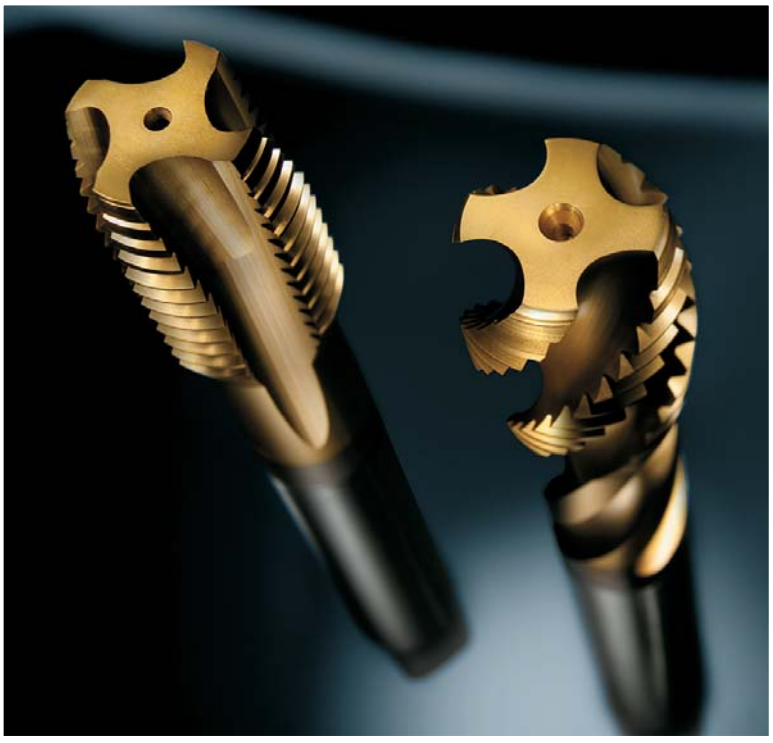
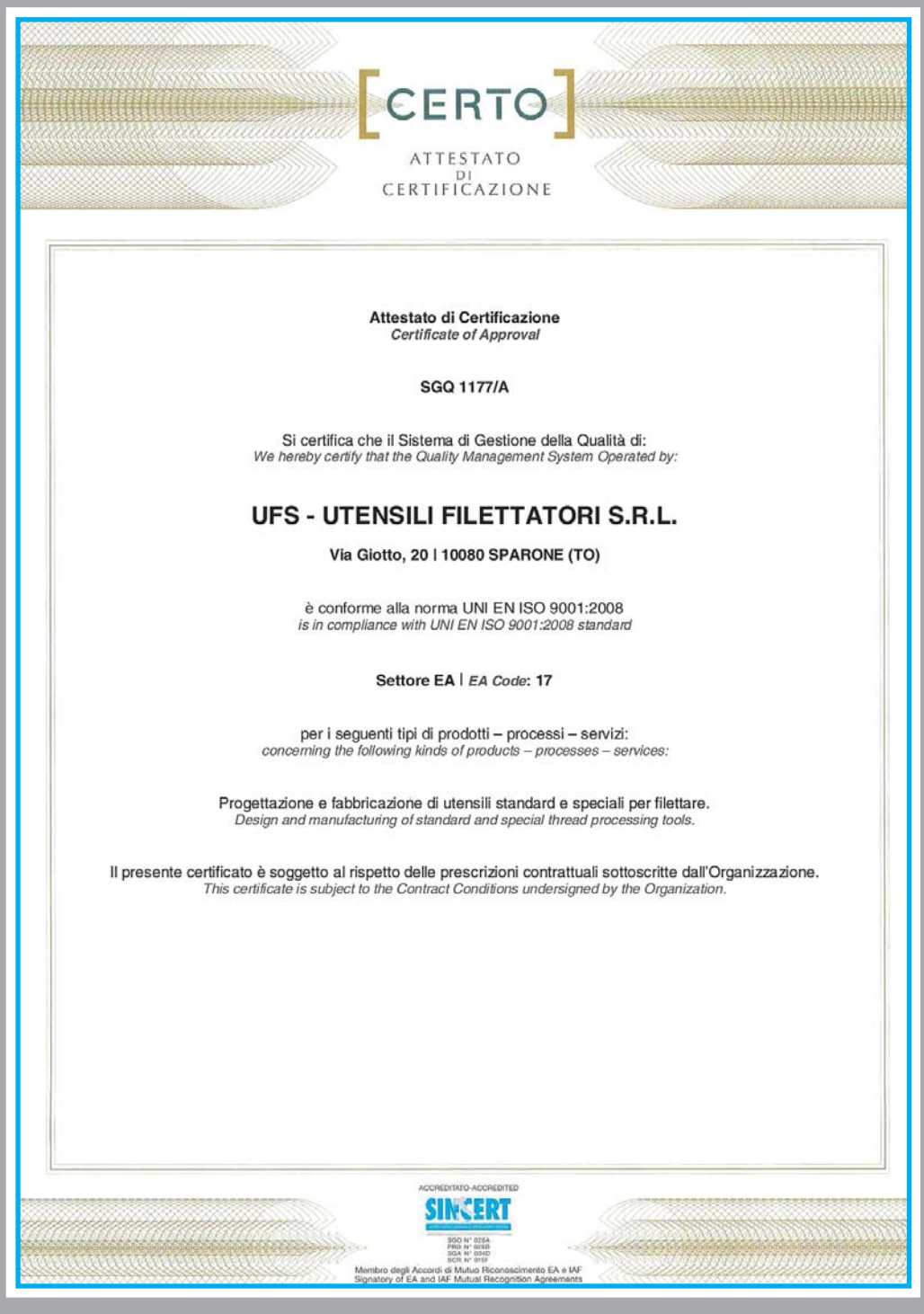


www.ufs.it

03-JIS TECHNICAL CATALOGUE



CERTO

ATTESTATO
DI
CERTIFICAZIONE

Attestato di Certificazione
Certificate of Approval

SGQ 1177/A

Si certifica che il Sistema di Gestione della Qualità di:
We hereby certify that the Quality Management System Operated by:

UFS - UTENSILI FILETTATORI S.R.L.

Via Giotto, 20 | 10080 SPARONE (TO)

è conforme alla norma UNI EN ISO 9001:2008
is in compliance with UNI EN ISO 9001:2008 standard

Settore EA | *EA Code*: **17**

per i seguenti tipi di prodotti – processi – servizi:
concerning the following kinds of products – processes – services:

Progettazione e fabbricazione di utensili standard e speciali per filettare.
Design and manufacturing of standard and special thread processing tools.

Il presente certificato è soggetto al rispetto delle prescrizioni contrattuali sottoscritte dall'Organizzazione.
This certificate is subject to the Contract Conditions undersigned by the Organization.

ACCREDITATO-ACCREDITED
SINCERT
SGQ N° 025A
PRD N° 025B
SGA N° 004D
SCR N° 015F
Membro degli Accordi di Mutuo Riconoscimento EA e IAF
Signatory of EA and IAF Mutual Recognition Agreements

Warning: taps can splinter during use; protective goggles or shield should therefore be used.

SUMMARY

OTHER THREADS, AS FOLLOWING, ON CATALOGUE N°29 (www.ufs.it)

UNC	UNC coarse thread
UNF	UNF fine thread
UNEF	UNEF extra fine thread
UNS	UNS special thread
8-12-16 UN	UN thread
20-28-32 UN	UN thread
GAS (BSP)	Parallel pipe threads
Rp (BSPP)	Parallel pipe threads
NPSM (NPSC)	American Standard straight pipe thread
NPSF	American Standard straight pipe thread
Rc (BSPT)	Tapered Whitworth pipe thread
NPT	American tapered pipe thread
NPTF	American tapered pipe thread
BSW	Whitworth thread standard
PG	Steel conduit thread
Tr	ISO Metric trapezoidal thread
Rd	Round thread
ISO529	ISO529 Short Taps
EG M	ISO Metric coarse thread for wire thread inserts (STI)
KOMBI	Kombi Taps for steel and aluminium

TURIN AND PIEDMONT:

Technological hub for mechanical industry and a land of culture, history and good life.

Customer Service

0039-0124-818001 (int. 206) - customerservice@ufs.it

Graziano Doglietto - Management and International sales	direzione@ufs.it
Stefano Doglietto - Production manager	produzione@ufs.it
Elisabetta Doglietto - Orders progress	logistica@ufs.it
Gianfranco Viretto - National sales	commerciale@ufs.it
Sonia Mana - Marketing	marketing@ufs.it
Ivan Cardamone - Technical office	tecnico@ufs.it
Alex Marco - Quality office	qualita@ufs.it
Roberto Balaso - R&D	ricerca@ufs.it
Rosanna Blessent - Supplier's accountancy	contabilefornitori@ufs.it
Carla Aimonetto - Customers' accountancy	contabileclienti@ufs.it
Fausto Cucciatti - Account dept	amministrazione@ufs.it
Ufs - Informations	ufssrl@ufs.it

UFS CHARACTER

A tap for every application
Standard and tailor-made special as per customer requests
Partner for a reliable and lasting cooperation
We have been manufacturing threading tools since 1947
Steady innovation: R&D in UFS Technology
The product: precise, reliable, accurate, all made by UFS
Great expansion in export markets
Certified quality… but not only by the certifier
The price is important …and we know it!
Goods are delivered punctually on the given date
UFS customers are never left alone

WWW.UFS.IT

A dynamic website is constantly updated in terms of content and interactive functionality available to customers and employees.

DISTRIBUTION

UFS company is expanding the sales aggressively on the export. We are already present with distributors located in Europe, Russia, South East Asia, China, Australia and South America. In Italy we act with distributors and we are supplier to the major producers in automotive and aerospace fields.

FILETTO

Hy, I am Filetto!
let's be friend... I could be useful.

METHOD OF FAST CONSTRUCTION OF THE UFS' CODE, FOR CHIP REMOVAL TAPS

E	24	M	...	T	-	JIS
Taps steel	Flutes type	Threads type	Diameter's location	Tap's coating or treatment surface (see to page 24 - 25)		

TAPS STEEL

High speed steel HSSE	Powdered metallurgy high speed steel PM3
E	K

FLUTES TYPE

24 Spiral pointed, shank type A

25 Spiral pointed, shank type B

60 Spiral fluted 40° thread length reduced, shank type A

61 Spiral fluted 40° thread length reduced, shank type B

82 Spiral fluted 45° thread length reduced, shank type A

83 Spiral fluted 45° thread length reduced, shank type B

26 Straight fluted taps for cast iron, shank type A

27 Straight fluted taps for cast iron, shank type B

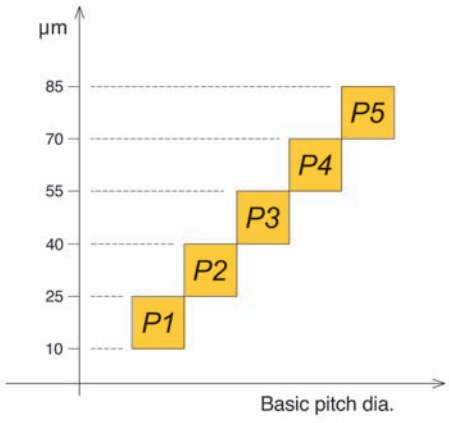
THREADS TYPE

M Metric coarse thread

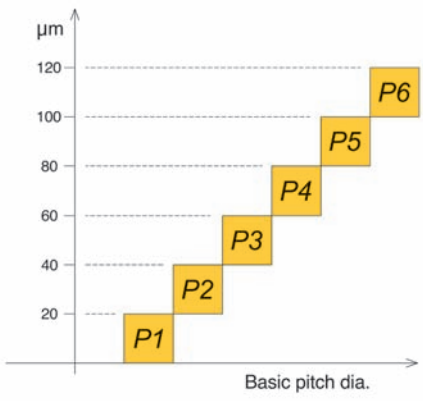
MF Metric fine thread

THREAD LIMITS

Pitch ≤ 0,6 mm



Pitch ≥ 0,7 mm



METHOD OF FAST CONSTRUCTION OF THE UFS' CODE, FOR ROLL FORM TAPS

P	JR...	SC	M	...	T
Roll taps steel	Tolerance's location for Thread limit JR	Shape roll taps	Threads type	Diameter's location	Tap's coating or treatment surface (see to page 24 - 25)

ROLL TAPS STEEL

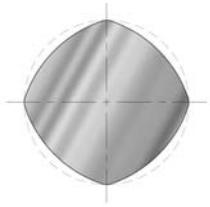
High speed steel 8% Co HSSP	Powdered metallurgy high speed steel PM3
P	X

THREAD LIMIT JR (µm)

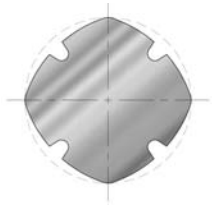
0	+13	+26	+39	+51	+64	+77	+89	+101	+114	+127	+140	+153	+166
JR1			JR4			JR7			JR10			JR13	
	JR2			JR5			JR8			JR11			
		JR3			JR6			JR9			JR12		

