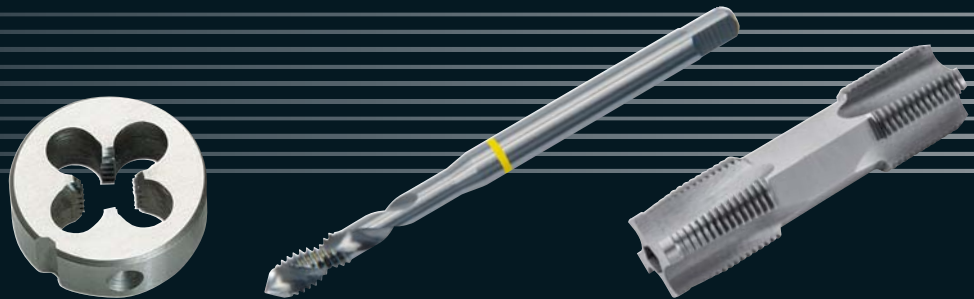


# VÖLKEĻ

THREADING SOLUTIONS ■ ■ ■



■ ■ ■ ■ ■ ■ ■ ■ VD 2012



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**Die Stocks - Tap Wrenches**  
**Útiles para roscar**

7 - 10



**Hand Taps**  
**Machos Mano**

11 - 37



**Short Machine Taps**  
**Machos Máquina cortos**

39 - 53



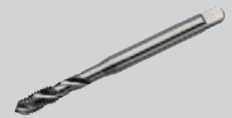
**HexTap, Bits and Combined Taps**  
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**Machine Taps**  
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				997	53

## Tap Holder with Ratchet

for right- and left-hand-turn


all steel quality

## Giramachos con Crique

para giro a derecha e izquierda

ejecución completamente de acero



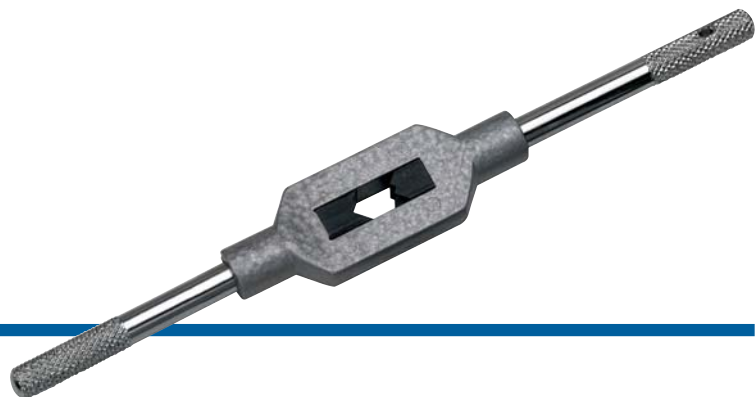
No.	for Taps	Square mm	Length mm	Weight kg		Art.-No.	Price €	
1	M 3-10 1/8-3/8	2.4-5.5	85	0,165	10	10001	7,70	
2	M 5-12 7/32-1/2	4.5-8.0	100	0,310	10	10002	9,30	
10	M 3-10 1/8-3/8	2.4-5.5	250	0,250	10	10010	12,60	
20	M 5-12 7/32-1/2	4.5-8.0	300	0,440	10	10020	15,40	
Jaws and Spring for No. 1 und 10						10	10091	1,30
Jaws and Spring for No. 2 und 20						10	10092	2,10


## Adjustable Tap Wrenches

DIN 1814 Zinc die cast

## Giramachos ajustables

DIN 1814, de zinc fundido



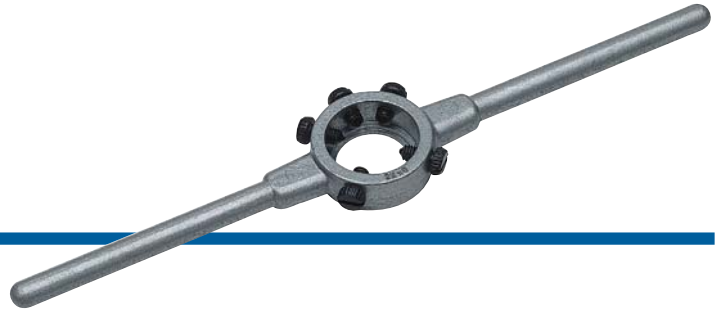
No.	for Taps	Square mm	Length mm	Weight kg		Art.-No.	Price €
0	M 1-8 1/16-1/4	2.0-5.0	130	0,050	5	13000	3,30
1	M 1-10 1/16-3/8 G 1/8	2.0-6.3	176	0,095	5	13010	3,60
1.1/2	M 1-12 1/16-1/2 G 1/8	2.1-8.0	176	0,120	5	13015	3,60
2	M 4-12 5/32-1/2 G 1/8	3.0-9.0	280	0,285	5	13020	5,80
3	M 5-20 7/32-3/4 G 1/8-1/2	4.9-12	380	0,660	1	13030	10,40
4	M 11-27 7/16-1" G 1/4-3/4	5.5-16	505	1,500	1	13040	19,80
5 L	M 13-32 1/2 -1.1/4 G 1/4-1"	7-20	700	1,800	1	13050	30,80


## Die Stocks

DIN 225 (DIN EN 22568), Zinc die cast

## Volvedores

DIN 225 (DIN EN 22568), de zinc fundido



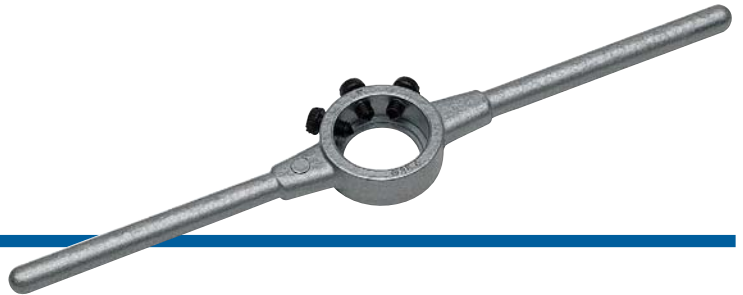
Ø x mm	for round Dies DIN 223 (DIN EN 22568)		Length mm	Weight kg		Art.-No.	Price €
16 x 5	M 1-2.6	BSW 1/16-3/32	160	0,050	5	15001	2,65
20 x 5	M 3-4	BSW 1/8-5/32	200	0,065	5	15002	2,75
20 x 7	M 4.5-6	BSW 3/16-1/4	200	0,065	5	15003	2,75
25 x 9	M 7-9	BSW 5/16	224	0,105	5	15004	3,10
30 x 11	M 10-11	BSW 3/8-7/16	280	0,190	5	15005	5,05
38 x 10	Mf 12-15	G 1/4	315	0,340	5	15006	7,90
38 x 14	M 12-14	BSW 1/2-9/16	315	0,340	5	15007	7,90
45 x 14	Mf 16-20	G 3/8-1/2	450	0,650	1	15008	9,40
45 x 18	M 16-20	BSW 5/8-13/16	450	0,650	1	15009	9,40
55 x 16	Mf 22-26	G 5/8-3/4	560	0,900	1	15010	12,10
55 x 22	M 22-24	BSW 7/8-1"	560	0,900	1	15011	12,10
65 x 18	Mf 27-36	G 7/8-1"	630	1,400	1	15012	20,40
65 x 25	M 27-36	BSW 1.1/8-1.3/8	630	1,400	1	15013	20,40


## Die Stocks

Inch - with 3 screws

## Volvedores

en pulgadas - con 3 tornillos



Ø	mm	inch/pulgadas	Length mm	Weight kg		Art.-No.	Price €
13/16"	20.6 x 6.35	13/16 x 1/4	200	0,060	5	15520	2,90
1"	25.4 x 9.5	1" x 3/8	224	0,100	5	15525	3,00
1.5/16"	33.4 x 11.1	1.5/16 x 7/16	270	0,180	5	15533	4,40
1.1/2"	38.1 x 12.7	1.1/2 x 1/2	315	0,320	5	15538	8,30
2"	50.8 x 15.9	2" x 5/8	560	0,900	1	15550	13,20
2.1/4"	57.1 x 17.5	2.1/4 x 11/16	560	0,900	1	15557	13,20
2.1/2"	63.5 x 19.0	2.1/2 x 3/4	630	1,400	1	15563	20,50
3"	76.2 x 22.2	3" x 7/8	900	2,200	1	15576	46,20
3.1/2"	88.9 x 25.4	3.1/2" x 1"	900	3,300	1	15588	57,00
4"	101.6 x 25.4	4" x 1"	1000	3,600	1	15599	182,00




## Adjustable Tap Wrenches

DIN 1814, **STEEL**

## Giramachos ajustables

DIN 1814, **ACERO**



No.	for Taps	Square mm	Length mm	Weight kg		Art.-No.	Price €
0	M 1-8 1/16-1/4	2.0-5.0	130	0,050	5	14000	4,90
1	M 1-10 1/16-3/8	2.0-6.3	176	0,100	5	14010	5,50
1.1/2	M 1-12 1/16-1/2 G 1/8	2.1-8.0	176	0,120	5	14015	5,50
2	M 4-12 5/32-1/2 G 1/8	3.0-9.0	280	0,285	5	14020	8,80
3	M 5-20 7/32-3/4 G 1/8-1/2	4.9-12	380	0,660	1	14030	15,90
4	M 11-27 7/16-1" G 1/4-3/4	5.5-16	500	1,500	1	14040	29,70
5	M 13-32 1/2-1.1/4 G 1/4-1"	7-20	700	1,800	1	14050	46,20
6	M 18-42 3/4-1.1/2 G 1/2-1.1/4	11-24	1000	2,600	1	14060	49,50
7	M 27-52 1.1/8-2" G 3/4-1.3/4	16-32	1250	4,500	1	14070	88,00
8	M 27-64 1.1/8"-3" G 3/4-3"	16-40	1250	4,500	1	14080	220,00


## Die Stocks

DIN 225 (DIN EN 22568), **STEEL**

## Volvedores

DIN 225 (DIN EN 22568), **ACERO**



Ø x mm	for round Dies DIN 223 (DIN EN 22568)	Length mm	Weight kg		Art.-No.	Price €
45 x 18	M 16-20 BSW 5/8-13/16	450	0,650	1	15209	15,40
55 x 22	M 22-24 BSW 7/8-1"	560	0,900	1	15211	22,00
65 x 25	M 27-36 BSW 1.1/8-1.3/8	630	1,400	1	15213	27,50
75 x 20	Mf 38-42 G 1.1/8-1.1/4	800	2,250	1	15214	46,20
75 x 30	M 38-42 BSW 1.1/2-1.5/8	800	2,100	1	15215	46,20
90 x 22	Mf 45-52 G 1.3/8-1.5/8	900	3,200	1	15216	57,00
90 x 36	M 45-52 BSW 1.3/4-2"	900	3,000	1	15217	57,00
105 x 22	Mf 54-63 G 1.3/4-2"	975	3,500	1	15218	87,00
105 x 36	M 54-63 BSW 2.1/4"-2.1/2"	975	3,500	1	15219	87,00
120 x 22	Mf 64-71 G 2.1/4-2.3/4	956	3,170	1	15220	225,00
120 x 36	M 64-71 BSW 2.3/4"	956	3,910	1	15221	225,00
130 x 25	G 3"	966	3,505	1	15222	313,00
130 x 36		966	4,025	1	15223	313,00
140 x 22		976	3,620	1	15224	393,00
150 x 25	G 3.1/2"	986	3,950	1	15226	447,00
160 x 25	G 4"	996	4,115	1	15228	613,00

## Tap Extensions

DIN 377, Squares according to DIN 10

### Prolongador para machos

DIN 377, cuadrado de anclaje según DIN 10

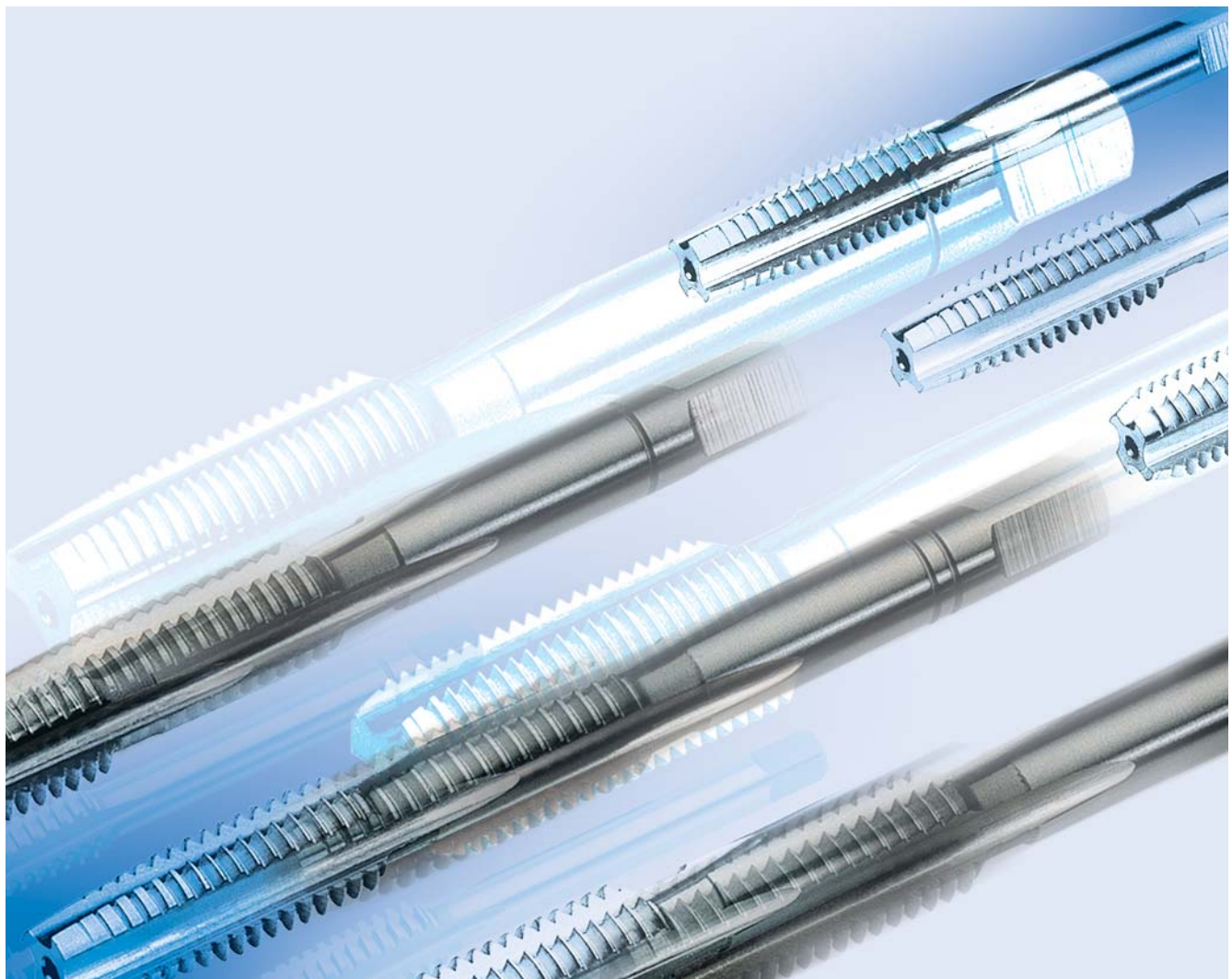


Square mm	L1	for DIN 352	Art.-No.	Price €
2.1	60	M 1-2.6	14521	2,75
2.4	70		14524	2,75
2.7	80	M 3	14527	2,75
3.0	90	M 3.5	14530	2,75
3.4	95	M 4	14534	2,75
3.8	100		14538	3,30
4.3	105		14543	4,00
4.9	110	M 4.5-8	14549	3,10
5.5	115	M 9-10	14555	3,50
6.2	120	M 11	14562	3,85
7.0	125	M 12	14570	4,75
8.0	125		14580	5,95
9.0	130	M 14-16	14590	6,50
10.0	140		14610	8,60
11.0	150	M 18	14611	10,45
12.0	155	M 20	14612	13,65
13.0	165		14613	15,40
14.5	175	M 22-24	14614	18,70
16.0	180	M 27	14616	19,80
18.0	200	M 30	14618	23,10
20.0	220	M 33	14620	29,70
22.0	220	M 36	14622	41,80
24.0	235	M 39-42	14624	53,90
26.0	250		14626	68,80
29.0	265	M 45-48	14629	81,40
32.0	285	M 52	14632	114,40

**Hand Taps**

**Machos Mano**

	HSS-G	HSSE	HSS-G Left Hand/izquierdas
M	12	29	33
Mf	14	31	34
BSW	20		35
BSF	21		
BA	22		
UNC	23		36
UNF	24		36
UNEF	25		
G (BSP)	26	32	37
PG	27		
Tr	28		



## Hand Taps

metric ISO-thread DIN 13

## Machos Mano

métrica ISO-rosca DIN 13



**DIN 352**

**HSS-G**

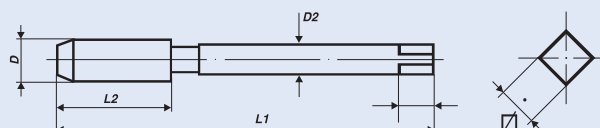
**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 1 x 0.25	32	5.5	2.5	2.1	27302	9,70	29,10
M 1.1 x 0.25	32	5.5	2.5	2.1	27304	9,70	29,10
M 1.2 x 0.25	32	5.5	2.5	2.1	27306	9,70	29,10
M 1.4 x 0.3	32	7.0	2.5	2.1	27308	9,70	29,10
M 1.6 x 0.35	32	8.0	2.5	2.1	27310	9,70	29,10
M 1.7 x 0.35	32	8.0	2.5	2.1	27312	9,70	29,10
M 1.8 x 0.35	32	8.0	2.5	2.1	27314	9,70	29,10
M 2 x 0.4	36	8.0	2.8	2.1	27316	4,00	12,00
M 2.2 x 0.45	36	9.0	2.8	2.1	27318	4,00	12,00
M 2.3 x 0.4	36	9.0	2.8	2.1	27320	4,00	12,00
M 2.5 x 0.45	40	9.0	2.8	2.1	27322	4,00	12,00
M 2.6 x 0.45	40	9.0	2.8	2.1	27324	4,00	12,00
M 3 x 0.5	40	11.0	3.5	2.7	27326	2,30	6,90
M 3.5 x 0.6	45	13.0	4.0	3.0	27328	3,40	10,20
M 4 x 0.7	45	13.0	4.5	3.4	27330	2,30	6,90
M 4.5 x 0.75	50	16.0	6.0	4.9	27332	3,40	10,20
M 5 x 0.8	50	16.0	6.0	4.9	27334	2,50	7,50
M 5.5 x 0.9	50	18.0	6.0	4.9	27336	4,10	12,30
M 6 x 1.0	50	19.0	6.0	4.9	27338	2,50	7,50
M 7 x 1.0	50	19.0	6.0	4.9	27340	4,10	12,30
M 8 x 1.25	56	22.0	6.0	4.9	27342	2,75	8,25
M 9 x 1.25	63	22.0	7.0	5.5	27344	5,20	15,60
M 10 x 1.5	70	24.0	7.0	5.5	27346	3,60	10,80
M 11 x 1.5	70	24.0	8.0	6.2	27348	6,60	19,80
M 12 x 1.75	75	29.0	9.0	7.0	27350	4,90	14,70
M 14 x 2.0	80	30.0	11.0	9.0	27354	5,90	17,70
M 15 x 2.0	80	32.0	12.0	9.0	27356	7,10	21,30
M 16 x 2.0	80	32.0	12.0	9.0	27358	7,20	21,60
M 18 x 2.5	95	40.0	14.0	11.0	27362	9,50	28,50
M 20 x 2.5	95	40.0	16.0	12.0	27366	10,70	32,10
M 22 x 2.5	100	40.0	18.0	14.5	27370	13,30	39,90
M 24 x 3.0	110	50.0	18.0	14.5	27374	15,60	46,80
M 27 x 3.0	110	50.0	20.0	16.0	27376	25,50	76,50
M 30 x 3.5	125	56.0	22.0	18.0	27378	33,20	99,60
M 33 x 3.5	125	56.0	25.0	20.0	27380	44,00	132,00
M 36 x 4.0	150	63.0	28.0	22.0	27382	53,00	159,00
M 39 x 4.0	150	63.0	32.0	24.0	27384	68,50	205,50
M 42 x 4.5	150	63.0	32.0	24.0	27386	77,50	232,50
M 45 x 4.5	160	70.0	36.0	29.0	27388	94,00	282,00
M 48 x 5.0	180	75.0	36.0	29.0	27390	133,00	399,00
M 52 x 5.0	180	75.0	40.0	32.0	27392	133,00	399,00
M 56 x 5.5	200	85.0	45.0	35.0	27394	164,00	492,00
M 60 x 5.5	200	85.0	45.0	35.0	27396	206,00	618,00
M 64 x 6.0	220	90.0	50.0	39.0	27398	238,00	714,00
M 68 x 6.0	220	90.0	50.0	39.0	27399	281,00	843,00

**How to order/Como pedir:**

- M3 = 27326
- M3, No. 1 = 27326-1
- M3, No. 2 = 27326-2
- M3, No. 3 = 27326-3



## Hand Taps, *non-serial form*

metric ISO-thread DIN 13

## Machos Mano, *salida conica*

métrica ISO-rosca DIN 13



**DIN 352 HSS-G Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 2 x 0.4	36	8	2.8	2.1	27616	4,00	12,00
M 2.5 x 0.45	40	9	2.8	2.1	27622	4,00	12,00
M 3 x 0.5	40	11	3.5	2.7	27626	2,30	6,90
M 4 x 0.7	45	13	4.5	3.4	27630	2,30	6,90
M 5 x 0.8	50	16	6.0	4.9	27634	2,50	7,50
M 6 x 1.0	50	19	6.0	4.9	27638	2,50	7,50
M 8 x 1.25	56	22	6.0	4.9	27642	2,75	8,25
M 9 x 1.25	63	22	7.0	5.5	27644	5,20	15,60
M 10 x 1.5	70	24	7.0	5.5	27646	3,60	10,80
M 11 x 1.5	70	24	8.0	6.2	27648	6,60	19,80
M 12 x 1.75	75	29	9.0	7.0	27650	4,90	14,70
M 13 x 1.75	75	29	9.0	7.0	27652	7,20	21,60
M 14 x 2.0	80	30	11.0	9.0	27654	5,90	17,70
M 16 x 2.0	80	32	12.0	9.0	27658	7,20	21,60
M 18 x 2.5	95	40	14.0	11.0	27662	9,50	28,50
M 19 x 2.5	95	40	14.0	11.0	27664	13,50	40,50
M 20 x 2.5	95	40	16.0	12.0	27666	10,70	32,10
M 22 x 2.5	100	40	18.0	14.5	27670	13,30	39,90
M 24 x 3.0	110	50	18.0	14.5	27674	15,60	46,80
M 27 x 3.0	110	50	20.0	16.0	27676	25,50	76,50
M 30 x 3.5	125	56	22.0	18.0	27678	33,20	99,60
M 33 x 3.5	125	56	25.0	20.0	27680	44,00	132,00
M 36 x 4.0	150	63	28.0	22.0	27682	53,00	159,00
M 39 x 4.0	150	63	32.0	24.0	27684	68,50	205,50
M 42 x 4.5	150	63	32.0	24.0	27686	77,50	232,50
M 3 x 0.6	40	11	3.5	2.7	27627	4,40	13,20
M 4 x 0.75	45	13	4.5	3.4	27631	4,40	13,20
M 5 x 0.9	50	16	6.0	4.9	27635	4,40	13,20

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

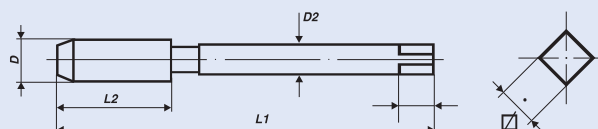
#### How to order/Como pedir:

- M3 = 27626
- M3, No. 1 = 27626-1
- M3, No. 2 = 27626-2
- M3, No. 3 = 27626-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

metric-fine ISO-thread DIN 13

## Machos Mano

métrica fina ISO-rosca DIN 13



**DIN 2181**

**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 2.5 x 0.35	40	9	2.8	2.1	26304	6,10	12,20
M 2.6 x 0.35	40	9	2.8	2.1	26305	6,10	12,20
M 3 x 0.35	40	9	3.5	2.7	26308	6,10	12,20
M 3.5 x 0.35	45	10	4.0	3.0	26309	6,10	12,20
M 4 x 0.35	45	10	4.5	3.4	26310	6,10	12,20
M 4 x 0.5	45	10	4.5	3.4	26312	6,10	12,20
M 4.5 x 0.5	50	12	6.0	4.9	26313	6,10	12,20
M 5 x 0.5	50	12	6.0	4.9	26314	6,10	12,20
M 5 x 0.75	50	12	6.0	4.9	26316	6,10	12,20
M 5.5 x 0.5	50	12	6.0	4.9	26315	6,10	12,20
M 6 x 0.5	50	14	6.0	4.9	26317	6,10	12,20
M 6 x 0.75	50	14	6.0	4.9	26318	5,50	11,00
M 7 x 0.5	50	14	6.0	4.9	26319	5,50	11,00
M 7 x 0.75	50	14	6.0	4.9	26320	5,50	11,00
M 8 x 0.5	50	19	6.0	4.9	26322	5,50	11,00
M 8 x 0.75	50	19	6.0	4.9	26324	5,50	11,00
M 8 x 1.0	56	22	6.0	4.9	26326	5,50	11,00
M 9 x 0.5	56	19	7.0	5.5	26327	6,10	12,20
M 9 x 0.75	56	19	7.0	5.5	26328	6,10	12,20
M 9 x 1.0	63	20	7.0	5.5	26330	6,10	12,20
M 10 x 0.5	63	20	7.0	5.5	26331	6,10	12,20
M 10 x 0.75	63	20	7.0	5.5	26332	6,10	12,20
M 10 x 1.0	63	20	7.0	5.5	26336	5,50	11,00
M 10 x 1.25	70	24	7.0	5.5	26338	6,10	12,20
M 11 x 0.75	63	20	8.0	6.2	26339	7,90	15,80
M 11 x 1.0	63	20	8.0	6.2	26340	7,90	15,80
M 11 x 1.25	63	22	8.0	6.2	26342	7,90	15,80
M 12 x 0.5	70	22	9.0	7.0	26345	7,90	15,80
M 12 x 0.75	70	22	9.0	7.0	26343	7,90	15,80
M 12 x 1.0	70	22	9.0	7.0	26344	7,90	15,80
M 12 x 1.25	70	22	9.0	7.0	26346	7,90	15,80
M 12 x 1.5	70	22	9.0	7.0	26348	7,30	14,60
M 13 x 0.5	70	22	11.0	9.0	26347	12,10	24,20
M 13 x 0.75	70	22	11.0	9.0	26349	12,10	24,20
M 13 x 1.0	70	22	11.0	9.0	26350	12,10	24,20
M 13 x 1.5	70	22	11.0	9.0	26351	12,10	24,20
M 14 x 0.5	70	22	11.0	9.0	26355	12,10	24,20



### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

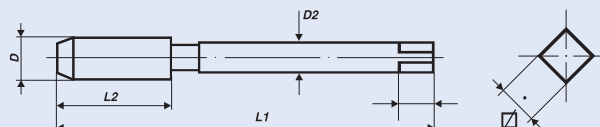
#### How to order/Como pedir:

M3x0,35 = 26308  
M3x0,35, No. 1 = 26308-1  
M3x0,35, No. 2 = 26308-2

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

metric-fine ISO-thread DIN 13

## Machos Mano

métrica fina ISO-rosca DIN 13



**DIN 2181**

**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 14 x 0.75	70	22	11.0	9.0	26352	12,10	24,20
M 14 x 1.0	70	22	11.0	9.0	26353	12,10	24,20
M 14 x 1.25	70	22	11.0	9.0	26354	9,20	18,40
M 14 x 1.5	70	22	11.0	9.0	26356	7,90	15,80
M 15 x 0.75	70	22	12.0	9.0	26357	13,50	27,00
M 15 x 1.0	70	22	12.0	9.0	26358	13,50	27,00
M 15 x 1.5	70	22	12.0	9.0	26360	13,50	27,00
M 16 x 0.5	70	22	12.0	9.0	26361	13,50	27,00
M 16 x 0.75	70	22	12.0	9.0	26363	13,50	27,00
M 16 x 1.0	70	22	12.0	9.0	26362	13,50	27,00
M 16 x 1.25	70	22	12.0	9.0	26364	13,50	27,00
M 16 x 1.5	70	22	12.0	9.0	26366	9,70	19,40
M 17 x 1.0	70	22	12.0	9.0	26368	14,60	29,20
M 17 x 1.5	70	22	12.0	9.0	26369	14,60	29,20
M 18 x 0.5	80	22	14.0	11.0	26367	14,60	29,20
M 18 x 0.75	80	22	14.0	11.0	26373	14,60	29,20
M 18 x 1.0	80	22	14.0	11.0	26370	14,60	29,20
M 18 x 1.25	80	22	14.0	11.0	26371	14,60	29,20
M 18 x 1.5	80	22	14.0	11.0	26372	11,00	22,00
M 18 x 2.0	80	22	14.0	11.0	26374	14,60	29,20
M 19 x 1.0	80	22	14.0	11.0	26375	18,30	36,60
M 19 x 1.5	80	22	14.0	11.0	26376	18,30	36,60
M 20 x 0.5	80	22	16.0	12.0	26377	18,30	36,60
M 20 x 0.75	80	22	16.0	12.0	26379	18,30	36,60
M 20 x 1.0	80	22	16.0	12.0	26378	18,30	36,60
M 20 x 1.25	80	22	16.0	12.0	26380	18,30	36,60
M 20 x 1.5	80	22	16.0	12.0	26384	13,50	27,00
M 20 x 2.0	80	22	16.0	12.0	26386	18,30	36,60
M 21 x 1.0	80	22	16.0	12.0	26387	19,00	38,00
M 21 x 1.5	80	22	16.0	12.0	26388	19,00	38,00
M 22 x 0.5	80	22	18.0	14.5	26389	19,00	38,00
M 22 x 0.75	80	22	18.0	14.5	26391	19,00	38,00
M 22 x 1.0	80	22	18.0	14.5	26390	19,00	38,00
M 22 x 1.25	80	22	18.0	14.5	26392	19,00	38,00
M 22 x 1.5	80	22	18.0	14.5	26394	19,00	38,00
M 22 x 2.0	80	22	18.0	14.5	26396	19,00	38,00
M 23 x 1.0	80	22	18.0	14.5	26397	25,50	51,00
M 23 x 1.5	80	22	18.0	14.5	26398	25,50	51,00
M 24 x 0.5	90	22	18.0	14.5	26501	25,50	51,00
M 24 x 0.75	90	22	18.0	14.5	26503	25,50	51,00
M 24 x 1.0	90	22	18.0	14.5	26500	25,50	51,00
M 24 x 1.25	90	22	18.0	14.5	26502	25,50	51,00
M 24 x 1.5	90	22	18.0	14.5	26504	19,30	38,60
M 24 x 2.0	90	22	18.0	14.5	26506	25,50	51,00
M 25 x 1.0	90	22	18.0	14.5	26507	37,50	75,00
M 25 x 1.5	90	22	18.0	14.5	26508	37,50	75,00
M 26 x 1.0	90	22	18.0	14.5	26510	37,50	75,00
M 26 x 1.5	90	22	18.0	14.5	26512	37,50	75,00
M 26 x 2.0	90	22	18.0	14.5	26514	37,50	75,00
M 27 x 1.0	90	22	20.0	16.0	26516	37,50	75,00

