x 0,8	5,0	6,0	70	16	4,9	4,20	110501008	110502003	110504009
M 6 x 1,0	6,0	6,0	80	19	4,9	5,00	110501009	110502004	110504010
M 7 x 1,0	7,0	7,0	80	19	5,5	6,00	110501010		110504011
M 8 x 1,25	8,0	8,0	90	22	6,2	6,80	110501011	110502005	110504012
M 9 x 1,25	9,0	9,0	90	18	6,2	7,80			110504013
M 10 x 1,5	10,0	10,0	100	24	8,0	8,50	110501012	110502006	110504014
DIN 376									
M 3 x 0,5	3,0	2,2	56	11	-	2,50	110501013		
M 4 x 0,7	4,0	2,8	63	13	2,1	3,30	110501014		
M 5 x 0,8	5,0	3,5	70	16	2,7	4,20	110501015		
M 6 x 1,0	6,0	4,5	80	19	3,4	5,00	110501016		
M 8 x 1,25	8,0	6,0	90	22	4,9	6,80	110501017		
M 10 x 1,5	10,0	7,0	100	24	5,5	8,50	110501018		
M 11 x 1,5	11,0	8,0	100	22	6,2	9,50			110504015
M 12 x 1,75	12,0	9,0	110	29	7,0	10,20	110501019	110502007	110504016
M 14 x 2,0	14,0	11,0	110	30	9,0	12,00	110501020	110502008	110504017
M 16 x 2,0	16,0	12,0	110	32	9,0	14,00	110501021	110502009	110504018
M 18 x 2,5	18,0	14,0	125	34	11,0	15,50	110501022	110502010	110504019
M 20 x 2,5	20,0	16,0	140	34	12,0	17,50	110501023	110502011	110504020
M 22 x 2,5	22,0	18,0	140	34	14,5	19,50	110501024	110502012	110504021
M 24 x 3,0	24,0	18,0	160	38	14,5	21,00	110501025	110502013	110504022
M 27 x 3,0	27,0	20,0	160	38	16,0	24,00	110501026		110504023
M 30 x 3,5	30,0	22,0	180	45	18,0	26,50	110501027		110504024
M 33 x 3,5	33,0	25,0	180	50	20,0	29,50	110501028		110504025
M 36 x 4,0	36,0	28,0	200	56	22,0	32,00	110501029		110504026
M 39 x 4,0	39,0	32,0	200	60	24,0	35,00	110501030		
M 42 x 4,5	42,0	32,0	200	60	24,0	37,50	110501031		
M 45 x 4,5	45,0	36,0	220	65	29,0	40,50	110501032		
M 48 x 5,0	48,0	36,0	250	70	29,0	43,00	110501033		
M 52 x 5,0	52,0	40,0	250	70	32,0	47,00	110501034		

M metric coarse thread / ISO DIN 13

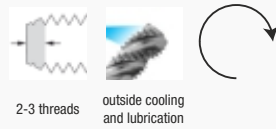
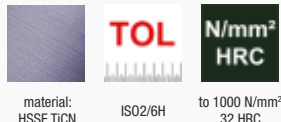
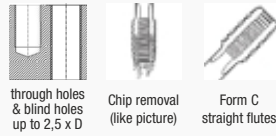
- ✓ Tap for machine use in through hole and blind hole.
- ✓ The short lead-in chamfer makes that tap universal in application. The flutes can hold the most part of the chips.



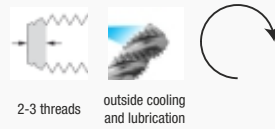
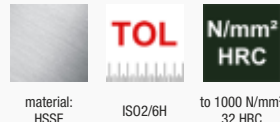
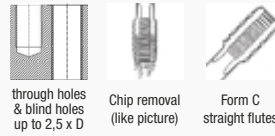
Shank: DIN 376

Shank: DIN 371

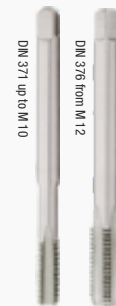
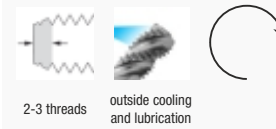
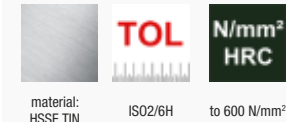
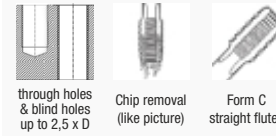
Machine Tap for cast materials



Machine Tap for titanium and titanium alloys



Machine Tap for brass (short-chipping)



M

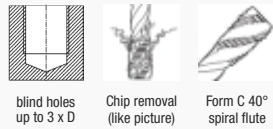
	D1	D2	L1	L2			No.	No.	No.
M 2 x 0,4	2,0	2,8	45	8	2,1	1,60		110511001	
M 2,5 x 0,45	2,5	2,8	50	9	2,1	2,05		110511002	
M 3 x 0,5	3,0	3,5	56	11	2,7	2,50	110510001	110511003	110509001
M 3,5 x 0,6	3,5	4,0	56	13	3,0	2,90	110510002		
M 4 x 0,7	4,0	4,5	63	13	3,4	3,30	110510003	110511004	110509002
M 5 x 0,8	5,0	6,0	70	16	4,9	4,20	110510004	110511005	110509003
M 6 x 1,0	6,0	6,0	80	19	4,9	5,00	110510005	110511006	110509004
M 7 x 1,0	7,0	7,0	80	19	5,5	6,00	110510006		
M 8 x 1,25	8,0	8,0	90	22	6,2	6,80	110510007	110511007	110509005
M 9 x 1,25	9,0	9,0	90	18	6,2	7,80	110510008		
M 10 x 1,5	10,0	10,0	100	24	8,0	8,50	110510009	110511008	110509006
M 11 x 1,5	11,0	8,0	100	22	6,2	9,50	110510010		
M 12 x 1,75	12,0	9,0	110	29	7,0	10,20	110510011	110511009	110509007
M 14 x 2,0	14,0	11,0	110	30	9,0	12,00	110510012	110511010	110509008
M 16 x 2,0	16,0	12,0	110	32	9,0	14,00	110510013	110511011	110509009
M 18 x 2,5	18,0	14,0	125	34	11,0	15,50	110510014	110511012	
M 20 x 2,5	20,0	16,0	140	34	12,0	17,50	110510015	110511013	
M 22 x 2,5	22,0	18,0	140	34	14,5	19,50	110510016		
M 24 x 3,0	24,0	18,0	160	38	14,5	21,00	110510017		
M 27 x 3,0	27,0	20,0	160	38	16,0	24,00	110510018		
M 30 x 3,5	30,0	22,0	180	45	18,0	26,50	110510019		
M 33 x 3,5	33,0	25,0	180	50	20,0	29,50	110510020		

Machine Taps - Form C (with spiral flutes) for blind holes

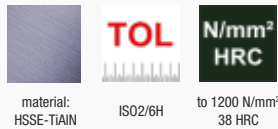
M metric coarse thread / ISO DIN 13

- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.

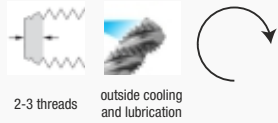
Machine Tap for universal use



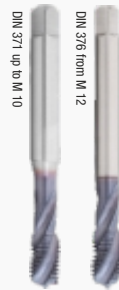
blind holes up to 3 x D
Chip removal (like picture)
Form C 40° spiral flute



material: HSSE-TIAIN
ISO2/6H
to 1200 N/mm²
38 HRC

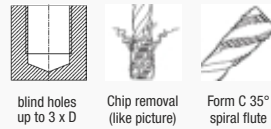


2-3 threads
outside cooling and lubrication

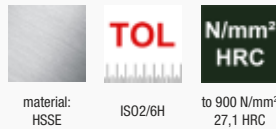


DIN 371 up to M 10
DIN 376 from M 12

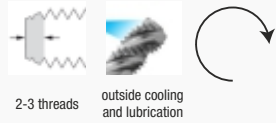
Machine Tap for general use



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



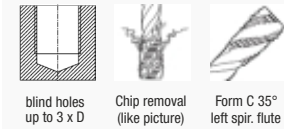
2-3 threads
outside cooling and lubrication



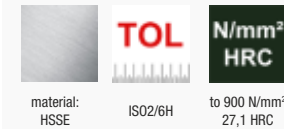
DIN 371
DIN 376

Machine Tap for general use

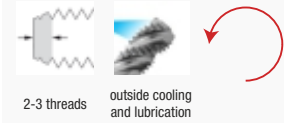
Left-hand thread



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° left spir. flute



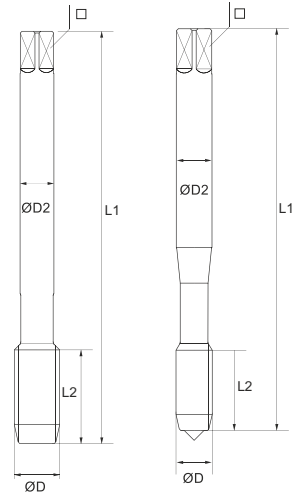
material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication



DIN 371
DIN 376



Shank: DIN 376

Shank: DIN 371

M

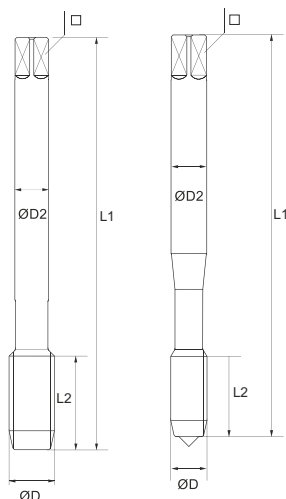
	D1	D2	L1	L2			No.	No.	No.
DIN 371									
M 2 x 0,4	2,0	2,8	45	6	2,1	1,60	110603001	110601001	
M 2,2 x 0,45	2,2	2,8	45	6	2,1	1,75	110603002		
M 2,5 x 0,45	2,5	2,8	50	6	2,1	2,05	110603003	110601002	
M 3 x 0,5	3,0	3,5	56	6	2,7	2,50	110603004	110601003	110602001
M 3,5 x 0,6	3,5	4,0	56	13	3,0	2,90	110603005	110601004	
M 4 x 0,7	4,0	4,5	63	7	3,4	3,30	110603006	110601005	110602002
M 5 x 0,8	5,0	6,0	70	8	4,9	4,20	110603007	110601006	110602003
M 6 x 1,0	6,0	6,0	80	10	4,9	5,00	110603008	110601007	110602004
M 7 x 1,0	7,0	7,0	80	19	5,5	6,00		110601008	
M 8 x 1,25	8,0	8,0	90	14	6,2	6,80	110603009	110601009	110602005
M 10 x 1,5	10,0	10,0	100	16	8,0	8,50	110603010	110601010	110602006
DIN 376									
M 3 x 0,5	3,0	2,2	56	6	-	2,50		110601011	110602007
M 4 x 0,7	4,0	2,8	63	7	2,1	3,30		110601012	110602008
M 5 x 0,8	5,0	3,5	70	8	2,7	4,20		110601013	110602009
M 6 x 1,0	6,0	4,5	80	10	3,4	5,00		110601014	110602010
M 8 x 1,25	8,0	6,0	90	14	4,9	6,80		110601015	110602011
M 10 x 1,5	10,0	7,0	100	16	5,5	8,50		110601016	110602012
M 12 x 1,75	12,0	9,0	110	18	7,0	10,20	110603011	110601017	110602013
M 14 x 2,0	14,0	11,0	110	20	9,0	12,00	110603012	110601018	110602014
M 16 x 2,0	16,0	12,0	110	22	9,0	14,00	110603013	110601019	110602015
M 18 x 2,5	18,0	14,0	125	25	11,0	15,50	110603014	110601020	110602016
M 20 x 2,5	20,0	16,0	140	25	12,0	17,50	110603015	110601021	110602017
M 22 x 2,5	22,0	18,0	140	27	14,5	19,50	110603016	110601022	110602018
M 24 x 3,0	24,0	18,0	160	30	14,5	21,00	110603017	110601023	110602019
M 27 x 3,0	27,0	20,0	160	30	16,0	24,00	110603018	110601024	110602020
M 30 x 3,5	30,0	22,0	180	35	18,0	26,50	110603019	110601025	110602021
M 33 x 3,5	33,0	25,0	180	35	20,0	29,50		110601026	110602022
M 36 x 4,0	36,0	28,0	200	40	22,0	32,00		110601027	110602023
M 39 x 4,0	39,0	32,0	200	40	24,0	35,00		110601028	110602024
M 42 x 4,5	42,0	32,0	200	45	24,0	37,50		110601029	110602025
M 45 x 4,5	45,0	36,0	220	45	29,0	40,50		110601030	110602026
M 48 x 5,0	48,0	36,0	250	50	29,0	43,00		110601031	110602027
M 52 x 5,0	52,0	40,0	250	50	32,0	47,00		110601032	110602028

M metric coarse thread / ISO DIN 13

✓ Tap for machine use in blind holes.

The fast spiral flutes

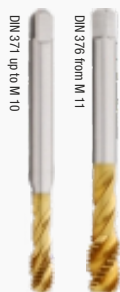
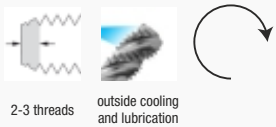
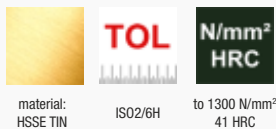
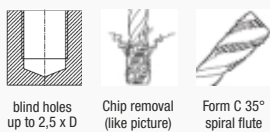
✓ provide good chip removal from the blind hole.



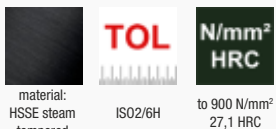
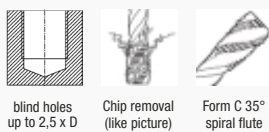
Shank: DIN 376

Shank: DIN 371

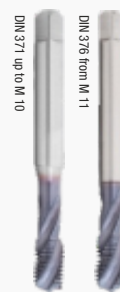
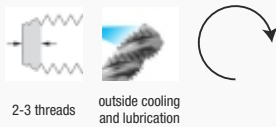
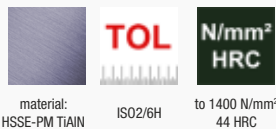
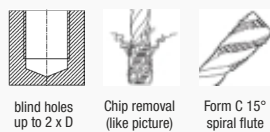
Machine Tap for high-alloyed steels and longer tool life time



Machine Tap ECO for stainless steels with high tool life time



Machine Tap for high alloyed stainless steels and high-tensile materials



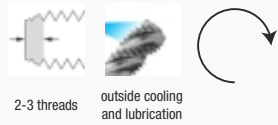
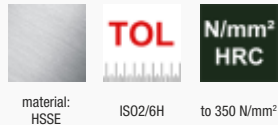
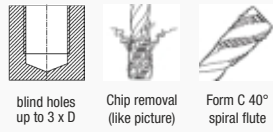
M	D1	D2	L1	L2	□	⊕	No.	No.	No.
M 2 x 0,4	2,0	2,8	45	6	2,1	1,60	110604001		110606001
M 2,5 x 0,45	2,5	2,8	50	6	2,1	2,05	110604002		110606002
M 3 x 0,5	3,0	3,5	56	6	2,7	2,50	110604003	110605001	110606003
M 3,5 x 0,6	3,5	4,0	56	13	3,0	2,90	110604004		
M 4 x 0,7	4,0	4,5	63	7	3,4	3,30	110604005	110605002	110606004
M 5 x 0,8	5,0	6,0	70	8	4,9	4,20	110604006	110605003	110606005
M 6 x 1,0	6,0	6,0	80	10	4,9	5,00	110604007	110605004	110606006
M 7 x 1,0	7,0	7,0	80	19	5,5	6,00	110604008		
M 8 x 1,25	8,0	8,0	90	14	6,2	6,80	110604009	110605005	110606007
M 9 x 1,25	9,0	9,0	90	15	7,0	7,80	110604010		
M 10 x 1,5	10,0	10,0	100	16	8,0	8,50	110604011	110605006	110606008
M 11 x 1,5	11,0	8,0	100	18	6,2	9,50	110604012		
M 12 x 1,75	12,0	9,0	110	18	7,0	10,20	110604013	110605007	110606009
M 14 x 2,0	14,0	11,0	110	20	9,0	12,00	110604014	110605008	110606010
M 16 x 2,0	16,0	12,0	110	22	9,0	14,00	110604015	110605009	110606011
M 18 x 2,5	18,0	14,0	125	25	11,0	15,50	110604016	110605010	110606012
M 20 x 2,5	20,0	16,0	140	25	12,0	17,50	110604017	110605011	110606013
M 22 x 2,5	22,0	18,0	140	27	14,5	19,50	110604018	110605012	110606014
M 24 x 3,0	24,0	18,0	160	30	14,5	21,00	110604019	110605013	110606015
M 27 x 3,0	27,0	20,0	160	30	16,0	24,00	110604020		
M 30 x 3,5	30,0	22,0	180	35	18,0	26,50	110604021		

Machine Taps - Form C (with spiral flutes) for blind holes

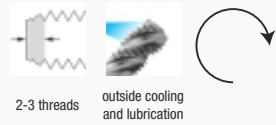
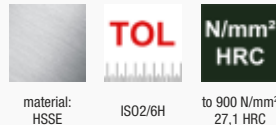
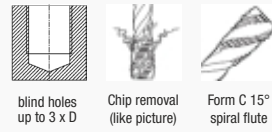
M metric coarse thread / ISO DIN 13

- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.

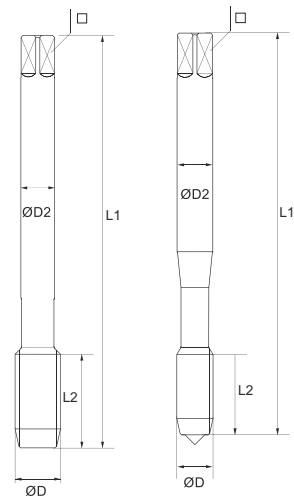
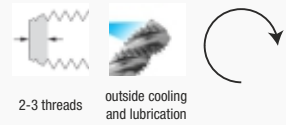
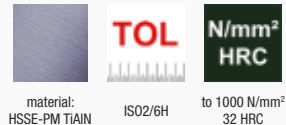
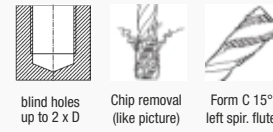
Machine Tap for aluminum (long-chipping)



Machine Tap for long-chipping materials



Machine Tap for special alloys (Inconel, Hastelloy etc.)



Shank: DIN 376 Shank: DIN 371

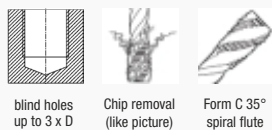
M

	D1	D2	L1	L2			No.	No.	No.
DIN 371									
M 3 x 0,5	3,0	3,5	56	6	2,7	2,50	110607001	110608001	110612001
M 3,5 x 0,6	3,5	4,0	56	13	3,0	2,90		110608002	
M 4 x 0,7	4,0	4,5	63	7	3,4	3,30	110607002	110608003	110612002
M 5 x 0,8	5,0	6,0	70	8	4,9	4,20	110607003	110608004	110612003
M 6 x 1,0	6,0	6,0	80	10	4,9	5,00	110607004	110608005	110612004
M 7 x 1,0	7,0	7,0	80	19	5,5	6,00		110608006	
M 8 x 1,25	8,0	8,0	90	14	6,2	6,80	110607005	110608007	110612005
M 10 x 1,5	10,0	10,0	100	16	8,0	8,50	110607006	110608008	110612006
DIN 376									
M 3 x 0,5	3,0	2,2	56	11	-	2,50		110608009	
M 4 x 0,7	4,0	2,8	63	13	2,1	3,30		110608010	
M 5 x 0,8	5,0	3,5	70	16	2,7	4,20		110608011	
M 6 x 1,0	6,0	4,5	80	19	3,4	5,00		110608012	
M 8 x 1,25	8,0	6,0	90	22	4,9	6,80		110608013	
M 10 x 1,5	10,0	7,0	100	24	5,5	8,50		110608014	
M 12 x 1,75	12,0	9,0	110	18	7,0	10,20	110607007	110608015	110612007
M 14 x 2,0	14,0	11,0	110	20	9,0	12,00	110607008	110608016	110612008
M 16 x 2,0	16,0	12,0	110	22	9,0	14,00	110607009	110608017	110612009
M 18 x 2,5	18,0	14,0	125	25	11,0	15,50		110608018	110612010
M 20 x 2,5	20,0	16,0	140	25	12,0	17,50		110608019	110612011
M 22 x 2,5	22,0	18,0	140	27	14,5	19,50		110608020	
M 24 x 3,0	24,0	18,0	160	30	14,5	21,00		110608021	

M metric coarse thread / ISO DIN 13

- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.

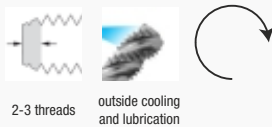
Machine Tap for general use **overlengthed (long shank)**



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC

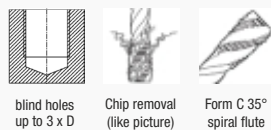


2-3 threads
outside cooling and lubrication



DIN 371 up to M 10
DIN 376 from M 12

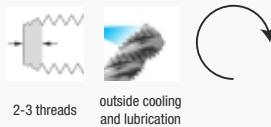
Machine Tap for general use **oversized (diameter)**



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
6G
7G
6H +0,1 mm
to 900 N/mm²
27,1 HRC

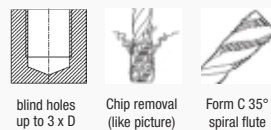


2-3 threads
outside cooling and lubrication



DIN 371 up to M 10
DIN 376 from M 12

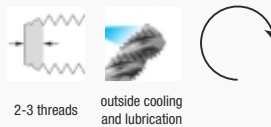
Machine Tap for general use **undersized (diameter)**



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



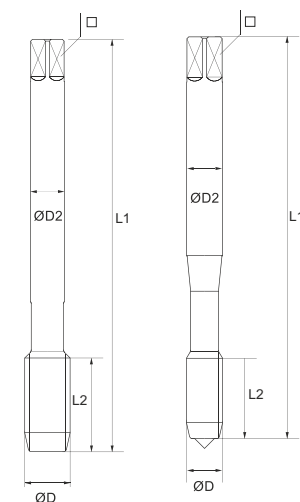
material: HSSE
4H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication



DIN 371 up to M 10
DIN 376 from M 12



Shank: DIN 376

Shank: DIN 371

M	D1	D2	L1	L2	□	No.	No.	No.
							Total length L1 = 100 mm	
M 2 x 0,4	2,0	2,8	45	6	2,1 1,60		Tol. 6G: threads with large clearance	Tol. 4H: threads with small clearance
M 2,5 x 0,45	2,5	2,8	50	6	2,1 2,05			110620001
M 3 x 0,5	3,0	3,5	56	6	2,7 2,50	110614001	110617001	110620003
M 4 x 0,7	4,0	4,5	63	7	3,4 3,30	110614002	110617002	110620004
M 5 x 0,8	5,0	6,0	70	8	4,9 4,20	110614003	110617003	110620005
M 6 x 1,0	6,0	6,0	80	10	4,9 5,00	110614004	110617004	110620006
M 8 x 1,25	8,0	8,0	90	14	6,2 6,80	110614005	110617005	110620007
M 10 x 1,5	10,0	10,0	100	16	8,0 8,50	110614006	110617006	110620008
M 12 x 1,75	12,0	9,0	110	18	7,0 10,20	110614007	110617007	110620009
M 14 x 2,0	14,0	11,0	110	20	9,0 12,00		110617008	
M 16 x 2,0	16,0	12,0	110	22	9,0 14,00		110617009	
M 18 x 2,5	18,0	14,0	125	25	11,0 15,50		110617010	
M 20 x 2,5	20,0	16,0	140	25	12,0 17,50		110617011	
							Total length L1 = 120 mm	
M 3 x 0,5	3,0	3,5	56	6	2,7 2,50		Tol. 7G: for disorted threads (heat treatment)	
M 4 x 0,7	4,0	4,5	63	7	3,4 3,30	110615001	110618001	
M 5 x 0,8	5,0	6,0	70	8	4,9 4,20	110615002	110618002	
M 6 x 1,0	6,0	6,0	80	10	4,9 5,00	110615003	110618003	
M 8 x 1,25	8,0	8,0	90	14	6,2 6,80	110615004	110618004	
M 10 x 1,5	10,0	10,0	100	16	8,0 8,50	110615005	110618005	
M 12 x 1,75	12,0	9,0	110	18	7,0 10,20	110615006	110618006	
							Total length L1 = 150 mm	
M 3 x 0,5	3,0	3,5	56	6	2,7 2,50		Tol. 6H +0,1 mm: for electroplating allowance	
M 4 x 0,7	4,0	4,5	63	7	3,4 3,30	110616001	110619001	
M 5 x 0,8	5,0	6,0	70	8	4,9 4,20	110616002	110619002	
M 6 x 1,0	6,0	6,0	80	10	4,9 5,00	110616003	110619003	
M 8 x 1,25	8,0	8,0	90	14	6,2 6,80	110616004	110619004	
M 10 x 1,5	10,0	10,0	100	16	8,0 8,50	110616005	110619005	
M 12 x 1,75	12,0	9,0	110	18	7,0 10,20	110616006	110619006	

Machine Nut Taps and Combined Machine Taps

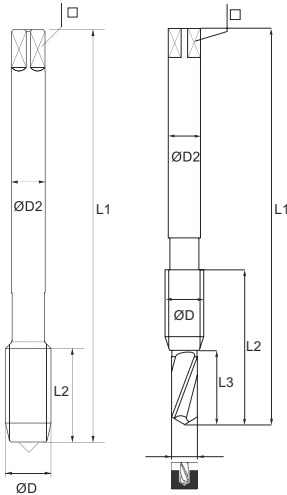
M metric coarse thread / ISO DIN 13

Machine Nut Tap

Machine Tap for threading nuts up to 1,0 D. The flutes can hold the most part of the chips.

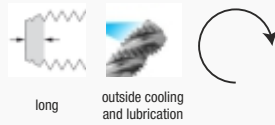
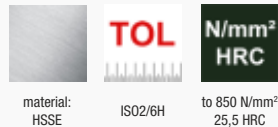
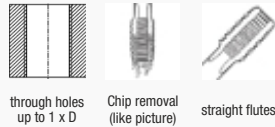
Combined Machine Tap

Machine Tap, which allows core hole drilling and thread tapping in one fluent process without changing tools.

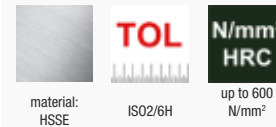
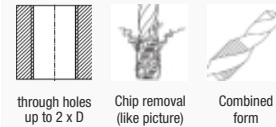


Shank: DIN 357

Machine Nut Tap for general use



Combined Machine Tap for general use



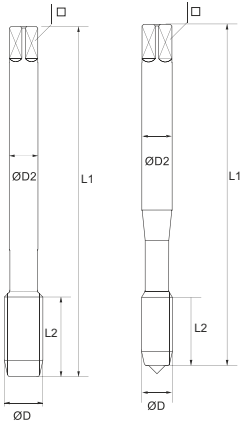
M

	D1	D2	L1	L2				L1	L2	L3		No.	
M 3 x 0,5	3,0	2,2	70	22	-	2,50	110901001	3,0	56	22	11	2,4	111001001
M 4 x 0,7	4,0	2,8	90	25	2,1	3,30	110901002	4,0	63	28	14	3,0	111001002
M 5 x 0,8	5,0	3,5	100	28	2,7	4,20	110901003	5,0	71	36	18	3,8	111001003
M 6 x 1,0	6,0	4,5	110	32	3,4	5,00	110901004	6,0	80	44	22	4,9	111001004
M 8 x 1,25	8,0	6,0	125	40	4,9	6,80	110901005	8,0	95	50	25	6,2	111001005
M 10 x 1,5	10,0	7,0	140	45	5,5	8,50	110901006	10,0	106	62	31	8,0	111001006
M 12 x 1,75	12,0	9,0	180	50	7,0	10,20	110901007	12,0	115	70	35	9,0	111001007
M 14 x 2,0	14,0	11,0	200	56	9,0	12,00	110901008						
M 16 x 2,0	16,0	12,0	200	63	9,0	14,00	110901009						
M 18 x 2,5	18,0	14,0	220	63	11,0	15,50	110901010						
M 20 x 2,5	20,0	16,0	250	70	12,0	17,50	110901011						
M 22 x 2,5	22,0	18,0	280	80	14,5	19,50	110901012						
M 24 x 3,0	24,0	18,0	280	80	14,5	21,00	110901013						

M metric coarse thread / ISO DIN 13

Machine Forming Taps have following advantages:

- No chips
- Up to 20 times longer lifetime (compared to taps)
- Same forming tap for through and blind hole
- Wide range of materials can be processed
- Intersection of the thread is impossible
- Very high trueness
- Increased strength of the thread
- Higher surface quality
- Much higher cutting speed



Shank: DIN 376

Shank: DIN 371

Machine Forming Taps for universal use

through holes & blind holes up to 2,5 x D

Threading with no chips

with oil grooves

material: HSSE TIN

TOL ISO2/6HX

N/mm² HRC

to 850 N/mm² 25,5 HRC

2-3 threads

outside cooling and lubrication



Machine Forming Taps for higher demands

through holes & blind holes up to 3 x D

Threading with no chips

with oil grooves

material: HSSE-PM TIN

TOL ISO2/6HX

N/mm² HRC

to 1200 N/mm² 37,1 HRC

2-3 threads

outside cooling and lubrication



Machine Forming Taps for universal use oversized (diameter)

blind holes up to 3 x D

Chip removal (like picture)

Form C 35° spiral flute

material: HSSE TIN

TOL ISO3/6GX

N/mm² HRC

to 850 N/mm² 25,5 HRC

2-3 threads

outside cooling and lubrication



M

D1 D2 L1 L2 □



No.

No.

No.

Tol. 6HX: standard tolerance

Tol. 6HX: standard tolerance

Tol. 6GX: threads with large clearance

M 2 x 0,4	2,0	2,8	45	8	2,1	1,85	111101001	111104001	111117001
M 2,2 x 0,45	2,2	2,8	45	8	2,1	2,03	111101002		
M 2,3 x 0,4	2,3	2,8	45	8	2,1	2,15	111101003		
M 2,5 x 0,45	2,5	2,8	50	9	2,1	2,33	111101004	111104002	111117002
M 2,6 x 0,45	2,6	2,8	50	9	2,1	2,43	111101005		
M 3 x 0,5	3,0	3,5	56	11	2,7	2,80	111101006	111104003	111117003
M 3,5 x 0,6	3,5	4,0	56	13	3,0	3,25	111101007	111104004	111117004
M 4 x 0,7	4,0	4,5	63	13	3,4	3,70	111101008	111104005	111117005
M 4,5 x 0,75	4,5	6,0	70	14	4,9	4,20	111101009		
M 5 x 0,8	5,0	6,0	70	16	4,9	4,65	111101010	111104006	111117006
M 6 x 1,0	6,0	6,0	80	19	4,9	5,10	111101011	111104007	111117007
M 8 x 1,25	8,0	8,0	90	22	6,2	7,45	111101012	111104008	111117008
M 10 x 1,5	10,0	10,0	100	24	8,0	9,35	111101013	111104009	111117009
M 12 x 1,75	12,0	9,0	110	29	7,0	11,25	111101014	111104010	111117010
M 14 x 2,0	14,0	11,0	110	30	9,0	13,10	111101015	111104011	111117011
M 16 x 2,0	16,0	12,0	110	32	9,0	15,10	111101016	111104012	111117012
M 18 x 2,5	18,0	14,0	125	34	11,0	16,85	111101017	111104013	
M 20 x 2,5	20,0	16,0	140	34	12,0	18,85	111101018	111104014	

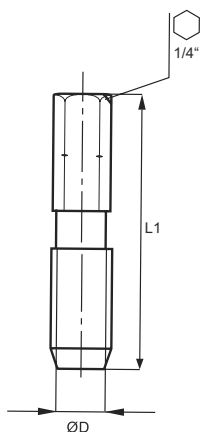
1/4" Bit-Short Machine Taps

M metric coarse thread / ISO DIN 13

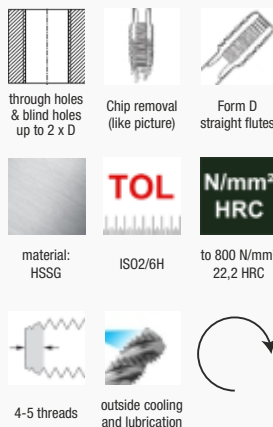
Efficient internal thread cutting with battery-powered screwdriver (min. 7,5 Volt).

Application:

- ⚙ non abrasive material up to 900 N/mm unalloyed and low alloyed steel



Bit-Taps Form D for through holes and blind holes



M	D1	L1	L2	Hexagon	Shank	No.
M 3 x 0,5	3,0	33	11	1/4"	2,50	111201001
M 3,5 x 0,6	3,5	34	10	1/4"	2,90	111201002
M 4 x 0,7	4,0	35	12	1/4"	3,30	111201003
M 4,5 x 0,75	4,5	35	12	1/4"	3,70	111201004
M 5 x 0,8	5,0	36	15	1/4"	4,20	111201005
M 5,5 x 0,9	5,5	35	15	1/4"	4,60	111201006
M 6 x 1,0	6,0	39	18	1/4"	5,00	111201007
M 7 x 1,0	7,0	38	16	1/4"	6,00	111201008
M 8 x 1,25	8,0	40	19	1/4"	6,80	111201009
M 9 x 1,25	9,0	41	18	1/4"	7,80	111201010
M 10 x 1,5	10,0	41	21	1/4"	8,50	111201011

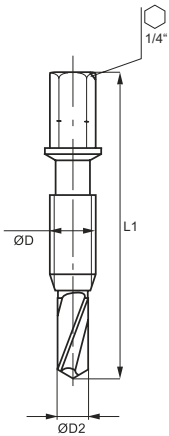
M metric coarse thread / ISO DIN 13

Efficient internal thread cutting with batterypowered screwdriver (min. 7,5 Volt).

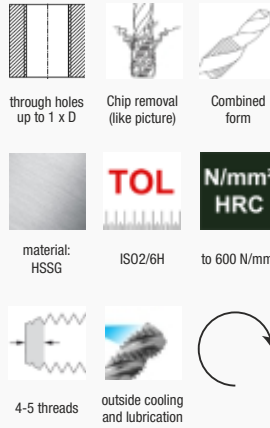
Core hole drilling and thread tapping in one fluent process.

Application:
























- ⚙ non abrasive material up to 600 N/mm² unalloyed and low alloyed steel

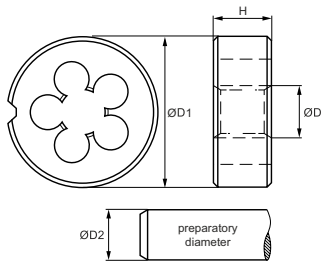


Kombi-Bit-Taps for through holes



M	D1	D2	L1	Hexagon	No.
M 3 x 0,5	3,0	2,5	36	1/4"	111301001
M 4 x 0,7	4,0	3,3	39	1/4"	111301002
M 5 x 0,8	5,0	4,2	41	1/4"	111301003
M 6 x 1,0	6,0	5,0	44	1/4"	111301004
M 8 x 1,25	8,0	6,8	50	1/4"	111301005
M 10 x 1,5	10,0	8,5	59	1/4"	111301006

Round Dies for general use	Round Dies for general use Left Hand	Round Dies for higher demands	Round Dies for stainless steels	Round Dies for brass
				
TOL ISO-6g	TOL ISO-6g	TOL ISO-6g	TOL ISO-6g	TOL ISO-6g
 	 	 	 	 
				
				



M	D	D1	H	D2	No.	No.	No.	No.	No.
M 1 x 0,25	1,0	16	5	0,96	111401001				
M 1,1 x 0,25	1,1	16	5	1,05	111401002				
M 1,2 x 0,25	1,2	16	5	1,15	111401003				
M 1,4 x 0,3	1,4	16	5	1,36	111401004			111405001	
M 1,6 x 0,35	1,6	16	5	1,55	111401005			111405002	
M 1,7 x 0,35	1,7	16	5	1,64	111401006			111405003	
M 1,8 x 0,35	1,8	16	5	1,75	111401007				
M 2 x 0,4	2,0	16	5	1,95	111401008	111402001		111405004	111409001
M 2,2 x 0,45	2,2	16	5	2,15	111401009				
M 2,3 x 0,4	2,3	16	5	2,23	111401010			111405005	
M 2,5 x 0,45	2,5	16	5	2,42	111401011			111405006	111409002
M 2,6 x 0,45	2,6	16	5	2,53	111401012			111405007	111409003
M 3 x 0,5	3,0	20	5	2,92	111401013	111402002	111404001	111405008	111409004
M 3,5 x 0,6	3,5	20	5	3,41	111401014			111405009	111409005
M 4 x 0,7	4,0	20	5	3,90	111401015	111402003	111404002	111405010	111409006
M 4,5 x 0,75	4,5	20	7	4,40	111401016				
M 5 x 0,8	5,0	20	7	4,90	111401017	111402004	111404003	111405011	111409007
M 5 x 0,9	5,0	20	7	4,89	111401018				
M 5,5 x 0,9	5,5	20	7	5,44	111401019				
M 6 x 1,0	6,0	20	7	5,88	111401020	111402005	111404004	111405012	111409008
M 7 x 1,0	7,0	25	9	6,88	111401021			111405013	111409009
M 8 x 1,25	8,0	25	9	7,86	111401022	111402006	111404005	111405014	111409010
M 9 x 1,25	9,0	25	9	8,86	111401023				
M 10 x 1,5	10,0	30	11	9,85	111401024	111402007	111404006	111405015	111409011
M 11 x 1,5	11,0	30	11	10,85	111401025				
M 12 x 1,75	12,0	38	14	11,83	111401026	111402008	111404007	111405016	111409012
M 14 x 2,0	14,0	38	14	13,82	111401027	111402009	111404008	111405017	111409013
M 15 x 2,0	15,0	38	14	14,91	111401028				
M 16 x 2,0	16,0	45	18	15,82	111401029	111402010	111404009	111405018	
M 18 x 2,5	18,0	45	18	17,79	111401030	111402011	111404010	111405019	
M 19 x 2,5	19,0	45	18	18,89	111401031				
M 20 x 2,5	20,0	45	18	19,79	111401032	111402012	111404011	111405020	
M 22 x 2,5	22,0	55	22	21,79	111401033	111402013	111404012	111405021	

M metric coarse thread / ISO DIN 13

Round Dies for general use	Round Dies for general use Left Hand	Round Dies for higher demands	Round Dies for stainless steels	Round Dies for brass
material: HSS	material: HSS	material: HSSE	material: HSSE	material: HSS
TOL ISO-6g	TOL ISO-6g	TOL ISO-6g	TOL ISO-6g	TOL ISO-6g
Chamfer: 1,5 threads	Chamfer: 1,5 threads	Chamfer: 1,5 threads	Chamfer: 2 threads	Chamfer: 1,25 threads
right hand thread	left hand thread	right hand thread	right hand thread	right hand thread
		with spiral entry	lapped with spiral entry	lapped with spiral entry

M	D	D1	H	D2	No.	No.	No.	No.	No.
M 24 x 3,0	24,0	55	22	23,76	111401034	111402014	111404013	111405022	
M 27 x 3,0	27,0	65	25	26,76	111401035	111402015	111404014	111405023	
M 30 x 3,5	30,0	65	25	29,73	111401036	111402016	111404015	111405024	
M 33 x 3,5	33,0	65	25	32,73	111401037	111402017			
M 36 x 4,0	36,0	65	25	35,70	111401038	111402018			
M 39 x 4,0	39,0	75	30	38,70	111401039	111402019			
M 42 x 4,5	42,0	75	30	41,68	111401040	111402020			
M 45 x 4,5	45,0	90	36	44,68	111401041	111402021			
M 48 x 5,0	48,0	90	36	47,66	111401042	111402022			
M 52 x 5,0	52,0	90	36	51,66	111401043	111402023			
M 56 x 5,5	56,0	105	36	55,65	111401044				
M 60 x 5,5	60,0	105	36	59,65	111401045				
M 64 x 6,0	64,0	120	36	63,62	111401046				
M 68 x 6,0	68,0	120	36	67,62	111401047				
M 72 x 6,0	72,0	120	36		111401048				
M 76 x 6,0	76,0	120	36		111401049				
M 80 x 6,0	80,0	120	36		111401050				
M 84 x 6,0	84,0	130	36		111401051				
M 88 x 6,0	88,0	140	36		111401052				
M 90 x 6,0	90,0	140	36		111401053				
M 92 x 6,0	92,0	140	36		111401054				
M 96 x 6,0	96,0	140	36		111401055				
M 100 x 6,0	100,0	150	36		111401056				

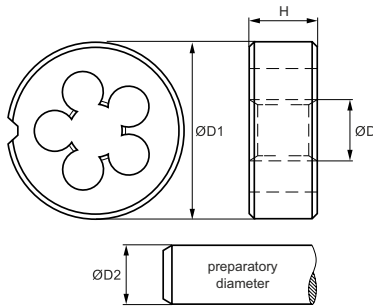
Round Dies for general use undersized



material: HSS 6e



Chamfer: 1,5 threads
right hand thread



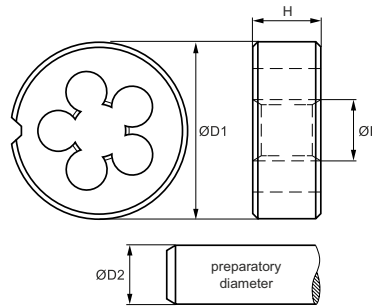
Round Dies for general use dimensions: 25 x 9



material: HSS ISO-6g



Chamfer: 1,5 threads
right hand thread




M	D	D1	H	D2	No.
M 3 x 0,5	3,0	20	5	2,89	111421001
M 4 x 0,7	4,0	20	5	3,87	111421002
M 5 x 0,8	5,0	20	7	4,86	111421003
M 6 x 1,0	6,0	20	7	5,85	111421004
M 8 x 1,25	8,0	25	9	7,83	111421005
M 10 x 1,5	10,0	30	11	9,81	111421006
M 12 x 1,75	12,0	38	14	11,81	111421007
M 14 x 2,0	14,0	38	14	13,87	111421008
M 16 x 2,0	16,0	45	18	15,87	111421009
M 18 x 2,5	18,0	45	18	17,75	111421010
M 20 x 2,5	20,0	45	18	19,75	111421011


M	D	D1	H	D2	No.
M 3 x 0,5	3,0	25	9	2,92	111422001
M 4 x 0,7	4,0	25	9	3,90	111422002
M 5 x 0,8	5,0	25	9	4,90	111422003
M 6 x 1,0	6,0	25	9	5,88	111422004
M 8 x 1,25	8,0	25	9	7,86	111422005
M 10 x 1,5	10,0	25	9	9,85	111422006
M 12 x 1,75	12,0	25	9	11,83	111422007

M metric coarse thread / ISO DIN 13

Hexagon Die Nuts for general use




material: HSS ISO-6g




Chamfer: 1,5 threads
right hand thread

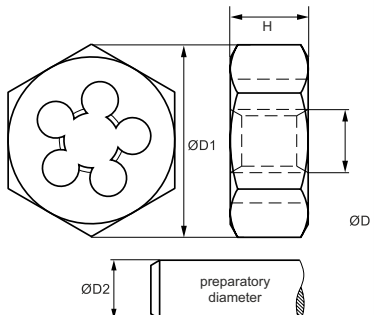
Hexagon Die Nuts for general use **Left Hand**



material: HSS ISO-6g



Chamfer: 1,5 threads
left hand thread



M	D	D1	H	D2	No.	No.
M 3 x 0,5	3,0	19	5	2,92	111501001	111502001
M 3,5 x 0,6	3,5	19	5	3,41	111501002	
M 4 x 0,7	4,0	19	5	3,90	111501003	111502002
M 5 x 0,8	4,5	19	7	4,40	111501004	111502003
M 6 x 1,0	6,0	19	7	5,88	111501005	111502004
M 7 x 1,0	7,0	22	9	6,88	111501006	
M 8 x 1,25	8,0	22	9	7,86	111501007	111502005
M 9 x 1,25	9,0	22	9	8,86	111501008	
M 10 x 1,5	10,0	27	11	9,85	111501009	111502006
M 11 x 1,5	11,0	27	11	10,85	111501010	
M 12 x 1,75	12,0	36	14	11,83	111501011	111502007
M 14 x 2,0	14,0	36	14	13,82	111501012	111502008
M 16 x 2,0	16,0	41	18	15,82	111501013	111502009
M 18 x 2,5	18,0	41	18	17,79	111501014	111502010
M 20 x 2,5	20,0	41	18	19,79	111501015	111502011
M 22 x 2,5	22,0	50	22	21,79	111501016	111502012
M 24 x 3,0	24,0	50	22	23,76	111501017	111502013
M 27 x 3,0	27,0	60	25	26,76	111501018	111502014
M 30 x 3,5	30,0	60	25	29,73	111501019	111502015
M 33 x 3,5	33,0	60	25	32,73	111501020	111502016
M 36 x 4,0	36,0	60	25	35,70	111501021	111502017
M 39 x 4,0	39,0	70	30	38,70	111501022	111502018
M 42 x 4,5	42,0	70	30	41,68	111501023	111502019
M 45 x 4,5	45,0	85	36	44,68	111501024	111502020
M 48 x 5,0	48,0	85	36	47,66	111501025	111502021
M 52 x 5,0	52,0	85	36	51,66	111501026	111502022
M 56 x 5,5	56,0	100	36	55,65	111501027	
M 60 x 5,5	60,0	100	36	59,65	111501028	
M 64 x 6,0	64,0	100	36	63,62	111501029	
M 68 x 6,0	68,0	115	36	67,62	111501030	

MF Metric fine thread / ISO DIN 13

Hand-Tap Sets, Round Dies and Tools Sets (example picture)



Set MF 3 - MF 12

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	MF 3 x 0,35 MF 4 x 0,5 MF 5 x 0,5 6 x 0,75 MF 8 x 0,75 MF 8 x 1,0 MF 10 x 1,0 MF 12 x 1,5
HSS Round Dies	MF 3 x 0,35 MF 4 x 0,5 MF 5 x 0,5 6 x 0,75 MF 8 x 0,75 MF 8 x 1,0 MF 10 x 1,0 MF 12 x 1,5
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 4-12 5/32-1/2 G 1/8
Die Stocks - zinc die cast	20 x 5 20 x 7 25 x 9 30 x 11 38 x 10
Screw extractor	

Item No.:
264801002

Set MF 6 - MF 20

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	MF 6 x 0,75 MF 8 x 0,75 MF 8 x 1,0 MF 10 x 1,0 MF 12 x 1,0 MF 12 x 1,5 MF 14 x 1,25 MF 14 x 1,5 MF 16 x 1,5 MF 18 x 1,5 MF 20 x 1,5
HSS Round Dies	MF 6 x 0,75 MF 8 x 0,75 MF 8 x 1,0 MF 10 x 1,0 MF 12 x 1,0 MF 12 x 1,5 MF 14 x 1,25 MF 14 x 1,5 MF 16 x 1,5 MF 18 x 1,5 MF 20 x 1,5
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4 G 1/8-G 1/2
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14
Screw extractor	

Item No.:
264801102

Set MF 6 - MF 24

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	MF 6 x 0,75 MF 8 x 0,75 MF 8 x 1,0 MF 10 x 1,0 MF 12 x 1,0 MF 12 x 1,5 MF 14 x 1,25 MF 14 x 1,5 MF 16 x 1,5 MF 18 x 1,5 MF 20 x 1,5 MF 22 x 1,5 MF 24 x 1,5
HSS Round Dies	MF 6 x 0,75 MF 8 x 0,75 MF 8 x 1,0 MF 10 x 1,0 MF 12 x 1,0 MF 12 x 1,5 MF 14 x 1,25 MF 14 x 1,5 MF 16 x 1,5 MF 18 x 1,5 MF 20 x 1,5 MF 22 x 1,5 MF 24 x 1,5
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 11-27 7/16-1" G 1/4-G 3/4
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14 55 x 16
Screw extractor	

Item No.:
264801202

MF Metric fine thread / ISO DIN 13

Short Machine Taps und Round Dies Sets MF 5 - MF 12 (example picture)



Set MF 5 - MF 12 HSSG Short Machine Taps & Drill bits for core holes HSS Round Dies



HSSG Short Machine Tap Form D for through hole & blind hole (up to 4 x D)	M 5 x 0,5 M 6 x 0,75 M 8 x 1,0 M 10 x 1,0 M 12 x 1,5
HSSG Drill bits for core holes	4,3 mm 5,2 mm 7,0 mm 9,0 mm 10,5 mm
HSS Round Dies	M 5 x 0,5 M 6 x 0,75 M 8 x 1,0 M 10 x 1,0 M 12 x 1,5



Item No.:
BES1

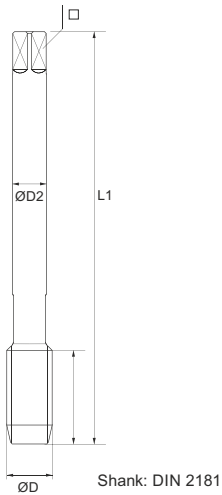
MF Metric fine thread / ISO DIN 13

Efficient internal thread cutting.