SHAPE ROLL FORM TAPS

SC = without oil grooves



CC = with oil grooves



OTHER CHARACTERISTICS ON REQUEST

FOR Through coolant, axial flow

FORY Through coolant, radial flow

Automatic load system for final products

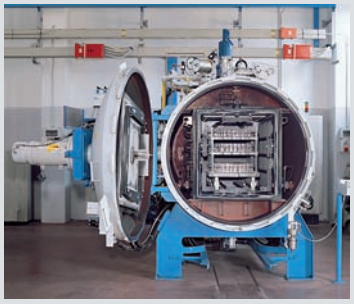
	Spiral pointed taps for through holes				Universal spiral pointed taps		Spiral flutes taps 40°				Universal Spiral flutes taps 40°			
	E24/E25... -JIS	E24/E25... V-JIS	E24/E25... T-JIS	E24/E25... TXC-JIS	K24/K25... TXC-JIS	K24/K25... FORY-TXC-JIS	E60/E61... -JIS	E60/E61... V-JIS	E60/E61... T-JIS	E60/E61... TXC-JIS	K60/K61... TXC-JIS	K60/K61... FOR-TXC-JIS		
	LINE	LINE	LINE	LINE	TOP **new**	TOP **new**	LINE	LINE	LINE	LINE	TOP **new**	TOP **new**		
														
							R40°	R40°	R40°	R40°	R40°	R40°		
	2	2	2	2	3	3	4	4	4	4	5	5		
	12	12	12	12	13	13	14	14	14	14	15	15		
	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	B (4-5)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)		
	HSSE	HSSE	HSSE	HSSE	PM3	PM3	HSSE	HSSE	HSSE	HSSE	PM3	PM3		
	Br	V	TiN	TXC	TXC	TXC	Br	V	TiN	TXC	TXC	TXC		
	N	N	N	N	**U**	**U**	N	N	N	N	**U**	**U**		
	3xD	3xD	3xD	3xD	3xD	3,5xD	2,5xD	2,5xD	2,5xD	2,5xD	2,5xD	3xD		
1.1	❍ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30	❍ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30		
1.2	■ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30	■ 10-15	■ 10-15	■ 20-30	■ 20-30	■ 20-30	■ 20-30		
1.3	■ 10-12	■ 10-12	■ 20-25	■ 20-25	■ 20-25	■ 20-25	■ 10-12	■ 10-12	■ 20-25	■ 20-25	■ 20-25	■ 20-25		
1.4	❍ 8-10	❍ 8-10	■ 15-20	■ 15-20	■ 15-20	■ 15-20	❍ 8-10	❍ 8-10	■ 15-20	■ 15-20	■ 15-20	■ 15-20		
1.5					■ 5-12	■ 5-12					■ 5-12	■ 5-12		
1.6														
1.7														
1.8														
2.1				❍ 10-15	■ 10-15	■ 10-15				❍ 10-15	❍ 10-15	❍ 10-15		
2.2				❍ 8-10	■ 8-10	■ 8-10				❍ 8-10	❍ 8-10	❍ 8-10		
2.3					■ 6-8	■ 6-8					❍ 6-8	❍ 6-8		
2.4														
3.1														
3.2														
3.3			❍ 10-15	❍ 10-15	■ 10-15	■ 10-15			❍ 10-15	❍ 10-15	■ 10-15	■ 10-15		
3.4			■ 15-20	■ 15-20	■ 15-20	■ 15-20			■ 15-20	■ 15-20	■ 15-20	■ 15-20		
3.5														
4.1	❍ 10-15	■ 10-15	❍ 20-25				❍ 10-15	■ 10-15	❍ 20-25					
4.2	■ 15-20	■ 15-20	■ 25-30	■ 25-30	■ 25-30	■ 25-30	■ 15-20	■ 15-20	■ 25-30	■ 25-30	❍ 25-30	❍ 25-30		
4.3			❍ 20-25	❍ 20-25	■ 20-25	■ 20-25			❍ 20-25	❍ 20-25	❍ 20-25	❍ 20-25		
4.4														
4.5														
4.6														
5.1	❍ 8-12	■ 8-12	❍ 15-20				❍ 8-12	■ 8-12	❍ 15-20					
5.2	❍ 10-15	■ 10-15	■ 20-25	■ 20-25	■ 20-25	■ 20-25	❍ 10-15	■ 10-15	■ 20-25	■ 20-25	❍ 20-25	❍ 20-25		
5.3														
5.4														
6.1		❍ 5-8												
6.2														
6.3														
7.1		❍ 6-8												
7.2														
7.3														
8.1														
8.2														
8.3														
9.1														
9.2														
9.3														
10.1														

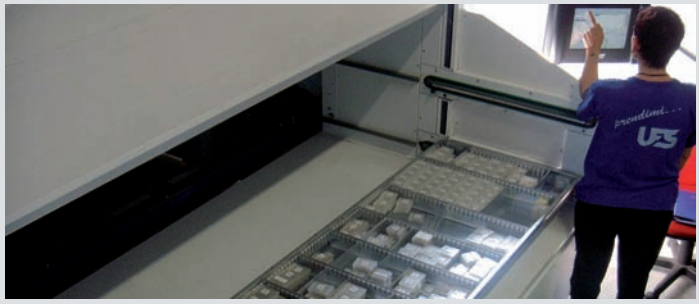
	Spiral flutes taps 45°				Straight flute taps for cast iron		Roll taps - HSSP steel		Roll taps - PM3 steel					
	E82/E83... -JIS	E82/E83... V-JIS	E82/E83... T-JIS	E82/E83... TXC-JIS	E26/E27... NS-JIS	E26/E27... CT-JIS	PJR...SC...T	PJR...CC...T	XJR...SC...TG	XJR...CC...TG				
	LINE	LINE	LINE	LINE	LINE	LINE	LINE	LINE	TOP **new**	TOP **new**				
														
	R45°	R45°	R45°	R45°										
	6	6	6	6	7	7	8	8	9	9				
	-	-	-	-	16	16	-	-	-	-				
	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)	C (2-3)				
	HSSE	HSSE	HSSE	HSSE	HSSE	HSSE	HSSP	HSSP	PM3	PM3				
	Br	V	TiN	TXC	NS	TiCN	TiN	TiN	TiN-G	TiN-G				
	N	N	N	N	GG	GG	**P -series**	**P -series**	**X -series**	**X -series**				
	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD	3xD				
1.1	❍ 10-15	■ 10-15	■ 20-30	■ 20-30			■ 20-30	■ 20-30	■ 30-40	■ 30-40				
1.2	■ 10-15	■ 10-15	■ 20-30	■ 20-30			■ 20-30	■ 20-30	■ 30-40	■ 30-40				
1.3	■ 10-12	■ 10-12	■ 20-25	■ 20-25			■ 20-25	■ 20-25	■ 30-35	■ 30-35				
1.4	❍ 8-10	❍ 8-10	■ 15-20	■ 15-20			❍ 15-20	❍ 15-20	■ 25-30	■ 25-30				
1.5									❍ 10-15	❍ 10-15				
1.6														
1.7														
1.8														
2.1		❍ 6-8		■ 10-15			■ 10-15	■ 10-15	■ 10-15	■ 10-15				
2.2		❍ 5-7		■ 8-10			■ 10-12	■ 10-12	■ 10-12	■ 10-12				
2.3							❍ 6-10	❍ 6-10	■ 6-10	■ 6-10				
2.4									❍ 6-8	❍ 6-8				
3.1					■ 20-25	■ 20-25								
3.2					■ 15-20	■ 15-20								
3.3					❍ 15-20	❍ 15-20								
3.4					❍ 20-25	❍ 20-25								
3.5					❍ 15-20	❍ 15-20								
4.1							■ 35-40	■ 35-40	■ 35-40	■ 35-40				
4.2	❍ 15-20	❍ 15-20	❍ 25-30	❍ 25-30			■ 40-45	■ 40-45	■ 40-45	■ 40-45				
4.3					❍ 30-40	❍ 30-40	■ 35-40	■ 35-40	■ 35-40	■ 35-40				
4.4					■ 25-30	■ 25-30								
4.5					❍ 20-30	❍ 20-30								
4.6					❍ 20-30	❍ 20-30								
5.1							❍ 15-20	❍ 15-20	❍ 15-20	❍ 15-20				
5.2	❍ 10-15	❍ 10-15	❍ 20-25	❍ 20-25			❍ 15-20	❍ 15-20	❍ 15-20	❍ 15-20				
5.3					■ 25-30	■ 25-30								
5.4														
6.1														
6.2														
6.3														
7.1									■ 15-20	■ 15-20				
7.2									❍ 5-8	❍ 5-8				
7.3														
8.1														
8.2					■ 10-15	■ 10-15								
8.3														
9.1														
9.2														
9.3														
10.1					❍ 15-20	❍ 15-20								




UTS

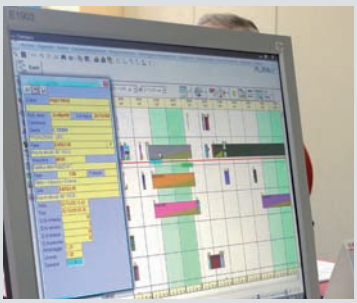





UTS


VACOTEC
Alpha 900
A4

UTS

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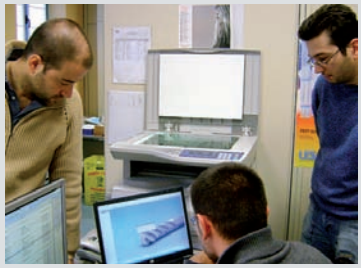
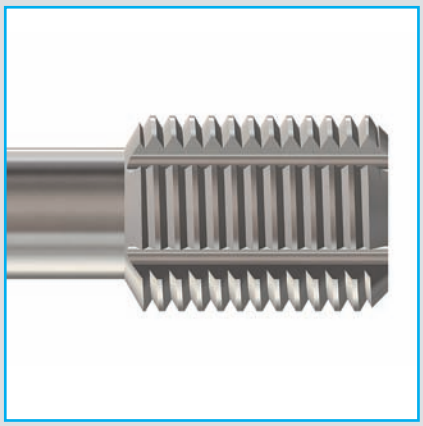



PRODUCTS INDEX

Steady innovation: R&D in UFS Techonolgy

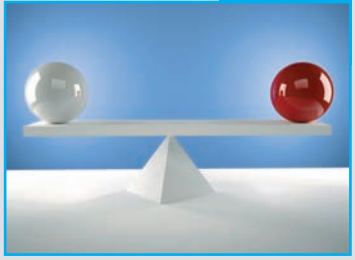


PRECISION

COMPLETE RANGE

FLEXABILITY

BALANCE



M

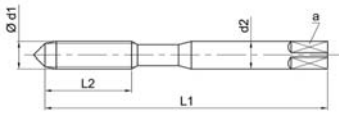
Metric coarse thread

Spiral pointed taps

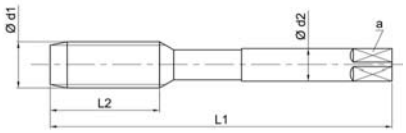
MACHINE TAPS

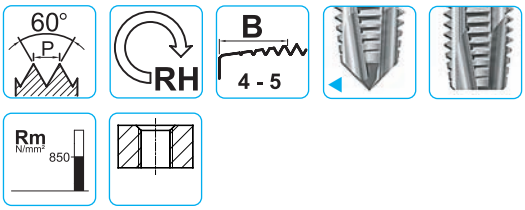
N GENERAL PURPOSE

JIS (A)



JIS (B)





Thread depth	3XD	3XD	3XD	3XD
Material	HSSE	HSSE	HSSE	HSSE
Surface treatment	Br	V	TiN	TXC

Material's groups number				
	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
	4.1 4.2	4.1 4.2	3.3 3.4	2.1 2.2 3.3 3.4
	5.1 5.2	5.1 5.2	4.1 4.2 4.3	4.2 4.3
		6.1 7.1	5.1 5.2	5.2

JIS (A)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E24M…-JIS	E24M…V-JIS	E24M…T-JIS	E24M…TXC-JIS
◀	2	0,4	40	9	3	2,5	2	*P1	❍	❍	❍	❍
◀	2,5	0,45	44	10	3	2,5	2	*P2	❍	❍	❍	❍
◀	3	0,5	46	11	4	3,2	3	*P2	❍	❍	❍	❍
◀	4	0,7	52	13	5	4	3	P2	❍	❍	❍	❍
◀	5	0,8	60	16	5,5	4,4	3	P2	❍	❍	❍	❍
◀	6	1	62	19	6	4,5	3	P2	❍	❍	❍	❍