## Hand Taps

metric-fine ISO-thread DIN 13

## Machos Mano

métrica fina ISO-rosca DIN 13



**DIN 2181**

**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 27 x 1.5	90	22	20.0	16.0	26517	37,50	75,00
M 27 x 2.0	90	22	20.0	16.0	26518	44,00	88,00
M 28 x 1.0	90	22	20.0	16.0	26520	44,00	88,00
M 28 x 1.5	90	22	20.0	16.0	26522	44,00	88,00
M 28 x 2.0	90	22	20.0	16.0	26524	44,00	88,00
M 29 x 1.5	90	22	22.0	18.0	26526	44,00	88,00
M 30 x 1.0	90	22	22.0	18.0	26528	52,00	104,00
M 30 x 1.5	90	22	22.0	18.0	26530	52,00	104,00
M 30 x 2.0	90	22	22.0	18.0	26532	52,00	104,00
M 30 x 2.5	125	56	22.0	18.0	26533	52,00	104,00
M 30 x 3.0	125	56	22.0	18.0	26534	52,00	104,00
M 32 x 1.0	90	22	22.0	18.0	26539	52,00	104,00
M 32 x 1.5	90	22	22.0	18.0	26536	52,00	104,00
M 32 x 2.0	90	22	22.0	18.0	26535	52,00	104,00
M 32 x 3.0	125	56	22.0	18.0	26537	52,00	104,00
M 33 x 1.5	100	25	25.0	20.0	26538	52,00	104,00
M 33 x 2.0	100	25	25.0	20.0	26540	63,00	126,00
M 33 x 3.0	125	56	25.0	20.0	26542	63,00	126,00
M 34 x 1.0	100	25	28.0	22.0	26543	63,00	126,00
M 34 x 1.5	100	25	28.0	22.0	26544	63,00	126,00
M 34 x 2.0	125	40	28.0	22.0	26546	63,00	126,00
M 35 x 1.0	100	25	28.0	22.0	26547	63,00	126,00
M 35 x 1.5	100	25	28.0	22.0	26548	63,00	126,00
M 35 x 2.0	125	40	28.0	22.0	26549	63,00	126,00
M 36 x 1.0	100	25	28.0	22.0	26551	66,50	133,00
M 36 x 1.5	100	25	28.0	22.0	26550	66,50	133,00
M 36 x 2.0	125	40	28.0	22.0	26552	66,50	133,00
M 36 x 3.0	125	40	28.0	22.0	26554	66,50	133,00
M 37 x 1.5	100	25	28.0	22.0	26553	82,00	164,00
M 38 x 1.0	100	25	28.0	22.0	26555	82,00	164,00
M 38 x 1.5	100	25	28.0	22.0	26556	82,00	164,00
M 38 x 2.0	125	40	28.0	22.0	26557	82,00	164,00
M 38 x 3.0	125	40	28.0	22.0	26559	82,00	164,00
M 39 x 1.5	110	25	32.0	24.0	26558	82,00	164,00
M 39 x 2.0	125	40	32.0	24.0	26560	82,00	164,00
M 39 x 3.0	125	40	32.0	24.0	26562	82,00	164,00
M 40 x 1.0	110	25	32.0	24.0	26563	82,00	164,00
M 40 x 1.5	110	25	32.0	24.0	26564	82,00	164,00
M 40 x 2.0	125	40	32.0	24.0	26566	82,00	164,00
M 40 x 3.0	125	40	32.0	24.0	26568	82,00	164,00
M 42 x 1.0	110	25	32.0	24.0	26569	82,00	164,00
M 42 x 1.5	110	25	32.0	24.0	26570	82,00	164,00
M 42 x 2.0	125	40	32.0	24.0	26572	86,00	172,00
M 42 x 3.0	125	40	32.0	24.0	26574	86,00	172,00
M 44 x 1.5	110	25	36.0	29.0	26571	97,00	194,00
M 44 x 2.0	125	40	36.0	29.0	26573	97,00	194,00
M 45 x 1.0	110	25	36.0	29.0	26575	97,00	194,00
M 45 x 1.5	110	25	36.0	29.0	26576	97,00	194,00
M 45 x 2.0	125	40	36.0	29.0	26578	97,00	194,00
M 45 x 3.0	125	40	36.0	29.0	26580	97,00	194,00





## Hand Taps

metric-fine ISO-thread DIN 13

## Machos Mano

métrica fina ISO-rosca DIN 13



**DIN 2181**

**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 46 x 1.5	140	40	36	29.0	26581	97,00	194,00
M 48 x 1.0	140	40	36	29.0	26583	116,00	232,00
M 48 x 1.5	140	40	36	29.0	26582	116,00	232,00
M 48 x 2.0	140	40	36	29.0	26584	116,00	232,00
M 48 x 3.0	140	40	36	29.0	26586	116,00	232,00
M 50 x 1.5	140	40	36	29.0	26588	127,00	254,00
M 50 x 2.0	140	40	36	29.0	26590	127,00	254,00
M 50 x 3.0	140	40	36	29.0	26592	127,00	254,00
M 52 x 1.5	140	40	40	32.0	26594	152,00	304,00
M 52 x 2.0	140	40	40	32.0	26596	152,00	304,00
M 52 x 3.0	140	40	40	32.0	26598	152,00	304,00
M 54 x 1.0	140	32	40	32.0	28118	165,00	330,00
M 54 x 1.5	140	32	40	32.0	28001	165,00	330,00
M 54 x 2.0	140	36	40	32.0	28002	165,00	330,00
M 54 x 3.0	140	40	40	32.0	28003	165,00	330,00
M 54 x 4.0	180	50	40	32.0	28004	165,00	330,00
M 55 x 1.5	140	32	40	32.0	28005	188,00	376,00
M 55 x 2.0	140	36	40	32.0	28006	188,00	376,00
M 55 x 3.0	140	40	40	32.0	28007	188,00	376,00
M 55 x 4.0	180	50	40	32.0	28008	188,00	376,00
M 56 x 1.0	140	32	40	32.0	28119	210,00	420,00
M 56 x 1.5	140	32	40	32.0	28009	210,00	420,00
M 56 x 2.0	140	36	40	32.0	28010	210,00	420,00
M 56 x 3.0	140	40	40	32.0	28011	210,00	420,00
M 56 x 4.0	180	50	40	32.0	28012	210,00	420,00
M 58 x 1.0	160	32	45	35.0	28120	225,00	450,00
M 58 x 1.5	160	32	45	35.0	28013	215,00	430,00
M 58 x 2.0	160	36	45	35.0	28014	215,00	430,00
M 58 x 3.0	160	40	45	35.0	28015	215,00	430,00
M 58 x 4.0	200	55	45	35.0	28016	215,00	430,00
M 60 x 1.5	160	34	45	35.0	28017	225,00	450,00
M 60 x 2.0	160	36	45	35.0	28018	225,00	450,00
M 60 x 3.0	160	40	45	35.0	28019	225,00	450,00
M 60 x 4.0	200	55	45	35.0	28020	225,00	450,00
M 62 x 1.5	160	34	50	39.0	28021	258,00	516,00
M 62 x 2.0	160	36	50	39.0	28022	258,00	516,00
M 62 x 3.0	180	45	50	39.0	28023	258,00	516,00
M 62 x 4.0	220	55	50	39.0	28024	258,00	516,00
M 63 x 1.5	160	32	50	39.0	28025	266,00	532,00
M 64 x 1.5	160	34	50	39.0	28026	266,00	532,00
M 64 x 2.0	160	36	50	39.0	28027	266,00	532,00
M 64 x 3.0	180	45	50	39.0	28028	266,00	532,00
M 64 x 4.0	220	60	50	39.0	28029	266,00	532,00
M 65 x 1.5	160	34	50	39.0	28030	281,00	562,00
M 65 x 2.0	160	36	50	39.0	28031	281,00	562,00
M 65 x 3.0	180	45	50	39.0	28032	281,00	562,00
M 65 x 4.0	220	60	50	39.0	28033	281,00	562,00
M 68 x 1.5	160	36	50	39.0	28034	290,00	580,00
M 68 x 2.0	160	40	50	39.0	28035	290,00	580,00
M 68 x 3.0	180	50	50	39.0	28036	290,00	580,00

## Hand Taps

metric-fine ISO-thread DIN 13

## Machos Mano

métrica fina ISO-rosca DIN 13



**DIN 2181**

**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 68 x 4.0	220	60	50	39.0	28037	290,00	580,00
M 70 x 1.5	160	36	50	39.0	28038	508,00	1.016,00
M 70 x 2.0	160	40	50	39.0	28039	508,00	1.016,00
M 70 x 3.0	200	50	50	39.0	28040	575,00	1.150,00
M 70 x 4.0	240	60	50	39.0	28041	575,00	1.150,00
M 72 x 1.5	160	36	50	39.0	28042	508,00	1.016,00
M 72 x 2.0	160	40	50	39.0	28043	508,00	1.016,00
M 72 x 3.0	200	50	50	39.0	28044	575,00	1.150,00
M 72 x 4.0	240	60	50	39.0	28045	575,00	1.150,00
M 74 x 1.5	160	36	50	39.0	28046	560,00	1.120,00
M 74 x 2.0	160	40	50	39.0	28047	560,00	1.120,00
M 74 x 3.0	200	50	50	39.0	28048	660,00	1.320,00
M 74 x 4.0	240	60	50	39.0	28049	660,00	1.320,00
M 75 x 1.5	160	36	50	39.0	28050	566,00	1.132,00
M 75 x 2.0	160	40	50	39.0	28051	566,00	1.132,00
M 75 x 3.0	200	50	50	39.0	28052	667,00	1.334,00
M 75 x 4.0	240	60	50	39.0	28053	667,00	1.334,00
M 76 x 1.5	160	36	50	39.0	28054	575,00	1.150,00
M 76 x 2.0	160	40	50	39.0	28055	575,00	1.150,00
M 76 x 3.0	220	50	50	39.0	28056	710,00	1.420,00
M 76 x 4.0	260	60	50	39.0	28057	710,00	1.420,00
M 78 x 1.5	160	36	50	39.0	28058	575,00	1.150,00
M 78 x 2.0	160	40	50	39.0	28059	575,00	1.150,00
M 78 x 3.0	220	55	50	39.0	28060	710,00	1.420,00
M 78 x 4.0	260	65	50	39.0	28061	710,00	1.420,00
M 80 x 1.5	160	36	50	39.0	28062	625,00	1.250,00
M 80 x 2.0	160	40	50	39.0	28063	625,00	1.250,00
M 80 x 3.0	220	55	50	39.0	28064	780,00	1.560,00
M 80 x 4.0	260	65	50	39.0	28065	780,00	1.560,00
M 82 x 1.5	160	36	50	39.0	28066	625,00	1.250,00
M 82 x 2.0	160	40	50	39.0	28067	625,00	1.250,00
M 82 x 3.0	220	55	50	39.0	28068	780,00	1.560,00
M 82 x 4.0	260	65	50	39.0	28069	780,00	1.560,00
M 84 x 1.5	160	36	50	39.0	28070	730,00	1.460,00
M 84 x 2.0	160	40	50	39.0	28071	730,00	1.460,00
M 84 x 3.0	220	55	50	39.0	28072	880,00	1.760,00
M 84 x 4.0	260	65	50	39.0	28073	880,00	1.760,00
M 85 x 1.5	160	36	50	39.0	28074	945,00	1.890,00
M 85 x 2.0	160	40	50	39.0	28075	945,00	1.890,00
M 85 x 3.0	220	55	50	39.0	28076	1.155,00	2.310,00
M 85 x 4.0	260	65	50	39.0	28077	1.155,00	2.310,00
M 86 x 1.5	160	36	50	39.0	28078	945,00	1.890,00
M 86 x 2.0	160	40	50	39.0	28079	945,00	1.890,00
M 86 x 3.0	220	55	50	39.0	28080	1.155,00	2.310,00
M 86 x 4.0	260	65	50	39.0	28081	1.155,00	2.310,00
M 88 x 1.5	160	38	50	39.0	28082	1.035,00	2.070,00
M 88 x 2.0	160	40	50	39.0	28083	1.035,00	2.070,00
M 88 x 3.0	220	55	50	39.0	28084	1.190,00	2.380,00
M 88 x 4.0	260	65	50	39.0	28085	1.190,00	2.380,00
M 90 x 1.5	160	38	50	39.0	28086	1.055,00	2.110,00



## Hand Taps

metric-fine ISO-thread DIN 13

## Machos Mano

métrica fina ISO-rosca DIN 13



**DIN 2181**

**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 90 x 2.0	160	40	50	39.0	28087	1.055,00	2.110,00
M 90 x 3.0	220	55	50	39.0	28088	1.275,00	2.550,00
M 90 x 4.0	260	65	50	39.0	28089	1.275,00	2.550,00
M 92 x 1.5	180	40	56	44.0	28090	1.080,00	2.160,00
M 92 x 2.0	180	45	56	44.0	28091	1.080,00	2.160,00
M 92 x 3.0	240	60	56	44.0	28092	1.365,00	2.730,00
M 92 x 4.0	280	70	56	44.0	28093	1.365,00	2.730,00
M 95 x 1.5	180	40	56	44.0	28094	1.165,00	2.330,00
M 95 x 2.0	180	45	56	44.0	28095	1.165,00	2.330,00
M 95 x 3.0	240	60	56	44.0	28096	1.540,00	3.080,00
M 95 x 4.0	280	70	56	44.0	28097	1.540,00	3.080,00
M 96 x 1.5	180	40	56	44.0	28098	1.165,00	2.330,00
M 96 x 2.0	180	45	56	44.0	28099	1.165,00	2.330,00
M 96 x 3.0	240	60	56	44.0	28100	1.540,00	3.080,00
M 96 x 4.0	280	70	56	44.0	28101	1.540,00	3.080,00
M 98 x 1.5	180	40	56	44.0	28102	1.225,00	2.510,00
M 98 x 2.0	180	45	56	44.0	28103	1.225,00	2.510,00
M 98 x 3.0	240	60	56	44.0	28104	1.650,00	3.300,00
M 98 x 4.0	280	70	56	44.0	28105	1.650,00	3.300,00
M 100 x 1.5	180	45	56	44.0	28106	1.430,00	2.860,00
M 100 x 2.0	180	50	56	44.0	28107	1.430,00	2.860,00
M 100 x 3.0	240	65	56	44.0	28108	1.735,00	3.470,00
M 100 x 4.0	280	75	56	44.0	28109	1.735,00	3.470,00
M 105 x 1.5	180	45	56	44.0	28110	1.540,00	3.080,00
M 105 x 2.0	180	50	56	44.0	28111	1.540,00	3.080,00
M 105 x 3.0	240	65	56	44.0	28112	1.870,00	3.740,00
M 105 x 4.0	280	75	56	44.0	28113	1.870,00	3.740,00
M 110 x 1.5	180	45	56	44.0	28114	1.715,00	3.430,00
M 110 x 2.0	180	50	56	44.0	28115	1.715,00	3.430,00
M 110 x 3.0	240	65	56	44.0	28116	2.110,00	4.220,00
M 110 x 4.0	280	75	56	44.0	28117	2.110,00	4.220,00

## Hand Taps

Whitworth-thread BS 84

## Machos Mano

rosca-Whitworth BS 84



≈ DIN 352 HSS-G

**BSW**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
1/16 x 60	36	10	2.5	2.1	22302	5,50	16,50
3/32 x 48	36	10	2.8	2.1	22304	4,40	13,20
1/8 x 40	40	12	3.5	2.7	22306	3,90	11,70
5/32 x 32	45	14	4.5	3.4	22308	3,90	11,70
3/16 x 24	50	18	6.0	4.9	22310	3,90	11,70
7/32 x 24	50	18	6.0	4.9	22312	3,90	11,70
1/4 x 20	50	19	6.0	4.9	22314	3,90	11,70
5/16 x 18	56	22	6.0	4.9	22316	4,30	12,90
3/8 x 16	70	24	7.0	5.5	22318	4,90	14,70
7/16 x 14	70	24	8.0	6.2	22320	6,10	18,30
1/2 x 12	75	29	9.0	7.0	22322	7,30	21,90
9/16 x 12	80	30	11.0	9.0	22324	9,50	28,50
5/8 x 11	80	32	12.0	9.0	22326	10,80	32,40
3/4 x 10	95	40	14.0	11.0	22330	14,30	42,90
7/8 x 9	100	40	18.0	14.5	22334	19,30	57,90
1" x 8	110	50	18.0	14.5	22338	22,00	66,00
1.1/8 x 7	132	56	22.0	18.0	22342	34,00	102,00
1.1/4 x 7	132	56	22.0	18.0	22346	38,00	114,00
1.3/8 x 6	150	63	28.0	22.0	22350	49,50	148,50
1.1/2 x 6	150	63	32.0	24.0	22354	57,20	171,60
1.5/8 x 5	160	70	32.0	24.0	22358	113,50	340,50
1.3/4 x 5	160	70	36.0	29.0	22362	113,50	340,50
1.7/8 x 4.1/2	190	80	36.0	29.0	22366	150,00	450,00
2" x 4.1/2	190	80	40.0	32.0	22370	150,00	450,00
2.1/4 x 4	220	80	45.0	35.0	22372	325,00	975,00
2.1/2 x 4	220	80	50.0	39.0	22374	418,00	1.254,00
2.3/4 x 3.1/2	240	80	50.0	39.0	22376	1.067,00	3.201,00
3" x 3.1/2	260	80	50.0	39.0	22378	1.375,00	4.125,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

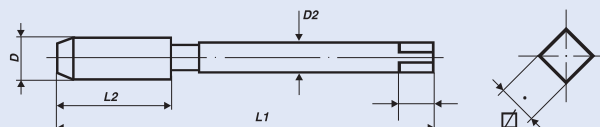
#### How to order/Como pedir:

BSW 1/8 = 22306  
BSW 1/8, No. 1 = 22306-1  
BSW 1/8, No. 2 = 22306-2  
BSW 1/8, No. 3 = 22306-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

British-Standard-Fine-thread BS 84

## Machos Mano

rosca Británica Standard Fina BS 84



≈ DIN 2181 HSS-G

**BSF**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
3/16 x 32	50	14	6.0	4.9	22710	3,90	7,80
1/4 x 26	50	18	6.0	4.9	22714	3,90	7,80
5/16 x 22	56	22	6.0	4.9	22716	4,30	8,60
3/8 x 20	63	22	7.0	5.5	22718	4,90	9,80
7/16 x 18	63	22	8.0	6.2	22720	6,10	12,20
1/2 x 16	75	24	9.0	7.0	22722	7,30	14,60
9/16 x 16	80	28	11.0	9.0	22724	9,50	19,00
5/8 x 14	80	28	12.0	9.0	22726	10,80	21,60
3/4 x 12	95	32	14.0	11.0	22730	14,30	28,60
7/8 x 11	100	36	18.0	14.5	22734	19,30	38,60
1" x 10	110	40	18.0	14.5	22738	22,00	44,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

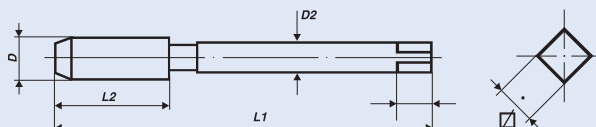
#### How to order/Como pedir:

- BSF 1/4 = 22714
- BSF 1/4, No. 1 = 22714-1
- BSF 1/4, No. 3 = 22714-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



**Hand Taps, *non-serial form***

BA-thread BS 93

**Machos Mano, *salida conica***

rosca BA, BS 93



ISO 529

HSS-G

**BA**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
BA 0	66	19	6.3	5.0	89400	5,50	16,50
BA 1	62	17	5.6	4.5	89401	5,50	16,50
BA 2	58	16	5.0	4.0	89402	5,50	16,50
BA 3	53	13	4.5	3.55	89403	5,50	16,50
BA 4	50	13	3.55	2.8	89404	5,50	16,50
BA 5	48	11	3.15	2.5	89405	5,50	16,50
BA 6	45	9.5	2.8	2.24	89406	5,50	16,50

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

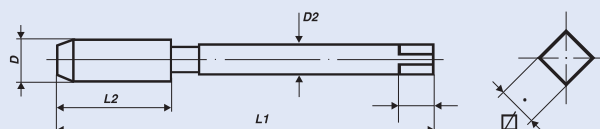
**How to order/Como pedir:**

- 2 BA = 89402
- 2 BA, No. 1 = 89402-1
- 2 BA, No. 2 = 89402-2
- 2 BA, No. 3 = 89402-3

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

Unified Coarse thread ANSI B 1.1

## Machos Mano

rosca gruesa unificada ANSI B 1.1



≈ DIN 352

HSS-G

Tolerance 2B

UNC

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
Nr. 1 x 64	32	10	2.5	2.1	23301	12,10	36,30
Nr. 2 x 56	36	11	2.8	2.1	23302	12,10	36,30
Nr. 3 x 48	36	11	2.8	2.1	23303	12,10	36,30
Nr. 4 x 40	40	12	3.5	2.7	23304	7,30	21,90
Nr. 5 x 40	40	12	3.5	2.7	23305	7,30	21,90
Nr. 6 x 32	45	14	4.0	3.0	23306	7,30	21,90
Nr. 8 x 32	45	14	4.5	3.4	23308	7,30	21,90
Nr. 10 x 24	50	16	6.0	4.9	23310	7,30	21,90
Nr. 12 x 24	50	18	6.0	4.9	23312	7,30	21,90
1/4 x 20	50	19	6.0	4.9	23314	3,90	11,70
5/16 x 18	56	22	6.0	4.9	23316	4,30	12,90
3/8 x 16	70	24	7.0	5.5	23318	4,90	14,70
7/16 x 14	70	24	8.0	6.2	23320	6,10	18,30
1/2 x 13	75	29	9.0	7.0	23322	7,30	21,90
9/16 x 12	80	30	11.0	9.0	23324	9,50	28,50
5/8 x 11	80	32	12.0	9.0	23326	10,80	32,40
3/4 x 10	95	40	14.0	11.0	23330	14,30	42,90
7/8 x 9	100	40	18.0	14.5	23334	19,30	57,90
1" x 8	110	50	18.0	14.5	23338	22,00	66,00
1.1/8 x 7	132	56	22.0	18.0	23342	34,00	102,00
1.1/4 x 7	132	56	22.0	18.0	23346	38,00	114,00
1.3/8 x 6	150	63	28.0	22.0	23350	49,50	148,50
1.1/2 x 6	150	63	32.0	24.0	23354	57,20	171,60
1.5/8 x 5	160	70	32.0	24.0	23358	113,50	340,50
1.3/4 x 5	160	70	36.0	29.0	23362	113,50	340,50
1.7/8 x 4.1/2	190	80	36.0	29.0	23366	150,00	450,00
2" x 4.1/2	190	80	40.0	32.0	23370	150,00	450,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

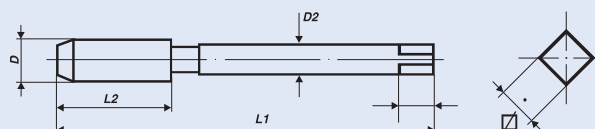
#### How to order/Como pedir:

- UNC 1/4 = 23314
- UNC 1/4, No. 1 = 23314-1
- UNC 1/4, No. 2 = 23314-2
- UNC 1/4, No. 3 = 23314-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

Unified Fine thread ANSI B 1.1

## Machos Mano

rosca fina unificada ANSI B 1.1



≈ DIN 2181 HSS-G Tolerance 2B

**UNF**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
Nr. 0 x 80	28	8	2.5	2.1	24300	12,10	24,20
Nr. 1 x 72	32	9	2.8	2.1	24301	12,10	24,20
Nr. 2 x 64	32	10	2.8	2.1	24302	12,10	24,20
Nr. 3 x 56	32	10	2.8	2.1	24303	12,10	24,20
Nr. 4 x 48	36	11	3.5	2.7	24304	7,30	14,60
Nr. 5 x 44	36	11	3.5	2.7	24305	7,30	14,60
Nr. 6 x 40	40	12	4.5	3.4	24306	7,30	14,60
Nr. 8 x 36	40	12	4.5	3.4	24308	7,30	14,60
Nr. 10 x 32	45	14	6.0	4.9	24310	7,30	14,60
Nr. 12 x 28	50	14	6.0	4.9	24312	7,30	14,60
1/4 x 28	50	18	6.0	4.9	24314	3,90	7,80
5/16 x 24	56	22	6.0	4.9	24316	4,30	8,60
3/8 x 24	63	22	7.0	5.5	24318	4,90	9,80
7/16 x 20	63	22	8.0	6.2	24320	6,10	12,20
1/2 x 20	75	24	9.0	7.0	24322	7,30	14,60
9/16 x 18	80	28	11.0	9.0	24324	9,50	19,00
5/8 x 18	80	28	12.0	9.0	24326	10,80	21,60
3/4 x 16	95	32	14.0	11.0	24330	14,30	28,60
7/8 x 14	100	36	18.0	14.5	24334	19,30	38,60
1" x 12	110	40	18.0	14.5	24338	22,00	44,00
1" x 14	110	40	18.0	14.5	24340	24,20	48,40
1.1/8 x 12	110	50	22.0	18.0	24342	34,00	68,00
1.1/4 x 12	132	56	22.0	18.0	24346	38,00	76,00
1.3/8 x 12	132	56	28.0	22.0	24350	49,50	99,00
1.1/2 x 12	150	63	32.0	24.0	24354	57,20	114,40

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

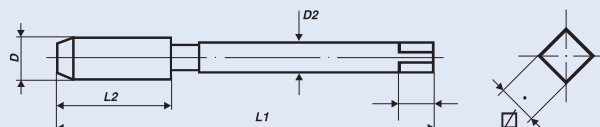
#### How to order/Como pedir:

- UNF 1/4 = 24314
- UNF 1/4, No. 1 = 24314-1
- UNF 1/4, No. 3 = 24314-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano





## Hand Taps, *non-serial form*

Unified Extra Fine thread ANSI B 1.1

## Machos Mano, *salida conica*

rosca extra fina unificada ANSI B 1.1



ISO 529

HSS-G

Tolerance 2B

UNEF

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
1/4 x 32	66	19	6.3	5.0	83821	4,65	13,95
5/16 x 32	72	22	8.0	6.3	83822	5,20	15,60
3/8 x 32	80	24	10.0	8.0	83823	5,85	17,55
7/16 x 28	85	25	8.0	6.3	83824	7,30	21,90
1/2 x 28	89	29	9.0	7.1	83825	8,70	26,10
9/16 x 24	95	30	11.2	9.0	83826	11,40	34,20
5/8 x 24	102	32	12.5	10.0	83827	12,90	38,70
3/4 x 20	112	37	14.0	11.2	83829	17,20	51,60
7/8 x 20	118	38	16.0	12.5	83831	23,20	69,60
1" x 20	130	45	16.0	14.0	83833	26,50	79,50

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

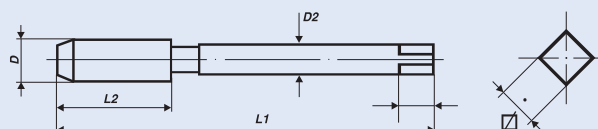
#### How to order/Como pedir:

UNEF 1/4 = 83821  
 UNEF 1/4, No. 1 = 83821-1  
 UNEF 1/4, No. 2 = 83821-2  
 UNEF 1/4, No. 3 = 83821-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

Pipe-thread DIN ISO 228

## Machos Mano

rosca Gas DIN ISO 228



**DIN 5157 HSS-G**

**G (BSP)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
G 1/8 x 28	63	20	7	5.5	25312	5,00	10,00
G 1/4 x 19	70	22	11	9.0	25314	5,50	11,00
G 3/8 x 19	70	22	12	9.0	25316	8,20	16,40
G 1/2 x 14	80	22	16	12.0	25318	11,30	22,60
G 5/8 x 14	80	22	18	14.5	25320	16,50	33,00
G 3/4 x 14	90	22	20	16.0	25322	16,50	33,00
G 7/8 x 14	90	22	22	18.0	25324	28,00	56,00
G 1" x 11	100	25	25	20.0	25326	28,00	56,00
G 1.1/8 x 11	125	40	28	22.0	25330	48,50	97,00
G 1.1/4 x 11	125	40	32	24.0	25334	48,50	97,00
G 1.3/8 x 11	140	40	36	29.0	25338	66,00	132,00
G 1.1/2 x 11	140	40	36	29.0	25342	66,00	132,00
G 1.5/8 x 11	140	40	40	32.0	25346	160,00	320,00
G 1.3/4 x 11	140	40	40	32.0	25350	132,00	264,00
G 2" x 11	160	40	45	35.0	25354	132,00	264,00
G 2.1/4 x 11	160	40	50	39.0	25358	297,00	594,00
G 2.1/2 x 11	160	40	50	39.0	25362	380,00	760,00
G 2.3/4 x 11	160	40	50	39.0	25366	695,00	1.390,00
G 3" x 11	160	40	50	39.0	25370	810,00	1.620,00
G 3.1/2 x 11	180	45	56	44.0	25374	1.275,00	2.550,00
G 4" x 11	180	45	56	44.0	25378	1.591,00	3.182,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

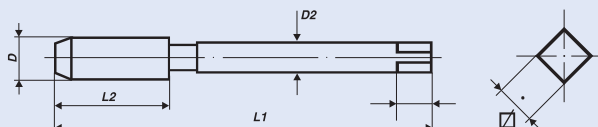
#### How to order/Como pedir:

- G 1/4 = 25314
- G 1/4, No. 1 = 25314-1
- G 1/4, No. 2 = 25314-2

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

armoured tube thread DIN 40 430

## Machos Mano

rosca para tubos blindados DIN 40 430



**DIN 40432 HSS-G**

**PG**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
PG 7 x 20	70	22	9.0	7.0	25707	9,60	19,20
PG 9 x 18	70	22	12.0	9.0	25709	12,80	25,60
PG 11 x 18	80	22	14.0	11.0	25711	21,00	42,00
PG 13.5 x 18	80	22	16.0	12.0	25713	25,00	50,00
PG 16 x 18	80	22	18.0	14.5	25716	30,00	60,00
PG 21 x 16	90	22	22.0	18.0	25721	41,00	82,00
PG 29 x 16	100	25	28.0	22.0	25729	68,00	136,00
PG 36 x 16	140	40	36.0	29.0	25736	108,00	216,00
PG 42 x 16	140	40	40.0	32.0	25742	169,00	338,00
PG 48 x 16	160	40	45.0	35.0	25748	200,00	400,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

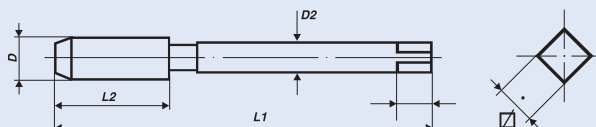
#### How to order/Como pedir:

- PG 7 = 25707
- PG 7, No. 1 = 25707-1
- PG 7, No. 2 = 25707-2

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

trapezoidal thread DIN 103

## Machos Mano

rosca trapezoidal DIN 103



**HSS-G**

**Tolerance 7H**

**Tr**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
Tr 10 x 2	90	34	7	5.5	25108	89,00	267,00
Tr 10 x 3	100	40	7	5.5	25112	89,00	267,00
Tr 12 x 3	110	40	8	6.2	25116	92,50	277,50
Tr 14 x 3	130	45	10	8.0	25120	121,00	363,00
Tr 14 x 4	130	55	10	8.0	25124	121,00	363,00
Tr 16 x 4	140	55	11	9.0	25128	109,00	327,00
Tr 18 x 4	150	55	12	9.0	25132	166,00	498,00
Tr 20 x 4	160	55	14	11.0	25136	177,00	531,00
Tr 22 x 5	175	65	16	12.0	25140	224,00	672,00
Tr 24 x 5	190	65	18	14.5	25144	247,00	741,00
Tr 26 x 5	210	70	20	16.0	25148	273,00	819,00
Tr 28 x 5	220	70	22	18.0	25152	298,00	894,00
Tr 30 x 6	240	80	22	18.0	25156	317,00	951,00
Tr 32 x 6	255	80	25	20.0	25160	387,00	1.161,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

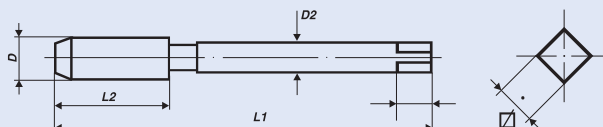
#### How to order/Como pedir:

- Tr 10x2 = 25108
- Tr 10x2, No. 1 = 25108-1
- Tr 10x2, No. 2 = 25108-2
- Tr 10x2, No. 3 = 25108-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps

metric ISO-thread DIN 13

## Machos Mano

métrica ISO-rosca DIN 13



**DIN 352**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 3 x 0.5	40	11	3.5	2.7	57326	3,90	11,70
M 4 x 0.7	45	13	4.5	3.4	57330	4,00	12,00
M 5 x 0.8	50	16	6.0	4.9	57334	4,20	12,60
M 6 x 1.0	50	19	6.0	4.9	57338	4,20	12,60
M 8 x 1.25	56	22	6.0	4.9	57342	4,75	14,25
M 10 x 1.5	70	24	7.0	5.5	57346	6,40	19,20
M 12 x 1.75	75	29	9.0	7.0	57350	8,40	25,20
M 14 x 2.0	80	30	11.0	9.0	57354	10,50	31,50
M 16 x 2.0	80	32	12.0	9.0	57358	12,60	37,80
M 18 x 2.5	95	40	14.0	11.0	57362	16,00	48,00
M 20 x 2.5	95	40	16.0	12.0	57366	18,50	55,50
M 22 x 2.5	100	40	18.0	14.5	57370	24,00	72,00
M 24 x 3.0	110	50	18.0	14.5	57374	28,00	84,00
M 27 x 3.0	110	50	20.0	16.0	57376	45,50	136,50
M 30 x 3.5	125	56	22.0	18.0	57378	62,00	186,00

### Application:

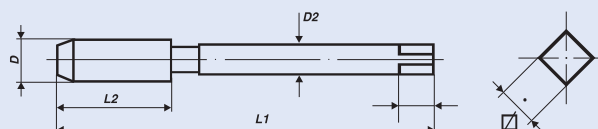
- high cutting ability
- abrasive material
- steels up to 1200 N/mm<sup>2</sup>
- and general use

### Aplicación:

- gran capacidad de corte
- materiales abrasivos
- aceros hasta 1200 N/mm<sup>2</sup>
- y uso general

### How to order/Como pedir:

- M3 = 57326
- M3, No. 1 = 57326-1
- M3, No. 2 = 57326-2
- M3, No. 3 = 57326-3



## Hand Taps

metric ISO-thread DIN 13

**Rougher piloted**

## Machos Mano

métrica ISO-rosca DIN 13

**Desbaste con punta piloto**



**DIN 352 HSS-E Tolerance ISO2/6H**

**M**

Nominal Diameter D	L1	L2	D2	∅	Art.-No.	Price per Piece €	Price per Set €
M 3 x 0,5	40	11	3,5	2,7	57726	7,70	23,10
M 4 x 0,7	45	13	4,5	3,4	57730	7,70	23,10
M 5 x 0,8	50	16	6,0	4,9	57734	8,30	24,90
M 6 x 1,0	50	19	6,0	4,9	57738	8,30	24,90
M 8 x 1,25	56	22	6,0	4,9	57742	9,00	27,00
M 10 x 1,5	70	24	7,0	5,5	57746	12,10	36,30
M 12 x 1,75	75	29	9,0	7,0	57750	16,50	49,50

**Application:**

wear resistant steel up to 1400 N/mm<sup>2</sup>

- high alloy steel
- heat resistant steel
- stainless steel
- alloy tool steel
- cast iron

Surface treatment: steam tempered

**How to order / Como pedir:**

- M 3 = 57726
- M 3, No. 1 = 57726-1
- M 3, No. 2 = 57726-2
- M 3, No. 3 = 57726-3