The short structural type makes that tap usable by machine and hand.

Application:

-  non abrasive material up to 900 N/mm²
-  unalloyed and low alloyed steel



Short Machine Taps

Form D for through holes and blind holes

through holes & blind holes up to 4 x D

Chip removal (like picture)

Form D straight flutes



material: HSSG

ISO2/6H

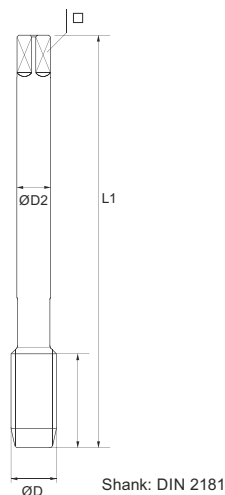
to 900 N/mm² 27,1 HRC

4-5 threads

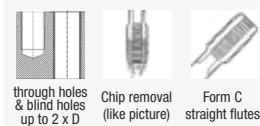
outside cooling and lubrication

MF	D1	D2	L1	L2			No.
MF 6 x 0,75	6,0	6,0	50	14	4,9	5,20	120101001
MF 8 x 0,75	8,0	6,0	50	19	4,9	6,20	120101002
MF 8 x 1,0	8,0	6,0	56	22	4,9	7,00	120101003
MF 9 x 0,75	9,0	7,0	56	19	5,5	8,20	120101004
MF 9 x 1,0	9,0	7,0	63	20	5,5	8,00	120101005
MF 10 x 0,75	10,0	7,0	63	20	5,5	9,20	120101006
MF 10 x 1,0	10,0	7,0	63	20	5,5	9,00	120101007
MF 10 x 1,25	10,0	7,0	70	24	5,5	8,80	120101008
MF 12 x 1,0	12,0	9,0	70	22	7,0	11,00	120101009
MF 12 x 1,25	12,0	9,0	70	22	7,0	10,80	120101010
MF 12 x 1,5	12,0	9,0	70	22	7,0	10,50	120101011
MF 13 x 1,0	13,0	11,0	70	22	9,0	12,00	120101012
MF 13 x 1,5	13,0	11,0	70	22	9,0	11,50	120101013
MF 14 x 1,0	14,0	11,0	70	22	9,0	13,00	120101014
MF 14 x 1,25	14,0	11,0	70	22	9,0	12,80	120101015
MF 14 x 1,5	14,0	11,0	70	22	9,0	12,50	120101016
MF 15 x 1,5	15,0	12,0	70	22	9,0	13,50	120101017
MF 16 x 1,5	16,0	12,0	70	22	9,0	14,50	120101018
MF 18 x 1,0	18,0	14,0	80	22	11,0	17,00	120101019
MF 18 x 1,5	18,0	14,0	80	22	11,0	16,50	120101020
MF 20 x 1,5	20,0	16,0	80	22	12,0	18,50	120101021
MF 20 x 2,0	20,0	16,0	80	22	12,0	18,00	120101022
MF 22 x 1,5	22,0	18,0	80	22	14,5	20,50	120101023
MF 22 x 2,0	22,0	18,0	80	22	14,5	20,00	120101024
MF 24 x 1,5	24,0	18,0	90	22	14,5	22,50	120101025
MF 24 x 2,0	24,0	18,0	90	22	14,5	22,00	120101026
MF 25 x 1,5	25,0	18,0	90	22	14,5	23,50	120101027
MF 26 x 1,5	26,0	18,0	90	22	14,5	24,50	120101028
MF 27 x 1,5	27,0	20,0	90	22	16,0	25,50	120101029
MF 28 x 1,5	28,0	20,0	90	22	16,0	26,50	120101030
MF 30 x 1,5	30,0	22,0	90	22	18,0	28,50	120101031
MF 30 x 2,0	30,0	22,0	90	22	18,0	28,00	120101032
MF 32 x 1,5	32,0	22,0	90	22	18,0	30,50	120101033

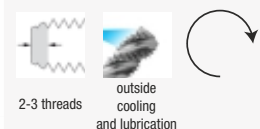
MF Metric fine thread / ISO DIN 13



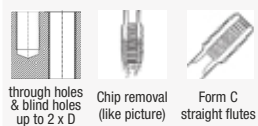
Hand Tap Sets for general use



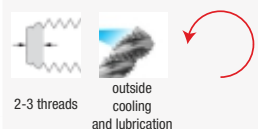
material: HSSG
ISO2/6H
to 900 N/mm²
27,1 HRC



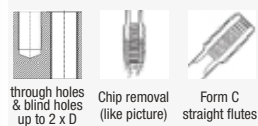
Hand Tap Sets for general use Left Hand



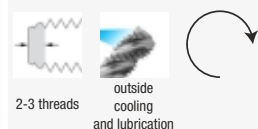
material: HSSG
ISO2/6H
to 900 N/mm²
27,1 HRC



Hand Tap Sets HSSE for higher demands



material: HSSE
ISO2/6H
bis 1000 N/mm²
31 HRC





MF	D1	D2	L1	L2	□	▣	No.	No.	No.		
MF 2,5 x 0,35	2,5	2,8	40	9	2,1	2,15	120301001				
MF 2,6 x 0,35	2,6	2,8	40	9	2,1	2,25	120301002				
MF 3 x 0,35	3,0	3,5	40	9	2,7	2,65	120301003				
MF 3,5 x 0,35	3,5	4,0	45	10	3,0	3,15	120301004				
MF 4 x 0,35	4,0	4,5	45	10	3,4	3,65	120301005				
MF 4 x 0,5	4,0	4,5	45	10	3,4	3,50	120301006				
MF 4,5 x 0,5	4,5	6,0	50	12	4,9	4,00	120301007				
MF 5 x 0,5	5,0	6,0	50	12	4,9	4,50	120301008				
MF 5 x 0,75	5,0	6,0	50	12	4,9	4,25	120301009				
MF 5,5 x 0,5	5,5	6,0	50	12	4,9	5,00	120301010				
MF 6 x 0,5	6,0	6,0	50	14	4,9	5,50	120301011				
MF 6 x 0,75	6,0	6,0	50	14	4,9	5,20	120301012	120302001	20,82	120304001	18,71
MF 7 x 0,5	7,0	6,0	50	14	4,9	6,50	120301013				
MF 7 x 0,75	7,0	6,0	50	14	4,9	6,20	120301014				
MF 8 x 0,5	8,0	6,0	50	19	4,9	7,50	120301015				
MF 8 x 0,75	8,0	6,0	50	19	4,9	7,20	120301016	120302002	20,82	120304002	18,71
MF 8 x 1	8,0	6,0	56	22	4,9	7,00	120301017	120302003	20,82	120304003	18,71
MF 9 x 0,5	9,0	7,0	56	19	5,5	8,50	120301018				
MF 9 x 0,75	9,0	7,0	56	19	5,5	8,25	120301019				
MF 9 x 1	9,0	7,0	63	20	5,5	8,00	120301020				
MF 10 x 0,5	10,0	7,0	63	20	5,5	9,50	120301021				
MF 10 x 0,75	10,0	7,0	63	20	5,5	9,20	120301022				
MF 10 x 1,0	10,0	7,0	63	20	5,5	9,00	120301023	120302004	20,82	120304004	20,35
MF 10 x 1,25	10,0	7,0	70	24	5,5	8,80	120301024	120302005	23,38	120304005	23,38
MF 11 x 0,75	11,0	8,0	63	20	6,2	10,20	120301025				
MF 11 x 1,0	11,0	8,0	63	20	6,2	10,00	120301026				
MF 11 x 1,25	11,0	8,0	63	22	6,2	10,80	120301027				
MF 12 x 0,5	12,0	9,0	70	22	7,0	11,50	120301028				
MF 12 x 0,75	12,0	9,0	70	22	7,0	10,20	120301029				
MF 12 x 1,0	12,0	9,0	70	22	7,0	11,00	120301030	120302006	30,88	120304006	28,30
MF 12 x 1,25	12,0	9,0	70	22	7,0	10,80	120301031	120302007	30,88	120304007	28,30
MF 12 x 1,5	12,0	9,0	70	22	7,0	10,50	120301032	120302008	28,30	120304008	28,30
MF 13 x 0,5	13,0	11,0	70	22	9,0	12,50	120301033				

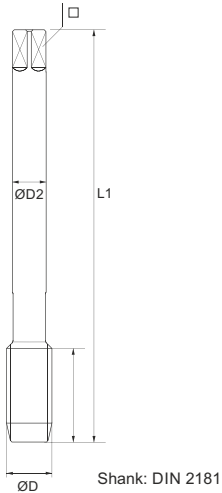
MF Metric fine thread / ISO DIN 13

Efficient internal thread cutting.

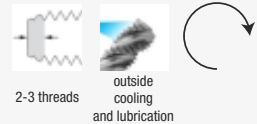
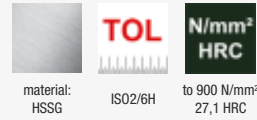
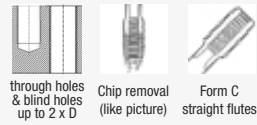
The short structural type makes that tap usable by machine and hand.

A Hand-Tap-Set includes 2 taps:

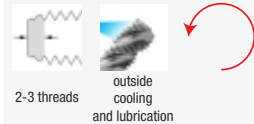
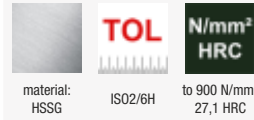
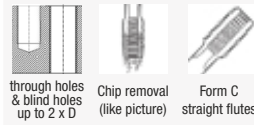
-  Taper Tap
-  Finish Tap



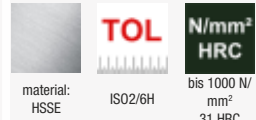
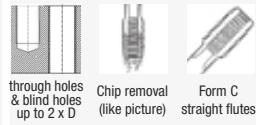
Hand Tap Sets for general use





Hand Tap Sets for general use Left Hand



Hand Tap Sets HSSE for higher demands



MF	D1	D2	L1	L2			No.	No.	No.
MF 13 x 0,75	13,0	11,0	70	22	9,0	12,20	120301034		
MF 13 x 1,0	13,0	11,0	70	22	9,0	12,00	120301035		
MF 13 x 1,5	13,0	11,0	70	22	9,0	11,50	120301036		
MF 14 x 0,5	14,0	11,0	70	22	9,0	13,50	120301037		
MF 14 x 0,75	14,0	11,0	70	22	9,0	13,20	120301038		
MF 14 x 1,0	14,0	11,0	70	22	9,0	13,00	120301039		
MF 14 x 1,25	14,0	11,0	70	22	9,0	12,80	120301040	120302009	120304009
MF 14 x 1,5	14,0	11,0	70	22	9,0	12,50	120301041	120302010	120304010
MF 15 x 0,75	15,0	12,0	70	22	9,0	14,20	120301042		
MF 15 x 1,0	15,0	12,0	70	22	9,0	14,00	120301043		
MF 15 x 1,5	15,0	12,0	70	22	9,0	13,50	120301044		
MF 16 x 0,5	16,0	12,0	70	22	9,0	15,50	120301045		
MF 16 x 0,75	16,0	12,0	70	22	9,0	15,20	120301046		
MF 16 x 1,0	16,0	12,0	70	22	9,0	15,00	120301047	120302011	120304011
MF 16 x 1,25	16,0	12,0	70	22	9,0	14,80	120301048		
MF 16 x 1,5	16,0	12,0	70	22	9,0	14,50	120301049	120302012	120304012
MF 17 x 1	17,0	12,0	70	22	9,0	16,00	120301050		
MF 17 x 1,5	17,0	12,0	70	22	9,0	15,50	120301051		
MF 18 x 0,5	18,0	14,0	80	22	11,0	17,50	120301052		
MF 18 x 0,75	18,0	14,0	80	22	11,0	17,20	120301053		
MF 18 x 1,0	18,0	14,0	80	22	11,0	17,00	120301054		
MF 18 x 1,25	18,0	14,0	80	22	11,0	16,80	120301055		
MF 18 x 1,5	18,0	14,0	80	22	11,0	16,50	120301056	120302013	120304013
MF 18 x 2,0	18,0	14,0	80	22	11,0	16,00	120301057		
MF 19 x 1	19,0	16,0	80	22	12,0	18,00	120301058		
MF 19 x 1,5	19,0	14,0	80	22	11,0	17,50	120301059		
MF 20 x 0,5	20,0	16,0	80	22	12,0	19,50	120301060		
MF 20 x 0,75	20,0	16,0	80	22	12,0	19,20	120301061		
MF 20 x 1,0	20,0	16,0	80	22	12,0	19,00	120301062		
MF 20 x 1,25	20,0	16,0	80	22	12,0	18,80	120301063		
MF 20 x 1,5	20,0	16,0	80	22	12,0	18,50	120301064	120302014	120304014
MF 20 x 2,0	20,0	16,0	80	22	12,0	18,00	120301065		120304015
MF 21 x 1	21,0	16,0	80	22	12,0	20,00	120301066		

MF Metric fine thread / ISO DIN 13

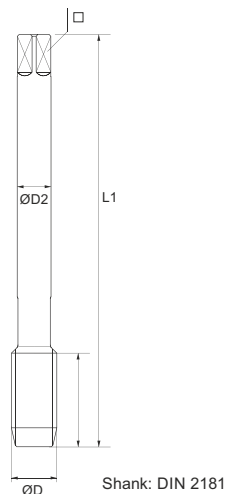
Efficient internal thread cutting.

The short structural type makes that tap usable by machine and hand.

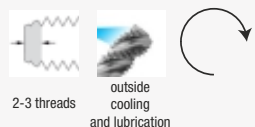
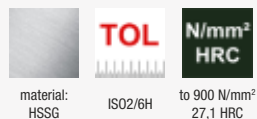
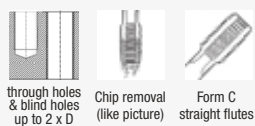
A Hand-Tap-Set includes 2 taps:

 Taper Tap

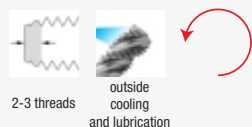
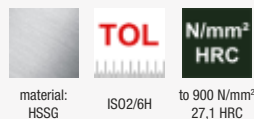
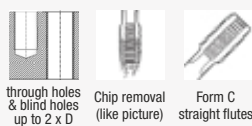
 Finish Tap



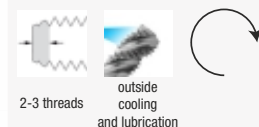
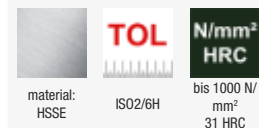
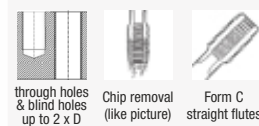
Hand Tap Sets for general use



Hand Tap Sets for general use Left Hand



Hand Tap Sets HSSE for higher demands



MF



	D1	D2	L1	L2			No.	No.	No.
MF 21 x 1,5	21,0	16,0	80	22	12,0	19,50	120301067		
MF 22 x 0,5	22,0	18,0	80	22	14,5	21,50	120301068		
MF 22 x 0,75	22,0	18,0	80	22	14,5	21,20	120301069		
MF 22 x 1,0	22,0	18,0	80	22	14,5	21,00	120301070		
MF 22 x 1,25	22,0	18,0	80	22	14,5	20,80	120301071		
MF 22 x 1,5	22,0	18,0	80	22	14,5	20,50	120301072	120302015	120304016
MF 22 x 2,0	22,0	18,0	80	22	14,5	20,00	120301073		120304017
MF 23 x 1	23,0	18,0	80	22	14,5	22,00	120301074		
MF 23 x 1,5	23,0	18,0	80	22	14,5	21,50	120301075		
MF 24 x 0,5	24,0	18,0	90	22	14,5	23,50	120301076		
MF 24 x 0,75	24,0	18,0	90	22	14,5	23,20	120301077		
MF 24 x 1,0	24,0	18,0	90	22	14,5	23,00	120301078		
MF 24 x 1,25	24,0	18,0	90	22	14,5	23,80	120301079		
MF 24 x 1,5	24,0	18,0	90	22	14,5	22,50	120301080	120302016	120304018
MF 24 x 2,0	24,0	18,0	90	22	14,5	22,00	120301081	120302017	
MF 25 x 1,0	25,0	18,0	90	22	14,5	24,00	120301082		
MF 25 x 1,5	25,0	18,0	90	22	14,5	23,50	120301083		
MF 26 x 1,0	26,0	18,0	90	22	14,5	25,00	120301084		
MF 26 x 1,5	26,0	18,0	90	22	14,5	24,50	120301085		
MF 26 x 2,0	26,0	18,0	90	22	14,5	24,00	120301086		
MF 27 x 1	27,0	20,0	90	22	16,0	26,00	120301087		
MF 27 x 1,5	27,0	20,0	90	22	16,0	25,50	120301088		
MF 27 x 2,0	27,0	20,0	90	22	16,0	25,00	120301089		
MF 28 x 1,0	28,0	20,0	90	22	16,0	27,00	120301090		
MF 28 x 1,5	28,0	20,0	90	22	16,0	26,50	120301091		
MF 28 x 2,0	28,0	20,0	90	22	16,0	26,00	120301092		
MF 29 x 1,5	29,0	22,0	90	22	18,0	27,50	120301093		
MF 30 x 1,0	30,0	22,0	90	22	18,0	29,00	120301094		
MF 30 x 1,5	30,0	22,0	90	22	18,0	28,50	120301095	120302018	
MF 30 x 2,0	30,0	22,0	90	22	18,0	28,00	120301096	120302019	
MF 30 x 2,5	30,0	22,0	125	56	18,0	27,50	120301097		
MF 30 x 3,0	30,0	22,0	125	56	18,0	27,00	120301098		
MF 32 x 1	32,0	22,0	90	22	18,0	31,00	120301099		

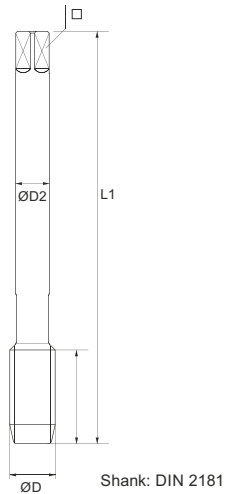
MF Metric fine thread / ISO DIN 13

Efficient internal thread cutting.

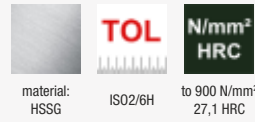
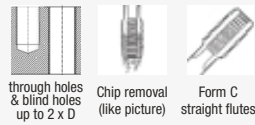
The short structural type makes that tap usable by machine and hand.

A Hand-Tap-Set includes 2 taps:

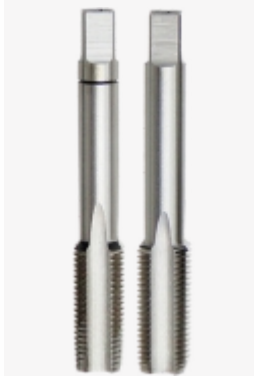
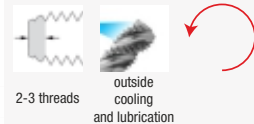
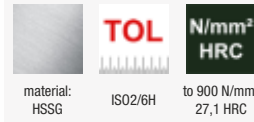
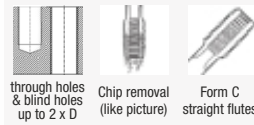
-  Taper Tap
-  Finish Tap



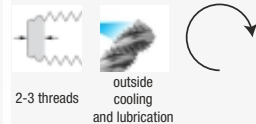
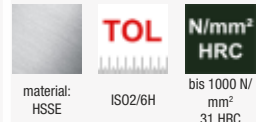
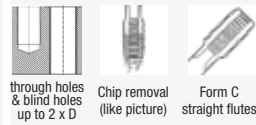
Hand Tap Sets for general use





Hand Tap Sets for general use Left Hand



Hand Tap Sets HSSE for higher demands





MF	D1	D2	L1	L2			No.	No.	No.
MF 32 x 1,5	32,0	22,0	90	22	18,0	30,50	120301100		
MF 32 x 2,0	32,0	22,0	90	22	18,0	30,00	120301101		
MF 32 x 3,0	32,0	22,0	125	56	18,0	29,00	120301102		
MF 33 x 1,5	33,0	25,0	100	25	20,0	31,50	120301103		
MF 33 x 2,0	33,0	25,0	100	25	20,0	31,00	120301104		
MF 33 x 3,0	33,0	25,0	125	56	20,0	30,00	120301105		
MF 34 x 1	34,0	28,0	100	25	22,0	33,00	120301106		
MF 34 x 1,5	34,0	28,0	100	25	22,0	32,50	120301107		
MF 34 x 2,0	34,0	28,0	125	40	22,0	32,00	120301108		
MF 35 x 1	35,0	28,0	100	25	22,0	34,00	120301109		
MF 35 x 1,5	35,0	28,0	100	25	22,0	33,50	120301110		
MF 35 x 2	35,0	28,0	125	40	22,0	33,00	120301111		
MF 36 x 1	36,0	28,0	100	25	22,0	35,00	120301112		
MF 36 x 1,5	36,0	28,0	100	25	22,0	34,50	120301113		
MF 36 x 2,0	36,0	28,0	125	40	22,0	34,00	120301114		
MF 36 x 3,0	36,0	28,0	125	40	22,0	33,00	120301115		
MF 37 x 1,5	37,0	28,0	100	25	22,0	35,50	120301116		
MF 38 x 1	38,0	28,0	100	25	22,0	37,00	120301117		
MF 38 x 1,5	38,0	28,0	100	25	22,0	36,50	120301118		
MF 38 x 2	38,0	28,0	125	40	22,0	36,00	120301119		
MF 38 x 3	38,0	28,0	125	40	22,0	35,00	120301120		
MF 39 x 1,5	39,0	32,0	110	25	24,0	37,50	120301121		
MF 39 x 2,0	39,0	32,0	125	40	24,0	37,00	120301122		
MF 39 x 3,0	39,0	32,0	125	40	24,0	36,00	120301123		
MF 40 x 1	40,0	32,0	110	25	24,0	39,00	120301124		
MF 40 x 1,5	40,0	32,0	110	25	24,0	38,50	120301125		
MF 40 x 2,0	40,0	32,0	125	40	24,0	38,00	120301126		
MF 40 x 3,0	40,0	32,0	125	40	24,0	37,00	120301127		
MF 42 x 1	42,0	32,0	110	25	24,0	41,00	120301128		
MF 42 x 1,5	42,0	32,0	110	25	24,0	40,50	120301129		
MF 42 x 2,0	42,0	32,0	125	40	24,0	40,00	120301130		
MF 42 x 3,0	42,0	32,0	125	40	24,0	39,00	120301131		
MF 44 x 1,5	44,0	36,0	110	25	29,0	42,50	120301132		

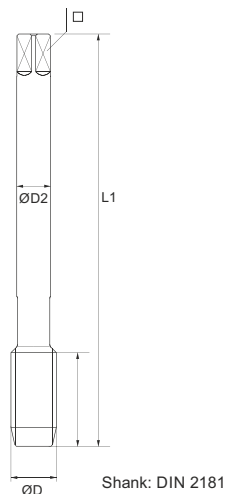
MF Metric fine thread / ISO DIN 13

Efficient internal thread cutting.

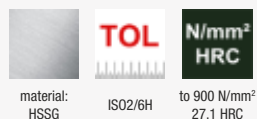
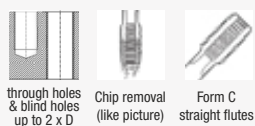
The short structural type makes that tap usable by machine and hand.

A Hand-Tap-Set includes 2 taps:

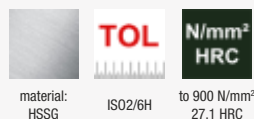
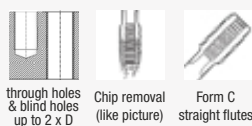
-  Taper Tap
-  Finish Tap



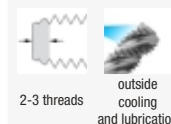
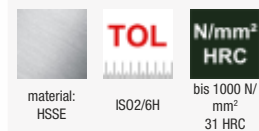
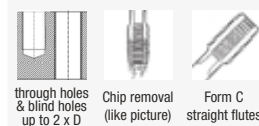
Hand Tap Sets for general use





Hand Tap Sets for general use Left Hand



Hand Tap Sets HSSE for higher demands





MF	D1	D2	L1	L2			No.	No.	No.
MF 44 x 2	44,0	36,0	125	40	29,0	42,00	120301133		
MF 45 x 1	45,0	36,0	110	25	29,0	44,00	120301134		
MF 45 x 1,5	45,0	36,0	110	25	29,0	43,50	120301135		
MF 45 x 2,0	45,0	36,0	125	40	29,0	43,00	120301136		
MF 45 x 3,0	45,0	36,0	125	40	29,0	42,00	120301137		
MF 46 x 1,5	46,0	36,0	140	40	29,0	45,50	120301138		
MF 48 x 1	48,0	36,0	140	40	29,0	47,00	120301139		
MF 48 x 1,5	48,0	36,0	140	40	29,0	46,50	120301140		
MF 48 x 2,0	48,0	36,0	140	40	29,0	46,00	120301141		
MF 48 x 3,0	48,0	36,0	140	40	29,0	45,00	120301142		
MF 50 x 1,5	50,0	36,0	140	40	29,0	48,50	120301143		
MF 50 x 2,0	50,0	36,0	140	40	29,0	48,00	120301144		
MF 50 x 3,0	50,0	36,0	140	40	29,0	47,00	120301145		
MF 52 x 1,5	52,0	40,0	140	40	32,0	50,50	120301146		
MF 52 x 2,0	52,0	40,0	140	40	32,0	50,00	120301147		
MF 52 x 3,0	52,0	40,0	140	40	32,0	49,00	120301148		
MF 54 x 1	54,0	40,0	140	32	32,0	53,00	120301149		
MF 54 x 1,5	54,0	40,0	140	32	32,0	52,50	120301150		
MF 54 x 2,0	54,0	40,0	140	36	32,0	52,00	120301151		
MF 54 x 3,0	54,0	40,0	140	40	32,0	51,00	120301152		
MF 54 x 4,0	54,0	40,0	180	50	32,0	50,00	120301153		
MF 55 x 1,5	55,0	40,0	140	32	32,0	53,50	120301154		
MF 55 x 2,0	55,0	40,0	140	36	32,0	53,00	120301155		
MF 55 x 3,0	55,0	40,0	140	40	32,0	52,00	120301156		
MF 55 x 4,0	55,0	40,0	180	50	32,0	51,00	120301157		
MF 56 x 1	56,0	40,0	140	32	32,0	55,00	120301158		
MF 56 x 1,5	56,0	40,0	140	32	32,0	54,50	120301159		
MF 56 x 2,0	56,0	40,0	140	36	32,0	54,00	120301160		
MF 56 x 3,0	56,0	40,0	140	40	32,0	53,00	120301161		
MF 56 x 4,0	56,0	40,0	180	50	32,0	52,00	120301162		
MF 58 x 1	58,0	45,0	160	32	35,0	57,00	120301163		
MF 58 x 1,5	58,0	45,0	160	32	35,0	56,50	120301164		
MF 58 x 2,0	58,0	45,0	160	36	35,0	56,00	120301165		
MF 58 x 3,0	58	45	160	40	35	55	120301166		

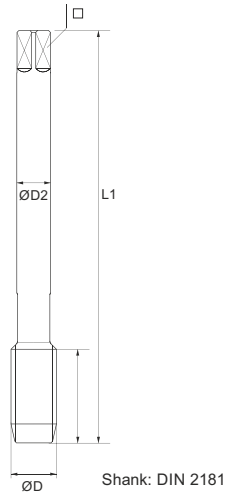
MF Metric fine thread / ISO DIN 13

Efficient internal thread cutting.

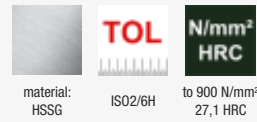
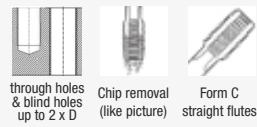
The short structural type makes that tap usable by machine and hand.

A Hand-Tap-Set includes 2 taps:

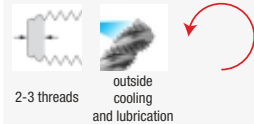
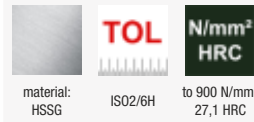
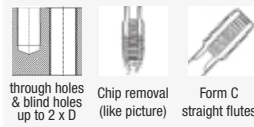
-  Taper Tap
-  Finish Tap



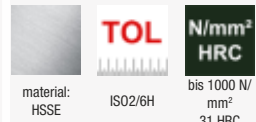
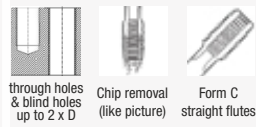
Hand Tap Sets for general use





Hand Tap Sets for general use Left Hand



Hand Tap Sets HSSE for higher demands



MF

	D1	D2	L1	L2			No.	No.	No.
MF 58 x 4,0	58	45	200	55	35	54	120301167		
MF 60 x 1,5	60	45	160	34	35	58,5	120301168		
MF 60 x 2,0	60	45	160	36	35	58	120301169		
MF 60 x 3,0	60	45	160	40	35	57	120301170		
MF 60 x 4,0	60	45	200	55	35	56	120301171		
MF 62 x 1,5	62	50	160	34	39	60,5	120301172		
MF 62 x 2,0	62	50	160	36	39	60	120301173		
MF 62 x 3,0	62	50	180	45	39	59	120301174		
MF 62 x 4,0	62	50	220	55	39	58	120301175		
MF 63 x 1,5	63	50	160	32	39	61,5	120301176		
MF 64 x 1,5	64	50	160	34	39	62,5	120301177		
MF 64 x 2,0	64	50	160	36	39	62	120301178		
MF 64 x 3,0	64	50	180	45	39	61	120301179		
MF 64 x 4,0	64	50	220	60	39	60	120301180		
MF 65 x 1,5	65	50	160	34	39	63,5	120301181		
MF 65 x 2,0	65	50	160	36	39	63	120301182		
MF 65 x 3,0	65	50	180	45	39	62	120301183		
MF 65 x 4,0	65	50	220	60	39	61	120301184		
MF 68 x 1,5	68	50	160	36	39	66,5	120301185		
MF 68 x 2,0	68	50	160	40	39	66	120301186		
MF 68 x 3,0	68	50	180	50	39	65	120301187		
MF 68 x 4,0	68	50	220	60	39	64	120301188		
MF 70 x 1,5	70	50	160	36	39	68,5	120301189		
MF 70 x 2,0	70	50	160	40	39	68	120301190		
MF 70 x 3,0	70	50	200	50	39	67	120301191		
MF 70 x 4,0	70	50	240	60	39	66	120301192		
MF 72 x 1,5	72	50	160	36	39	70,5	120301193		
MF 72 x 2,0	72	50	160	40	39	70	120301194		
MF 72 x 3,0	72	50	200	50	39	69	120301195		
MF 72 x 4,0	72	50	240	60	39	68	120301196		
MF 74 x 1,5	74	50	160	36	39	72,5	120301197		
MF 74 x 2,0	74	50	160	40	39	72	120301198		
MF 74 x 3,0	74	50	200	50	39	71	120301199		
MF 74 x 4,0	74	50	240	60	39	70	120301200		


MF Metric fine thread / ISO DIN 13

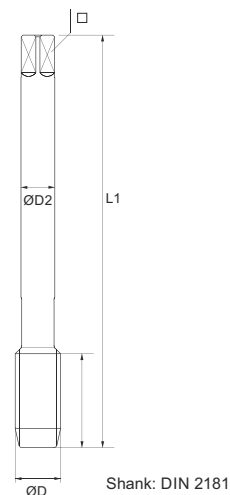
Efficient internal thread cutting.

The short structural type makes that tap usable by machine and hand.

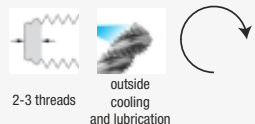
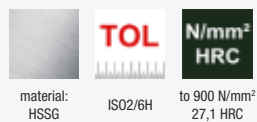
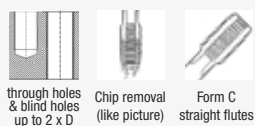
A Hand-Tap-Set includes 2 taps:

 Taper Tap

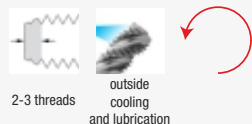
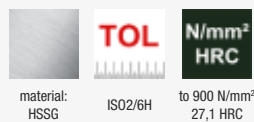
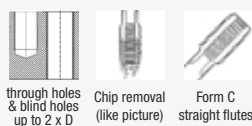
 Finish Tap



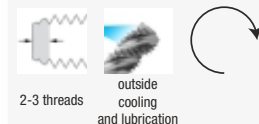
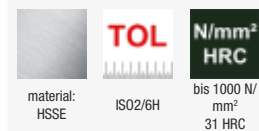
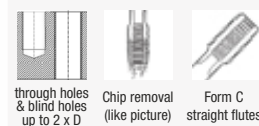
Hand Tap Sets for general use





Hand Tap Sets for general use Left Hand



Hand Tap Sets HSSE for higher demands





MF	D1	D2	L1	L2			No.	No.	No.
MF 75 x 1,5	75	50	160	36	39	73,5	120301201		
MF 75 x 2,0	75	50	160	40	39	73	120301202		
MF 75 x 3,0	75	50	200	50	39	72	120301203		
MF 75 x 4,0	75	50	240	60	39	71	120301204		
MF 76 x 1,5	76	50	160	36	39	74,5	120301205		
MF 76 x 2,0	76	50	160	40	39	74	120301206		
MF 76 x 3,0	76	50	220	50	39	73	120301207		
MF 76 x 4,0	76	50	260	60	39	72	120301208		
MF 78 x 1,5	78	50	160	36	39	76,5	120301209		
MF 78 x 2,0	78	50	160	40	39	76	120301210		
MF 78 x 3,0	78	50	220	55	39	75	120301211		
MF 78 x 4,0	78	50	260	65	39	74	120301212		
MF 80 x 1,5	80	50	160	36	39	78,5	120301213		
MF 80 x 2,0	80	50	160	40	39	78	120301214		
MF 80 x 3,0	80	50	220	55	39	77	120301215		
MF 80 x 4,0	80	50	260	65	39	76	120301216		
MF 82 x 1,5	82	50	160	36	39	80,5	120301217		
MF 82 x 2,0	82	50	160	40	39	80	120301218		
MF 82 x 3,0	82	50	220	55	39	79	120301219		
MF 82 x 4,0	82	50	260	65	39	78	120301220		
MF 84 x 1,5	84	50	160	36	39	82,5	120301221		
MF 84 x 2,0	84	50	160	40	39	82	120301222		
MF 84 x 3,0	84	50	220	55	39	81	120301223		
MF 84 x 4,0	84	50	260	65	39	80	120301224		
MF 85 x 1,5	85	50	160	36	39	83,5	120301225		
MF 85 x 2,0	85	50	160	40	39	83	120301226		
MF 85 x 3,0	85	50	220	55	39	82	120301227		
MF 85 x 4,0	85	50	260	65	39	81	120301228		
MF 86 x 1,5	86	50	160	36	39	84,5	120301229		
MF 86 x 2,0	86	50	160	40	39	84	120301230		
MF 86 x 3,0	86	50	220	55	39	83	120301231		
MF 86 x 4,0	86	50	260	65	39	82	120301232		
MF 88 x 1,5	88	50	160	38	39	86,5	120301233		
MF 88 x 2,0	88	50	160	40	39	86	120301234		

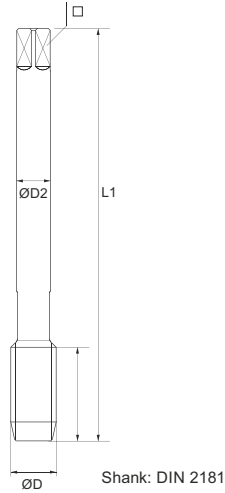
MF Metric fine thread / ISO DIN 13

Efficient internal thread cutting.

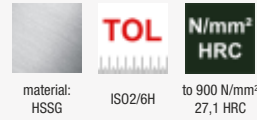
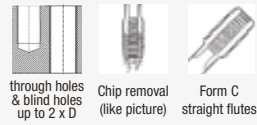
The short structural type makes that tap usable by machine and hand.

A Hand-Tap-Set includes 2 taps:

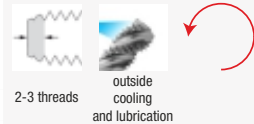
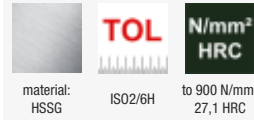
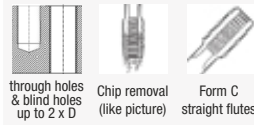
-  Taper Tap
-  Finish Tap



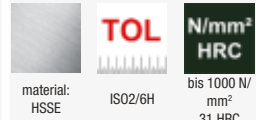
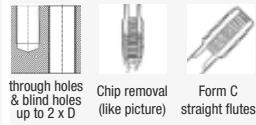
Hand Tap Sets for general use




Hand Tap Sets for general use Left Hand



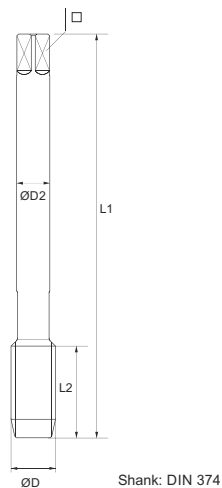
Hand Tap Sets HSSE for higher demands



MF	D1	D2	L1	L2	□		No.	€	No.	€	No.	€
MF 88 x 3,0	88	50	220	55	39	85	120301235	3.334,74				
MF 88 x 4,0	88	50	260	65	39	84	120301236	3.334,74				
MF 90 x 1,5	90	50	160	38	39	88,5	120301237	3.031,58				
MF 90 x 2,0	90	50	160	40	39	88	120301238	2.981,05				
MF 90 x 3,0	90	50	220	55	39	87	120301239	3.562,11				
MF 90 x 4,0	90	50	260	65	39	86	120301240	3.562,11				
MF 92 x 1,5	92	56	180	40	44	90,5	120301241	3.031,58				
MF 92 x 2,0	92	56	180	45	44	90	120301242	3.031,58				
MF 92 x 3,0	92	56	240	60	44	89	120301243	3.840,00				
MF 92 x 4,0	92	56	280	70	44	88	120301244	3.840,00				
MF 95 x 1,5	95	56	180	40	44	93,5	120301245	3.258,95				
MF 95 x 2,0	95	56	180	45	44	93	120301246	3.258,95				
MF 95 x 3,0	95	56	240	60	44	92	120301247	4.294,74				
MF 95 x 4,0	95	56	280	70	44	91	120301248	4.193,68				
MF 96 x 1,5	96	56	180	40	44	94,5	120301249	3.284,21				
MF 96 x 2,0	96	56	180	45	44	94	120301250	3.284,21				
MF 96 x 3,0	96	56	240	60	44	93	120301251	4.294,74				
MF 96 x 4,0	96	56	280	70	44	92	120301252	4.294,74				
MF 98 x 1,5	98	56	180	40	44	96,5	120301253	3.536,84				
MF 98 x 2,0	98	56	180	45	44	96	120301254	3.536,84				
MF 98 x 3,0	98	56	240	60	44	95	120301255	4.673,68				
MF 98 x 4,0	98	56	280	70	44	94	120301256	4.673,68				
MF 100 x 1,5	100	56	180	45	44	98,5	120301257	4.042,11				
MF 100 x 2,0	100	56	180	50	44	98	120301258	4.042,11				
MF 100 x 3,0	100	56	240	65	44	97	120301259	4.926,32				
MF 100 x 4,0	100	56	280	75	44	96	120301260	4.926,32				
MF 105 x 1,5	105	56	180	45	44	103,5	120301261	4.370,53				
MF 105 x 2,0	105	56	180	50	44	103	120301262	4.370,53				
MF 105 x 3,0	105	56	240	65	44	102	120301263	5.305,26				
MF 105 x 4,0	105	56	280	75	44	101	120301264	5.305,26				
MF 110 x 1,5	110	56	180	45	44	108,5	120301265	4.800,00				
MF 110 x 2,0	110	56	180	50	44	108	120301266	4.800,00				
MF 110 x 3,0	110	56	240	65	44	107	120301267	5.936,84				
MF 110 x 4,0	110	56	280	75	44	106	120301268	5.936,84				

MF Metric fine thread / ISO DIN 13

- ✔ Tap for machine use in through hole.
- ✔ The spiral point pushes the chips ahead.



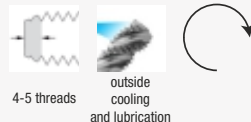
Machine Tap for general use



through holes up to 4 x D Chip removal (like picture) Form B with spiral point



material: HSSE ISO2/6H to 900 N/mm² 27,1 HRC



4-5 threads outside cooling and lubrication



Machine Tap for general use

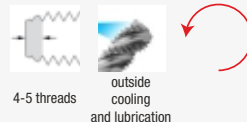
Left-hand thread



through holes up to 4 x D Chip removal (like picture) Form B with spiral point



material: HSSE ISO2/6H to 900 N/mm² 27,1 HRC



4-5 threads outside cooling and lubrication

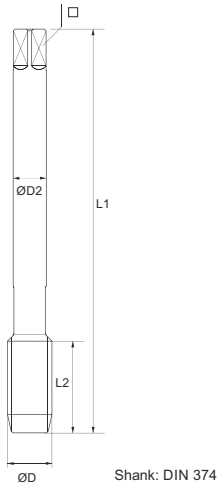


MF	D1	D2	L1	L2	□	▣	No.	No.
MF 3 x 0,35	3,0	2,2	56	9	-	2,65	120401001	120402001
MF 4 x 0,35	4,0	2,8	63	10	2,1	3,65	120401002	120402002
MF 4 x 0,5	4,0	2,8	63	10	2,1	3,50	120401003	120402003
MF 5 x 0,5	5,0	3,5	70	12	2,7	4,50	120401004	120402004
MF 5 x 0,75	5,0	3,5	70	12	2,7	4,25	120401005	120402005
MF 6 x 0,5	6,0	4,5	80	14	3,4	5,50	120401006	120402006
MF 6 x 0,75	6,0	4,5	80	14	3,4	5,20	120401007	120402007
MF 7 x 0,75	7,0	5,5	80	14	4,3	6,20	120401008	120402008
MF 8 x 0,5	8,0	6,0	80	19	4,9	7,50	120401009	120402009
MF 8 x 0,75	8,0	6,0	80	19	4,9	7,20	120401010	120402010
MF 8 x 1,0	8,0	6,0	90	22	4,9	7,00	120401011	120402011
MF 9 x 0,75	9,0	7,0	80	19	5,5	8,25	120401012	120402012
MF 9 x 1,0	9,0	7,0	90	22	5,5	8,00	120401013	120402013
MF 10 x 0,75	10,0	7,0	90	20	5,5	9,20	120401014	120402014
MF 10 x 1,0	10,0	7,0	90	20	5,5	9,00	120401015	120402015
MF 10 x 1,25	10,0	7,0	100	24	5,5	8,80	120401016	120402016
MF 11 x 1,0	11,0	8,0	90	20	6,2	10,00	120401017	120402017
MF 11 x 1,25	11,0	8,0	90	22	6,2	10,80	120401018	120402018
MF 12 x 0,75	12,0	9,0	100	22	7,0	10,20	120401019	120402019
MF 12 x 1,0	12,0	9,0	100	22	7,0	11,00	120401020	120402020
MF 12 x 1,25	12,0	9,0	100	22	7,0	10,80	120401021	120402021
MF 12 x 1,5	12,0	9,0	100	22	7,0	10,50	120401022	120402022
MF 13 x 1,0	13,0	11,0	100	22	9,0	12,00	120401023	120402023
MF 13 x 1,5	13,0	11,0	100	22	9,0	11,50	120401024	120402024
MF 14 x 0,75	14,0	11,0	100	22	9,0	13,20	120401025	120402025
MF 14 x 1,0	14,0	11,0	100	22	9,0	13,00	120401026	120402026
MF 14 x 1,25	14,0	11,0	100	22	9,0	12,80	120401027	120402027
MF 14 x 1,5	14,0	11,0	100	22	9,0	12,50	120401028	120402028
MF 15 x 1,0	15,0	12,0	100	22	9,0	14,00	120401029	120402029
MF 15 x 1,5	15,0	12,0	100	22	9,0	13,50	120401030	120402030
MF 16 x 1,0	16,0	12,0	100	22	9,0	15,00	120401031	120402031
MF 16 x 1,25	16,0	12,0	100	22	9,0	14,80	120401032	120402032
MF 16 x 1,5	16,0	12,0	100	22	9,0	14,50	120401033	120402033
MF 18 x 1,0	18,0	14,0	110	25	11,0	17,00	120401034	120402034
MF 18 x 1,25	18,0	14,0	110	25	11,0	16,80	120401035	120402035

Machine Taps - Form B for through holes

MF Metric fine thread / ISO DIN 13

- ✔ Tap for machine use in through hole.
- ✔ The spiral point pushes the chips ahead.