JIS (B)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E25M…-JIS	E25M…V-JIS	E25M…T-JIS	E25M…TXC-JIS
	7	1	65	19	6,2	5	3	P2	★	★	★	★
	8	1,25	70	22	6,2	5	3	P3	❍	❍	❍	❍
	10	1,5	75	24	7	5,5	3	P3	❍	❍	❍	❍
	12	1,75	82	29	8,5	6,5	3	P4	❍	❍	❍	❍
	14	2	88	30	10,5	8	3	P4	❍	❍	❍	❍
	16	2	95	32	12,5	10	3	P4	❍	❍	❍	❍
	18	2,5	100	37	14	11	4	P4	★	★	★	★
	20	2,5	105	37	15	12	4	P4	★	★	★	★
	22	2,5	115	38	17	13	4	P4	★	★	★	★
	24	3	120	45	19	15	4	P4	★	★	★	★
	27	3	130	45	20	15	4	P4	★	★	★	★
	30	3,5	135	48	23	17	4	P5	★	★	★	★

Thread Limit (µm)

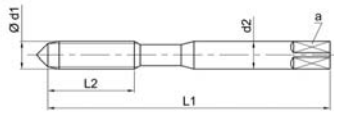
*P1: 10 – 25
*P2: 25 – 40
P2: 20 – 40
P3: 40 – 60
P4: 60 – 80
P5: 80 – 100

Box:
M2 – M10: 10 pcs
M12 – M16: 5 pcs

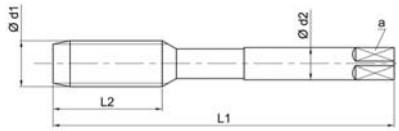
€ Price list page	1	1	1	1

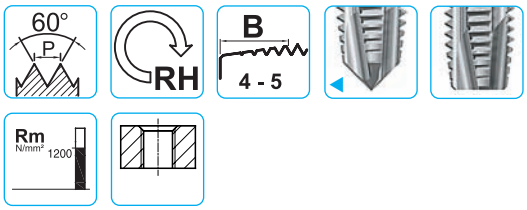
● Standard ❍ Lead time on enquiry, standard price-list ★ Only on request

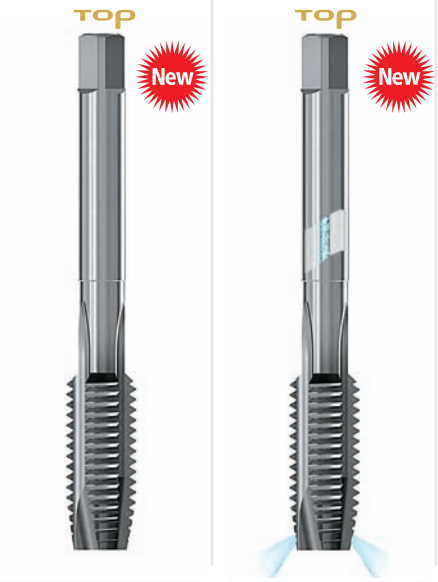
JIS (A)



JIS (B)







Thread depth	3XD	3,5XD
Material	PM3	PM3
Surface treatment	TXC	TXC
Material's groups number	1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 3.3 3.4 4.2 4.3 5.2	1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 3.3 3.4 4.2 4.3 5.2

JIS (A)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE K24M…TXC-JIS	CODE K24M…FORY-TXC-JIS
◀	**4**	**0,7**	52	13	5	4	3	P2	❍	-
◀	**5**	**0,8**	60	16	5,5	4,4	3	P2	❍	-
◀	**6**	**1**	62	19	6	4,5	3	P2	❍	★

JIS (B)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE K25M…TXC-JIS	CODE K25M…FORY-TXC-JIS
	8	**1,25**	70	22	6,2	5	3	P3	❍	★
	10	**1,5**	75	24	7	5,5	3	P3	❍	★
	12	**1,75**	82	29	8,5	6,5	3	P4	❍	★
	14	**2**	88	30	10,5	8	3	P4	❍	★
	16	**2**	95	32	12,5	10	3	P4	❍	★
	18	**2,5**	100	37	14	11	4	P4	★	★
	20	**2,5**	105	37	15	12	4	P4	★	★
	22	**2,5**	115	38	17	13	4	P4	★	★
	24	**3**	120	45	19	15	4	P4	★	★

Thread Limit (µm)

P2: 20 – 40
P3: 40 – 60
P4: 60 – 80

Box:
M4 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page **2** **2**

● Standard ❍ Lead time on enquiry, standard price-list ★ Only on request

M

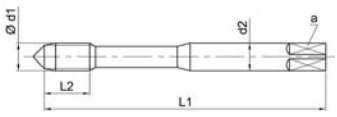
Metric coarse thread

Spiral fluted taps

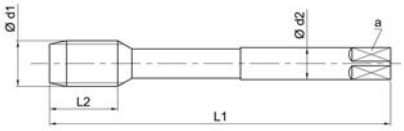
MACHINE TAPS

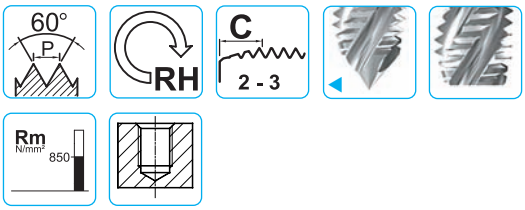
N GENERAL PURPOSE

JIS (A)



JIS (B)





Thread depth	2,5xD	2,5xD	2,5xD	2,5xD
Material	HSSE	HSSE	HSSE	HSSE
Surface treatment	Br	V	TiN	TXC

Material's groups number				
	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
	4.1 4.2	4.1 4.2	3.3 3.4	2.1 2.2 3.3 3.4
	5.1 5.2	5.1 5.2	4.1 4.2 4.3	4.2 4.3
			5.1 5.2	5.2

JIS (A)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E60M...-JIS	E60M...V-JIS	E60M...T-JIS	E60M...TXC-JIS
◀	2	0,4	40	9	3	2,5	2	*P1	❍	❍	❍	❍
◀	2,5	0,45	44	10	3	2,5	2	*P1	❍	❍	❍	❍
◀	3	0,5	46	5	4	3,2	3	*P1	❍	❍	❍	❍
◀	4	0,7	52	7	5	4	3	P2	❍	❍	❍	❍
◀	5	0,8	60	8	5,5	4,4	3	P2	❍	❍	❍	❍
◀	6	1	62	10	6	4,5	3	P2	❍	❍	❍	❍

JIS (B)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E61M...-JIS	E61M...V-JIS	E61M...T-JIS	E61M...TXC-JIS
	7	1	65	10	6,2	5	3	P2	★	★	★	★
	8	1,25	70	13	6,2	5	3	P2	❍	❍	❍	❍
	10	1,5	75	15	7	5,5	3	P2	❍	❍	❍	❍
	12	1,75	82	18	8,5	6,5	3	P2	❍	❍	❍	❍
	14	2	88	20	10,5	8	3	P2	❍	❍	❍	❍
	16	2	95	20	12,5	10	3	P2	❍	❍	❍	❍
	18	2,5	100	25	14	11	4	P3	★	★	★	★
	20	2,5	105	25	15	12	4	P3	★	★	★	★
	22	2,5	115	25	17	13	4	P3	★	★	★	★
	24	3	120	30	19	15	4	P3	★	★	★	★
	27	3	130	30	20	15	4	P3	★	★	★	★
	30	3,5	135	35	23	17	4	P3	★	★	★	★

Thread Limit (µm)

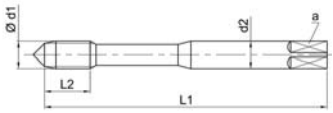
*P1: 10 – 25
P2: 20 – 40
P3: 40 – 60

Box:
M2 – M10: 10 pcs
M12 – M16: 5 pcs

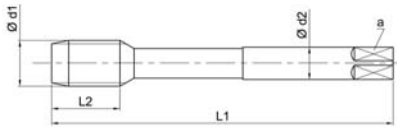
€ Price list page	2	2	2	3

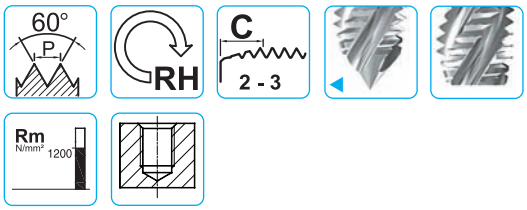
● Standard ❍ Lead time on enquiry, standard price-list ★ Only on request

JIS (A)



JIS (B)





Thread depth	2,5XD	3XD
Material	PM3	PM3
Surface treatment	TXC	TXC

Material's groups number		
	1.1 1.2 1.3 1.4 1.5	1.1 1.2 1.3 1.4 1.5
	2.1 2.2 2.3	2.1 2.2 2.3
	3.3 3.4 4.2 4.3	3.3 3.4 4.2 4.3
	5.2	5.2

JIS (A)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE K60M…TXC-JIS	K60M…FOR-TXC-JIS
◀	**4**	**0,7**	52	7	5	4	3	P2	❍	-
◀	**5**	**0,8**	60	8	5,5	4,4	3	P2	❍	-
◀	**6**	**1**	62	10	6	4,5	3	P2	❍	⋆

JIS (B)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE K61M…TXC-JIS	K61M…FOR-TXC-JIS
	8	**1,25**	70	13	6,2	5	3	P3	❍	⋆
	10	**1,5**	75	15	7	5,5	3	P3	❍	⋆
	12	**1,75**	82	18	8,5	6,5	3	P3	❍	⋆
	14	**2**	88	20	10,5	8	3	P3	❍	⋆
	16	**2**	95	20	12,5	10	3	P3	❍	⋆
	18	**2,5**	100	25	14	11	4	P3	⋆	⋆
	20	**2,5**	105	25	15	12	4	P3	⋆	⋆
	22	**2,5**	115	25	17	13	4	P4	⋆	⋆
	24	**3**	120	30	19	15	4	P4	⋆	⋆

Thread Limit (µm)

P2: 20 – 40
P3: 40 – 60
P4: 60 – 80

Box:
M4 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page **3** **3**

● Standard ❍ Lead time on enquiry, standard price-list ⋆ Only on request

M

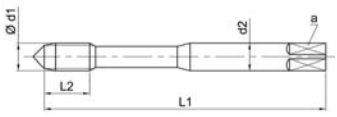
Metric coarse thread

Spiral fluted taps

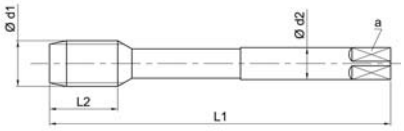
MACHINE TAPS

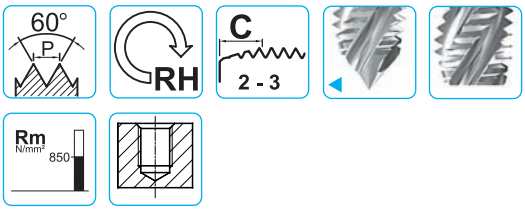
N GENERAL PURPOSE

JIS (A)



JIS (B)





Thread depth	3xD	3xD	3xD	3xD
Material	HSSE	HSSE	HSSE	HSSE
Surface treatment	Br	V	TiN	TXC

Material's groups number				
	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
	4.2 5.2	2.1 2.2	4.2 5.2	2.1 2.2
		4.2 5.2		4.2 5.2

JIS (A)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E82M…-JIS	E82M…V-JIS	E82M…T-JIS	E82M…TXC-JIS
◀	4	0,7	52	7	5	4	3	P2	❍	❍	❍	❍
◀	5	0,8	60	8	5,5	4,4	3	P2	❍	❍	❍	❍
◀	6	1	62	10	6	4,5	3	P2	❍	❍	❍	❍

JIS (B)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E83M…-JIS	E83M…V-JIS	E83M…T-JIS	E83M…TXC-JIS
	8	1,25	70	13	6,2	5	3	P2	❍	❍	❍	❍
	10	1,5	75	15	7	5,5	3	P2	❍	❍	❍	❍
	12	1,75	82	18	8,5	6,5	3	P2	❍	❍	❍	❍
	14	2	88	20	10,5	8	3	P2	❍	❍	❍	❍
	16	2	95	20	12,5	10	3	P2	❍	❍	❍	❍
	18	2,5	100	25	14	11	4	P3	❍	❍	❍	❍
	20	2,5	105	25	15	12	4	P3	⋆	⋆	⋆	⋆
	22	2,5	115	25	17	13	4	P3	⋆	⋆	⋆	⋆
	24	3	120	30	19	15	4	P3	⋆	⋆	⋆	⋆

Thread Limit (µm)

P2: 20 – 40
P3: 40 – 60

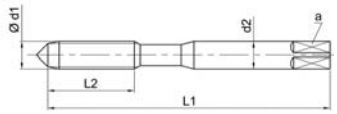
Box:
M4 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page	3	3	3	4

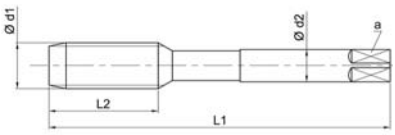
● Standard ❍ Lead time on enquiry, standard price-list ⋆ Only on request

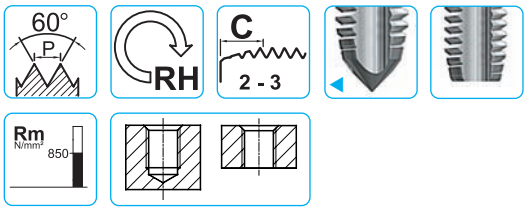
GG Cast Iron

JIS (A)