**Aplicación:**

aceros muy resistentes hasta 1400 N/mm<sup>2</sup>

- aceros fuertemente aleados
  - aceros resistentes al calor
  - aceros inoxidables
  - aceros para herramientas
  - fundición gris
- superficies tratadas al vaporizado

## Hand Taps

metric-fine ISO-thread DIN 13

## Machos Mano

métrica fina ISO-rosca DIN 13



**DIN 2181**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 6 x 0.75	50	14	6.0	4.9	56318	7,30	14,60
M 8 x 0.75	50	19	6.0	4.9	56324	7,30	14,60
M 8 x 1.0	56	22	6.0	4.9	56326	7,30	14,60
M 10 x 1.0	63	20	7.0	5.5	56336	7,90	15,80
M 10 x 1.25	70	24	7.0	5.5	56338	9,20	18,40
M 12 x 1.0	70	22	9.0	7.0	56344	11,00	22,00
M 12 x 1.25	70	22	9.0	7.0	56346	11,00	22,00
M 12 x 1.5	70	22	9.0	7.0	56348	11,00	22,00
M 14 x 1.25	70	22	11.0	9.0	56354	12,70	25,40
M 14 x 1.5	70	22	11.0	9.0	56356	11,60	23,20
M 16 x 1.5	70	22	12.0	9.0	56366	14,60	29,20
M 18 x 1.5	80	22	14.0	11.0	56372	15,30	30,60
M 18 x 2.0	80	22	14.0	11.0	56374	20,30	40,60
M 20 x 1.5	80	22	16.0	12.0	56384	19,10	38,20
M 20 x 2.0	80	22	16.0	12.0	56386	25,50	51,00
M 22 x 1.5	80	22	18.0	14.5	56394	23,70	47,40
M 22 x 2.0	80	22	18.0	14.5	56396	25,50	51,00
M 24 x 1.5	90	22	18.0	14.5	56504	26,50	53,00

### Application:

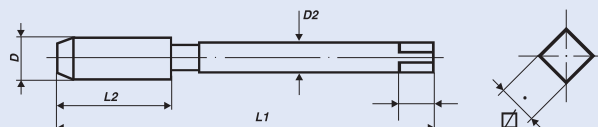
- high cutting ability
- abrasive material
- steels up to 1200 N/mm<sup>2</sup>
- and general use

### Aplicación:

- gran capacidad de corte
- materiales abrasivos
- aceros hasta 1200 N/mm<sup>2</sup>
- y uso general

### How to order/Como pedir:

- M 6x0,75 = 56318
- M 6x0,75, No. 1 = 56318-1
- M 6x0,75, No. 2 = 56318-2



## Hand Taps

Pipe-thread DIN ISO 228

## Machos Mano

rosca Gas DIN ISO 228



**DIN 5157**

**HSS-E**

**G (BSP)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
G 1/8 x 28	63	20	7.0	5.5	55312	7,30	14,60
G 1/4 x 19	70	22	11.0	9.0	55314	8,60	17,20
G 3/8 x 19	70	22	12.0	9.0	55316	12,90	25,80
G 1/2 x 14	80	22	16.0	12.0	55318	17,70	35,40
G 3/4 x 14	90	22	20.0	16.0	55322	24,20	48,40
G 1" x 11	100	25	25.0	20.0	55326	39,50	79,00

### Application:

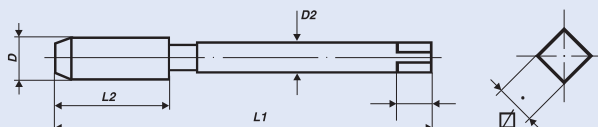
- high cutting ability
- abrasive material
- steels up to 1200 N/mm<sup>2</sup>
- and general use

### Aplicación:

- gran capacidad de corte
- materiales abrasivos
- aceros hasta 1200 N/mm<sup>2</sup>
- y uso general

### How to order/Como pedir:

- G 1/4 = 55314
- G 1/4, No. 1 = 55314-1
- G 1/4, No. 2 = 55314-2





## Hand Taps, *Left Hand*

metric ISO-thread DIN 13

## Machos Mano, *izquierdas*

métrica ISO-rosca DIN 13



**DIN 352**

**HSS-G**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 3 x 0.5	40	11	3.5	2.7	27026	3,60	10,80
M 4 x 0.7	45	13	4.5	3.4	27030	3,60	10,80
M 5 x 0.8	50	16	6.0	4.9	27034	4,10	12,30
M 6 x 1.0	50	19	6.0	4.9	27038	4,30	12,90
M 8 x 1.25	56	22	6.0	4.9	27042	4,60	13,80
M 10 x 1.5	70	24	7.0	5.5	27046	5,90	17,70
M 12 x 1.75	75	29	9.0	7.0	27050	8,10	24,30
M 14 x 2.0	80	30	11.0	9.0	27054	9,70	29,10
M 16 x 2.0	80	32	12.0	9.0	27058	11,70	35,10
M 18 x 2.5	95	40	14.0	11.0	27062	15,40	46,20
M 20 x 2.5	95	40	16.0	12.0	27066	17,30	51,90
M 22 x 2.5	100	40	18.0	14.5	27070	21,00	63,00
M 24 x 3.0	110	50	18.0	14.5	27074	26,00	78,00
M 27 x 3.0	110	50	20.0	16.0	27076	42,00	126,00
M 30 x 3.5	125	56	22.0	18.0	27078	53,00	159,00
M 33 x 3.5	125	56	25.0	20.0	27080	71,00	213,00
M 36 x 4.0	150	63	28.0	22.0	27082	85,00	255,00
M 39 x 4.0	150	63	32.0	24.0	27084	109,00	327,00
M 42 x 4.5	150	63	32.0	24.0	27086	124,00	372,00
M 45 x 4.5	160	70	36.0	29.0	27088	150,00	450,00
M 48 x 5.0	180	75	36.0	29.0	27090	212,00	636,00
M 52 x 5.0	180	75	40.0	32.0	27092	212,00	636,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

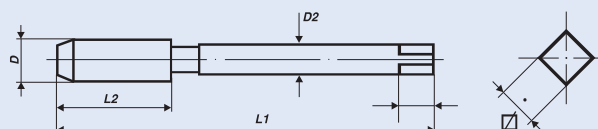
#### How to order/Como pedir:

- M3 = 27026
- M3, No. 1 = 27026-1
- M3, No. 2 = 27026-2
- M3, No. 3 = 27026-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



**Hand Taps, *Left Hand***  
metric-fine ISO-thread DIN 13

**Machos Mano, *izquierdas***  
métrica fina ISO-rosca DIN 13



**DIN 2181 HSS-G Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
M 6 x 0.75	50	14	6.0	4.9	26007	8,20	16,40
M 8 x 0.75	50	19	6.0	4.9	26010	8,20	16,40
M 8 x 1.0	56	22	6.0	4.9	26011	8,20	16,40
M 10 x 1.0	63	20	7.0	5.5	26015	8,20	16,40
M 10 x 1.25	70	24	7.0	5.5	26016	9,20	18,40
M 12 x 1.0	70	22	9.0	7.0	26020	11,90	23,80
M 12 x 1.25	70	22	9.0	7.0	26021	11,90	23,80
M 12 x 1.5	70	22	9.0	7.0	26022	11,00	22,00
M 14 x 1.25	70	22	11.0	9.0	26027	13,70	27,40
M 14 x 1.5	70	22	11.0	9.0	26028	11,90	23,80
M 16 x 1.0	70	22	12.0	9.0	26031	20,20	40,40
M 16 x 1.5	70	22	12.0	9.0	26033	14,50	29,00
M 18 x 1.5	80	22	14.0	11.0	26036	16,40	32,80
M 20 x 1.5	80	22	16.0	12.0	26040	20,20	40,40
M 22 x 1.5	80	22	18.0	14.5	26045	26,40	52,80
M 24 x 1.5	90	22	18.0	14.5	26050	29,20	58,40
M 24 x 2.0	90	22	18.0	14.5	26051	38,00	76,00
M 30 x 1.5	90	22	22.0	18.0	26063	77,60	155,20
M 30 x 2.0	90	22	22.0	18.0	26064	77,60	155,20

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

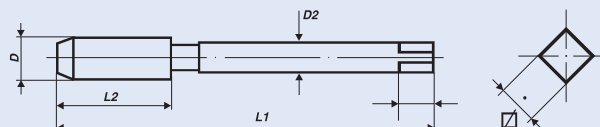
**How to order/Como pedir:**

- M 6x0,75 = 26007
- M 6x0,75, No. 1 = 26007-1
- M 6x0,75, No. 2 = 26007-2

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps, *Left Hand*

Whitworth-thread BS 84

## Machos Mano, *izquierdas*

rosca-Whitworth BS 84



≈ DIN 352 HSS-G

**BSW**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
BSW 1/8 x 40	40	12	3.5	2.7	22006	6,30	18,90
BSW 5/32 x 32	45	14	4.5	3.4	22008	6,30	18,90
BSW 3/16 x 24	50	18	6.0	4.9	22010	6,30	18,90
BSW 1/4 x 20	50	19	6.0	4.9	22014	6,30	18,90
BSW 5/16 x 18	56	22	6.0	4.9	22016	6,60	19,80
BSW 3/8 x 16	70	24	7.0	5.5	22018	7,70	23,10
BSW 7/16 x 14	70	24	8.0	6.2	22020	9,40	28,20
BSW 1/2 x 12	75	29	9.0	7.0	22022	11,20	33,60
BSW 9/16 x 12	80	30	11.0	9.0	22024	14,60	43,80
BSW 5/8 x 11	80	32	12.0	9.0	22026	16,50	49,50
BSW 3/4 x 10	95	40	14.0	11.0	22030	22,00	66,00
BSW 7/8 x 9	100	40	18.0	14.5	22034	27,50	82,50
BSW 1" x 8	110	50	18.0	14.5	22038	33,00	99,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

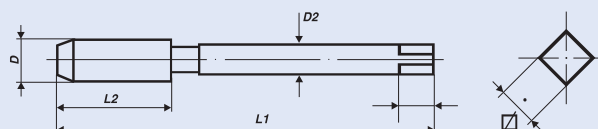
#### How to order/Como pedir:

- BSW 1/8 = 22006
- BSW 1/8, No. 1 = 22006-1
- BSW 1/8, No. 2 = 22006-2
- BSW 1/8, No. 3 = 22006-3

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



**Hand Taps, *Left Hand***

Unified thread ANSI B 1.1

**Macho mano, *izquierdas***

rosca unificada ANSI B 1.1



≈ **DIN 352**    **HSS-G**    **Tolerance 2B**

**UNC / UNF**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
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**UNC 3-pcs**

UNC Nr. 6 x 32	45	14	4.0	3.0	23006	9,90	29,70
UNC Nr. 8 x 32	45	14	4.5	3.4	23008	9,90	29,70
UNC Nr. 10 x 24	50	16	6.0	4.9	23010	9,90	29,70
UNC Nr. 12 x 24	50	18	6.0	4.9	23012	9,90	29,70
UNC 1/4 x 20	50	19	6.0	4.9	23014	6,30	18,90
UNC 5/16 x 18	56	22	6.0	4.9	23016	6,60	19,80
UNC 3/8 x 16	70	24	7.0	5.5	23018	7,70	23,10
UNC 7/16 x 14	70	24	8.0	6.2	23020	9,40	28,20
UNC 1/2 x 13	75	29	9.0	7.0	23022	11,20	33,60
UNC 9/16 x 12	80	30	11.0	9.0	23024	14,60	43,80
UNC 5/8 x 11	80	32	12.0	9.0	23026	16,50	49,50
UNC 3/4 x 10	95	40	14.0	11.0	23030	22,00	66,00
UNC 7/8 x 9	100	40	18.0	14.5	23034	27,50	82,50
UNC 1" x 8	110	50	18.0	14.5	23038	33,00	99,00

**UNF 2-pcs**

UNF Nr. 10 x 32	45	14	6.0	4.9	24010	9,90	19,80
UNF 1/4 x 28	50	18	6.0	4.9	24014	6,30	12,60
UNF 5/16 x 24	56	22	6.0	4.9	24016	6,60	13,20
UNF 3/8 x 24	63	22	7.0	5.5	24018	7,70	15,40
UNF 7/16 x 20	63	22	8.0	6.2	24020	9,40	18,80
UNF 1/2 x 20	75	24	9.0	7.0	24022	11,20	22,40
UNF 9/16 x 18	80	28	11.0	9.0	24024	14,60	29,20
UNF 5/8 x 18	80	28	12.0	9.0	24026	16,50	33,00
UNF 3/4 x 16	95	32	14.0	11.0	24030	22,00	44,00
UNF 7/8 x 14	100	36	18.0	14.5	24034	27,50	55,00
UNF 1" x 12	110	40	18.0	14.5	24038	33,00	66,00

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

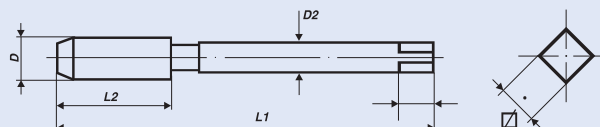
**How to order/Como pedir:**

- UNC 1/4 = 23014
- UNC 1/4, No. 1 = 23014-1
- UNC 1/4, No. 2 = 23014-2
- UNC 1/4, No. 3 = 23014-3

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano



## Hand Taps, *Left Hand*

Pipe-thread DIN ISO 228

## Machos Mano, *izquierdas*

rosca Gas DIN ISO 228



**DIN 5157 HSS-G**

**G (BSP)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €	Price per Set €
G 1/8 x 28	63	20	7.0	5.5	25012	7,70	15,40
G 1/4 x 19	70	22	11.0	9.0	25014	8,70	17,40
G 3/8 x 19	70	22	12.0	9.0	25016	12,70	25,40
G 1/2 x 14	80	22	16.0	12.0	25018	16,60	33,20
G 5/8 x 14	80	22	18.0	14.5	25020	25,00	50,00
G 3/4 x 14	90	22	20.0	16.0	25022	25,00	50,00
G 1" x 11	100	25	25.0	20.0	25026	42,00	84,00
G 1.1/8 x 11	125	40	28.0	22.0	25030	73,00	146,00
G 1.1/4 x 11	125	40	32.0	24.0	25034	73,00	146,00
G 1.3/8 x 11	140	40	36.0	29.0	25038	96,00	192,00
G 1.1/2 x 11	140	40	36.0	29.0	25042	96,00	192,00
G 1.3/4 x 11	140	40	40.0	32.0	25050	198,00	396,00
G 2" x 11	160	40	45.0	35.0	25054	198,00	396,00

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

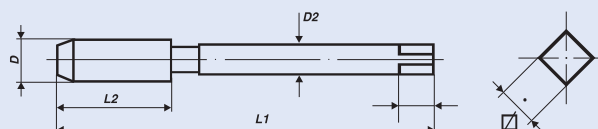
#### How to order/Como pedir:

- G 1/4 = 25014
- G 1/4, No. 1 = 25014-1
- G 1/4, No. 2 = 25014-2

### Aplicación:


#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano





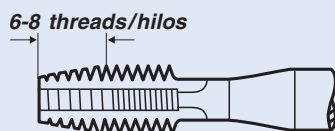
## Q.C. Boxen

 203-205

## Short Machine Taps

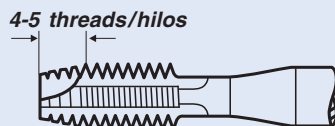
## Machos Máquina cortos

	Form C	Form D	Form B	35° RSP	B-AZ
M			40	40	40
M (ISO 529)			41	42	41
Mf		43			
BSW		44			
W (DIN 477)	44				
UNC		45			
UNF		45			
G (BSP)		46			
Rc (BSPT)	47		47	47	
Rp (BSPP)	48			48	
PG		49			
NPT	50		50	50	
NPTF			52	52	
NPS	53			53	



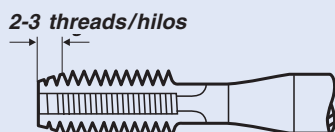
### Form A

6-8 Threads Lead, for short through holes  
6-8 hilos de entrada, agujero pasante



### Form B

4-5 Threads Lead with Spiral Point for through holes  
4-5 hilos de entrada con punta espiral, agujero pasante



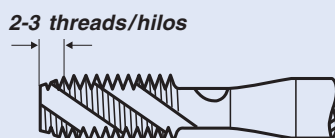
### Form C

2-3 Threads Lead, for blind holes  
2-3 hilos de entrada, agujero ciego



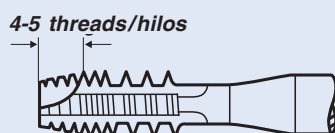
### Form D

4-5 Threads Lead, for through and blind holes  
4-5 hilos de entrada, agujero pasante y ciego



### Form C/35° RSP

2-3 Threads Lead, 35° Spiral Flute, for blind holes  
2-3 hilos de entrada con canal helicoidal 35°, agujero ciego



### Form B-AZ

4-5 Threads Lead with Spiral Point and interrupted threads for through holes  
4-5 hilos de entrada con punta espiral y diente alterno, agujero pasante

## Short Machine Taps

metric ISO-thread DIN 13

## Machos Máquina cortos

métrica ISO-rosca DIN 13



**DIN 352 HSS-E Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
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### Spiral Point / punta en espiral (pasante)

M 3 x 0.5	40	11	3.5	2.7	61526	3,50
M 4 x 0.7	45	13	4.5	3.4	61530	3,50
M 5 x 0.8	48	16	6.0	4.9	61534	3,60
M 6 x 1.0	50	19	6.0	4.9	61538	3,90
M 8 x 1.25	56	22	6.0	4.9	61542	4,60
M 10 x 1.5	70	24	7.0	5.5	61546	5,50
M 12 x 1.75	75	29	9.0	7.0	61550	7,80
M 14 x 2.0	80	30	11.0	9.0	61554	9,50
M 16 x 2.0	80	32	12.0	9.0	61558	13,00
M 18 x 2.5	95	40	14.0	11.0	61562	16,00
M 20 x 2.5	95	40	16.0	12.0	61566	17,60
M 22 x 2.5	100	40	18.0	14.5	61570	25,00
M 24 x 3.0	110	50	18.0	14.5	61574	28,00

### 35° Spiral Flute / Helicoidal 35° (ciego)

M 3 x 0.5	40	11	3.5	2.7	61726	4,40
M 4 x 0.7	45	13	4.5	3.4	61730	4,40
M 5 x 0.8	48	16	6.0	4.9	61734	4,70
M 6 x 1.0	50	19	6.0	4.9	61738	4,90
M 8 x 1.25	56	22	6.0	4.9	61742	5,60
M 10 x 1.5	70	24	7.0	5.5	61746	6,60
M 12 x 1.75	75	29	9.0	7.0	61750	8,50

### with interrupted threads / con diente alterno (pasante)

M 3 x 0.5	40	11	3.5	2.7	61926	5,50
M 4 x 0.7	45	13	4.5	3.4	61930	5,50
M 5 x 0.8	48	16	6.0	4.9	61934	5,70
M 6 x 1.0	50	19	6.0	4.9	61938	5,70
M 8 x 1.25	56	22	6.0	4.9	61942	6,10
M 10 x 1.5	70	24	7.0	5.5	61946	7,60
M 12 x 1.75	75	29	9.0	7.0	61950	9,50

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Spiral Point:** for through holes

**Spiral Flute:** for blind holes

**Form B-AZ:** for through holes

#### Aplicación:

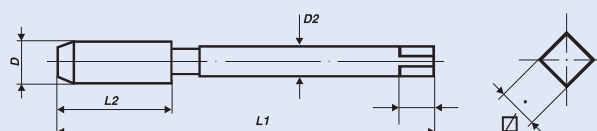
##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para roscar a mano y a máquina

**Punta en espiral:** para agujeros pasantes

**Helicoidal 35°:** para agujeros ciegos

**Con diente alterno:** para agujeros pasantes





## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13



No. 805

No. 809

### ISO 529

### Form B

### HSS-G

### Tolerance ISO2/6H

### M

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 2 x 0.4	41.0	8.0	2.50	2.00	80516	6,20
M 2.5 x 0.45	44.5	9.5	2.80	2.24	80522	6,20
M 2.6 x 0.45	44.5	9.5	2.90	2.24	80524	6,20
M 3 x 0.5	48.0	11.0	3.15	2.50	80526	3,65
M 3.5 x 0.6	50.0	13.0	3.55	2.80	80528	3,85
M 4 x 0.7	53.0	13.0	4.00	3.15	80530	3,65
M 5 x 0.8	58.0	16.0	5.00	4.00	80534	3,95
M 6 x 1.0	66.0	19.0	6.30	5.00	80538	4,10
M 8 x 1.25	72.0	22.0	8.00	6.30	80542	5,20
M 10 x 1.5	80.0	24.0	10.00	8.00	80546	6,40
M 12 x 1.75	89.0	29.0	9.00	7.10	80550	9,00
M 14 x 2.0	95.0	30.0	11.20	9.00	80554	10,30
M 16 x 2.0	102.0	32.0	12.50	10.00	80558	12,70
M 18 x 2.5	110.0	37.0	14.00	11.20	80562	18,20
M 20 x 2.5	112.0	37.0	14.00	11.20	80566	20,50
M 22 x 2.5	118.0	38.0	16.00	12.50	80570	24,20
M 24 x 3.0	130.0	45.0	18.00	14.00	80574	27,50
M 27 x 3.0	135.0	45.0	20.00	16.00	80576	38,50
M 30 x 3.5	138.0	48.0	20.00	16.00	80578	51,00

#### with interrupted threads / con diente alterno

M 3 x 0.5	48.0	11.0	3.15	2.50	80926	5,50
M 4 x 0.7	53.0	13.0	4.00	3.15	80930	5,50
M 5 x 0.8	58.0	16.0	5.00	4.00	80934	5,75
M 6 x 1.0	66.0	19.0	6.30	5.00	80938	5,75
M 7 x 1.0	66.0	19.0	7.10	5.60	80940	6,95
M 8 x 1.25	72.0	22.0	8.00	6.30	80942	6,05
M 10 x 1.5	80.0	24.0	10.0	8.00	80946	7,60
M 12 x 1.75	89.0	29.0	9.00	7.10	80950	9,70
M 14 x 2.0	95.0	30.0	11.20	9.00	80954	13,10
M 16 x 2.0	102.0	32.0	12.50	10.00	80958	14,70
M 18 x 2.5	110.0	37.0	14.00	11.20	80962	22,00
M 20 x 2.5	112.0	37.0	14.00	11.20	80966	25,30
M 22 x 2.5	118.0	38.0	16.00	12.50	80970	28,60
M 24 x 3.0	130.0	45.0	18.00	14.00	80974	32,00

#### Application:

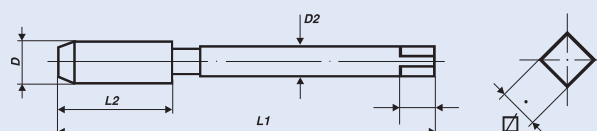
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes
- para roscar a mano y a máquina



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13



**ISO 529**

**Form C/35°RSP**

**HSS-G**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 2.5 x 0.45	44.5	9.5	2.80	2.24	80722	7,90
M 2.6 x 0.45	44.5	9.5	2.90	2.24	80724	7,90
M 3 x 0.5	48.0	11.0	3.15	2.50	80726	4,75
M 4 x 0.7	53.0	13.0	4.00	3.15	80730	4,75
M 5 x 0.8	58.0	16.0	5.00	4.00	80734	4,75
M 6 x 1.0	66.0	19.0	6.30	5.00	80738	4,85
M 8 x 1.25	72.0	22.0	8.00	6.30	80742	5,75
M 10 x 1.5	80.0	24.0	10.00	8.00	80746	7,40
M 12 x 1.75	89.0	29.0	9.00	7.10	80750	9,60
M 14 x 2.0	95.0	30.0	11.20	9.00	80754	13,10
M 16 x 2.0	102.0	32.0	12.50	10.00	80758	14,70
M 18 x 2.5	110.0	37.0	14.00	11.20	80762	22,00
M 20 x 2.5	112.0	37.0	14.00	11.20	80766	25,30
M 22 x 2.5	118.0	38.0	16.00	12.50	80770	28,60
M 24 x 3.0	130.0	45.0	18.00	14.00	80774	32,00
M 27 x 3.0	135.0	45.0	20.00	16.00	80776	46,50
M 30 x 3.5	138.0	48.0	20.00	16.00	80778	60,50

### Application:

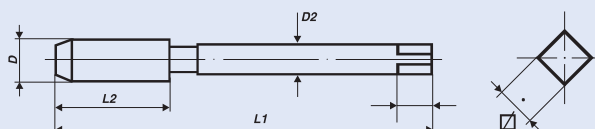
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes
- para roscar a mano y a máquina



## Short Machine Taps

metric-fine ISO-thread DIN 13

## Machos Máquina cortos

métrica fina ISO-rosca DIN 13



**DIN 2181**

**Form D**

**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 6 x 0.75	50	14	6.0	4.9	66318	5,50
M 8 x 0.75	50	19	6.0	4.9	66324	5,50
M 8 x 1.0	56	22	6.0	4.9	66326	5,50
M 9 x 0.75	56	19	7.0	5.5	66328	6,10
M 9 x 1.0	63	20	7.0	5.5	66330	6,10
M 10 x 0.75	63	20	7.0	5.5	66332	6,10
M 10 x 1.0	63	20	7.0	5.5	66336	5,50
M 10 x 1.25	70	24	7.0	5.5	66338	6,10
M 12 x 1.0	70	22	9.0	7.0	66344	7,90
M 12 x 1.25	70	22	9.0	7.0	66346	7,90
M 12 x 1.5	70	22	9.0	7.0	66348	7,30
M 13 x 1.0	70	22	11.0	9.0	66350	12,10
M 13 x 1.5	70	22	11.0	9.0	66351	12,10
M 14 x 1.0	70	22	11.0	9.0	66353	12,10
M 14 x 1.25	70	22	11.0	9.0	66354	9,20
M 14 x 1.5	70	22	11.0	9.0	66356	7,90
M 15 x 1.5	70	22	12.0	9.0	66360	13,50
M 16 x 1.5	70	22	12.0	9.0	66366	9,70
M 18 x 1.0	80	22	14.0	11.0	66370	14,60
M 18 x 1.5	80	22	14.0	11.0	66372	11,00
M 20 x 1.5	80	22	16.0	12.0	66384	13,50
M 20 x 2.0	80	22	16.0	12.0	66386	18,30
M 22 x 1.5	80	22	18.0	14.5	66394	19,00
M 22 x 2.0	80	22	18.0	14.5	66396	19,00
M 24 x 1.5	90	22	18.0	14.5	66504	19,30
M 24 x 2.0	90	22	18.0	14.5	66506	25,50
M 25 x 1.5	90	22	18.0	14.5	66508	37,50
M 26 x 1.5	90	22	18.0	14.5	66512	37,50
M 27 x 1.5	90	22	20.0	16.0	66517	37,50
M 28 x 1.5	90	22	20.0	16.0	66522	44,00
M 30 x 1.5	90	22	22.0	18.0	66530	52,00
M 30 x 2.0	90	22	22.0	18.0	66532	52,00
M 32 x 1.5	90	22	22.0	18.0	66536	52,00

### Application:

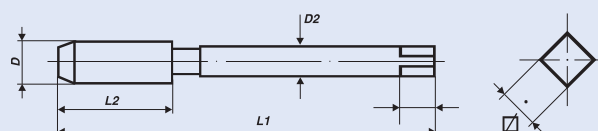
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes
- para roscar a mano y a máquina



## Short Machine Taps

Whitworth-thread BS 84

## Machos Máquina cortos

rosca-Whitworth BS 84



≈ DIN 352

Form D

HSS-G

**BSW**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
1/8 x 40	40	12	3.5	2.7	62306	3,90
3/16 x 24	50	18	6.0	4.9	62310	3,90
1/4 x 20	50	19	6.0	4.9	62314	3,90
5/16 x 18	56	22	6.0	4.9	62316	4,30
3/8 x 16	70	24	7.0	5.5	62318	4,90
7/16 x 14	70	24	8.0	6.2	62320	6,10
1/2 x 12	75	29	9.0	7.0	62322	7,30
9/16 x 12	80	30	11.0	9.0	62324	9,50
5/8 x 11	80	32	12.0	9.0	62326	10,80
3/4 x 10	95	40	14.0	11.0	62330	14,30
7/8 x 9	100	40	18.0	14.5	62334	19,30
1" x 8	110	50	18.0	14.5	62338	22,00

## Short Machine Taps

tapered Whitworth screw thread for gas cylinders  
taper 3:25, DIN 477

## Machos Máquina cortos

rosca Whitworth conica para tubos de gas  
conicidad 3:25, DIN 477



≈ DIN 352

Form C

HSS-G

**W**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
19,8 x 14	90	32	16	12	62397	132,00
28,8 x 14	100	40	20	16	62398	148,50
31,8 x 14	110	40	22	18	62399	170,50

## Short Machine Taps

Unified Coarse and Fine thread ANSI B 1.1

## Machos Máquina cortos

rosca unificada ANSI B 1.1



≈ DIN 352 Form D HSS-G Tolerance 2B

# UNC / UNF

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
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### UNC

1/4 x 20	50	19	6.0	4.9	63314	3,90
5/16 x 18	56	22	6.0	4.9	63316	4,30
3/8 x 16	70	24	7.0	5.5	63318	4,90
7/16 x 14	70	24	8.0	6.2	63320	6,10
1/2 x 13	75	29	9.0	7.0	63322	7,30
9/16 x 12	80	30	11.0	9.0	63324	9,50
5/8 x 11	80	32	12.0	9.0	63326	10,80
3/4 x 10	95	40	14.0	11.0	63330	14,30
7/8 x 9	100	40	18.0	14.5	63334	19,30
1" x 8	110	50	18.0	14.5	63338	22,00

### UNF

1/4 x 28	50	18	6.0	4.9	64314	3,90
5/16 x 24	56	22	6.0	4.9	64316	4,30
3/8 x 24	63	22	7.0	5.5	64318	4,90
7/16 x 20	63	22	8.0	6.2	64320	6,10
1/2 x 20	75	24	9.0	7.0	64322	7,30
9/16 x 18	80	28	11.0	9.0	64324	9,50
5/8 x 18	80	28	12.0	9.0	64326	10,80
3/4 x 16	95	32	14.0	11.0	64330	14,30
7/8 x 14	100	36	18.0	14.5	64334	19,30
1" x 12	110	40	18.0	14.5	64338	22,00

#### Application:

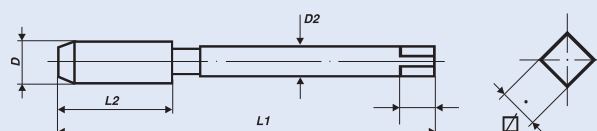
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes
- para roscar a mano y a máquina



## Short Machine Taps

Pipe-thread DIN ISO 228

## Machos Máquina cortos

rosca Gas DIN ISO 228



DIN 5157

Form D

HSS-G

**G (BSP)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
G 1/8 x 28	63	20	7	5.5	65312	5,00
G 1/4 x 19	70	22	11	9.0	65314	5,50
G 3/8 x 19	70	22	12	9.0	65316	8,20
G 1/2 x 14	80	22	16	12.0	65318	11,30
G 3/4 x 14	90	22	20	16.0	65322	16,50
G 1" x 11	100	25	25	20.0	65326	28,00
G 1.1/4 x 11	125	40	32	24.0	65334	48,50
G 1.1/2 x 11	140	40	36	29.0	65342	64,00
G 1.3/4 x 11	140	40	40	32.0	65350	132,00
G 2" x 11	160	40	45	35.0	65354	132,00
G 2.1/4 x 11	160	40	50	39.0	65358	297,00
G 2.1/2 x 11	160	40	50	39.0	65362	380,00
G 2.3/4 x 11	160	40	50	39.0	65366	695,00
G 3" x 11	160	40	50	39.0	65370	810,00
G 3.1/2 x 11	180	45	56	44.0	65374	1.275,00
G 4" x 11	180	45	56	44.0	65378	1.591,00

### Application:

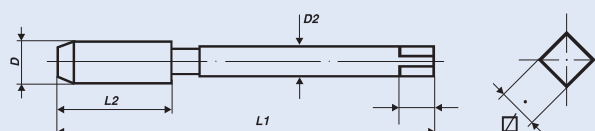
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes
- para roscar a mano y a máquina



## Short Machine Taps

tapered pipe thread, taper 1:16, con. 55°

## Machos Máquina cortos

rosca inglesa para tubo, conicidad 1:16



### HSS-G

### Rc (BSPT)

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
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#### Form C

PT 1/8 x 28	65	19.0	7.0	5.5	63712	7,20
PT 1/4 x 19	70	25.0	11.0	9.0	63714	8,30
PT 3/8 x 19	75	26.0	12.0	9.0	63716	13,20
PT 1/2 x 14	80	31.0	16.0	12.0	63718	16,50
PT 3/4 x 14	100	33.0	20.0	16.0	63722	24,20
PT 1" x 11	110	38.0	25.0	20.0	63726	36,50

#### Form B, Spiral Point / punta en espiral (pasante)

PT 1/16 x 28	55	17.5	8.0	6.0	97502	7,20
PT 1/8 x 28	55	19.0	8.0	6.0	97506	7,40
PT 1/4 x 19	62	28.0	11.0	9.0	97514	8,60
PT 3/8 x 19	65	28.0	14.0	11.0	97518	15,40
PT 1/2 x 14	80	35.0	18.0	14.0	97522	22,00
PT 3/4 x 14	85	35.0	23.0	17.0	97530	33,00
PT 1" x 11	95	45.0	26.0	21.0	97538	48,50
PT 1.1/4 x 11	105	45.0	32.0	26.0	97546	73,00
PT 1.1/2 x 11	110	45.0	38.0	29.0	97554	105,00
PT 2" x 11	120	50.0	46.0	35.0	97570	175,00