Machine Tap for general use



through holes up to 4 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE
ISO2/6H to 900 N/mm²
27,1 HRC



4-5 threads
outside cooling and lubrication



Machine Tap for general use

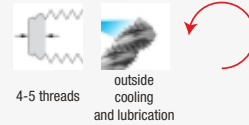
Left-hand thread



through holes up to 4 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE
ISO2/6H to 900 N/mm²
27,1 HRC



4-5 threads
outside cooling and lubrication

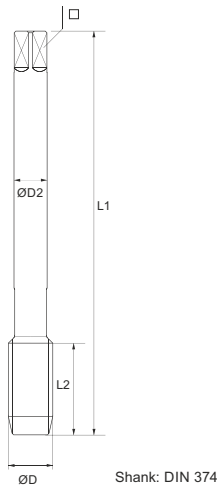


MF

	D1	D2	L1	L2	□	▣	No.	No.
MF 18 x 1,5	18,0	14,0	110	25	11,0	16,50	120401036	120402036
MF 18 x 2,0	18,0	14,0	125	34	11,0	16,00	120401037	120402037
MF 20 x 1,0	20,0	16,0	125	25	12,0	19,00	120401038	120402038
MF 20 x 1,25	20,0	16,0	125	25	12,0	18,80	120401039	120402039
MF 20 x 1,5	20,0	16,0	125	25	12,0	18,50	120401040	120402040
MF 20 x 2,0	20,0	16,0	140	34	12,0	18,00	120401041	120402041
MF 21 x 1,5	21,0	16,0	125	25	12,0	19,50	120401042	120402042
MF 22 x 1,0	22,0	18,0	125	25	14,5	21,00	120401043	120402043
MF 22 x 1,25	22,0	18,0	125	25	14,5	20,80	120401044	120402044
MF 22 x 1,5	22,0	18,0	125	25	14,5	20,50	120401045	120402045
MF 22 x 2,0	22,0	18,0	140	34	14,5	20,00	120401046	120402046
MF 23 x 1,5	23,0	18,0	125	25	14,5	21,50	120401047	120402047
MF 24 x 1,0	24,0	18,0	140	28	14,5	23,00	120401048	120402048
MF 24 x 1,25	24,0	18,0	140	28	14,5	23,80	120401049	120402049
MF 24 x 1,5	24,0	18,0	140	28	14,5	22,50	120401050	120402050
MF 24 x 2,0	24,0	18,0	140	28	14,5	22,00	120401051	120402051
MF 25 x 1,0	25,0	18,0	140	28	14,5	24,00	120401052	120402052
MF 25 x 1,5	25,0	18,0	140	28	14,5	23,50	120401053	120402053
MF 26 x 1,0	26,0	18,0	140	28	14,5	25,00	120401054	120402054
MF 26 x 1,5	26,0	18,0	140	28	14,5	24,50	120401055	120402055
MF 26 x 2,0	26,0	18,0	140	28	14,5	24,00	120401056	120402056
MF 27 x 1,0	27,0	20,0	140	28	16,0	26,00	120401057	120402057
MF 27 x 1,5	27,0	20,0	140	28	16,0	25,50	120401058	120402058
MF 27 x 2,0	27,0	20,0	140	28	16,0	25,00	120401059	120402059
MF 28 x 1,0	28,0	20,0	140	28	16,0	27,00	120401060	120402060
MF 28 x 1,5	28,0	20,0	140	28	16,0	26,50	120401061	120402061
MF 28 x 2,0	28,0	20,0	140	28	16,0	26,00	120401062	120402062
MF 29 x 1,5	29,0	22,0	150	28	18,0	27,50	120401063	120402063
MF 30 x 1,0	30,0	22,0	150	28	18,0	29,00	120401064	120402064
MF 30 x 1,5	30,0	22,0	150	28	18,0	28,50	120401065	120402065
MF 30 x 2,0	30,0	22,0	150	28	18,0	28,00	120401066	120402066
MF 30 x 2,5	30,0	22,0	180	45	18,0	27,50	120401067	120402067
MF 30 x 3,0	30,0	22,0	180	45	18,0	27,00	120401068	120402068
MF 32 x 1,5	32,0	22,0	150	28	18,0	30,50	120401069	120402069
MF 32 x 2,0	32,0	22,0	150	28	18,0	30,00	120401070	120402070

MF Metric fine thread / ISO DIN 13

- ✔ Tap for machine use in through hole.
- ✔ The spiral point pushes the chips ahead.



Machine Tap for general use



through holes up to 4 x D Chip removal (like picture) Form B with spiral point



material: HSSE ISO2/6H to 900 N/mm² 27,1 HRC



4-5 threads outside cooling and lubrication



Machine Tap for general use

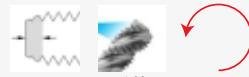
Left-hand thread



through holes up to 4 x D Chip removal (like picture) Form B with spiral point



material: HSSE ISO2/6H to 900 N/mm² 27,1 HRC



4-5 threads outside cooling and lubrication



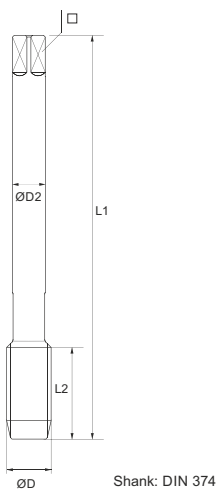
MF

	D1	D2	L1	L2	□	🔩	No.	No.
MF 32 x 3,0	32,0	22,0	180	50	18,0	29,00	120401071	120402071
MF 33 x 1,5	33,0	25,0	160	30	20,0	31,50	120401072	120402072
MF 33 x 2,0	33,0	25,0	160	30	20,0	31,00	120401073	120402073
MF 33 x 3,0	33,0	25,0	180	50	20,0	30,00	120401074	120402074
MF 34 x 1,5	34,0	28,0	170	30	22,0	32,50	120401075	120402075
MF 34 x 2,0	34,0	28,0	170	30	22,0	32,00	120401076	120402076
MF 35 x 1,5	35,0	28,0	170	30	22,0	33,50	120401077	120402077
MF 36 x 1,5	36,0	28,0	170	30	22,0	34,50	120401078	120402078
MF 36 x 2,0	36,0	28,0	170	30	22,0	34,00	120401079	120402079
MF 36 x 3,0	36,0	28,0	200	56	22,0	33,00	120401080	120402080
MF 38 x 1,5	38,0	28,0	170	30	22,0	36,50	120401081	120402081
MF 39 x 1,5	39,0	32,0	170	30	24,0	37,50	120401082	120402082
MF 39 x 2,0	39,0	32,0	170	30	24,0	37,00	120401083	120402083
MF 39 x 3,0	39,0	32,0	200	60	24,0	36,00	120401084	120402084
MF 40 x 1,5	40,0	32,0	170	30	24,0	38,50	120401085	120402085
MF 40 x 2,0	40,0	32,0	170	30	24,0	38,00	120401086	120402086
MF 40 x 3,0	40,0	32,0	200	60	24,0	37,00	120401087	120402087
MF 42 x 1,5	42,0	32,0	170	30	24,0	40,50	120401088	120402088
MF 42 x 2,0	42,0	32,0	170	30	24,0	40,00	120401089	120402089
MF 42 x 3,0	42,0	32,0	200	60	24,0	39,00	120401090	120402090
MF 45 x 1,5	45,0	36,0	180	32	29,0	43,50	120401091	120402091
MF 45 x 2,0	45,0	36,0	180	32	29,0	43,00	120401092	120402092
MF 45 x 3,0	45,0	36,0	200	50	29,0	42,00	120401093	120402093
MF 48 x 1,5	48,0	36,0	190	32	29,0	46,50	120401094	120402094
MF 48 x 2,0	48,0	36,0	190	32	29,0	46,00	120401095	120402095
MF 48 x 3,0	48,0	36,0	225	50	29,0	45,00	120401096	120402096
MF 50 x 1,5	50,0	36,0	190	32	29,0	48,50	120401097	120402097
MF 50 x 2,0	50,0	36,0	190	32	29,0	48,00	120401098	120402098
MF 50 x 3,0	50,0	36,0	225	50	29,0	47,00	120401099	120402099
MF 52 x 1,5	52,0	40,0	190	32	32,0	50,50	120401100	120402100
MF 52 x 2,0	52,0	40,0	190	32	32,0	50,00	120401101	120402101
MF 52 x 3,0	52,0	40,0	225	50	32,0	49,00	120401102	120402102
MF 63 x 1,5	63,0	50,0	275	50	39,0	61,50	120401103	

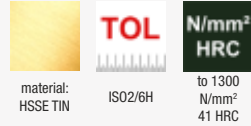
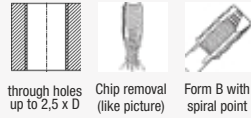
Machine Taps - Form B for through holes

MF Metric fine thread / ISO DIN 13

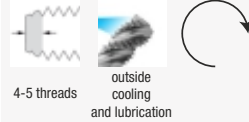
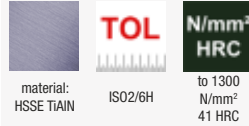
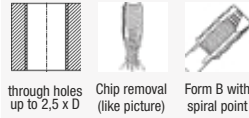
- ✓ Tap for machine use in through hole.
- ✓ The spiral point pushes the chips ahead.



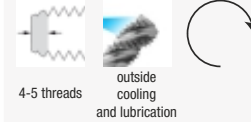
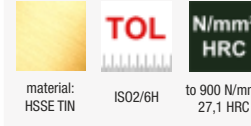
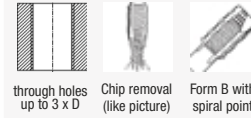
Machine Tap for high-alloyed steels



Machine Tap for stainless steels



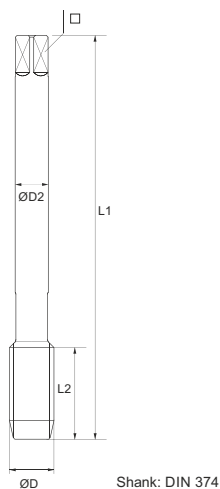
Machine Tap for aluminum



MF	D1	D2	L1	L2	□	▣	No.	No.	No.
MF 6 x 0,75	6,0	4,5	80	14	3,4	5,20	120404001	120405001	120407001
MF 8 x 1,0	8,0	6,0	90	22	4,9	7,00	120404002	120405002	120407002
MF 10 x 1,0	10,0	7,0	90	20	5,5	9,00	120404003	120405003	120407003
MF 10 x 1,25	10,0	7,0	100	24	5,5	8,80	120404004	120405004	120407004
MF 12 x 1,0	12,0	9,0	100	22	7,0	11,00	120404005	120405005	120407005
MF 12 x 1,25	12,0	9,0	100	22	7,0	10,80	120404006	120405006	120407006
MF 12 x 1,5	12,0	9,0	100	22	7,0	10,50	120404007	120405007	120407007
MF 14 x 1,25	14,0	11,0	100	22	9,0	12,80	120404008	120405008	120407008
MF 14 x 1,5	14,0	11,0	100	22	9,0	12,50	120404009	120405009	120407009
MF 16 x 1,5	16,0	12,0	100	22	9,0	14,50	120404010	120405010	120407010
MF 18 x 1,5	18,0	14,0	110	25	11,0	16,50	120404011	120405011	120407011
MF 20 x 1,5	20,0	16,0	125	25	12,0	18,50	120404012	120405012	120407012

MF Metric fine thread / ISO DIN 13

- ✓ Tap for machine use in through hole.
- ✓ The spiral point pushes the chips ahead.



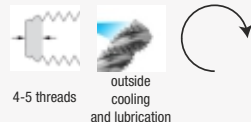
Machine Tap for special alloys (Inconel, Hastelloy etc.)



through holes up to 2,5 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE-PM TiAlN
ISO2/6H
to 1200 N/mm² / 38 HRC



4-5 threads
outside cooling and lubrication



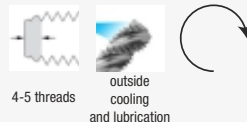
Machine Tap with longer tool life time



through holes up to 2,5 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE TiN
ISO2/6H
to 900 N/mm² / 27,1 HRC



4-5 threads
outside cooling and lubrication



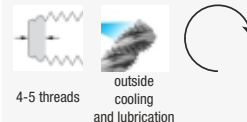
Machine Tap for general use oversized (diameter)



through holes up to 3 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE
ISO2/6H
to 900 N/mm² / 27,1 HRC



4-5 threads
outside cooling and lubrication



MF

D1 D2 L1 L2 □

No.

No.

No.

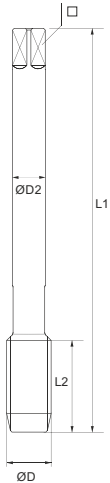
Tol. 6G:
threads with large clearance

MF	D1	D2	L1	L2	□	No.	No.	No.
MF 6 x 0,75	6,0	4,5	80	14	3,4	5,20	120425001	120417001
MF 8 x 1,0	8,0	6,0	90	22	4,9	7,00	120412001	120417002
MF 10 x 1,0	10,0	7,0	90	20	5,5	9,00	120412002	120417003
MF 10 x 1,25	10,0	7,0	100	24	5,5	8,80	120412003	120417004
MF 12 x 1,0	12,0	9,0	100	22	7,0	11,00	120412004	120425005
MF 12 x 1,25	12,0	9,0	100	22	7,0	10,80	120412005	120425006
MF 12 x 1,5	12,0	9,0	100	22	7,0	10,50	120412006	120417005
MF 14 x 1,25	14,0	11,0	100	22	9,0	12,80	120425008	
MF 14 x 1,5	14,0	11,0	100	22	9,0	12,50	120412007	120417006
MF 16 x 1,5	16,0	12,0	100	22	9,0	14,50	120412008	120425010
MF 18 x 1,5	18,0	14,0	110	25	11,0	16,50	120412009	120425011
MF 20 x 1,5	20,0	16,0	125	25	12,0	18,50	120412010	120425012

Machine Taps - Form C (straight flutes) for through holes and blind holes

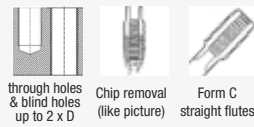
MF Metric fine thread / ISO DIN 13

- ✓ Tap for machine use in through hole and blind hole.
- ✓ The short lead-in chamfer makes that tap universal in application. The flutes can hold the most part of the chips.



Shank: DIN 374

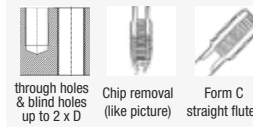
Machine Tap for general use



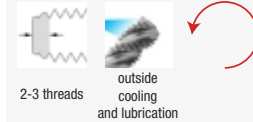
through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes
material: HSSE
ISO2/6H
to 900 N/mm² 27,1 HRC



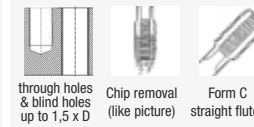
Machine Tap for general use Left-hand thread



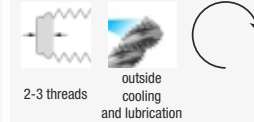
through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes
material: HSSE
ISO2/6H
to 900 N/mm² 27,1 HRC



Machine Tap with longer tool life time



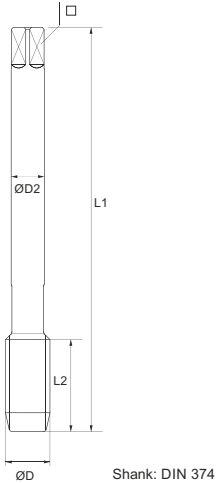
through holes & blind holes up to 1,5 x D
Chip removal (like picture)
Form C straight flutes
material: HSSE TIN
ISO2/6H
to 900 N/mm² 27,1 HRC



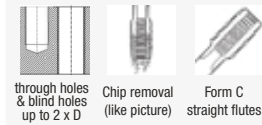
MF	D1	D2	L1	L2	□	🔩	No.	No.	No.
MF 4 x 0,35	4,0	2,8	63	10	2,1	3,65	120501001		
MF 5 x 0,5	5,0	3,5	70	12	2,7	4,50	120501002		
MF 6 x 0,5	6,0	4,5	80	14	3,4	5,50			120504001
MF 6 x 0,75	6,0	4,5	80	14	3,4	5,20	120501003	120502001	120504002
MF 7 x 0,75	7,0	5,5	80	14	4,3	6,20			120504003
MF 8 x 0,75	8,0	6,0	80	19	4,9	7,20	120501004		
MF 8 x 1,0	8,0	6,0	90	22	4,9	7,00	120501005	120502002	120504004
MF 10 x 0,5	10,0	7,0	90	20	5,5	9,50			120504005
MF 10 x 1,0	10,0	7,0	90	20	5,5	9,00	120501006	120502003	120504006
MF 10 x 1,25	10,0	7,0	100	24	5,5	8,80	120501007	120502004	120504007
MF 12 x 0,75	12,0	9,0	100	22	7,0	10,20			120504008
MF 12 x 1,0	12,0	9,0	100	22	7,0	11,00	120501008		120504009
MF 12 x 1,25	12,0	9,0	100	22	7,0	10,80	120501009	120502005	120504010
MF 12 x 1,5	12,0	9,0	100	22	7,0	10,50	120501010	120502006	120504011
MF 14 x 1,0	14,0	11,0	100	22	9,0	13,00	120501011		120504012
MF 14 x 1,25	14,0	11,0	100	22	9,0	12,80	120501012		120504013
MF 14 x 1,5	14,0	11,0	100	22	9,0	12,50	120501013	120502007	120504014
MF 16 x 1,0	16,0	12,0	100	22	9,0	15,00	120501014		120504015
MF 16 x 1,25	16,0	12,0	100	22	9,0	14,80			120504016
MF 16 x 1,5	16,0	12,0	100	22	9,0	14,50	120501015	120502008	120504017
MF 18 x 1,0	18,0	14,0	110	25	11,0	17,00	120501016		
MF 18 x 1,5	18,0	14,0	110	25	11,0	16,50	120501017	120502009	120504018
MF 18 x 2,0	18,0	14,0	125	34	11,0	16,00	120501018		
MF 20 x 1,0	20,0	16,0	125	25	12,0	19,00	120501019		
MF 20 x 1,25	20,0	16,0	125	25	12,0	18,80	120501020		
MF 20 x 1,5	20,0	16,0	125	25	12,0	18,50	120501021	120502010	120504019
MF 20 x 2,0	20,0	16,0	140	34	12,0	18,00	120501022		
MF 22 x 1,0	22,0	18,0	125	25	14,5	21,00	120501023		
MF 22 x 1,5	22,0	18,0	125	25	14,5	20,50	120501024		120504020
MF 22 x 2,0	22,0	18,0	140	34	14,5	20,00	120501025	51,63	

MF Metric fine thread / ISO DIN 13

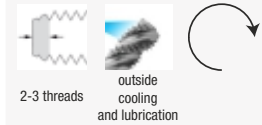
- ✓ Tap for machine use in through hole and blind hole.
- ✓ The short lead-in chamfer makes that tap universal in application. The flutes can hold the most part of the chips.



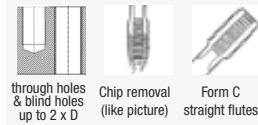
Machine Tap for general use



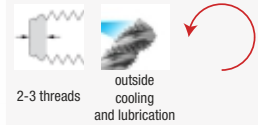
through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes
material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



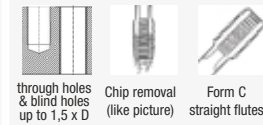
Machine Tap for general use Left-hand thread



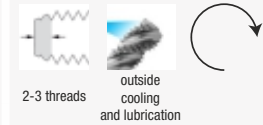
through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes
material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



Machine Tap with longer tool life time



through holes & blind holes up to 1,5 x D
Chip removal (like picture)
Form C straight flutes
material: HSSE TIN
ISO2/6H
to 900 N/mm²
27,1 HRC



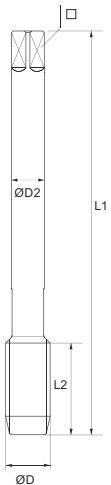
MF

	D1	D2	L1	L2	□	🔩	No.	No.	No.
MF 24 x 1,0	24,0	18,0	140	28	14,5	23,00	120501026		
MF 24 x 1,5	24,0	18,0	140	28	14,5	22,50	120501027		
MF 24 x 2,0	24,0	18,0	140	28	14,5	22,00	120501028		
MF 25 x 1,0	25,0	18,0	140	28	14,5	24,00	120501029		
MF 26 x 1,5	26,0	18,0	140	28	14,5	24,50	120501030		
MF 27 x 1,5	27,0	20,0	140	28	16,0	25,50	120501031		
MF 27 x 2,0	27,0	20,0	140	28	16,0	25,00	120501032		
MF 28 x 1,5	28,0	20,0	140	28	16,0	26,50	120501033		
MF 30 x 1,5	30,0	22,0	150	28	18,0	28,50	120501034		
MF 30 x 2,0	30,0	22,0	150	28	18,0	28,00	120501035		
MF 32 x 1,5	32,0	22,0	150	28	18,0	30,50	120501036		
MF 32 x 2,0	32,0	22,0	150	28	18,0	30,00	120501037		
MF 33 x 2,0	33,0	25,0	160	30	20,0	31,00	120501038		
MF 35 x 1,5	35,0	28,0	170	30	22,0	33,50	120501039		
MF 36 x 1,5	36,0	28,0	170	30	22,0	34,50	120501040		
MF 36 x 2,0	36,0	28,0	170	30	22,0	34,00	120501041		
MF 38 x 1,5	38,0	28,0	170	30	22,0	36,50	120501042		
MF 40 x 1,5	40,0	32,0	170	30	24,0	38,50	120501043		
MF 42 x 1,5	42,0	32,0	170	30	24,0	40,50	120501044		
MF 45 x 1,5	45,0	36,0	180	32	29,0	43,50	120501045		
MF 48 x 1,5	48,0	36,0	190	32	29,0	46,50	120501046		
MF 50 x 1,5	50,0	36,0	190	32	29,0	48,50	120501047		
MF 52 x 1,5	52,0	40,0	190	32	32,0	50,50	120501048		

Machine Taps - Form C (straight flutes) for through holes and blind holes

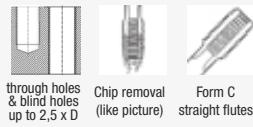
MF Metric fine thread / ISO DIN 13

- ✓ Tap for machine use in through hole and blind hole.
- ✓ The short lead-in chamfer makes that tap universal in application. The flutes can hold the most part of the chips.

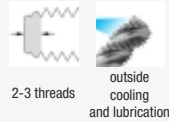


Shank: DIN 374

Machine Tap for cast materials



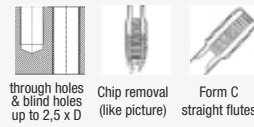
through holes & blind holes up to 2,5 x D
 Chip removal (like picture)
 Form C straight flutes
 material: HSSE TiCN
TOL ISO2/6H
 N/mm² HRC to 1000
 N/mm² 32 HRC



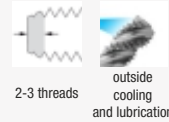
DIN 374



Machine Tap for brass (short-chipping)



through holes & blind holes up to 2,5 x D
 Chip removal (like picture)
 Form C straight flutes
 material: HSSE TiCN
TOL ISO2/6H
 N/mm² HRC to 1000
 N/mm² 32 HRC



DIN 374

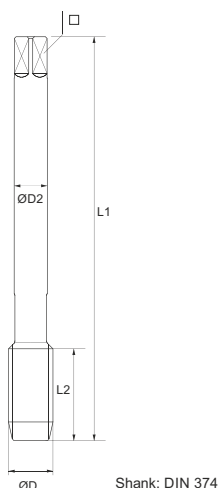


MF

	D1	D2	L1	L2	□	▣	No.	No.
MF 4 x 0,5	4,0	2,8	63	10	2,1	3,50	120510001	120509001
MF 5 x 0,5	5,0	3,5	70	12	2,7	4,50	120510002	120509002
MF 6 x 0,75	6,0	4,5	80	14	3,4	5,20	120510003	120509003
MF 8 x 1,0	8,0	6,0	90	22	4,9	7,00	120510004	120509004
MF 10 x 1,0	10,0	7,0	90	20	5,5	9,00	120510005	120509005
MF 10 x 1,25	10,0	7,0	100	24	5,5	8,80	120510006	120509006
MF 12 x 1,25	12,0	9,0	100	22	7,0	10,80	120510007	120509007
MF 12 x 1,5	12,0	9,0	100	22	7,0	10,50	120510008	120509008
MF 14 x 1,25	14,0	11,0	100	22	9,0	12,80	120510009	120509009
MF 14 x 1,5	14,0	11,0	100	22	9,0	12,50	120510010	120509010
MF 16 x 1,5	16,0	12,0	100	22	9,0	14,50	120510011	120509011
MF 18 x 1,5	18,0	14,0	110	25	11,0	16,50	120510012	120509012
MF 20 x 1,5	20,0	16,0	125	25	12,0	18,50	120510013	120509013

MF Metric fine thread / ISO DIN 13

- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.



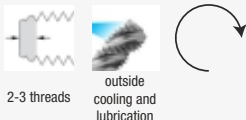
Machine Tap for general use



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication

DIN 374



Machine Tap for general use

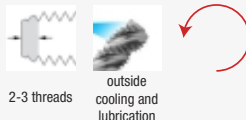
Left-hand thread



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication

DIN 374



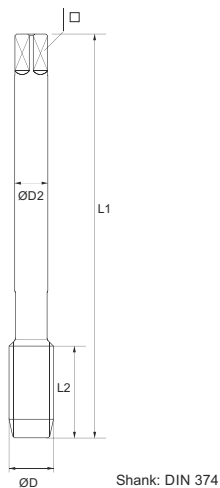
MF

	D1	D2	L1	L2	□	⊕	No.	No.
MF 3 x 0,35	3,0	2,2	56	5	-	2,65	120601001	120602001
MF 4 x 0,35	4,0	2,8	63	5	2,1	3,65	120601002	120602002
MF 4 x 0,5	4,0	2,8	63	5	2,1	3,50	120601003	120602003
MF 5 x 0,5	5,0	3,5	70	5	2,7	4,50	120601004	120602004
MF 5 x 0,75	5,0	3,5	70	8	2,7	4,25	120601005	120602005
MF 6 x 0,5	6,0	4,5	80	5	3,4	5,50	120601006	120602006
MF 6 x 0,75	6,0	4,5	80	8	3,4	5,20	120601007	120602007
MF 7 x 0,75	7,0	5,5	80	8	4,3	6,20	120601008	120602008
MF 8 x 0,5	8,0	6,0	80	8	4,9	7,50	120601009	120602009
MF 8 x 0,75	8,0	6,0	80	8	4,9	7,20	120601010	120602010
MF 8 x 1,0	8,0	6,0	90	10	4,9	7,00	120601011	120602011
MF 9 x 0,75	9,0	7,0	80	10	5,5	8,25	120601012	120602012
MF 9 x 1,0	9,0	7,0	90	10	5,5	8,00	120601013	120602013
MF 10 x 0,75	10,0	7,0	90	10	5,5	9,20	120601014	120602014
MF 10 x 1,0	10,0	7,0	90	10	5,5	9,00	120601015	120602015
MF 10 x 1,25	10,0	7,0	100	16	5,5	8,80	120601016	120602016
MF 11 x 1,0	11,0	8,0	90	11	6,2	10,00	120601017	120602017
MF 11 x 1,25	11,0	8,0	90	14	6,2	10,80	120601018	120602018
MF 12 x 0,75	12,0	9,0	100	10	7,0	10,20	120601019	120602019
MF 12 x 1,0	12,0	9,0	100	11	7,0	11,00	120601020	120602020
MF 12 x 1,25	12,0	9,0	100	15	7,0	10,80	120601021	120602021
MF 12 x 1,5	12,0	9,0	100	15	7,0	10,50	120601022	120602022
MF 13 x 1,0	13,0	11,0	100	11	9,0	12,00	120601023	120602023
MF 13 x 1,5	13,0	11,0	100	15	9,0	11,50	120601024	120602024
MF 14 x 0,75	14,0	11,0	100	10	9,0	13,20	120601025	120602025
MF 14 x 1,0	14,0	11,0	100	11	9,0	13,00	120601026	120602026
MF 14 x 1,25	14,0	11,0	100	15	9,0	12,80	120601027	120602027
MF 14 x 1,5	14,0	11,0	100	15	9,0	12,50	120601028	120602028
MF 15 x 1,0	15,0	12,0	100	12	9,0	14,00	120601029	120602029
MF 15 x 1,5	15,0	12,0	100	15	9,0	13,50	120601030	120602030
MF 16 x 1,0	16,0	12,0	100	12	9,0	15,00	120601031	120602031
MF 16 x 1,25	16,0	12,0	100	15	9,0	14,80	120601032	120602032
MF 16 x 1,5	16,0	12,0	100	15	9,0	14,50	120601033	120602033
MF 18 x 1,0	18,0	14,0	110	13	11,0	17,00	120601034	120602034
MF 18 x 1,25	18,0	14,0	110	15	11,0	16,80	120601035	120602035

Machine Taps - Form C (with spiral flutes) for blind holes

MF Metric fine thread / ISO DIN 13

- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.



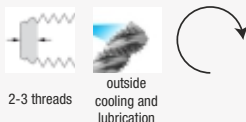
Machine Tap for general use



blind holes up to 3 x D Chip removal (like picture) Form C 35° spiral flute



material: HSSE ISO2/6H to 900 N/mm² 27,1 HRC



2-3 threads outside cooling and lubrication

DIN 374

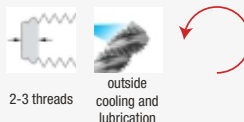
Machine Tap for general use Left-hand thread



blind holes up to 3 x D Chip removal (like picture) Form C 35° spiral flute



material: HSSE ISO2/6H to 900 N/mm² 27,1 HRC



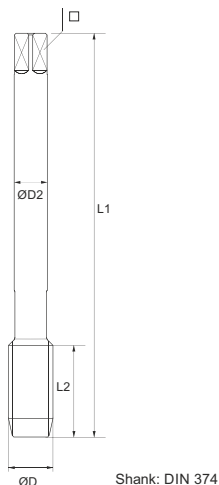
2-3 threads outside cooling and lubrication

DIN 374

MF	D1	D2	L1	L2			No.	No.
MF 18 x 1,5	18,0	14,0	110	17	11,0	16,50	120601036	120602036
MF 18 x 2,0	18,0	14,0	125	20	11,0	16,00	120601037	120602037
MF 20 x 1,0	20,0	16,0	125	14	12,0	19,00	120601038	120602038
MF 20 x 1,25	20,0	16,0	125	17	12,0	18,80	120601039	120602039
MF 20 x 1,5	20,0	16,0	125	17	12,0	18,50	120601040	120602040
MF 20 x 2,0	20,0	16,0	140	20	12,0	18,00	120601041	120602041
MF 21 x 1,5	21,0	16,0	125	17	12,0	19,50	120601042	120602042
MF 22 x 1,0	22,0	18,0	125	14	14,5	21,00	120601043	120602043
MF 22 x 1,25	22,0	18,0	125	17	14,5	20,80	120601044	120602044
MF 22 x 1,5	22,0	18,0	125	17	14,5	20,50	120601045	120602045
MF 22 x 2,0	22,0	18,0	140	20	14,5	20,00	120601046	120602046
MF 23 x 1,5	23,0	18,0	125	17	14,5	21,50	120601047	120602047
MF 24 x 1,0	24,0	18,0	140	15	14,5	23,00	120601048	120602048
MF 24 x 1,25	24,0	18,0	140	17	14,5	23,80	120601049	120602049
MF 24 x 1,5	24,0	18,0	140	20	14,5	22,50	120601050	120602050
MF 24 x 2,0	24,0	18,0	140	20	14,5	22,00	120601051	120602051
MF 25 x 1,0	25,0	18,0	140	15	14,5	24,00	120601052	120602052
MF 25 x 1,5	25,0	18,0	140	20	14,5	23,50	120601053	120602053
MF 26 x 1,0	26,0	18,0	140	15	14,5	25,00	120601054	120602054
MF 26 x 1,5	26,0	18,0	140	20	14,5	24,50	120601055	120602055
MF 26 x 2,0	26,0	18,0	140	20	14,5	24,00	120601056	120602056
MF 27 x 1,0	27,0	20,0	140	15	16,0	26,00	120601057	120602057
MF 27 x 1,5	27,0	20,0	140	20	16,0	25,50	120601058	120602058
MF 27 x 2,0	27,0	20,0	140	20	16,0	25,00	120601059	120602059
MF 28 x 1,0	28,0	20,0	140	15	16,0	27,00	120601060	120602060
MF 28 x 1,5	28,0	20,0	140	20	16,0	26,50	120601061	120602061
MF 28 x 2,0	28,0	20,0	140	20	16,0	26,00	120601062	120602062
MF 29 x 1,5	29,0	22,0	150	22	18,0	27,50	120601063	120602063
MF 30 x 1,0	30,0	22,0	150	17	18,0	29,00	120601064	120602064
MF 30 x 1,5	30,0	22,0	150	22	18,0	28,50	120601065	120602065
MF 30 x 2,0	30,0	22,0	150	22	18,0	28,00	120601066	120602066
MF 30 x 2,5	30,0	22,0	180	27	18,0	27,50	120601067	120602067
MF 30 x 3,0	30,0	22,0	180	30	18,0	27,00	120601068	120602068
MF 32 x 1,5	32,0	22,0	150	22	18,0	30,50	120601069	120602069
MF 32 x 2,0	32,0	22,0	150	22	18,0	30,00	120601070	120602070

MF Metric fine thread / ISO DIN 13

- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.



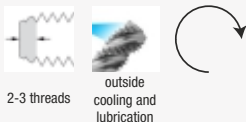
Machine Tap for general use



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication

DIN 374

Machine Tap for general use

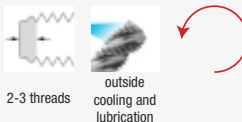
Left-hand thread



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
ISO2/6H
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication

DIN 374

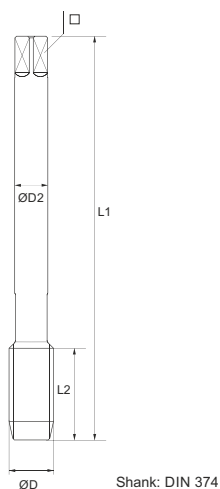
MF

	D1	D2	L1	L2			No.	No.
MF 32 x 3,0	32,0	22,0	180	30	18,0	29,00	120601071	120602071
MF 33 x 1,5	33,0	25,0	160	24	20,0	31,50	120601072	120602072
MF 33 x 2,0	33,0	25,0	160	24	20,0	31,00	120601073	120602073
MF 33 x 3,0	33,0	25,0	180	30	20,0	30,00	120601074	120602074
MF 34 x 1,5	34,0	28,0	170	24	22,0	32,50	120601075	120602075
MF 34 x 2,0	34,0	28,0	170	24	22,0	32,00	120601076	120602076
MF 35 x 1,5	35,0	28,0	170	24	22,0	33,50	120601077	120602077
MF 36 x 1,5	36,0	28,0	170	24	22,0	34,50	120601078	120602078
MF 36 x 2,0	36,0	28,0	170	24	22,0	34,00	120601079	120602079
MF 36 x 3,0	36,0	28,0	200	30	22,0	33,00	120601080	120602080
MF 38 x 1,5	38,0	28,0	170	24	22,0	36,50	120601081	120602081
MF 39 x 1,5	39,0	32,0	170	25	24,0	37,50	120601082	120602082
MF 39 x 2,0	39,0	32,0	170	25	24,0	37,00	120601083	120602083
MF 39 x 3,0	39,0	32,0	200	30	24,0	36,00	120601084	120602084
MF 40 x 1,5	40,0	32,0	170	25	24,0	38,50	120601085	120602085
MF 40 x 2,0	40,0	32,0	170	25	24,0	38,00	120601086	120602086
MF 40 x 3,0	40,0	32,0	200	30	24,0	37,00	120601087	120602087
MF 42 x 1,5	42,0	32,0	170	25	24,0	40,50	120601088	120602088
MF 42 x 2,0	42,0	32,0	170	25	24,0	40,00	120601089	120602089
MF 42 x 3,0	42,0	32,0	200	30	24,0	39,00	120601090	120602090
MF 45 x 1,5	45,0	36,0	180	27	29,0	43,50	120601091	120602091
MF 45 x 2,0	45,0	36,0	180	27	29,0	43,00	120601092	120602092
MF 45 x 3,0	45,0	36,0	200	30	29,0	42,00	120601093	120602093
MF 48 x 1,5	48,0	36,0	190	27	29,0	46,50	120601094	120602094
MF 48 x 2,0	48,0	36,0	190	27	29,0	46,00	120601095	120602095
MF 48 x 3,0	48,0	36,0	225	33	29,0	45,00	120601096	120602096
MF 50 x 1,5	50,0	36,0	190	27	29,0	48,50	120601097	120602097
MF 50 x 2,0	50,0	36,0	190	27	29,0	48,00	120601098	120602098
MF 50 x 3,0	50,0	36,0	225	33	29,0	47,00	120601099	120602099
MF 52 x 1,5	52,0	40,0	190	27	32,0	50,50	120601100	120602100
MF 52 x 2,0	52,0	40,0	190	27	32,0	50,00	120601101	120602101
MF 52 x 3,0	52,0	40,0	225	33	32,0	49,00	120601102	120602102
MF 63 x 1,5	63,0	50,0	275	40	39,0	61,50	120601103	

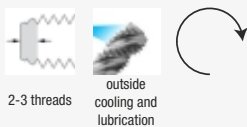
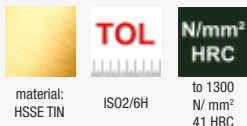
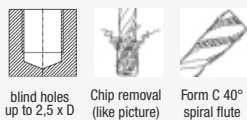
Machine Taps - Form C (with spiral flutes) for blind holes

MF Metric fine thread / ISO DIN 13

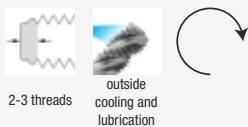
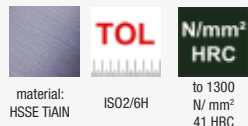
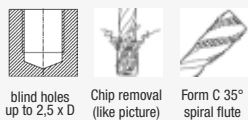
- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.



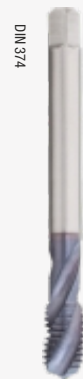
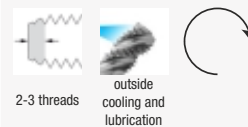
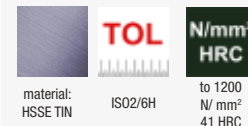
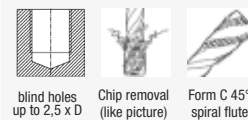
Machine Tap und for high- alloyed steels



Machine Tap PRO for stainless steels with high tool life time



Machine Tap for special alloys (Inconel, Hastelloy etc.)

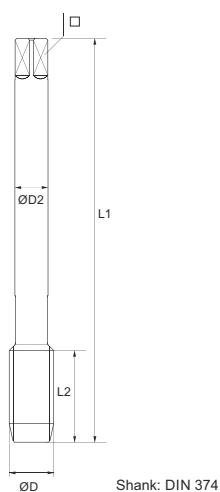


MF

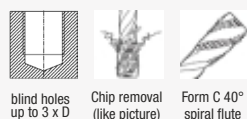
	D1	D2	L1	L2	□	⊕	No.	No.	No.
MF 6 x 0,75	6,0	4,5	80	8	3,4	5,20	120604001	120605001	
MF 8 x 1,0	8,0	6,0	90	10	4,9	7,00	120604002	120605002	120612001
MF 10 x 1,0	10,0	7,0	90	10	5,5	9,00	120604003	120605003	120612002
MF 10 x 1,25	10,0	7,0	100	16	5,5	8,80	120604004	120605004	120612003
MF 12 x 1,0	12,0	9,0	100	11	7,0	11,00	120604005	120605005	120612004
MF 12 x 1,25	12,0	9,0	100	15	7,0	10,80	120604006	120605006	120612005
MF 12 x 1,5	12,0	9,0	100	15	7,0	10,50	120604007	120605007	120612006
MF 14 x 1,5	14,0	11,0	100	15	9,0	12,50	120604008	120605008	120612007
MF 16 x 1,5	16,0	12,0	100	15	9,0	14,50	120604009	120605009	120612008
MF 18 x 1,5	18,0	14,0	110	17	11,0	16,50	120604010	120605010	120612009
MF 20 x 1,5	20,0	16,0	125	17	12,0	18,50	120604011	120605011	120612010
MF 22 x 1,5	22,0	18,0	125	17	14,5	20,50	120604012	120605012	

MF Metric fine thread / ISO DIN 13

- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.



Machine Tap for general use oversized (diameter)



blind holes up to 3 x D
 Chip removal (like picture)
 Form C 40° spiral flute

material: HSSE TIN
 ISO2/6H
 to 900 N/mm²
 27,1 HRC



MF	D1	D2	L1	L2	<input type="checkbox"/>		No.
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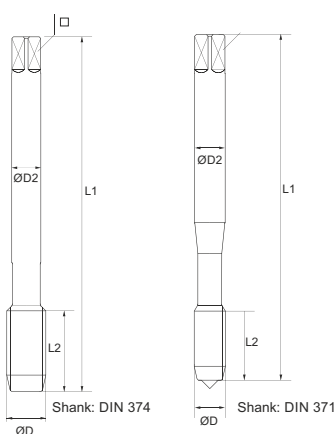
Tol. 6G:
 threads with large clearance

MF 6 x 0,75	6,0	4,5	80	8	3,4	5,20	120617001
MF 8 x 1,0	8,0	6,0	90	10	4,9	7,00	120617002
MF 10 x 1,0	10,0	7,0	90	10	5,5	9,00	120617003
MF 10 x 1,25	10,0	7,0	100	16	5,5	8,80	120617004
MF 12 x 1,5	12,0	9,0	100	15	7,0	10,50	120617005
MF 14 x 1,5	14,0	11,0	100	15	9,0	12,50	120617006

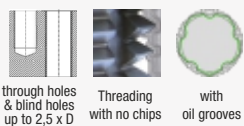
MF Metric fine thread / ISO DIN 13

Machine Forming Taps have following advantages:

- No chips
- Up to 20 times longer lifetime (compared to taps)
- Same forming tap for through and blind hole
- Wide range of materials can be processed
- Intersection of the thread is impossible
- Very high trueness
- Increased strength of the thread
- Higher surface quality
- Much higher cutting speed



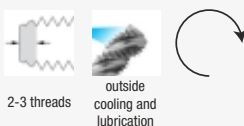
Machine Forming Taps for general use



through holes & blind holes up to 2,5 x D
Threading with no chips
with oil grooves



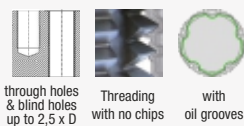
material: HSSE TIN
ISO2/6H
to 850 N/mm²
25,5 HRC



2-3 threads
outside cooling and lubrication



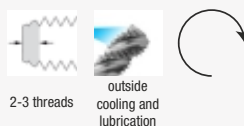
Machine Forming Taps for general use oversized (diameter)



through holes & blind holes up to 2,5 x D
Threading with no chips
with oil grooves



material: HSSE TIN
ISO2/6H
to 850 N/mm²
25,5 HRC



2-3 threads
outside cooling and lubrication



MF

D1 D2 L1 L2 □



No.

No.

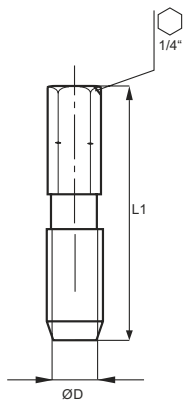
							Tol. 6HX: standard tolerance		Tol. 6GX: threads with large clearance	
MF 3 x 0,35	3,0	3,5	56	10	2,7	2,85	121101001		121117001	
MF 4 x 0,5	4,0	4,5	63	12	3,4	3,80	121101002		121117002	
MF 5 x 0,5	5,0	6,0	70	14	4,9	4,80	121101003		121117003	
MF 6 x 0,75	6,0	6,0	80	16	4,9	5,65	121101004		121117004	
MF 8 x 1,0	8,0	8,0	90	18	6,2	7,55	121101005		121117005	
MF 10 x 1,0	10,0	10,0	90	18	8,0	9,55	121101006		121117006	
MF 10 x 1,25	10,0	10,0	100	20	8,0	9,45	121101007		121117007	
MF 12 x 1,0	12,0	9,0	100	22	7,0	11,55	121101008		121117008	
MF 12 x 1,25	12,0	9,0	100	22	7,0	11,45	121101009		121117009	
MF 12 x 1,5	12,0	9,0	100	22	7,0	11,30	121101010		121117010	
MF 14 x 1,25	14,0	11,0	100	22	9,0	13,45	121101011		121117011	
MF 14 x 1,5	14,0	11,0	100	22	9,0	13,30	121101012		121117012	
MF 16 x 1,5	16,0	12,0	100	22	9,0	15,30	121101013		121117013	
MF 18 x 1,5	18,0	14,0	110	22	11,0	17,30	121101014		121117014	
MF 20 x 1,5	20,0	16,0	125	25	12,0	19,30	121101015		121117015	

MF Metric fine thread / ISO DIN 13

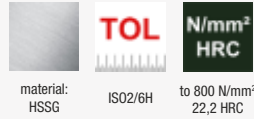
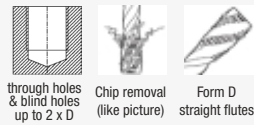
Efficient internal thread cutting with battery powered screwdriver (min. 7,5 Volt).