JIS (B)





Thread depth	3XD	3XD
Material	HSSE	HSSE
Surface treatment	NS	TiCN

Al Si>10%, Brass and Bronze with short chip	Material's groups number	3.1 3.2 3.3 3.4 3.5 4.3 4.4 4.5 4.6 5.3 8.2 10.1	3.1 3.2 3.3 3.4 3.5 4.3 4.4 4.5 4.6 5.3 8.2 10.1

JIS (A)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E26M…NS-JIS	CODE E26M…CT-JIS
◀	4	0,7	52	13	5	4	3	P3	❍	❍
◀	5	0,8	60	16	5,5	4,4	3	P3	❍	❍
◀	6	1	62	19	6	4,5	3	P3	❍	❍

JIS (B)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E27M…NS-JIS	CODE E27M…CT-JIS
	8	1,25	70	22	6,2	5	4	P4	❍	❍
	10	1,5	75	24	7	5,5	4	P4	❍	❍
	12	1,75	82	29	8,5	6,5	4	P5	❍	❍
	14	2	88	30	10,5	8	4	P5	❍	❍
	16	2	95	32	12,5	10	4	P5	❍	❍
	18	2,5	100	37	14	11	4	P5	★	★
	20	2,5	105	37	15	12	4	P5	★	★
	22	2,5	115	38	17	13	4	P5	★	★
	24	3	120	45	19	15	4	P5	★	★
	27	3	130	45	20	15	4	P5	★	★
	30	3,5	135	48	23	17	4	P6	★	★

Thread Limit (µm)
P3: 40 – 60
P4: 60 – 80
P5: 80 – 100
P6: 100 – 120

Box:
M4 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page 4 4

● Standard ❍ Lead time on enquiry, standard price-list ★ Only on request

M

Metric coarse thread

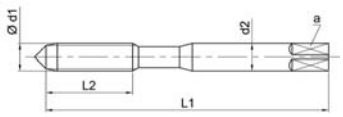
SC without oil grooves, CC with oil grooves

MACHINE TAPS

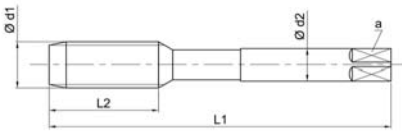
P - SERIES

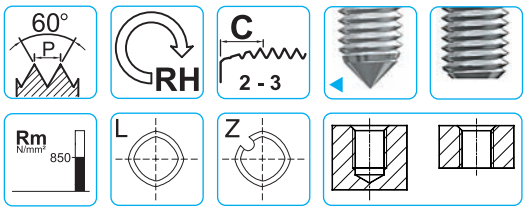
ROLL FORM TAPS

JIS (A)



JIS (B)





Thread depth	3xD	3xD
Material	HSSP	HSSP
Surface treatment	TiN	TiN

Material's groups number	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
	2.1 2.2 2.3	2.1 2.2 2.3
	4.1 4.2 4.3	4.1 4.2 4.3
	5.1 5.2	5.1 5.2

JIS (A)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE PJ…SCM…T	CODE PJ…CCM…T
◀	**2**	**0,4**	40	9	3	2,5	-	R4	❍	-
◀	**2,5**	**0,45**	44	10	3	2,5	-	R4	❍	-
◀	**3**	**0,5**	46	11	4	3,2	2	R5	❍	❍
◀	**4**	**0,7**	52	13	5	4	4	R6	❍	❍
◀	**5**	**0,8**	60	16	5,5	4,4	5	R6	❍	❍
◀	**6**	**1**	62	19	6	4,5	5	R7	❍	❍

JIS (B)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE PJ…SCM…T	CODE PJ…CCM…T
	8	**1,25**	70	22	6,2	5	5	R7	❍	❍
	10	**1,5**	75	24	7	5,5	5	R7	❍	❍
	12	**1,75**	82	29	8,5	6,5	5	R8	❍	❍
	14	**2**	88	30	10,5	8	6	R10	❍	❍
	16	**2**	95	32	12,5	10	6	R10	❍	❍

Example of coding roll taps:

PJ**R7**SCM**6**T

Thread Limit — Ød1

Thread Limit (µm)

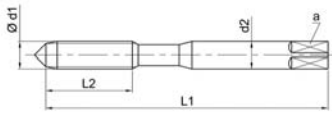
R4: 39 – 51
R5: 51 – 64
R6: 64 – 77
R7: 77 – 89
R8: 89 – 101
R9: 101 – 114
R10: 114 – 127

Box:
M2 – M10: 10 pcs
M12 – M16: 5 pcs

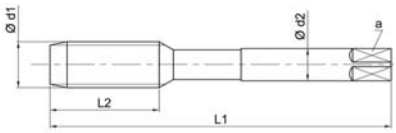
€ Price list page	4	4

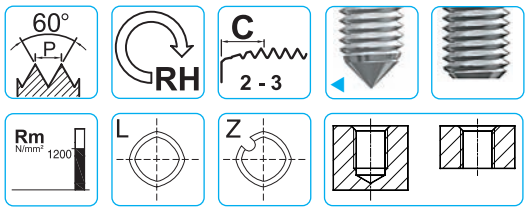
● Standard ❍ Lead time on enquiry, standard price-list ⋆ Only on request

JIS (A)



JIS (B)





Thread depth	3XD	3XD
Material	PM3	PM3
Surface treatment	TiN-G	TiN-G

Material's groups number		
	1.1 1.2 1.3 1.4 1.5	1.1 1.2 1.3 1.4 1.5
	2.1 2.2 2.3 2.4	2.1 2.2 2.3 2.4
	4.1 4.2 4.3	4.1 4.2 4.3
	5.1 5.2 7.1 7.2	5.1 5.2 7.1 7.2

JIS (A)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE XJ…SCM…TG	CODE XJ…CCM…TG
◀	**2**	**0,4**	40	9	3	2,5	-	R4	⋆	-
◀	**2,5**	**0,45**	44	10	3	2,5	-	R4	⋆	-
◀	**3**	**0,5**	46	11	4	3,2	2	R5	⋆	⋆
◀	**4**	**0,7**	52	13	5	4	4	R6	⋆	⋆
◀	**5**	**0,8**	60	16	5,5	4,4	5	R6	⋆	⋆
◀	**6**	**1**	62	19	6	4,5	5	R7	⋆	⋆

TiN-G Evolution of the coating TiN, good sliding properties.

JIS (B)	Ød1 M	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE XJ…SCM…TG	CODE XJ…CCM…TG
	8	**1,25**	70	22	6,2	5	5	R7	⋆	⋆
	10	**1,5**	75	24	7	5,5	5	R7	⋆	⋆
	12	**1,75**	82	29	8,5	6,5	5	R8	⋆	⋆
	14	**2**	88	30	10,5	8	6	R10	⋆	⋆
	16	**2**	95	32	12,5	10	6	R10	⋆	⋆

Example of coding roll taps:

XJ**R7**SCM**6**TG

Thread Limit — Ød1

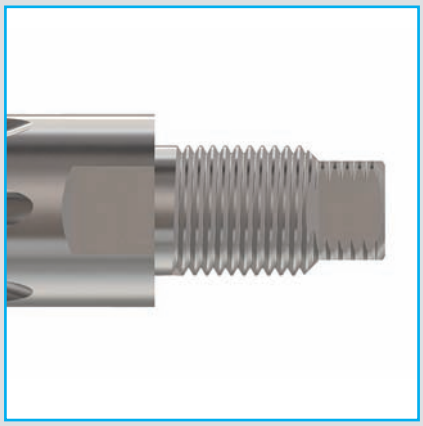
Thread Limit (µm)

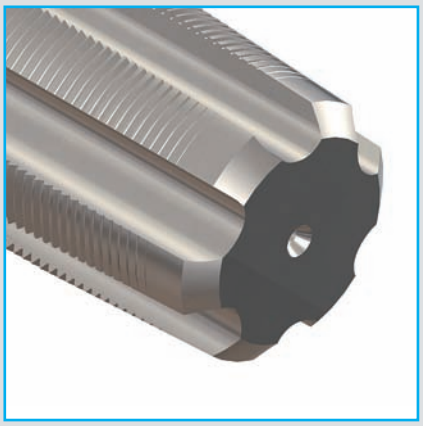
R4: 39 – 51
R5: 51 – 64
R6: 64 – 77
R7: 77 – 89
R8: 89 – 101
R9: 101 – 114
R10: 114 – 127

Box:
M2 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page **4** **5**

● Standard ❍ Lead time on enquiry, standard price-list ⋆ Only on request





EXPERIENCE

R&D

INTERNATIONAL

ASSISTANCE

MF

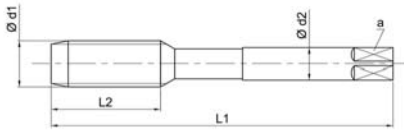
Metric fine thread

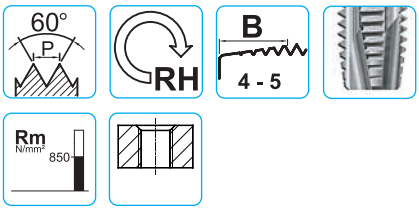
Spiral pointed taps

MACHINE TAPS

N GENERAL PURPOSE

JIS (B)





Thread depth	3XD	3XD	3XD	3XD
Material	HSSE	HSSE	HSSE	HSSE
Surface treatment	Br	V	TiN	TXC
Material's groups number	1.1 1.2 1.3 1.4 4.1 4.2 5.1 5.2	1.1 1.2 1.3 1.4 4.1 4.2 5.1 5.2 6.1 7.1	1.1 1.2 1.3 1.4 3.3 3.4 4.1 4.2 4.3 5.1 5.2	1.1 1.2 1.3 1.4 2.1 2.2 3.3 3.4 4.2 4.3 5.2

JIS (B)	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E25MF…-JIS	E25MF…V-JIS	E25MF…T-JIS	E25MF…TXC-JIS
	8	**1**	70	22	6,2	5	3	P2	❍	❍	❍	❍
	10	**1**	75	24	7	5,5	3	P3	❍	❍	❍	❍
	10	**1,25**	75	24	7	5,5	3	P3	❍	❍	❍	❍
	12	**1,5**	82	29	8,5	6,5	3	P3	❍	❍	❍	❍
	14	**1,5**	88	30	10,5	8	3	P3	❍	❍	❍	❍
	16	**1,5**	95	32	12,5	10	3	P3	❍	❍	❍	❍
	18	**1,5**	100	37	14	11	4	P4	★	★	★	★
	20	**1,5**	105	37	15	12	4	P4	★	★	★	★
	22	**1,5**	115	38	17	13	4	P4	★	★	★	★
	24	**1,5**	120	45	19	15	4	P4	★	★	★	★
	27	**1,5**	130	45	20	15	4	P4	★	★	★	★
	30	**1,5**	135	48	23	17	4	P4	★	★	★	★

Thread Limit (µm)

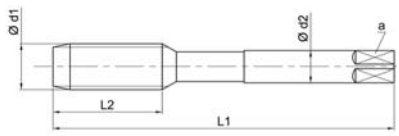
P2: 20 – 40
P3: 40 – 60
P4: 60 – 80

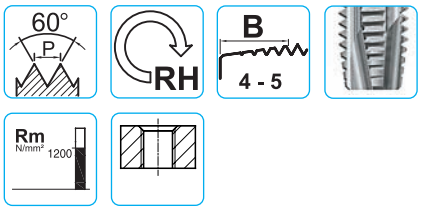
Box:
M8 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page	5	5	5	5

● Standard ❍ Lead time on enquiry, standard price-list ★ Only on request

JIS (B)





Thread depth	3XD	3,5XD
Material	PM3	PM3
Surface treatment	TXC	TXC

Material's groups number	1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 3.3 3.4 4.2 4.3 5.2	1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 3.3 3.4 4.2 4.3 5.2

JIS (B)	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE K25MF…TXC-JIS	CODE K25MF…FORY-TXC-JIS
	8	**1**	70	22	6,2	5	3	P2	⋆	⋆
	10	**1**	75	24	7	5,5	3	P3	⋆	⋆
	10	**1,25**	75	24	7	5,5	3	P3	⋆	⋆
	12	**1,5**	82	29	8,5	6,5	3	P3	⋆	⋆
	14	**1,5**	88	30	10,5	8	3	P3	⋆	⋆
	16	**1,5**	95	32	12,5	10	3	P3	⋆	⋆
	18	**1,5**	100	37	14	11	4	P4	⋆	⋆
	20	**1,5**	105	37	15	12	4	P4	⋆	⋆
	22	**1,5**	115	38	17	13	4	P4	⋆	⋆
	24	**1,5**	120	45	19	15	4	P4	⋆	⋆

Thread Limit (µm)