#### Form C, 35° Spiral Flute / Helicoidal 35° (ciego)

PT 1/16 x 28	55	17.5	8.0	6.0	97702	7,20
PT 1/8 x 28	55	19.0	8.0	6.0	97706	7,40
PT 1/4 x 19	62	28.0	11.0	9.0	97714	8,60
PT 3/8 x 19	65	28.0	14.0	11.0	97718	15,40
PT 1/2 x 14	80	35.0	18.0	14.0	97722	22,00
PT 3/4 x 14	85	35.0	23.0	17.0	97730	33,00
PT 1" x 11	95	45.0	26.0	21.0	97738	48,50
PT 1.1/4 x 11	105	45.0	32.0	26.0	97746	73,00
PT 1.1/2 x 11	110	45.0	38.0	29.0	97754	105,00
PT 2" x 11	120	50.0	46.0	35.0	97770	175,00

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Form C:** for through and blind holes

**Spiral Point:** for through holes

**Spiral Flute:** for blind holes

#### Aplicación:

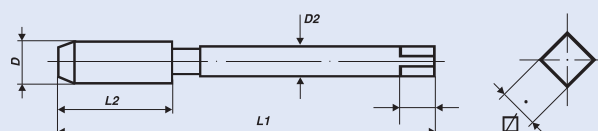
##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para roscar a mano y a máquina

**Forma C:** para agujeros pasantes y ciegos

**Punta en espiral:** para agujeros pasantes

**Helicoidal 35°:** para agujeros ciegos



## Short Machine Taps

Pipe-thread ISO 7-1 (DIN EN 10226-1)

## Machos Máquina cortos

rosca Gas ISO 7-1 (DIN EN 10226-1)



### HSS-G

### Rp (BSPP)

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
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#### Form C

PS 1/16 x 28	55	19	6.5	5.0	95402	6,20
PS 1/8 x 28	55	19	8.0	6.0	95406	6,20
PS 1/4 x 19	62	28	11.0	9.0	95414	7,40
PS 3/8 x 19	65	28	14.0	11.0	95418	11,70
PS 1/2 x 14	80	35	18.0	14.0	95422	18,80
PS 3/4 x 14	85	35	23.0	17.0	95430	32,50
PS 1" x 11	95	45	26.0	21.0	95438	40,00
PS 1.1/4 x 11	105	45	32.0	26.0	95446	60,50
PS 1.1/2 x 11	110	45	38.0	29.0	95454	84,00
PS 2" x 11	120	50	46.0	35.0	95470	117,00

#### Form C, 35° Spiral Flute / Helicoidal 35° (ciego)

PS 1/16 x 28	55	19	6.5	5.0	95702	6,70
PS 1/8 x 28	55	19	8.0	6.0	95706	6,70
PS 1/4 x 19	62	28	11.0	9.0	95714	7,80
PS 3/8 x 19	65	28	14.0	11.0	95718	12,70
PS 1/2 x 14	80	35	18.0	14.0	95722	20,50
PS 3/4 x 14	85	35	23.0	17.0	95730	29,50
PS 1" x 11	95	45	26.0	21.0	95738	44,00
PS 1.1/4 x 11	105	45	32.0	26.0	95746	66,00
PS 1.1/2 x 11	110	45	38.0	29.0	95754	92,00
PS 2" x 11	120	50	46.0	35.0	95770	127,00

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Form C:** for through and blind holes

**Spiral Flute:** for blind holes

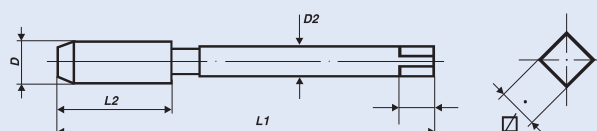
#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para roscar a mano y a máquina

**Forma C:** para agujeros pasantes y ciegos

**Helicoidal 35°:** para agujeros ciegos





## Short Machine Taps

armoured tube thread DIN 40 430

## Machos Máquina cortos

rosca para tubos blindados DIN 40 430



**DIN 40432**

**Form D**

**HSS-G**

**PG**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
PG 7 x 20	70	22	9.0	7.0	65707	9,60
PG 9 x 18	70	22	12.0	9.0	65709	12,80
PG 11 x 18	80	22	14.0	11.0	65711	21,00
PG 13.5 x 18	80	22	16.0	12.0	65713	25,00
PG 16 x 18	80	22	18.0	14.5	65716	30,00
PG 21 x 16	90	22	22.0	18.0	65721	41,00
PG 29 x 16	100	25	28.0	22.0	65729	68,00
PG 36 x 16	140	40	36.0	29.0	65736	108,00
PG 42 x 16	140	40	40.0	32.0	65742	169,00
PG 48 x 16	160	40	45.0	35.0	65748	200,00

### Application:

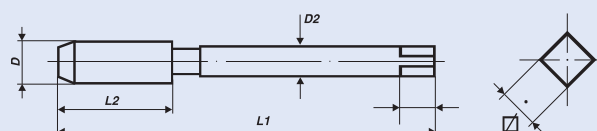
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes
- para roscar a mano y a máquina



## Short Machine Taps

american tapered pipe thread, taper 1:16

## Machos Máquina cortos

rosca americana para tubo, conicidad 1:16



### HSS-G

### NPT

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>Form C</b>						
NPT 1/16 x 27	65	19	7	5.5	63510	14,60
NPT 1/8 x 27	65	19	7	5.5	63512	12,10
NPT 1/4 x 18	70	25	11	9.0	63514	13,40
NPT 3/8 x 18	75	26	12	9.0	63516	18,50
NPT 1/2 x 14	80	31	16	12.0	63518	23,10
NPT 3/4 x 14	100	33	20	16.0	63522	30,50
NPT 1" x 11.5	110	38	25	20.0	63526	48,50
NPT 1.1/4 x 11.5	125	41	32	24.0	63534	73,00
NPT 1.1/2 x 11.5	140	42	36	29.0	63542	137,00
NPT 2" x 11.5	160	44	36	29.0	63554	168,00
<b>Form B, Spiral Point / punta en espiral (pasante)</b>						
NPT 1/16 x 27	55	17.5	8.0	6.0	98502	18,30
NPT 1/8 x 27	55	19.0	8.0	6.0	98506	14,60
NPT 1/4 x 18	62	28.0	11.0	9.0	98514	16,50
NPT 3/8 x 18	65	28.0	14.0	11.0	98518	22,00
NPT 1/2 x 14	80	35.0	18.0	14.0	98522	27,50
NPT 3/4 x 14	85	35.0	23.0	17.0	98530	36,70
NPT 1" x 11.5	95	45.0	26.0	21.0	98538	58,80
NPT 1.1/4 x 11.5	105	45.0	32.0	26.0	98546	88,00
NPT 1.1/2 x 11.5	110	45.0	38.0	29.0	98554	146,00
NPT 2" x 11.5	120	50.0	46.0	35.0	98570	183,00
<b>Form C, 35° Spiral Flute / Helicoidal 35° (ciego)</b>						
NPT 1/16 x 27	55	17.5	8.0	6.0	98702	18,30
NPT 1/8 x 27	55	19.0	8.0	6.0	98706	14,60
NPT 1/4 x 18	62	28.0	11.0	9.0	98714	16,50
NPT 3/8 x 18	65	28.0	14.0	11.0	98718	22,00
NPT 1/2 x 14	80	35.0	18.0	14.0	98722	27,50
NPT 3/4 x 14	85	35.0	23.0	17.0	98730	36,70
NPT 1" x 11.5	95	45.0	26.0	21.0	98738	58,80
NPT 1.1/4 x 11.5	105	45.0	32.0	26.0	98746	88,00
NPT 1.1/2 x 11.5	110	45.0	38.0	29.0	98754	146,00
NPT 2" x 11.5	120	50.0	46.0	35.0	98770	183,00

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Form C:** for through and blind holes

**Spiral Point:** for through holes

**Spiral Flute:** for blind holes

#### Aplicación:

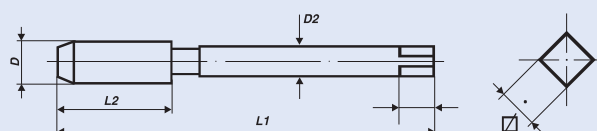
##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para roscar a mano y a máquina

**Forma C:** para agujeros pasantes y ciegos

**Punta en espiral:** para agujeros pasantes

**Helicoidal 35°:** para agujeros ciegos



**Short Machine Taps, *Left Hand***

american tapered pipe thread, taper 1:16

**Machos Máquina cortos, *izquierdas***

rosca americana para tubo, conicidad 1:16



**Form C**

**HSS-G**

**NPT**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
NPT 1/8 x 27	65	19	7	5.5	63002	18,20
NPT 1/4 x 18	70	25	11	9.0	63003	19,80
NPT 3/8 x 18	75	26	12	9.0	63004	27,80
NPT 1/2 x 14	80	31	16	12.0	63005	34,70
NPT 3/4 x 14	100	33	20	16.0	63007	45,60
NPT 1" x 11.5	110	38	25	20.0	63009	72,60
NPT 1.1/4 x 11.5	125	41	32	24.0	63011	109,00
NPT 1.1/2 x 11.5	140	42	36	29.0	63013	205,00

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

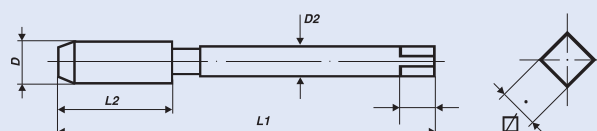
**Form C:** for through and blind holes

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para roscar a mano y a máquina

**Forma C:** para agujeros pasantes y ciegos



## Short Machine Taps

american tapered pipe thread, taper 1:16

## Machos Máquina cortos

rosca americana para tubo, conicidad 1:16



### HSS-E

### NPTF

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>Form B, Spiral Point / punta en espiral (pasante)</b>						
NPTF 1/16 x 27	55	19	6.5	5.0	98571	18,30
NPTF 1/8 x 27	55	19	8.0	6.0	98572	14,60
NPTF 1/4 x 18	62	28	11.0	9.0	98574	16,50
NPTF 3/8 x 18	65	28	14.0	11.0	98576	22,00
NPTF 1/2 x 14	80	35	18.0	14.0	98578	27,50
NPTF 3/4 x 14	85	35	23.0	17.0	98580	36,70
NPTF 1" x 11.5	95	45	26.0	21.0	98582	59,00
NPTF 1.1/4 x 11.5	105	45	32.0	26.0	98584	88,00
NPTF 1.1/2 x 11.5	110	45	38.0	29.0	98586	146,00
NPTF 2" x 11.5	120	50	46.0	35.0	98588	183,00

<b>Form C, 35° Spiral Flute / Helicoidal 35° (ciego)</b>						
NPTF 1/8 x 27	55	19	8.0	6.0	98772	14,60
NPTF 1/4 x 18	62	28	11.0	9.0	98774	16,50
NPTF 3/8 x 18	65	28	14.0	11.0	98776	22,00
NPTF 1/2 x 14	80	35	18.0	14.0	98778	27,50
NPTF 3/4 x 14	85	35	23.0	17.0	98780	36,70
NPTF 1" x 11.5	95	45	26.0	21.0	98782	58,80

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Spiral Point:** for through holes

**Spiral Flute:** for blind holes

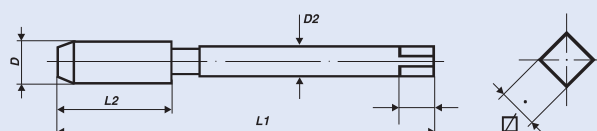
#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para roscar a mano y a máquina

**Punta en espiral:** para agujeros pasantes

**Helicoidal 35°:** para agujeros ciegos



## Short Machine Taps

american tapered pipe thread

## Machos Máquina cortos

rosca americana para tubo



### HSS-E

### NPS

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>Form C</b>						
NPS 1/16 x 27	54	17.5	8.0	6.0	99402	15,40
NPS 1/8 x 27	55	19.0	8.0	6.0	99406	13,20
NPS 1/4 x 18	62	28.0	11.0	9.0	99414	14,90
NPS 3/8 x 18	65	28.0	14.0	11.0	99418	18,70
NPS 1/2 x 14	80	35.0	18.0	14.0	99422	23,10
NPS 3/4 x 14	85	35.0	23.0	17.0	99430	30,50
NPS 1" x 11.5	95	45.0	26.0	21.0	99438	48,60
NPS 1.1/4 x 11.5	105	45.0	32.0	26.0	99446	73,00
NPS 1.1/2 x 11.5	110	45.0	38.0	29.0	99454	155,00
NPS 2" x 11.5	120	50.0	46.0	35.0	99470	250,00

#### Form C, 35° Spiral Flute / Helicoidal 35° (ciego)

NPS 1/16 x 27	54	17.5	8.0	6.0	99702	17,20
NPS 1/8 x 27	55	19.0	8.0	6.0	99706	15,00
NPS 1/4 x 18	62	28.0	11.0	9.0	99714	16,50
NPS 3/8 x 18	65	28.0	14.0	11.0	99718	21,00
NPS 1/2 x 14	80	35.0	18.0	14.0	99722	27,50
NPS 3/4 x 14	85	35.0	23.0	17.0	99730	34,50
NPS 1" x 11.5	95	45.0	26.0	21.0	99738	59,00
NPS 1.1/4 x 11.5	105	45.0	32.0	26.0	99746	89,00
NPS 1.1/2 x 11.5	110	45.0	38.0	29.0	99754	177,00
NPS 2" x 11.5	120	50.0	46.0	35.0	99770	275,00

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Form C:** for through and blind holes

**Spiral Flute:** for blind holes

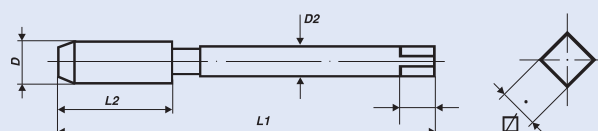
#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para roscar a mano y a máquina

**Forma C:** para agujeros pasantes y ciegos

**Helicoidal 35°:** para agujeros ciegos





## Bit Edition

	M	Mf	UNC/UNF	BSW	G(BSP)
HexTap	57	58			62
Combined Bits Machos Combinados con amarre hexagonal	63		64		
TriBit <sup>2</sup>	65				
Drill Bits Broca con amarre hexagonal	65-66				
Countersink Bits Avellanador 90° con amarre hexagonal	66				
Combined Machine Tap Machos Máquina Combinados	67			68	



## HexTap S

### Technical Information:

VÖLKEL-Threading-Bits have been designed for thread cutting using battery-powered screwdriver drills and electric hand drills with right-hand and left-hand rotation. But they are also suitable for thread cutting by hand or in a stationary drilling machine.

Your battery-powered screwdriver drill should have a minimum power of 7.5 Volts.

Take care that the tool and the axis of the hole are exactly aligned and use a suitable cutting oil.

The following technical data apply for thread cutting using battery-powered screwdriver drills and electric hand drills:



## HexTap S

### Información técnica:

Los machos Völkel con amarre hexagonal 1/4" han sido diseñados para roscar utilizando atornilladores a batería y taladros de mano eléctricos con rotación a derechas e izquierdas.

Pero también son adecuados para realizar roscas a mano o en taladros de columna. El atornillador a batería deberá tener una fuerza mínima de 7,5 Voltios. Hay que prestar atención a que el eje de la herramienta y del agujero estén alineados con exactitud y se utilice un aceite de corte adecuado.

Los siguientes datos técnicos son aplicables utilizando atornilladores a batería y taladros de mano eléctricos:

Dimensions/Métrica	M 3	M 4	M 5	M 6	M 8	M 10
Core hole dia./Ø Broca previa	2,5 mm	3,3 mm	4,2 mm	5,0 mm	6,8 mm	8,5 mm
RPM/ N° de revoluciones	Lowest setting (0 - 450 RPM)/Regulación más baja (0 – 450 revoluciones/min.)					
Torque/Par de giro	Maximum setting/Regulación máxima					

## HexTap DS

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

## HexTap DS

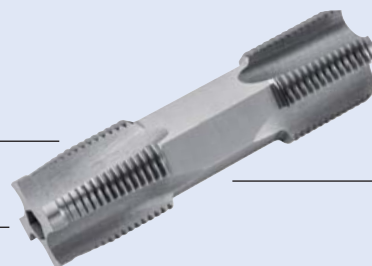
### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos
- para roscar a mano

Rougher piloted  
Desbaste con punta piloto

Hexagon Hole for Ratchet or  
Hexagon Keys  
Hexagon al interior para crique  
o llaves en L  
SW 2



Finisher/Bottoming  
Acabado

External Hexagon for Open-End Wrench  
Hexagon al exterior para llaves de una boca  
SW 1

### Benefit:

- Pilot for exact alignment
- Rougher and Finisher combined in one tool
- Use in awkward places
- For making new threads
- For cleaning and repairing damaged threads

### Ventajas:

- Piloto para enfoque de alineación true
- Desbaste y Acabado en una herramienta
- Uso en puntos de difícil acceso
- Para la fabricación de nuevas roscas
- Para reparar y reparar roscas deterioradas





## HexTap S

Threading-Bit, 1/4" Hexagon Shank  
metric ISO-thread DIN 13



## HexTap S

Macho con amarre hexagonal 1/4"  
métrica ISO-rosca DIN 13

**HSS-G**

**Tolerance ISO2/6H**

**M**

Size	Typ	L 1	L 2	SW1	Art.-No.	Price per Piece €
M 3	S	33,0	11	1/4"	67026	3,30
M 3.5	S	33,5	10	1/4"	67028	4,40
M 4	S	35,0	12	1/4"	67030	3,30
M 4.5	S	35,0	12	1/4"	67032	4,40
M 5	S	36,0	15	1/4"	67034	4,10
M 5.5	S	35,0	15	1/4"	67036	5,00
M 6	S	39,0	18	1/4"	67038	4,10
M 7	S	37,5	16	1/4"	67040	5,00
M 8	S	40,0	19	1/4"	67042	5,90
M 9	S	40,5	18	1/4"	67044	8,30
M 10	S	41,0	21	1/4"	67046	6,90

## HexTap DS

Double Ended Tap, Multi-Drive  
metric ISO-thread DIN 13

## HexTap DS

Macho doble punta, Multi-Drive  
métrica ISO-rosca DIN 13



**HSS-G**

**Tolerance ISO2/6H**

**M**

Size	Typ	L 1	L 4	SW1	SW2	Art.-No.	Price per Piece €
M 11	DS	70	22	8	4	67048	14,00
M 12	DS	70	22	8	4	67050	14,00
M 14	DS	70	22	10	4	67051	16,00
M 16	DS	70	22	10	4	67052	18,50
M 18	DS	80	24	13	5	67053	20,00
M 20	DS	80	24	13	6	67054	22,00
M 22	DS	80	24	15	6	67055	28,00
M 24	DS	90	27	15	8	67056	33,00
M 27	DS	90	27	19	8	67057	51,00
M 30	DS	90	27	19	10	67058	66,40
M 33	DS	100	29	24	10	67059	88,00
M 36	DS	100	29	24	10	67060	106,00
M 39	DS	110	32	27	12	67061	137,00
M 42	DS	110	27	27	12	67062	155,00
M 45	DS	110	27	32	17	67063	188,00
M 48	DS	140	42	32	17	67064	266,00
M 52	DS	140	42	36	19	67065	266,00

## HexTap S

Threading-Bit, 1/4" Hexagon Shank  
 metric-fine ISO-thread DIN 13

## HexTap S

Macho con amarre hexagonal 1/4"  
 métrica fina ISO-rosca DIN 13



**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Size	Typ	L 1	L 2	SW1	Art.-No.	Price per Piece €
M 3 x 0.35	S	33,0	11	1/4"	67700	4,40
M 3.5 x 0.35	S	33,5	10	1/4"	67701	4,40
M 4 x 0.35	S	35,0	12	1/4"	67702	4,40
M 4 x 0.5	S	35,0	12	1/4"	67703	4,40
M 4.5 x 0.5	S	35,0	12	1/4"	67704	5,00
M 5 x 0.5	S	36,0	15	1/4"	67705	5,00
M 5 x 0.75	S	36,0	15	1/4"	67706	5,00
M 5.5 x 0.5	S	35,0	15	1/4"	67707	5,00
M 6 x 0.5	S	39,0	18	1/4"	67708	5,00
M 6 x 0.75	S	39,0	18	1/4"	67709	5,00
M 7 x 0.5	S	37,5	16	1/4"	67710	6,60
M 7 x 0.75	S	37,5	16	1/4"	67711	6,60
M 8 x 0.5	S	40,0	19	1/4"	67712	6,60
M 8 x 0.75	S	40,0	19	1/4"	67713	6,60
M 8 x 1.0	S	40,0	19	1/4"	67714	6,60
M 9 x 0.5	S	40,5	18	1/4"	67715	8,30
M 9 x 0.75	S	40,5	18	1/4"	67716	8,30
M 9 x 1.0	S	40,5	18	1/4"	67717	8,30
M 10 x 0.5	S	41,0	21	1/4"	67718	8,30
M 10 x 0.75	S	41,0	21	1/4"	67719	8,30
M 10 x 1.0	S	41,0	21	1/4"	67720	8,30
M 10 x 1.25	S	41,0	21	1/4"	67721	8,30

## HexTap DS

Double Ended Tap, Multi-Drive  
metric-fine ISO-thread DIN 13

## HexTap DS

Macho doble punta, Multi-Drive  
métrica fina ISO-rosca DIN 13



**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Size	Typ	L 1	L 4	SW1	SW2	Art.-No.	Price per Piece €
M 11 x 0,75	DS	70	22	8	4	67722	15,80
M 11 x 1.0	DS	70	22	8	4	67723	15,80
M 11 x 1.25	DS	70	22	8	4	67724	15,80
M 12 x 0.5	DS	70	22	8	4	67725	15,80
M 12 x 0.75	DS	70	22	8	4	67726	15,80
M 12 x 1	DS	70	22	8	4	67727	15,80
M 12 x 1.25	DS	70	22	8	4	67728	15,80
M 12 x 1.5	DS	70	22	8	4	67729	14,60
M 13 x 0.5	DS	70	22	10	4	67730	24,20
M 13 x 0.75	DS	70	22	10	4	67731	24,20
M 13 x 1.0	DS	70	22	10	4	67732	24,20
M 13 x 1.5	DS	70	22	8	4	67733	24,20
M 14 x 0.5	DS	70	22	10	4	67734	24,20
M 14 x 0.75	DS	70	22	10	4	67735	24,20
M 14 x 1.0	DS	70	22	10	4	67736	24,20
M 14 x 1.25	DS	70	22	10	4	67737	18,40
M 14 x 1.5	DS	70	22	10	4	67738	15,80
M 15 x 0.75	DS	70	22	12	4	67739	27,00
M 15 x 1.0	DS	70	22	12	4	67740	27,00
M 15 x 1.5	DS	70	22	10	4	67741	27,00
M 16 x 0.5	DS	70	22	12	4	67742	27,00
M 16 x 0.75	DS	70	22	12	4	67743	27,00
M 16 x 1	DS	70	22	12	4	67744	27,00
M 16 x 1.25	DS	70	22	12	4	67745	27,00
M 16 x 1.5	DS	70	22	12	4	67746	19,40
M 17 x 1.0	DS	80	24	13	5	67747	29,20
M 17 x 1.5	DS	80	24	13	5	67748	29,20
M 18 x 0.5	DS	80	24	13	5	67749	29,20
M 18 x 0.75	DS	80	24	13	5	67750	29,20
M 18 x 1.0	DS	80	24	13	5	67751	29,20
M 18 x 1,25	DS	80	24	13	5	67752	29,20
M 18 x 1.5	DS	80	24	13	5	67753	22,00
M 18 x 2.0	DS	80	24	13	5	67754	29,20
M 19 x 1.0	DS	80	24	15	6	67755	36,60
M 19 x 1.5	DS	80	24	15	6	67756	36,60
M 20 x 0.5	DS	80	24	15	6	67757	36,60
M 20 x 0.75	DS	80	24	15	6	67758	36,60
M 20 x 1.0	DS	80	24	15	6	67759	36,60
M 20 x 1.25	DS	80	24	15	6	67760	36,60
M 20 x 1.5	DS	80	24	15	6	67761	27,00
M 20 x 2.0	DS	80	24	15	6	67762	36,60
M 21 x 1.0	DS	80	24	15	6	67763	38,00
M 21 x 1.5	DS	80	24	15	6	67764	38,00
M 22 x 0.5	DS	80	24	17	6	67765	38,00
M 22 x 0.75	DS	80	24	17	6	67766	38,00
M 22 x 1.0	DS	80	24	17	6	67767	38,00
M 22 x 1.25	DS	80	24	17	6	67768	38,00
M 22 x 1.5	DS	80	24	17	6	67769	38,00
M 22 x 2.0	DS	80	24	17	6	67770	38,00



## HexTap DS

Double Ended Tap, Multi-Drive  
metric-fine ISO-thread DIN 13

## HexTap DS

Macho doble punta, Multi-Drive  
métrica fina ISO-rosca DIN 13



**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Size	Typ	L 1	L 4	SW1	SW2	Art.-No.	Price per Piece €
M 23 x 1.0	DS	80	24	17	6	67771	51,00
M 23 x 1.5	DS	80	24	17	6	67772	51,00
M 24 x 0.5	DS	80	24	19	8	67773	51,00
M 24 x 0,75	DS	80	24	19	8	67774	51,00
M 24 x 1.0	DS	80	24	19	8	67775	51,00
M 24 x 1,25	DS	80	24	19	8	67776	51,00
M 24 x 1.5	DS	90	27	19	8	67777	38,60
M 24 x 2.0	DS	90	27	17	8	67778	51,00
M 25 x 1.0	DS	90	27	19	8	67779	75,00
M 25 x 1.5	DS	90	27	19	8	67780	75,00
M 26 x 1.0	DS	90	27	19	8	67781	75,00
M 26 x 1.5	DS	90	27	19	8	67782	75,00
M 26 x 2.0	DS	90	27	19	8	67783	75,00
M 27 x 1.0	DS	90	27	19	8	67784	75,00
M 27 x 1.5	DS	90	27	19	8	67785	75,00
M 27 x 2.0	DS	90	27	19	8	67786	88,00
M 28 x 1.0	DS	90	27	19	8	67787	88,00
M 28 x 1.5	DS	90	27	19	8	67788	88,00
M 28 x 2.0	DS	90	27	19	8	67789	88,00
M 29 x 1.5	DS	90	27	19	8	67790	88,00
M 30 x 1.0	DS	90	27	24	10	67791	104,00
M 30 x 1.5	DS	90	27	24	10	67792	104,00
M 30 x 2.0	DS	90	27	24	10	67793	104,00
M 30 x 2.5	DS	90	27	22	10	67794	104,00
M 30 x 3.0	DS	90	27	22	10	67795	104,00
M 32 x 1.0	DS	90	27	24	10	67796	104,00
M 32 x 1.5	DS	90	27	24	10	67797	104,00
M 32 x 2.0	DS	90	27	24	10	67798	104,00
M 32 x 3.0	DS	90	27	24	10	67799	104,00
M 33 x 1.5	DS	100	29	24	10	67800	104,00
M 33 x 2.0	DS	100	29	24	10	67801	126,00
M 33 x 3.0	DS	100	29	24	10	67802	126,00
M 34 x 1.0	DS	100	29	27	10	67803	126,00
M 34 x 1.5	DS	100	29	27	10	67804	126,00
M 34 x 2.0	DS	100	29	27	10	67805	126,00
M 35 x 1.0	DS	100	29	27	10	67806	126,00
M 35 x 1.5	DS	100	29	27	10	67807	126,00
M 35 x 2.0	DS	100	29	27	10	67808	126,00
M 36 x 1.0	DS	100	29	27	10	67809	133,00
M 36 x 1.5	DS	100	29	27	10	67810	133,00
M 36 x 2.0	DS	100	29	27	10	67811	133,00
M 36 x 3.0	DS	100	29	27	10	67812	133,00
M 37 x 1.5	DS	100	29	27	10	67813	164,00
M 38 x 1.0	DS	110	32	27	12	67814	164,00
M 38 x 1.5	DS	110	32	27	12	67815	164,00
M 38 x 2.0	DS	110	32	27	12	67816	164,00
M 38 x 3.0	DS	110	32	27	12	67817	164,00
M 39 x 1.5	DS	110	32	32	12	67818	164,00
M 39 x 2.0	DS	110	32	27	12	67819	164,00



## HexTap DS

Double Ended Tap, Multi-Drive  
metric-fine ISO-thread DIN 13

## HexTap DS

Macho doble punta, Multi-Drive  
métrica fina ISO-rosca DIN 13



**HSS-G**

**Tolerance ISO2/6H**

**Mf**

Size	Typ	L 1	L 4	SW1	SW2	Art.-No.	Price per Piece €
M 39 x 3.0	DS	110	32	27	12	67820	164,00
M 40 x 1.0	DS	110	32	32	12	67821	164,00
M 40 x 1.5	DS	110	32	32	12	67822	164,00
M 40 x 2.0	DS	110	32	32	12	67823	164,00
M 40 x 3.0	DS	110	32	27	12	67824	164,00
M 42 x 1.0	DS	110	32	32	12	67825	164,00
M 42 x 1.5	DS	110	27	32	12	67828	164,00
M 42 x 2.0	DS	110	27	32	12	67826	172,00
M 42 x 3.0	DS	110	27	32	12	67827	172,00
M 44 x 1.5	DS	110	27	36	12	67829	194,00
M 44 x 2.0	DS	110	27	36	12	67830	194,00
M 45 x 1.0	DS	110	27	36	17	67831	194,00
M 45 x 1.5	DS	110	27	36	17	67832	194,00
M 45 x 2.0	DS	110	27	36	17	67833	194,00
M 45 x 3.0	DS	110	27	36	17	67834	194,00
M 46 x 1.5	DS	110	27	36	17	67835	194,00
M 48 x 1.0	DS	140	45	36	17	67836	232,00
M 48 x 1.5	DS	140	45	36	17	67837	232,00
M 48 x 2.0	DS	140	45	36	17	67838	232,00
M 48 x 3.0	DS	140	45	36	17	67839	232,00
M 50 x 1.5	DS	140	42	41	17	67840	254,00
M 50 x 2.0	DS	140	42	41	17	67841	254,00
M 50 x 3.0	DS	140	42	36	17	67842	254,00
M 52 x 1.5	DS	140	42	41	19	67843	304,00
M 52 x 2.0	DS	140	42	41	19	67844	304,00
M 52 x 3.0	DS	140	42	41	19	67845	304,00
M 63 x 1.5	DS	160	47	50	19	67846	498,00

## HexTap S

Threading-Bit, 1/4" Hexagon Shank  
Pipe-thread DIN ISO 228

## HexTap S

Macho con amarre hexagonal 1/4"  
rosca Gas DIN ISO 228



### HSS-G

### G (BSP)

Size	Typ	L 1	L 2	SW1	Art.-No.	Price per Piece €
G 1/8	S	40,5	17	1/4"	67870	6,60

## HexTap DS

Double Ended Tap, Multi-Drive  
Pipe-thread DIN ISO 228

## HexTap DS

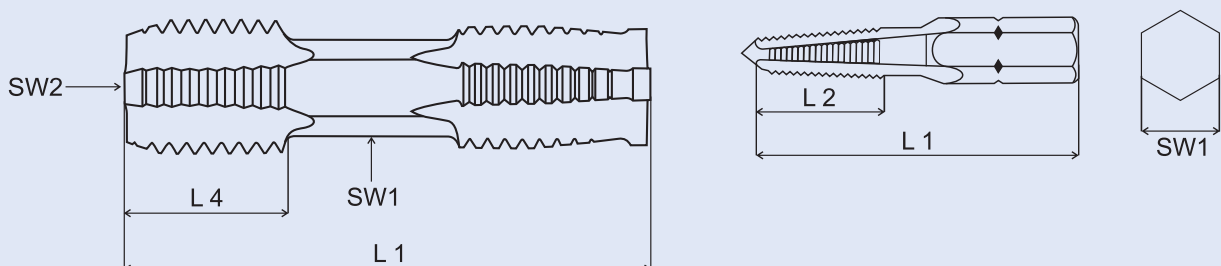
Macho doble punta, Multi-Drive  
rosca Gas DIN ISO 228



### HSS-G

### G (BSP)

Size	Typ	L 1	L 4	SW1	SW2	Art.-No.	Price per Piece €
G 1/4	DS	70	22	8	4	67871	12,00
G 3/8	DS	70	22	12	4	67872	16,40
G 1/2	DS	80	24	15	6	67873	22,00
G 3/4	DS	90	27	19	8	67874	33,00
G 1"	DS	100	29	24	10	67875	56,00
G 1.1/4	DS	110	27	32	12	67876	97,00
G 1.1/2	DS	140	42	36	17	67877	128,00
G 2"	DS	160	47	41	19	67878	264,00



## Combined Bits

for Drilling, Tapping and  
Deburring in one operation  
with 1/4" Hexagon Drive (Bit)



## Machos Combinados

para taladrar, roscar y avellanar  
en una sola operación  
con amarre hexagonal 1/4"

### HSS-G

### Tolerance ISO2/6H

### M

Nominal Diameter D	D 1	L 1	⌀	Art.-No.	Price per Piece €
M 3 x 0,5	2,5	36	1/4"	67226	6,40
M 4 x 0,7	3,3	39	1/4"	67230	6,40
M 5 x 0,8	4,2	41	1/4"	67234	6,40
M 6 x 1,0	5,0	44	1/4"	67238	6,40
M 8 x 1,25	6,8	50	1/4"	67242	8,80
M 10 x 1,5	8,5	59	1/4"	67246	10,60

### TIN

M 3 x 0,5	2,5	36	1/4"	67210	11,90
M 4 x 0,7	3,3	39	1/4"	67211	11,90
M 5 x 0,8	4,2	41	1/4"	67212	11,90
M 6 x 1,0	5,0	44	1/4"	67213	11,90
M 8 x 1,25	6,8	50	1/4"	67214	16,00
M 10 x 1,5	8,5	59	1/4"	67215	22,00

#### Technical Information:

VÖLKEL-Combined-Bits have been designed for drilling, tapping and deburring in one operation using battery-powered screwdriver drills and electric hand drills with right-hand and left-hand rotation, but they are also suitable for thread cutting in a stationary drilling machine. The Combined Bit is suitable for universal use in materials of medium mechanical strength, non ferrous metals and thermoplastics (up to 600 N/mm<sup>2</sup> tensile strength). It is possible with this tool to produce through threads up to a maximum threaded depth of 1 x D. They are especially useful for mounting and small batch production. Take care that the tool and the axis of the hole are exactly aligned and use a suitable cutting oil. The following technical data apply for using battery-powered screwdriver and electric hand drills:

#### Información técnica:

Los Machos Combinados Völkel han sido diseñados para taladrar, roscar y avellanar en una sola operación, utilizando atornilladores a batería y taladros de mano eléctricos con rotación a derechas e izquierdas, pero también son apropiados para ser utilizados en taladros de columna. Los machos combinados son apropiados para uso en general en materiales de resistencia mecánica media, metales no ferrosos y termoplásticos (hasta 600 N/mm<sup>2</sup> de resistencia a la tracción). Con esta herramienta es posible realizar agujeros pasantes hasta una profundidad de rosca máxima de 1 x D. Son especialmente útiles para trabajos de montaje y producciones en serie pequeñas. Hay que prestar atención a que el eje de la herramienta y del agujero estén alineados con exactitud y se utilice un aceite de corte adecuado.