Application:

non abrasive material up to 900 N/mm² unalloyed and low alloyed steel





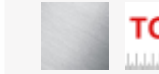





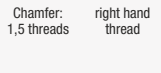
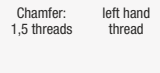
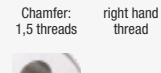
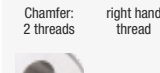
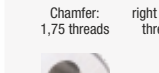
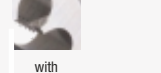
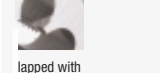
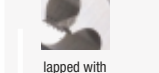







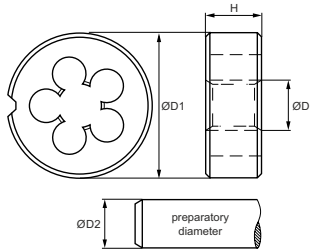
Bit-Taps
Form D for through holes and blind holes







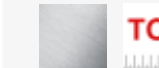




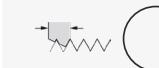








MF

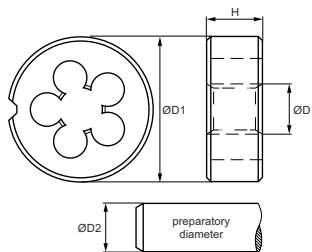
	D1	L1	L2			No.
MF 3 x 0,35	3,0	33,0	11	1/4"	2,65	121201001
MF 3,5 x 0,35	3,5	33,5	10	1/4"	3,15	121201002
MF 4 x 0,35	4,0	35,0	12	1/4"	3,65	121201003
MF 4 x 0,5	4,0	35,0	12	1/4"	3,50	121201004
MF 4,5 x 0,5	4,5	35,0	12	1/4"	4,00	121201005
MF 5 x 0,5	5,0	36,0	15	1/4"	4,50	121201006
MF 5 x 0,75	5,0	36,0	15	1/4"	4,25	121201007
MF 5,5 x 0,5	5,5	35,0	15	1/4"	5,00	121201008
MF 6 x 0,5	6,0	39,0	18	1/4"	5,50	121201009
MF 6 x 0,75	6,0	39,0	18	1/4"	5,20	121201010
MF 7 x 0,5	7,0	37,5	16	1/4"	6,50	121201011
MF 7 x 0,75	7,0	37,5	16	1/4"	6,20	121201012
MF 8 x 0,5	8,0	40,0	19	1/4"	7,50	121201013
MF 8 x 0,75	8,0	40,0	19	1/4"	7,20	121201014
MF 8 x 1	8,0	40,0	19	1/4"	7,00	121201015
MF 9 x 0,5	9,0	40,5	18	1/4"	8,50	121201016
MF 9 x 0,75	9,0	40,5	18	1/4"	8,25	121201017
MF 9 x 1	9,0	40,5	18	1/4"	8,00	121201018
MF 10 x 0,5	10,0	41,0	21	1/4"	9,50	121201019
MF 10 x 0,75	10,0	41,0	21	1/4"	9,20	121201020
MF 10 x 1,0	10,0	41,0	21	1/4"	9,00	121201021
MF 10 x 1,25	10,0	41,0	21	1/4"	8,80	121201022

Round Dies for general use	Round Dies for general use Left Hand	Round Dies for higher demands	Round Dies for stainless steels	Round Dies undersized
				
material: HSS	material: HSS	material: HSSE	material: HSSE	material: HSS
ISO-6g	ISO-6g	ISO-6g	ISO-6g	6e
 Chamfer: 1,5 threads	 Chamfer: 1,5 threads	 Chamfer: 1,5 threads	 Chamfer: 2 threads	 Chamfer: 1,75 threads
 right hand thread	 left hand thread	 right hand thread	 right hand thread	 right hand thread
		 with spiral entry	 lapped with spiral entry	 lapped with spiral entry
				





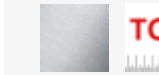















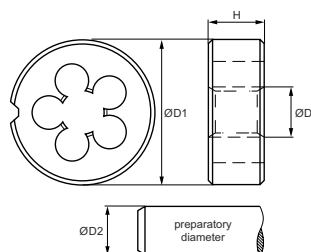
MF	D	D1	H	D2	No.	No.	No.	No.	No.	D2 Tol. 6e
MF 2,5 x 0,35	2,5	16	5	2,44	121401001					
MF 2,6 x 0,35	2,6	16	5	2,54	121401002					
MF 3 x 0,35	3,0	20	5	2,94	121401003			121405001		
MF 3,5 x 0,35	3,5	20	5	3,44	121401004			121405002		
MF 4 x 0,35	4,0	20	5	3,94	121401005					
MF 4 x 0,5	4,0	20	5	3,93	121401006			121405003	121421001	3,84 mm
MF 4,5 x 0,5	4,5	20	5	4,43	121401007					
MF 5 x 0,5	5,0	20	5	4,93	121401008			121405004	121421002	4,83 mm
MF 5 x 0,75	5,0	20	7	4,91	121401010					
MF 5,5 x 0,5	5,5	20	5	5,43	121401009					
MF 6 x 0,5	6,0	20	5	5,93	121401011			121405005	121421003	5,83 mm
MF 6 x 0,75	6,0	20	7	5,90	121401012	121402001	121404001	121405006	121421004	5,81 mm
MF 7 x 0,5	7,0	25	9	6,93	121401013				121421005	6,83 mm
MF 7 x 0,75	7,0	25	9	6,90	121401014			121405007		
MF 8 x 0,5	8,0	25	9	7,93	121401015			121405008	121421006	7,82 mm
MF 8 x 0,75	8,0	25	9	7,90	121401016	121402002	121404002	121405009	121421007	7,80 mm
MF 8 x 1,0	8,0	25	9	7,83	121401017	121402003	121404003	121405010	121421008	7,78 mm
MF 9 x 0,5	9,0	25	9	8,93	121401018					
MF 9 x 0,75	9,0	25	9	8,90	121401019					
MF 9 x 1,0	9,0	25	9	8,88	121401020					
MF 10 x 0,5	10,0	30	11	9,93	121401021					
MF 10 x 0,75	10,0	30	11	9,90	121401022			121405011	121421009	9,79 mm
MF 10 x 1,0	10,0	30	11	9,88	121401023	121402004	121404004	121405012	121421010	9,77 mm
MF 10 x 1,25	10,0	30	11	9,86	121401024	121402005	121404005	121405013		
MF 11 x 1,0	11,0	30	11	10,88	121401025					
MF 11 x 1,25	11,0	30	11	10,86	121401026					
MF 12 x 0,5	12,0	38	10	11,93	121401027					
MF 12 x 0,75	12,0	38	10	11,90	121401028				121421011	11,78 mm
MF 12 x 1,0	12,0	38	10	11,88	121401029	121402006	121404006	121405014	121421012	11,76 mm
MF 12 x 1,25	12,0	38	10	11,86	121401030	121402007	121404007	121405015		
MF 12 x 1,5	12,0	38	10	11,85	121401031	121402008	121404008	121405016	121421013	11,73 mm
MF 13 x 0,5	13,0	38	10	12,93	121401032					
MF 13 x 1,0	13,0	38	10	12,88	121401033					

Round Dies for general use	Round Dies for general use Left Hand	Round Dies for higher demands	Round Dies for stainless steels	Round Dies undersized
				
material: HSS	material: HSS	material: HSSE	material: HSSE	material: HSS
ISO-6g	ISO-6g	ISO-6g	ISO-6g	6e
				
Chamfer: 1,5 threads	Chamfer: 1,5 threads	Chamfer: 1,5 threads	Chamfer: 2 threads	Chamfer: 1,75 threads
right hand thread	left hand thread	right hand thread	right hand thread	right hand thread
				
		with spiral entry	lapped with spiral entry	lapped with spiral entry
				



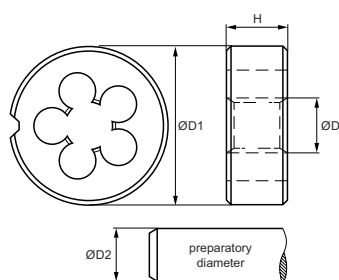
MF	D	D1	H	D2	No.	No.	No.	No.	No.	D2 Tol. 6e
MF 13 x 1,5	13,0	38	10	12,85	121401034					
MF 14 x 0,5	14,0	38	10	13,93	121401035					
MF 14 x 0,75	14,0	38	10	13,90	121401036					
MF 14 x 1,0	14,0	38	10	13,88	121401037			121405017	121421014	13,76 mm
MF 14 x 1,25	14,0	38	10	13,86	121401038	121402009	121404009	121405018		
MF 14 x 1,5	14,0	38	10	13,85	121401039	121402010	121404010	121405019	121421015	13,73 mm
MF 15 x 0,75	15,0	38	10	14,90	121401040					
MF 15 x 1,0	15,0	38	10	14,88	121401041					
MF 15 x 1,5	15,0	38	10	14,85	121401042					
MF 16 x 0,5	16,0	45	14	15,93	121401043					
MF 16 x 0,75	16,0	45	14	15,90	121401044					
MF 16 x 1,0	16,0	45	14	15,88	121401045	121402011		121405020	121421016	15,76 mm
MF 16 x 1,25	16,0	45	14	15,86	121401046					
MF 16 x 1,5	16,0	45	14	15,85	121401047	121402012	121404011	121405021	121421017	15,73 mm
MF 17 x 1,0	17,0	45	14	16,88	121401048					
MF 17 x 1,5	17,0	45	14	16,85	121401049					
MF 18 x 0,5	18,0	45	14	17,93	121401050					
MF 18 x 0,75	18,0	45	14	17,90	121401051					
MF 18 x 1,0	18,0	45	14	17,88	121401052			121405022	121421018	17,74 mm
MF 18 x 1,25	18,0	45	14	17,86	121401053					
MF 18 x 1,5	18,0	45	14	17,85	121401054	121402013	121404012	121405023	121421019	17,71 mm
MF 18 x 2,0	18,0	45	14	17,82	121401055		121404013			
MF 19 x 1,0	19,0	45	14	18,88	121401056					
MF 19 x 1,5	19,0	45	14	18,85	121401057					
MF 20 x 0,5	20,0	45	14	19,93	121401058					
MF 20 x 0,75	20,0	45	14	19,90	121401059					
MF 20 x 1,0	20,0	45	14	19,88	121401060			121405024	121421020	19,66 mm
MF 20 x 1,25	20,0	45	14	19,86	121401061					
MF 20 x 1,5	20,0	45	14	19,85	121401062	121402014	121404014	121405025	121421021	19,71 mm
MF 20 x 2,0	20,0	45	14	19,82	121401063		121404015			
MF 21 x 1,0	21,0	45	14	20,88	121401064					
MF 21 x 1,5	21,0	45	14	20,85	121401065					
MF 22 x 0,5	22,0	55	16	21,93	121401066					

Round Dies for general use	Round Dies for general use Left Hand	Round Dies for higher demands	Round Dies for stainless steels	Round Dies undersized
				
material: HSS	material: HSS	material: HSSE	material: HSSE	material: HSS
ISO-6g	ISO-6g	ISO-6g	ISO-6g	6e
 Chamfer: 1,5 threads	 Chamfer: 1,5 threads	 Chamfer: 1,5 threads	 Chamfer: 2 threads	 Chamfer: 1,75 threads
right hand thread	left hand thread	right hand thread	right hand thread	right hand thread
		 with spiral entry	 lapped with spiral entry	 lapped with spiral entry
				

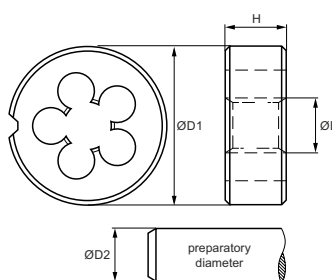
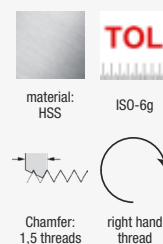


MF	D	D1	H	D2	No.	No.	No.	No.	No.	D2 Tol. 6e
MF 22 x 0,75	22,0	55	16	21,90	121401067					
MF 22 x 1,0	22,0	55	16	21,88	121401068					
MF 22 x 1,25	22,0	55	16	21,86	121401069					
MF 22 x 1,5	22,0	55	16	21,85	121401070	121402015	121404016	121405026	121421022	21,71 mm
MF 22 x 2,0	22,0	55	16	21,82	121401071					
MF 23 x 1,0	23,0	55	16	22,88	121401072					
MF 23 x 1,5	23,0	55	16	22,85	121401073					
MF 24 x 0,5	24,0	55	16	23,93	121401074					
MF 24 x 0,75	24,0	55	16	23,90	121401075					
MF 24 x 1,0	24,0	55	16	23,88	121401076				121421023	21,74 mm
MF 24 x 1,25	24,0	55	16	23,86	121401077					
MF 24 x 1,5	24,0	55	16	23,85	121401078	121402016	121404017	121405027	121421024	23,70 mm
MF 24 x 2,0	24,0	55	16	22,82	121401079	121402017		121405028		
MF 25 x 1,0	25,0	55	16	24,88	121401080					
MF 25 x 1,5	25,0	55	16	24,85	121401081					
MF 26 x 1,0	26,0	55	16	25,88	121401082					
MF 26 x 1,5	26,0	55	16	25,85	121401083			121405029	121421025	25,69 mm
MF 26 x 2,0	26,0	55	16	25,82	121401084					
MF 27 x 1,0	27,0	65	18	26,88	121401085					
MF 27 x 1,5	27,0	65	18	26,85	121401086					
MF 27 x 2,0	27,0	65	18	26,82	121401087					
MF 28 x 1,0	28,0	65	18	27,88	121401088					
MF 28 x 1,5	28,0	65	18	27,85	121401089					
MF 28 x 2,0	28,0	65	18	27,82	121401090					
MF 29 x 1,5	29,0	65	18	28,85	121401091					
MF 30 x 1,0	30,0	65	18	29,88	121401092					
MF 30 x 1,5	30,0	65	18	29,85	121401093			121405030		
MF 30 x 2,0	30,0	65	18	29,82	121401094	121402018		121405031		
MF 30 x 2,5	30,0	65	18	29,79	121401095	121402019				
MF 30 x 3,0	30,0	65	25	29,76	121401096	121402020				
MF 32 x 1,0	32,0	65	18	31,88	121401098	121402021				
MF 32 x 1,5	32,0	65	18	31,85	121401097	121402022				
MF 32 x 2,0	32,0	65	18	31,82	121401099	121402023				

Round Dies for general use



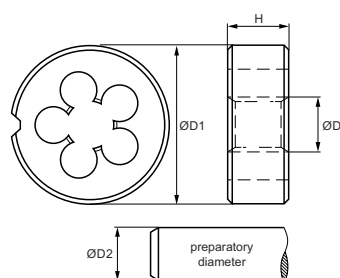
Round Dies for general use



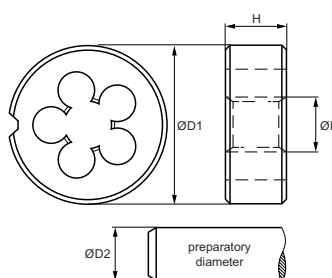
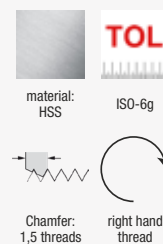
MF	D	D1	H	D2	No.
MF 32 x 3,0	32,0	65	25	31,77	121401100
MF 33 x 1,5	33,0	65	18	32,85	121401101
MF 33 x 2,0	33,0	65	18	32,82	121401102
MF 33 x 3,0	33,0	65	25	32,76	121401103
MF 34 x 1,0	34,0	65	18	33,88	121401104
MF 34 x 1,5	34,0	65	18	33,85	121401105
MF 34 x 2,0	34,0	65	18	33,82	121401106
MF 35 x 1,0	35,0	65	18	34,88	121401107
MF 35 x 1,5	35,0	65	18	34,85	121401108
MF 35 x 2,0	35,0	65	18	34,82	121401109
MF 36 x 1,0	36,0	65	18	35,88	121401110
MF 36 x 1,5	36,0	65	18	35,85	121401111
MF 36 x 2,0	36,0	65	18	35,82	121401112
MF 36 x 3,0	36,0	65	25	35,76	121401113
MF 37 x 1,5	37,0	65	18	36,85	121401114
MF 38 x 1,0	38,0	75	20	37,88	121401115
MF 38 x 1,5	38,0	75	20	37,85	121401116
MF 38 x 2,0	38,0	75	20	37,82	121401117
MF 38 x 3,0	38,0	75	30	37,77	121401118
MF 39 x 1,5	39,0	75	20	38,85	121401119
MF 39 x 2,0	39,0	75	20	38,82	121401120
MF 39 x 3,0	39,0	75	30	38,76	121401121
MF 40 x 1,0	40,0	75	20	39,88	121401122
MF 40 x 1,5	40,0	75	20	39,85	121401123
MF 40 x 2,0	40,0	75	20	39,82	121401124
MF 40 x 3,0	40,0	75	30	39,76	121401125
MF 42 x 1,0	42,0	75	20	41,88	121401126
MF 42 x 1,5	42,0	75	20	41,85	121401127
MF 42 x 2,0	42,0	75	20	41,82	121401128
MF 42 x 3,0	42,0	75	30	41,76	121401129
MF 44 x 1,5	44,0	90	22	43,85	121401130
MF 44 x 2,0	44,0	90	22	43,82	121401131
MF 45 x 1,0	45,0	90	22	44,88	121401132

MF	D	D1	H	D2	No.
MF 45 x 1,5	45,0	90	22	44,85	121401133
MF 45 x 2,0	45,0	90	22	44,82	121401134
MF 45 x 3,0	45,0	90	36	44,76	121401135
MF 46 x 1,5	46,0	90	22	45,85	121401136
MF 48 x 1,0	48,0	90	22	47,88	121401137
MF 48 x 1,5	48,0	90	22	47,85	121401138
MF 48 x 2,0	48,0	90	22	47,82	121401139
MF 48 x 3,0	48,0	90	36	47,46	121401140
MF 50 x 1,5	50,0	90	22	49,85	121401141
MF 50 x 2,0	50,0	90	22	49,82	121401142
MF 50 x 3,0	50,0	90	36	49,76	121401143
MF 52 x 1,5	52,0	90	22	51,85	121401144
MF 52 x 2,0	52,0	90	22	51,82	121401145
MF 52 x 3,0	52,0	90	36	51,76	121401146
MF 54 x 1,5	54,0	105	22	53,92	121401147
MF 54 x 2,0	54,0	105	22	53,91	121401148
MF 54 x 3,0	54,0	105	36	53,88	121401149
MF 54 x 4,0	54,0	105	36	53,85	121401150
MF 55 x 1,5	55,0	105	22	54,85	121401151
MF 55 x 2,0	55,0	105	22	54,82	121401152
MF 55 x 3,0	55,0	105	36	54,76	121401153
MF 55 x 4,0	55,0	105	36	54,73	121401154
MF 56 x 1,5	56,0	105	22	55,85	121401155
MF 56 x 2,0	56,0	105	22	55,82	121401156
MF 56 x 3,0	56,0	105	36	55,76	121401157
MF 56 x 4,0	56,0	105	36	55,73	121401158
MF 58 x 1,5	58,0	105	22	57,92	121401159
MF 58 x 2,0	58,0	105	22	57,91	121401160
MF 58 x 3,0	58,0	105	36	57,88	121401161
MF 58 x 4,0	58,0	105	36	57,85	121401162
MF 60 x 1,5	60,0	105	22	59,92	121401163
MF 60 x 2,0	60,0	105	22	59,91	121401164
MF 60 x 3,0	60,0	105	36	59,88	121401165

Round Dies for general use



Round Dies for general use



MF	D	D1	H	D2	No.
MF 60 x 4,0	60,0	105	36	59,85	121401166
MF 62 x 1,5	62,0	105	22	61,92	121401167
MF 62 x 2,0	62,0	105	22	61,91	121401168
MF 62 x 3,0	62,0	105	36	61,88	121401169
MF 62 x 4,0	62,0	105	36	61,85	121401170
MF 63 x 1,5	63,0	105	22	62,92	121401171
MF 64 x 1,5	64,0	120	22	63,92	121401172
MF 64 x 2,0	64,0	120	22	63,91	121401173
MF 64 x 3,0	64,0	120	36	63,88	121401174
MF 64 x 4,0	64,0	120	36	63,85	121401175
MF 65 x 1,5	65,0	120	22	64,92	121401176
MF 65 x 2,0	65,0	120	22	64,91	121401177
MF 65 x 3,0	65,0	120	36	64,88	121401178
MF 65 x 4,0	65,0	120	36	64,85	121401179
MF 68 x 1,5	68,0	120	22	67,92	121401180
MF 68 x 2,0	68,0	120	22	67,91	121401181
MF 68 x 3,0	68,0	120	36	67,88	121401182
MF 68 x 4,0	68,0	120	36	67,85	121401183
MF 70 x 1,5	70,0	120	22	69,92	121401184
MF 70 x 2,0	70,0	120	22	69,91	121401185
MF 70 x 3,0	70,0	120	36	69,88	121401186
MF 70 x 4,0	70,0	120	36	69,85	121401187
MF 72 x 1,5	72,0	120	22	71,92	121401188
MF 72 x 2,0	72,0	120	22	71,91	121401189
MF 72 x 3,0	72,0	120	36	71,88	121401190
MF 72 x 4,0	72,0	120	36	71,85	121401191
MF 74 x 1,5	74,0	120	22	73,92	121401192
MF 74 x 2,0	74,0	120	22	73,91	121401193
MF 74 x 3,0	74,0	120	36	73,88	121401194
MF 74 x 4,0	74,0	120	36	73,85	121401195
MF 75 x 1,5	75,0	120	22	74,92	121401196
MF 75 x 2,0	75,0	120	22	74,91	121401197
MF 75 x 3,0	75,0	120	36	74,88	121401198

MF	D	D1	H	D2	No.
MF 75 x 4,0	75,0	120	36	74,85	121401199
MF 76 x 1,5	76,0	120	22	75,92	121401200
MF 76 x 2,0	76,0	120	22	75,91	121401201
MF 76 x 3,0	76,0	120	36	75,88	121401202
MF 76 x 4,0	76,0	120	36	75,85	121401203
MF 78 x 1,5	78,0	120	22	77,92	121401204
MF 78 x 2,0	78,0	120	22	77,91	121401205
MF 78 x 3,0	78,0	120	36	77,88	121401206
MF 78 x 4,0	78,0	120	36	77,85	121401207
MF 80 x 1,5	80,0	120	22	79,92	121401208
MF 80 x 2,0	80,0	120	22	79,91	121401209
MF 80 x 3,0	80,0	120	36	79,88	121401210
MF 80 x 4,0	80,0	120	36	79,85	121401211
MF 82 x 1,5	82,0	130	25	81,92	121401212
MF 82 x 2,0	82,0	130	25	81,91	121401213
MF 82 x 3,0	82,0	130	36	81,88	121401214
MF 82 x 4,0	82,0	130	36	81,85	121401215
MF 84 x 1,5	84,0	130	25	83,92	121401216
MF 84 x 2,0	84,0	130	25	83,91	121401217
MF 84 x 3,0	84,0	130	36	83,88	121401218
MF 84 x 4,0	84,0	130	36	83,85	121401219
MF 85 x 1,5	85,0	130	25	84,92	121401220
MF 85 x 2,0	85,0	130	25	84,91	121401221
MF 85 x 3,0	85,0	130	36	84,88	121401222
MF 85 x 4,0	85,0	130	36	84,85	121401223
MF 86 x 1,5	86,0	140	22	85,92	121401224
MF 86 x 2,0	86,0	140	22	85,91	121401225
MF 86 x 3,0	86,0	140	22	85,88	121401226
MF 86 x 4,0	86,0	140	22	85,85	121401227
MF 88 x 1,5	88,0	140	22	87,92	121401228
MF 88 x 2,0	88,0	140	22	87,91	121401229
MF 88 x 3,0	88,0	140	22	87,88	121401230
MF 88 x 4,0	88,0	140	22	87,85	121401231

MF Metric fine thread / ISO DIN 13

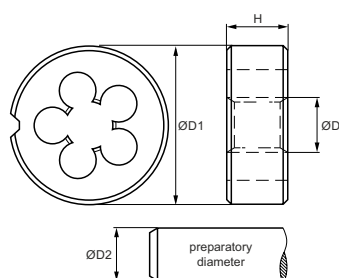
Round Dies for general use



material: HSS ISO-6g

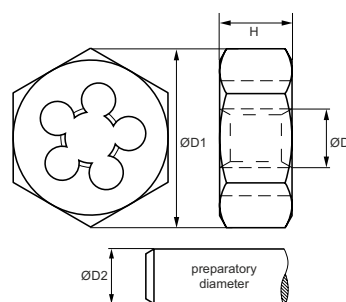
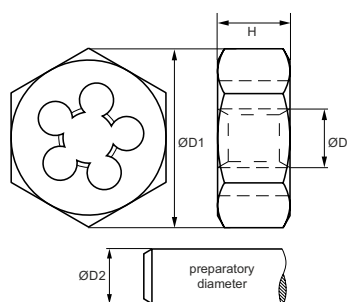


Chamfer: 1,5 threads
right hand thread

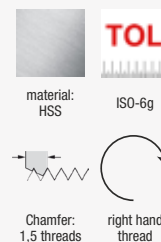


MF	D	D1	H	D2	No.
MF 90 x 1,5	90,0	140	22	89,92	121401232
MF 90 x 2,0	90,0	140	22	89,91	121401233
MF 90 x 3,0	90,0	140	22	89,88	121401234
MF 90 x 4,0	90,0	140	22	89,85	121401235
MF 92 x 1,5	92,0	140	22	91,92	121401236
MF 92 x 2,0	92,0	140	22	91,91	121401237
MF 92 x 3,0	92,0	140	22	91,88	121401238
MF 92 x 4,0	92,0	140	22	91,85	121401239
MF 95 x 1,5	95,0	140	22	94,92	121401240
MF 95 x 2,0	95,0	140	22	94,91	121401241
MF 95 x 3,0	95,0	140	22	94,88	121401242
MF 95 x 4,0	95,0	140	22	94,85	121401243
MF 96 x 1,5	96,0	140	22	95,92	121401244
MF 96 x 2,0	96,0	140	22	95,91	121401245
MF 96 x 3,0	96,0	140	22	95,88	121401246
MF 96 x 4,0	96,0	140	22	95,85	121401247
MF 98 x 1,5	98,0	150	25	94,92	121401248
MF 98 x 2,0	98,0	150	25	97,91	121401249
MF 98 x 3,0	98,0	150	25	97,88	121401250
MF 98 x 4,0	98,0	150	25	97,85	121401251
MF 100 x 1,5	100,0	150	25	99,92	121401252
MF 100 x 2,0	100,0	150	25	99,91	121401253
MF 100 x 3,0	100,0	150	25	99,88	121401254
MF 100 x 4,0	100,0	150	25	99,85	121401255
MF 105 x 1,5	105,0	150	25	104,92	121401256
MF 105 x 2,0	105,0	150	25	104,91	121401257
MF 105 x 3,0	105,0	150	25	104,88	121401258
MF 105 x 4,0	105,0	150	25	104,85	121401259
MF 110 x 1,5	110,0	160	25	109,92	121401260
MF 110 x 2,0	110,0	160	25	109,91	121401261
MF 110 x 3,0	110,0	160	25	109,88	121401262
MF 110 x 4,0	110,0	160	25	109,85	121401263

Hexagon Di Nuts for general use



Hexagon Di Nuts for general use



MF	D	D1	H	D2	No.
MF 3 x 0,35	3,0	19	5	2,94	121501001
MF 4 x 0,35	3,5	19	5	3,44	121501002
MF 4 x 0,5	4,0	19	5	3,93	121501003
MF 5 x 0,5	5,0	19	5	4,93	121501004
MF 5 x 0,75	5,0	19	7	4,91	121501005
MF 6 x 0,5	6,0	19	5	5,93	121501006
MF 6 x 0,75	6,0	19	7	5,90	121501007
MF 7 x 0,75	7,0	22	9	6,90	121501008
MF 8 x 0,5	8,0	22	9	7,93	121501009
MF 8 x 0,75	8,0	22	9	7,90	121501010
MF 8 x 1,0	8,0	22	9	7,83	121501011
MF 9 x 0,75	9,0	22	9	8,90	121501012
MF 9 x 1,0	9,0	22	9	8,88	121501013
MF 10 x 0,75	10,0	27	11	9,90	121501014
MF 10 x 1,0	10,0	27	11	9,88	121501015
MF 10 x 1,25	10,0	27	11	9,86	121501016
MF 11 x 1,0	11,0	27	11	10,88	121501017
MF 11 x 1,25	11,0	27	11	10,86	121501018
MF 12 x 0,75	12,0	36	10	11,90	121501019
MF 12 x 1,0	12,0	36	10	11,88	121501020
MF 12 x 1,25	12,0	36	10	11,86	121501021
MF 12 x 1,5	12,0	36	10	11,85	121501022
MF 13 x 1,0	13,0	36	10	12,88	121501023
MF 13 x 1,5	13,0	36	10	12,85	121501024
MF 14 x 0,75	14,0	36	10	13,90	121501025
MF 14 x 1,0	14,0	36	10	13,88	121501026
MF 14 x 1,25	14,0	36	10	13,86	121501027
MF 14 x 1,5	14,0	36	10	13,85	121501028
MF 15 x 1,0	15,0	36	10	14,88	121501029
MF 15 x 1,5	15,0	36	10	14,85	121501030
MF 16 x 1,0	16,0	41	14	15,88	121501031
MF 16 x 1,25	16,0	41	14	15,86	121501032
MF 16 x 1,5	16,0	41	14	15,85	121501033
MF 18 x 1,0	18,0	41	14	17,88	121501034

MF	D	D1	H	D2	No.
MF 18 x 1,25	18,0	41	14	17,86	121501035
MF 18 x 1,5	18,0	41	14	17,85	121501036
MF 18 x 2,0	18,0	41	14	17,82	121501037
MF 20 x 1,0	20,0	41	14	19,88	121501038
MF 20 x 1,25	20,0	41	14	19,86	121501039
MF 20 x 1,5	20,0	41	14	19,85	121501040
MF 20 x 2,0	20,0	41	14	19,82	121501041
MF 21 x 1,5	21,0	41	14	20,85	121501042
MF 22 x 1,0	22,0	50	16	21,88	121501043
MF 22 x 1,25	22,0	50	16	21,86	121501044
MF 22 x 1,5	22,0	50	16	21,85	121501045
MF 22 x 2,0	22,0	50	16	21,82	121501046
MF 23 x 1,5	23,0	50	16	22,85	121501047
MF 24 x 1,0	24,0	50	16	23,88	121501048
MF 24 x 1,25	24,0	50	16	23,86	121501049
MF 24 x 1,5	24,0	50	16	23,85	121501050
MF 24 x 2,0	24,0	50	16	22,82	121501051
MF 25 x 1,0	25,0	50	16	24,88	121501052
MF 25 x 1,5	25,0	50	16	24,85	121501053
MF 26 x 1,0	26,0	50	16	25,88	121501054
MF 26 x 1,5	26,0	50	16	25,85	121501055
MF 26 x 2,0	26,0	50	16	25,82	121501056
MF 27 x 1,0	27,0	60	18	26,88	121501057
MF 27 x 1,5	27,0	60	18	26,85	121501058
MF 27 x 2,0	27,0	60	18	26,82	121501059
MF 28 x 1,0	28,0	60	18	27,88	121501060
MF 28 x 1,5	28,0	60	18	27,85	121501061
MF 28 x 2,0	28,0	60	18	27,82	121501062
MF 29 x 1,5	29,0	60	18	28,85	121501063
MF 30 x 1,0	30,0	60	18	29,88	121501064
MF 30 x 1,5	30,0	60	18	29,85	121501065
MF 30 x 2,0	30,0	60	18	29,82	121501066
MF 30 x 3,0	30,0	60	25	29,76	121501067
MF 32 x 1,5	32,0	60	18	31,85	121501068

MF Metric fine thread / ISO DIN 13

Hexagon Di Nuts

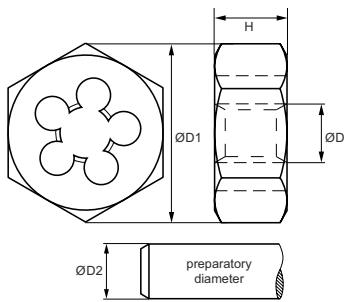
for general use



material:
HSS ISO-6g



Chamfer:
1,5 threads right hand
thread



MF

	D	D1	H	D2	No.
MF 32 x 2,0	32,0	60	18	31,82	121501069
MF 32 x 3,0	32,0	60	25	31,77	121501070
MF 33 x 1,5	33,0	60	18	32,85	121501071
MF 33 x 2,0	33,0	60	18	32,82	121501072
MF 33 x 3,0	33,0	60	25	32,76	121501073
MF 34 x 1,5	34,0	60	18	33,85	121501074
MF 34 x 2,0	34,0	60	18	33,82	121501075
MF 35 x 1,5	35,0	60	18	34,85	121501076
MF 36 x 1,5	36,0	60	18	35,85	121501077
MF 36 x 2,0	36,0	60	18	35,82	121501078
MF 36 x 3,0	36,0	60	25	35,76	121501079
MF 38 x 1,5	38,0	70	20	37,85	121501080
MF 39 x 1,5	39,0	70	20	38,85	121501081
MF 39 x 2,0	39,0	70	20	38,82	121501082
MF 39 x 3,0	39,0	70	30	38,76	121501083
MF 40 x 1,5	40,0	70	20	39,85	121501084
MF 40 x 2,0	40,0	70	20	39,82	121501085
MF 40 x 3,0	40,0	70	30	39,76	121501086
MF 42 x 1,5	42,0	70	20	41,85	121501087
MF 42 x 2,0	42,0	70	20	41,82	121501088
MF 42 x 3,0	42,0	70	30	41,76	121501089
MF 45 x 1,5	45,0	85	22	44,85	121501090
MF 45 x 2,0	45,0	85	22	44,82	121501091
MF 45 x 3,0	45,0	85	36	44,76	121501092
MF 48 x 1,5	48,0	85	22	47,85	121501093
MF 48 x 2,0	48,0	85	22	47,82	121501094
MF 48 x 3,0	48,0	85	36	47,46	121501095
MF 50 x 1,5	50,0	85	22	49,85	121501096
MF 50 x 2,0	50,0	85	22	49,82	121501097
MF 50 x 3,0	50,0	85	36	49,76	121501098
MF 52 x 1,5	52,0	85	22	51,85	121501099
MF 52 x 2,0	52,0	85	22	51,82	121501100
MF 52 x 3,0	52,0	85	36	51,76	121501101

G-Rohr (BSP)

British standard whitworth pipe thread / DIN ISO 228

Hand-Tap Sets, Round Dies and Tools Sets (example picture)



Set G(BSP) 1/8" - 1"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14 G 1" x 11
HSS Round Dies	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14 G 1" x 11
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-1/2 & M 13-32 1/2-1.1/4" G 1/4-1"
Die Stocks - zinc die cast	30 x 11 38 x 10 45 x 14 55 x 16 68 x 18
Screw extractor	

Item No.:
264802014

Set G(BSP) 1/8" - 1" (incl. intermediate sizes)

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 5/8 x 14 G 3/4 x 14 G 7/8 x 14 G 1" x 11
HSS Round Dies	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 5/8 x 14 G 3/4 x 14 G 7/8 x 14 G 1" x 11
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-1/2 & M 13-32 1/2-1.1/4" G 1/4-1"
Die Stocks - zinc die cast	30 x 11 38 x 10 45 x 14 55 x 16 68 x 18
Screw extractor	

Item No.:
264802114

Set G(BSP) 1/4" - 1.1/2"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14 G 1" x 11 G 1.1/4" x 11 G 1.1/2" x 11
HSS Round Dies	G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14 G 1" x 11 G 1.1/4" x 11 G 1.1/2" x 11
adjustable Tap Wrenches - zinc die cast	M 4-12 5/32-1/2 G 1/8 & M 11-27 7/16-1" G 1/4-3/4 & M 27-52 1.1/8"-2" G 3/4-1.3/4"
Die Stocks - zinc die cast	38 x 10 45 x 14 55 x 16 68 x 18 75 x 20 90 x 22
Screw extractor	

Item No.:
264802214

G-Rohr (BSP)

British standard whitworth pipe thread / DIN ISO 228

Hand-Tap Sets, Round Dies and Tools Sets (example picture)



Set G(BSP) 1/8" - 3/4" Short Machine Taps through hole & blind hole HSSG Hexagonal-Die-Nuts



HSSG Short Machine Taps Form D for through holes and blind holes (up to 4 x D)	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14
HSSG Hexagonal-Die-Nuts	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14

Item No.:
BSR1

Set G(BSP) 1/8" - 1/2" Short Machine Taps through hole & blind hole HSSG Hexagonal-Die-Nuts



HSSG Short Machine Taps Form D for through holes and blind holes (up to 4 x D)	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14
HSSG Hexagonal-Die-Nuts	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14

Item No.:
BSR2

Set G(BSP) 1/8" - 3/4" Short Machine Taps through hole & blind hole HSSG Round Dies



HSSG Short Machine Taps Form D for through holes and blind holes (up to 4 x D)	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14
HSSG Hexagonal-Die-Nuts	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14

Item No.:
BSR3



G-Rohr (BSP)

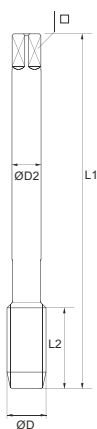
British standard whitworth pipe thread / DIN ISO 228

Efficient internal thread cutting.

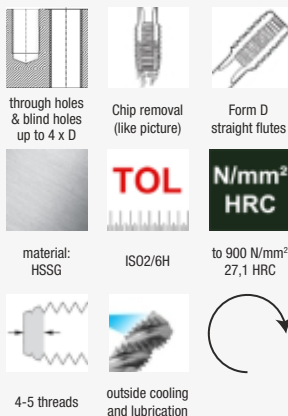
The short structural type makes that tap usable by machine and hand.

Application:



-  non abrasive material up to 900 N/mm²
-  unalloyed and low alloyed steel



Short Machine Taps Form D for through holes and blind holes



G(BSP)

G(BSP)	D1	D2	L1	L2			No.
BSP 1/8 x 28	9,73	7,0	63	20	5,5	8,80	130101001
BSP 1/4 x 19	13,16	11,0	70	22	9,0	11,80	130101002
BSP 3/8 x 19	16,66	12,0	70	22	9,0	15,25	130101003
BSP 1/2 x 14	20,95	16,0	80	22	12,0	19,00	130101004
BSP 3/4 x 14	26,44	20,0	90	22	16,0	24,50	130101005
BSP 1" x 11	33,25	25,0	100	25	20,0	30,75	130101006
BSP 1.1/4 x 11	41,91	32,0	125	40	24,0	39,50	130101007
BSP 1.1/2 x 11	47,80	36,0	140	40	29,0	45,25	130101008
BSP 1.3/4 x 11	53,74	40,0	140	40	32,0	51,20	130101009
BSP 2" x 11	59,61	45,0	160	40	35,0	57,00	130101010
BSP 2.1/4 x 11	65,71	50,0	160	40	39,0	63,10	130101011
BSP 2.1/2 x 11	75,18	50,0	160	40	39,0	72,60	130101012
BSP 2.3/4 x 11	81,53	50,0	160	40	39,0	79,00	130101013
BSP 3" x 11	87,88	50,0	160	40	39,0	85,50	130101014
BSP 3.1/2 x 11	100,3	56,0	180	45	44,0	98,00	130101015
BSP 4" x 11	113,0	56,0	180	45	44,0	110,50	130101016



G-Rohr (BSP)

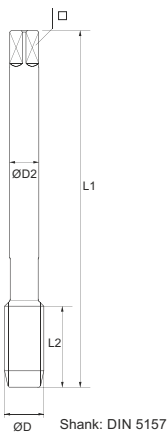
British standard whitworth pipe thread / DIN ISO 228

Efficient internal thread cutting.

The short structural type makes that tap usable by machine and hand.

A Hand-Tap-Set includes 2 taps:

-  Taper Tap
-  Finish Tap



Hand Tap Sets for general use



through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes



material: HSSG medium to 900 N/mm² 27,1 HRC



2-3 threads
outside cooling and lubrication



Hand Tap Sets for general use Left Hand



through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes



material: HSSG medium to 900 N/mm² 27,1 HRC



2-3 threads
outside cooling and lubrication



Hand Tap Sets for high tensile materials



through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes





material: HSSG medium to 1200 N/mm² 38,2 HRC



2-3 threads
outside cooling and lubrication



G(BSP)

	D1	D2	L1	L2			No.	No.	No.
BSP 1/8 x 28	9,73	7,0	63	20	5,5	8,80	130301001	130302001	130304001
BSP 1/4 x 19	13,16	11,0	70	22	9,0	11,80	130301002	130302002	130304002
BSP 3/8 x 19	16,66	12,0	70	22	9,0	15,25	130301003	130302003	130304003
BSP 1/2 x 14	20,95	16,0	80	22	12,0	19,00	130301004	130302004	130304004
BSP 5/8 x 14	22,91	18,0	80	22	14,5	21,00	130301005	130302005	
BSP 3/4 x 14	26,44	20,0	90	22	16,0	24,50	130301006	130302006	130304005
BSP 7/8 x 14	30,20	22,0	90	22	18,0	28,25	130301007		
BSP 1" x 11	33,25	25,0	100	25	20,0	30,75	130301008	130302007	130304006
BSP 1.1/8 x 11	37,90	28,0	125	40	22,0	35,30	130301009	130302008	
BSP 1.1/4 x 11	41,91	32,0	125	40	24,0	39,50	130301010	130302009	
BSP 1.3/8 x 11	44,32	36,0	140	40	29,0	41,70	130301011	130302010	
BSP 1.1/2 x 11	47,80	36,0	140	40	29,0	45,25	130301012	130302011	
BSP 1.5/8 x 11	52,00	40,0	140	40	32,0	49,60	130301013		
BSP 1.3/4 x 11	53,74	40,0	140	40	32,0	51,20	130301014	130302012	
BSP 2" x 11	59,61	45,0	160	40	35,0	57,00	130301015	130302013	
BSP 2.1/4 x 11	65,71	50,0	160	40	39,0	63,10	130301016		
BSP 2.1/2 x 11	75,18	50,0	160	40	39,0	72,60	130301017		
BSP 2.3/4 x 11	81,53	50,0	160	40	39,0	79,00	130301018		
BSP 3" x 11	87,88	50,0	160	40	39,0	85,50	130301019		
BSP 3.1/2 x 11	100,3	56,0	180	45	44,0	98,00	130301020		
BSP 4" x 11	113,0	56,0	180	45	44,0	110,50	130301021		

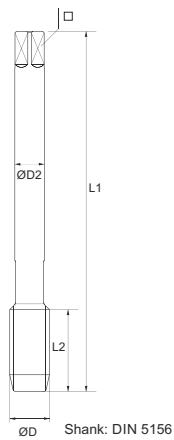
Machine Taps - Form B for through holes and Form C Left-hand thread

G-Rohr (BSP)

British standard whitworth pipe thread / DIN ISO 228

Tap for machine use in through hole and for left-hand thread in through and blind holes.

The spiral point pushes the chips ahead.



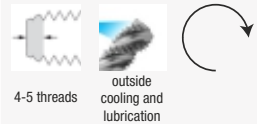
Machine Tap for general use



through holes up to 4 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE medium to 900 N/mm² 27,1 HRC



4-5 threads
outside cooling and lubrication

DIN 5156



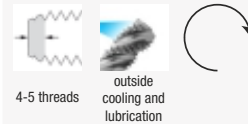
Machine Tap for stainless steels



through holes up to 2,5 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE TiAlN medium to 1300 N/mm² 41 HRC



4-5 threads
outside cooling and lubrication

DIN 5156



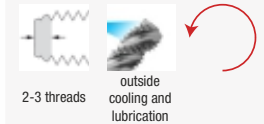
Machine Tap for general use Left-hand thread



through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes



material: HSSE medium to 900 N/mm² 27,1 HRC



2-3 threads
outside cooling and lubrication

DIN 5156



G(BSP)

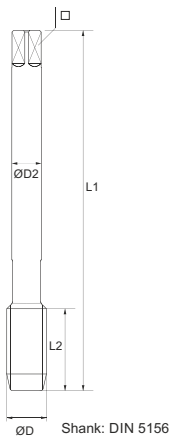
	D1	D2	L1	L2	□		No.	No.	No.
BSP 1/8 x 28	9,73	7,0	90	20	5,5	8,80	130401001	130405001	130502001
BSP 1/4 x 19	13,16	11,0	100	22	9,0	11,80	130401002	130405002	130502002
BSP 3/8 x 19	16,66	12,0	100	22	9,0	15,25	130401003	130405003	130502003
BSP 1/2 x 14	20,95	16,0	125	25	12,0	19,00	130401004	130405004	130502004
BSP 5/8 x 14	22,91	18,0	125	25	14,5	21,00	130401005	130405005	130502005
BSP 3/4 x 14	26,44	20,0	140	28	16,0	24,50	130401006	130405006	130502006
BSP 7/8 x 14	30,20	22,0	150	28	18,0	28,25	130401007	130405007	
BSP 1" x 11	33,25	25,0	160	30	20,0	30,75	130401008	130405008	130502007
BSP 1.1/8 x 11	37,90	28,0	170	30	22,0	35,30	130401009	130405009	
BSP 1.1/4 x 11	41,91	32,0	170	30	24,0	39,50	130401010	130405010	
BSP 1.3/8 x 11	44,32	36,0	180	32	29,0	41,70	130401011	130405011	
BSP 1.1/2 x 11	47,80	36,0	190	32	29,0	45,25	130401012	130405012	
BSP 1.3/4 x 11	53,74	40,0	190	32	32,0	51,20	130401013	130405013	
BSP 2" x 11	59,61	45,0	220	40	35,0	57,00	130401014	130405014	

G-Rohr (BSP)

British standard whitworth pipe thread / DIN ISO 228

Tap for machine use in through hole and for left-hand thread in through and blind holes.