P2: 20 – 40
P3: 40 – 60
P4: 60 – 80

Box:
M8 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page 5 5

● Standard ❍ Lead time on enquiry, standard price-list ⋆ Only on request

MF

Metric fine thread

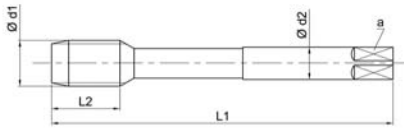
Spiral fluted taps

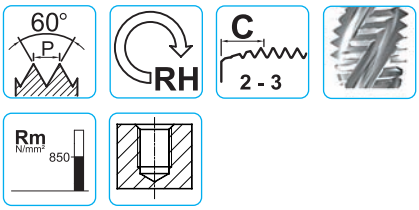
MACHINE TAPS

N GENERAL PURPOSE

MF

JIS (B)





Thread depth	2,5xD	2,5xD	2,5xD	2,5xD
Material	HSSE	HSSE	HSSE	HSSE
Surface treatment	Br	V	TiN	TXC

Material's groups number				
	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4	1.1 1.2 1.3 1.4
	4.1 4.2	4.1 4.2	3.3 3.4	2.1 2.2 3.3 3.4
	5.1 5.2	5.1 5.2	4.1 4.2 4.3	4.2 4.3
			5.1 5.2	5.2

JIS (B)	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E61MF...-JIS	E61MF...V-JIS	E61MF...T-JIS	E61MF...TXC-JIS
	8	**1**	70	13	6,2	5	3	P2	❍	❍	❍	❍
	10	**1**	75	15	7	5,5	3	P2	❍	❍	❍	❍
	10	**1,25**	75	15	7	5,5	3	P2	❍	❍	❍	❍
	12	**1,5**	82	18	8,5	6,5	3	P2	❍	❍	❍	❍
	14	**1,5**	88	20	10,5	8	3	P2	❍	❍	❍	❍
	16	**1,5**	95	20	12,5	10	3	P2	❍	❍	❍	❍
	18	**1,5**	100	25	14	11	4	P2	★	★	★	★
	20	**1,5**	105	25	15	12	4	P2	★	★	★	★
	22	**1,5**	115	25	17	13	4	P2	★	★	★	★
	24	**1,5**	120	30	19	15	4	P2	★	★	★	★
	27	**1,5**	130	30	20	15	4	P2	★	★	★	★
	30	**1,5**	135	35	23	17	4	P2	★	★	★	★

Thread Limit (µm)

P2: 20 – 40
P3: 40 – 60

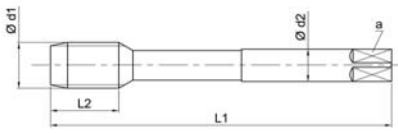
Box:
M8 – M10: 10 pcs
M12 – M16: 5 pcs

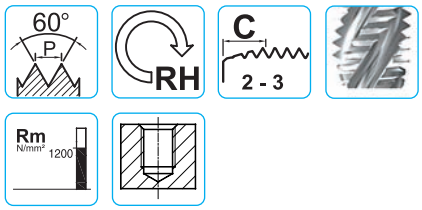
€ Price list page	6	6	6	6

● Standard ❍ Lead time on enquiry, standard price-list ★ Only on request

U UNIVERSAL APPLICATIONS R≤ 1200 N/mm²

JIS (B)





Thread depth	2,5xD	3xD
Material	PM3	PM3
Surface treatment	TXC	TXC
Material's groups number	1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 3.3 3.4 4.2 4.3 5.2	1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 3.3 3.4 4.2 4.3 5.2

JIS (B)	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE K61MF…TXC-JIS	K61MF…FOR-TXC-JIS
	8	**1**	70	13	6,2	5	3	P2	⋆	⋆
	10	**1**	75	15	7	5,5	3	P2	⋆	⋆
	10	**1,25**	75	15	7	5,5	3	P3	⋆	⋆
	12	**1,5**	82	18	8,5	6,5	3	P3	⋆	⋆
	14	**1,5**	88	20	10,5	8	3	P3	⋆	⋆
	16	**1,5**	95	20	12,5	10	3	P3	⋆	⋆
	18	**1,5**	100	25	14	11	4	P3	⋆	⋆
	20	**1,5**	105	25	15	12	4	P3	⋆	⋆
	22	**1,5**	115	25	17	13	4	P3	⋆	⋆
	24	**1,5**	120	30	19	15	4	P3	⋆	⋆

Thread Limit (µm)

P2: 20 – 40
P3: 40 – 60

Box:
M8 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page **6** **6**

● Standard ❍ Lead time on enquiry, standard price-list ⋆ Only on request

MF

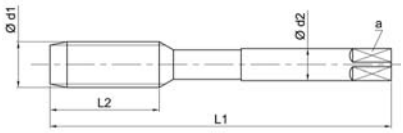
Metric fine thread

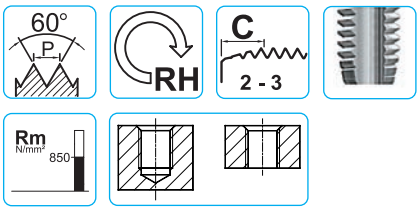
Straight fluted taps for cast iron

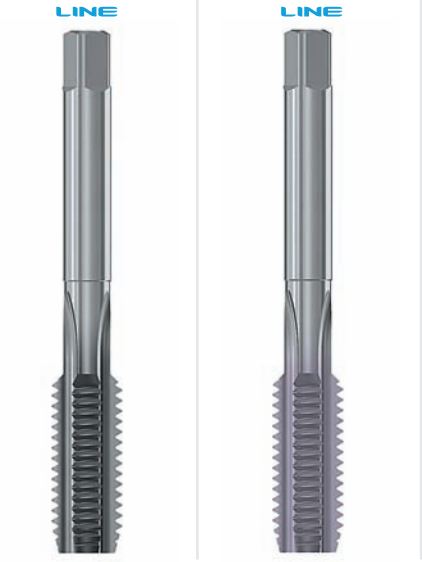
MACHINE TAPS

GG CAST IRON

JIS (B)







Thread depth	3XD	3XD
Material	HSSE	HSSE
Surface treatment	NS	TiCN

Al Si>10%, Brass and Bronze with short chip

Material's groups number

3.1 3.2 3.3 3.4 3.5	3.1 3.2 3.3 3.4 3.5
4.3 4.4 4.5 4.6 5.3	4.3 4.4 4.5 4.6 5.3
8.2 10.1	8.2 10.1

JIS (B)	Ød1 MF	P mm	L_1	L_2	d_2 h9	a h12	Z	Thread Limit	CODE E27MF…NS-JIS	CODE E27MF…CT-JIS
	8	**1**	70	22	6,2	5	4	P3	❍	❍
	10	**1**	75	24	7	5,5	4	P3	❍	❍
	10	**1,25**	75	24	7	5,5	4	P4	❍	❍
	12	**1,5**	82	29	8,5	6,5	4	P4	❍	❍
	14	**1,5**	88	30	10,5	8	4	P4	❍	❍
	16	**1,5**	95	32	12,5	10	4	P4	❍	❍
	18	**1,5**	100	37	14	11	4	P4	★	★
	20	**1,5**	105	37	15	12	4	P4	★	★
	22	**1,5**	115	38	17	13	4	P4	★	★
	24	**1,5**	120	45	19	15	4	P4	★	★
	27	**1,5**	130	45	20	15	4	P4	★	★
	30	**1,5**	135	48	23	17	4	P4	★	★

Thread Limit (µm)

P3: 40 – 60
P4: 60 – 80

Box:
M8 – M10: 10 pcs
M12 – M16: 5 pcs

€ Price list page 6 6

● Standard ❍ Lead time on enquiry, standard price-list ★ Only on request


DURABLE
PARTNERS IP


QUALITY
Bad
Poor
Good
Excellent

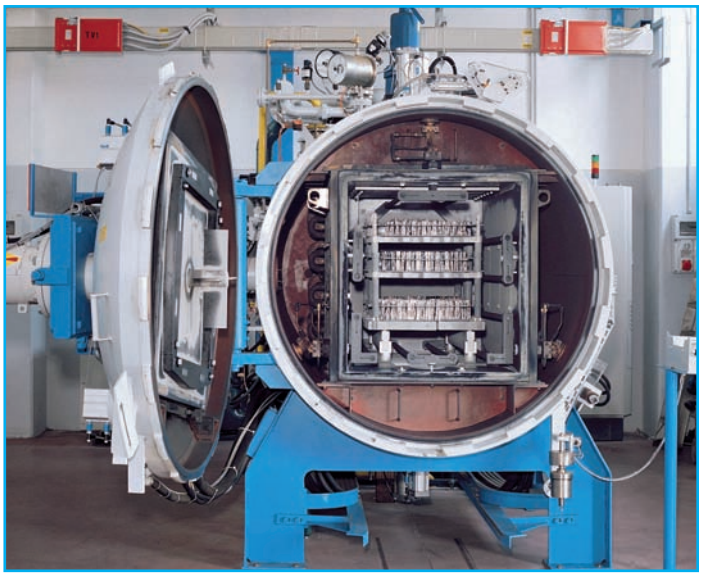

ON TIME

THE COMPANY AND ITS PRODUCTS

Used material

The tool yield is determined by several factors, but most fundamental is the material. UFS uses the best high speed steels of high cobalt content (5% and over, or a high percentage of vanadium) and steels made from sintered powders (PM, PM1,PM3 high % of Co and Co + Va). This materials show a more homogeneous structure, with low carbide content, and with a correspondingly reduced risk of splintering, less wear and better performance on materials of high resistance.

- HSSE steel with 5% of Cobalt used for materials to work with R < 850 N/mm^2
- HSSP steels with higher Cobalt percentage (or vanadium) used for materials to work with R < 1000 N/mm^2
- HSSV3 steel with high percentage of Vanadium, for Inox
- Sintered PM steels of a high cobalt and vanadium content used for materials to work with R > 1000 N/mm^2

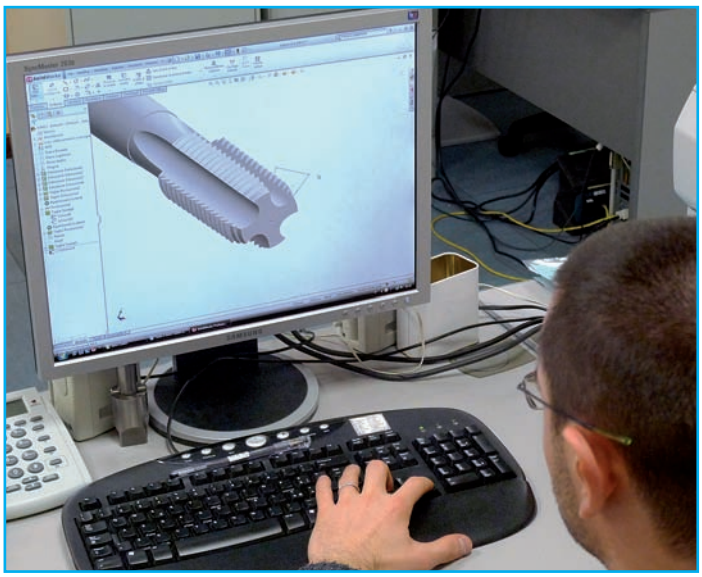


Heat Treatments

Heat treatment is a conclusive factor for the yield of the tool and consists of preheating - hardening - tempering.
The preheating is gradual and the tempering is assisted by very accurate controls of the temperature and the times of austenitisation.
Then 4-5 recoveries follow for the complete transformation of the structure. The check of the austenitic grain occurs after the austenitisation and the hardness and the structure check after each recovery. Heat treatment are performed in vacuum ovens, which guarantee high quality tempering