Los siguientes datos técnicos son aplicables utilizando atornilladores a batería y taladros de mano eléctricos.

Dimensions/Métrica	M 3	M 4	M 5	M 6	M 8	M 10
Core hole dia./Ø Broca previa	2,5 mm	3,3 mm	4,2 mm	5,0 mm	6,8 mm	8,5 mm
max. RPM	1600 UpM	1200 UpM	950 UpM	800 UpM	600 UpM	450 UpM

## Combined Bits

for Drilling, Tapping and  
Deburring in one operation  
with 1/4" Hexagon Drive (Bit)



## Machos Combinados

para taladrar, roscar y avellanar  
en una sola operación  
con amarre hexagonal 1/4"

### HSS-G

### UNC / UNF

Nominal Diameter D	D 1	L 1	⊘	Art.-No.	Price per Piece €
<b>UNC</b>					
Nr. 4 x 40	2,3	36	1/4"	67280	8,20
Nr. 5 x 40	2,6	36	1/4"	67281	8,20
Nr. 6 x 32	2,85	39	1/4"	67282	8,20
Nr. 8 x 32	3,5	39	1/4"	67283	8,20
Nr. 10 x 24	3,9	41	1/4"	67284	8,20
Nr. 12 x 24	4,5	41	1/4"	67285	8,20
1/4 x 20	5,2	44	1/4"	67286	8,20
5/16 x 18	6,6	50	1/4"	67287	11,50
3/8 x 16	8,0	59	1/4"	67288	13,90
<b>UNF</b>					
Nr. 4 x 48	2,4	36	1/4"	67290	8,20
Nr. 5 x 44	2,7	36	1/4"	67291	8,20
Nr. 6 x 40	3,0	39	1/4"	67292	8,20
Nr. 8 x 36	3,5	39	1/4"	67293	8,20
Nr. 10 x 32	4,1	41	1/4"	67294	8,20
Nr. 12 x 28	4,7	41	1/4"	67295	8,20
1/4 x 28	5,5	44	1/4"	67296	8,20
5/16 x 24	6,9	50	1/4"	67297	11,50
3/8 x 24	8,5	59	1/4"	67298	13,90



## TriBit<sup>2</sup>

One Box for all occasions  
Drilling, Tapping, Deburring  
Combined and specific tools

## TriBit<sup>2</sup>


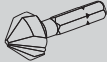

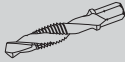
Una caja para todas las ocasiones  
Taladrar, Roscar, Avellanar  
Combinación de herramientas específicas



## HSS-G

## Tolerance ISO2/6H

# M

Nominal Diameter D					Art.-No.	Price €
M 3 x 0,5	2,5 mm	6,3 mm	M 3	M 3	67403	20,90
M 4 x 0,7	3,3 mm	8,3 mm	M 4	M 4	67404	20,90
M 5 x 0,8	4,2 mm	10,4 mm	M 5	M 5	67405	22,00
M 6 x 1,0	5,0 mm	12,4 mm	M 6	M 6	67406	22,50
M 8 x 1,25	6,8 mm	16,5 mm	M 8	M 8	67408	28,50
M 10 x 1,5	8,5 mm	20,5 mm	M 10	M 10	67410	33,00

## Wood Drill Bits

with 1/4" Hexagon Drive

## Broca para madera

con amarre hexagonale 1/4"



## HSS-G

Nominal Diameter D	L 1	S 2	⊘	Art.-No.	Price per Piece €
3,0 mm	38	16	1/4"	67630	3,10
4,0 mm	44	20	1/4"	67640	3,10
5,0 mm	50	26	1/4"	67650	3,10
6,0 mm	50	26	1/4"	67660	3,20
8,0 mm	51	32	1/4"	67680	3,75
10,0 mm	54	38	1/4"	67698	4,85

## Drill Bits

with 1/4" Hexagon Drive

### Broca

con amarra hexagonal 1/4"



## HSS-G

**M**

Nominal Diameter D	L 1	S 2	∅	Art.-No.	Price per Piece €
1,0 mm	32	7	1/4"	67110	3,10
1,5 mm	32	10	1/4"	67115	3,10
2,0 mm	34	12	1/4"	67120	3,10
2,5 mm (M3)	36	14	1/4"	67125	3,10
3,0 mm	38	16	1/4"	67130	3,10
3,3 mm (M4)	40	18	1/4"	67133	3,10
3,5 mm	40	18	1/4"	67135	3,10
4,0 mm	44	20	1/4"	67140	3,10
4,2 mm (M5)	45	20	1/4"	67142	3,10
4,5 mm	46	24	1/4"	67145	3,10
5,0 mm (M6)	50	26	1/4"	67150	3,10
5,5 mm	50	26	1/4"	67155	3,20
6,0 mm	50	26	1/4"	67160	3,20
6,5 mm	50	30	1/4"	67165	3,20
6,8 mm (M8)	50	30	1/4"	67168	3,20
7,0 mm	50	30	1/4"	67170	3,20
7,5 mm	51	32	1/4"	67175	3,75
8,0 mm	51	32	1/4"	67180	3,75
8,5 mm (M10)	53	33	1/4"	67185	4,30
9,0 mm	53	33	1/4"	67190	4,30
9,5 mm	54	38	1/4"	67195	4,85
10,0 mm	54	38	1/4"	67198	4,85
10,2 mm (M12)	54	38	1/4"	67199	4,85

## Countersink Bits

90° - 3 Flutes

with 1/4" Hexagon Drive

### Avellanador 90°

con amarra hexagonal 1/4"



## HSS

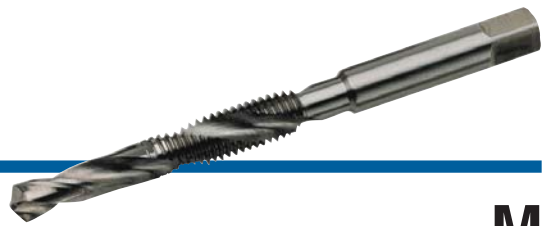
Nominal Diameter D	L 1	∅	Art.-No.	Price per Piece €
6,3 mm	31	1/4"	67306	8,10
8,3 mm	31	1/4"	67308	8,10
10,4 mm	34	1/4"	67310	8,70
12,4 mm	35	1/4"	67312	9,20
16,5 mm	40	1/4"	67316	10,50
20,5 mm	41	1/4"	67320	11,50

## Combined Machine Tap

metric ISO-thread DIN 13

## Machos Máquina Combinados

métrica ISO-rosca DIN 13



HSS-E

Tolerance ISO2/6H

M

Nominal Diameter D	L 1	S 1	L 2	D 1	D 2	∅	Art.-No.	Price per Piece €
M 3 x 0,5	56	16	11	2,5	3,0	2,4	37026	15,40
M 4 x 0,7	63	18	14	3,3	4,0	3,0	37030	15,40
M 5 x 0,8	71	20	18	4,2	5,0	3,8	37034	15,40
M 6 x 1,0	80	22	22	5,0	6,0	4,9	37038	17,10
M 8 x 1,25	95	26	25	6,8	8,0	6,2	37042	19,60
M 10 x 1,5	106	30	31	8,5	10,0	8,0	37046	21,50
M 12 x 1,75	115	32	35	10,2	12,0	9,0	37050	25,30

SET		Art.-No.	Price per Piece €
M 3 - 12	M 3-4-5-6-8-10-12	47837	126,50

### Application:

The Combined Tap enables the user to produce the tapping drill hole and the through thread in one operation without any tool changing.

The tool incorporates a twist drill before the thread-tapping part. It is possible with this tool to produce through threads up to a maximum threaded depth of  $2 \times D$ .

The Combined Tap is suitable for universal use in materials of medium mechanical strength: non-alloyed and alloyed steel sorts up to 600 N/mm<sup>2</sup>, malleable cast iron, nodulized graphite cast iron, copper, brass, aluminium, aluminium-magnesium and zinc alloys, red bronze, electron metal, pressure-cast zinc.

It is sensible to use this tool on machines possessing an RPM switchover facility for drilling and tapping. The feed rate must be adapted to the particular operation required - drilling or tapping.

Tapping chucks with pressure compensation may not be used.

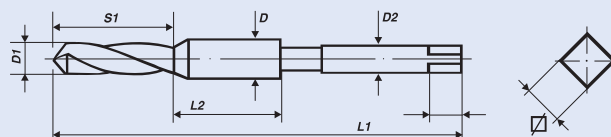
### Aplicación:

Los machos combinados permiten al usuario taladrar y roscar agujeros en una sola operación sin cambiar de herramienta. La herramienta incorpora una broca previa antes de la sección para roscar. Con esta herramienta es posible producir agujeros pasantes hasta una profundidad de rosca máxima de  $2 \times D$ . El macho combinado es adecuado para uso universal en materiales de resistencia mecánica media: Acero no aleado y Acero aleado hasta 600 N/mm<sup>2</sup>, Fundición maleable, Fundición esferolítica, Cobre, Latón, Aluminio, Aleaciones de aluminio-magnesio, Aleaciones de cinc, Fundición de bronce, electrón, Fundición de impresión de cinc.

Es aconsejable utilizar esta herramienta en máquinas con selector de revoluciones RPM, para el taladrado y roscado.

El avance deberá adaptarse a la operación requerida-taladrado o roscado.

Roscadores con compensación de presión no deben ser utilizados.



## Combined Machine Tap

Whitworth-thread BS 84

## Machos Máquina Combinados

rosca-Whitworth BS 84



### HSS-E

### BSW

Nominal Diameter D	L 1	S 1	L 2	D 1	D 2	∅	Art.-No.	Price per Piece €
BSW 1/8 x 40	56	16	11	2,6	3,0	2,4	70006	16,50
BSW 5/32 x 32	63	18	14	3,2	4,0	3,0	70008	16,50
BSW 3/16 x 24	71	20	18	3,7	5,0	3,8	70010	16,50
BSW 1/4 x 20	80	22	22	5,1	6,0	4,9	70014	18,70
BSW 5/16 x 18	95	26	25	6,5	8,0	6,2	70016	20,90
BSW 3/8 x 16	106	30	31	7,9	10,0	8,0	70018	23,00
BSW 1/2 x 12	115	32	35	10,5	12,0	9,0	70022	27,00
<b>SET</b>								
BSW 1/8 - 1/2	BSW 1/8-5/32-3/16-1/4-5/16-3/8-1/2						47870	127,00

#### Application:

The Combined Tap enables the user to produce the tapping drill hole and the through thread in one operation without any tool changing.

The tool incorporates a twist drill before the thread-tapping part. It is possible with this tool to produce through threads up to a maximum threaded depth of 2 x D.

The Combined Tap is suitable for universal use in materials of medium mechanical strength: non-alloyed and alloyed steel sorts up to 600 N/mm<sup>2</sup>, malleable cast iron, nodulized graphite cast iron, copper, brass, aluminium, aluminium-magnesium and zinc alloys, red bronze, electron metal, pressure-cast zinc.

It is sensible to use this tool on machines possessing an RPM switchover facility for drilling and tapping. The feed rate must be adapted to the particular operation required - drilling or tapping.

Tapping chucks with pressure compensation may not be used.

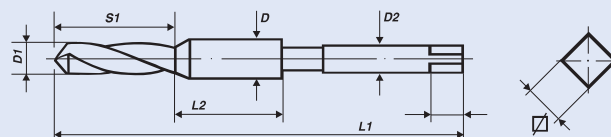
#### Aplicación:

Los machos combinados permiten al usuario taladrar y roscar agujeros en una sola operación sin cambiar de herramienta. La herramienta incorpora una broca previa antes de la sección para roscar. Con esta herramienta es posible producir agujeros pasantes hasta una profundidad de rosca máxima de 2 x D. El macho combinado es adecuado para uso universal en materiales de resistencia mecánica media: Acero no aleado y Acero aleado hasta 600 N/mm<sup>2</sup>, Fundición maleable, Fundición esferulítica, Cobre, Latón, Aluminio, Aleaciones de aluminio-magnesio, Aleaciones de cromo, Fundición de bronce, electrón, Fundición de impresión de cinc.

Es aconsejable utilizar esta herramienta en máquinas con selector de revoluciones RPM, para el taladrado y roscado.

El avance deberá adaptarse a la operación requerida-taladrado o roscado.

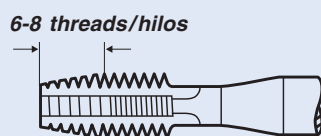
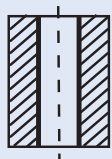
Roscardores con compensación de presión no deben ser utilizados.



## Machine Taps HSS-E

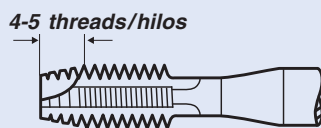
## Machos Máquina HSS-E

	Form A	Form C	Form B	15° RSP	35° RSP	B-AZ	TwinBox
M	72	73	74	78	76	79	71
M - extra long			80		81		
M - 6G - 7G - +0,1			82		83		
M - LH		107	108		109		
Mf		84	85		88		
Mf - LH			110		113		
BSW			91		92		
UNC			93		94		
UNF			95		96		
8 - UN / 12 - UN			97		98		
UNEF			99		100		
UN / UNS			101				
G (BSP)		102	103		104		
G (BSP) - LH		116					
Rc (BSPT)		105					
NPT		106					



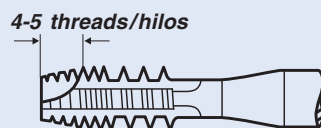
### Form A

6-8 Threads Lead  
6-8 hilos de entrada



### Form B

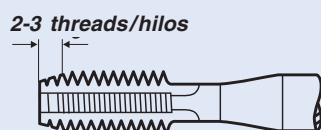
4-5 Threads Lead with Spiral Point  
4-5 hilos de entrada con punta espiral



### Form B-AZ

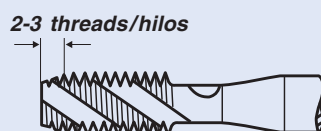
4-5 Threads Lead, Spiral Point with interrupted threads  
4-5 hilos de entrada con punta espiral y diente alterno

Through hole  
agujero pasante



### Form C

2-3 Threads Lead  
2-3 hilos de entrada









### Form C/35° RSP

2-3 Threads Lead, 35° Spiral Flute  
2-3 hilos de entrada con canal helicoidal 35°

Blind hole  
agujero ciego

## Recommended Application of Machine Taps

## Aplicación recomendada para Machos Máquina

Art.-No. M	373/383	374/384	375/385	376/386	377/387	379/389
Art.-No. Mf		394	395		397	
Art.-No. BSW			705/715		707/717	
Art.-No. UNC			745/755		747/757	
Art.-No. UNF			765/775		767/777	
Art.-No. G (BSP)		784	785		787	
Form/Forma	A	C	B	15°RSP	35°RSP	B-AZ
Typ of hole/Tipo de agujero						
Material						
Structural Steel up to 500N/mm <sup>2</sup> Aceros estructurales hasta 500 N/mm <sup>2</sup>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Structural Steel over 500 N/mm <sup>2</sup> Aceros estructurales de más de 500 N/mm <sup>2</sup>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
free-cutting Steel Aceros automáticos			<input type="radio"/>		<input type="radio"/>	
Cementation Steel, heat treatable Steel Aceros cementables y bonificados			<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
Tool Steel Aceros para herramienta			<input type="radio"/>		<input type="radio"/>	
Stainless Steel Aceros inoxidable			<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
Cast Steel Acero colado			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Cast Iron, spheroidal graphite Iron Fundición gris/fundición esferolítica		<input type="radio"/>				
Malleable Cast Iron Fundición maleable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Brass, short-chipping Latón, mecanizado corto		<input type="radio"/>				
Brass, long-chipping Latón, mecanizado largo			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Bronzes Bronce			<input type="radio"/>		<input type="radio"/>	
Copper Cobre			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Al-alloys, short-chipping Aluminio, mecanizado corto		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	
Al-alloys, long-chipping Aluminio, mecanizado largo			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zinc Alloys Aleación de cinc			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Magnesium Alloys Aleación de magnesio		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
Thermoplastics Plásticos, materias termoplásticas			<input type="radio"/>		<input type="radio"/>	
Thermosetting Plastics Plásticos, duroplásticos		<input type="radio"/>				

## Standard TwinBox

Machine Tap + Twist Drill  
metric ISO-thread DIN 13

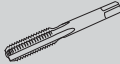

## TwinBox Standard

Machos Máquina + Broca  
métrica ISO-rosca DIN 13



**DIN 371/376 HSS-E Tolerance ISO2/6H**

**M**

Nominal Diameter D			Art.-No.	Price per Piece €
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### Form B, Spiral Point / punta en espiral (pasante)

M 3 x 0,5	DIN 371	2,5 mm	37590	6,00
M 4 x 0,7	DIN 371	3,3 mm	37591	6,10
M 5 x 0,8	DIN 371	4,2 mm	37592	6,70
M 6 x 1,0	DIN 371	5,0 mm	37593	6,80
M 8 x 1,25	DIN 371	6,8 mm	37594	8,60
M 10 x 1,5	DIN 371	8,5 mm	37595	11,10
M 12 x 1,75	DIN 376	10,2 mm	38596	14,10
M 14 x 2,0	DIN 376	12,0 mm	38597	18,60
M 16 x 2,0	DIN 376	14,0 mm	38598	25,10

### Form C, Spiral Flute / Helicoidal 35° (ciego)

M 3 x 0,5	DIN 371	2,5 mm	37790	7,10
M 4 x 0,7	DIN 371	3,3 mm	37791	7,20
M 5 x 0,8	DIN 371	4,2 mm	37792	7,90
M 6 x 1,0	DIN 371	5,0 mm	37793	8,00
M 8 x 1,25	DIN 371	6,8 mm	37794	10,00
M 10 x 1,5	DIN 371	8,5 mm	37795	12,90
M 12 x 1,75	DIN 376	10,2 mm	38796	16,20
M 14 x 2,0	DIN 376	12,0 mm	38797	21,40
M 16 x 2,0	DIN 376	14,0 mm	38798	28,20

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- Spiral Point for through holes
- Spiral Flute for blind holes

##### HSS-G Twist Drills DIN 338, type N

bright finish, profile ground

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- punta en espiral para agujeros pasantes
- helicoidal 35° para agujeros ciegos

##### Brocas HSS-G DIN 338, Tipo N

superficies brillantes, rectificadas

## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form A**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 2 x 0.4	45	8	2.8	2.1	37316	6,50
M 2.3 x 0.4	45	9	2.8	2.1	37318	6,50
M 2.5 x 0.45	50	9	2.8	2.1	37322	6,50
M 2.6 x 0.45	50	9	2.8	2.1	37324	6,50
M 3 x 0.5	56	11	3.5	2.7	37326	5,30
M 4 x 0.7	63	13	4.5	3.4	37330	5,30
M 5 x 0.8	70	16	6.0	4.9	37334	5,60
M 6 x 1.0	80	19	6.0	4.9	37338	5,60
M 8 x 1.25	90	22	8.0	6.2	37342	6,80
M 10 x 1.5	100	24	10.0	8.0	37346	8,40
<b>DIN 376</b>						
M 2 x 0.4	45	8	1.4	—	38316	6,20
M 3 x 0.5	56	11	2.2	—	38326	5,80
M 4 x 0.7	63	13	2.8	2.1	38330	5,80
M 5 x 0.8	70	16	3.5	2.7	38334	6,10
M 6 x 1.0	80	19	4.5	3.4	38338	6,10
M 8 x 1.25	90	22	6.0	4.9	38342	7,30
M 10 x 1.5	100	24	7.0	5.5	38346	8,80
M 12 x 1.75	110	29	9.0	7.0	38350	10,20
M 14 x 2.0	110	30	11.0	9.0	38354	13,10
M 16 x 2.0	110	32	12.0	9.0	38358	14,70
M 18 x 2.5	125	34	14.0	11.0	38362	21,00
M 20 x 2.5	140	34	16.0	12.0	38366	28,50
M 22 x 2.5	140	34	18.0	14.5	38370	32,50
M 24 x 3.0	160	38	18.0	14.5	38374	34,70
M 27 x 3.0	160	38	20.0	16.0	38376	55,50
M 30 x 3.5	180	45	22.0	18.0	38378	58,00
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47813	49,50

### Application:

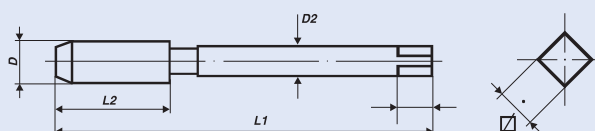
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes





## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376 Form C HSS-E Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	Ø	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 2 x 0.4	45	8	2.8	2.1	37416	6,50
M 2.3 x 0.4	45	9	2.8	2.1	37418	6,50
M 2.5 x 0.45	50	9	2.8	2.1	37422	6,50
M 2.6 x 0.45	50	9	2.8	2.1	37424	6,50
M 3 x 0.5	56	11	3.5	2.7	37426	5,30
M 3.5 x 0.6	56	13	4.0	3.0	37428	6,00
M 4 x 0.7	63	13	4.5	3.4	37430	5,30
M 5 x 0.8	70	16	6.0	4.9	37434	5,60
M 6 x 1.0	80	19	6.0	4.9	37438	5,60
M 7 x 1.0	80	19	7.0	5.5	37440	7,80
M 8 x 1.25	90	22	8.0	6.2	37442	6,80
M 10 x 1.5	100	24	10.0	8.0	37446	8,40
<b>DIN 376</b>						
M 3 x 0.5	56	11	2.2	—	38426	5,80
M 4 x 0.7	63	13	2.8	2.1	38430	5,80
M 5 x 0.8	70	16	3.5	2.7	38434	6,10
M 6 x 1.0	80	19	4.5	3.4	38438	6,10
M 8 x 1.25	90	22	6.0	4.9	38442	7,30
M 10 x 1.5	100	24	7.0	5.5	38446	8,80
M 12 x 1.75	110	29	9.0	7.0	38450	10,20
M 14 x 2.0	110	30	11.0	9.0	38454	13,10
M 16 x 2.0	110	32	12.0	9.0	38458	14,70
M 18 x 2.5	125	34	14.0	11.0	38462	21,00
M 20 x 2.5	140	34	16.0	12.0	38466	28,50
M 22 x 2.5	140	34	18.0	14.5	38470	32,50
M 24 x 3.0	160	38	18.0	14.5	38474	34,70
M 27 x 3.0	160	38	20.0	16.0	38476	55,50
M 30 x 3.5	180	45	22.0	18.0	38478	58,00
M 33 x 3.5	180	50	25.0	20.0	38480	80,00
M 36 x 4.0	200	56	28.0	22.0	38482	132,00
M 39 x 4.0	200	60	32.0	24.0	38484	168,00
M 42 x 4.5	200	60	32.0	24.0	38486	195,00
M 45 x 4.5	220	65	36.0	29.0	38488	220,00
M 48 x 5.0	250	70	36.0	29.0	38490	242,00
M 52 x 5.0	250	70	40.0	32.0	38492	295,00
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47814	49,50

### Application:

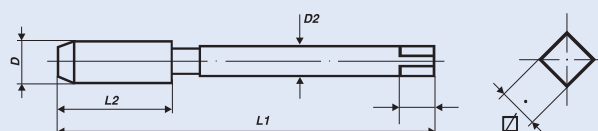
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13



**DIN 371/376**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
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**TIN**

**DIN 371**

M 3 x 0.5	56	11	3.5	2.7	31526	8,60
M 4 x 0.7	63	13	4.5	3.4	31530	8,60
M 5 x 0.8	70	16	6.0	4.9	31534	9,00
M 6 x 1.0	80	19	6.0	4.9	31538	9,65
M 8 x 1.25	90	22	8.0	6.2	31542	11,80
M 10 x 1.5	100	24	10.0	8.0	31546	15,30

**DIN 376**

M 12 x 1.75	110	29	9.0	7.0	31550	20,60
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**VAP**

**DIN 371**

M 3 x 0.5	56	11	3.5	2.7	31570	6,05
M 4 x 0.7	63	13	4.5	3.4	31571	6,05
M 5 x 0.8	70	16	6.0	4.9	31572	6,50
M 6 x 1.0	80	19	6.0	4.9	31573	6,50
M 8 x 1.25	90	22	8.0	6.2	31574	7,80
M 10 x 1.5	100	24	10.0	8.0	31575	9,70

**DIN 376**

M 12 x 1.75	110	29	9.0	7.0	31576	11,80
M 14 x 2.0	110	30	11.0	9.0	31577	15,20
M 16 x 2.0	110	32	12.0	9.0	31578	17,00
M 18 x 2.5	125	34	14.0	11.0	31579	24,20
M 20 x 2.5	140	34	16.0	12.0	31580	32,70

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

**TIN-coating:**

- improved resistance to wear and abrasion
- excellent anti-friction properties
- faster cutting speeds possible

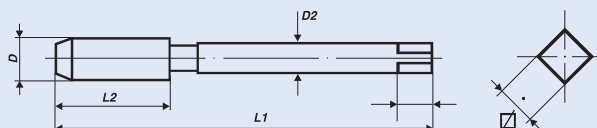
**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes

**TIN (recubrimiento de nitruro de titanio):**

- excelente resistencia al desgaste y a la abrasión
- excelente propiedades antifricción
- velocidades de corte considerablemente más rápidas



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 2 x 0.4	45	8	2.8	2.1	37516	7,00
M 2.5 x 0.45	50	9	2.8	2.1	37522	7,00
M 3 x 0.5	56	11	3.5	2.7	37526	5,50
M 3.5 x 0.6	56	13	4.0	3.0	37528	6,10
M 4 x 0.7	63	13	4.5	3.4	37530	5,50
M 5 x 0.8	70	16	6.0	4.9	37534	5,90
M 6 x 1.0	80	19	6.0	4.9	37538	5,90
M 7 x 1.0	80	19	7.0	5.5	37540	8,30
M 8 x 1.25	90	22	8.0	6.2	37542	7,10
M 10 x 1.5	100	24	10.0	8.0	37546	8,80
<b>DIN 376</b>						
M 3 x 0.5	56	11	2.2	—	38526	6,00
M 4 x 0.7	63	13	2.8	2.1	38530	6,00
M 5 x 0.8	70	16	3.5	2.7	38534	6,40
M 6 x 1.0	80	19	4.5	3.4	38538	6,40
M 8 x 1.25	90	22	6.0	4.9	38542	7,70
M 10 x 1.5	100	24	7.0	5.5	38546	9,20
M 12 x 1.75	110	29	9.0	7.0	38550	10,70
M 14 x 2.0	110	30	11.0	9.0	38554	13,80
M 16 x 2.0	110	32	12.0	9.0	38558	15,40
M 18 x 2.5	125	34	14.0	11.0	38562	22,00
M 20 x 2.5	140	34	16.0	12.0	38566	29,70
M 22 x 2.5	140	34	18.0	14.5	38570	34,10
M 24 x 3.0	160	38	18.0	14.5	38574	36,30
M 27 x 3.0	160	38	20.0	16.0	38576	58,30
M 30 x 3.5	180	45	22.0	18.0	38578	60,50
M 33 x 3.5	180	50	25.0	20.0	38580	84,00
M 36 x 4.0	200	56	28.0	22.0	38582	138,00
M 39 x 4.0	200	60	32.0	24.0	38584	177,00
M 42 x 4.5	200	60	32.0	24.0	38586	205,00
M 45 x 4.5	220	65	36.0	29.0	38588	232,00
M 48 x 5.0	250	70	36.0	29.0	38590	255,00
M 52 x 5.0	250	70	40.0	32.0	38592	310,00
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47815	52,80

### Application:

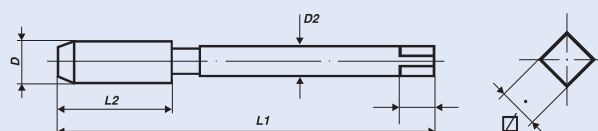
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13



**DIN 371/376**

**Form C/35°RSP**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
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**TIN**

**DIN 371**

M 3 x 0.5	56	6	3.5	2.7	31726	9,70
M 4 x 0.7	63	7	4.5	3.4	31730	9,70
M 5 x 0.8	70	8	6.0	4.9	31734	10,30
M 6 x 1.0	80	10	6.0	4.9	31738	10,90
M 8 x 1.25	90	14	8.0	6.2	31742	13,30
M 10 x 1.5	100	16	10.0	8.0	31746	17,10

**DIN 376**

M 12 x 1.75	110	18	9.0	7.0	31750	22,70
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**VAP**

**DIN 371**

M 3 x 0.5	56	6	3.5	2.7	31770	7,30
M 4 x 0.7	63	7	4.5	3.4	31771	7,30
M 5 x 0.8	70	8	6.0	4.9	31772	7,90
M 6 x 1.0	80	10	6.0	4.9	31773	7,90
M 8 x 1.25	90	14	8.0	6.2	31774	9,50
M 10 x 1.5	100	16	10.0	8.0	31775	11,70

**DIN 376**

M 12 x 1.75	110	18	9.0	7.0	31776	14,10
M 14 x 2.0	110	20	11.0	9.0	31777	18,20
M 16 x 2.0	110	22	12.0	9.0	31778	20,40
M 18 x 2.5	125	25	14.0	11.0	31779	29,10
M 20 x 2.5	140	25	16.0	12.0	31780	39,30

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

**TIN-coating:**

- improved resistance to wear and abrasion
- excellent anti-friction properties
- faster cutting speeds possible

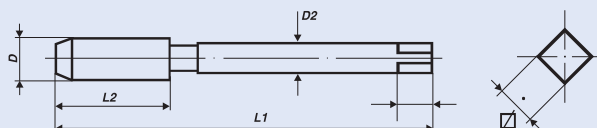
**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos

**TIN (recubrimiento de nitruro de titanio):**

- excelente resistencia al desgaste y a la abrasión
- excelente propiedades antifricción
- velocidades de corte considerablemente más rápidas



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form C/35°RSP**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 2 x 0.4	45	6	2.8	2.1	37716	7,30
M 2.5 x 0.45	50	6	2.8	2.1	37722	7,30
M 3 x 0.5	56	6	3.5	2.7	37726	6,60
M 3.5 x 0.6	56	13	4.0	3.0	37728	7,30
M 4 x 0.7	63	7	4.5	3.4	37730	6,60
M 5 x 0.8	70	8	6.0	4.9	37734	7,20
M 6 x 1.0	80	10	6.0	4.9	37738	7,20
M 7 x 1.0	80	12	7.0	5.5	37740	9,90
M 8 x 1.25	90	14	8.0	6.2	37742	8,60
M 10 x 1.5	100	16	10.0	8.0	37746	10,60
<b>DIN 376</b>						
M 3 x 0.5	56	6	2.2	—	38726	7,30
M 4 x 0.7	63	7	2.8	2.1	38730	7,30
M 5 x 0.8	70	8	3.5	2.7	38734	7,70
M 6 x 1.0	80	10	4.5	3.4	38738	7,70
M 8 x 1.25	90	14	6.0	4.9	38742	9,20
M 10 x 1.5	100	16	7.0	5.5	38746	11,10
M 12 x 1.75	110	18	9.0	7.0	38750	12,80
M 14 x 2.0	110	20	11.0	9.0	38754	16,50
M 16 x 2.0	110	22	12.0	9.0	38758	18,50
M 18 x 2.5	125	25	14.0	11.0	38762	26,40
M 20 x 2.5	140	25	16.0	12.0	38766	35,70
M 22 x 2.5	140	27	18.0	14.5	38770	41,00
M 24 x 3.0	160	30	18.0	14.5	38774	44,00
M 27 x 3.0	160	30	20.0	16.0	38776	70,00
M 30 x 3.5	180	35	22.0	18.0	38778	73,00
M 33 x 3.5	180	35	25.0	20.0	38780	101,00
M 36 x 4.0	200	40	28.0	22.0	38782	166,00
M 39 x 4.0	200	40	32.0	24.0	38784	212,00
M 42 x 4.5	200	45	32.0	24.0	38786	245,00
M 45 x 4.5	220	45	36.0	29.0	38788	278,00
M 48 x 5.0	250	50	36.0	29.0	38790	305,00
M 52 x 5.0	250	50	40.0	32.0	38792	370,00
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47817	61,50