The spiral point pushes the chips ahead.



Machine Tap for general use



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
medium
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication



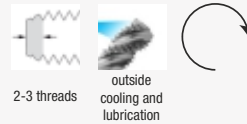
Machine Tap for stainless steels



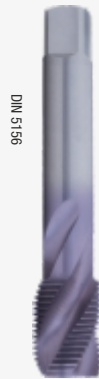
blind holes up to 2,5 x D
Chip removal (like picture)
Form C 40° spiral flute



material: HSSE TAIN
medium
to 1300 N/mm²
41 HRC



2-3 threads
outside cooling and lubrication



G(BSP)

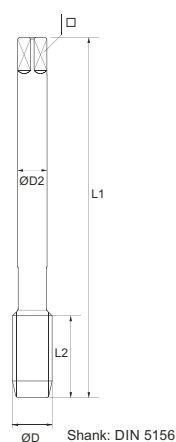
G(BSP)	D1	D2	L1	L2	□	▣	No.	No.
BSP 1/8 x 28	9,73	7,0	90	20	5,5	8,80	130601001	130605001
BSP 1/4 x 19	13,16	11,0	100	22	9,0	11,80	130601002	130605002
BSP 3/8 x 19	16,66	12,0	100	22	9,0	15,25	130601003	130605003
BSP 1/2 x 14	20,95	16,0	125	25	12,0	19,00	130601004	130605004
BSP 5/8 x 14	22,91	18,0	125	25	14,5	21,00	130601005	130605005
BSP 3/4 x 14	26,44	20,0	140	28	16,0	24,50	130601006	130605006
BSP 7/8 x 14	30,20	22,0	150	28	18,0	28,25	130601007	130605007
BSP 1" x 11	33,25	25,0	160	30	20,0	30,75	130601008	130605008
BSP 1.1/8 x 11	37,90	28,0	170	30	22,0	35,30	130601009	130605009
BSP 1.1/4 x 11	41,91	32,0	170	30	24,0	39,50	130601010	130605010
BSP 1.3/8 x 11	44,32	36,0	180	32	29,0	41,70	130601011	130605011
BSP 1.1/2 x 11	47,80	36,0	190	32	29,0	45,25	130601012	130605012
BSP 1.3/4 x 11	53,74	40,0	190	32	32,0	51,20	130601013	130605013
BSP 2" x 11	59,61	45,0	220	40	35,0	57,00	130601014	130605014

G-Rohr (BSP)

British standard whitworth pipe thread / DIN ISO 228

Machine Forming Taps have following advantages:

- No chips
- Up to 20 times longer lifetime (compared to taps)
- Same forming tap for through and blind hole
- Wide range of materials can be processed
- Intersection of the thread is impossible
- Very high trueness
- Increased strength of the thread
- Higher surface quality
- Much higher cutting speed



Machine Forming Taps for universal use

through holes & blind holes up to 2,5 x D

Threading with no chips

with oil grooves

material: HSSE TIN

ISO 5969 X

to 850 N/mm² 25,5 HRC

2-3 threads

outside cooling and lubrication



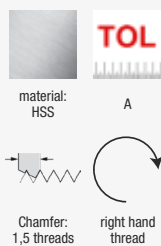
G(BSP)

G(BSP)	D1	D2	L1	L2	□	⊞	No.
BSP 1/8 x 28	9,73	7,0	90	18	5,5	9,25	131101001
BSP 1/4 x 19	13,16	11,0	100	22	9,0	12,50	131101002
BSP 3/8 x 19	16,66	12,0	100	22	9,0	16,00	131101003
BSP 1/2 x 14	20,95	16,0	125	25	12,0	20,00	131101004
BSP 3/4 x 14	26,44	20,0	140	28	20,0	25,50	131101005

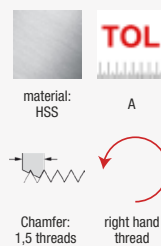
G-Rohr (BSP)

British standard whitworth pipe thread / DIN ISO 228

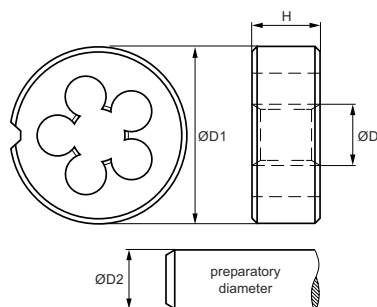
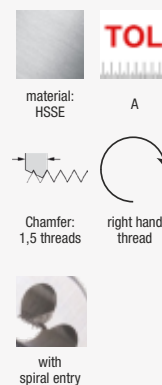
Round Dies for general use



Round Dies for general use Left Hand



Round Dies for stainless steels



G(BSP)

	D	D1	H	D2	No.	No.	No.
BSP 1/8 x 28	9,73	30	11	9,62	131401001	131402001	131405001
BSP 1/4 x 19	13,16	38	10	13,03	131401002	131402002	131405002
BSP 3/8 x 19	16,66	45	14	16,54	131401003	131402003	131405003
BSP 1/2 x 14	20,95	45	14	20,81	131401004	131402004	131405004
BSP 5/8 x 14	22,91	55	16	22,77	131401005	131402005	
BSP 3/4 x 14	26,44	55	16	26,30	131401006	131402006	131405005
BSP 7/8 x 14	30,20	65	18	30,06	131401007	131402007	
BSP 1" x 11	33,25	65	18	33,07	131401008	131402008	131405006
BSP 1.1/8 x 11	37,90	75	20	37,72	131401009	131402009	
BSP 1.1/4 x 11	41,91	75	20	41,73	131401010	131402010	
BSP 1.3/8 x 11	44,32	90	22	44,14	131401011	131402011	
BSP 1.1/2 x 11	47,80	90	22	47,62	131401012	131402012	
BSP 1.5/8 x 11	52,00	90	22	51,82	131401013	131402013	
BSP 1.3/4 x 11	53,74	105	22	53,57	131401014	131402014	
BSP 2" x 11	59,61	90	22	59,43	131401015	131402015	
BSP 2" x 11	59,61	105	22	59,43	131401016		
BSP 2.1/4 x 11	65,71	120	22	65,49	131401017		
BSP 2.1/2 x 11	75,18	120	22	74,97	131401018		
BSP 2.3/4 x 11	81,53	120	22	81,32	131401019		
BSP 3" x 11	87,88	130	25	87,67	131401020		
BSP 3.1/2 x 11	100,33	150	25	100,11	131401021		
BSP 4" x 11	113,03	160	25	112,81	131401022		

G-Rohr (BSP)

British standard whitworth pipe thread / DIN ISO 228

Hexagon Die Nuts for general use



material: HSS

A



Chamfer: 1,5 threads

right hand thread

Hexagon Die Nuts for general use

Left Hand



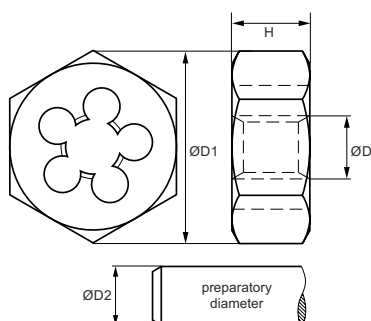
material: HSS

A



Chamfer: 1,5 threads

right hand thread



G(BSP)

	D	D1	H	D2	No.	No.
BSP 1/8 x 28	9,73	27	11	9,62	131501001	131502001
BSP 1/4 x 19	13,16	36	10	13,03	131501002	131502002
BSP 3/8 x 19	16,66	41	14	16,54	131501003	131502003
BSP 1/2 x 14	20,95	41	14	20,81	131501004	131502004
BSP 5/8 x 14	22,91	50	16	22,77	131501005	131502005
BSP 3/4 x 14	26,44	50	16	26,30	131501006	131502006
BSP 7/8 x 14	30,20	60	18	30,06	131501007	
BSP 1" x 11	33,25	60	18	33,07	131501008	131502007
BSP 1.1/8 x 11	37,90	70	20	37,72	131501009	131502008
BSP 1.1/4 x 11	41,91	70	20	41,73	131501010	131502009
BSP 1.3/8 x 11	44,32	85	22	44,14	131501011	131502010
BSP 1.1/2 x 11	47,80	85	22	47,62	131501012	131502011
BSP 1.5/8 x 11	52,00	85	22	51,82	131501013	
BSP 1.3/4 x 11	53,74	100	22	53,57	131501014	131502012
BSP 2" x 11	59,61	100	22	59,43	131501015	131502013

UNC

Unified coarse thread / ANSI B1.1

Hand-Tap Sets, Round Dies and Tools Sets (example picture)



Set UNC 1/4" - 1/2"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts)	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13
HSS Round Dies	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 4-12 5/32-1/2 G 1/8
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14
Screw extractor	

Item No.:
264805003

Set UNC 1/4" - 3/4"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts)	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13 UNC 5/8 x 11 UNC 3/4 x 10
HSS Round Dies	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13 UNC 5/8 x 11 UNC 3/4 x 10
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-1/2
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18
Screw extractor	

Item No.:
264805103

Set UNC 1/4" - 1"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts)	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13 UNC 5/8 x 11 UNC 3/4 x 10 UNC 7/8 x 9 UNC 1" x 8
HSS Round Dies	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13 UNC 5/8 x 11 UNC 3/4 x 10 UNC 7/8 x 9 UNC 1" x 8
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 11-27 7/16-1" G 1/4-3/4
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22
Screw extractor	

Item No.:
264805303

Set UNC 1/4" - 1.1/2"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts)	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13 UNC 5/8 x 11 UNC 3/4 x 10 UNC 7/8 x 9 UNC 1" x 8 UNC 1.1/8" x 7 UNC 1.1/4" x 7 UNC 1.1/2" x 6
HSS Round Dies	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13 UNC 5/8 x 11 UNC 3/4 x 10 UNC 7/8 x 9 UNC 1" x 8 UNC 1.1/8" x 7 UNC 1.1/4" x 7 UNC 1.1/2" x 6
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-1/2 & M 13-32 1/2 - 1.1/4" G 1/4-1"
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22 65 x 25
Screw extractor	

Item No.:
264805303

Set UNC & UNF 1/4" - 3/4"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts) UNC	UNC 1/4 UNC 5/16 UNC 3/8 UNC 7/16 UNC 1/2 UNC 5/8 UNC 3/4
HSSG Hand Tap Sets (2 parts) UNF	UNF 1/4 UNF 5/16 UNF 3/8 UNF 7/16 UNF 1/2 UNF 5/8 UNF 3/4
HSS Round Dies UNC	UNC 1/4 UNC 5/16 UNC 3/8 UNC 7/16 UNC 1/2 UNC 5/8 UNC 3/4
HSS Round Dies UNF	UNF 1/4 UNF 5/16 UNF 3/8 UNF 7/16 UNF 1/2 UNF 5/8 UNF 3/4
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-1/2
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18
Screw extractor	

Item No.:
2648066203

UNC

Unified coarse thread / ANSI B1.1

Short Machine Taps und Round Dies Sets UNC 1/4" - 1/2" (example picture)



Set UNC 1/4" - 1/2" HSSG Short Machine Taps & Drill bits for core holes HSS Round Dies

HSSG Short Machine Tap Form D for through hole & blind hole (up to 4 x D)	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14
HSSG Drill bits for core holes	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14
HSS Round Dies	UNC 1/4 x 20 UNC 5/16 x 18 UNC 3/8 x 16 UNC 7/16 x 14 UNC 1/2 x 13

Item No.:
BES2




Short Machine Taps and Hand Tap Sets

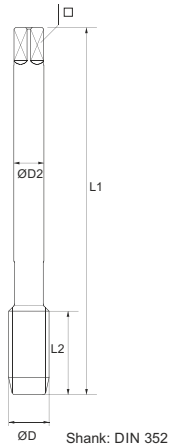
UNC Unified coarse thread / ANSI B1.1

Efficient internal thread cutting.

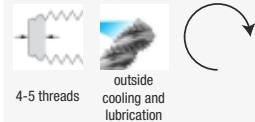
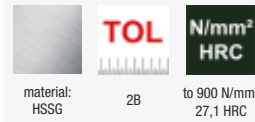
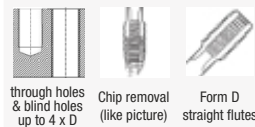
The short structural type makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 3 taps:

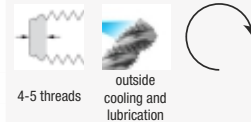
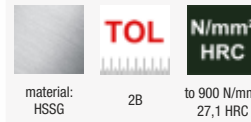
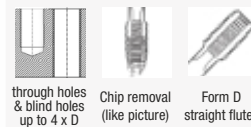
-  Taper Tap
-  Intermediate Tap
-  Finish Tap



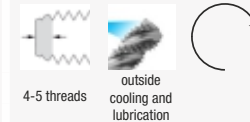
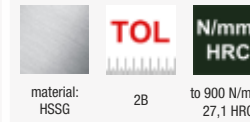
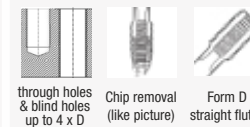
Short Machine Taps Form D for through holes and blind holes





Hand Tap Sets for general use



Hand Tap Sets for general use **Left Hand**



UNC

	D1	D2	L1	L2			No.	No.	No.
UNC No 1 x 64	1,85	2,5	32	10	2,1	1,50		140301001	
UNC No 2 x 56	2,18	2,8	36	11	2,1	1,80		140301002	
UNC No 3 x 48	2,52	2,8	36	11	2,1	2,10		140301003	
UNC No 4 x 40	2,85	3,5	40	12	2,7	2,30		140301004	
UNC No 5 x 40	3,18	3,5	40	12	2,7	2,60		140301005	
UNC No 6 x 32	3,51	4,0	45	14	3,0	2,85		140301006	140302001
UNC No 8 x 32	4,17	4,5	45	14	3,4	3,50		140301007	140302002
UNC No 10 x 24	4,83	6,0	50	16	4,9	3,90		140301008	140302003
UNC No 12 x 24	5,49	6,0	50	18	4,9	4,50		140301009	140302004
UNC 1/4 x 20	6,35	6,0	50	19	4,9	5,20	140101001	140301010	140302005
UNC 5/16 x 18	7,94	6,0	56	22	4,9	6,60	140101002	140301011	140302006
UNC 3/8 x 16	9,53	7,0	70	24	5,5	8,00	140101003	140301012	140302007
UNC 7/16 x 14	11,11	8,0	70	24	6,2	9,40	140101004	140301013	140302008
UNC 1/2 x 13	12,70	9,0	75	29	7,0	10,80	140101005	140301014	140302009
UNC 9/16 x 12	14,29	11,0	80	30	9,0	12,20	140101006	140301015	140302010
UNC 5/8 x 11	15,88	12,0	80	32	9,0	13,50	140101007	140301016	140302011
UNC 3/4 x 10	19,05	14,0	95	40	11,0	16,50	140101008	140301017	140302012
UNC 7/8 x 9	22,23	18,0	100	40	14,5	19,50	140101009	140301018	140302013
UNC 1" x 8	25,40	18,0	110	50	14,5	22,25	140101010	140301019	140302014
UNC 1.1/8 x 7	28,58	22,0	132	56	18,0	25,00		140301020	
UNC 1.1/4 x 7	31,75	22,0	132	56	18,0	28,25		140301021	
UNC 1.3/8 x 6	34,93	28,0	150	63	22,0	30,75		140301022	
UNC 1.1/2 x 6	38,10	32,0	150	63	24,0	34,00		140301023	
UNC 1.5/8 x 5	41,28	32,0	160	70	24,0	37,10		140301024	
UNC 1.3/4 x 5	44,45	36,0	160	70	29,0	39,50		140301025	
UNC 1.7/8 x 4,5	47,63	36,0	190	80	29,0	42,00		140301026	
UNC 2" x 4,5	50,80	40,0	190	80	32,0	45,00		140301027	
UNC 2.1/4 x 4,5	57,15	45,0	220	80	35,0	51,50		140301028	
UNC 2.1/2 x 4	63,50	50,0	220	80	39,0	57,25		140301029	
UNC 2.3/4 x 4	69,85	50,0	240	80	39,0	63,50		140301030	
UNC 3" x 4	73,20	50,0	260	80	39,0	70,00		140301031	

UNC Unified coarse thread / ANSI B1.1

- ✓ Tap for machine use in through hole.
- ✓ The spiral point pushes the chips ahead.

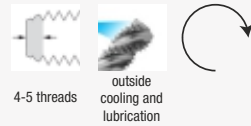
Machine Tap for general use



through holes up to 4 x D
Chip removal (like picture)
Form B with spiral point



material: HSSG 2B to 900 N/mm² 27.1 HRC



4-5 threads
outside cooling and lubrication



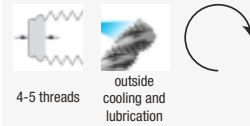
Machine Tap for stainless steels



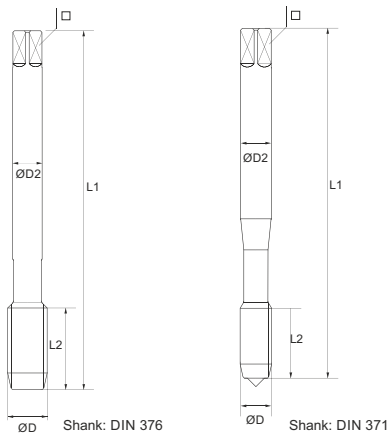
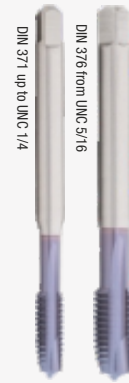
through holes up to 2,5 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE-TiAIN 2B to 1300 N/mm² 41 HRC



4-5 threads
outside cooling and lubrication



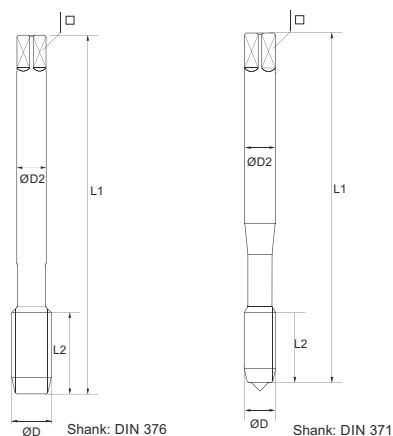
UNC

	D1	D2	L1	L2			No.	No.
DIN 371								
UNC No 2 x 56	2,18	2,8	45	8	2,1	1,85		140405001
UNC No 3 x 48	2,52	2,8	50	9	2,1	2,10		140405002
UNC No 4 x 40	2,85	3,5	50	10	2,7	2,30	140401001	140405003
UNC No 5 x 40	3,18	3,5	56	11	2,7	2,60	140401002	140405004
UNC No 6 x 32	3,51	4,0	56	12	3,0	2,85	140401003	140405005
UNC No 8 x 32	4,17	4,5	63	13	3,4	3,50	140401004	140405006
UNC No 10 x 24	4,83	6,0	70	15	4,9	3,90	140401005	140405007
UNC No 12 x 24	5,49	6,0	70	16	4,9	4,50	140401006	140405008
UNC 1/4 x 20	6,35	7,0	80	17	5,5	5,20	140401007	140405009
UNC 5/16 x 18	7,94	8,0	90	20	6,2	6,60	140401008	
UNC 3/8 x 16	9,53	9,0	100	22	7,0	8,00	140401009	
DIN 376								
UNC No 4 x 40	2,85	1,8	50	10	-	2,30	140401010	
UNC No 5 x 40	3,18	2,2	56	11	1,8	2,60	140401011	
UNC No 6 x 32	3,51	2,5	56	12	2,1	2,85	140401012	
UNC No 8 x 32	4,17	2,8	63	13	2,1	3,50	140401013	
UNC No 10 x 24	4,83	3,5	70	15	2,7	3,90	140401014	
UNC No 12 x 24	5,49	3,5	70	16	2,7	4,50	140401015	
UNC 1/4 x 20	6,35	4,5	80	17	3,4	5,20	140401016	
UNC 5/16 x 18	7,94	6,0	90	20	4,9	6,60	140401017	140405010
UNC 3/8 x 16	9,53	7,0	100	22	5,5	8,00	140401018	140405011
UNC 7/16 x 14	11,11	8,0	100	22	6,2	9,40	140401019	140405012
UNC 1/2 x 13	12,70	9,0	110	25	7,0	10,80	140401020	140405013
UNC 9/16 x 12	14,29	11,0	110	26	9,0	12,20	140401021	140405014
UNC 5/8 x 11	15,88	12,0	110	27	9,0	13,50	140401022	140405015
UNC 3/4 x 10	19,05	14,0	125	30	11,0	16,50	140401023	140405016
UNC 7/8 x 9	22,23	18,0	140	32	14,5	19,50	140401024	140405017
UNC 1" x 8	25,40	20,0	160	36	16,0	22,25	140401025	140405018
UNC 1.1/4 x 7	31,75	22,0	180	40	18,0	28,25	140401026	
UNC 1.1/2 x 6	38,10	32,0	200	50	24,0	34,00	140401027	
UNC 1.3/4 x 5	44,45	36,0	220	65	29,0	39,50	140401028	
UNC 2" x 4,5	50,80	40,0	250	70	32,0	45,00	140401029	

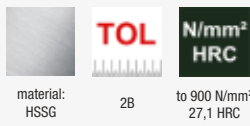
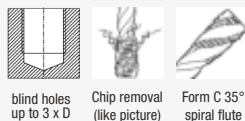
Machine Taps - Form C (with spiral flutes) for blind holes

UNC Unified coarse thread / ANSI B1.1

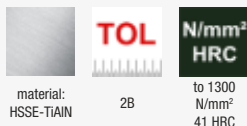
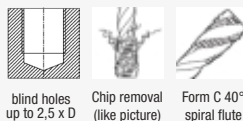
- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.



Machine Tap for general use



Machine Tap for stainless steels



UNC

D1 D2 L1 L2 □

No.

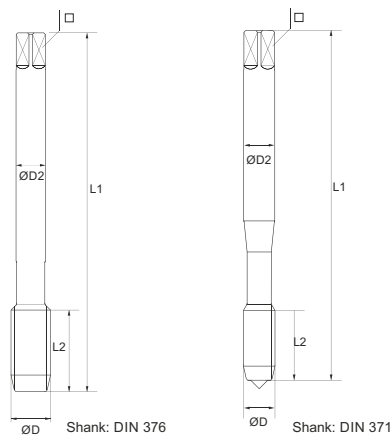
No.

UNC	D1	D2	L1	L2	□	No.	No.
DIN 371							
UNC No 2 x 56	2,18	2,8	45	6	2,1	1,85	140605001
UNC No 3 x 48	2,52	2,8	50	7	2,1	2,10	140605002
UNC No 4 x 40	2,85	3,5	50	6	2,7	2,30	140601001 140605003
UNC No 5 x 40	3,18	3,5	56	7	2,7	2,60	140601002 140605004
UNC No 6 x 32	3,51	4,0	56	7	3,0	2,85	140601003 140605005
UNC No 8 x 32	4,17	4,5	63	8	3,4	3,50	140601004 140605006
UNC No 10 x 24	4,83	6,0	70	10	4,9	3,90	140601005 140605007
UNC No 12 x 24	5,49	6,0	70	10	4,9	4,50	140601006 140605008
UNC 1/4 x 20	6,35	7,0	80	13	5,5	5,20	140601007 140605009
UNC 5/16 x 18	7,94	8,0	90	14	6,2	6,60	140601008
UNC 3/8 x 16	9,53	9,0	100	16	7,0	8,00	140601009
DIN 376							
UNC No 4 x 40	2,85	1,8	50	10	-	2,30	140601010
UNC No 5 x 40	3,18	2,2	56	11	1,8	2,60	140601011
UNC No 6 x 32	3,51	2,5	56	12	2,1	2,85	140601012
UNC No 8 x 32	4,17	2,8	63	13	2,1	3,50	140601013
UNC No 10 x 24	4,83	3,5	70	15	2,7	3,90	140601014
UNC No 12 x 24	5,49	3,5	70	16	2,7	4,50	140601015
UNC 1/4 x 20	6,35	4,5	80	17	3,4	5,20	140601016
UNC 5/16 x 18	7,94	6,0	90	20	4,9	6,60	140601017 140605010
UNC 3/8 x 16	9,53	7,0	100	22	5,5	8,00	140601018 140605011
UNC 7/16 x 14	11,11	8,0	100	22	6,2	9,40	140601019 140605012
UNC 1/2 x 13	12,70	9,0	110	25	7,0	10,80	140601020 140605013
UNC 9/16 x 12	14,29	11,0	110	26	9,0	12,20	140601021 140605014
UNC 5/8 x 11	15,88	12,0	110	27	9,0	13,50	140601022 140605015
UNC 3/4 x 10	19,05	14,0	125	30	11,0	16,50	140601023 140605016
UNC 7/8 x 9	22,23	18,0	140	32	14,5	19,50	140601024 140605017
UNC 1" x 8	25,40	20,0	160	36	16,0	22,25	140601025 140605018
UNC 1.1/4 x 7	31,75	22,0	180	40	18,0	28,25	140601026
UNC 1.1/2 x 6	38,10	32,0	200	50	24,0	34,00	140601027
UNC 1.3/4 x 5	44,45	36,0	220	65	29,0	39,50	140601028
UNC 2" x 4,5	50,80	40,0	250	70	32,0	45,00	140601029

UNC Unified coarse thread / ANSI B1.1

Machine Forming Taps have following advantages:

- No chips
- Up to 20 times longer lifetime (compared to taps)
- Same forming tap for through and blind hole
- Wide range of materials can be processed
- Intersection of the thread is impossible
- Very high trueness
- Increased strength of the thread
- Higher surface quality
- Much higher cutting speed



Machine Forming Taps for universal use



UNC



	D1	D2	L1	L2			No.
UNC No 4 x 40	2,85	3,5	56	11	2,7	2,55	141101001
UNC No 5 x 40	3,18	3,5	56	10	2,7	2,65	141101002
UNC No 6 x 32	3,51	4,0	56	12	3,0	3,15	141101003
UNC No 8 x 32	4,17	4,5	63	13	3,4	3,80	141101004
UNC No 10 x 24	4,83	6,0	70	15	4,9	4,35	141101005
UNC No 12 x 24	5,49	6,0	80	16	4,9	5,00	141101006
UNC 1/4 x 20	6,35	7,0	80	17	5,5	5,75	141101007
UNC 5/16 x 18	7,94	8,0	90	20	6,2	7,30	141101008
UNC 3/8 x 16	9,53	10,0	100	22	8,0	8,80	141101009
UNC 7/16 x 14	11,11	8,0	100	22	6,2	10,25	141101010
UNC 1/2 x 13	12,70	9,0	110	25	7,0	11,80	141101011
UNC 9/16 x 12	14,29	11,0	110	26	9,0	13,30	141101012
UNC 5/8 x 11	15,88	12,0	110	27	9,0	14,80	141101013
UNC 3/4 x 10	19,05	14,0	125	30	11,0	17,85	141101014

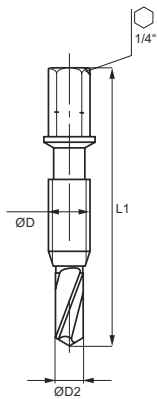
UNC Unified coarse thread / ANSI B1.1

Efficient internal thread cutting with batterypowered screwdriver (min. 7,5 Volt).

Core hole drilling and thread tapping in one fluent process.

Application:

-  non abrasive material up to 600 N/mm²
-  unalloyed and low alloyed steel



Kombi-Bit-Taps for through holes



through holes up to 1 x D

Chip removal (like picture)

Combined form



material: HSSG

2B

to 600 N/mm²




4-5 threads

outside cooling and lubrication



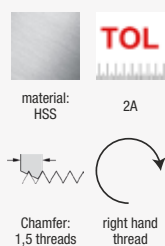
UNC

	D1	D2	L1		No.
UNC No 4 x 40	2,85	2,3	36	1/4"	141301001
UNC No 5 x 40	3,18	2,6	36	1/4"	141301002
UNC No 6 x 32	3,51	2,9	39	1/4"	141301003
UNC No 8 x 32	4,17	3,5	39	1/4"	141301004
UNC No 10 x 24	4,83	3,9	41	1/4"	141301005
UNC No 12 x 24	5,49	4,5	41	1/4"	141301006
UNC 1/4 x 20	6,35	5,2	44	1/4"	141301007
UNC 5/16 x 18	7,94	6,6	50	1/4"	141301008
UNC 3/8 x 16	9,53	8,0	59	1/4"	141301009

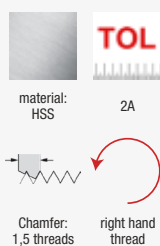
UNC

Unified coarse thread / ANSI B1.1

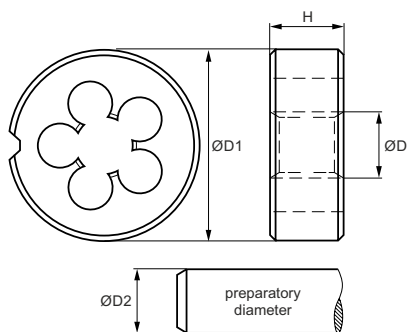
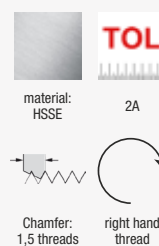
Round Dies for general use



Round Dies for general use Left Hand



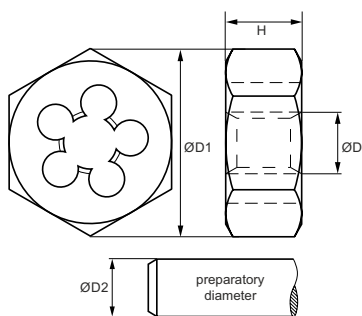
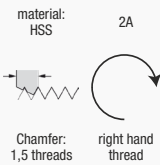
Round Dies for stainless steels



UNC

	D	D1	H	D2	No.	No.	No.
UNC No 1 x 64	1,85	16	5	1,79	141401001		
UNC No 2 x 56	2,18	16	5	2,12	141401002		
UNC No 3 x 48	2,52	16	5	2,44	141401003		
UNC No 4 x 40	2,85	20	5	2,76	141401004		141405001
UNC No 5 x 40	3,18	20	5	3,09	141401005		
UNC No 6 x 32	3,51	20	7	3,41	141401006	141402001	141405002
UNC No 8 x 32	4,17	20	7	4,07	141401007	141402002	141405003
UNC No 10 x 24	4,83	20	7	4,71	141401008	141402003	
UNC No 12 x 24	5,49	20	7	5,37	141401009		
UNC 1/4 x 20	6,35	20	7	6,22	141401010	141402004	141405004
UNC 5/16 x 18	7,94	25	9	7,80	141401011	141402005	141405005
UNC 3/8 x 16	9,53	30	11	9,37	141401012	141402006	141405006
UNC 7/16 x 14	11,11	30	11	10,95	141401013	141402007	
UNC 1/2 x 13	12,70	38	14	12,52	141401014	141402008	
UNC 9/16 x 12	14,29	38	14	14,10	141401015	141402009	
UNC 5/8 x 11	15,88	45	18	15,68	141401016	141402010	
UNC 3/4 x 10	19,05	45	18	18,84	141401017	141402011	
UNC 7/8 x 9	22,23	55	22	22,00	141401018	141402012	
UNC 1" x 8	25,40	55	22	25,16	141401019	141402013	
UNC 1.1/8 x 7	28,58	65	25	28,31	141401020		
UNC 1.1/4 x 7	31,75	65	25	31,49	141401021		
UNC 1.3/8 x 6	34,93	65	25	34,63	141401022		
UNC 1.1/2 x 6	38,10	65	25	37,80	141401023		
UNC 1.1/2 x 6	38,10	75	30	37,80	141401024		
UNC 1.5/8 x 5	41,28	75	30	40,95	141401025		
UNC 1.3/4 x 5	44,45	90	36	44,12	141401026		
UNC 1.7/8 x 4,5	47,63	90	36	47,30	141401027		
UNC 2" x 4,5	50,80	90	36	50,45	141401028		

Hexagon Die Nuts for general use



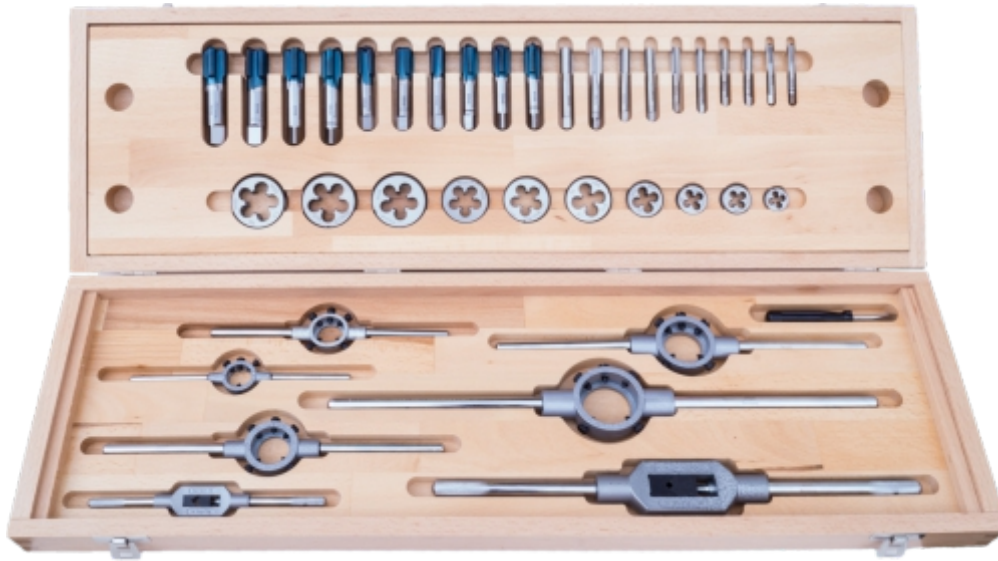
UNC

	D	D1	H	D2	No.
UNC 1/4 x 20	6,35	19	7	6,22	141501001
UNC 5/16 x 18	7,94	22	9	7,80	141501002
UNC 3/8 x 16	9,53	27	11	9,37	141501003
UNC 7/16 x 14	11,11	27	11	10,95	141501004
UNC 1/2 x 13	12,70	36	14	12,52	141501005
UNC 9/16 x 12	14,29	36	14	14,10	141501006
UNC 5/8 x 11	15,88	41	18	15,68	141501007
UNC 3/4 x 10	19,05	41	18	18,84	141501008
UNC 7/8 x 9	22,23	50	22	22,00	141501009
UNC 1" x 8	25,40	50	22	25,16	141501010
UNC 1.1/8 x 7	28,58	60	25	28,31	141501011
UNC 1.1/4 x 7	31,75	60	25	31,49	141501012
UNC 1.3/8 x 6	34,93	60	25	34,63	141501013
UNC 1.1/2 x 6	38,10	70	30	37,80	141501014

UNF

Unified fine thread / ANSI B1.1

Hand-Tap Sets, Round Dies and Tools Sets (example picture)



Set UNF 1/4" - 1/2" HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	UNF 1/4 x 28 UNF 5/16 x 24 UNF 3/8 x 24 UNF 7/16 x 20 UNF 1/2 x 20
HSS Round Dies	UNF 1/4 x 28 UNF 5/16 x 24 UNF 3/8 x 24 UNF 7/16 x 20 UNF 1/2 x 20
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 4-12 5/32-1/2 G 1/8
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 10
Screw extractor	

Item No.:
264806004

Set UNF 1/4" - 3/4" HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	UNF 1/4 x 28 UNF 5/16 x 24 UNF 3/8 x 24 UNF 7/16 x 20 UNF 1/2 x 20 UNF 5/8 x 18 UNF 3/4 x 16
HSS Round Dies	UNF 1/4 x 28 UNF 5/16 x 24 UNF 3/8 x 24 UNF 7/16 x 20 UNF 1/2 x 20 UNF 5/8 x 18 UNF 3/4 x 16
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-1/2
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14
Screw extractor	

Item No.:
264806104

Set UNF 1/4" - 1" HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	UNF 1/4 x 28 UNF 5/16 x 24 UNF 3/8 x 24 UNF 7/16 x 20 UNF 1/2 x 20 UNF 5/8 x 18 UNF 3/4 x 16 UNF 7/8 x 14 UNF 1" x 12
HSS Round Dies	UNF 1/4 x 28 UNF 5/16 x 24 UNF 3/8 x 24 UNF 7/16 x 20 UNF 1/2 x 20 UNF 5/8 x 18 UNF 3/4 x 16 UNF 7/8 x 14 UNF 1" x 12
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 11-27 7/16-1" G 1/4-3/4
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14 55 x 16
Screw extractor	

Item No.:
264806304

Set UNC & UNF 1/4" - 3/4" HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts) UNC	UNC 1/4 UNC 5/16 UNC 3/8 UNC 7/16 UNC 1/2 UNC 5/8 UNC 3/4
HSSG Hand Tap Sets (2 parts) UNF	UNF 1/4 UNF 5/16 UNF 3/8 UNF 7/16 UNF 1/2 UNF 5/8 UNF 3/4
HSS Round Dies UNC	UNC 1/4 UNC 5/16 UNC 3/8 UNC 7/16 UNC 1/2 UNC 5/8 UNC 3/4
HSS Round Dies UNF	UNF 1/4 UNF 5/16 UNF 3/8 UNF 7/16 UNF 1/2 UNF 5/8 UNF 3/4
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-1/2
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18
Screw extractor	

Item No.:
2648066203

UNF

Unified fine thread / ANSI B1.1

Short Machine Taps und Round Dies Sets UNF 1/4" - 1/2" (example picture)



Set UNF 1/4" - 1/2" HSSG Short Machine Taps & Drill bits for core holes HSS Round Dies



HSSG Short Machine Tap Form D for through hole & blind hole (up to 4 x D)	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14
HSSG Drill bits for core holes	G 1/8 x 28 G 1/4 x 19 G 3/8 x 19 G 1/2 x 14 G 3/4 x 14
HSS Round Dies	UNF 1/4 x 28 UNF 5/16 x 24 UNF 3/8 x 24 UNF 7/16 x 20 UNF 1/2 x 20

Item No.:
BES3


Short Machine Taps and Hand Tap Sets

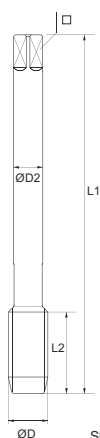
UNF Unified fine thread / ANSI B1.1

Efficient internal thread cutting.

The short structural type makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

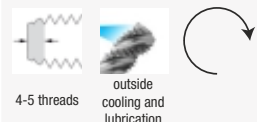
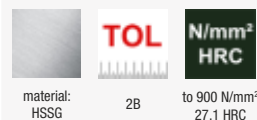
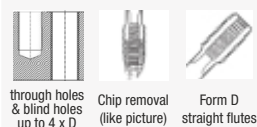
A Hand-Tap-Set includes 2 taps:

-  Taper Tap
-  Finish Tap

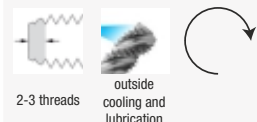
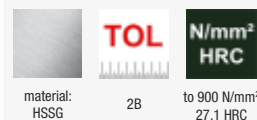
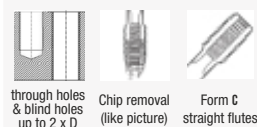


Shank: DIN 2181

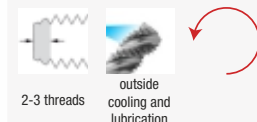
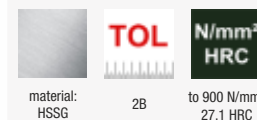
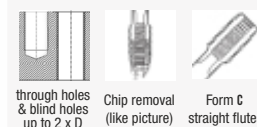
Short Machine Taps Form D for through holes and blind holes




Hand Tap Sets for general use



Hand Tap Sets for general use **Left Hand**



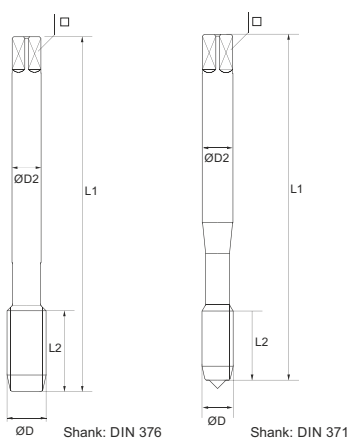
UNF

	D1	D2	L1	L2	□		No.	No.	No.
UNF No 0 x 80	1,52	2,5	28	8	2,1	1,30		150301001	
UNF No 1 x 72	1,85	2,8	32	9	2,1	1,60		150301002	
UNF No 2 x 64	2,18	2,8	32	10	2,1	1,90		150301003	
UNF No 3 x 56	2,52	2,8	32	10	2,1	2,10		150301004	
UNF No 4 x 48	2,85	3,5	36	11	2,7	2,40		150301005	
UNF No 5 x 44	3,18	3,5	36	11	2,7	2,70		150301006	
UNF No 6 x 40	3,51	4,5	40	12	3,4	3,00		150301007	
UNF No 8 x 36	4,17	4,5	40	12	3,4	3,50		150301008	
UNF No 10 x 32	4,83	6,0	45	14	4,9	4,10		150301009	150302001
UNF No 12 x 28	5,49	6,0	50	14	4,9	4,70		150301010	
UNF 1/4 x 28	6,35	6,0	50	18	4,9	5,50	150101001	150301011	150302002
UNF 5/16 x 24	7,94	6,0	56	22	4,9	6,90	150101002	150301012	150302003
UNF 3/8 x 24	9,53	7,0	63	22	5,5	8,50	150101003	150301013	150302004
UNF 7/16 x 20	11,11	8,0	63	22	6,2	9,90	150101004	150301014	150302005
UNF 1/2 x 20	12,70	9,0	75	24	7,0	11,50	150101005	150301015	150302006
UNF 9/16 x 18	14,29	11,0	80	28	9,0	12,90	150101006	150301016	150302007
UNF 5/8 x 18	15,88	12,0	80	28	9,0	14,50	150101007	150301017	150302008
UNF 3/4 x 16	19,05	14,0	95	32	11,0	17,50	150101008	150301018	150302009
UNF 7/8 x 14	22,23	18,0	100	36	14,5	20,25	150101009	150301019	150302010
UNF 1" x 12	25,40	18,0	110	40	14,5	23,25	150101010	150301020	150302011
UNF 1" x 14	25,40	18,0	110	40	14,5	23,30		150301021	
UNF 1.1/8 x 12	28,58	22,0	110	50	18,0	26,50		150301022	
UNF 1.1/4 x 12	31,75	22,0	132	56	18,0	29,50		150301023	
UNF 1.3/8 x 12	34,93	28,0	132	56	22,0	32,50		150301024	
UNF 1.1/2 x 12	38,10	32,0	150	63	24,0	36,00		150301025	

UNF

Unified fine thread / ANSI B1.1

- ✓ Tap for machine use in through hole.
- ✓ The spiral point pushes the chips ahead.



Machine Tap for general use



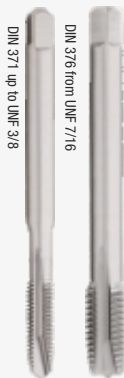
through holes up to 4 x D
Chip removal (like picture)
Form B with spiral point



material: HSSG 2B to 900 N/mm² 27,1 HRC



4-5 threads
outside cooling and lubrication



Machine Tap for stainless steels



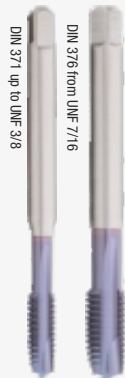
through holes up to 2,5 x D
Chip removal (like picture)
Form B with spiral point



material: HSSE-TIAIN 2B to 1300 N/mm² 41 HRC



4-5 threads
outside cooling and lubrication



UNF

	D1	D2	L1	L2	□	▣	No.	No.
UNF No 3 x 56	2,52	2,8	50	9	2,1	2,10		150405001
UNF No 4 x 48	2,85	3,5	50	10	2,7	2,40	150401001	150405002
UNF No 5 x 44	3,18	3,5	56	11	2,7	2,70	150401002	150405003
UNF No 6 x 40	3,51	4,0	56	12	3,0	3,00	150401003	150405004
UNF No 8 x 36	4,17	4,5	63	13	3,4	3,50	150401004	150405005
UNF No 10 x 32	4,83	6,0	70	15	4,9	4,10	150401005	150405006
UNF No 12 x 28	5,49	6,0	70	16	4,9	4,70	150401006	150405007
UNF 1/4 x 28	6,35	7,0	80	17	5,5	5,50	150401007	150405008
UNF 5/16 x 24	7,94	8,0	90	17	6,2	6,90	150401008	150405009
UNF 3/8 x 24	9,53	9,0	100	18	7,0	8,50	150401009	150405010
UNF 7/16 x 20	11,11	8,0	100	22	6,2	9,90	150401010	150405011
UNF 1/2 x 20	12,70	9,0	100	22	7,0	11,50	150401011	150405012
UNF 9/16 x 18	14,29	11,0	100	22	9,0	12,90	150401012	150405013
UNF 5/8 x 18	15,88	12,0	100	22	9,0	14,50	150401013	150405014
UNF 3/4 x 16	19,05	14,0	110	25	11,0	17,50	150401014	150405015
UNF 7/8 x 14	22,23	18,0	140	26	14,5	20,25	150401015	150405016
UNF 1" x 12	25,40	20,0	150	28	16,0	23,25	150401016	150405017
UNF 1" x 14	25,40	20,0	150	28	16,0	23,30	150401017	
UNF 1.1/4 x 12	31,75	22,0	150	30	18,0	29,50	150401018	
UNF 1.1/2 x 12	38,10	32,0	170	33	24,0	36,00	150401019	

Machine Taps - Form C (with spiral flutes) for blind holes

UNF

Unified fine thread / ANSI B1.1

- ✓ Tap for machine use in blind holes.
- ✓ The fast spiral flutes provide good chip removal from the blind hole.