Products' quality

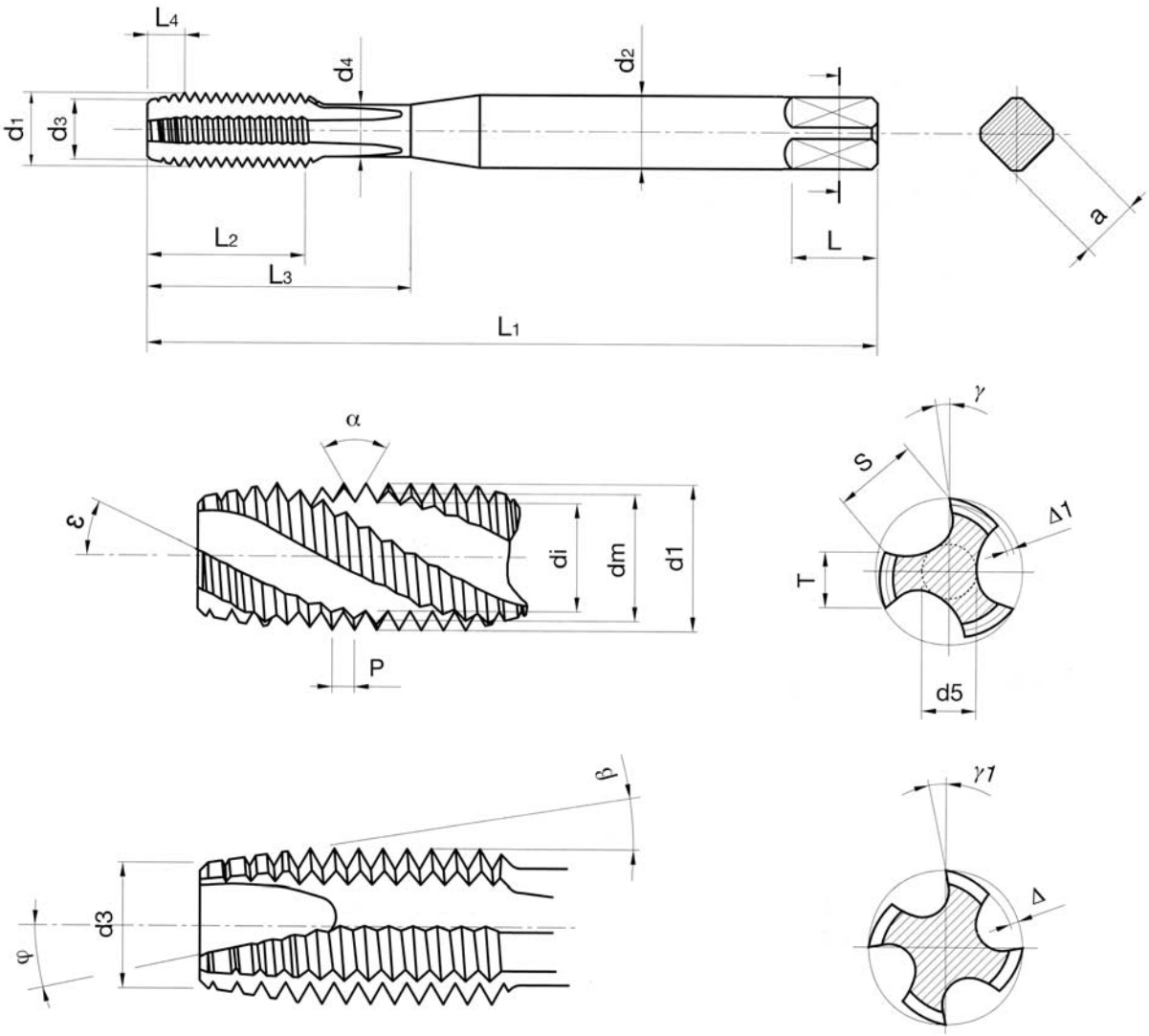
Our checks have always been based on metallographic and dimensional tests. Thanks to the new UFS Technology, the sample product subjected is tested for durability and improved, especially with products designed using special materials at the customer's request.
The staff appointed to these operations work full time both in UFS product improvement and in defining new tool shapes suitable for new materials or materials required for European Research Projects, together with Polytechnic University of Turin, Faculty of Materials Science as well as other important European Universities, including Aachen and Bilbao.
This allows us to test undoubtedly difficult materials, like ceramic alloys, special cast iron, aeronautical and space alloys, among others; the improvement processes established for these materials help us to raise the quality level of the standard production.



Purposes

The aims set out in our previous catalogue have been widely achieved and during these last few years the consolidated production processes have allowed us to increase product quality and repeatability. We only have to continue in this quest for continuous improvement, with our characteristic determination.

TAP'S TERMINOLOGY



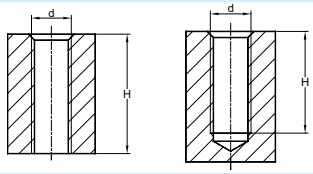
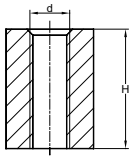
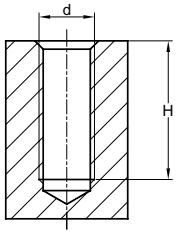
LEGEND

L1: Total lenght
L2: Thread lenght
L4: Chamfer length
L3: Useful lenght
L: Lenght of square
P: Pitch
S: Flute width
d1: Major diameter

d2: Shank diameter
d4: Neck diameter
d3: Chamfer diameter
dm: Pitch diameter
di: Minor diameter
d5: Core diameter
T: Width of land
α: Included angle of thread

γ1: Rake angle
γ: Rake angle of spiral point
β: Chamfer angle
ε: Spiral flute angle
Δ: Chamfer relief
Δ1: Pitch diameter relief
a: Square
φ: Spiral point angle

HOLE TYPES AND RECOMMENDED TAPS

Blind and through holes			
	H < 3 d	**E26**	
Through holes			
	H < 3 d	**E24**	
Blind holes			
	H < 2,5 d	**E60**	
	H > 3 d	**E82**	

CHAMFER'S TYPE

Length n° x P	B 4 - 5	C 2 - 3	E 1,5 - 2 Only on request

TAPPING DRILL SIZES

For cutting taps

ISO metric coarse thread DIN 13

M	P mm		Ø di foratura 6H - *drill sizes* min	max
*M 1	0,25	**0,75**	0,729	0,785
*M 1,1	0,25	**0,85**	0,829	0,885
*M 1,2	0,25	**0,95**	0,929	0,985
*M 1,4	0,30	**1,10**	1,075	1,142
M 1, 6	0,35	**1,25**	1,221	1,321
M 1,70	,35	**1,35**	1,321	1,421
M 1,8	0,35	**1,45**	1,421	1,521
M 2	0,40	**1,60**	1,567	1,679
M 2,2	0,45	**1,75**	1,713	1,838
M 2,3	0,4	**1,90**	1,813	1,938
M 2,5	0,45	**2,05**	2,013	2,138
M 2,6	0,45	**2,10**	2,113	2,238
M 3	0,50	**2,50**	2,459	2,599
M 3,5	0,60	**2,90**	2,850	3,010
M 4	0,70	**3,30**	3,242	3,422
M 4, 5	0,75	**3,70**	3,688	3,878
M 5	0,80	**4,20**	4,134	4,334
M 6	1,00	**5,00**	4,917	5,153
M 7	1,00	**6,00**	5,917	6,153
M 8	1,25	**6,80**	6,647	6,912
M 9	1,25	**7,80**	7,647	7,912
M 10	1,50	**8,50**	8,376	8,676
M 11	1,50	**9,50**	9,376	9,676
M 12	1,75	**10,30**	10,106	10,441
M 14	2,00	**12,00**	11,835	12,210
M 16	2,00	**14,00**	13,835	14,210
M 18	2,50	**15,50**	15,294	15,744
M 20	2,50	**17,50**	17,294	17,744
M 22	2,50	**19,50**	19,294	19,744
M 24	3,00	**21,00**	20,752	21,252
M 27	3,00	**24,00**	23,752	24,252
M 30	3,50	**26,50**	26,211	26,771

* Tolerance: 5H

For rolling taps

ISO metric coarse thread DIN 13

M	P mm		Toll.
2	0,4	**1,82**	± 0,02
2,2	0,45	**2,00**	± 0,02
2,3	0,4	**2,1**	± 0,02
2,5	0,45	**2,30**	± 0,02
2,6	0,45	**2,40**	± 0,02
3	0,5	**2,8**	± 0,03
3,5	0,6	**3,25**	± 0,03
4	0,7	**3,70**	± 0,03
5	0,8	**4,65**	± 0,03
6	1	**5,55**	± 0,05
8	1,25	**7,40**	± 0,05
10	1,5	**9,30**	± 0,05
12	1,75	**11,20**	± 0,05
14	2	**13,10**	± 0,05
16	2	**15,10**	± 0,05

Important: pay attention
to the drills' diameter

TAPPING DRILL SIZES

For cutting taps

ISO metric coarse thread DIN 13

MF	P mm		Ø di foratura 6H - *drill sizes* min	max
M 4	0,5	**3,50**	3,459	3,599
M 4,5	0,5	**4,00**	3,959	4,099
M 5	0,5	**4,50**	4,459	4,599
M 6	0,5	**5,50**	5,459	5,599
M 6	0,75	**5,25**	5,188	5,378
M 7	0,75	**6,25**	6,188	6,378
M 8	0,5	**7,50**	7,459	7,599
M 8	0,75	**7,25**	7,188	7,378
M 8	1	**7,00**	6,917	7,153
M 9	0,75	**8,25**	8,188	8,378
M 9	1	**8,00**	7,917	8,153
M 10	0,5	**9,50**	9,459	9,599
M 10	0,75	**9,25**	9,188	9,378
M 10	1	**9**	8,917	9,153
M 10	1,25	**8,75**	8,647	8,912
M 11	1	**10**	9,917	10,153
M 12	0,5	**11,5**	11,459	11,599
M 12	0,75	**11,25**	11,188	11,378
M 12	1	**11**	10,917	11,153
M 12	1,25	**10,75**	10,647	10,912
M 12	1,5	**10,5**	10,376	10,676
M 13	1	**12**	11,917	12,153
M 14	1	**13**	12,917	13,153
M 14	1,25	**12,75**	12,647	12,912
M 14	1,5	**12,5**	12,376	12,676
M 15	1	**14**	13,917	14,153
M 15	1,5	**13,5**	13,376	13,676
M 16	1	**15**	14,917	15,153
M 16	1,25	**14,8**	14,647	14,912
M 16	1,5	**14,5**	14,376	14,676
M 17	1	**16**	15,917	16,153
M 17	1,5	**15,5**	15,376	15,676
M 18	1	**17**	16,917	17,153
M 18	1,5	**16,5**	16,376	16,676
M 18	2	**16**	15,835	16,210
M 20	1	**19**	18,917	19,153
M 20	1,5	**18,5**	18,376	18,676
M 20	2	**18**	17,835	18,210
M 22	1	**21**	20,917	21,153
M 22	1,5	**20,5**	20,376	20,676
M 22	2	**20**	19,835	20,210
M 24	1	**23**	22,917	23,153
M 24	1,5	**22,5**	22,376	22,676
M 24	2	**22**	21,835	22,210
M 25	1	**24**	23,917	24,153
M 25	1,5	**23,5**	23,376	23,676
M 25	2	**23**	22,835	23,210
M 26	1,5	**24,5**	24,376	24,676
M 27	1	**26**	25,917	26,153
M 27	1,5	**25,5**	25,376	25,676
M 27	2	**25**	24,835	25,210

For cutting taps

ISO metric coarse thread DIN 13

MF	P mm		Ø di foratura 6H - *drill sizes* min	max
M 28	1	**27**	26,917	27,153
M 28	1,5	**26,5**	26,376	26,676
M 28	2	**26**	25,835	26,210
M 30	1	**29**	28,917	29,153
M 30	1,5	**28,5**	28,376	28,676
M 30	2	**28**	27,835	28,210
M 30	3	**27**	26,752	27,252

We have a great deal of special taps in stock: oversized, treated, non-standard sizes. Call us!

COATINGS

PVD Coating

	UFS Code	Micro hardness HV 0,05	Friction coefficient	Maximum working temperature	Properties	Applications
TiN	T	2300	0,4	600	Wear resistance	Coating for general applications and machining low and medium alloy steels.
TiN-G	TG	2300	0,2	600	Wear resistance and good sliding properties	General applications for high-performance former taps, UFS TOP series (see to pag.9).
TiCN	CT	3000	0,4	400	Wear resistance	Application on abrasive materials (ex. cast iron), nickel and titanium alloys.
NS Super Nitriding	NS	2300	0,15	600	Wear resistance	New coating developed for a gradual replacement of the classic nitriding NQ. Traditional application for machining cast iron.
TXC Tinalox + Carbon	TXC	3500	0,15	850	Oxidation and wear resistance, chip evacuation	Combination of a coating 3500 HV and a lubricating layer, recommended for tapping blind deep holes. Application on stainless steel and aluminium with a high % of Si

SURFACE TREATMENT

Surface Treatments

	UFS Code	Micro hardness HV 0,05	Friction coefficient	Maximum working temperature	Properties	Applications
V Steam Tempering	V	400	-	-	Chip evacuation	Basic surface treatment suited for machining soft steel, low alloy steels, automatic steel (AVP), pure aluminium and aluminium low % Si

STEAM TEMPERING

TiN

There are so many specific surface treatments for threaded materials, but to simplify it as much as possible, most applications use two different types.