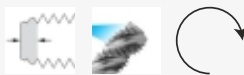
Machine Tap for general use



blind holes up to 3 x D Chip removal (like picture) Form C 35° spiral flute



material: HSSG 2B to 900 N/mm² 27,1 HRC



2-3 threads outside cooling and lubrication

Machine Tap for stainless steels



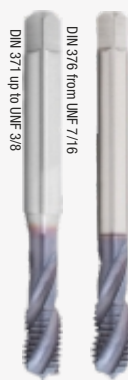
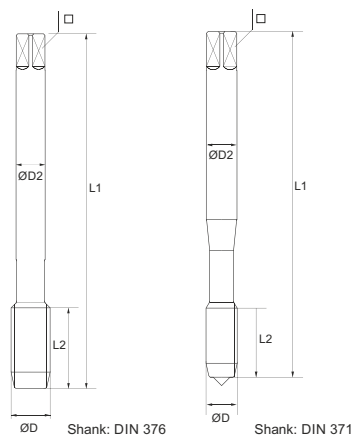
blind holes up to 2,5 x D Chip removal (like picture) Form C 40° spiral flute



material: HSSE-TiAIN 2B to 1300 N/mm² 41 HRC



2-3 threads outside cooling and lubrication



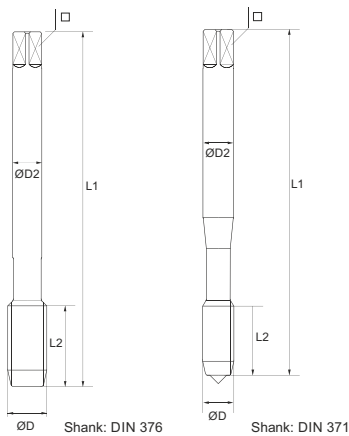
UNF

	D1	D2	L1	L2	□	▣	No.	No.
UNF No 3 x 56	2,52	2,8	50	6	2,1	2,10		150605001
UNF No 4 x 48	2,85	3,5	50	6	2,7	2,40	150601001	150605002
UNF No 5 x 44	3,18	3,5	56	7	2,7	2,70	150601002	150605003
UNF No 6 x 40	3,51	4,0	56	7	3,0	3,00	150601003	150605004
UNF No 8 x 36	4,17	4,5	63	8	3,4	3,50	150601004	150605005
UNF No 10 x 32	4,83	6,0	70	10	4,9	4,10	150601005	150605006
UNF No 12 x 28	5,49	6,0	70	10	4,9	4,70	150601006	150605007
UNF 1/4 x 28	6,35	7,0	80	10	5,5	5,50	150601007	150605008
UNF 5/16 x 24	7,94	8,0	90	10	6,2	6,90	150601008	150605009
UNF 3/8 x 24	9,53	9,0	100	10	7,0	8,50	150601009	150605010
UNF 7/16 x 20	11,11	8,0	100	13	6,2	9,90	150601010	150605011
UNF 1/2 x 20	12,70	9,0	100	13	7,0	11,50	150601011	150605012
UNF 9/16 x 18	14,29	11,0	100	15	9,0	12,90	150601012	150605013
UNF 5/8 x 18	15,88	12,0	100	15	9,0	14,50	150601013	150605014
UNF 3/4 x 16	19,05	14,0	110	17	11,0	17,50	150601014	150605015
UNF 7/8 x 14	22,23	18,0	140	17	14,5	20,25	150601015	150605016
UNF 1" x 12	25,40	20,0	150	20	16,0	23,25	150601016	150605017
UNF 1" x 14	25,40	20,0	150	20	16,0	23,30	150601017	
UNF 1.1/4 x 12	31,75	22,0	150	22	18,0	29,50	150601018	
UNF 1.1/2 x 12	38,10	32,0	170	25	24,0	36,00	150601019	

UNF Unified fine thread / ANSI B1.1

Machine Forming Taps have following advantages:

- No chips
- Up to 20 times longer lifetime (compared to taps)
- Same forming tap for through and blind hole
- Wide range of materials can be processed
- Intersection of the thread is impossible
- Very high trueness
- Increased strength of the thread
- Higher surface quality
- Much higher cutting speed



Machine Forming Taps for universal use

UNF

	D1	D2	L1	L2			No.
UNF No 2 x 64	2,18	2,8	45	7	2,1	2,02	151101001
UNF No 4 x 48	2,85	3,5	56	11	2,7	2,62	151101002
UNF No 6 x 40	3,51	4,0	56	12	3,0	3,22	151101003
UNF No 8 x 36	4,17	4,5	63	13	3,4	3,85	151101004
UNF No 10 x 32	4,83	6,0	70	15	4,9	4,45	151101005
UNF 1/4 x 28	6,35	7,0	80	17	5,5	5,95	151101006
UNF 5/16 x 24	7,94	8,0	90	17	6,2	7,45	151101007
UNF 3/8 x 24	9,53	10,0	90	18	8,0	9,05	151101008
UNF 7/16 x 20	11,11	8,0	100	22	6,2	10,55	151101009
UNF 1/2 x 20	12,70	9,0	100	22	7,0	12,15	151101010
UNF 5/8 x 18	15,88	12,0	100	22	9,0	15,25	151101011
UNF 3/4 x 16	19,05	14,0	110	25	11,0	18,35	151101012



1/4" Combined-Bit-Taps

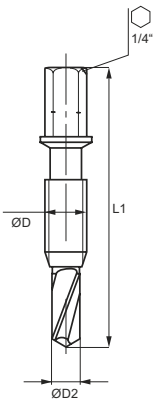
UNF Unified fine thread / ANSI B1.1

Efficient internal thread cutting with batterypowered screwdriver (min. 7,5 Volt).

Core hole drilling and thread tapping in one fluent process.

Application:

-  non abrasive material up to 600 N/mm²
-  unalloyed and low alloyed steel



Kombi-Bit-Taps for through holes

through holes up to 1 x D

Chip removal (like picture)

Combined form


material: HSSG 2B to 600 N/mm²

4-5 threads

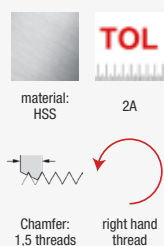
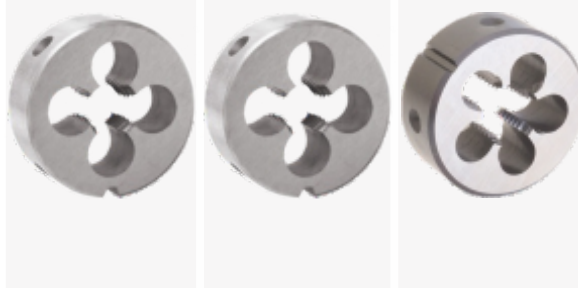
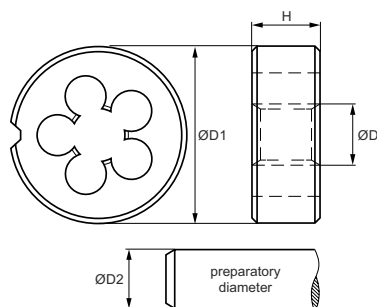
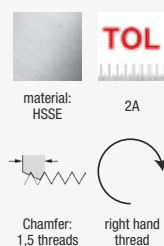
outside cooling and lubrication



UNF

	D1	D2	L1		No.
UNF No 4 x 48	2,85	2,4	36	1/4"	151301001
UNF No 5 x 44	3,18	2,7	36	1/4"	151301002
UNF No 6 x 40	3,51	3,0	39	1/4"	151301003
UNF No 8 x 36	4,17	3,5	39	1/4"	151301004
UNF No 10 x 32	4,83	4,1	41	1/4"	151301005
UNF No 12 x 28	5,49	4,7	41	1/4"	151301006
UNF 1/4 x 28	6,35	5,5	44	1/4"	151301007
UNF 5/16 x 24	7,94	6,9	50	1/4"	151301008
UNF 3/8 x 24	9,53	8,5	59	1/4"	151301009

**Round Dies
for general use**

**Round Dies
for general use
Left Hand**

**Round Dies
for stainless
steels**


	D	D1	H	D2	No.	No.	No.
UNF NR. 0 x 80	1,52	16	5	1,47	151401001		
UNF NR. 1 x 72	1,85	16	5	1,79	151401002		
UNF NR. 2 x 64	2,18	16	5	2,12	151401003		
UNF NR. 3 x 56	2,52	16	5	2,44	151401004		
UNF NR. 4 x 48	2,85	20	5	2,77	151401005		
UNF NR. 5 x 44	3,18	20	5	3,10	151401006		
UNF NR. 6 x 40	3,51	20	5	3,42	151401007		
UNF NR. 8 x 36	4,17	20	7	4,08	151401008		
UNF NR. 10 x 32	4,83	20	7	4,73	151401009	151402001	151405001
UNF NR. 12 x 28	5,49	20	7	5,38	151401010		
UNF 1/4 x 28	6,35	20	7	6,24	151401011	151402002	151405002
UNF 5/16 x 24	7,94	25	9	7,82	151401012	151402003	151405003
UNF 3/8 x 24	9,53	30	11	9,41	151401013	151402004	151405004
UNF 7/16 x 20	11,11	30	11	10,98	151401014	151402005	151405005
UNF 1/2 x 20	12,70	38	10	12,56	151401015	151402006	
UNF 9/16 x 18	14,29	38	10	14,14	151401016	151402007	
UNF 5/8 x 18	15,88	45	14	15,73	151401017	151402008	
UNF 3/4 x 16	19,05	45	14	18,89	151401018	151402009	
UNF 7/8 x 14	22,23	55	16	22,05	151401019	151402010	
UNF 1" x 12	25,40	55	16	25,21	151401020	151402011	
UNF 1" x 14	25,40	55	16	25,23	151401021		
UNF 1.1/8 x 12	28,58	65	18	28,38	151401022		
UNF 1.1/4 x 12	31,75	65	18	31,55	151401023		
UNF 1.3/8 x 12	34,93	65	18	34,73	151401024		
UNF 1.1/2 x 12	38,10	65	18	37,90	151401025		
UNF 1.1/2 x 12	38,10	75	20	37,90	151401026		

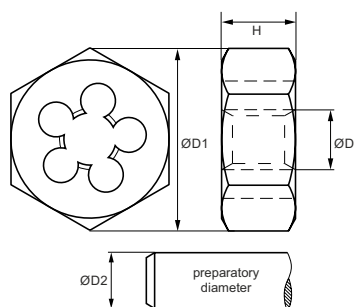
Hexagon Die Nuts for general use



material: HSS 2A



Chamfer: 1,5 threads right hand thread



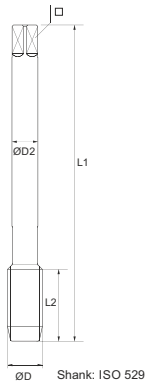
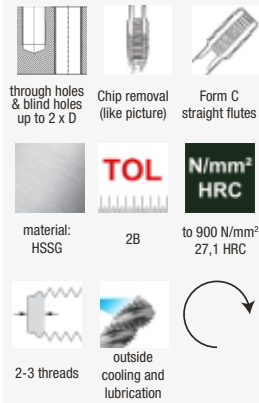
UNF

	D	D1	H	D2	No.
UNF 1/4 x 28	6,35	19	7	6,24	151501001
UNF 5/16 x 24	7,94	22	9	7,82	151501002
UNF 3/8 x 24	9,53	27	11	9,41	151501003
UNF 7/16 x 20	11,11	27	11	10,98	151501004
UNF 1/2 x 20	12,70	36	10	12,56	151501005
UNF 9/16 x 18	14,29	36	10	14,14	151501006
UNF 5/8 x 18	15,88	41	14	15,73	151501007
UNF 3/4 x 16	19,05	41	14	18,89	151501008
UNF 7/8 x 14	22,23	50	16	22,05	151501009
UNF 1" x 12	25,40	50	16	25,21	151501010
UNF 1.1/8 x 12	28,58	60	18	28,38	151501011
UNF 1.1/4 x 12	31,75	60	18	31,55	151501012
UNF 1.3/8 x 12	34,93	60	18	34,73	151501013
UNF 1.1/2 x 12	38,10	70	20	37,90	151501014

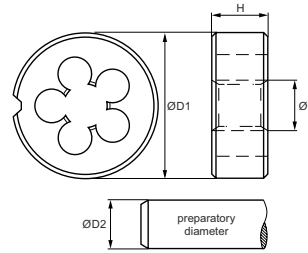
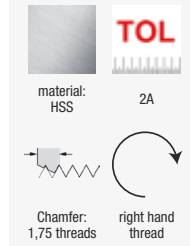
UNS Unified thread with special / threads per inch (TPI)

- ✓ Tap for machine use in through hole and blind hole.
- ✓ The short lead-in chamfer makes that tap universal in application. The flutes can hold the most part of the chips.

Machine Taps Form C for through holes and blind holes



Round Dies for general use



UNS

	D1	D2	L1	L2			No.
UNS 1/4 x 24	6,35	6,3	66	19	5,0	5,40	160501001
UNS 1/4 x 36	6,35	6,3	66	19	5,0	5,70	160501002
UNS 1/4 x 40	6,35	6,3	66	19	5,0	5,75	160501003
UNS 3/8 x 27	9,53	10,0	80	24	8,0	8,35	160501004
UNS 7/16 x 24	11,11	8,0	85	25	6,3	10,10	160501005
UNS 1/2 x 24	12,70	9,0	89	29	7,1	11,75	160501006
UNS 5/8 x 27	15,88	12,5	102	32	10,0	14,70	160501007
UNS 3/4 x 24	19,05	14,0	112	37	11,2	18,00	160501008
UNS 7/8 x 18	22,23	16,0	118	38	12,5	21,00	160501009
UNS 1" x 14	25,40	18,0	130	45	14,0	23,75	160501010

UNS



	D	D1	H	D2	No.
UNS 1/4 x 24	6,35	20	7	6,24	161401001
UNS 1/4 x 36	6,35	20	5	6,26	161401002
UNS 1/4 x 40	6,35	20	5	6,27	161401003
UNS 3/8 x 27	9,53	30	11	9,41	161401004
UNS 7/16 x 24	11,11	30	11	11,00	161401005
UNS 1/2 x 24	12,70	38	10	12,59	161401006
UNS 5/8 x 27	15,88	45	14	15,76	161401007
UNS 7/8 x 18	22,23	55	16	22,08	161401008
UNS 1" x 14	25,40	55	16	25,23	161401009

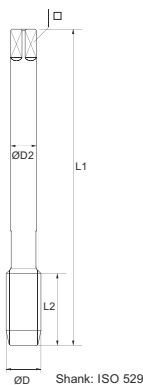
UNEF Unified extra fine thread / ANSI B1.1

Efficient internal thread cutting.

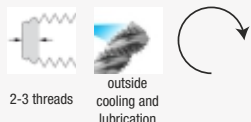
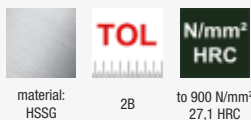
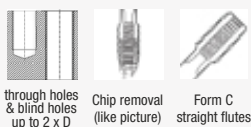
The short structural type of the Hand Tap Sets makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 2 taps:

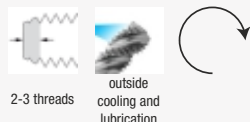
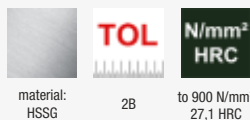
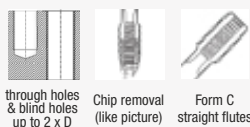
-  Taper Tap
-  Finish Tap
















Hand Tap Sets for general use



Machine Taps Form C for through holes and blind holes



UNEF

	D1	D2	L1	L2	□		No.	No.
UNEF No 12 x 32	5,49	5,6	62	17	4,5			170501001
UNEF 1/4 x 32	6,35	6,3	66	19	5,0		170313001	170501002
UNEF 5/16 x 32	7,94	8,0	72	22	6,3		170313002	170501003
UNEF 3/8 x 32	9,53	10,0	80	24	8,0		170313003	170501004
UNEF 7/16 x 28	11,11	8,0	85	25	6,3		170313004	170501005
UNEF 1/2 x 28	12,70	9,0	89	29	7,1		170313005	170501006
UNEF 9/16 x 24	14,29	11,2	95	30	9,0		170313006	170501007
UNEF 5/8 x 24	15,88	12,5	102	32	10,0		170313007	170501008
UNEF 11/16 x 24	17,46	14,0	112	37	11,2			170501009
UNEF 3/4 x 20	19,05	14,0	112	37	11,2		170313008	170501010
UNEF 13/16 x 20	20,64	16,0	118	38	12,5			170501011
UNEF 7/8 x 20	22,23	16,0	118	38	12,5		170313009	170501012
UNEF 15/16 x 20	23,81	18,0	130	45	14,0			170501013
UNEF 1" x 20	25,40	16,0	130	45	14,0		170313010	170501014
UNEF 1.1/16 x 18	26,99	20,0	138	48	16,0			170501015
UNEF 1.1/8 x 18	28,58	20,0	138	48	16,0			170501016
UNEF 1.3/16 x 18	30,16	22,4	151	51	18,0			170501017
UNEF 1.1/4 x 18	31,75	22,4	151	51	18,0			170501018
UNEF 1.5/16 x 18	33,34	25,0	162	57	20,0			170501019
UNEF 1.3/8 x 18	34,93	25,0	162	57	20,0			170501020
UNEF 1.7/16 x 18	36,51	28,0	170	60	22,4			170501021
UNEF 1.1/2 x 18	38,10	28,0	170	60	22,4			170501022
UNEF 1.9/16 x 18	39,69	28,0	170	60	22,4			170501023
UNEF 1.5/8 x 18	41,28	28,0	170	60	22,4			170501024
UNEF 1.11/16 x 18	42,86	31,5	187	67	25,0			170501025
UNEF 1.3/4 x 18	44,45	31,5	187	67	25,0			170501026
UNEF 2" x 18	50,80	35,5	200	70	28,0			170501027

UNEF

Unified extra fine thread / ANSI B1.1

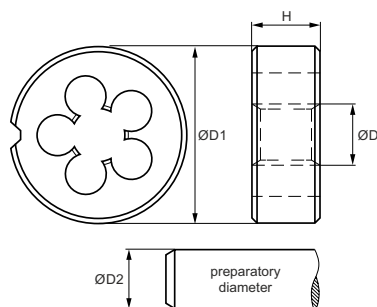
Round Dies for general use



material: HSS 2A



Chamfer: 1,5 threads
right hand thread



UNEF

	D	D1	H	D2	No.
UNEF No 12 x 32	5,49	20	7	5,39	171401001
UNEF 1/4 x 32	6,35	20	7	6,25	171401002
UNEF 5/16 x 32	7,94	25	9	7,84	171401003
UNEF 3/8 x 32	9,53	30	11	9,42	171401004
UNEF 7/16 x 28	11,11	30	11	11,00	171401005
UNEF 1/2 x 28	12,70	38	10	12,59	171401006
UNEF 9/16 x 24	14,29	38	10	14,17	171401007
UNEF 5/8 x 24	15,88	45	14	15,75	171401008
UNEF 11/16 x 24	17,46	45	14	17,33	171401009
UNEF 3/4 x 20	19,05	45	14	18,91	171401010
UNEF 13/16 x 20	20,64	55	16	20,50	171401011
UNEF 7/8 x 20	22,23	55	16	22,09	171401012
UNEF 15/16 x 20	23,81	55	16	23,67	171401013
UNEF 1" x 20	25,40	55	16	25,26	171401014
UNEF 1.1/16 x 18	26,99	65	18	26,84	171401015
UNEF 1.1/8 x 18	28,58	65	18	28,58	171401016
UNEF 1.3/16 x 18	30,23	65	18	30,16	171401017
UNEF 1.1/4 x 18	31,75	65	18	31,75	171401018
UNEF 1.5/16 x 18	33,34	65	18	33,34	171401019
UNEF 1.3/8 x 18	34,93	65	18	34,93	171401020
UNEF 1.7/16 x 18	36,51	75	20	36,51	171401021
UNEF 1.1/2 x 18	38,10	75	20	38,10	171401022

8-UN Unified thread series with 8-threads per inch (TPI)

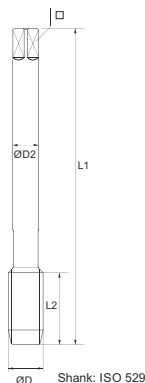
Efficient internal thread cutting.

The short structural type of the Hand Tap Sets makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 2 taps:

 Taper Tap

 Finish Tap



Hand Tap Sets for general use



through holes & blind holes up to 2 x D Chip removal (like picture) Form C straight flutes



material: HSSG 2B to 900 N/mm² 27,1 HRC



2-3 threads outside cooling and lubrication



Machine Taps Form C for through holes and blind holes



through holes & blind holes up to 2 x D Chip removal (like picture) Form C straight flutes

























material: HSSG 2B to 900 N/mm² 27,1 HRC



2-3 threads outside cooling and lubrication



8-UN

	D1	D2	L1	L2			No.	No.
UN 1.1/16 x 8	26,99	20,0	138	48	16,0		180301001	180501001
UN 1.1/8 x 8	28,58	20,0	138	48	16,0		180301002	180501002
UN 1.3/16 x 8	30,16	22,4	151	51	18,0		180301003	180501003
UN 1.1/4 x 8	31,75	22,4	151	51	18,0		180301004	180501004
UN 1.5/16 x 8	33,34	25,0	162	57	20,0		180301005	180501005
UN 1.3/8 x 8	34,93	25,0	162	57	20,0		180301006	180501006
UN 1.1/2 x 8	38,10	28,0	170	60	22,4		180301007	180501007
UN 1.5/8 x 8	41,28	28,0	170	60	22,4		180301008	180501008
UN 1.3/4 x 8	44,45	31,5	187	67	25,0		180301009	180501009
UN 1.7/8 x 8	47,63	31,5	187	67	25,0		180301010	180501010
UN 2" x 8	50,80	35,5	200	70	28,0		180301011	180501011
UN 2.1/8 x 8	53,98	35,5	200	70	28,0		180301012	180501012
UN 2.1/4 x 8	57,15	40,0	221	76	31,5		180301013	180501013
UN 2.1/2 x 8	63,50	40,0	224	79	31,5		180301014	180501014
UN 2.3/4 x 8	69,85	45,0	234	79	35,5		180301015	180501015
UN 3" x 8	76,20	50,0	258	83	40,0		180301016	180501016
UN 3.1/4 x 8	82,55	50,0	261	86	40,0		180301017	180501017
UN 3.1/2 x 8	88,90	50,0	261	86	40,0		180301018	180501018
UN 3.3/4 x 8	95,25	56,0	279	89	45,0		180301019	180501019
UN 4" x 8	101,60	56,0	279	89	45,0		180301020	180501020

8-UN

Unified thread series with 8-threads per inch (TPI)

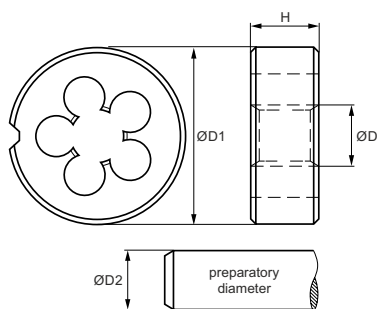
Round Dies for general use



material: HSS 2A



Chamfer: 1,75 threads
right hand thread



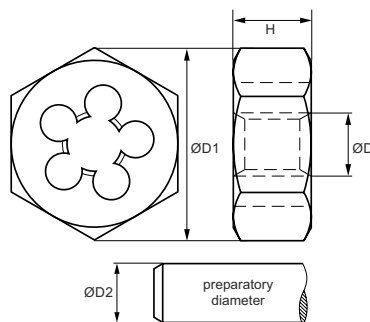
Hexagon Die Nuts for general use



material: HSS medium



Chamfer: 1,5 threads
right hand thread



8-UN

	D	D1	H	D2	No.
UN 1.1/8 x 8	28,58	65	25	28,33	181401001
UN 1.1/4 x 8	31,75	65	25	31,51	181401002
UN 1.3/8 x 8	34,93	65	25	34,68	181401003
UN 1.1/2 x 8	38,10	75	20	37,85	181401004
UN 1.3/4 x 8	44,45	90	22	44,20	181401005
UN 2" x 8	50,80	90	22	50,55	181401006

8-UN



	D	D1	H	D2	No.
UN 1.1/8 x 8	28,58	60	25	28,33	181501001
UN 1.1/4 x 8	31,75	60	25	31,51	181501002
UN 1.3/8 x 8	34,93	60	25	34,68	181501003
UN 1.1/2 x 8	38,10	60	25	37,85	181501004
UN 1.5/8 x 8	41,28	70	30	41,03	181501005
UN 1.3/4 x 8	44,45	85	36	44,20	181501006
UN 1.7/8 x 8	47,63	85	22	47,38	181501007
UN 2" x 8	50,80	85	22	50,55	181501008
UN 2.1/8 x 8	53,98	85	22		181501009
UN 2.1/4 x 8	57,15	100	22		181501010
UN 2.1/2 x 8	63,50	115	22		181501011

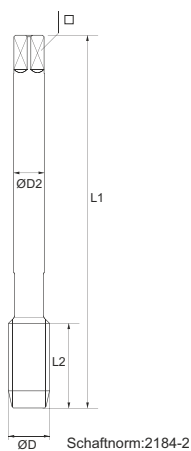
12-UN Unified thread series with 12-threads per inch (TPI)

Efficient internal thread cutting.

The short structural type makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 2-3 taps:

-  Taper Tap (Intermediate Tap)
-  Finish Tap



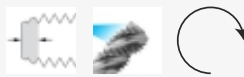
Hand Tap Sets for general use



through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes



material: HSSG 2B bis 750 N/mm²



2-3 threads outside cooling and lubrication



Machine Taps Form C for through holes and blind holes



through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes




material: HSSG 2B to 900 N/mm² 27,1 HRC



2-3 threads outside cooling and lubrication



12-UN

	D1	D2	L1	L2	□		No.	No.
UN 1/2 x 12	12,70	9,0	75	25	7,0	10,65	190301001	
UN 5/8 x 12	15,88	12,0	80	25	9,0	13,80	190301002	
UN 11/16 x 12	17,46	14,0	80	25	11,0	15,40	190301003	
UN 3/4 x 12	19,05	14,0	80	25	11,0	17,00	190301004	
UN 13/16 x 12	20,64	16,0	80	25	12,0	18,60	190301005	
UN 7/8 x 12	22,23	18,0	80	25	14,5	20,20	190301006	
UN 15/16 x 12	23,81	18,0	90	25	14,5	21,80	190301007	
UN 1.1/16 x 12	26,99	20,0	90	28	16,0	24,90	190301008	
UN 1.3/16 x 12	30,16	22,0	90	28	18,0	28,10	190301009	
UN 1.5/16 x 12	33,34	28,0	125	32	22,0	31,30	190301010	
UN 1.7/16 x 12	36,51	28,0	125	32	22,0	34,50	190301011	
UN 1.5/8 x 12	41,28	32,0	125	32	24,0	39,20	190301012	190501001
UN 1.3/4 x 12	44,45	36,0	125	32	29,0	42,40	190301013	190501002
UN 1.7/8 x 12	47,63	36,0	140	32	29,0	45,60	190301014	190501003
UN 2 x 12	50,80	40,0	140	32	32,0	48,75	190301015	190501004
UN 2.1/8 x 12	53,98	35,5	200	70	28,0	51,90		190501005
UN 2.1/4 x 12	57,15	40,0	221	76	31,5	55,10		190501006
UN 2.1/2 x 12	63,50	40,0	224	79	31,5	61,50		190501007
UN 2.3/4 x 12	69,85	45,0	234	79	35,5	67,80		190501008
UN 3" x 12	76,20	50,0	258	83	40,0	74,20		190501009
UN 3.1/4 x 12	82,55	50,0	261	86	40,0	80,50		190501010
UN 3.1/2 x 12	88,90	50,0	261	86	40,0	86,90		190501011
UN 3.3/4 x 12	95,25	56,0	279	89	45,0	93,20		190501012
UN 4" x 12	101,60	56,0	279	89	45,0	99,60		190501013

12-UN

Unified thread series with 12-threads per inch (TPI)

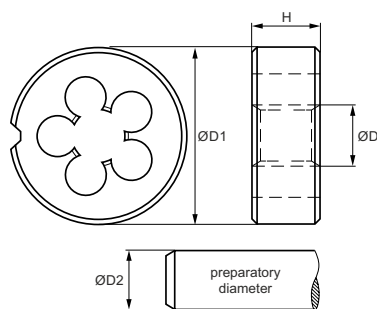
Round Dies
for general use



material: HSS medium



Chamfer: 1,75 threads right hand thread



12-UN

	D	D1	H	D2	No.
UN 1.1/16 x 12	26,99	65	18	26,80	191401001
UN 1.5/16 x 12	33,34	65	18	33,15	191401002
UN 1.5/8 x 12	41,28	75	20	41,09	191401003
UN 1.3/4 x 12	44,45	90	22	44,26	191401004
UN 2" x 12	50,80	90	22	50,61	191401005

BSW

British standard BS 84 whitworth coarse thread

Hand-Tap Sets, Round Dies and Tools Sets (example picture)



Set BSW 1/8" - 1/2"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts) BSW 1/8 x 40 | BSW 3/16 x 24 | BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12

HSS Round Dies BSW 1/8 x 40 | BSW 3/16 x 24 | BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12

adjustable Tap Wrenches - zinc die cast M 1-10 | 1/16-3/8 | G 1/8 & M 4-12 | 5/32-1/2 | G 1/8

Die Stocks - zinc die cast 20 x 5 | 20 x 7 | 25 x 9 | 30 x 11 | 38 x 14

Screw extractor

Item No.:
264803010

Set BSW 1/4" - 1/2"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts) BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12

HSS Round Dies BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12

adjustable Tap Wrenches - zinc die cast M 1-10 | 1/16-3/8 | G 1/8 & M 4-12 | 5/32-1/2 | G 1/8

Die Stocks - zinc die cast 20 x 7 | 25 x 9 | 30 x 11 | 38 x 14

Screw extractor

Item No.:
264803110

Set BSW 1/4" - 3/4"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts) BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12 | BSW 5/8 x 11 | BSW 3/4 x 10

HSS Round Dies BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12 | BSW 5/8 x 11 | BSW 3/4 x 10

adjustable Tap Wrenches - zinc die cast M 1-10 | 1/16-3/8 | G 1/8 & M 5-20 | 7/32-3/4" | G 1/8-1/2

Die Stocks - zinc die cast 20 x 7 | 25 x 9 | 30 x 11 | 38 x 14 | 45 x 18

Screw extractor

Item No.:
264803210

Set BSW 1/4" - 1"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts) BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12 | BSW 5/8 x 11 | BSW 3/4 x 10 | BSW 7/8 x 9 | BSW 1" x 8

HSS Round Dies BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12 | BSW 5/8 x 11 | BSW 3/4 x 10 | BSW 7/8 x 9 | BSW 1" x 8

adjustable Tap Wrenches - zinc die cast M 1-10 | 1/16-3/8 | G 1/8 & M 11-27 | 7/16-1" | G 1/4-3/4

Die Stocks - zinc die cast 20 x 7 | 25 x 9 | 30 x 11 | 38 x 14 | 45 x 18 | 55 x 22

Screw extractor

Item No.:
264803410

Set BSW 1/4" - 1.1/2"

HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts) BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12 | BSW 5/8 x 11 | BSW 3/4 x 10 | BSW 7/8 x 9 | BSW 1" x 8 | BSW 1.1/8" x 7 | BSW 1.1/4" x 7 | BSW 1.3/8" x 6 | BSW 1.1/2" x 6

HSS Round Dies BSW 1/4 x 20 | BSW 5/16 x 18 | BSW 3/8 x 16 | BSW 7/16 x 14 | BSW 1/2 x 12 | BSW 5/8 x 11 | BSW 3/4 x 10 | BSW 7/8 x 9 | BSW 1" x 8 | BSW 1.1/8" x 7 | BSW 1.1/4" x 7 | BSW 1.3/8" x 6 | BSW 1.1/2" x 6

adjustable Tap Wrenches - zinc die cast M 1-10 | 1/16-3/8 | G 1/8 & M 5-20 | 7/32-3/4 | G 1/8-1/2 & M 13-32 | 1/2-1.1/4" | G 1/4-1"

Die Stocks - zinc die cast 20 x 7 | 25 x 9 | 30 x 11 | 38 x 14 | 45 x 18 | 55 x 22 | 65 x 25

Screw extractor

Item No.:
264803510

BSW

British standard BS 84 whitworth coarse thread

Short Machine Taps und Round Dies Sets BSW 1/4" - 1/2" (example picture)



Set BSW 1/4" - 1/2"

HSSG Short Machine Taps & Drill bits for core holes HSS Round Dies

HSSG Short Machine Tap Form D for through hole & blind hole (up to 4 x D)	BSW 1/4 x 20 BSW 5/16 x 18 BSW 3/8 x 16 BSW 7/16 x 14 BSW 1/2 x 12
HSSG Drill bits for core holes	5,1 mm 6,5 mm 7,9 mm 9,3 mm 10,5 mm
HSS Round Dies	BSW 1/4 x 20 BSW 5/16 x 18 BSW 3/8 x 16 BSW 7/16 x 14 BSW 1/2 x 12

Item No.:
BES4




BSW

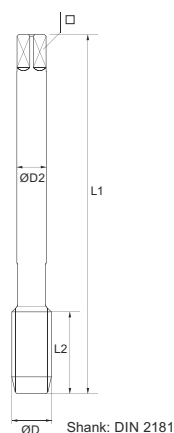
British standard BS 84 whitworth coarse thread

Efficient internal thread cutting.

The short structural type makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 3 taps:

-  Taper Tap
-  Intermediate Tap
-  Finish Tap



Short Machine Taps Form D for through holes and blind holes

through holes & blind holes up to 1,5 x D

Chip removal (like picture)

Form C straight flutes

material: HSSG

TOL medium

N/mm² HRC to 900 N/mm² 27,1 HRC

3-4 threads

outside cooling and lubrication

Hand Tap Sets for general use

through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes

material: HSSG

TOL medium

N/mm² HRC to 900 N/mm² 27,1 HRC

2-3 threads

outside cooling and lubrication

Hand Tap Sets for general use Left Hand

through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes

material: HSSG

TOL medium


N/mm² HRC to 900 N/mm² 27,1 HRC

2-3 threads

outside cooling and lubrication



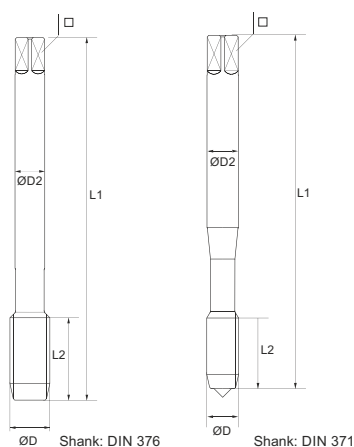
BSW

	D1	D2	L1	L2	□		No.	No.	No.
BSW 1/16 x 60	1,59	2,5	36	10	2,1	1,20	210101001	210301001	
BSW 3/32 x 48	2,38	2,8	36	10	2,1	1,90	210101002	210301002	
BSW 1/8 x 40	3,18	3,5	40	12	2,7	2,60	210101003	210301003	210302001
BSW 5/32 x 32	3,97	4,5	45	14	3,4	3,20	210101004	210301004	210302002
BSW 3/16 x 24	4,76	6,0	50	18	4,9	3,80	210101005	210301005	210302003
BSW 7/32 x 24	5,56	6,0	50	18	4,9	4,60	210101006	210301006	
BSW 1/4 x 20	6,35	6,0	50	19	4,9	5,10	210101007	210301007	210302004
BSW 5/16 x 18	7,94	6,0	56	22	4,9	6,50	210101008	210301008	210302005
BSW 3/8 x 16	9,53	7,0	70	24	5,5	7,90	210101009	210301009	210302006
BSW 7/16 x 14	11,11	8,0	70	24	6,2	9,30	210101010	210301010	210302007
BSW 1/2 x 12	12,70	9,0	75	29	7,0	10,50	210101011	210301011	210302008
BSW 9/16 x 12	14,29	11,0	80	30	9,0	12,00	210101012	210301012	210302009
BSW 5/8 x 11	15,88	12,0	80	32	9,0	13,50	210101013	210301013	210302010
BSW 3/4 x 10	19,05	14,0	95	40	11,0	16,50	210101014	210301014	210302011
BSW 7/8 x 9	22,23	18,0	100	40	14,5	19,50	210101015	210301015	210302012
BSW 1" x 8	25,40	18,0	110	50	14,5	22,00	210101016	210301016	210302013
BSW 1.1/8 x 7	28,58	22,0	132	56	18,0	25,00	210101017	210301017	
BSW 1.1/4 x 7	31,75	22,0	132	56	18,0	28,00	210101018	210301018	
BSW 1.3/8 x 6	34,93	28,0	150	63	22,0	30,50	210101019	210301019	
BSW 1.1/2 x 6	38,10	32,0	150	63	24,0	33,50	210101020	210301020	
BSW 1.5/8 x 5	41,28	32,0	160	70	24,0	35,50	210101021	210301021	
BSW 1.3/4 x 5	44,45	36,0	160	70	29,0	39,00	210101022	210301022	
BSW 1.7/8 x 4,5	47,63	36,0	190	80	29,0	41,50	210101023	210301023	
BSW 2" x 4,5	50,80	40,0	190	80	32,0	44,50	210101024	210301024	
BSW 2.1/4 x 4	57,15	45,0	220	80	35,0	50,00	210101025	210301025	
BSW 2.1/2 x 4	63,50	50,0	220	80	39,0	56,50	210101026	210301026	
BSW 2.3/4 x 3,5	69,85	50,0	240	80	39,0	62,00	210101027	210301027	
BSW 3" x 3,5	76,20	50,0	260	80	39,0	68,00	210101028	210301028	

BSW

British standard BS 84 whitworth coarse thread

Tap for machine use in through hole and blind hole.



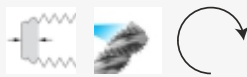
Machine Tap for general use in through hole



through holes up to 4 x D
Chip removal (like picture)
Form B with spiral point



material: HSSG
medium
to 900 N/mm²
27,1 HRC



4-5 threads
outside cooling and lubrication



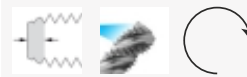
Machine Tap for general use in blind hole



blind holes up to 3 x D
Chip removal (like picture)
Form C 35° spiral flute



material: HSSE
medium
to 900 N/mm²
27,1 HRC



2-3 threads
outside cooling and lubrication



BSW

D1 D2 L1 L2 □

No.

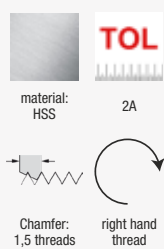
DIN 371	D1	D2	L1	L2	□	No.
BSW 1/8 x 40	3,18	3,5	56	11	2,7	2,60 210401001
BSW 5/32 x 32	3,97	4,5	63	13	3,4	3,20 210401002
BSW 3/16 x 24	4,76	6,0	70	15	4,9	3,80 210401003
BSW 1/4 x 20	6,35	7,0	80	17	5,5	5,10 210401004
BSW 5/16 x 18	7,94	8,0	90	20	6,2	6,50 210401005
BSW 3/8 x 16	9,53	9,0	100	22	7,0	7,90 210401006
BSW 7/16 x 14	11,11	11,0	100	22	9,0	9,30 210401007
BSW 1/2 x 12	12,70	12,0	110	25	9,0	10,50 210401008
DIN 376						
BSW 1/4 x 20	6,35	4,5	80	17	3,4	5,10 210401009
BSW 5/16 x 18	7,94	6,0	90	20	4,9	6,50 210401010
BSW 3/8 x 16	9,53	7,0	100	22	5,5	7,90 210401011
BSW 7/16 x 14	11,11	8,0	100	22	6,2	9,30 210401012
BSW 1/2 x 12	12,70	9,0	110	25	7,0	10,50 210401013
BSW 9/16 x 12	14,29	11,0	110	26	9,0	12,00 210401014
BSW 5/8 x 11	15,88	12,0	110	27	9,0	13,50 210401015
BSW 3/4 x 10	19,05	14,0	125	30	11,0	16,50 210401016
BSW 7/8 x 9	22,23	18,0	140	32	14,5	19,50 210401017
BSW 1" x 8	25,40	20,0	160	36	16,0	22,00 210401018
BSW 1.1/4 x 7	31,75	22,0	180	40	18,0	28,00 210401019
BSW 1.3/8 x 6	34,93	28,0	200	50	22,0	30,50 210401020
BSW 1.1/2 x 6	38,10	32,0	200	50	24,0	33,50 210401021

D1 D2 L1 L2 □

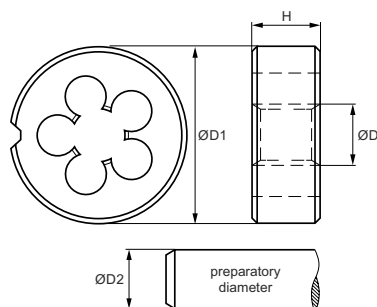
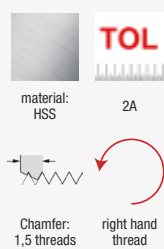
No.

DIN 371	D1	D2	L1	L2	□	No.
BSW 1/8 x 40	3,18	3,5	56	7	2,7	2,60 210601001
BSW 5/32 x 32	3,97	4,5	63	7	3,4	3,20 210601002
BSW 3/16 x 24	4,76	6,0	70	10	4,9	3,80 210601003
BSW 1/4 x 20	6,35	7,0	80	13	5,5	5,10 210601004
BSW 5/16 x 18	7,94	8,0	90	14	6,2	6,50 210601005
BSW 3/8 x 16	9,53	9,0	100	16	7,0	7,90 210601006
BSW 7/16 x 14	11,11	11,0	100	17	9,0	9,30 210601007
BSW 1/2 x 12	12,70	12,0	110	20	9,0	10,50 210601008
DIN 376						
BSW 1/4 x 20	6,35	4,5	80	13	3,4	5,10 210601009
BSW 5/16 x 18	7,94	6,0	90	14	4,9	6,50 210601010
BSW 3/8 x 16	9,53	7,0	100	16	5,5	7,90 210601011
BSW 7/16 x 14	11,11	8,0	100	17	6,2	9,30 210601012
BSW 1/2 x 12	12,70	9,0	110	20	7,0	10,50 210601013
BSW 9/16 x 12	14,29	11,0	110	20	9,0	12,00 210601014
BSW 5/8 x 11	15,88	12,0	110	22	9,0	13,50 210601015
BSW 3/4 x 10	19,05	14,0	125	25	11,0	16,50 210601016
BSW 7/8 x 9	22,23	18,0	140	27	14,5	19,50 210601017
BSW 1" x 8	25,40	20,0	160	30	16,0	22,00 210601018
BSW 1.1/4 x 7	31,75	22,0	180	35	18,0	28,00 210601019
BSW 1.3/8 x 6	34,93	28,0	200	40	22,0	30,50 210601020
BSW 1.1/2 x 6	38,10	32,0	200	40	24,0	33,50 210601021

Round Dies for general use



Round Dies for general use Left Hand

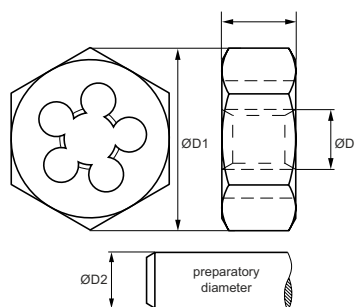


BSW

	D	D1	H	D2	No.	No.
BSW 1/16 x 60	1,59	16	5	1,51	211401001	
BSW 3/32 x 48	2,38	16	5	2,3	211401002	
BSW 1/8 x 40	3,18	20	5	3,09	211401003	211402001
BSW 5/32 x 32	3,97	20	5	3,88	211401004	211402002
BSW 3/16 x 24	4,76	20	7	4,66	211401005	211402003
BSW 7/32 x 24	5,56	20	7	5,46	211401006	
BSW 1/4 x 20	6,35	20	7	6,24	211401007	211402004
BSW 5/16 x 18	7,94	25	9	7,82	211401008	211402005
BSW 3/8 x 16	9,53	30	11	9,4	211401009	211402006
BSW 7/16 x 14	11,11	30	11	10,98	211401010	211402007
BSW 1/2 x 12	12,7	38	14	12,56	211401011	211402008
BSW 9/16 x 12	14,29	38	14	14,14	211401012	211402009
BSW 5/8 x 11	15,88	45	18	15,72	211401013	211402010
BSW 3/4 x 10	19,05	45	18	18,89	211401014	211402011
BSW 7/8 x 9	22,23	55	22	22,1	211401015	211402012
BSW 1" x 8	25,4	55	22	25,27	211401016	211402013
BSW 1.1/8 x 7	28,58	65	25	28,44	211401017	
BSW 1.1/4 x 7	31,75	65	25	31,61	211401018	
BSW 1.3/8 x 6	34,93	65	25	34,77	211401019	
BSW 1.1/2 x 6	38,1	65	25	37,95	211401020	
BSW 1.1/2 x 6	38,1	75	30	37,95	211401021	
BSW 1.5/8 x 5	41,28	75	30	41,11	211401022	
BSW 1.3/4 x 5	44,45	90	36	44,28	211401023	
BSW 1.7/8 x 4,5	47,63	90	36	47,46	211401024	
BSW 2" x 4,5	50,8	90	36	50,63	211401025	
BSW 2.1/4 x 4	57,15	105	36	56,98	211401026	
BSW 2.1/2 x 4	63,5	105	36	63,34	211401027	
BSW 2.3/4 x 3,5	69,85	120	36	69,68	211401028	
BSW 3" x 3,5	76,2	120	36	76,03	211401029	

BSW

British standard BS 84 whitworth coarse thread

Hexagon Die Nuts
for general usematerial:
HSS 2AChamfer:
1,5 threads right hand
thread

BSW

	D	D1	H	D2	No.
BSW 1/8 x 40	3,18	20	5	3,09	211501001
BSW 3/16 x 24	4,76	20	7	4,66	211501002
BSW 1/4 x 20	6,35	20	7	6,24	211501003
BSW 5/16 x 18	7,94	25	9	7,82	211501004
BSW 3/8 x 16	9,53	30	11	9,40	211501005
BSW 7/16 x 14	11,11	30	11	10,98	211501006
BSW 1/2 x 12	12,70	38	14	12,56	211501007
BSW 9/16 x 12	14,29	38	14	14,14	211501008
BSW 5/8 x 11	15,88	45	18	15,72	211501009
BSW 3/4 x 10	19,05	45	18	18,89	211501010
BSW 7/8 x 9	22,23	55	22	22,10	211501011
BSW 1" x 8	25,40	55	22	25,27	211501012
BSW 1.1/8 x 7	28,58	65	25	28,44	211501013
BSW 1.1/4 x 7	31,75	65	25	31,61	211501014
BSW 1.3/8 x 6	34,93	65	25	34,77	211501015
BSW 1.1/2 x 6	38,10	65	25	37,95	211501016
BSW 2" x 4,5	50,80	90	36	50,63	211501017
BSW 2.1/4 x 4	57,15	105	36	56,98	211501018
BSW 2.1/2 x 4	63,50	105	36	63,34	211501019
BSW 2.3/4 x 3,5	69,85	120	36	69,68	211501020
BSW 3" x 3,5	76,20	120	36	76,03	211501021

BSF

British standard BS 84 whitworth coarse thread

Hand-Tap Sets, Round Dies and Tools Sets (example picture)



Set BSF 1/4" - 1/2" HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	BSF 1/4 x 26 BSF 5/16 x 22 BSF 3/8 x 20 BSF 7/16 x 18 BSF 1/2 x 16
HSS Round Dies	BSF 1/4 x 26 BSF 5/16 x 22 BSF 3/8 x 20 BSF 7/16 x 18 BSF 1/2 x 16
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 4-12 5/32-1/2 G 1/8
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 10
Screw extractor	

Item No.:
264804111

Set BSF 1/4" - 3/4" HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	BSF 1/4 x 26 BSF 5/16 x 22 BSF 3/8 x 20 BSF 7/16 x 18 BSF 1/2 x 16 BSF 5/8 x 14 BSF 3/4 x 12
HSS Round Dies	BSF 1/4 x 26 BSF 5/16 x 22 BSF 3/8 x 20 BSF 7/16 x 18 BSF 1/2 x 16 BSF 5/8 x 14 BSF 3/4 x 12
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4 G 1/8-1/2
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14
Screw extractor	

Item No.:
264804211

Set BSF 1/4" - 1" HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (2 parts)	BSF 1/4 x 26 BSF 5/16 x 22 BSF 3/8 x 20 BSF 7/16 x 18 BSF 1/2 x 16 BSF 5/8 x 14 BSF 3/4 x 12 BSF 7/8 x 11 BSF 1" x 10
HSS Round Dies	BSF 1/4 x 26 BSF 5/16 x 22 BSF 3/8 x 20 BSF 7/16 x 18 BSF 1/2 x 16 BSF 5/8 x 14 BSF 3/4 x 12 BSF 7/8 x 11 BSF 1" x 10
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 11-27 7/16-1" G 1/4-3/4
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14 55 x 16
Screw extractor	

Item No.:
264804411

Set BSW & BSF 1/4" - 3/4" HSSG Hand Tap Sets & HSS Round Dies & Tools

HSSG Hand Tap Sets (3 parts) UNC	BSW 1/4 BSW 5/16 BSW 3/8 BSW 7/16 BSW 1/2 BSW 5/8 BSW 3/4
HSSG Hand Tap Sets (2 parts) UNF	BSF 1/4 BSF 5/16 BSF 3/8 BSF 7/16 BSF 1/2 BSF 5/8 BSF 3/4
HSS Round Dies UNC	BSW 1/4 BSW 5/16 BSW 3/8 BSW 7/16 BSW 1/2 BSW 5/8 BSW 3/4
HSS Round Dies UNF	BSF 1/4 BSF 5/16 BSF 3/8 BSF 7/16 BSF 1/2 BSF 5/8 BSF 3/4
adjustable Tap Wrenches - zinc die cast	M 1-10 1/16-3/8 G 1/8 & M 5-20 7/32-3/4" G 1/8-1/2
Die Stocks - zinc die cast	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18
Screw extractor	

Item No.:
2648046210

BSF

British standard BS 84 whitworth coarse thread

Short Machine Taps und Round Dies Sets BSF 1/4" - 1/2" (example picture)



Set BSF 1/4" - 1/2" HSSG Short Machine Taps & Drill bits for core holes HSS Round Dies

HSSG Short Machine Tap Form D for through hole & blind hole (up to 4 x D)	BSF 1/4 x 26 BSF 5/16 x 22 BSF 3/8 x 20 BSF 7/16 x 18 BSF 1/2 x 16
HSSG Drill bits for core holes	5,2 mm 6,6 mm 8,1 mm 9,5 mm 11 mm
HSS Round Dies	BSF 1/4 x 26 BSF 5/16 x 22 BSF 3/8 x 20 BSF 7/16 x 18 BSF 1/2 x 16

Item No.:
BES5

Short Machine Taps and Hand Tap Sets



BSF

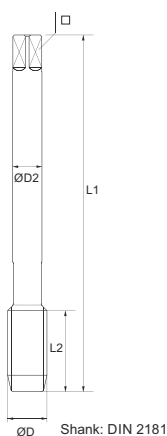
British standard BS 84 whitworth coarse thread

Efficient internal thread cutting.

The short structural type makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 2 taps:

-  Taper Tap
-  Finish Tap



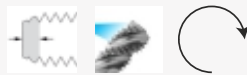
Short Machine Taps Form D for through holes and blind holes



through holes & blind holes up to 1,5 x D Chip removal (like picture) Form C straight flutes



material: HSSG medium to 900 N/mm² 27,1 HRC



3-4 threads outside cooling and lubrication



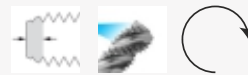
Hand Tap Sets for general use



through holes & blind holes up to 2 x D Chip removal (like picture) Form C straight flutes





material: HSSG medium to 900 N/mm² 27,1 HRC



3-4 threads outside cooling and lubrication



BSF

	D1	D2	L1	L2			No.	No.
BSF 3/16 x 32	4,76	6,0	50	14	4,9	3,90	220101001	220301001
BSF 1/4 x 26	6,35	6,0	50	18	4,9	5,30	220101002	220301002
BSF 5/16 x 22	7,94	6,0	56	22	4,9	6,80	220101003	220301003
BSF 3/8 x 20*	9,53	7,0	63	22	5,5	8,30	220101004	220301004
BSF 7/16 x 18	11,11	8,0	63	22	6,2	9,70	220101005	220301005
BSF 1/2 x 16	12,70	9,0	75	24	7,0	11,10	220101006	220301006
BSF 9/16 x 16	14,29	11,0	80	28	9,0	12,70	220101007	220301007
BSF 5/8 x 14	15,88	12,0	80	28	9,0	14,00	220101008	220301008
BSF 3/4 x 12	19,05	14,0	95	32	11,0	16,80	220101009	220301009
BSF 7/8 x 11	22,23	18,0	100	36	14,5	19,70	220101010	220301010
BSF 1" x 10	25,40	18,0	110	40	14,5	22,70	220101011	220301011

* BSF 3/8 = Fisher thread

BSF

British standard BS 84 whitworth coarse thread

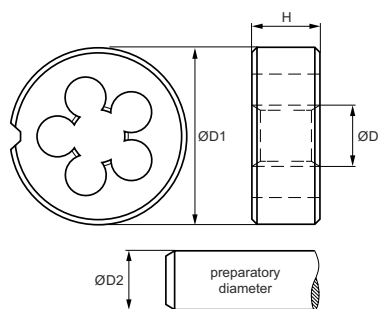
Round Dies for general use



material: HSS 2A



Chamfer: 1,5 threads
right hand thread



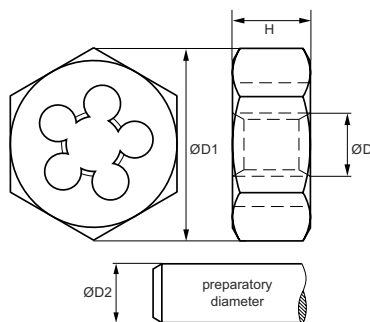
Hexagon Die Nuts for general use



material: HSS medium



Chamfer: 1,5 threads
right hand thread



BSF

	D	D1	H	D2	No.
BSF 3/16 x 32	4,76	20	7	4,67	221401001
BSF 1/4 x 26	6,35	20	7	6,25	221401002
BSF 5/16 x 22	7,94	25	9	7,83	221401003
BSF 3/8 x 20	9,53	30	11	9,41	221401004
BSF 7/16 x 18	11,11	30	11	10,99	221401005
BSF 1/2 x 16	12,70	38	10	12,57	221401006
BSF 9/16 x 16	14,29	38	10	14,12	221401007
BSF 5/8 x 14	15,88	45	14	15,73	221401008
BSF 3/4 x 12	19,05	45	14	18,89	221401009
BSF 7/8 x 11	22,23	55	22	22,11	221401010
BSF 1" x 10	25,40	55	22	25,28	221401011

BSF

	D	D1	H	D2	No.
BSF 3/16 x 32	4,76	19	7	4,67	221501001
BSF 1/4 x 26	6,35	19	7	6,25	221501002
BSF 5/16 x 22	7,94	22	9	7,83	221501003
BSF 3/8 x 20	9,53	27	11	9,41	221501004
BSF 7/16 x 18	11,11	27	11	10,99	221501005
BSF 1/2 x 16	12,70	36	10	12,57	221501006
BSF 9/16 x 16	14,29	36	10	14,12	221501007
BSF 5/8 x 14	15,88	41	14	15,73	221501008
BSF 3/4 x 12	19,05	41	14	18,89	221501009
BSF 7/8 x 11	22,23	50	16	22,11	221501010
BSF 1" x 10	25,40	50	16	25,28	221501011

Short Machine Taps and Hand Tap Sets




TR

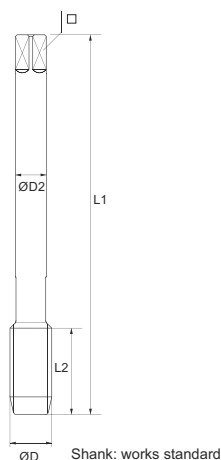
Trapezoidal thread / DIN 103

Efficient internal thread cutting.

The short structural type makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 3 taps:

-  Taper Tap
-  Intermediate Tap
-  Finish Tap



Hand Tap Sets for general use



through holes & blind holes up to 1 x D
Chip removal (like picture)
Form C straight flutes



material: HSSG 7H to 900 N/mm² 27,1 HRC



special chamfer
outside cooling and lubrication



Hand Tap Sets for general use

Left Hand



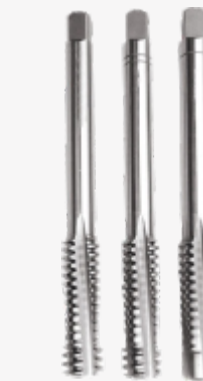
through holes & blind holes up to 1 x D
Chip removal (like picture)
Form C straight flutes





material: HSSG 7H to 900 N/mm² 27,1 HRC



special chamfer
outside cooling and lubrication



TR

	D2	L1	L2			No.	No.
TR 9 x 1,5	7,0	100,0	22	5,5	7,60	230301001	230302001
TR 10 x 1,5	7,0	100,0	22	5,5	8,60	230301002	230302002
TR 10 x 2	7,0	90,0	34	5,5	8,20	230301003	230302003
TR 10 x 3	7,0	100,0	40	5,5	7,60	230301004	230302004
TR 11 x 2	8,0	100,0	22	6,2	9,20	230301005	230302005
TR 12 x 2	9,0	110,0	25	7,0	10,20	230301006	230302006
TR 12 x 3	8,0	110,0	40	6,2	9,25	230301007	230302007
TR 14 x 2	11,0	110,0	26	9,0	12,20	230301008	230302008
TR 14 x 3	10,0	130,0	45	8,0	11,25	230301009	230302009
TR 14 x 4	10,0	130,0	55	8,0	10,70	230301010	230302010
TR 16 x 2	12,0	110,0	27	9,0	14,20	230301011	230302011
TR 16 x 4	11,0	140,0	55	9,0	12,25	230301012	230302012
TR 18 x 2	14,0	125,0	27	11,0	16,20	230301013	230302013
TR 18 x 4	12,0	150,0	55	9,0	14,25	230301014	230302014
TR 20 x 2	16,0	140,0	27	12,0	18,20	230301015	230302015
TR 20 x 4	14,0	160,0	55	11,0	16,25	230301016	230302016
TR 22 x 3	18,0	160,0	34	14,5	19,25	230301017	230302017
TR 22 x 5	16,0	175,0	65	12,0	17,30	230301018	230302018
TR 24 x 3	18,0	160,0	36	14,5	21,25	230301019	230302019
TR 24 x 5	18,0	190,0	65	14,5	19,30	230301020	230302020
TR 26 x 3	20,0	160,0	36	16,0	23,25	230301021	230302021
TR 26 x 5	20,0	210,0	70	16,0	21,30	230301022	230302022
TR 28 x 3	22,0	180,0	40	18,0	25,25	230301023	230302023
TR 28 x 5	22,0	220,0	70	18,0	23,30	230301024	230302024
TR 30 x 3	22,0	180,0	40	18,0	27,25	230301025	230302025
TR 30 x 6	22,0	240,0	80	18,0	24,30	230301026	230302026
TR 32 x 6	25,0	255,0	80	20,0	26,30	230301027	230302027

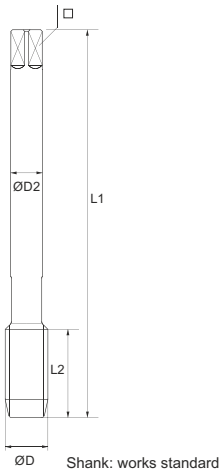
TR

Trapezoidal thread / DIN 103

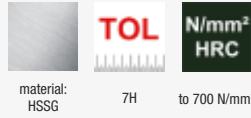
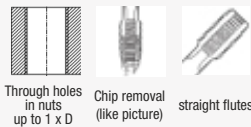
Machine Nut Tap with long shank for cutting Nuts.

For all through holes up to a max. thread depth of 1,0 x diameter.

Please note that this tap can only take cutting forces up to 1,0 times diameter.

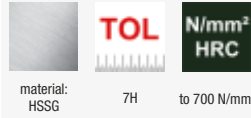
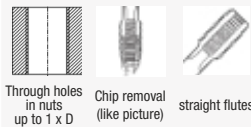


Machine Nut Taps for general use




Machine Nut Taps for general use

Left Hand



TR

	D2	L1	L2	□		No.	No.
TR 8 x 1,5	6,0	90,0	55	4,9	6,70		
TR 9 x 2	7,0	110,0	63	5,5	7,20		
TR 10 x 2	7,0	110,0	63	5,5	8,20	230901001	230902001
TR 10 x 3	7,0	125,0	75	5,5	7,60	230901002	230902002
TR 12 x 2	9,0	135,0	75	7,0	10,20		
TR 12 x 3	8,0	165,0	111	6,2	9,25	230901003	230902003
TR 14 x 2	10,0	150	90	8,0	12,20		
TR 14 x 3	10,0	140	85	8,0	11,25	230901004	230902004
TR 14 x 4	10,0	170	112	8,0	10,70	230901005	230902005
TR 16 x 2	12,0	160	90	9,0	14,20		
TR 16 x 4	11,0	180	116	9,0	12,25	230901006	230902006
TR 18 x 2	14,0	175	90	11,0	16,20		
TR 18 x 4	12,0	190	120	9,0	14,25	230901007	230902007
TR 20 x 2	16,0	185	105	12,0	18,20		
TR 20 x 4	14,0	200	124	11,0	16,25	230901008	230902008
TR 22 x 3	16,0	220	125	12,0	19,25		
TR 22 x 4	16,0	210	130	12,0	18,25	230901009	
TR 22 x 5	16,0	235	155	12,0	17,30	230901010	230902009
TR 24 x 3	18,0	220	130	14,5	21,25		
TR 24 x 5	18,0	245	160	14,5	19,30	230901011	230902010
TR 26 x 3	20,0	235	130	16,0	23,25		
TR 26 x 5	20,0	255	165	16,0	21,30	230901012	230902011
TR 28 x 3	22,0	245	140	18,0	25,25		
TR 28 x 5	22,0	265	170	18,0	23,30	230901013	230902012
TR 30 x 3	22,0	250	140	18,0	27,25		
TR 30 x 6	22,0	290	185	18,0	24,30	230901014	230902013
TR 32 x 6	25,0	300	191	20,0	26,30	230901015	230902014
TR 36 x 6	28,0	310	200	22,0	30,50	230901016	230902015

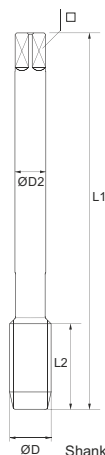
TR

Trapezoidal thread / DIN 103

Machine Nut Tap with long shank for cutting Nuts.

For all through holes up to a max. thread depth of 1,5 x diameter.

Please note that this tap can only take cutting forces up to 1,5 times diameter.



Shank: works standard

Machine Nut Taps for stainless steels

Machine Nut Taps for stainless steels Left Hand

Through holes in nuts up to 1,5 x D

Chip removal (like picture)

25° left spiral flute

material: HSSE-nitrated

7H

to 900 N/mm² 27,1 HRC

special chamfer

outside cooling and lubrication

Through holes in nuts up to 1,5 x D

Chip removal (like picture)

25° left spiral flute

material: HSSE-nitrated

7H

to 900 N/mm² 27,1 HRC

special chamfer

outside cooling and lubrication

TR

	D2	L1	L2	□	▣	No.	No.
TR 8 x 1,5	6,0	90,0	55	4,9	6,70	230905001	230905001L
TR 9 x 2	7,0	110,0	63	5,5	7,20	230905002	230905002L
TR 10 x 2	7,0	110,0	63	5,5	8,20	230905003	230905003L
TR 10 x 3	7,0	125,0	75	5,5	7,60	230905004	230905004L
TR 12 x 2	9,0	135,0	75	7,0	10,20	230905005	230905005L
TR 12 x 3	8,0	165,0	111	6,2	9,25	230905006	230905006L
TR 14 x 2	10,0	150,0	90	8,0	12,20	230905007	230905007L
TR 14 x 3	10,0	140,0	85	8,0	11,25	230905008	230905008L
TR 14 x 4	10,0	170,0	112	8,0	10,70	230905009	230905009L
TR 16 x 2	12,0	160,0	90	9,0	14,20	230905010	230905010L
TR 16 x 4	11,0	180,0	116	9,0	12,25	230905011	230905011L
TR 18 x 2	14,0	175,0	90	11,0	16,20	230905012	230905012L
TR 18 x 4	12,0	190,0	120	9,0	14,25	230905013	230905013L
TR 20 x 2	16,0	185,0	105	12,0	18,20	230905014	230905014L
TR 20 x 4	14,0	200,0	124	11,0	16,25	230905015	230905015L
TR 22 x 3	16,0	220,0	125	12,0	19,25	230905016	230905016L
TR 22 x 4	16,0	210,0	130	12,0	18,25	230905017	230905017L
TR 22 x 5	16,0	235,0	155	12,0	17,30	230905018	230905018L
TR 24 x 3	18,0	220,0	130	14,5	21,25	230905019	230905019L
TR 24 x 5	18,0	245,0	160	14,5	19,30	230905020	230905020L
TR 26 x 3	20,0	235,0	130	16,0	23,25	230905021	230905021L
TR 26 x 5	20,0	255,0	165	16,0	21,30	230905022	230905022L
TR 28 x 3	22,0	245,0	140	18,0	25,25	230905023	230905023L
TR 28 x 5	22,0	265,0	170	18,0	23,30	230905024	230905024L
TR 30 x 3	22,0	250,0	140	18,0	27,25	230905025	230905025L
TR 30 x 6	22,0	290,0	185	18,0	24,30	230905026	230905026L
TR 32 x 6	25,0	300,0	191	20,0	26,30	230905027	230905027L

TR

Trapezoidal thread / DIN 103

Round Dies
for general use



material: HSS 7e



Chamfer: 1,75 threads right hand thread

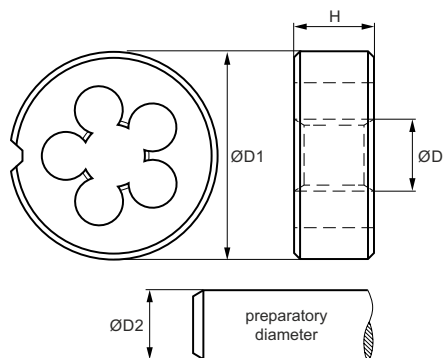
Round Dies
for general use
Left Hand



material: HSS 7e



Chamfer: 1,75 threads right hand thread



TR

	D1	H	D2	No.	No.
TR 10 x 2	38,0	14	9,91	231401001	231402001
TR 10 x 3	38,0	14	9,88	231401002	231402002
TR 12 x 2	38,0	14	11,91	231401003	231402003
TR 12 x 3	38,0	14	11,88	231401004	231402004
TR 14 x 2	38,0	14	13,91	231401005	231402005
TR 14 x 3	45,0	18	13,88	231401006	231402006
TR 14 x 4	45,0	18	13,85	231401007	231402007
TR 16 x 2	45,0	18	15,91	231401008	231402008
TR 16 x 4	45,0	18	15,85	231401009	231402009
TR 18 x 2	45,0	18	17,91	231401010	231402010
TR 18 x 4	45,0	18	17,85	231401011	231402011
TR 20 x 2	45,0	18	19,91	231401012	231402012
TR 20 x 4	55,0	22	19,85	231401013	231402013
TR 22 x 5	55,0	22	21,84	231401014	231402014
TR 24 x 5	65,0	25	23,84	231401015	231402015
TR 26 x 5	65,0	25	25,84	231401016	231402016
TR 28 x 5	65,0	25	27,84	231401017	231402017
TR 30 x 6	65,0	25	29,82	231401018	231402018



NPT

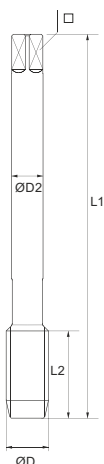
National standard taper 1:16 pipe thread ANSI B 1.20.1

Efficient internal thread cutting.

The short structural type makes that tap usable by machine and hand.

Application:

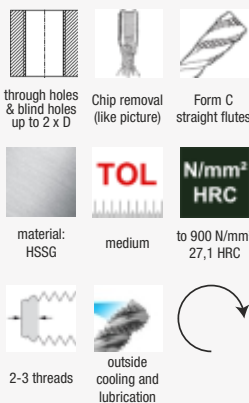
-  non abrasive material up to 900 N/mm²
-  unalloyed and low alloyed steel





NPTF

National standard taper 1:16 pipe thread ANSI B 1.20.3



Short Machine Taps Form D for through holes and blind holes



NPT

NPT	D1	D2	L1	L2			No.
NPT 1/16 x 27	7,90	19,0	65	19	5,5	6,00	240101001
NPT 1/8 x 27	10,24	19,0	65	19	5,5	8,25	240101002
NPT 1/4 x 18	13,62	25,0	70	25	9,0	10,70	240101003
NPT 3/8 x 18	17,06	26,0	75	26	9,0	14,10	240101004
NPT 1/2 x 14	21,22	31,0	80	31	12,0	17,40	240101005
NPT 3/4 x 14	26,57	33,0	100	33	16,0	22,60	240101006
NPT 1" x 11,5	33,23	38,0	110	38	20,0	28,50	240101007
NPT 1.1/4 x 11,5	41,99	41,0	125	41	24,0	37,00	240101008
NPT 1.1/2 x 11,5	48,05	42,0	140	42	29,0	43,50	240101009
NPT 2" x 11,5	60,09	44,0	160	44	29,0	55,00	240101010

NPTF

NPTF	D1	D2	L1	L2			No.
NPTF 1/16 x 27	7,87	19,0	65	19	5,5	6,00	250101001
NPTF 1/8 x 27	10,22	19,0	65	19	5,5	8,25	250101002
NPTF 1/4 x 18	13,58	25,0	70	25	9,0	10,70	250101003
NPTF 3/8 x 18	17,02	26,0	75	26	9,0	14,10	250101004
NPTF 1/2 x 14	21,21	31,0	80	31	12,0	17,40	250101005
NPTF 3/4 x 14	26,57	33,0	100	33	16,0	22,60	250101006
NPTF 1" x 11,5	33,20	38,0	110	38	20,0	28,50	250101007
NPTF 1.1/4 x 11,5	41,95	41,0	125	41	24,0	37,00	250101008
NPTF 1.1/2 x 11,5	48,02	42,0	140	42	29,0	43,50	250101009
NPTF 2" x 11,5	60,06	44,0	160	44	29,0	55,00	250101010

NPT

National standard taper 1:16 pipe thread ANSI B 1.20.1

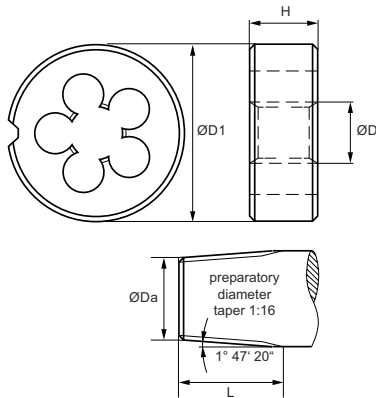
Round Dies for general use



material: HSS medium



Chamfer: 1,5 threads right hand thread



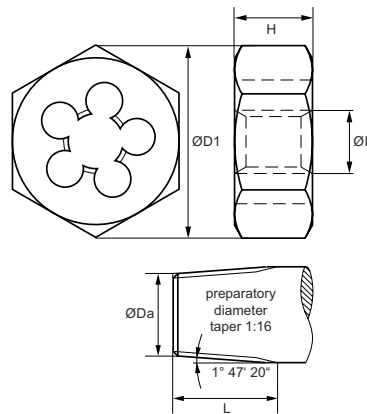
Hexagon Die Nuts for general use



material: HSS medium



Chamfer: 1,5 threads right hand thread



NPT

	D	D1	H	Da x L	No.
NPT 1/16 x 27	7,90	25	9	7,58 x 8,4	241401001
NPT 1/8 x 27	10,24	30	11	9,93 x 8,5	241401002
NPT 1/4 x 18	13,62	38	14	13,18 x 12,7	241401003
NPT 3/8 x 18	17,06	45	14	16,60 x 12,9	241401004
NPT 1/2 x 14	21,22	45	18	20,63 x 16,8	241401005
NPT 5/8 x 14	23,90	55	22		241401006
NPT 3/4 x 14	26,57	55	22	25,95 x 17,1	241401007
NPT 7/8 x 14	29,90	65	25		241401008
NPT 1" x 11,5	33,23	65	25	32,51 x 21,3	241401009
NPT 1.1/4 x 11,5	41,99	75	26	41,23 x 21,9	241401010
NPT 1.1/2 x 11,5	48,05	90	27	47,30 x 22,3	241401011
NPT 2" x 11,5	60,09	105	28	59,31 x 23,1	241401012

NPT

	D	D1	H	Da x L	No.
NPT 1/16 x 27	7,90	22	9	7,58 x 8,4	241501001
NPT 1/8 x 27	10,24	27	11	9,93 x 8,5	241501002
NPT 1/4 x 18	13,62	36	14	13,18 x 12,7	241501003
NPT 3/8 x 18	17,06	41	14	16,60 x 12,9	241501004
NPT 1/2 x 14	21,22	41	14	20,63 x 16,8	241501005
NPT 3/4 x 14	26,57	50	22	25,95 x 17,1	241501006
NPT 1" x 11,5	33,23	60	25	32,51 x 21,3	241501007
NPT 1.1/4 x 11,5	41,99	70	25	41,23 x 21,9	241501008
NPT 1.1/2 x 11,5	48,05	85	28	47,30 x 22,3	241501009
NPT 2" x 11,5	60,09	100	28	59,31 x 23,1	241501010

Short Machine Taps and Round Dies

NPS

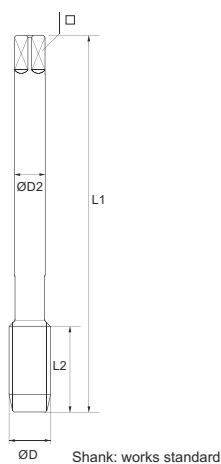
National standard straight pipe thread

Efficient internal thread cutting.

The short structural type makes that tap usable by machine and hand.

Application:

- ⚙ non abrasive material up to 900 N/mm²
- ⚙ unalloyed and low alloyed steel



Short Machine Taps Form C for through holes and blind holes



through holes & blind holes up to 2 x D

Chip removal (like picture)

Form C straight flutes



material: HSSG

medium

to 900 N/mm² 27,1 HRC



2-3 threads

outside cooling and lubrication



Round Dies for general use



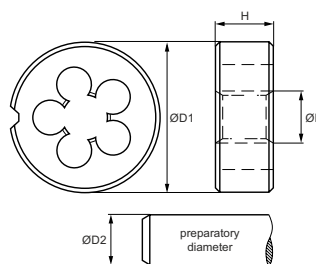
material: HSS

medium



Chamfer: 1,75 threads

right hand thread



NPS

	D1	D2	L1	L2	□	⚙	No.
NPS 1/16 x 27	7,90	8,0	54	18	6,0	6,40	260101001
NPS 1/8 x 27	10,24	8,0	55	19	6,0	8,90	260101002
NPS 1/4 x 18	13,62	11,0	62	28	9,0	11,50	260101003
NPS 3/8 x 18	17,06	14,0	65	28	11,0	15,00	260101004
NPS 1/2 x 14	21,22	18,0	80	35	14,0	18,50	260101005
NPS 3/4 x 14	26,57	23,0	85	35	17,0	23,80	260101006
NPS 1" x 11,5	33,23	26,0	95	45	21,0	29,90	260101007
NPS 1,1/4 x 11,5	41,99	32,0	105	45	26,0	38,60	260101008
NPS 1,1/2 x 11,5	48,05	38,0	110	45	29,0	44,70	260101009
NPS 2" x 11,5	60,09	46,0	120	50	35,0	56,70	260101010

NPSM

	D	D1	H	D2	No.
NPSM 1/8 x 27	10,24	30	11	9,99	261401001
NPSM 1/4 x 18	13,62	38	10	13,25	261401002
NPSM 3/8 x 18	17,06	45	14	16,70	261401003
NPSM 1/2 x 14	21,22	45	14	20,78	261401004
NPSM 3/4 x 14	26,57	55	16	26,14	261401005
NPSM 1" x 11,5	33,23	65	18	32,69	261401006
NPSM 1.1/4 x 11,5	41,99	75	20	41,45	261401007

RC (BSPT)

Whitworth tapered pipe thread / DIN 2999



RP (BSPP)

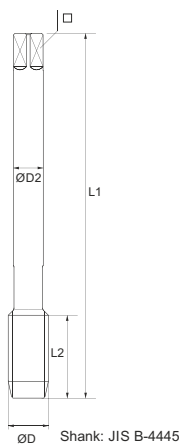
British standard whitworth pipe thread / ISO 7-1

Efficient internal thread cutting.

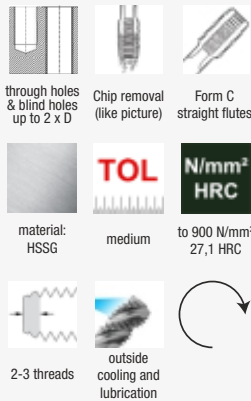
The short structural type makes that tap usable by machine and hand.

Application:

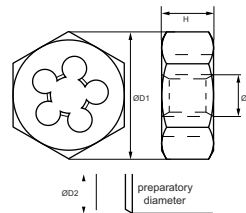
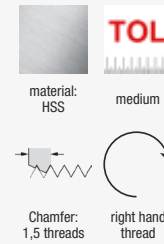
-  non abrasive material up to 900 N/mm²
-  unalloyed and low alloyed steel













Short Machine Taps Form C for through holes and blind holes



Hexagon Die Nuts for general use





RC (BSPT)

	D1	D2	L1	L2			No.
RC 1/16 x 28	7,72	8,0	55	17,5	6,0		6,30
RC 1/8 x 28	9,73	8,0	55	19	6,0		8,30 270101001
RC 1/4 x 19	13,16	11,0	62	28	9,0		11,10 270101002
RC 3/8 x 19	16,66	14,0	65	28	11,0		14,50 270101003
RC 1/2 x 14	20,95	18,0	80	35	14,0		18,10 270101004
RC 3/4 x 14	26,44	23,0	85	35	17,0		23,50 270101005
RC 1" x 11	33,25	26,0	95	45	21,0		29,50 270101006
RC 1.1/4 x 11	41,91	32,0	105	45	26,0		38,25
RC 1.1/2 x 11	47,80	38,0	110	45	29,0		44,25
RC 2" x 11	59,61	46,0	120	50	35,0		56,00

R (BSPT)

	D	D1	H	No.
R 1/8 x 28	9,73	27	11	271501001
R 1/4 x 19	13,16	36	14	271501002
R 3/8 x 19	16,66	41	15	271501003
R 1/2 x 14	20,95	50	19	271501004
R 3/4 x 14	26,44	60	20	271501005
R 1" x 11	33,25	60	25	271501006
R 1.1/4 x 11	41,91	85	26	271501007
R 1.1/2 x 11	47,80	85	26	271501008
R 2" x 11	59,61	100	31	271501009

RP (BSPP)

	D1	D2	L1	L2			No.
RP 1/16 x 28	7,72	8,0	55	18	6,0	6,55	280101001
RP 1/8 x 28	9,73	8,0	55	19	6,0	8,60	280101002
RP 1/4 x 19	13,16	11,0	62	28	9,0	11,50	280101003
RP 3/8 x 19	16,66	14,0	65	28	11,0	15,00	280101004
RP 1/2 x 14	20,95	18,0	80	35	14,0	18,50	280101005
RP 3/4 x 14	26,44	23,0	85	35	17,0	24,00	280101006
RP 1" x 11	33,25	26,0	95	45	21,0	30,25	280101007
RP 1.1/4 x 11	41,91	32,0	105	45	26,0	38,75	280101008
RP 1.1/2 x 11	47,80	38,0	110	45	29,0	44,75	280101009
RP 2" x 11	59,61	46,0	120	50	35,0	56,50	280101010




BA British Association thread / BS 93

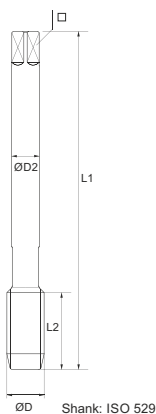
Efficient internal thread cutting.

The short structural type makes that tap usable by hand.


The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 3 taps:

-  Taper Tap
-  Intermediate Tap
-  Finish Tap



Hand Tap Sets for general use




through holes & blind holes up to 2 x D Chip removal (like picture) Form C straight flutes

material: HSSG **TOL** medium to 900 N/mm² 27,1 HRC

2-3 threads outside cooling and lubrication

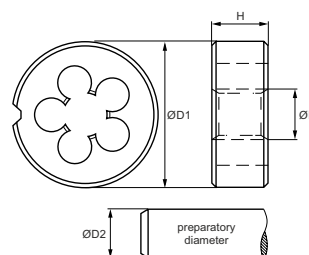


Round Dies for general use



material: HSS medium

Chamfer: 1,75 threads right hand thread



BA

BA	D1	D2	L1	L2			No.
BA 0	6,00	6,3	66	19,0	5,0	5,10	290313001
BA 1	5,30	5,6	62	17,0	4,5	4,50	290313002
BA 2	4,70	5,0	58	16,0	4,0	4,00	290313003
BA 3	4,10	4,5	53	13,0	3,6	3,40	290313004
BA 4	3,60	3,6	50	13,0	2,8	3,00	290313005
BA 5	3,20	3,2	48	11,0	2,5	2,65	290313006
BA 6	2,80	2,8	45	9,5	2,2	2,30	290313007

BA




BA	D	D1	H	D2	No.
BA 0	6,00	20,6	6,35	5,90	291401001
BA 1	5,30	20,6	6,35	5,21	291401002
BA 2	4,70	20,6	6,35	4,61	291401003
BA 3	4,10	20,6	6,35	4,02	291401004
BA 4	3,60	20,6	6,35	3,52	291401005
BA 5	3,20	20,6	6,35	3,14	291401006
BA 6	2,80	20,6	6,35	2,74	291401007
BA 7	2,50	20,6	6,35	2,44	291401008
BA 8	2,20	20,6	6,35	2,15	291401009
BA 10	1,70	20,6	6,35	1,66	291401010

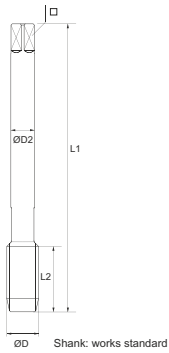
W Tapered whitworth DIN 477 for screw sockets taper 3:25

Efficient internal thread cutting.

The short structural type makes that tap usable by hand. The Short-Machine-Tap is also usable by machine.

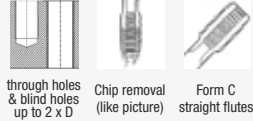
A Hand-Tap-Set includes 3 taps:

-  Taper Tap
-  Intermediate Tap
-  Finish Tap

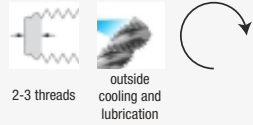
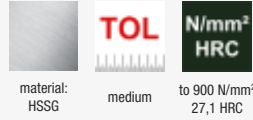


Short Machine Taps

Form C for through holes and blind holes

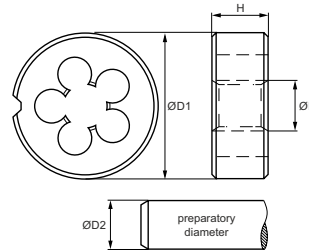
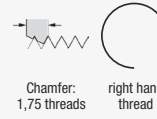




through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes



Round Dies

for general use



W	D1	D2	L1	L2			No.
W 19,8 x 14 conical	19,80	16,0	90	32	12,0	14,70	300101001
W 28,8 x 14 conical	28,80	22,0	100	40	18,0	22,70	300101002
W 31,3 x 14 conical	31,30	22,0	110	40	18,0	25,20	300101003
W 21,8 x 14 cyl. - right	21,80	18,0	80	22	14,5	19,75	310101004
W 21,8 x 14 cyl. - left	21,80	18,0	80	22	14,5	19,75	310101005
W 24,32 x 14 cylindrical	24,32	18,0	90	22	14,5	22,25	310101006

W	D	D1	H	D2	No.
W 19,8 x 14 conical	19,80	45	25	17,34	301401001
W 28,8 x 14 conical	28,80	65	30	25,74	301401002
W 21,8 x 14 cyl. - right	21,80	55	16	21,58	311401003
W 21,8 x 14 cyl. - left	21,80	55	16	21,58	311401004
W 24,32 x 14 cylindrical	24,32	55	16	24,10	311401005

PG



Steel Conduit Thread / DIN 40430

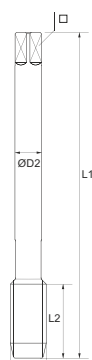
Efficient internal thread cutting.

The short structural type makes that tap usable by hand.

The Short-Machine-Tap is also usable by machine.

Application:

-  non abrasive material up to 900 N/mm²
-  unalloyed and low alloyed steel



Shank: DIN 40432

Short Machine Taps Form D for through holes and blind holes

through holes & blind holes up to 4 x D

Chip removal (like picture)

Form D straight flutes

material: HSSG medium to 900 N/mm² 27,1 HRC

4-5 threads

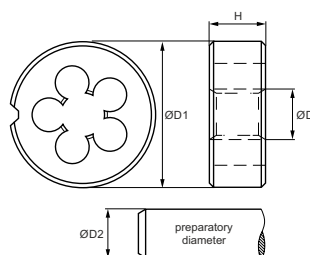
outside cooling and lubrication





Round Dies for general use

material: HSS medium

Chamfer: 1,75 threads right hand thread



PG

PG	D1	D2	L1	L2			No.
PG 7 x 20	12,50	9,0	70	22	7,0	11,35	320101001
PG 9 x 18	15,20	12,0	70	22	9,0	13,95	320101002
PG 11 x 18	18,60	14,0	80	22	11,0	17,35	320101003
PG 13,5 x 18	20,40	16,0	80	22	12,0	19,15	320101004
PG 16 x 18	22,50	18,0	80	22	14,5	21,25	320101005
PG 21 x 16	28,30	22,0	90	22	18,0	26,90	320101006
PG 29 x 16	37,00	28,0	100	25	22,0	35,60	320101007
PG 36 x 16	47,00	36,0	140	40	29,0	45,60	320101008
PG 42 x 16	54,00	40,0	140	40	32,0	52,60	320101009
PG 48 x 16	59,30	45,0	160	40	35,0	57,90	320101010

PG

PG	D	D1	H	D2	No.
PG 7 x 20	12,50	38	10	12,50	321401001
PG 9 x 18	15,20	45	14	15,20	321401002
PG 11 x 18	18,60	45	14	18,60	321401003
PG 13,5 x 18	20,40	45	14	20,40	321401004
PG 16 x 18	22,50	55	16	22,50	321401005
PG 21 x 16	28,30	65	18	28,30	321401006
PG 29 x 16	37,00	65	18	37,00	321401007
PG 36 x 16	47,00	90	22	47,00	321401008
PG 42 x 16	54,00	105	22	54,00	321401009
PG 48 x 16	59,30	105	22	59,30	321401010

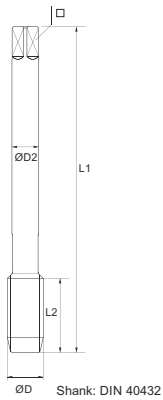
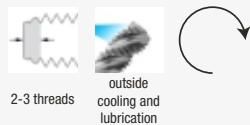
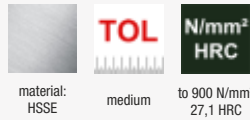
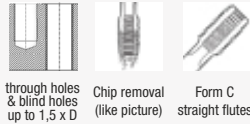
FG Bicycle thread / DIN 79012

BSC British bicycle thread / RS 811

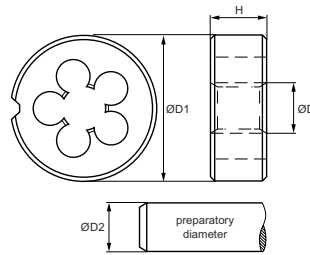
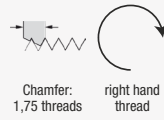
Tap for machine use in through hole and blind hole.

The short lead-in chamfer makes that tap universal in application. The flutes can hold the most part of the chips.

Short Machine Taps Form C for through holes and blind holes



Round Dies for general use



FG	D1	D2	L1	L2	□	⚙️	No.
FG 6,35 x 26	6,35	7,0	80	14	5,5	5,50	330501001
FG 7,9 x 26	7,90	8,0	90	16	6,2	7,00	330501002
FG 9,5 x 26	9,50	7,0	90	16	5,5	8,60	330501003
FG 14,3 x 20 right	14,30	11,0	100	22	9,0	13,10	330501004
FG 14,3 x 20 left	14,30	11,0	100	22	9,0	13,10	330501005
FG 25,4 x 24	25,40	14,0	110	22	11,0	24,50	330501006

FG	D	D1	H	D2	No.
FG 6,35 x 26	6,35	20	7	6,24	331401001
FG 7,9 x 26	7,90	25	9	7,82	331401002
FG 9,5 x 26	9,50	30	11	9,40	331401003
FG 14,3 x 20 right	14,30	38	10	14,40	331401004
FG 14,3 x 20 left	14,30	38	10	14,40	331401005
FG 25,4 x 24	25,40	55	16	25,25	331401006

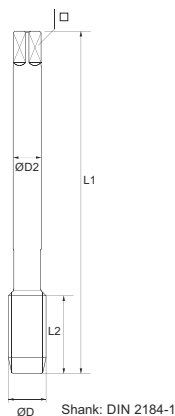
BSC	D1	D2	L1	L2	□	⚙️	No.
BSC 1/4 x 26	6,35	6,0	56	14	4,9	5,55	340101001
BSC 5/16 x 26	7,94	6,0	63	16	4,9	7,10	340101002
BSC 3/8 x 26	9,53	7,0	63	16	5,5	8,65	340101003
BSC 9/16 x 20 right	14,29	11,0	70	22	9,0	13,15	340101004
BSC 9/16 x 20 left	14,29	11,0	70	22	9,0	13,15	340101005
BSC 1" x 24	25,40	14,0	70	22	11,0	24,50	340101006

BSC	D	D1	H	D2	No.
BSC 1/4 x 26	6,35	20,6	6,35	6,24	341401001
BSC 5/16 x 26	7,94	25,4	9,5	7,82	341401002
BSC 3/8 x 26	9,53	25,4	9,5	9,40	341401003
BSC 7/16 x 26	11,11	25,4	9,5	10,98	341401004
BSC 9/16 x 20 right	14,29	38,1	12,7	14,14	341401005
BSC 9/16 x 20 left	14,29	38,1	12,7	14,14	341401006
BSC 1" x 24	25,40	55	16	25,25	341401007

RD knuckle thread / DIN 405

Tap for machine use in through hole and blind hole.

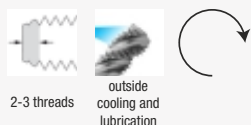
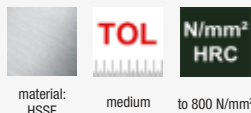
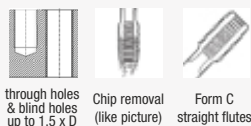
The short lead-in chamfer makes that tap universal in application. The flutes can hold the most part of the chips.