Steam tempering plant

Coating plant

HARDNESS COMPARISON TABLE

HV Vickers Hardness	HRC Rockwell Hardness	HB Brinell Hardness	Tensile Strength N/mm2	Tensile Strength Tons/sq. in.
940	68			
900	67			
864	66			
829	65			
800	64			
773	63			
745	62			
720	61			
698	60			
675	59			
655	58		2200	142
650		618	2180	141
640		608	2145	139
639	57	607	2140	138
630		599	2105	136
620		589	2070	134
615	56	584	2050	133
610		580	2030	131
600		570	1995	129
596	55	567	1980	128
590		561	1955	126
580		551	1920	124
578	54	549	1910	124
570		542	1880	122
560	53	532	1845	119
550		523	1810	117
544	52	517	1790	116
540		513	1775	115
530		504	1740	113
527	51	501	1730	112
520		494	1700	110
514	50	488	1680	109
510		485	1665	108
500		475	1630	105
497	49	472	1620	105
490		466	1595	103
484	48	460	1570	102
480		456	1555	101
473	47	449	1530	99
470		447	1520	98
460		437	1485	96
458	46	435	1480	96
450		428	1455	94
446	45	424	1440	93
440		418	1420	92

HV Vickers Hardness	HRC Rockwell Hardness	HB Brinell Hardness	Tensile Strength N/mm2	Tensile Strength Tons/sq. in.
434	44	416	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
392	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	337	1140	74
350		333	1125	73
345	35	328	1110	72
340		323	1095	71
336	34	319	1080	70
330		314	1060	69
327	33	311	1050	68
320		304	1030	67
317	32	301	1020	66
310	31	295	995	64
302	30	287	970	63
300		285	965	62
295		280	950	61
293	29	278	940	61
290		276	930	60
287	28	273	920	60
285		271	915	59
280	27	266	900	58
275		261	880	57
272	26	258	870	56
270		257	865	56
268	25	255	860	56
265		252	850	55
260	24	247	835	54
255	23	242	820	53
250	22	238	800	52
245		233	785	51
243	21	231	780	50
240		228	770	50
235		223	755	49
230		219	740	48
225		214	720	47
220		209	705	46
215		204	690	45
210		199	675	44
205		195	660	43
200		190	640	41

MATERIAL GROUPS

1	Acciaio - *Steel*		
1.1	**Magnetic soft steel Rm < 400 N/mm², < 120 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
	1.1013	RFe100	-
	1.1014	Rfe80	-
	1.1015	Rfe60	-
1.2	**Structural steel, case carburizing steel, free cutting steel Rm < 700 N/mm², < 200 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
Structural steel	1.0037	St37-2	STKM 12 C
	1.0044	St44-2	SM 41 B
	1.0050	St50-2	SS 50
	1.0060	St60-2	SM 58
	1.0070	St70-2	-
	1.0570	St52-3	SM 490 A,B,C
Case carburizing steel	1.0301	C10	S 10 C
	1.0401	C15	S 15 C
	1.0402	C22	S 22 C
	1.0406	C25	-
	1.7131	16MnCr5	SCR 415
	1.7147	20MnCr5	SMnC 420 (H)
	1.5919	15CrNi6	-
	1.6523	21NiCrMo2	SNCM 220 (H)
	1.6587	17CrNiMo6	-
Free cutting steel	1.0711	9S20	SUM 21
	1.0715	9SMn28	SUM 22
	1.0718	9SMnPb28	SUM 22L
	1.0726	35S20	-
	1.0736	9SMn36	SUM 25
	1.0737	9SMnPb36	-
1.3	**Plain carbon steel Rm < 850 N/mm², < 250 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
Heat-treatable steel	1.0528	C30	S 30 CM
	1.0501	C35	S 35 C
	1.0511	C40	-
	1.0503	C45	S 45 C
	1.0540	C50	-
	1.0535	C55	S 55 C
	1.0601	C60	-
	1.1178	Ck30	-
	1.1181	Ck35	S 35 C
	1.1191	Ck45	S 45 C

Continue Plain carbon steel ➤

	W-Nr.	DIN - Germany	JIS
Spring steel	1.1231	Ck67	-
	1.1248	Ck75	-
	1.1269	Ck85	SK 5-CSP
	1.1274	Ck101	SUP 4
Surface hardening	1.1183	Cf35	S 35 C
	1.1193	Cf45	-
	1.1213	Cf53	S 50 C
1.4	**Alloyed steel - tempered steel, steel castings Rm < 850 N/mm², < 250 HB**		
1.5	**Alloyed steel - tempered steel, Rm 850 ÷ 1200 N/mm², 250 ÷ 350 HB**		
1.6	**Alloyed steel - high strength steel Rm 1200 ÷ 1400 N/mm², 38 ÷ 45 HRC**		
1.7	**Alloyed steel - high strength steel Rm 1400 ÷ 1600 N/mm², 45 ÷ 49 HRC**		
1.8	**Hardened steel 49 ÷ 62 HRC**		
	W-Nr.	**DIN - Germany**	**JIS**
Heat-treatable steel	1.7035	41Cr4	SCr 440 (H)
	1.8159	50CrV4, 51CrV4	SUP 10
	1.7218	25CrMo4	SCM 420
	1.7220	34CrMo4	SCCRM 3 / SCM 435 TK
	1.7225	42CrMo4	SCM 440
	1.7228	50CrMo4	SCM 445 (H)
	1.7242	16CrMo4	SCM 418 (H)
	1.6580	30CrNiMo8	SNCM 431
	1.6582	34CrNiMo6	SNCM 447
	1.6511	36CrNiMo4	SNC 836
	1.6773	36NiCrMo16	-
	1.6565	40NiCrMo6	SNCM 439
Nitriding steel	1.8515	31CrMo12	-
	1.8519	31CrMoV9	-
	1.8507	34CrAlMo7	-
	1.8509	41CrAlMo7	SACM 645
Ball bearing steel	1.3505	100Cr6	SUJ 2
	1.3537	100CrMo7	-
Spring steel	1.5025	51Si7	-
	1.5026	56Si7	-
	1.5027	60Si7	-
	1.7108	60SiCr7	-
	1.8159	50CrV4	SUP 10
	1.7176	55Cr3	SUP 9 (A)
	1.7701	51CrMoV4	-
Steel castings	1.0446	GS-45	-
	1.0552	GS-52	-
	1.5919	GS-15CrNi6	-
	1.7218	GS-25CrMo4	SCM 430
	1.7220	GS-34CrMo4	SCCRM 3 / SCM 435 TK
	1.7379	GS-18CrMo9-10	-

Continue Alloyed steel ➤

	W-Nr.	DIN - Germany	JIS
Surface hardening	1.7005	45Cr2	-
	1.7006	46Cr2	-
	1.7043	38Cr4	-
	1.7034	37Cr4	SCr 435 H
	1.7223	41CrMo4	SCM 440
Hot work tool steel	1.2767	45NiCrMo16	-
	1.2713	55NiCrMoV6	SKT 4
	1.2714	55NiCrMoV7	-
	1.2311	40CrMnMo7	-
	1.2365	X32CrMoV3-3	-
	1.2343	X38CrMoV5-1	-
	1.2344	X40CrMoV5-1	SKD 61
	1.2567	X30WCrV5-3	SKD 4
	1.2581	X30WCrV9-3	SKD 5
Cold work tool steel	1.2080	X210Cr12	SKD 1
	1.2083	X42Cr13	SUS 420 J 2
	1.2363	X100CrMoV5-1	SKD 12
	1.2379	X155CrVMo12-1	SKD 11
	1.2510	100MnCrW4	SKS 3
	1.2550	60WCrV7	-
	1.2842	90MnCrV8	-
High speed steel	1.3202	S 12-1-4-5	-
	1.3207	S 10-4-3-10	SKH 57
	1.3243	S 6-5-2-5	SKH 55
	1.3247	S 2-10-1-8	SKH 59
	1.3343	S 6-5-2	SKH 51
	1.3344	S 6-5-3	SKH 52
	1.3348	S 2-9-2	-
Sintered high speed steel	-	HS 6-5-3-8	(ASP2030, ASP30)
	-	HS 10-2-5-8	(ASP2052, ASP52)
	-	HS 6-7-6-10	(ASP2060, ASP60)
1.7 Special steel Rm<1600 N/mm2			HARDOX 400
			HARDOX 450
1.8 Special steel 49 - 62 HRC			HARDOX 500
			HARDOX 600

2 Stainless Steel

2.1 Free machining stainless steel Rm < 850 N/mm², < 250 HB

W-Nr.	DIN - Germany	JIS
1.4104	X14CrMoS17	SUS 430 F
1.4305	X8CrNiS18-9	SUS 303

Continue Alloyed steel ➤

2.2	**Austenitic stainless steel Rm < 850 N/mm², < 250 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
	1.4301	X5CrNi18-10	SUS 304
	1.4306	X2CrNi19-11	SCS 19
	1.4401	X5CrNiMo18-10	SUS 316
	1.4404	X2CrNiMo17-13-2	SUS 316 L
	1.4406	X2CrNiMoN17-12-2	SUS 316 LN
	1.4435	X2CrNiMo18-14-3	SCS 16 / SUS 316 L
	1.4438	X2CrNiMo18-16-4	SUS 317 L
	1.4541	X6CrNiTi18-10	SUS 321
	1.4550	X6CrNiNb18-10	SUS 347
	1.4828	X15CrNiSi20-12	SUH 309
	1.4841	X15CrNiSi25-20	SUH 310
	1.4845	X12CrNi25-21	-
2.3	**Ferritic, ferritic + austenitic, martensitic Rm < 1100 N/mm², < 320 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
Ferritic	1.4002	X6CrAl13	SUS 405
	1.4003	X2Cr11	-
	1.4016	X6Cr17	SUS 430
	1.4510	X6CrTi17	SUS 430LX
	1.4509	X2CrTiNb18	-
	1.4512	X5CrTi12	SUH 409
Ferritic + austenitic (Duplex)	1.4462	X2CrNiMoN22-5-3	SUS 329 J3L
	1.4501	X2CrNiMoCuWN25-7-4	-
Martensitic	1.4006	X10Cr13	SUS 410
	1.4005	X12CrS13	SUS 416
	1.4021	X20Cr13	SUS 420 J1
	1.4028	X30Cr13	SUS 420 J2
	1.4057	X17CrNi16-2	SUS 431
	1.4125	X105CrMo17	SUS 440 C
2.4	**Cr-Ni alloys high temperatures resistant Rm 1100 ÷ 1400 N/mm², 330 ÷ 410 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
Precipitation hardening	1.4542	X5CrNiCuNb16-4	SCS 24 / SUS 630
	1.4545	X4CrNiCu16-6	15-5PH
	1.4568	X7CrNiAl17-7	SUS 631
	1.4922	X20CrMoV11-1	-
	1.4939	X12CrNiMo12	-
	1.4944	-	-
	1.4980	X6NiCrTiMoVB25-15-2	-

3	Cast Iron		
3.1	**Lamellar grey cast iron Rm < 600 N/mm², < 180 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
	0.6010	GG-10	FC 10
	0.6015	GG-15	FC 15
	0.6020	GG-20	FC 20
3.2	**Lamellar grey cast iron Rm 600 ÷ 1000 N/mm², 180 ÷ 300 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
	0.6025	GG-25	FC 25
	0.6030	GG-30	FC 30
	0.6035	GG-35	FC 35
	0.6040	GG-40	FC 40
3.3	**Nodular cast iron Rm < 1000 N/mm², < 300 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
	0.7033	GGG-35.3	-
	0.7040	GGG-40	FCD 40
	0.7043	GGG-40.3	-
	0.7050	GGG-50	FCD 50
	0.7060	GGG-60	FCD 60
	0.7070	GGG-70	FCD 70
	0.7080	GGG-80	-
	0.7670	GGG-Ni22	-
	0.7683	GGG-Ni35	-
	0.7660	GGG-NiCr20-2	-
	0.7677	GGG-NiCr30-1	-
	0.7685	GGG-NiCr35-3	-
3.4	**Malleable cast iron Rm < 700 N/mm², < 210 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
	0.8035	GTW-35-04	-
	0.8045	GTW-45-07	-
	0.8145	GTS-45-06	-
	0.8165	GTS-65-02	-
	0.8170	GTS-70-02	-
3.5	**Compacted cast iron with vermicular graphite Rm 700 ÷ 1000 N/mm², 200 ÷ 300 HB**		
	W-Nr.	**DIN - Germany**	**Trade name**
			(CGI)
			(GGV)
			(GJV)

4	Aluminium, Magnesium		
4.1	**Aluminium / Magnesium unalloyed Rm < 350 N/mm², < 100 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
	3.0205	Al99	A1x3
	3.0255	Al99.5	A1x1
	3.0285	Al99.8	A1xS
	3.0305	Al99.9	-
	3.3208	Al99.9MgSi	-
	3.3308	Al99.9Mg0.5	-
	3.3318	Al99.9Mg1	-
4.2	**Al alloys, Si < 0,5% - long chipping Rm < 500 N/mm², < 150 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
Si < 0,5% Al wrought alloys	3.0505	AlMn0.5Mg0.5	A3105
	3.0915	AlFeSi	-
	3.3315	AlMg1	A2x8
	3.3525	AlMg2Mn0.3	-
	3.3527	AlMg2Mn0.8	-
	3.3545	AlMg4Mn	A5086
	3.3555	AlMg5	A2x2
	3.0615	AlMgSiPb	-
	3.1255	AlCuSiMn	A3x1
	3.1325	AlCuMg1	A3x2
	3.1355	AlCuMg2	A3x4
	3.3547	AlMg4.5Mn	A2x7
	3.3206	AlMgSi0.5	A2x5
	3.2315	AlMgSi1	-
	3.4365	AlZnMgCu1.5	A34x6
Si < 0,5% Al casting alloys	3.1371	G-AlCu4TiMg	AC1B
	3.3241	G-AlMg3Si	-
	3.3261	G-AlMg5SI	-
	3.3541	G-AlMg3	-
4.3	**Al alloys, Si < 10% - medium chipping Rm < 500 N/mm², < 150 HB**		
	W-Nr.	**DIN - Germany**	**JIS**
Si < 10% Al casting alloys	3.2134	G-AlSi5Cu1Mg	AC4D
	3.2161	G-AlSi8Cu3	AC4B
	3.2162.05	GD-AlSi8Cu3	-
	3.2371	G-AlSi7Mg	AC4C
	3.2373	G-AlSi9Mg	AC4A
4.4	**Al alloys, Si > 10% - short chipping Rm < 600 N/mm², < 180HB**		
	W-Nr.	**DIN - Germany**	**JIS**
Si > 10% Al casting alloys	3.2381	G-AlSi10Mg	-
	3.2383	G-AlSi10Mg(Cu)	ADC3
	3.2581	G-AlSi12	AC3A
	3.2583	G-AlSi12(Cu)	ADC1