RMS Royal Microscopical Society / DIN 58888

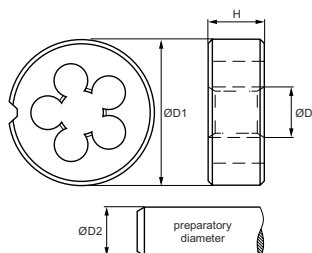
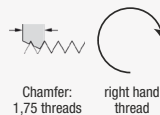
Short Machine Taps

Form C for through holes and blind holes



Round Dies

for general use



RD

	D1	D2	L1	L2	□	▣	No.
Rd 8 x 1/10	8,25	6,0	90	26	4,9	5,71	350501001
Rd 9 x 1/10	9,25	7,0	90	26	5,5	6,71	350501002
Rd 10 x 1/10	10,25	7,0	100	28	5,5	7,71	350501003
Rd 11 x 1/10	11,25	8,0	100	28	6,2	8,71	350501004
Rd 12 x 1/10	12,25	9,0	110	28	7,0	9,71	350501005
Rd 14 x 1/8	14,32	11,0	110	32	9,0	11,14	350501006
Rd 16 x 1/8	16,32	12,0	110	32	9,0	13,14	350501007
Rd 18 x 1/8	18,32	14,0	125	32	11,0	15,14	350501008
Rd 20 x 1/8	20,32	16,0	140	32	12,0	17,14	350501009
Rd 22 x 1/8	22,32	18,0	140	32	14,5	19,14	350501010
Rd 24 x 1/8	24,32	18,0	160	34	14,5	21,14	350501011
Rd 26 x 1/8	26,32	20,0	160	36	16,0	23,14	350501012
Rd 28 x 1/8	28,32	20,0	160	36	16,0	25,14	350501013
Rd 30 x 1/8	30,32	22,0	180	36	18,0	27,14	350501014
Rd 32 x 1/8	32,82	25,0	180	36	20,0	29,14	350501015
Rd 34 x 1/8	34,32	28,0	200	36	22,0	31,14	350501016
Rd 36 x 1/8	36,32	28,0	200	36	22,0	33,14	350501017
Rd 38 x 1/8	38,32	28,0	200	38	22,0	35,14	350501018
Rd 40 x 1/6	40,42	32,0	200	50	24,0	36,19	350501019

RD

	D	D1	H	D2	No.
Rd 10 x 1/10	10,25	38	14	9,84	351401001
Rd 11 x 1/10	11,25	38	14	10,84	351401002
Rd 12 x 1/10	12,25	38	14	11,84	351401003
Rd 14 x 1/8	14,32	45	18	13,82	351401004
Rd 16 x 1/8	16,32	45	18	15,82	351401005
Rd 18 x 1/8	18,32	45	18	17,82	351401006
Rd 20 x 1/8	20,32	55	22	19,82	351401007
Rd 22 x 1/8	22,32	55	22	21,82	351401008
Rd 24 x 1/8	24,32	55	22	23,82	351401009
Rd 26 x 1/8	26,32	65	25	25,82	351401010
Rd 28 x 1/8	28,32	65	25	27,82	351401011
Rd 30 x 1/8	30,32	65	25	29,82	351401012
Rd 32 x 1/8	32,82	65	25	31,82	351401013

RMS

	D1	D2	L1	L2	□	▣	No.
W 0,8 x 36	20,35	16,0	80	18	12,0	19,45	360501001

RMS

	D	D1	H	D2	No.
W 0,8 x 36	20,35	45	14	20,00	361401002

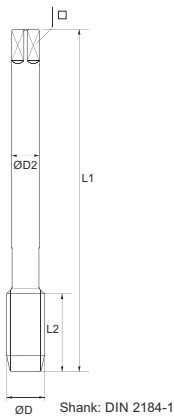
MINI Metric Mini-thread and Nono-thread

Efficient internal thread cutting in clock and watch industry as well as apparatus construction and fine mechanics.

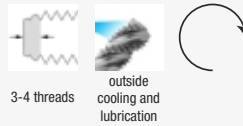
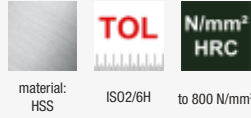
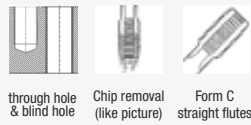
For through and blind holes.

Very break-proof.



Suitable for automatic lathe and tapping machine.



Machine Tap for general use



MINI

	D1	D2	L1	L2			No.	packing unit [PU]	per PU
M 0,3 x 0,08	0,3	1,0	22	2	0,2	0,24	370501001	10 pieces	
M 0,35 x 0,09	0,4	1,0	22	2	0,3	0,28	370501002	10 pieces	
M 0,4 x 0,1	0,4	1,0	22	2,5	0,3	0,32	370501003	10 pieces	
M 0,5 x 0,125	0,5	1,0	22	3	0,4	0,40	370501004	10 pieces	
M 0,6 x 0,15	0,6	1,0	22	3,5	0,5	0,49	370501005	10 pieces	
M 0,7 x 0,175	0,7	1,5	25	4,5	0,6	0,57	370501006	10 pieces	
M 0,8 x 0,2	0,8	1,5	25	5	0,7	0,65	370501007	10 pieces	
M 0,9 x 0,225	0,9	1,5	25	5,5	0,8	0,73	370501008	10 pieces	
M 1 x 0,15	1,0	1,5	25	6	0,9	0,89	370501009	10 pieces	
M 1 x 0,2	1,0	1,5	25	6	0,9	0,85	370501010	10 pieces	
M 1 x 0,25	1,0	1,5	25	6	0,8	0,81	370501011	10 pieces	
M 1,1 x 0,25	1,1	1,5	25	7	0,9	0,91	370501012	10 pieces	
M 1,2 x 0,15	1,2	1,5	25	7	1,1	1,09	370501013	10 pieces	
M 1,2 x 0,2	1,2	1,5	25	7	1,1	1,05	370501014	10 pieces	
M 1,2 x 0,25	1,2	1,5	25	7	1,0	1,01	370501015	10 pieces	
M 1,3 x 0,3	1,3	1,5	25	8	1,1	1,07	370501016	10 pieces	
M 1,4 x 0,2	1,4	2,0	30	9	1,3	1,25	370501017	10 pieces	
M 1,4 x 0,25	1,4	2,0	30	9	1,2	1,21	370501018	10 pieces	
M 1,4 x 0,3	1,4	2,0	30	8,5	1,2	1,17	370501019	10 pieces	
M 1,5 x 0,3	1,5	2,0	30	10	1,3	1,27	370501020	10 pieces	
M 1,6 x 0,2	1,6	2,0	30	10	1,5	1,45	370501021	10 pieces	
M 1,6 x 0,25	1,6	2,0	30	10	1,4	1,41	370501022	10 pieces	
M 1,6 x 0,35	1,6	2,0	30	10	1,3	1,30	370501023	10 pieces	
M 1,7 x 0,35	1,7	2,0	30	10	1,4	1,40	370501024	10 pieces	
M 1,8 x 0,2	1,8	2,0	30	10	1,7	1,65	370501025	10 pieces	
M 1,8 x 0,25	1,8	2,0	30	10	1,6	1,61	370501026	10 pieces	
M 1,8 x 0,35	1,8	2,0	30	10	1,5	1,50	370501027	10 pieces	
M 2 x 0,2	2,0	3,0	35	13	1,9	1,85	370501028	10 pieces	
M 2 x 0,25	2,0	3,0	35	13	1,8	1,81	370501029	10 pieces	
M 2 x 0,4	2,0	3,0	35	13	1,7	1,65	370501030	10 pieces	
M 2,2 x 0,45	2,2	3,0	35	13	1,8	1,80	370501031	10 pieces	
M 2,3 x 0,4	2,3	3,0	35	13	2,0	1,95	370501032	10 pieces	
M 2,4 x 0,45	2,4	3,0	40	15	2,0	2,00	370501033	10 pieces	
M 2,5 x 0,45	2,5	3,0	40	15	2,1	2,10	370501034	10 pieces	
M 2,6 x 0,45	2,6	3,0	40	15	2,2	2,20	370501035	10 pieces	

Short Machine Taps and Hand Tap Sets

Camera-Tripod

Camera tripod & C-Mount thread / DIN 4503


Efficient internal thread cutting.

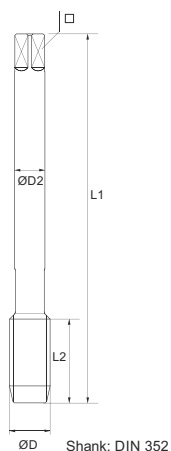
The short structural type makes that tap usable by hand.

The Short-Machine-Tap is also usable by machine.

A Hand-Tap-Set includes 2 taps:

 Taper Tap

 Finish Tap



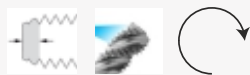
Short Machine Taps Form D for through holes and blind holes



through holes & blind holes up to 4 x D
Chip removal (like picture)
Form D straight flutes



material: HSSG medium to 900 N/mm² 27,1 HRC



4-5 threads
outside cooling and lubrication



Hand Tap Sets for general use



through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes





material: HSSG medium to 900 N/mm² 27,1 HRC



2-3 threads
outside cooling and lubrication



Camera

	D1	D2	L1	L2			No.	No.
Cam.-Tripod 1/4"	6,35	6,0	50	19	4,9	5,20	380101001	
Cam.-Tripod 3/8"	9,53	7,0	70	24	5,5	8,00	380101002	
C-Mount 1" x 32	25,40	18,0	130	45	14,0	23,75	380101003	
S-Mount 12 x 0,5	12,00	9,0	70	22	7,0	11,50		380301004

Camera-Tripod

Camera tripod & C-Mount thread / DIN 4503

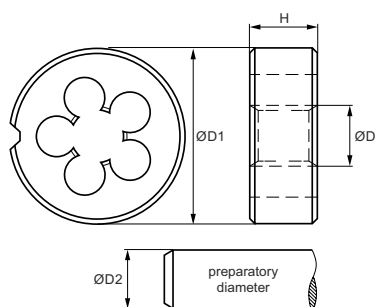
Round Dies
for general use



material: HSS medium



Chamfer: 1,75 threads right hand thread



Camera

	D	D1	H	D2	No.
Camera-Tripod 1/4"	6,35	20	7	6,22	381401001
Camera-Tripod 3/8"	9,53	20	7	9,37	381401002
C-Mount 1" x 32	25,40	55	16	25,25	381401003
S-Mount 12 x 0,5	12,00	38	10	11,92	381401004

VG Valve thread / DIN 7756

Efficient internal thread cutting.

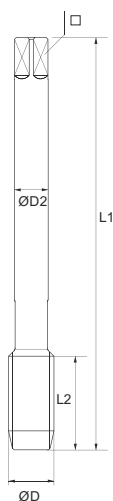
The short structural type makes that tap usable by hand.

The Short-Machine-Tap is also usable by machine.

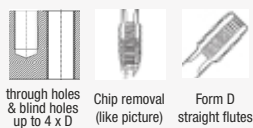
A Hand-Tap-Set includes 2 taps:

 Taper Tap

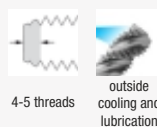
 Finish Tap



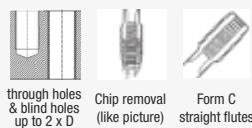
Short Machine Taps Form D for through holes and blind holes



through holes & blind holes up to 4 x D
Chip removal (like picture)
Form D straight flutes
material: HSSG medium to 900 N/mm² 27,1 HRC



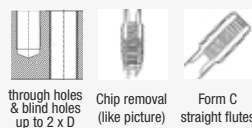
Hand Tap Sets for general use



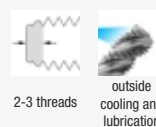
through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes
material: HSSG medium to 900 N/mm² 27,1 HRC





Short Machine Taps Form C for through holes and blind holes



through holes & blind holes up to 2 x D
Chip removal (like picture)
Form C straight flutes
material: HSSG medium to 900 N/mm² 27,1 HRC



VG

	D1	D2	L1	L2			No.	No.	No.
DIN 2181									
VG 5 x 36	5,15	6,0	50	12	4,9	4,65	390101001	390301001	
VG 5,2 x 24	5,23	6,0	56	17	4,9	4,25	390101002	390301002	
VG 6 x 32	5,98	6,0	56	14	4,9	5,35	390101003	390301003	
VG 8 x 32	7,68	7,0	56	16	5,5	6,90	390101004	390301004	
VG 10 x 28	10,27	8,0	63	18	6,2	9,35	390101005	390301005	
VG 12 x 26	12,17	9,0	70	22	7,0	11,15	390101006	390301006	
DIN 374									
VG 5 x 36	5,15	6,0	70	12	4,9	4,65			390501001
VG 5,2 x 24	5,23	6,0	80	17	4,9	4,25			390501002
VG 6 x 32	5,98	7,0	80	14	5,5	5,35			390501003
VG 8 x 32	7,68	8,0	80	16	6,2	6,90			390501004
VG 10 x 28	10,27	8,0	90	18	6,2	9,35			390501005
VG 12 x 26	12,17	9,0	100	22	7,0	11,15			390501006

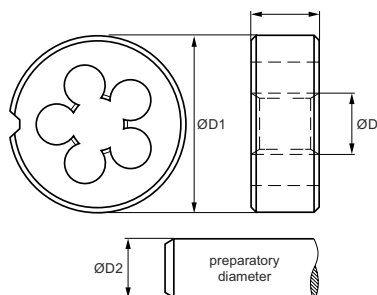
Round Dies
for general use



material: HSS medium



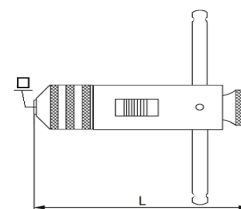
Chamfer: 1,5 threads right hand thread



VG

	D	D1	H	D2	No.
VG 5 x 36	5,15	20	7	5,15	391401001
VG 5,2 x 24	5,23	20	7	5,23	391401002
VG 6 x 32	5,98	20	7	5,98	391401003
VG 8 x 32	7,68	25	9	9,60	391401004
VG 10 x 28	10,27	30	11	10,27	391401005
VG 12 x 26	12,17	30	11	12,17	391401006

Tap holders with ratchet



for taps

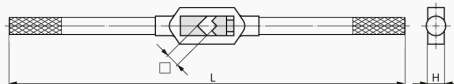
size	metric	inch-sizes		L1	No.
1	M 3 - M 10	1/8 - 3/8	2,4 - 5,5	85	491625001
2	M 5 - M 12	7/32 - 1/2	4,5 - 8,0	100	491625002
10	M 3 - M 10	1/8 - 3/8	2,4 - 5,5	250	491625010
20	M 5 - M 12	7/32 - 1/2	4,5 - 8,0	300	491625020



Adjustable Pro Tap Wrenches - Premium zinc die cast

for taps

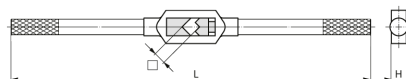
size	metric	inch-sizes	pipe-threads		L1	No.
0	M 1 - M 8	1/16 - 1/4		2,0 - 5,0	130	491725000
1	M 1 - M 10	1/16 - 3/8	G 1/8	2,0 - 6,3	176	491725010
1.1/2	M 1 - M 12	1/16 - 1/2	G 1/8	2,1 - 8,0	176	491725015
2	M 4 - M 12	5/32 - 1/2	G 1/8	3,0 - 9,0	280	491725020
3	M 5 - M 20	7/32 - 3/4	G 1/8 - G 1/2	4,9 - 12	380	491725030
4	M 11 - M 27	7/16 - 1"	G 1/4 - G 3/4	5,5 - 16	505	491725040
5	M 13 - M 32	1/2 - 1.1/4	G 1/4 - G 1"	7,0 - 20	700	491725050
6	M 18 - M 42	3/4 - 1.1/2	G 1/2 - 1.1/4"	11,0 - 24	1000	491725060



Adjustable Tap Wrenches - steel

for taps

	metric	inch-sizes	pipe-threads		L1	No.
0	M 1 - M 8	1/16 - 1/4		2,0 - 5,0	130	491724000
1	M 1 - M 10	1/16 - 3/8		2,0 - 6,3	180	491724010
1.1/2	M 1 - M 12	1/16 - 1/2	G 1/8	2,1 - 8,0	205	491724015
2	M 4 - M 12	5/32 - 1/2	G 1/8	3,0 - 9,0	280	491724020
3	M 5 - M 20	7/32 - 3/4	G 1/8 - G 1/2	4,9 - 12	380	491724030
4	M 11 - M 27	7/16 - 1"	G 1/4 - G 3/4	5,5 - 16	500	491724040
5	M 13 - M 32	1/2 - 1.1/4	G 1/4 - G 1"	7,0 - 20	700	491724050
6	M 18 - M 42	3/4 - 1.1/2	G 1/2 - G 1.1/4	11 - 24	1000	491724060
7	M 27 - M 52	1.1/8 - 2"	G 3/4 - G 1.3/4	16 - 32	1250	491724070
8	M 27 - M 64	1.1/8 - 3"	G 3/4 - G 3"	16 - 40	1250	491724080

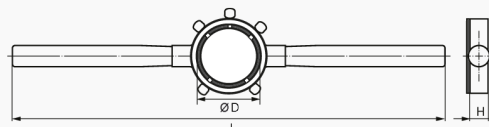


**Die Stocks Pro -
Premium zinc die cast**



For Round Dies

∅ D x H	metric	inch-sizes	L1	No.
16 x 5	M 1 - M 2,6	BSW 1/16 - BSW 3/32	160	491825001
20 x 5	M 3 - M 4	BSW 1/8 - BSW 5/32	200	491825002
20 x 7	M 4.5 - M 6	BSW 3/16 - BSW 1/4	200	491825003
25 x 9	M 7 - M 9	BSW 5/16	224	491825004
30 x 11	M 10 - M 11	BSW 3/8 - BSW 7/16	280	491825005
38 x 10	MF 12 - MF 15	G 1/4	315	491825006
38 x 14	M 12 - M 14	BSW 1/2 - BSW 9/16	315	491825007
45 x 14	MF 16 - MF 20	G 3/8-1/2	450	491825008
45 x 18	M 16 - M 20	BSW 5/8 - BSW 13/16	450	491825009
55 x 16	MF 22 - MF 26	G 5/8 - G 3/4	560	491825010
55 x 22	M 22 - M 24	BSW 7/8 - BSW 1"	560	491825011
65 x 18	MF 27 - MF 36	G 7/8 - G 1"	630	491825012
65 x 25	M 27 - M 36	BSW 1.1/8 - BSW 1.3/8	630	491825013

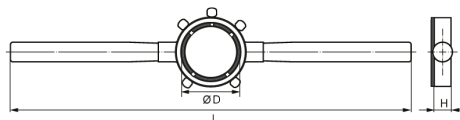


**Die Stocks -
zinc die cast**



For Round Dies

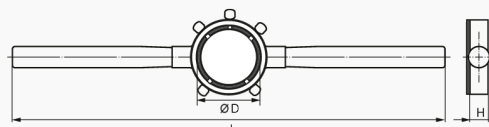
∅ D in inch	∅ D (mm) x H (mm)	∅ D (inch) x H (inch)	L1	No.
13/16"	20,6 x 6,35	13/16 x 1/4	200	491823014
1"	25,4 x 9,5	1" x 3/8	224	491823015
1.5/16"	33,4 x 11,1	1.5/16 x 7/16	270	491823016
1.1/2"	38,1 x 12,7	1.1/2 x 1/2	315	491823017
2"	50,8 x 15,9	2" x 5/8	560	491823018
2.1/4"	57,1 x 17,5	2.1/4 x 11/16	560	491823019
2.1/2"	63,5 x 19,0	2.1/2 x 3/4	630	491823020
3"	76,2 x 22,2	3" x 7/8	900	491823021
3.1/2"	88,9 x 25,4	3.1/2" x 1"	900	491823022
4"	101,6 x 25,4	4" x 1"	1000	491823023



**Die Stocks -
steel**

For Round Dies

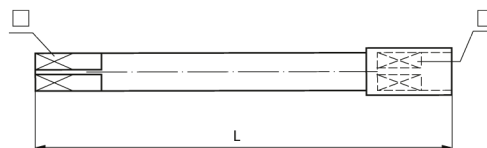
∅ D x H	metric	inch-sizes	L1	No.
45 x 18	M 16 - M 20	BSW 5/8 - BSW 13/16	450	491824001
55 x 22	M 22 - M 24	BSW 7/8 - BSW 1"	560	491824002
65 x 25	M 27 - M 36	BSW 1.1/8 - BSW 1.3/8	630	491824003
75 x 20	MF 38 - MF 42	G 1.1/8 - G 1.1/4	800	491824004
75 x 30	M 38 - M 42	BSW 1.1/2 - BSW 1.5/8	800	491824005
90 x 22	MF 45 - MF 52	G 1.3/8 - G 1.5/8	900	491824006
90 x 36	M 45 - M 52	BSW 1.3/4 - BSW 2"	900	491824007
105 x 22	MF 54 - MF 63	G 1.3/4 - G 2"	975	491824008
105 x 36	M 54 - M 63	BSW 2.1/4	975	491824009
120 x 22	MF 64 - MF 71	G 2.1/4 - G 2.3/4	956	491824010
120 x 36	M 64 - M 71	BSW 2.1/2 - BSW 2.3/4	956	491824011
130 x 25		G 3"	966	491824012
130 x 36			966	491824013
140 x 22			976	491824014
150 x 25		G 3.1/2"	986	491824015
160 x 25		G 4"	996	491824016



Extension sleeves for taps



□	L1	for taps	
		metric acc. to DIN 352	No.
2,1	60	M 1 - M 2,6	491925021
2,4	70		491925024
2,7	80	M 3	491925027
3,0	90	M 3,5	491925030
3,4	95	M 4	491925034
3,8	100		491925038
4,3	105		491925043
4,9	110	M 4,5 - M 8	491925049
5,5	115	M 9 - M 10	491925055
6,2	120	M 11	491925062
7,0	125	M 12	491925070
8,0	125		491925080
9,0	130	M 14 - M 16	491925090
10,0	140		491925100
11,0	150	M 18	491925110
12,0	155	M 20	491925120
13,0	165		491925130
14,5	175	M 22 - M 24	491925145
16,0	180	M 27	491925160
18,0	200	M 30	491925180
20,0	220	M 33	491925200
22,0	220	M 36	491925220
24,0	235	M 39 - M 42	491925240
26,0	250		491925260
29,0	265	M 45 - M 48	491925290
32,0	285	M 52	491925320



Die Guides M 3 - M 12

for Round Dies DIN 223 = EN 22568 and
Die Stocks DIN 225 = EN 22568

Application:

- ⚙ The guide helps cutting an external thread with cutting dies. The guides will be laid together with the cutting dies into the die holder.

Advantages:

- ✓ accurate aligned threads
- ✓ clear thread flanks
- ✓ less deficient products
- ✓ better evacuation of the chip, because of the leading with clearance holes
- ✓ able to cut right- or left-hand threads as well as all possible pitches



Item No.:
492025312



100 ml
Item No.: SP100

High Performance cutting paste

Cutting paste with high pressure additives achieves extremely high lubricity. The paste adhering to the cutting edges only gets liquid when used (use cutting paste undiluted).

Lubrication is important for chip removal processes.

Advantages:

- ✓ Contains no petroleum, chlorine or sulfur
- ✓ Significantly improved tool life time
- ✓ Does not leave a greasy film of oil on the workpiece

Application:

- ⚙ Drilling, tapping, thread milling, reaming, milling, core drilling, sawing, as well as for heavy chipping and for all machining operations.

For all steels such as: iron, steel, tool steel, high alloy steels, chromium-nickel alloys, Aluminum, titanium, manganese, cast steel, cast iron, brass, bronze and all stainless steels AISI 304, AISI 316, INOX etc.

Countersink

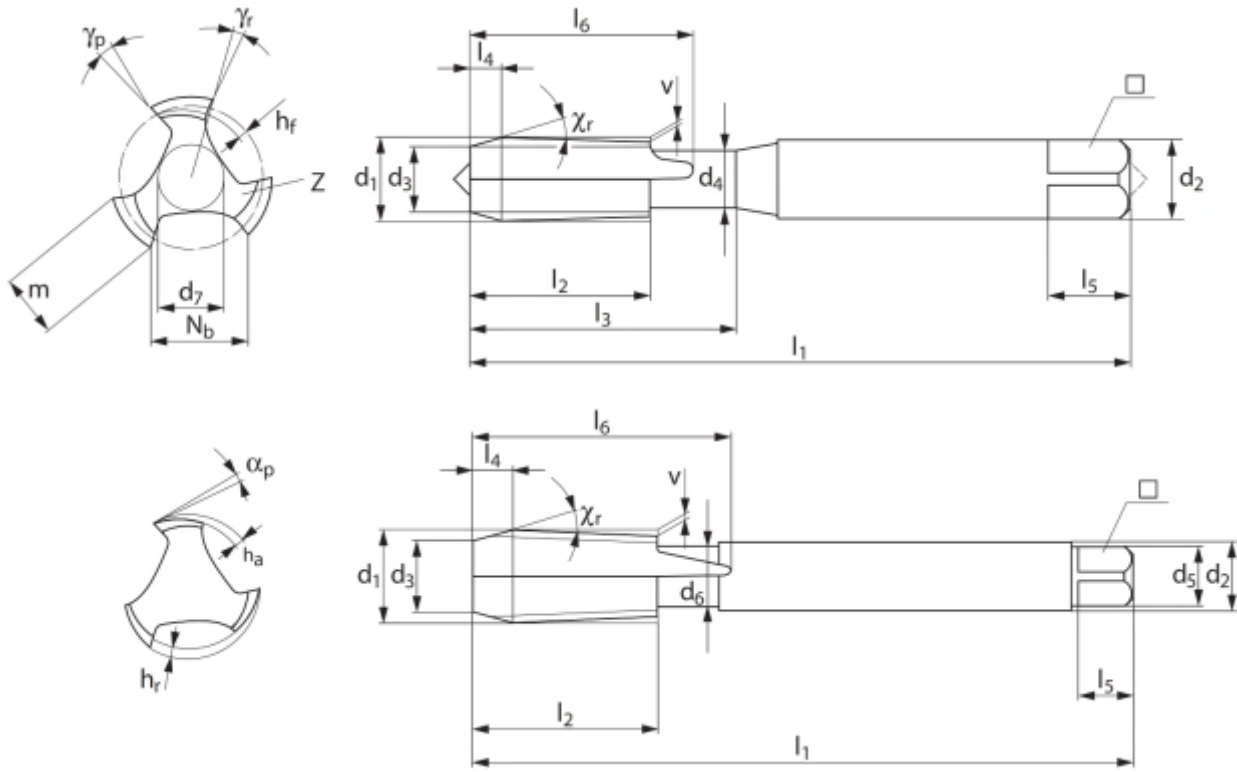


dimension	No.	No.	No.
6,3 mm (M 3)	74563	74663	744063
8,3 mm (M 4)	74583	74683	744083
10,4 mm (M 5)	745104	746104	744104
12,4 mm (M 6)	745124	746124	744124
16,5 mm (M 8)	745165	746165	744165
20,5 mm (M 10)	745205	746205	744205
25,0 mm (M 12)	745250	746250	
31,0 mm (M 16)	745310	746310	
Set 6,3 8,3 10,4 12,4 16,5 20,5 mm	1571	1573	1576 68,04
Set 6,3 10,4 16,5 20,5 25,0 mm	1572	1574	



* picture of sets

Tap Geometries








d1	Thread diameter	Z	Number of flutes
d2	Shank diameter	v	Back taper (axial relief)
d3	Chamfer diameter	xr	Chamfer angle
d4	Neck diameter	Nb	Width of flute
d5	Recessed square diameter	m	Width of land
d6	Neck diameter	ha	Chamfer relief
d7	Web diameter	hf	Relief on flanks
l1	Total length	hr	Chamfer relief
l2	Thread length	αp	Relief angle
l3	Useful length	γp	Rake angle
l4	Chamfer lead length		
l5	Square length		
l6	Flute length		
<input type="checkbox"/>	Sqaure dimension		

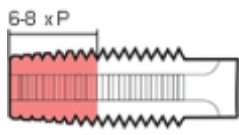
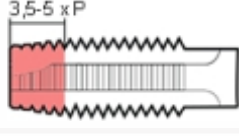

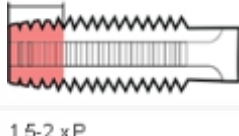
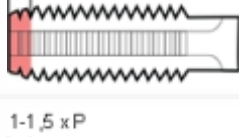
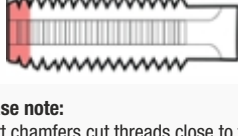
Tap Centering



Tap Construction dimensions

	DIN 352	DIN 2181	DIN 5157	DIN 40432
Gewindebohrer / Tap				
	DIN 371	DIN 40435		
Gewindebohrer / Tap				
	DIN 376	DIN 374	DIN 5156	DIN 40433
Gewindebohrer / Tap				DIN 40435
	DIN 2174	DIN 371		
Gewindeformer / Forming Tap				
	DIN2174	DIN 376	DIN 2189	
Gewindeformer / Forming Tap				

Tap Chamfer Forms

	Form A long, 6 - 8 thread straight flutes for short through holes
	Form B medium, 3,5 - 5,5 threads straight flutes with spiral point for through holes in medium- and long chipping materials
	Form C short, 2 - 3 threads straight and spiral flutes for blind holes in medium- and long chipping materials for through holes in short chipping materials
	Form D medium, 3,5 - 5 threads straight and spiral flutes 15° for blind holes with long thread runout for short through holes
	Form E very short, 1,5 - 2 threads straight and spiral flutes 15° for blind holes with short thread runout
	Form F very short, 1 - 1,5 threads straight and spiral flutes for blind holes with short thread runout Avoid if possible.

Please note:

Short chamfers cut threads close to the bottom of the borehole.

Long chamfers reduce the force on the cutting edges (recommended for materials with higher material strength)

Long chamfers increase the required torque.

Tap flutes



Form A, C, E
straight-fluted
for through and blind holes

The flutes can hold a part of the chips. Chips get only partially removed in cutting direction. For this reason it is not recommended to use the tap for deep holes.



Form B
straight-fluted with spiral point
for through holes

Due to the spiral point the chips are getting removed tightly rolled in cutting direction and prevents chip-packing. Coolant-lubricant can flow freely.



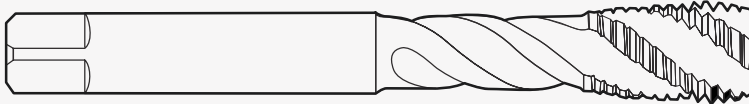
Form C, D
8 - 15° left-hand spiral flutes
for through holes

Due to the left-hand spiral flutes the rake angle remains constant and ensure stable chamfer teeth to produce threads in high-strength materials. The left-hand spiral flutes forces the chips to remove ahead of the tap.



Form C, E
10 - 15° right-hand spiral flutes
for blind holes

Especially suitable for automatic lathes and multi-spindle machines. Due to the chip removal against the cutting direction a secured tapping process is assured in hard conditions, even for threads with cross holes.

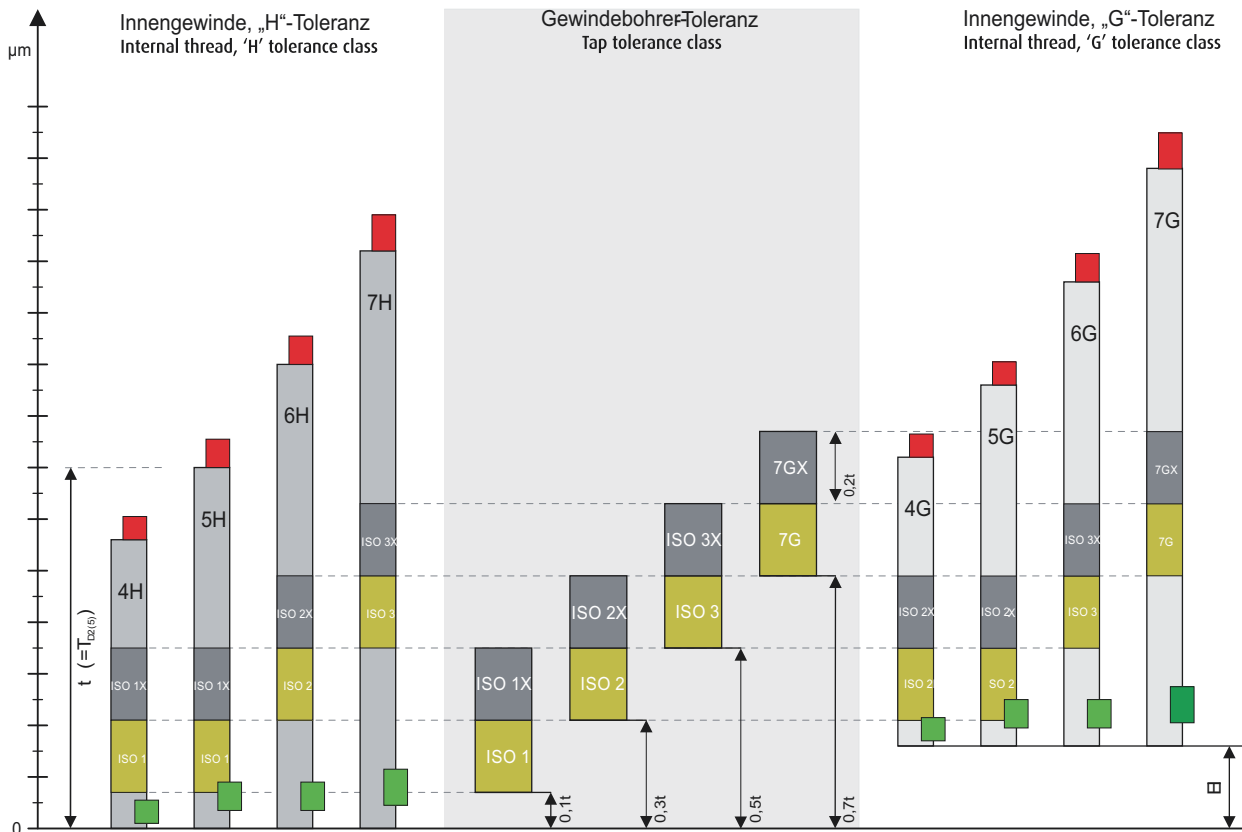


Form C, E
35 - 50° right-hand spiral flutes
for blind holes

Due to the high spiral flutes, the chips can be removed securely also in long-chipping and deep blind holes.



Tolerances



- Flankendurchmesser-Toleranz des Innengewindes nach DIN ISO 965-1
Pitch diameter tolerance of internal thread acc. DIN ISO 965-1
- Gewindebohrer mit spezieller Flankendurchmesser-Toleranz
Taps with specific pitch diameter tolerance
- Flankendurchmesser-Toleranz des Gewindebohrers nach DIN EN 22857
Pitch diameter tolerance of the tap acc. DIN EN 22857
- Flankendurchmesser-Toleranz des Ausschusslehndorns nach DIN ISO 1502
Pitch diameter tolerance of the no-go thread plug gauge acc. DIN ISO 1502
- Flankendurchmesser-Toleranz des Gutlehndorns nach DIN ISO 1502
Pitch diameter tolerance of the go thread plug gauge acc. DIN ISO 1502

- EI = Grundmaß
Basis
- t = Toleranzklasse 5 des Innengewindes (Toleranzeinheit)
Tolerance class of the internal thread (tolerance unit)
- TD2 = Toleranz des Flankendurchmessers
Pitch diameter tolerance

tolerance class of tap	tolerance field internal thread	remarks	Applications
4H (DIN 802/1)	ISO 1 4H 5H	undersize	Threads with small clearance
6H (DIN 802/1)	ISO 2 4G 5G 6H	normal	Thread with normal clearance
6G (DIN 802/1)	ISO 3 6G 7H 8H	oversize	Threads with large clearance
7G (DIN 802/4)	7G 8G	oversize	before heat treatment, causing distortion
6H +0,1		oversize	Electroplating allowance ≈ 25µm thickness
6H +0,2		oversize	Electroplating allowance ≈ 50µm thickness

Tap Surface Treatments



TIN (titanium nitride) coating

The TIN surface treatment (titanium-nitride gold-yellow) increases the surface hardness (approx. 2300 HV) and the sliding properties. It provides a better cutting performance and increased tool life time.



VAP (vaporized - steam tempered)

The oxide surface (vaporized) improves the adhesion of the cutting oil and provides a stabil lubricant film. Cold welding in the tap flanks is reduced.



TiAlN (titanium aluminium nitride) coating

The TiAlN surface treatment increases the surface hardness (approx. 3300 HV), the sliding properties (friction coefficient: 0,25) and with high temperature resistance up to 800°C. It provides a better cutting performance and increased tool life time.



TiCN (titanium carbonitride) coating

The TiCN surface treatment (titanium carbon nitride - grey violet) increases the surface hardness (approx. 3000 HV) and the sliding properties (coefficient of friction: 0,3). It provides a better cutting performance and increased tool life time.

Coating services

Every threading tool of our product range - whether or not cataloged - can be delivered with any coating or surface treatment in short time.

Tapping undersized threads	<ul style="list-style-type: none"> Pitch error Too small tolerance Geometry of the tap is not suitable for the material
Tapping oversized threads	<ul style="list-style-type: none"> Cutting speed is too high Bad running accuracy Chip jammings in flutes Incorrect positioning of workpiece or tap Inconsistent feed of tap Too high tolerance
Poor thread surface	<ul style="list-style-type: none"> Cutting speed not suitable Cooling is not suitable or not existing Geometry of the tap is not suitable for the material Core hole too small
Thread break of the thread to be cut	<ul style="list-style-type: none"> Geometry of the tap is not suitable for the material Core hole too small Core hole not deep enough Chip jammings in flutes Bad running accuracy Incorrect positioning of workpiece or tap Inconsistent feed of tap
Low tap lifetime	<ul style="list-style-type: none"> Cutting speed not suitable Cooling is not suitable or not existing Geometry of the tap is not suitable for the material Surface treatment/ coating for tap needed Core hole too small
Tool outbreaks	<ul style="list-style-type: none"> Geometry of the tap is not suitable for the material Core hole too small Core hole not deep enough Chip jammings in flutes Bad running accuracy Incorrect positioning of workpiece or tap Inconsistent feed of tap Worn tap
Cold welding on the tap	<ul style="list-style-type: none"> Cutting speed not suitable Increase coolant supply

Tap Cutting speeds

The cutting speeds for taps depend on following parameters:

- ✓ material of the workpiece
- ✓ tap geometries
- ✓ lubrication
- ✓ and more.

You can find the cutting speed in the product descriptions of the taps in our online-shop. Just enter the item number into the Search-field and find the cutting speeds in the bottom part of the product description.

Lubrication and cooling

It is recommended to use one of the following coolings or lubrications to improve the thread results and tool life time.

Dry machining and pressurized air

- ✓ cast iron
- ✓ (Cooled) pressurized air is used for chip removal

Emulsion

- ✓ Most common coolant-lubricant for thread cutting

Thread cutting oil

- ✓ Achieving excellent thread surfaces and tool life time

Thread cutting paste

- ✓ suitable for forming taps
- ✓ good results with horizontal cutting direction
- ✓ for bigger diameters and through holes

MQL - Minimum-quantity lubrication

- ✓ cooling by aerosol

Formula

Description	Symbol	Unit	Formula	Example
Rotation speed	n	min ⁻¹		
Angular speed	ω	s ⁻¹	$\omega = \frac{2 \cdot \pi \cdot n}{60}$	n = 400 min ⁻¹ $\omega = \frac{2 \cdot \pi \cdot 400}{60}$ ω = 41,89 s ⁻¹
Cutting speed	v _c	m/min	$v_c = \frac{d \cdot \omega}{33,3}$ $v_c = \frac{d \cdot \pi \cdot n}{1000}$	n = 400 min ⁻¹ , d = 20 mm $v_c = \frac{20 \cdot \pi \cdot 400}{1000}$ v _c = 25,133 m/min
Feed per revolution	f	mm		
Feed speed	v _f	mm/min	v _f = f · n	n = 400 min ⁻¹ f = 0,800 mm v _f = 0,800 · 400 v _f = 320 mm/min
Force	F	N	F = k _c · A	
Torque	M	Nm	$M = \frac{F \cdot d}{2000}$	F = 200 N, d = 20 mm $M = \frac{200 \cdot 20}{2000}$ M = 2 Nm
Mechanical work	W	J	W = F · U	F = 200 N, d = 20 mm $U = \frac{d \cdot \pi}{1000} = 0,063 \text{ m}$ W = 200 · 0,063 = 12,6 J
Performance	P	W	$P = \frac{F \cdot v_c}{60}$ P = M · ω	F = 200 N, v _c = 25,133 m/min P = 83,78 W M = 2 Nm, ω = 41,89 s ⁻¹ P = 83,78 W
Efficiency	η	-	$\eta = \frac{P_{ab}}{P_{an}}$ η < 1	P _{ab} = 58,65, P _{an} = 83,78 W $\eta = \frac{58,65}{83,78} = 0,7$

$$\pi = 3,141592654$$

d = Diameter in mm

U = circumference in m

$$1 \text{ kW} = 1,36 \text{ PS}$$

$$1 \text{ PS} = 0,736 \text{ kW}$$

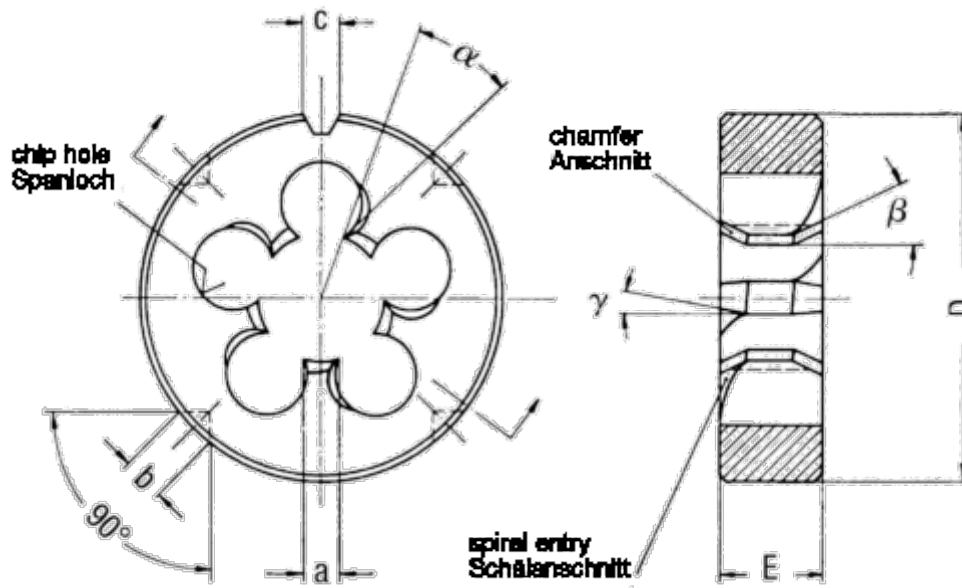
$$1 \frac{\text{m}}{\text{s}} = 60 \frac{\text{m}}{\text{min}}$$

$$1/\text{s} = 60/\text{min} = 1 \text{ Hz}$$

$$1 \text{ J} = 1 \text{ Nm} = 1 \frac{\text{kg} \cdot \text{m}^2}{\text{s}^2}$$

$$1 \text{ W} = 1 \frac{\text{J}}{\text{s}} = 1 \frac{\text{Nm}}{\text{s}} = 1 \frac{\text{kg} \cdot \text{m}^2}{\text{s}^3}$$

Round Dies Geometries



D	outside diameter	b	diameter of hole for fixing screw
E	thickness	α	rake angle
a	width of tooth	β	chamfer angle
c	width of notch	γ	spiral angle

Preparation of workpiece:

- ☑ concentric chamfer - ease entry of cutting
- ☑ workpiece diameter must be less than the nominal diameter

Chamfer

- ☑ Standard chamfer (length, see at the item)
- ☑ Spiral entry: free flow of chips ahead of the die and a reducing of cutting torque.

This result in an improved surface finish on the cut threads and longer die life

- ☑ 70° (short chamfer) - chamfer length: 1,25 pitch = 70°

Tolerances for Round Dies

Metric ISO thread acc. DIN 13 - coarse and fine thread

4h = tolerance class „fine“

6h = tolerance class „middle“, for small diameters (up to M 1,4)

6g = tolerance class „middle“ - Standard

6e = undersize tolerance; for bolts that receive a surface treatment or a galvanizing (layer thickness up to 8 μm).

Cutting dies with 6e tolerance are cutting about 0,03 mm smaller than normal cutting dies with 6g tolerance.

8e = undersize tolerance; for bolts that receive a strong surface coating (layer thickness about 16 - 18 μm)

Unified thread UNC, UNF, UNEF, UNS, UN, UNJC, UNJF etc.

3A = tolerance „fine“

2A = standard tolerance „middle“

1A = tolerance „coarse“

Whitworth pipe thread G (BSP) acc. DIN-ISO 228

A = standard tolerance „middle“

B = tolerance „coarse“

Cutting speeds for Machine Forming Taps

materials	tensile strength	forming speed in m/min	recommended lubrication
construction steels, free-machining steels, cold-extrusion steels etc.	< 600 N/mm ²	20 - 80	Cutting oil/ Emulsion
construction steels, heat-treatable steels, cast steels etc.	< 800 N/mm ²	20 - 60	Cutting oil/ Emulsion
heat-treatable steels, cold-extrusion steels, nitriding steels etc.	< 1000 N/mm ²	10 - 40	Cutting oil
corrosion and acid proof steels ferritic, martensitic	< 950 N/mm ²	10 - 25 (with emulsion just limitedly applicable)	Cutting oil
corrosion and acid proof steels austenitic	< 950 N/mm ²	10 - 25 (with emulsion just limitedly applicable)	Cutting oil
aluminium wrought alloys	< 550 N/mm ²	15 - 40	Cutting oil/ Emulsion
aluminium cast alloys	Si < 12%	15 - 40	Cutting oil/ Emulsion
pure copper	< 400 N/mm ²	20 - 40	Cutting oil/ Emulsion
copper-zinc alloys (brass long-chipping)	< 550 N/mm ²	40 - 80	Emulsion

forming (cutting) speed [m/min] = (diameter * π * number of rotation) / 1000

number of rotation n [1/min] = (cutting speed in m/min * 1000) / (diameter * π)

feed programming [mm/min] = number of rotation * pitch

Please notice that the mentioned cutting speeds are only for orientation.

The right cutting speed is depend on lubrication and application.

Precision threading technology

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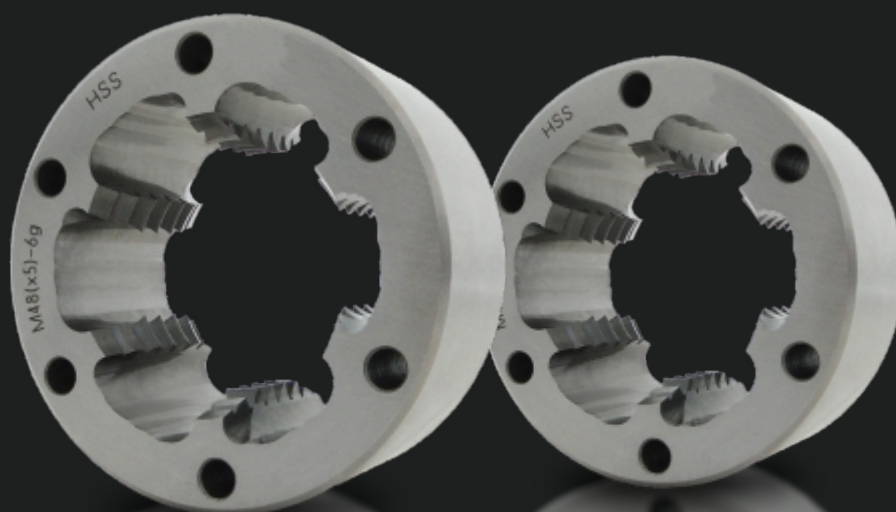
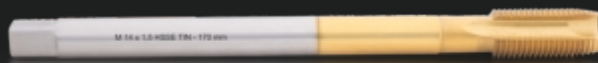
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