Continue Magnesium alloys ➤

4.5	**Magnesium standard alloys Rm 120 ÷ 300 N/mm²**		
	W-Nr.	**DIN - Germany**	**JIS / Trade name**
	3.5200	MgMn2	MAGNUMINIUM 133
	3.5312	MgAl3Zn	AZ31
	3.5632	MgAl6Zu3	AZ63
	3.5812	MgAl8Zn1	AZ81 hp
	3.5912	MgAl9Zn1	AZ91 hp
4.6	**High strength magnesium alloys Rm 240 ÷ 400 N/mm², 70 ÷ 120 HB**		
	3.5161	MgZn6Zr	ZK60
	3.5612	MgAl6Zn1	AZ61
5	**COOPER**		
5.1	**Cooper unalloyed – long chipping Rm < 350 N/mm², < 100 HB**		
	W-Nr.	**DIN - Germany**	**JIS / Trade name**
	2.0040	OF-Cu	C1020
	2.0060	E-Cu57	C1100
	2.0065	E-Cu58	-
	2.0070	Se-Cu	-
	2.0076	SW-Cu	-
	2.0090	SF-Cu	C1220
5.2	**Cooper alloys, soft brass - long chipping Rm < 700 N/mm², < 200 HB**		
	W-Nr.	**DIN - Germany**	**JIS / Trade name**
Brass	2.0240		C2300
	2.0250	CuZn20, Ms80	C2400
	2.0265	CuZn30, Ms70	C2600
	2.0280	CuZn33, Ms67	C2680
	2.0321	CuZn37, Ms63	C2700
	2.0335	CuZn36, Ms64	C2700
Bronze	2.1016	CuSn4	C5111
	2.1020	CuSn6	C5191
	2.1030	CuSn8	C5212
	2.1080	CuSn6Zn6	-
5.3	**Cooper alloys, hard brass, bronze - short chipping Rm < 700 N/mm², < 200 HB**		
	W-Nr.	**DIN - Germany**	**JIS / Trade name**
Brass	2.0360	CuZn40 (Ms60)	C2800
	2.0380	CuZn39Pb2 (Ms58)	C3771
	2.0410	CuZn44Pb2 (Ms56)	-
	2.0510	CuZn37Al1	-
	2.0550	CuZn40Al2	-
	2.0561	CuZn40Al1	-
	2.0580	CuZn40Mn1Pb	-
	2.2140	G-ZnAl4	ZAMAK
Bronze	2.1086	G-CuSn10Zn	-
	2.1093	G-CuSn6ZnNi	-
	2.1096	G-CuSn5ZnPb	-

Continue Bronze ➤

5.4	**High strength bronze Rm < 1500 N/mm², < 440 HB**		
	W-Nr.	**DIN - Germany**	**Trade name**
	2.0932	CuAl8Fe3	Ampco12
	2.0936	CuAl10Fe3Mn2	Ampco16, Ampco 15
	2.0940	CuAl10Fe	-
	2.0966	CuAl10Ni5Fe4	Ampco
	2.0978	CuAl11Ni6Fe5	-
	-	CuAl11Fe4	Ampco 20
	2.0882	CuNi30MnFe	-
6	**Titanium**		
6.1	**Titanium unalloyed Rm < 700 N/mm², < 200 HB**		
	W-Nr.	**DIN - Germany**	**Other**
	3.7024	Ti99.8	T35, Grade 1
	3.7034	Ti99.7	T40, Grade 2
	3.7055	Ti99.6	T50, Grade 3
	3.7064	Ti99.5	T60, Grade 4
6.2	**Titanium alloys Rm < 900 N/mm², < 270 HB**		
6.3	**Titanium alloys Rm < 1400 N/mm², < 410 HB**		
	W-Nr.	**DIN - Germany**	**Other**
	3.7124	TiCu2	-
	3.7154	TiAl6Zr5	-
	3.7164, 3.7165	TiAl6V4	Grade 5
	3.7174	TiAl6V6Sn2	-
	3.7184	TiAl4Mo4Sn2	-
7	**Nickel**		
7.1	**Nickel unalloyed Rm < 500 N/mm², < 150 HB**		
	W-Nr.	**DIN - Germany**	**Trade name**
	1.3911	Rni24	-
	1.3926	Rni12	-
	1.3927	Rni8	-
	2.4061	Ni99,6	Nickel 205
	2.4066	Ni99,2	Nickel 200
	2.4068	LC-Ni99	Nickel 201
7.2	**Nickel alloys Rm < 900 N/mm², < 270 HB**		
7.3	**Nickel alloys Rm < 1600 N/mm², < 470 HB**		
	W-Nr.	**DIN - Germany**	**Trade name**
	1.3912	X2Ni36	Invar
	2.4360	NiCu30Fe	Monel 400
	2.4375	NiCu30Al	Monel K500

Continue Nickel alloys ➤

7.2 – 7.3	W-Nr.	DIN - Germany	JIS / Trade name
	2.4602	NiCr17Mo17FeW	Hastelloy C
	2.4630	Ni-Cr20Ti	Nimonic 75
	2.4631	NiCr20TiAl	NCF 80A Nimonic 80A
	2.4634	NiCo20Cr15MoAlTi	Nimonic 105
	2.4636	NiCo15Cr15MoAlTi	Udimet 700
	2.4654	NiCr20Co14MoTi	Waspaloy
	2.4662	NiCr13Mo6Ti3	Nimonic 901
	2.4665	NiCr22Fe18Mo	Hastelloy X
	2.4668	NiCr19Fe19NbMo	NCF 718 Inconel 718
	2.4670	G-NiCr13Al6MoNb	Nimocast 713
	2.4674	NiCo15Cr10MoAlTi	Nimocast PK24
	2.4816	NiCr15Fe	Inconel 600
	2.4856	NiCr22Mo9Nb	Inconel 625

8 Synthetic materials

8.1 Thermoplastics – extra long chipping Rm < 80 N/mm²

W-Nr.	DIN - Germany	JIS / Trade name
-	-	ABS
PE	Polyethylene	Sholex Hostalen
PP	Polypropylene	Poly-Pro Hostalen PP
PVC	Polyvinyl chloride	Nipolit Hostalit
PS	Polystyrene	Polystyrol
PMMA	Polymethyle acryle	Sumipex
PTFE	Polytetrafluorethylene	Teflon
PA	Polyamide	Nylon
PC	Polycarbonate	Jupilon Makralon
PI	Thermoplastic polyamide	Kinel

8.2 Thermosetting plastics – short chipping Rm < 110 N/mm²

W-Nr.	DIN - Germany	Trade name
PF	Phenol formaldehyde	Pertinax
MF	Melamine formaldehyde	Albanit, Resopal
UF	Urea formaldehyde	Bakelite

8.3 Reinforced plastic materials Rm 800 ÷ 1500 N/mm², 240 ÷ 440 HB

W-Nr.	DIN - Germany	Trade name
AFK	Aramid	Kevlar
BFK	Boron	-
CFK	Carbon fibre	-
GFK	Glass fibre	-
SFK	Synthetic fibre	-

9	**Special Materials**		
9.1	**TIC - Hard materials Rm < 1700 N/mm², < 51 HRC**		
	W-Nr.	**DIN - Germany**	**Trade name**
			Ferritan
			Ferro Titanit
			Ferrotic
9.2	**Alloys on cobalt base Rm < 1200 N/mm², < 350 HB**		
	W-Nr.	**DIN - Germany**	**Trade name**
			AiResist
			Biodur
			Celsit
			Haynes Alloy
			Stellite
9.3	**Tungsten alloys Rm < 1800 N/mm², < 52 HRC**		
	W-Nr.	**DIN - Germany**	**Trade name**
			Anviloy
			Denal
			Densimet
			Mallory
10	**Graphite**		
10.1	**Graphite Rm < 100 N/mm²**		
	W-Nr.	**DIN - Germany**	**Trade name**
			Graphit R8340
			Technograph 15
			Technograph 30
			R8510
			R8650
			Union Poco EDM1
			Union Poco EDM3

Wishing an OEM or Private Label brand on your taps?
Just ask, we can talk about it...

TECHNICAL FORM

Thread cutting and thread forming

Writer: | Date:

N° Prot:

❑ Sampling / Quantity:_ _ _ _ _ ❑ Order / Quantity:_ _ _ _ _ _ _ _ ❑ Complaint

Customer: | Phone: | Fax:

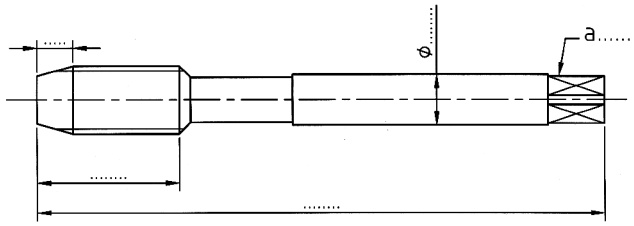
Reference person: | e-mail:

1. Thread size

Ø x Pitch

Tolerance | Norm:

Description tap



2. Work-Piece:

Material: | Code:

Tensile strength N/mm² | Hardness: ❑ HB ❑ HRC

Particular characteristic of material:

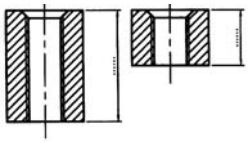
Chip type: ❑ short ❑ medium ❑ lOng

Ø Core hole

Obtained from...
❑ Drilling ❑ Prefuse
❑ Molding ❑ Turning

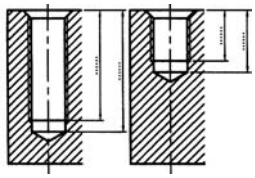
Boring: YES NOT

Through hole



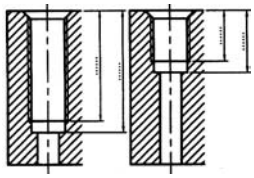
….x D

Blind hole



….x D

Blind/through hole



….x D

3. Machine brand and type:

❑ Vertical ❑ *Obliquely*
❑ Horizontal ❑ *Other*

Feed ❑ Leadscrew ❑ Manual ❑ Hydraulic ❑ Mechanic

❑ CNC Advance Reverse

%Prog. axial feed

Cutting speed

Vc (m/min) Advance Reverse

N°giri (1/min)

3.1. Tool holder (Manufacturer):

N° spindle _ _ _ _

❑ Internal coolant supply

Rigid tapping:

❑ Collets ❑ Fitting
❑ Micro - compensation ❑ Weldon
❑ Other:

Tapping with compensation:

❑ With axial compensation in compression and extension
❑ Extension only
❑ Other:

4. Coolant (brand):

❑ Emulsion % _ _ _ _ _ _ _ ❑ Cutting oil ❑ Minimal lubrication (MMS) ❑ To dry

5. Problems:

6. Competitor's characteristics:

Surface treatment: Tool's life:

UFS srl - via Giotto 20, 10080 Sparone (TO) Italy - ufssrl@ufs.it - Tel 0039-0124-818001 - Fax 0039-0124-818003

SALE'S GENERAL CONDITIONS

Acceptance of the order

Only written orders are considered as valid. Telephone orders must be confirmed in writing.

Delivery

The orders will be sent from our store in Sparone (TO) depending on the availability of the goods.
Our delivery terms shown in the offers are intended as valid, circumstances permitting.

Shipment

The goods always travels at the buyer's risk, also in the case of goods free at destination.
Fast couriers are used which deliver on the same day as ordered, not using the postal service, unless expressly requested by the customer.
If the goods do not arrive, or if the goods cannot be traced, it will be the exclusive responsibility of the customer and the goods are shipped after payment.
The products are packaged in single or multiple P.P containers, to preserve the integrity of the tools during transport.

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All pictures of this catalogue are purely indicative and not relied to one specific diameter of the tool.
Shape and dimensions are according to the indicated technical features and not to the pictures.

UFS declines any responsibility or penalty for possible damages caused by the tools described in this publication. All legal proceedings will be dealt with in Ivrea (TO).

UFS S.r.l. - Sparone (TO) - Italy