### Application:

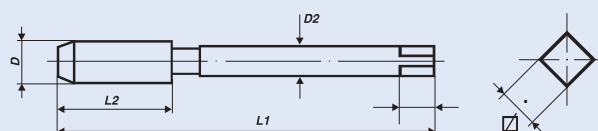
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form C/15°RSP**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	37626	7,20
M 3.5 x 0.6	56	13	4.0	3.0	37628	7,90
M 4 x 0.7	63	13	4.5	3.4	37630	7,20
M 5 x 0.8	70	16	6.0	4.9	37634	7,70
M 6 x 1.0	80	19	6.0	4.9	37638	7,70
M 7 x 1.0	80	19	7.0	5.5	37640	10,80
M 8 x 1.25	90	22	8.0	6.2	37642	9,40
M 10 x 1.5	100	24	10.0	8.0	37646	11,50
<b>DIN 376</b>						
M 3 x 0.5	56	11	2.2	—	38626	8,00
M 4 x 0.7	63	13	2.8	2.1	38630	8,00
M 5 x 0.8	70	16	3.5	2.7	38634	8,30
M 6 x 1.0	80	19	4.5	3.4	38638	8,30
M 8 x 1.25	90	22	6.0	4.9	38642	10,00
M 10 x 1.5	100	24	7.0	5.5	38646	12,00
M 12 x 1.75	110	29	9.0	7.0	38650	13,90
M 14 x 2.0	110	30	11.0	9.0	38654	18,00
M 16 x 2.0	110	32	12.0	11.0	38658	20,00
M 18 x 2.5	125	34	14.0	11.0	38662	29,00
M 20 x 2.5	140	34	16.0	12.0	38666	39,00
M 22 x 2.5	140	34	18.0	14.5	38670	44,50
M 24 x 3.0	160	38	18.0	14.5	38674	47,50
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47816	65,00

### Application:

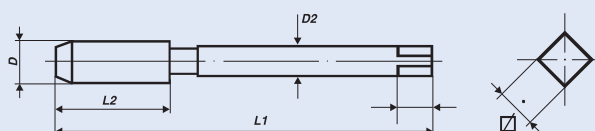
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica ISO-rosca DIN 13

DIN 371

DIN 376



### DIN 371/376

### Form B-AZ

### HSS-E

### Tolerance ISO2/6H

# M

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	37926	7,30
M 4 x 0.7	63	13	4.5	3.4	37930	7,30
M 5 x 0.8	70	16	6.0	4.9	37934	7,90
M 6 x 1.0	80	19	6.0	4.9	37938	7,90
M 8 x 1.25	90	22	8.0	6.2	37942	9,70
M 10 x 1.5	100	24	10.0	8.0	37946	11,50
<b>DIN 376</b>						
M 3 x 0.5	56	11	2.2	—	38926	7,90
M 4 x 0.7	63	13	2.8	2.1	38930	7,90
M 5 x 0.8	70	16	3.5	2.7	38934	8,30
M 6 x 1.0	80	19	4.5	3.4	38938	8,30
M 8 x 1.25	90	22	6.0	4.9	38942	10,00
M 10 x 1.5	100	24	7.0	5.5	38946	12,00
M 12 x 1.75	110	29	9.0	7.0	38950	13,90
M 14 x 2.0	110	30	11.0	9.0	38954	18,00
M 16 x 2.0	110	32	12.0	9.0	38958	20,00
M 18 x 2.5	125	34	14.0	11.0	38962	28,60
M 20 x 2.5	140	34	16.0	12.0	38966	38,70
M 22 x 2.5	140	34	18.0	14.5	38970	44,50
M 24 x 3.0	160	38	18.0	14.5	38974	47,50
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47819	68,00

#### Application:

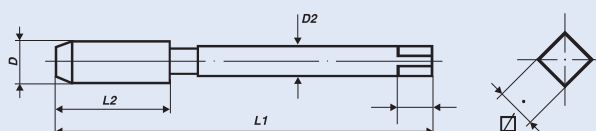
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



**Machine Taps, *extra long***

metric ISO-thread DIN 13

**Machos Máquina, *extra largos***

métrica ISO-rosca DIN 13



≈ **DIN 371**      **Form B**      **HSS-E**      **Tolerance ISO2/6H**      **M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>100 mm</b>						
M 3 x 0.5	100	11	3.5	2.7	32010	7,70
M 4 x 0.7	100	13	4.5	3.4	32011	7,70
M 5 x 0.8	100	16	6.0	4.9	32012	8,10
M 6 x 1.0	100	19	6.0	4.9	32013	8,10
M 8 x 1.25	100	22	8.0	6.2	32014	9,70
M 10 x 1.5	100	24	10.0	8.0	32015	10,20
M 12 x 1.75	100	29	12.0	9.0	32016	11,50
<b>120 mm</b>						
M 4 x 0.7	120	13	4.5	3.4	32021	8,10
M 5 x 0.8	120	16	6.0	4.9	32022	8,80
M 6 x 1.0	120	19	6.0	4.9	32023	8,80
M 8 x 1.25	120	22	8.0	6.2	32024	10,20
M 10 x 1.5	120	24	10.0	8.0	32025	11,60
M 12 x 1.75	120	29	12.0	9.0	32026	13,50
<b>150 mm</b>						
M 4 x 0.7	150	13	4.5	3.4	32031	8,50
M 5 x 0.8	150	16	6.0	4.9	32032	9,50
M 6 x 1.0	150	19	6.0	4.9	32033	9,50
M 8 x 1.25	150	22	8.0	6.2	32034	11,60
M 10 x 1.5	150	24	10.0	8.0	32035	14,00
M 12 x 1.75	150	29	12.0	9.0	32036	16,50

**Application:**

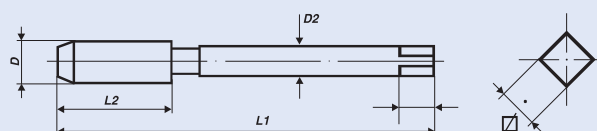
for general use in awkward places

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

**Aplicación:**

para uso general en sitios de difícil acceso

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



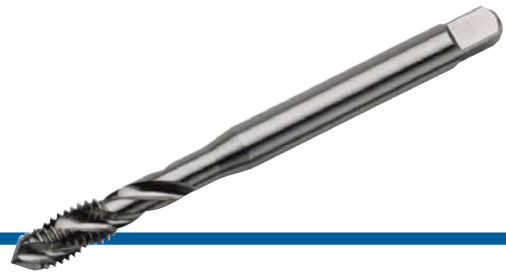


## Machine Taps, *extra long*

metric ISO-thread DIN 13

## Machos Máquina, *extra largos*

métrica ISO-rosca DIN 13



≈ DIN 371

Form C/35°RSP

HSS-E

Tolerance ISO2/6H

M

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>100 mm</b>						
M 3 x 0.5	100	6	3.5	2.7	32040	9,20
M 4 x 0.7	100	7	4.5	3.4	32041	9,20
M 5 x 0.8	100	8	6.0	4.9	32042	9,80
M 6 x 1.0	100	10	6.0	4.9	32043	9,80
M 8 x 1.25	100	14	8.0	6.2	32044	11,40
M 10 x 1.5	100	16	10.0	8.0	32045	12,40
M 12 x 1.75	100	18	12.0	9.0	32046	12,50
<b>120 mm</b>						
M 4 x 0.7	120	7	4.5	3.4	32051	9,50
M 5 x 0.8	120	8	6.0	4.9	32052	10,50
M 6 x 1.0	120	10	6.0	4.9	32053	10,50
M 8 x 1.25	120	14	8.0	6.2	32054	12,00
M 10 x 1.5	120	16	10.0	8.0	32055	13,70
M 12 x 1.75	120	18	12.0	9.0	32056	14,60
<b>150 mm</b>						
M 4 x 0.7	150	7	4.5	3.4	32061	9,80
M 5 x 0.8	150	8	6.0	4.9	32062	11,30
M 6 x 1.0	150	10	6.0	4.9	32063	11,30
M 8 x 1.25	150	14	8.0	6.2	32064	13,30
M 10 x 1.5	150	16	10.0	8.0	32065	16,10
M 12 x 1.75	150	18	12.0	9.0	32066	17,50

### Application:

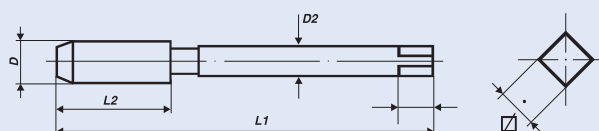
#### for general use in awkward places

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general en sitios de difícil acceso

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



**Machine Taps, *with oversize***

metric ISO-thread DIN 13

**Machos Máquina *Sobredimensionados***

métrica ISO-rosca DIN 13



**DIN 371/376**

**Form B**

**HSS-E**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>6G</b>						
DIN 371						
M 2.5 x 0.45	50	9	2.8	2.1	32522	7,20
M 3 x 0.5	56	11	3.5	2.7	32526	7,20
M 4 x 0.7	63	13	4.5	3.4	32530	7,20
M 5 x 0.8	70	16	6.0	4.9	32534	7,50
M 6 x 1.0	80	19	6.0	4.9	32538	7,50
M 8 x 1.25	90	22	8.0	6.2	32542	9,20
M 10 x 1.5	100	24	10.0	8.0	32546	10,50
DIN 376						
M 12 x 1.75	110	29	9.0	7.0	32550	12,60
M 14 x 2.0	110	30	11.0	9.0	32554	18,00
M 16 x 2.0	110	32	12.0	9.0	32558	21,00
M 18 x 2.5	125	34	14.0	11.0	32562	28,50
M 20 x 2.5	140	34	16.0	12.0	32566	40,00
<b>7G</b>						
DIN 371						
M 3 x 0.5	56	11	3.5	2.7	32503	7,30
M 4 x 0.7	63	13	4.5	3.4	32504	7,30
M 5 x 0.8	70	16	6.0	4.9	32505	7,70
M 6 x 1.0	80	19	6.0	4.9	32506	7,70
M 8 x 1.25	90	22	8.0	6.2	32508	9,70
M 10 x 1.5	100	24	10.0	8.0	32510	11,60
DIN 376						
M 12 x 1.75	110	29	9.0	7.0	32512	13,40
<b>+ 0,1 mm</b>						
DIN 371						
M 3 x 0.5	56	11	3.5	2.7	32583	7,30
M 4 x 0.7	63	13	4.5	3.4	32584	7,30
M 5 x 0.8	70	16	6.0	4.9	32585	7,70
M 6 x 1.0	80	19	6.0	4.9	32586	7,70
M 8 x 1.25	90	22	8.0	6.2	32588	9,70
M 10 x 1.5	100	24	10.0	8.0	32590	11,60
DIN 376						
M 12 x 1.75	110	29	9.0	7.0	32592	13,40

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- long chipping material
- for through holes

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- materiales de mecanización larga
- para agujeros pasantes

## Machine Taps, *with oversize*

metric ISO-thread DIN 13

## Machos Máquina *Sobredimensionados*

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form C/35°RSP**

**HSS-E**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>6G</b>						
DIN 371						
M 3 x 0.5	56	6	3.5	2.7	32726	8,60
M 4 x 0.7	63	7	4.5	3.4	32730	8,60
M 5 x 0.8	70	8	6.0	4.9	32734	9,00
M 6 x 1.0	80	10	6.0	4.9	32738	9,00
M 8 x 1.25	90	14	8.0	6.2	32742	11,00
M 10 x 1.5	100	16	10.0	8.0	32746	12,70
DIN 376						
M 12 x 1.75	110	18	9.0	7.0	32750	13,70
M 14 x 2.0	110	20	11.0	9.0	32754	19,70
M 16 x 2.0	110	22	12.0	9.0	32758	20,80
M 18 x 2.5	125	25	14.0	11.0	32762	31,00
M 20 x 2.5	140	25	16.0	12.0	32766	43,50
<b>7G</b>						
DIN 371						
M 3 x 0.5	56	6	3.5	2.7	32703	8,80
M 4 x 0.7	63	7	4.5	3.4	32704	8,80
M 5 x 0.8	70	8	6.0	4.9	32705	9,50
M 6 x 1.0	80	10	6.0	4.9	32706	9,50
M 8 x 1.25	90	14	8.0	6.2	32708	12,10
M 10 x 1.5	100	16	10.0	8.0	32710	14,30
DIN 376						
M 12 x 1.75	110	18	9.0	7.0	32712	15,40
<b>+ 0,1 mm</b>						
DIN 371						
M 3 x 0.5	56	6	3.5	2.7	32783	8,80
M 4 x 0.7	63	7	4.5	3.4	32784	8,80
M 5 x 0.8	70	8	6.0	4.9	32785	9,50
M 6 x 1.0	80	10	6.0	4.9	32786	9,50
M 8 x 1.25	90	14	8.0	6.2	32788	12,10
M 10 x 1.5	100	16	10.0	8.0	32790	14,30
DIN 376						
M 12 x 1.75	110	18	9.0	7.0	32792	15,50

### Application:

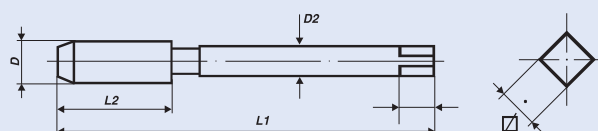
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- long chipping material
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- materiales de mecanización larga
- para agujeros ciegos



## Machine Taps

metric-fine ISO-thread DIN 13

## Machos Máquina

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form C**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 4 x 0.35	63	10	2.8	2.1	39402	9,90
M 5 x 0.5	70	12	3.5	2.7	39404	9,90
M 6 x 0.75	80	14	4.5	3.4	39407	9,90
M 8 x 0.75	80	19	6.0	4.9	39410	9,90
M 8 x 1.0	90	22	6.0	4.9	39411	9,90
M 10 x 1.0	90	20	7.0	5.5	39415	11,90
M 10 x 1.25	100	24	7.0	5.5	39416	11,90
M 12 x 1.0	100	22	9.0	7.0	39420	15,50
M 12 x 1.25	100	22	9.0	7.0	39421	15,90
M 12 x 1.5	100	22	9.0	7.0	39422	15,50
M 14 x 1.0	100	22	11.0	9.0	39426	19,20
M 14 x 1.25	100	22	11.0	9.0	39427	19,20
M 14 x 1.5	100	22	11.0	9.0	39428	19,20
M 16 x 1.0	100	22	12.0	9.0	39431	22,70
M 16 x 1.5	100	22	12.0	9.0	39433	22,70
M 18 x 1.0	110	25	14.0	11.0	39434	26,90
M 18 x 1.5	110	25	14.0	11.0	39436	26,90
M 18 x 2.0	125	34	14.0	11.0	39437	26,90
M 20 x 1.0	125	25	16.0	12.0	39438	29,30
M 20 x 1.25	125	25	16.0	12.0	39439	29,30
M 20 x 1.5	125	25	16.0	12.0	39440	29,30
M 20 x 2.0	140	34	16.0	12.0	39441	29,30
M 22 x 1.0	125	25	18.0	14.5	39443	37,00
M 22 x 1.5	125	25	18.0	14.5	39445	37,00
M 22 x 2.0	140	34	18.0	14.5	39446	37,00
M 24 x 1.0	140	28	18.0	14.5	39448	43,30
M 24 x 1.5	140	28	18.0	14.5	39450	43,30
M 24 x 2.0	140	28	18.0	14.5	39451	43,30
M 25 x 1.0	140	28	18.0	14.5	39452	43,30
M 26 x 1.5	140	28	18.0	14.5	39454	43,30
M 27 x 1.5	140	28	20.0	16.0	39456	54,00
M 27 x 2.0	140	28	20.0	16.0	39457	54,00
M 28 x 1.5	140	28	20.0	16.0	39459	54,00
M 30 x 1.5	150	28	22.0	18.0	39463	62,00
M 30 x 2.0	150	28	22.0	18.0	39464	62,00
M 32 x 1.5	150	28	22.0	18.0	39466	79,50
M 32 x 2.0	150	28	22.0	18.0	39467	79,50
M 33 x 2.0	160	30	25.0	20.0	39468	79,50
M 35 x 1.5	170	30	28.0	22.0	39472	79,50
M 36 x 1.5	170	30	28.0	22.0	39473	99,50
M 36 x 2.0	170	30	28.0	22.0	39474	99,50
M 38 x 1.5	170	30	28.0	22.0	39476	106,00
M 40 x 1.5	170	30	32.0	24.0	39480	116,00
M 42 x 1.5	170	30	32.0	24.0	39483	128,00
M 45 x 1.5	180	32	36.0	29.0	39486	151,00
M 48 x 1.5	190	32	36.0	29.0	39489	182,00
M 50 x 1.5	190	32	36.0	29.0	39494	210,00
M 52 x 1.5	190	32	40.0	32.0	39497	232,00

## Machine Taps

metric-fine ISO-thread DIN 13

## Machos Máquina

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 3 x 0.35	56	9	2.2	-	39501	11,00
M 4 x 0.35	63	10	2.8	2.1	39502	11,00
M 4 x 0.5	63	10	2.8	2.1	39503	11,00
M 5 x 0.5	70	12	3.5	2.7	39504	11,00
M 5 x 0.75	70	12	3.5	2.7	39505	11,00
M 6 x 0.5	80	14	4.5	3.4	39506	11,00
M 6 x 0.75	80	14	4.5	3.4	39507	11,00
M 7 x 0.75	80	14	5.5	4.3	39508	11,00
M 8 x 0.5	80	19	6.0	4.9	39509	11,00
M 8 x 0.75	80	19	6.0	4.9	39510	11,00
M 8 x 1.0	90	22	6.0	4.9	39511	11,00
M 9 x 0.75	80	19	7.0	5.5	39512	11,00
M 9 x 1.0	90	22	7.0	5.5	39513	11,00
M 10 x 0.75	90	20	7.0	5.5	39514	12,80
M 10 x 1.0	90	20	7.0	5.5	39515	12,80
M 10 x 1.25	100	24	7.0	5.5	39516	12,80
M 11 x 1.0	90	20	8.0	6.2	39517	17,60
M 11 x 1.25	90	22	8.0	6.2	39518	17,60
M 12 x 0.75	100	22	9.0	7.0	39519	17,60
M 12 x 1.0	100	22	9.0	7.0	39520	17,60
M 12 x 1.25	100	22	9.0	7.0	39521	17,60
M 12 x 1.5	100	22	9.0	7.0	39522	17,60
M 13 x 1.0	100	22	11.0	9.0	39523	22,60
M 13 x 1.5	100	22	11.0	9.0	39524	22,60
M 14 x 0.75	100	22	11.0	9.0	39525	22,60
M 14 x 1.0	100	22	11.0	9.0	39526	22,60
M 14 x 1.25	100	22	11.0	9.0	39527	22,60
M 14 x 1.5	100	22	11.0	9.0	39528	22,60
M 15 x 1.0	100	22	12.0	9.0	39529	24,80
M 15 x 1.5	100	22	12.0	9.0	39530	24,80
M 16 x 1.0	100	22	12.0	9.0	39531	25,30
M 16 x 1.25	100	22	12.0	9.0	39532	25,30
M 16 x 1.5	100	22	12.0	9.0	39533	25,30
M 18 x 1.0	110	25	14.0	11.0	39534	30,80
M 18 x 1.25	110	25	14.0	11.0	39535	30,80
M 18 x 1.5	110	25	14.0	11.0	39536	30,80
M 18 x 2.0	125	34	14.0	11.0	39537	30,80

### Application:

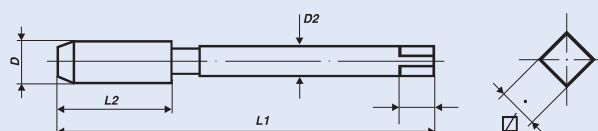
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

metric-fine ISO-thread DIN 13

## Machos Máquina

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 20 x 1.0	125	25	16.0	12.0	39538	34,10
M 20 x 1.25	125	25	16.0	12.0	39539	34,10
M 20 x 1.5	125	25	16.0	12.0	39540	34,10
M 20 x 2.0	140	34	16.0	12.0	39541	34,10
M 21 x 1.5	125	25	16.0	12.0	39542	34,10
M 22 x 1.0	125	25	18.0	14.5	39543	41,80
M 22 x 1.25	125	25	18.0	14.5	39544	41,80
M 22 x 1.5	125	25	18.0	14.5	39545	41,80
M 22 x 2.0	140	34	18.0	14.5	39546	41,80
M 23 x 1.5	125	25	18.0	14.5	39547	48,40
M 24 x 1.0	140	28	18.0	14.5	39548	48,40
M 24 x 1.25	140	28	18.0	14.5	39549	48,40
M 24 x 1.5	140	28	18.0	14.5	39550	48,40
M 24 x 2.0	140	28	18.0	14.5	39551	48,40
M 25 x 1.0	140	28	18.0	14.5	39552	51,70
M 25 x 1.5	140	28	18.0	14.5	39553	51,70
M 26 x 1.0	140	28	18.0	14.5	3955X	51,70
M 26 x 1.5	140	28	18.0	14.5	39554	51,70
M 26 x 2.0	140	28	18.0	14.5	39555	51,70
M 27 x 1.0	140	28	20.0	16.0	39500	61,60
M 27 x 1.5	140	28	20.0	16.0	39556	61,60
M 27 x 2.0	140	28	20.0	16.0	39557	61,60
M 28 x 1.0	140	28	20.0	16.0	39558	61,60
M 28 x 1.5	140	28	20.0	16.0	39559	61,60
M 28 x 2.0	140	28	20.0	16.0	39560	61,60
M 29 x 1.5	150	28	22.0	18.0	39561	69,30
M 30 x 1.0	150	28	22.0	18.0	39562	69,30
M 30 x 1.5	150	28	22.0	18.0	39563	69,30
M 30 x 2.0	150	28	22.0	18.0	39564	69,30
M 30 x 2.5	180	45	22.0	18.0	3956X	69,30
M 30 x 3.0	180	45	22.0	18.0	39565	69,30
M 32 x 1.5	150	28	22.0	18.0	39566	84,70
M 32 x 2.0	150	28	22.0	18.0	39567	84,70
M 32 x 3.0	180	50	22.0	18.0	39592	84,70
M 33 x 1.5	160	30	25.0	20.0	39593	84,70
M 33 x 2.0	160	30	25.0	20.0	39568	84,70
M 33 x 3.0	180	50	25.0	20.0	39569	84,70

### Application:

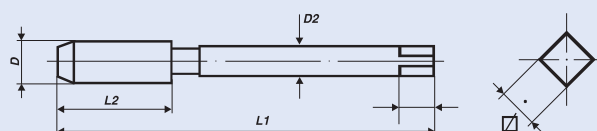
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

metric-fine ISO-thread DIN 13

## Machos Máquina

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 34 x 1.5	170	30	28.0	22.0	39570	84,70
M 34 x 2.0	170	30	28.0	22.0	39571	84,70
M 35 x 1.5	170	30	28.0	22.0	39572	84,70
M 36 x 1.5	170	30	28.0	22.0	39573	106,00
M 36 x 2.0	170	30	28.0	22.0	39574	106,00
M 36 x 3.0	200	56	28.0	22.0	39575	106,00
M 38 x 1.5	170	30	28.0	22.0	39576	113,00
M 39 x 1.5	170	30	32.0	24.0	39577	113,00
M 39 x 2.0	170	30	32.0	24.0	39578	113,00
M 39 x 3.0	200	60	32.0	24.0	39579	113,00
M 40 x 1.5	170	30	32.0	24.0	39580	125,00
M 40 x 2.0	170	30	32.0	24.0	39581	125,00
M 40 x 3.0	200	60	32.0	24.0	39582	125,00
M 42 x 1.5	170	30	32.0	24.0	39583	140,00
M 42 x 2.0	170	30	32.0	24.0	39584	140,00
M 42 x 3.0	200	60	32.0	24.0	39585	140,00
M 45 x 1.5	180	32	36.0	29.0	39586	165,00
M 45 x 2.0	180	32	36.0	29.0	39587	165,00
M 45 x 3.0	200	50	36.0	29.0	39588	165,00
M 48 x 1.5	190	32	36.0	29.0	39589	198,00
M 48 x 2.0	190	32	36.0	29.0	39590	198,00
M 48 x 3.0	225	50	36.0	29.0	39591	198,00
M 50 x 1.5	190	32	36.0	29.0	39594	231,00
M 50 x 2.0	190	32	36.0	29.0	39595	231,00
M 50 x 3.0	225	50	36.0	29.0	39596	231,00
M 52 x 1.5	190	32	40.0	32.0	39597	253,00
M 52 x 2.0	190	32	40.0	32.0	39598	253,00
M 52 x 3.0	225	50	40.0	32.0	39599	253,00
M 63 x 1.5	275	50	50.0	39.0	3959X	396,00

### Application:

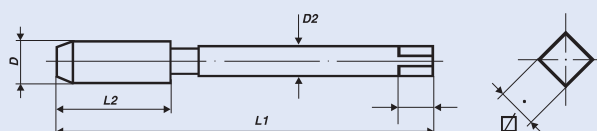
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form C/35° RSP**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 3 x 0.35	56	5	2.2	-	39701	12,50
M 4 x 0.35	63	5	2.8	2.1	39702	12,50
M 4 x 0.5	63	5	2.8	2.1	39703	12,50
M 5 x 0.5	70	5	3.5	2.7	39704	12,50
M 5 x 0.75	70	8	3.5	2.7	39705	12,50
M 6 x 0.5	80	5	4.5	3.4	39706	12,50
M 6 x 0.75	80	8	4.5	3.4	39707	12,50
M 7 x 0.75	80	8	5.5	4.3	39708	12,50
M 8 x 0.5	80	8	6.0	4.9	39709	12,50
M 8 x 0.75	80	8	6.0	4.9	39710	12,50
M 8 x 1.0	90	10	6.0	4.9	39711	12,50
M 9 x 0.75	80	10	7.0	5.5	39712	12,50
M 9 x 1.0	90	10	7.0	5.5	39713	12,50
M 10 x 0.75	90	10	7.0	5.5	39714	14,80
M 10 x 1.0	90	10	7.0	5.5	39715	14,80
M 10 x 1.25	100	16	7.0	5.5	39716	14,80
M 11 x 1.0	90	11	8.0	6.2	39717	19,10
M 11 x 1.25	90	14	8.0	6.2	39718	19,10
M 12 x 0.75	100	10	9.0	7.0	39719	19,10
M 12 x 1.0	100	11	9.0	7.0	39720	19,10
M 12 x 1.25	100	15	9.0	7.0	39721	19,10
M 12 x 1.5	100	15	9.0	7.0	39722	19,10
M 13 x 1.0	100	11	11.0	9.0	39723	23,30
M 13 x 1.5	100	15	11.0	9.0	39724	23,30
M 14 x 0.75	100	10	11.0	9.0	39725	23,30
M 14 x 1.0	100	11	11.0	9.0	39726	23,30
M 14 x 1.25	100	15	11.0	9.0	39727	23,30
M 14 x 1.5	100	15	11.0	9.0	39728	23,30
M 15 x 1.0	100	12	12.0	9.0	39729	27,00
M 15 x 1.5	100	15	12.0	9.0	39730	27,00
M 16 x 1.0	100	12	12.0	9.0	39731	27,00
M 16 x 1.25	100	15	12.0	9.0	39732	27,00
M 16 x 1.5	100	15	12.0	9.0	39733	27,00
M 18 x 1.0	110	13	14.0	11.0	39734	33,70
M 18 x 1.25	110	15	14.0	11.0	39735	33,70
M 18 x 1.5	110	17	14.0	11.0	39736	33,70
M 18 x 2.0	125	20	14.0	11.0	39737	33,70

### Application:

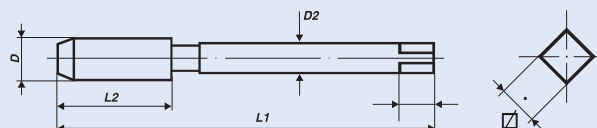
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos





## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form C/35° RSP**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 20 x 1.0	125	14	16.0	12.0	39738	37,50
M 20 x 1.25	125	17	16.0	12.0	39739	37,50
M 20 x 1.5	125	17	16.0	12.0	39740	37,50
M 20 x 2.0	140	20	16.0	12.0	39741	37,50
M 21 x 1.5	125	17	16.0	12.0	39742	37,50
M 22 x 1.0	125	14	18.0	14.5	39743	45,80
M 22 x 1.25	125	17	18.0	14.5	39744	45,80
M 22 x 1.5	125	17	18.0	14.5	39745	45,80
M 22 x 2.0	140	20	18.0	14.5	39746	45,80
M 23 x 1.5	125	17	18.0	14.5	39747	55,00
M 24 x 1.0	140	15	18.0	14.5	39748	55,00
M 24 x 1.25	140	17	18.0	14.5	39749	55,00
M 24 x 1.5	140	20	18.0	14.5	39750	55,00
M 24 x 2.0	140	20	18.0	14.5	39751	55,00
M 25 x 1.0	140	15	18.0	14.5	39752	55,00
M 25 x 1.5	140	20	18.0	14.5	39753	55,00
M 26 x 1.0	140	15	18.0	14.5	3975X	55,00
M 26 x 1.5	140	20	18.0	14.5	39754	55,00
M 26 x 2.0	140	20	18.0	14.5	39755	55,00
M 27 x 1.0	140	15	20.0	16.0	39700	66,00
M 27 x 1.5	140	20	20.0	16.0	39756	66,00
M 27 x 2.0	140	20	20.0	16.0	39757	66,00
M 28 x 1.0	140	15	20.0	16.0	39758	66,00
M 28 x 1.5	140	20	20.0	16.0	39759	66,00
M 28 x 2.0	140	20	20.0	16.0	39760	66,00
M 29 x 1.5	150	22	22.0	18.0	39761	75,00
M 30 x 1.0	150	17	22.0	18.0	39762	75,00
M 30 x 1.5	150	22	22.0	18.0	39763	75,00
M 30 x 2.0	150	22	22.0	18.0	39764	75,00
M 30 x 2.5	180	27	22.0	18.0	3976X	75,00
M 30 x 3.0	180	30	22.0	18.0	39765	75,00
M 32 x 1.5	150	22	22.0	18.0	39766	94,00
M 32 x 2.0	150	22	22.0	18.0	39767	94,00
M 32 x 3.0	180	30	22.0	18.0	39792	94,00
M 33 x 1.5	160	24	25.0	20.0	39793	94,00
M 33 x 2.0	160	24	25.0	20.0	39768	94,00
M 33 x 3.0	180	30	25.0	20.0	39769	94,00

### Application:

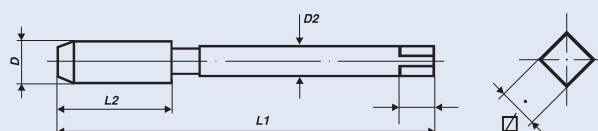
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps

metric ISO-thread DIN 13

## Machos Máquina

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form C/35° RSP**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 34 x 1.5	170	24	28.0	22.0	39770	94,00
M 34 x 2.0	170	24	28.0	22.0	39771	94,00
M 35 x 1.5	170	24	28.0	22.0	39772	94,00
M 36 x 1.5	170	24	28.0	22.0	39773	118,00
M 36 x 2.0	170	24	28.0	22.0	39774	118,00
M 36 x 3.0	200	30	28.0	22.0	39775	118,00
M 38 x 1.5	170	24	28.0	22.0	39776	125,00
M 39 x 1.5	170	25	32.0	24.0	39777	125,00
M 39 x 2.0	170	25	32.0	24.0	39778	125,00
M 39 x 3.0	200	30	32.0	24.0	39779	125,00
M 40 x 1.5	170	25	32.0	24.0	39780	138,00
M 40 x 2.0	170	25	32.0	24.0	39781	138,00
M 40 x 3.0	200	30	32.0	24.0	39782	138,00
M 42 x 1.5	170	25	32.0	24.0	39783	155,00
M 42 x 2.0	170	25	32.0	24.0	39784	155,00
M 42 x 3.0	200	30	32.0	24.0	39785	155,00
M 45 x 1.5	180	27	36.0	29.0	39786	181,00
M 45 x 2.0	180	27	36.0	29.0	39787	181,00
M 45 x 3.0	200	30	36.0	29.0	39788	181,00
M 48 x 1.5	190	27	36.0	29.0	39789	216,00
M 48 x 2.0	190	27	36.0	29.0	39790	216,00
M 48 x 3.0	225	33	36.0	29.0	39791	216,00
M 50 x 1.5	190	27	36.0	29.0	39794	250,00
M 50 x 2.0	190	27	36.0	29.0	39795	250,00
M 50 x 3.0	225	33	36.0	29.0	39796	250,00
M 52 x 1.5	190	27	40.0	32.0	39797	275,00
M 52 x 2.0	190	27	40.0	32.0	39798	275,00
M 52 x 3.0	225	33	40.0	32.0	39799	275,00
M 63 x 1.5	275	40	50.0	39.0	3979X	420,00

### Application:

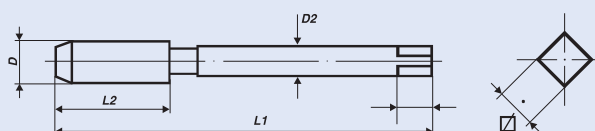
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps

Withworth-thread BS 84

## Machos Máquina

rosca-Whitworth BS 84

DIN 371

DIN 376



≈ DIN 371/376

Form B

HSS-E

**BSW**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
≈ DIN 371						
BSW 1/8 x 40	56	11	3.5	2.7	70506	7,90
BSW 5/32 x 32	63	13	4.5	3.4	70508	7,90
BSW 3/16 x 24	70	15	6.0	4.9	70510	7,90
BSW 1/4 x 20	80	17	7.0	5.5	70514	7,90
BSW 5/16 x 18	90	20	8.0	6.2	70516	10,00
BSW 3/8 x 16	100	22	9.0	7.0	70518	11,20
BSW 7/16 x 14	100	22	11.0	9.0	70520	13,30
BSW 1/2 x 12	110	25	12.0	9.0	70522	13,30
≈ DIN 376						
BSW 1/4 x 20	80	17	4.5	3.4	71514	7,90
BSW 5/16 x 18	90	20	6.0	4.9	71516	10,00
BSW 3/8 x 16	100	22	7.0	5.5	71518	11,20
BSW 7/16 x 14	100	22	8.0	6.2	71520	13,30
BSW 1/2 x 12	110	25	9.0	7.0	71522	13,30
BSW 9/16 x 12	110	26	11.0	9.0	71524	20,00
BSW 5/8 x 11	110	27	12.0	9.0	71526	20,00
BSW 3/4 x 10	125	30	14.0	11.0	71530	38,70
BSW 7/8 x 9	140	32	18.0	14.5	71534	47,20
BSW 1" x 8	160	36	20.0	16.0	71538	53,30
BSW 1.1/4 x 7	180	40	22.0	18.0	71546	73,70
BSW 1.3/8 x 6	200	50	28.0	22.0	71550	154,00
BSW 1.1/2 x 6	200	50	32.0	24.0	71554	154,00

### Application:

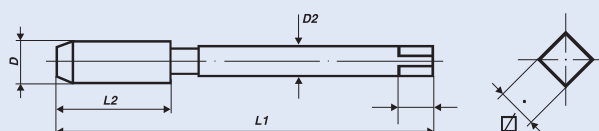
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

Withworth-thread BS 84

## Machos Máquina

rosca-Whitworth BS 84

DIN 371

DIN 376



≈ DIN 371/376

Form C/35° RSP

HSS-E

**BSW**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
BSW 1/8 x 40	56	7	3.5	2.7	70706	10,00
BSW 5/32 x 32	63	7	4.5	3.4	70708	10,00
BSW 3/16 x 24	70	10	6.0	4.9	70710	10,00
BSW 1/4 x 20	80	13	7.0	5.5	70714	10,00
BSW 5/16 x 18	90	14	8.0	6.2	70716	12,10
BSW 3/8 x 16	100	16	9.0	7.0	70718	13,30
BSW 7/16 x 14	100	17	11.0	9.0	70720	16,90
BSW 1/2 x 12	110	20	12.0	9.0	70722	16,90
<b>DIN 376</b>						
BSW 1/4 x 20	80	13	4.5	3.4	71714	10,00
BSW 5/16 x 18	90	14	6.0	4.9	71716	12,10
BSW 3/8 x 16	100	16	7.0	5.5	71718	13,30
BSW 7/16 x 14	100	17	8.0	6.2	71720	16,90
BSW 1/2 x 12	110	20	9.0	7.0	71722	16,90
BSW 9/16 x 12	110	20	11.0	9.0	71724	24,20
BSW 5/8 x 11	110	22	12.0	9.0	71726	24,20
BSW 3/4 x 10	125	25	14.0	11.0	71730	48,50
BSW 7/8 x 9	140	27	18.0	14.5	71734	58,50
BSW 1" x 8	160	30	20.0	16.0	71738	66,00
BSW 1.1/4 x 7	180	35	22.0	18.0	71746	87,00
BSW 1.3/8 x 6	200	40	28.0	22.0	71750	184,00
BSW 1.1/2 x 6	200	40	32.0	24.0	71754	184,00

### Application:

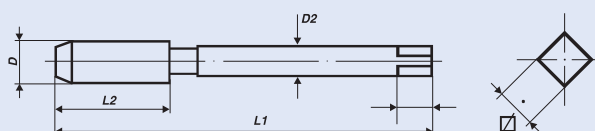
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps

Unified Coarse thread ANSI B 1.1

## Machos Máquina

rosca gruesa unificada ANSI B 1.1

DIN 371

DIN 376



≈ DIN 371/376

Form B

HSS-E

Tolerance 2B

UNC

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
UNC No. 4 x 40	50	10	3.5	2.7	74504	7,90
UNC No. 5 x 40	56	11	3.5	2.7	74505	7,90
UNC No. 6 x 32	56	12	4.0	3.0	74506	7,90
UNC No. 8 x 32	63	13	4.5	3.4	74508	7,90
UNC No. 10 x 24	70	15	6.0	4.9	74510	7,90
UNC No. 12 x 24	70	16	6.0	4.9	74512	7,90
UNC 1/4 x 20	80	17	7.0	5.5	74514	7,90
UNC 5/16 x 18	90	20	8.0	6.2	74516	10,00
UNC 3/8 x 16	100	22	9.0	7.0	74518	11,20
<b>DIN 376</b>						
UNC No. 4 x 40	50	10	1.8	-	75504	7,90
UNC No. 5 x 40	56	11	2.2	1.8	75505	7,90
UNC No. 6 x 32	56	12	2.5	2.1	75506	7,90
UNC No. 8 x 32	63	13	2.8	2.1	75508	7,90
UNC No. 10 x 24	70	15	3.5	2.7	75510	7,90
UNC No. 12 x 24	70	16	3.5	2.7	75512	7,90
UNC 1/4 x 20	80	17	4.5	3.4	75514	7,90
UNC 5/16 x 18	90	20	6.0	4.9	75516	10,00
UNC 3/8 x 16	100	22	7.0	5.5	75518	11,20
UNC 7/16 x 14	100	22	8.0	6.2	75520	13,30
UNC 1/2 x 13	110	25	9.0	7.0	75522	13,30
UNC 9/16 x 12	110	26	11.0	9.0	75524	20,00
UNC 5/8 x 11	110	27	12.0	9.0	75526	20,00
UNC 3/4 x 10	125	30	14.0	11.0	75530	38,70
UNC 7/8 x 9	140	32	18.0	14.5	75534	47,20
UNC 1" x 8	160	36	20.0	16.0	75538	53,30
UNC 1.1/4 x 7	180	40	22.0	18.0	75546	73,70
UNC 1.1/2 x 6	200	50	32.0	24.0	75554	154,00
UNC 1.3/4 x 5	220	65	36.0	29.0	75562	265,00
UNC 2" x 4.1/2	250	70	40.0	32.0	75570	385,00

### Application:

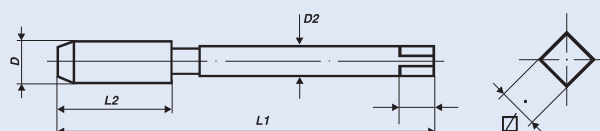
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

Unified Coarse thread ANSI B 1.1

## Machos Máquina

rosca gruesa unificada ANSI B 1.1

DIN 371

DIN 376



≈ **DIN 371/376**

**Form C/35° RSP**

**HSS-E**

**Tolerance 2B**

**UNC**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
UNC No. 4 x 40	50	6	3.5	2.7	74704	10,00
UNC No. 5 x 40	56	7	3.5	2.7	74705	10,00
UNC No. 6 x 32	56	7	4.0	3.0	74706	10,00
UNC No. 8 x 32	63	8	4.5	3.4	74708	10,00
UNC No. 10 x 24	70	10	6.0	4.9	74710	10,00
UNC No. 12 x 24	70	10	6.0	4.9	74712	10,00
UNC 1/4 x 20	80	13	7.0	5.5	74714	10,00
UNC 5/16 x 18	90	14	8.0	6.2	74716	12,10
UNC 3/8 x 16	100	16	9.0	7.0	74718	13,30
<b>DIN 376</b>						
UNC No. 4 x 40	50	6	1.8	-	75704	10,00
UNC No. 5 x 40	56	7	2.2	1.8	75705	10,00
UNC No. 6 x 32	56	7	2.5	2.1	75706	10,00
UNC No. 8 x 32	63	8	2.8	2.1	75708	10,00
UNC No. 10 x 24	70	10	3.5	2.7	75710	10,00
UNC No. 12 x 24	70	10	3.5	2.7	75712	10,00
UNC 1/4 x 20	80	13	4.5	3.4	75714	10,00
UNC 5/16 x 18	90	14	6.0	4.9	75716	12,10
UNC 3/8 x 16	100	16	7.0	5.5	75718	13,30
UNC 7/16 x 14	100	17	8.0	6.2	75720	16,80
UNC 1/2 x 13	110	20	9.0	7.0	75722	16,80
UNC 9/16 x 12	110	20	11.0	9.0	75724	24,20
UNC 5/8 x 11	110	22	12.0	9.0	75726	24,20
UNC 3/4 x 10	125	25	14.0	11.0	75730	48,50
UNC 7/8 x 9	140	27	18.0	14.5	75734	58,50
UNC 1" x 8	160	30	20.0	16.0	75738	66,00
UNC 1.1/4 x 7	180	35	22.0	18.0	75746	87,00
UNC 1.1/2 x 6	200	40	32.0	24.0	75754	184,00
UNC 1.3/4 x 5	220	45	36.0	29.0	75762	288,00
UNC 2" x 4.1/2	250	50	40.0	32.0	75770	410,00

### Application:

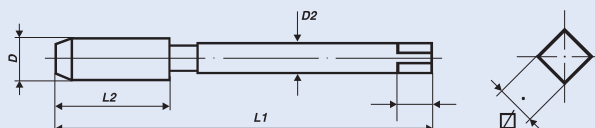
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps

Unified Fine thread ANSI B 1.1

## Machos Máquina

rosca fina unificada ANSI B 1.1

DIN 371

DIN 376



≈ DIN 371/376

Form B

HSS-E

Tolerance 2B

UNF

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
UNF No. 4 x 48	50	10	3.5	2.7	76504	7,90
UNF No. 5 x 44	56	11	3.5	2.7	76505	7,90
UNF No. 6 x 40	56	12	4.0	3.0	76506	7,90
UNF No. 8 x 36	63	13	4.5	3.4	76508	7,90
UNF No. 10 x 32	70	15	6.0	4.9	76510	7,90
UNF No. 12 x 28	70	16	6.0	4.9	76512	7,90
UNF 1/4 x 28	80	17	7.0	5.5	76514	7,90
UNF 5/16 x 24	90	17	8.0	6.2	76516	10,00
UNF 3/8 x 24	100	18	9.0	7.0	76518	11,20
<b>DIN 376</b>						
UNF 7/16 x 20	100	22	8.0	6.2	77520	13,30
UNF 1/2 x 20	100	22	9.0	7.0	77522	13,30
UNF 9/16 x 18	100	22	11.0	9.0	77524	20,00
UNF 5/8 x 18	100	22	12.0	9.0	77526	20,00
UNF 3/4 x 16	110	25	14.0	11.0	77530	38,70
UNF 7/8 x 14	140	26	18.0	14.5	77534	47,20
UNF 1" x 14	150	28	20.0	16.0	77540	53,30
UNF 1" x 12	150	28	20.0	16.0	77538	53,30
UNF 1.1/4 x 12	150	30	22.0	18.0	77546	73,70
UNF 1.1/2 x 12	170	33	32.0	24.0	77554	154,00

### Application:

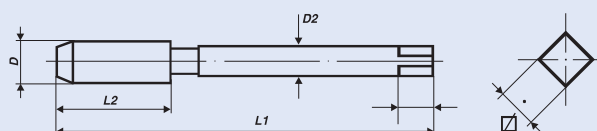
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

Unified Fine thread ANSI B 1.1

## Machos Máquina

rosca fina unificada ANSI B 1.1

DIN 371

DIN 376



≈ **DIN 371/376**

**Form C/35° RSP**

**HSS-E**

**Tolerance 2B**

**UNF**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
UNF No. 4 x 48	50	6	3.5	2.7	76704	10,00
UNF No. 5 x 44	56	7	3.5	2.7	76705	10,00
UNF No. 6 x 40	56	7	4.0	3.0	76706	10,00
UNF No. 8 x 36	63	8	4.5	3.4	76708	10,00
UNF No. 10 x 32	70	10	6.0	4.9	76710	10,00
UNF No. 12 x 28	70	10	6.0	4.9	76712	10,00
UNF 1/4 x 28	80	10	7.0	5.5	76714	10,00
UNF 5/16 x 24	90	10	8.0	6.2	76716	12,10
UNF 3/8 x 24	100	10	9.0	7.0	76718	13,30
<b>DIN 376</b>						
UNF 7/16 x 20	100	13	8.0	6.2	77720	16,80
UNF 1/2 x 20	100	13	9.0	7.0	77722	16,80
UNF 9/16 x 18	100	15	11.0	9.0	77724	24,20
UNF 5/8 x 18	100	15	12.0	9.0	77726	24,20
UNF 3/4 x 16	110	17	14.0	11.0	77730	48,50
UNF 7/8 x 14	140	17	18.0	14.5	77734	58,50
UNF 1" x 14	150	20	20.0	16.0	77740	66,00
UNF 1" x 12	150	20	20.0	16.0	77738	66,00
UNF 1.1/4 x 12	150	22	22.0	18.0	77746	87,00
UNF 1.1/2 x 12	170	25	32.0	24.0	77754	184,00

### Application:

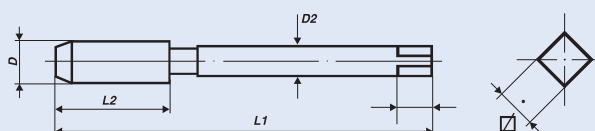
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos





## Machine Taps

Unified thread ANSI B 1.1

## Machos Máquina

rosca unificada ANSI B 1.1



ISO 529

Form B

HSS-E

Tolerance 2B

UN

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
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### 8-UN

UN	1.1/16 x 8	138	48	20.0	16.0	83101	56,50
UN	1.1/8 x 8	138	48	20.0	16.0	83102	56,50
UN	1.3/16 x 8	151	51	22.4	18.0	83103	66,00
UN	1.1/4 x 8	151	51	22.4	18.0	83104	66,00
UN	1.5/16 x 8	162	57	25.0	20.0	83105	83,00
UN	1.3/8 x 8	162	57	25.0	20.0	83106	83,00
UN	1.1/2 x 8	170	60	28.0	22.4	83107	108,00
UN	1.5/8 x 8	170	60	28.0	22.4	83108	127,00
UN	1.3/4 x 8	187	67	31.5	25.0	83109	146,00
UN	1.7/8 x 8	187	67	31.5	25.0	83110	226,00
UN	2" x 8	200	70	35.5	28.0	83111	226,00
UN	2.1/8 x 8	200	70	35.5	28.0	83112	447,00
UN	2.1/4 x 8	221	76	40.0	31.5	83113	447,00
UN	2.1/2 x 8	224	79	40.0	31.5	83115	650,00
UN	2.3/4 x 8	234	79	45.0	35.5	83116	715,00
UN	3" x 8	258	83	50.0	40.0	83117	795,00
UN	3.1/4 x 8	261	86	50.0	40.0	83118	795,00
UN	3.1/2 x 8	261	86	50.0	40.0	83119	935,00
UN	3.3/4 x 8	279	89	56.0	45.0	83120	1.150,00
UN	4" x 8	279	89	56.0	45.0	83121	1.150,00

### 12-UN

UN	1.5/8 x 12	170	60	28.0	22.4	83301	127,00
UN	1.3/4 x 12	187	67	31.5	25.0	83302	146,00
UN	1.7/8 x 12	187	67	31.5	25.0	83303	226,00
UN	2" x 12	200	70	35.5	28.0	83304	226,00
UN	2.1/8 x 12	200	70	35.5	28.0	83305	447,00
UN	2.1/4 x 12	221	76	40.0	31.5	83306	447,00
UN	2.1/2 x 12	224	79	40.0	31.5	83308	650,00
UN	2.3/4 x 12	234	79	45.0	35.5	83309	715,00
UN	3" x 12	258	83	50.0	40.0	83310	795,00
UN	3.1/4 x 12	261	86	50.0	40.0	83311	795,00
UN	3.1/2 x 12	261	86	50.0	40.0	83312	935,00
UN	3.3/4 x 12	279	89	56.0	45.0	83313	1.150,00
UN	4" x 12	279	89	56.0	45.0	83314	1.150,00

#### Application:

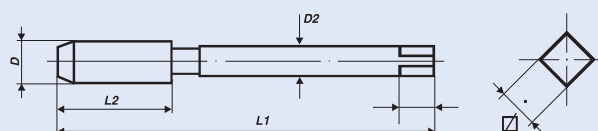
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

Unified thread ANSI B 1.1

## Machos Máquina

rosca unificada ANSI B 1.1



ISO 529

Form C/35° RSP

HSS-E

Tolerance 2B

UN

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>8-UN</b>						
UN 1.1/16 x 8	138	48	20.0	16.0	83151	71,00
UN 1.1/8 x 8	138	48	20.0	16.0	83152	71,00
UN 1.3/16 x 8	151	51	22.4	18.0	83153	83,00
UN 1.1/4 x 8	151	51	22.4	18.0	83154	83,00
UN 1.5/16 x 8	162	57	25.0	20.0	83155	104,00
UN 1.3/8 x 8	162	57	25.0	20.0	83156	104,00
UN 1.1/2 x 8	170	60	28.0	22.4	83157	135,00
UN 1.5/8 x 8	170	60	28.0	22.4	83158	159,00
UN 1.3/4 x 8	187	67	31.5	25.0	83159	182,00
UN 1.7/8 x 8	187	67	31.5	25.0	83160	282,00
UN 2" x 8	200	70	35.5	28.0	83161	282,00
UN 2.1/8 x 8	200	70	35.5	28.0	83162	560,00
UN 2.1/4 x 8	221	76	40.0	31.5	83163	560,00
UN 2.1/2 x 8	224	79	40.0	31.5	83165	813,00
UN 2.3/4 x 8	234	79	45.0	35.5	83166	895,00
UN 3" x 8	258	83	50.0	40.0	83167	995,00
UN 3.1/4 x 8	261	86	50.0	40.0	83168	995,00
UN 3.1/2 x 8	261	86	50.0	40.0	83169	1.170,00
UN 3.3/4 x 8	279	89	56.0	45.0	83170	1.450,00
UN 4" x 8	279	89	56.0	45.0	83171	1.450,00
<b>12-UN</b>						
UN 1.5/8 x 12	170	60	28.0	22.4	83351	159,00
UN 1.3/4 x 12	187	67	31.5	25.0	83352	182,00
UN 1.7/8 x 12	187	67	31.5	25.0	83353	282,00
UN 2" x 12	200	70	35.5	28.0	83354	282,00
UN 2.1/8 x 12	200	70	35.5	28.0	83355	560,00
UN 2.1/4 x 12	221	76	40.0	31.5	83356	560,00
UN 2.1/2 x 12	224	79	40.0	31.5	83358	813,00
UN 2.3/4 x 12	234	79	45.0	35.5	83359	895,00
UN 3" x 12	258	83	50.0	40.0	83360	995,00
UN 3.1/4 x 12	261	86	50.0	40.0	83361	995,00
UN 3.1/2 x 12	261	86	50.0	40.0	83362	1.170,00
UN 3.3/4 x 12	279	89	56.0	45.0	83363	1.450,00
UN 4" x 12	279	89	56.0	45.0	83364	1.450,00

### Application:

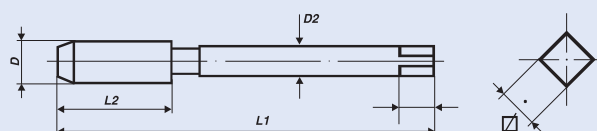
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps

Unified Extra Fine thread ANSI B 1.1

## Machos Máquina

rosca extra fina unificada ANSI B 1.1



ISO 529

Form B

HSS-E

Tolerance 2B

UNEF

Nominal Diameter D		L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
UNEF	Nr.12 x 32	62	17	5.6	4.5	83320	8,00
UNEF	1/4 x 32	66	19	6.3	5.0	83321	7,20
UNEF	5/16 x 32	72	22	8.0	6.3	83322	9,00
UNEF	3/8 x 32	80	24	10.0	8.0	83323	10,20
UNEF	7/16 x 28	85	25	8.0	6.3	83324	12,00
UNEF	1/2 x 28	89	29	9.0	7.1	83325	12,00
UNEF	9/16 x 24	95	30	11.2	9.0	83326	18,10
UNEF	5/8 x 24	102	32	12.5	10.0	83327	18,50
UNEF	11/16 x 24	112	37	14.0	11.2	83328	34,20
UNEF	3/4 x 20	112	37	14.0	11.2	83329	34,20
UNEF	13/16 x 20	118	38	16.0	12.5	83330	42,00
UNEF	7/8 x 20	118	38	16.0	12.5	83331	42,00
UNEF	15/16 x 20	130	45	18.0	14.0	83332	48,00
UNEF	1" x 20	130	45	18.0	14.0	83333	48,00
UNEF	1.1/16 x 18	138	48	20.0	16.0	83334	56,50
UNEF	1.1/8 x 18	138	48	20.0	16.0	83335	56,50
UNEF	1.3/16 x 18	151	51	22.4	18.0	83336	66,00
UNEF	1.1/4 x 18	151	51	22.4	18.0	83337	66,00
UNEF	1.5/16 x 18	162	57	25.0	20.0	83338	83,00
UNEF	1.3/8 x 18	162	57	25.0	20.0	83339	83,00
UNEF	1.7/16 x 18	170	60	28.0	22.4	83340	108,00
UNEF	1.1/2 x 18	170	60	28.0	22.4	83341	108,00
UNEF	1.9/16 x 18	170	60	28.0	22.4	83342	127,00
UNEF	1.5/8 x 18	170	60	28.0	22.4	83343	127,00
UNEF	1.11/16 x 18	187	67	31.5	25.0	83344	146,00
UNEF	1.3/4 x 18	187	67	31.5	25.0	83345	146,00
UNEF	2" x 18	200	70	35.5	28.0	83346	226,00

### Application:

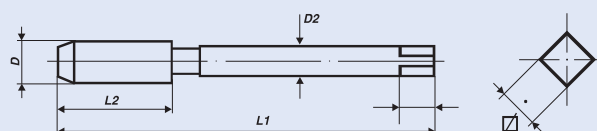
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Maschine Taps

Unified Extra Fine thread ANSI B 1.1

## Machos Máquina

rosca extra fina unificada ANSI B 1.1



ISO 529

Form C/35°RSP

HSS-E

Tolerance 2B

**UNEF**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
UNEF Nr. 12 x 32	62	17	5.6	4.5	83370	9,90
UNEF 1/4 x 32	66	19	6.3	5.0	83371	8,90
UNEF 5/16 x 32	72	22	8.0	6.3	83372	11,30
UNEF 3/8 x 32	80	24	10.0	8.0	83373	12,70
UNEF 7/16 x 28	85	25	8.0	6.3	83374	15,00
UNEF 1/2 x 28	89	29	9.0	7.1	83375	15,00
UNEF 9/16 x 24	95	30	11.2	9.0	83376	22,60
UNEF 5/8 x 24	102	32	12.5	10.0	83377	22,60
UNEF 11/16 x 24	112	37	14.0	11.2	83378	43,00
UNEF 3/4 x 20	112	37	14.0	11.2	83379	43,00
UNEF 13/16 x 20	118	38	16.0	12.5	83380	52,50
UNEF 7/8 x 20	118	38	16.0	12.5	83381	52,50
UNEF 15/16 x 20	130	45	18.0	14.0	83382	60,00
UNEF 1" x 20	130	45	18.0	14.0	83383	60,00

### Application:

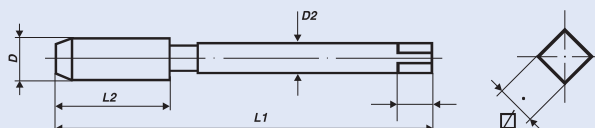
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps

Unified thread ANSI B 1.1

## Machos Máquina

rosca unificada ANSI B 1.1



ISO 529

Form B

HSS-E

Tolerance 2B

UN

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
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### UNS

UNS	1/4 x 24	66	19	6.3	5.0	83201	7,20
UNS	1/4 x 36	66	19	6.3	5.0	83202	7,20
UNS	1/4 x 40	66	19	6.3	5.0	83203	7,20
UNS	3/8 x 27	80	24	10.0	8.0	83204	10,20
UNS	7/16 x 24	85	25	8.0	6.3	83205	12,00
UNS	1/2 x 24	89	29	9.0	7.1	83206	12,00
UNS	5/8 x 27	102	32	12.5	10.0	83207	18,50
UNS	3/4 x 24	112	37	14.0	11.2	83208	34,30
UNS	7/8 x 18	118	38	16.0	12.5	83209	42,00
UNS	1" x 14	130	45	18.0	14.0	83210	48,00

### UN

UN	5/16 x 28	72	22	8.0	6.3	83221	9,10
UN	3/8 x 20	80	24	10.0	8.0	83222	10,20
UN	3/8 x 28	80	24	10.0	8.0	83223	10,20
UN	7/16 x 32	85	25	8.0	6.3	83224	12,00
UN	1/2 x 32	89	29	9.0	7.1	83225	12,00
UN	9/16 x 20	95	30	11.2	9.0	83226	18,10
UN	9/16 x 28	95	30	11.2	9.0	83227	18,10
UN	9/16 x 32	95	30	11.2	9.0	83228	18,10
UN	5/8 x 20	102	32	12.5	10.0	83229	18,50
UN	5/8 x 28	102	32	12.5	10.0	83230	18,50
UN	11/16 x 20	112	37	14.0	11.2	83231	34,30
UN	11/16 x 16	112	37	14.0	11.2	83232	34,30
UN	1" x 32	130	45	18.0	14.0	83233	48,00

#### Application:

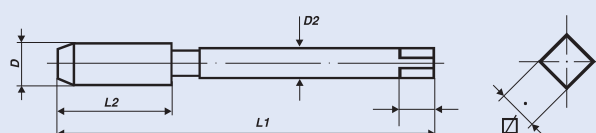
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



**Machine Taps**  
Pipe-thread DIN ISO 228

**Machos Máquina**  
rosca Gas DIN ISO 228



**DIN 5156 Form C HSS-E**

**G (BSP)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
G 1/8 x 28	90	20	7.0	5.5	78412	12,10
G 1/4 x 19	100	22	11.0	9.0	78414	15,20
G 3/8 x 19	100	22	12.0	9.0	78416	19,00
G 1/2 x 14	125	25	16.0	12.0	78418	26,80
G 5/8 x 14	125	25	18.0	14.5	78420	30,50
G 3/4 x 14	140	28	20.0	16.0	78422	39,50
G 7/8 x 14	150	28	22.0	18.0	78424	46,50
G 1" x 11	160	30	25.0	20.0	78426	57,50
G 1.1/8 x 11	170	30	28.0	22.0	78430	79,50
G 1.1/4 x 11	170	30	32.0	24.0	78434	108,00
G 1.3/8 x 11	180	32	36.0	29.0	78438	127,00
G 1.1/2 x 11	190	32	36.0	29.0	78442	150,00
G 1.3/4 x 11	190	32	40.0	32.0	78450	197,00
G 2" x 11	220	40	45.0	35.0	78454	205,00

**Application:**

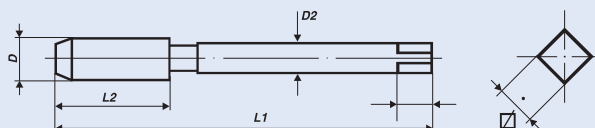
**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos



## Machine Taps

Pipe-thread DIN ISO 228

## Machos Máquina

rosca Gas DIN ISO 228



**DIN 5156**

**Form B**

**HSS-E**

**G (BSP)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
G 1/8 x 28	90	20	7.0	5.5	78512	12,70
G 1/4 x 19	100	22	11.0	9.0	78514	16,00
G 3/8 x 19	100	22	12.0	9.0	78516	19,00
G 1/2 x 14	125	25	16.0	12.0	78518	28,00
G 5/8 x 14	125	25	18.0	14.5	78520	32,00
G 3/4 x 14	140	28	20.0	16.0	78522	41,70
G 7/8 x 14	150	28	22.0	18.0	78524	49,00
G 1" x 11	160	30	25.0	20.0	78526	64,50
G 1.1/8 x 11	170	30	28.0	22.0	78530	95,00
G 1.1/4 x 11	170	30	32.0	24.0	78534	115,00
G 1.3/8 x 11	180	32	36.0	29.0	78538	149,00
G 1.1/2 x 11	190	32	36.0	29.0	78542	161,00
G 1.3/4 x 11	190	32	40.0	32.0	78550	235,00
G 2" x 11	220	40	45.0	35.0	78554	240,00

### Application:

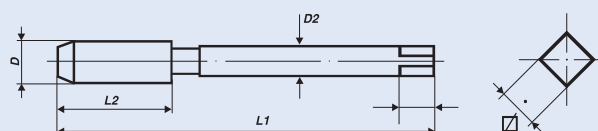
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps

Pipe-thread DIN ISO 228

## Machos Máquina

rosca Gas DIN ISO 228



**DIN 5156**

**Form C/35° RSP**

**HSS-E**

**G (BSP)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
G 1/8 x 28	90	20	7.0	5.5	78712	14,30
G 1/4 x 19	100	22	11.0	9.0	78714	18,40
G 3/8 x 19	100	22	12.0	9.0	78716	22,90
G 1/2 x 14	125	25	16.0	12.0	78718	32,00
G 5/8 x 14	125	25	18.0	14.5	78720	37,00
G 3/4 x 14	140	28	20.0	16.0	78722	48,00
G 7/8 x 14	150	28	22.0	18.0	78724	56,50
G 1" x 11	160	30	25.0	20.0	78726	70,00
G 1.1/8 x 11	170	30	28.0	22.0	78730	102,00
G 1.1/4 x 11	170	30	32.0	24.0	78734	130,00
G 1.3/8 x 11	180	32	36.0	29.0	78738	157,00
G 1.1/2 x 11	190	32	36.0	29.0	78742	182,00
G 1.3/4 x 11	190	32	40.0	32.0	78750	239,00
G 2" x 11	220	40	45.0	35.0	78754	246,00

**Application:**

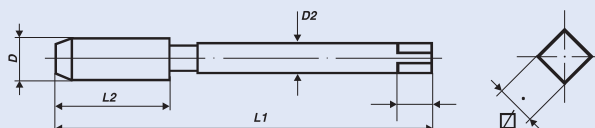
**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos





## Machine Taps

tapered pipe thread, taper 1:16, con. 55°

## Machos Máquina

rosca inglesa para tubo, conicidad 1:16



**DIN 5156**

**Form C**

**HSS-E**

**Rc (BSPT)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
Rc 1/8 x 28	90	20	7.0	5.5	73404	15,80
Rc 1/4 x 19	100	22	11.0	9.0	73406	19,80
Rc 3/8 x 19	100	22	12.0	9.0	73408	24,70
Rc 1/2 x 14	125	28	16.0	12.0	73410	34,70
Rc 3/4 x 14	140	28	20.0	16.0	73412	51,50
Rc 1" x 11	160	38	25.0	20.0	73414	74,00

### Application:

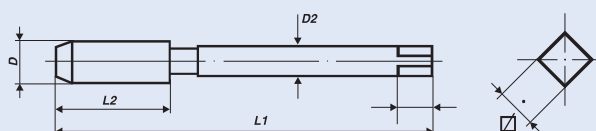
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos



## Machine Taps

american tapered pipe thread, taper 1:16

## Machos Máquina

rosca americana para tubo, conicidad 1:16



**Form C**

**HSS-E**

**NPT**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
NPT 1/16 x 27	90	20	6.0	4.9	73432	20,20
NPT 1/8 x 27	90	20	7.0	5.5	73434	15,80
NPT 1/4 x 18	100	22	11.0	9.0	73436	19,80
NPT 3/8 x 18	100	22	12.0	9.0	73438	24,70
NPT 1/2 x 14	125	28	16.0	12.0	73440	34,80
NPT 3/4 x 14	140	28	20.0	16.0	73442	51,50
NPT 1" x 11.5	160	38	25.0	20.0	73444	74,00

### Application:

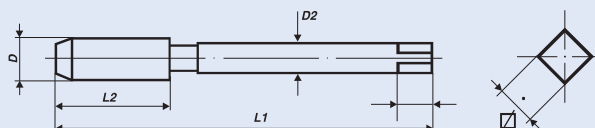
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos



## Machine Taps, *Left Hand*

metric ISO-thread DIN 13

## Machos Máquina, *izquierdas*

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form C**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	33426	8,80
M 4 x 0.7	63	13	4.5	3.4	33430	8,80
M 5 x 0.8	70	16	6.0	4.9	33434	9,20
M 6 x 1.0	80	19	6.0	4.9	33438	9,20
M 8 x 1.25	90	22	8.0	6.2	33442	11,00
M 10 x 1.5	100	24	10.0	8.0	33446	12,50
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	34450	14,90
M 14 x 2.0	110	30	11.0	9.0	34454	22,00
M 16 x 2.0	110	32	12.0	9.0	34458	25,00
M 18 x 2.5	125	34	14.0	11.0	34462	34,00
M 20 x 2.5	140	34	16.0	12.0	34466	48,00
M 22 x 2.5	140	34	18.0	14.5	34470	50,00
M 24 x 3.0	160	38	18.0	14.5	34474	52,00

### Application:

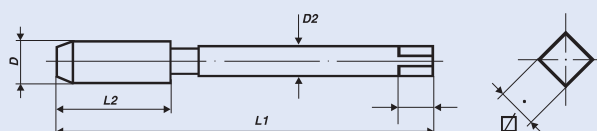
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos



**Machine Taps, *Left Hand***

metric ISO-thread DIN 13

**Machos Máquina, *izquierdas***

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	33526	10,00
M 4 x 0.7	63	13	4.5	3.4	33530	10,00
M 5 x 0.8	70	16	6.0	4.9	33534	10,40
M 6 x 1.0	80	19	6.0	4.9	33538	10,40
M 7 x 1.0	80	19	7.0	5.5	33540	13,60
M 8 x 1.25	90	22	8.0	6.2	33542	12,70
M 10 x 1.5	100	24	10.0	8.0	33546	14,30
<b>DIN 376</b>						
M 3 x 0.5	56	11	2.2	—	34526	10,00
M 4 x 0.7	63	13	2.8	2.1	34530	10,00
M 5 x 0.8	70	16	3.5	2.7	34534	10,40
M 6 x 1.0	80	19	4.5	3.4	34538	10,40
M 8 x 1.25	90	22	6.0	4.9	34542	12,70
M 10 x 1.5	100	24	7.0	5.5	34546	14,30
M 12 x 1.75	110	29	9.0	7.0	34550	18,00
M 14 x 2.0	110	30	11.0	9.0	34554	23,00
M 16 x 2.0	110	32	12.0	9.0	34558	26,50
M 18 x 2.5	125	34	14.0	11.0	34562	36,00
M 20 x 2.5	140	34	16.0	12.0	34566	51,00
M 22 x 2.5	140	34	18.0	14.5	34570	56,00
M 24 x 3.0	160	38	18.0	14.5	34574	60,00
M 27 x 3.0	160	38	20.0	16.0	34576	99,50
M 30 x 3.5	180	45	22.0	18.0	34578	104,00
M 33 x 3.5	180	50	25.0	20.0	34580	141,00
M 36 x 4.0	200	56	28.0	22.0	34582	237,00
M 39 x 4.0	200	60	32.0	24.0	34584	298,00
M 42 x 4.5	200	60	32.0	24.0	34586	354,00
M 45 x 4.5	220	65	36.0	29.0	34588	390,00
M 48 x 5.0	250	70	36.0	29.0	34590	430,00
M 52 x 5.0	250	70	40.0	32.0	34592	510,00

**Application:**

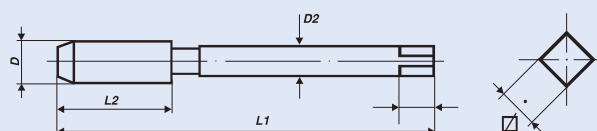
**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps, *Left Hand*

metric ISO-thread DIN 13

## Machos Máquina, *izquierdas*

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form C/35°SP**

**HSS-E**

**Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0.5	56	6	3.5	2.7	33726	11,80
M 4 x 0.7	63	7	4.5	3.4	33730	11,80
M 5 x 0.8	70	8	6.0	4.9	33734	12,50
M 6 x 1.0	80	10	6.0	4.9	33738	12,50
M 8 x 1.25	90	14	8.0	6.2	33742	15,00
M 10 x 1.5	100	16	10.0	8.0	33746	17,10
<b>DIN 376</b>						
M 3 x 0.5	56	6	2.2	—	34726	11,80
M 4 x 0.7	63	7	2.8	2.1	34730	11,80
M 5 x 0.8	70	8	3.5	2.7	34734	12,50
M 6 x 1.0	80	10	4.5	3.4	34738	12,50
M 8 x 1.25	90	14	6.0	4.9	34742	15,00
M 10 x 1.5	100	16	7.0	5.5	34746	17,10
M 12 x 1.75	110	18	9.0	7.0	34750	19,50
M 14 x 2.0	110	20	11.0	9.0	34754	25,50
M 16 x 2.0	110	22	12.0	9.0	34758	28,60
M 18 x 2.5	125	25	14.0	11.0	34762	38,50
M 20 x 2.5	140	25	16.0	12.0	34766	55,00
M 22 x 2.5	140	27	18.0	14.5	34770	61,00
M 24 x 3.0	160	30	18.0	14.5	34774	63,00
M 27 x 3.0	160	30	20.0	16.0	34776	108,00
M 30 x 3.5	180	35	22.0	18.0	34778	112,00
M 33 x 3.5	180	35	25.0	20.0	34780	155,00
M 36 x 4.0	200	40	28.0	22.0	34782	261,00
M 39 x 4.0	200	40	32.0	24.0	34784	320,00
M 42 x 4.5	200	45	32.0	24.0	34786	375,00
M 45 x 4.5	220	45	36.0	29.0	34788	425,00
M 48 x 5.0	250	50	36.0	29.0	34790	464,00
M 52 x 5.0	250	50	40.0	32.0	34792	540,00

### Application:

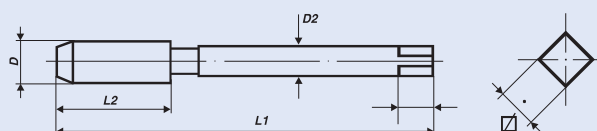
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps, *Left Hand*

metric-fine ISO-thread DIN 13

## Machos Máquina, *izquierdas*

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 3 x 0.35	56	9	2.2	-	34801	23,80
M 4 x 0.35	63	10	2.8	2.1	34802	23,80
M 4 x 0.5	63	10	2.8	2.1	34803	23,80
M 5 x 0.5	70	12	3.5	2.7	34804	23,80
M 5 x 0.75	70	12	3.5	2.7	34805	23,80
M 6 x 0.5	80	14	4.5	3.4	34806	23,80
M 6 x 0.75	80	14	4.5	3.4	34807	23,80
M 7 x 0.75	80	14	5.5	4.3	34808	23,80
M 8 x 0.5	80	19	6.0	4.9	34809	23,80
M 8 x 0.75	80	19	6.0	4.9	34810	23,80
M 8 x 1.0	90	22	6.0	4.9	34811	23,80
M 9 x 0.75	80	19	7.0	5.5	34812	23,80
M 9 x 1.0	90	22	7.0	5.5	34813	23,80
M 10 x 0.75	90	20	7.0	5.5	34814	26,50
M 10 x 1.0	90	20	7.0	5.5	34815	26,50
M 10 x 1.25	100	24	7.0	5.5	34816	26,50
M 11 x 1.0	90	20	8.0	6.2	34817	37,00
M 11 x 1.25	90	22	8.0	6.2	34818	37,00
M 12 x 0.75	100	22	9.0	7.0	34819	37,00
M 12 x 1.0	100	22	9.0	7.0	34820	37,00
M 12 x 1.25	100	22	9.0	7.0	34821	37,00
M 12 x 1.5	100	22	9.0	7.0	34822	37,00
M 13 x 1.0	100	22	11.0	9.0	34823	45,00
M 13 x 1.5	100	22	11.0	9.0	34824	45,00
M 14 x 0.75	100	22	11.0	9.0	34825	45,00
M 14 x 1.0	100	22	11.0	9.0	34826	45,00
M 14 x 1.25	100	22	11.0	9.0	34827	45,00
M 14 x 1.5	100	22	11.0	9.0	34828	45,00
M 15 x 1.0	100	22	12.0	9.0	34829	52,20
M 15 x 1.5	100	22	12.0	9.0	34830	52,20
M 16 x 1.0	100	22	12.0	9.0	34831	52,20
M 16 x 1.25	100	22	12.0	9.0	34832	52,20
M 16 x 1.5	100	22	12.0	9.0	34833	52,20
M 18 x 1.0	110	25	14.0	11.0	34834	62,50
M 18 x 1.25	110	25	14.0	11.0	34835	62,50
M 18 x 1.5	110	25	14.0	11.0	34836	62,50
M 18 x 2.0	125	34	14.0	11.0	34837	62,50

### Application:

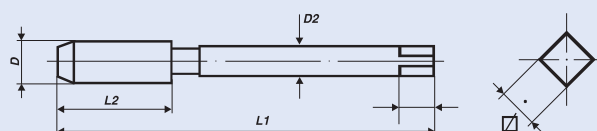
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



## Machine Taps, *Left Hand*

metric-fine ISO-thread DIN 13

## Machos Máquina, *izquierdas*

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 20 x 1.0	125	25	16.0	12.0	34838	68,50
M 20 x 1.25	125	25	16.0	12.0	34839	68,50
M 20 x 1.5	125	25	16.0	12.0	34840	68,50
M 20 x 2.0	140	34	16.0	12.0	34841	68,50
M 21 x 1.5	125	25	16.0	12.0	34842	68,50
M 22 x 1.0	125	25	18.0	14.5	34843	86,00
M 22 x 1.25	125	25	18.0	14.5	34844	86,00
M 22 x 1.5	125	25	18.0	14.5	34845	86,00
M 22 x 2.0	140	34	18.0	14.5	34846	86,00
M 23 x 1.5	125	25	18.0	14.5	34847	100,50
M 24 x 1.0	140	28	18.0	14.5	34848	100,50
M 24 x 1.25	140	28	18.0	14.5	34849	100,50
M 24 x 1.5	140	28	18.0	14.5	34850	100,50
M 24 x 2.0	140	28	18.0	14.5	34851	100,50
M 25 x 1.0	140	28	18.0	14.5	34852	100,50
M 25 x 1.5	140	28	18.0	14.5	34853	100,50
M 26 x 1.0	140	28	18.0	14.5	3485X	100,50
M 26 x 1.5	140	28	18.0	14.5	34854	100,50
M 26 x 2.0	140	28	18.0	14.5	34855	100,50
M 27 x 1.0	140	28	20.0	16.0	34800	126,00
M 27 x 1.5	140	28	20.0	16.0	34856	126,00
M 27 x 2.0	140	28	20.0	16.0	34857	126,00
M 28 x 1.0	140	28	20.0	16.0	34858	126,00
M 28 x 1.5	140	28	20.0	16.0	34859	126,00
M 28 x 2.0	140	28	20.0	16.0	34860	126,00
M 29 x 1.5	150	28	22.0	18.0	34861	144,00
M 30 x 1.0	150	28	22.0	18.0	34862	144,00
M 30 x 1.5	150	28	22.0	18.0	34863	144,00
M 30 x 2.0	150	28	22.0	18.0	34864	144,00
M 30 x 2.5	180	45	22.0	18.0	3486X	144,00
M 30 x 3.0	180	45	22.0	18.0	34865	144,00
M 32 x 1.5	150	28	22.0	18.0	34866	178,00
M 32 x 2.0	150	28	22.0	18.0	34867	178,00
M 32 x 3.0	180	50	22.0	18.0	34892	178,00
M 33 x 1.5	160	30	25.0	20.0	34893	178,00
M 33 x 2.0	160	30	25.0	20.0	34868	178,00
M 33 x 3.0	180	50	25.0	20.0	34869	178,00



### Application:

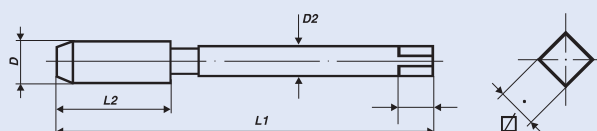
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes



**Machine Taps, *Left Hand***

metric-fine ISO-thread DIN 13

**Machos Máquina, *izquierdas***

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form B**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 34 x 1.5	170	30	28.0	22.0	34870	178,00
M 34 x 2.0	170	30	28.0	22.0	34871	178,00
M 35 x 1.5	170	30	28.0	22.0	34872	178,00
M 36 x 1.5	170	30	28.0	22.0	34873	223,00
M 36 x 2.0	170	30	28.0	22.0	34874	223,00
M 36 x 3.0	200	56	28.0	22.0	34875	223,00
M 38 x 1.5	170	30	28.0	22.0	34876	236,00
M 39 x 1.5	170	30	32.0	24.0	34877	236,00
M 39 x 2.0	170	30	32.0	24.0	34878	236,00
M 39 x 3.0	200	60	32.0	24.0	34879	236,00
M 40 x 1.5	170	30	32.0	24.0	34880	257,00
M 40 x 2.0	170	30	32.0	24.0	34881	257,00
M 40 x 3.0	200	60	32.0	24.0	34882	257,00
M 42 x 1.5	170	30	32.0	24.0	34883	287,00
M 42 x 2.0	170	30	32.0	24.0	34884	287,00
M 42 x 3.0	200	60	32.0	24.0	34885	287,00
M 45 x 1.5	180	32	36.0	29.0	34886	340,00
M 45 x 2.0	180	32	36.0	29.0	34887	340,00
M 45 x 3.0	200	50	36.0	29.0	34888	340,00
M 48 x 1.5	190	32	36.0	29.0	34889	410,00
M 48 x 2.0	190	32	36.0	29.0	34890	410,00
M 48 x 3.0	225	50	36.0	29.0	34891	410,00
M 50 x 1.5	190	32	36.0	29.0	34894	475,00
M 50 x 2.0	190	32	36.0	29.0	34895	475,00
M 50 x 3.0	225	50	36.0	29.0	34896	475,00
M 52 x 1.5	190	32	40.0	32.0	34897	525,00
M 52 x 2.0	190	32	40.0	32.0	34898	525,00
M 52 x 3.0	225	50	40.0	32.0	34899	525,00

**Application:**

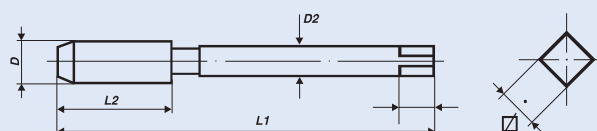
**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes





## Machine Taps, *Left Hand*

metric-fine ISO-thread DIN 13

## Machos Máquina, *izquierdas*

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form C/35° SP**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 3 x 0.35	56	5	2.2	-	34901	26,50
M 4 x 0.35	63	5	2.8	2.1	34902	26,50
M 4 x 0.5	63	5	2.8	2.1	34903	26,50
M 5 x 0.5	70	5	3.5	2.7	34904	26,50
M 5 x 0.75	70	8	3.5	2.7	34905	26,50
M 6 x 0.5	80	5	4.5	3.4	34906	26,50
M 6 x 0.75	80	8	4.5	3.4	34907	26,50
M 7 x 0.75	80	8	5.5	4.3	34908	26,50
M 8 x 0.5	80	8	6.0	4.9	34909	26,50
M 8 x 0.75	80	8	6.0	4.9	34910	26,50
M 8 x 1.0	90	10	6.0	4.9	34911	26,50
M 9 x 0.75	80	10	7.0	5.5	34912	26,50
M 9 x 1.0	90	10	7.0	5.5	34913	26,50
M 10 x 0.75	90	10	7.0	5.5	34914	32,00
M 10 x 1.0	90	10	7.0	5.5	34915	32,00
M 10 x 1.25	100	16	7.0	5.5	34916	32,00
M 11 x 1.0	90	11	8.0	6.2	34917	41,00
M 11 x 1.25	90	14	8.0	6.2	34918	41,00
M 12 x 0.75	100	10	9.0	7.0	34919	41,00
M 12 x 1.0	100	11	9.0	7.0	34920	41,00
M 12 x 1.25	100	15	9.0	7.0	34921	41,00
M 12 x 1.5	100	15	9.0	7.0	34922	41,00
M 13 x 1.0	100	11	11.0	9.0	34923	50,00
M 13 x 1.5	100	15	11.0	9.0	34924	50,00
M 14 x 0.75	100	10	11.0	9.0	34925	50,00
M 14 x 1.0	100	11	11.0	9.0	34926	50,00
M 14 x 1.25	100	15	11.0	9.0	34927	50,00
M 14 x 1.5	100	15	11.0	9.0	34928	50,00
M 15 x 1.0	100	12	12.0	9.0	34929	57,50
M 15 x 1.5	100	15	12.0	9.0	34930	57,50
M 16 x 1.0	100	12	12.0	9.0	34931	57,50
M 16 x 1.25	100	15	12.0	9.0	34932	57,50
M 16 x 1.5	100	15	12.0	9.0	34933	57,50
M 18 x 1.0	110	13	14.0	11.0	34934	71,00
M 18 x 1.25	110	15	14.0	11.0	34935	71,00
M 18 x 1.5	110	17	14.0	11.0	34936	71,00
M 18 x 2.0	125	20	14.0	11.0	34937	71,00

### Application:

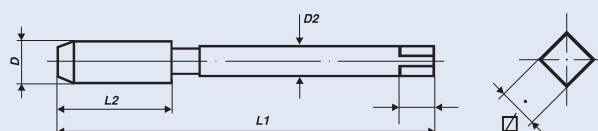
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps, *Left Hand*

metric-fine ISO-thread DIN 13

## Machos Máquina, *izquierdas*

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form C/35° SP**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 20 x 1.0	125	14	16.0	12.0	34938	79,50
M 20 x 1.25	125	17	16.0	12.0	34939	79,50
M 20 x 1.5	125	17	16.0	12.0	34940	79,50
M 20 x 2.0	140	20	16.0	12.0	34941	79,50
M 21 x 1.5	125	17	16.0	12.0	34942	79,50
M 22 x 1.0	125	14	18.0	14.5	34943	96,00
M 22 x 1.25	125	17	18.0	14.5	34944	96,00
M 22 x 1.5	125	17	18.0	14.5	34945	96,00
M 22 x 2.0	140	20	18.0	14.5	34946	96,00
M 23 x 1.5	125	17	18.0	14.5	34947	115,00
M 24 x 1.0	140	15	18.0	14.5	34948	115,00
M 24 x 1.25	140	17	18.0	14.5	34949	115,00
M 24 x 1.5	140	20	18.0	14.5	34950	115,00
M 24 x 2.0	140	20	18.0	14.5	34951	115,00
M 25 x 1.0	140	15	18.0	14.5	34952	115,00
M 25 x 1.5	140	20	18.0	14.5	34953	115,00
M 26 x 1.0	140	15	18.0	14.5	3495X	115,00
M 26 x 1.5	140	20	18.0	14.5	34954	115,00
M 26 x 2.0	140	20	18.0	14.5	34955	115,00
M 27 x 1.0	140	15	20.0	16.0	34900	139,00
M 27 x 1.5	140	20	20.0	16.0	34956	139,00
M 27 x 2.0	140	20	20.0	16.0	34957	139,00
M 28 x 1.0	140	15	20.0	16.0	34958	139,00
M 28 x 1.5	140	20	20.0	16.0	34959	139,00
M 28 x 2.0	140	20	20.0	16.0	34960	139,00
M 29 x 1.5	150	22	22.0	18.0	34961	158,00
M 30 x 1.0	150	17	22.0	18.0	34962	158,00
M 30 x 1.5	150	22	22.0	18.0	34963	158,00
M 30 x 2.0	150	22	22.0	18.0	34964	158,00
M 30 x 2.5	180	27	22.0	18.0	3496X	158,00
M 30 x 3.0	180	30	22.0	18.0	34965	158,00
M 32 x 1.5	150	22	22.0	18.0	34966	197,00
M 32 x 2.0	150	22	22.0	18.0	34967	197,00
M 32 x 3.0	180	30	22.0	18.0	34992	197,00
M 33 x 1.5	160	24	25.0	20.0	34993	197,00
M 33 x 2.0	160	24	25.0	20.0	34968	197,00
M 33 x 3.0	180	30	25.0	20.0	34969	197,00



### Application:

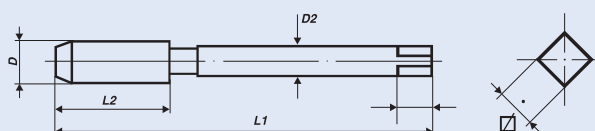
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



## Machine Taps, *Left Hand*

metric-fine ISO-thread DIN 13

## Machos Máquina, *izquierdas*

métrica fina ISO-rosca DIN 13



**DIN 374**

**Form C/35° SP**

**HSS-E**

**Tolerance ISO2/6H**

**Mf**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 34 x 1.5	170	24	28.0	22.0	34970	197,00
M 34 x 2.0	170	24	28.0	22.0	34971	197,00
M 35 x 1.5	170	24	28.0	22.0	34972	197,00
M 36 x 1.5	170	24	28.0	22.0	34973	248,00
M 36 x 2.0	170	24	28.0	22.0	34974	248,00
M 36 x 3.0	200	30	28.0	22.0	34975	248,00
M 38 x 1.5	170	24	28.0	22.0	34976	260,00
M 39 x 1.5	170	25	32.0	24.0	34977	260,00
M 39 x 2.0	170	25	32.0	24.0	34978	260,00
M 39 x 3.0	200	30	32.0	24.0	34979	260,00
M 40 x 1.5	170	25	32.0	24.0	34980	283,00
M 40 x 2.0	170	25	32.0	24.0	34981	283,00
M 40 x 3.0	200	30	32.0	24.0	34982	283,00
M 42 x 1.5	170	25	32.0	24.0	34983	320,00
M 42 x 2.0	170	25	32.0	24.0	34984	320,00
M 42 x 3.0	200	30	32.0	24.0	34985	320,00
M 45 x 1.5	180	27	36.0	29.0	34986	376,00
M 45 x 2.0	180	27	36.0	29.0	34987	376,00
M 45 x 3.0	200	30	36.0	29.0	34988	376,00
M 48 x 1.5	190	27	36.0	29.0	34989	448,00
M 48 x 2.0	190	27	36.0	29.0	34990	448,00
M 48 x 3.0	225	33	36.0	29.0	34991	448,00
M 50 x 1.5	190	27	36.0	29.0	34994	522,00
M 50 x 2.0	190	27	36.0	29.0	34995	522,00
M 50 x 3.0	225	33	36.0	29.0	34996	522,00
M 52 x 1.5	190	27	40.0	32.0	34997	573,00
M 52 x 2.0	190	27	40.0	32.0	34998	573,00
M 52 x 3.0	225	33	40.0	32.0	34999	573,00

### Application:

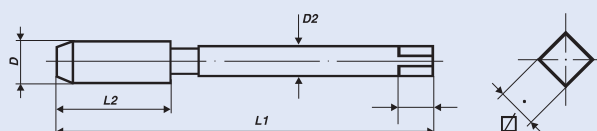
#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros ciegos



**Machine Taps, *Left Hand***

Pipe-thread DIN ISO 228

**Machos Máquina, *izquierdas***

rosca Gas DIN ISO 228



**DIN 5156**

**Form C**

**HSS-E**

**G (BSP)**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
G 1/8 x 28	90	20	7.0	5.5	78202	18,20
G 1/4 x 19	100	22	11.0	9.0	78203	22,80
G 3/8 x 19	100	22	12.0	9.0	78204	28,50
G 1/2 x 14	125	25	16.0	12.0	78205	39,80
G 5/8 x 14	125	25	18.0	14.5	78206	45,80
G 3/4 x 14	140	28	20.0	16.0	78207	59,00
G 1" x 11	160	30	25.0	20.0	78209	86,00

**Application:**

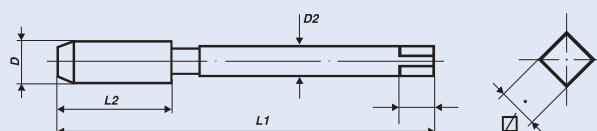
**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes

**Aplicación:**








**para uso general**

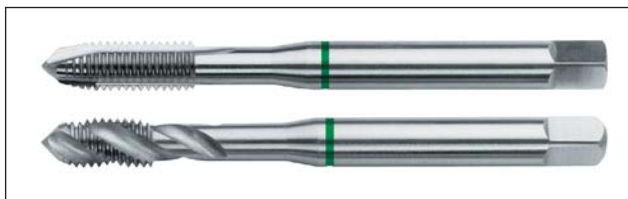
- materiales de buena mecanización hasta 900 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para agujeros pasantes y ciegos



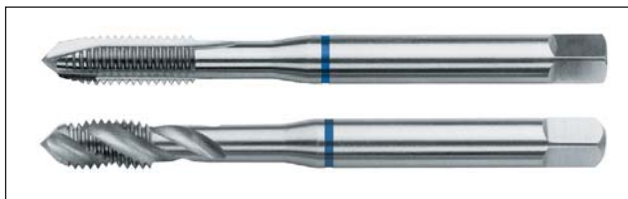
**Machine Taps with coloured ring  
HSS-E**

**Machos Máquina de banda  
colorada HSS-E**

							
Form A / C				128	131		130
Form B	120	122	124				
39° RSP	121	123	126			129	
TwinBox	133	134	135				



for general use  
para uso general



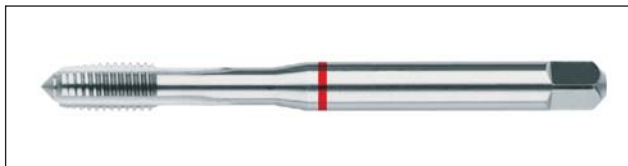
for wear resistant steel  
para aceros de alta resistencia



for stainless steel  
para acero inoxidable



for cast iron  
para fundición gris, esferolítica



Material from 1200 N/mm<sup>2</sup> tensile strength  
materiales de más de 1200 N/mm<sup>2</sup>  
de resistencia a la tracción



for aluminium alloys  
para aluminio



for brass  
para latón



## Recommended Application of Coloured Ring Machine Taps

## Aplicación recomendada para Machos Máquina de banda colorada

Material	Lubricant Lubricante	Cutting Speed Velocidad de corte m/min.
Steel, unalloyed and low alloyed, short-chipping Aceros no aleados y de baja aleación, mecanizado corto	S/E	10-20
non abrasive Material, short-chipping Materiales de buena mecanización, mecanizado corto	S/E	6-15
Steel, heat resistant, long-chipping Aceros resistentes al calor, mecanizado largo	S	4- 8
Steel, heat resistant, short-chipping Aceros resistentes al calor, mecanizado corto	S	4- 8
Steel, cementation and heat treatable, short-chipping Aceros de cementación y bonificados, mecanizado corto	S	4- 8
Steel, Tool Steel up to 1200 N/mm <sup>2</sup> Aceros para herramientas hasta 1200 N/mm <sup>2</sup>	S	2- 5
Steel, Tool Steel over 1200 N/mm <sup>2</sup> Aceros para herramientas de más de 1200 N/mm <sup>2</sup>	S	2- 5
Steel stainless, short-chipping Aceros inoxidable, mecanizado corto	S	5-10
Steel stainless, long-chipping Aceros inoxidable, mecanizado largo	S	5-10
Iron, Cast Fundición gris	P/T	6-20
Iron, spheroidal graphite Fundición con grafito esferoidal	P/T	6-20
Iron, Malleable Cast Fundición maleable	E	6-12
Brass, short-chipping Latón, mecanizado corto	E	20-30
Brass, long-chipping Latón, mecanizado largo	S/E	10-15
Bronze, short-chipping Bronce, mecanizado corto	S/E	6-15
Bronze, long-chipping Bronce, mecanizado largo	S/E	6-15
Copper Cobre	S/E	10-15
Aluminium-alloys, short-chipping Aluminio, mecanizado corto	S/E	15-30
Aluminium-alloys, long-chipping Aluminio, mecanizado largo	E	10-20
Zinc Alloys Cinc, aleaciones de	S/E	10-15
Magnesium Alloys Magnesio, aleaciones de	E/T	10-20
Titanium, short-chipping Titanio, mecanizado corto	S	3- 4
Titanium, long-chipping Titanio, mecanizado largo	S	3- 4
Plastics, thermoplastics Plásticos, Termoplásticos	E/T	5-15
Plastics, thermosetting Plásticos, duroplásticos	T	5-15

S = cutting oil/aceite para corte

E = oil emulsion/taladrina

P = kerosene/petróleo

T = dry/seco

## Recommended Application of Coloured Ring Machine Taps

## Aplicación recomendada para Machos Máquina de banda colorada

Material	Green Ring	Blue Ring	White Ring	Black Ring	Red Ring	Yellow Ring	Orange Ring
	Banda Verde	Banda Azul	Banda Blanca	Banda Negra	Banda Roja	Banda Amarilla	Banda Naranja
Steel, unalloyed and low alloyed, short-chipping Aceros no aleados y de baja aleación, mecanizado corto	●						
non abrasive Material, short-chipping Materiales de buena mecanización, mecanizado corto	●						
Steel, heat resistant, long-chipping Aceros resistentes al calor, mecanizado largo			○				
Steel, heat resistant, short-chipping Aceros resistentes al calor, mecanizado corto		●					
Steel, cementation and heat treatable, short-chipping Aceros de cementación y bonificados, mecanizado corto		●					
Steel, Tool Steel up to 1200 N/mm <sup>2</sup> Aceros para herramientas hasta 1200 N/mm <sup>2</sup>		●					
Steel, Tool Steel over 1200 N/mm <sup>2</sup> Aceros para herramientas de más de 1200 N/mm <sup>2</sup>					●		
Steel stainless, short-chipping Aceros inoxidable, mecanizado corto		●					
Steel stainless, long-chipping Aceros inoxidable, mecanizado largo			○				
Iron, Cast Fundición gris				●			
Iron, spheroidal graphite Fundición con grafito esferoidal		●					
Iron, Malleable Cast Fundición maleable	●						
Brass, short-chipping Latón, mecanizado corto		●		●			●
Brass, long-chipping Latón, mecanizado largo	●						
Bronze, short-chipping Bronce, mecanizado corto		●		●			
Bronze, long-chipping Bronce, mecanizado largo	●						
Copper Cobre	●						
Aluminium-alloys, short-chipping Aluminio, mecanizado corto		●					
Aluminium-alloys, long-chipping Aluminio, mecanizado largo	●					●	
Zinc Alloys Cinc, aleaciones de	●						
Magnesium Alloys Magnesio, aleaciones de	●	●					
Titanium, short-chipping Titanio, mecanizado corto		●					
Titanium, long-chipping Titanio, mecanizado largo			○				
Plastics, thermoplastics Plásticos, Termoplásticos	●						
Plastics, thermosetting Plásticos, duroplásticos				●	●		

## GREEN RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA VERDE

métrica ISO-rosca DIN 13

DIN 371

DIN 376



### DIN 371/376 Form B HSS-E Tolerance ISO2/6H

Nominal Diameter D	L1	L2	D2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	11	3.5	2.7	35326	8,10
M 4 x 0,7	63	13	4.5	3.4	35330	8,10
M 5 x 0,8	70	16	6.0	4.9	35334	8,90
M 6 x 1,0	80	19	6.0	4.9	35338	8,90
M 8 x 1,25	90	22	8.0	6.2	35342	10,30
M 10 x 1,5	100	24	10.0	8.0	35346	12,40
<b>DIN 376</b>						
M 12 x 1,75	110	29	9.0	7.0	35350	15,40
M 14 x 2,0	110	30	11.0	9.0	35354	19,80
M 16 x 2,0	110	32	12.0	9.0	35358	22,50
M 18 x 2,5	125	34	14.0	11.0	35362	31,10
M 20 x 2,5	140	34	16.0	12.0	35366	43,50
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47853	71,50

#### Application:

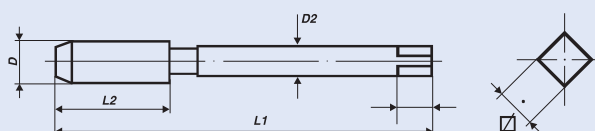
##### for general use

- non abrasive material up to 1000 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- long chipping material
- for through holes

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 1000N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- materiales de mecanización larga
- para agujeros pasantes





## GREEN RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA VERDE

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form C/39° RSP**

**HSS-E**

**Tolerance ISO2/6H**

Nominal Diameter D	L1	L2	D2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	6	3.5	2.7	36326	10,30
M 4 x 0,7	63	7	4.5	3.4	36330	10,30
M 5 x 0,8	70	8	6.0	4.9	36334	11,20
M 6 x 1,0	80	10	6.0	4.9	36338	11,20
M 8 x 1,25	90	14	8.0	6.2	36342	13,00
M 10 x 1,5	100	16	10.0	8.0	36346	15,40
<b>DIN 376</b>						
M 12 x 1,75	110	18	9.0	7.0	36350	18,70
M 14 x 2,0	110	20	11.0	9.0	36354	24,80
M 16 x 2,0	110	22	12.0	9.0	36358	28,40
M 18 x 2,5	125	25	14.0	11.0	36362	38,90
M 20 x 2,5	140	25	16.0	12.0	36366	54,50
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47863	90,00

### Application:

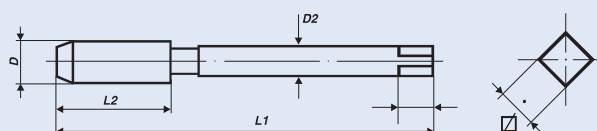
#### for general use

- non abrasive material up to 1000 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- long chipping material
- for blind holes

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 1000 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- materiales de mecanización larga
- para agujeros ciegos



## BLUE RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA AZUL

métrica ISO-rosca DIN 13

DIN 371

DIN 376



### DIN 371/376 Form B HSS-E Tolerance ISO2/6H

Nominal Diameter D	L1	L2	D2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	11	3.5	2.7	35426	8,70
M 4 x 0,7	63	13	4.5	3.4	35430	8,70
M 5 x 0,8	70	16	6.0	4.9	35434	9,50
M 6 x 1,0	80	19	6.0	4.9	35438	9,50
M 8 x 1,25	90	22	8.0	6.2	35442	11,00
M 10 x 1,5	100	24	10.0	8.0	35446	12,10
<b>DIN 376</b>						
M 12 x 1,75	110	29	9.0	7.0	35450	16,00
M 14 x 2,0	110	30	11.0	9.0	35454	22,00
M 16 x 2,0	110	32	12.0	9.0	35458	23,70
M 18 x 2,5	125	34	14.0	11.0	35462	32,50
M 20 x 2,5	140	34	16.0	12.0	35466	45,10
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47854	76,00

#### Application:

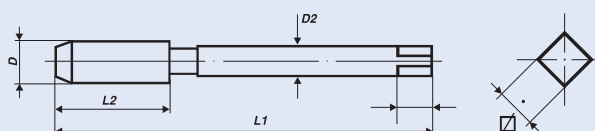
wear resistant steel up to 1200 N/mm<sup>2</sup>

- high alloy steel
- short chipping material
- short chipping stainless steel
- alloy tool steel
- for through holes

#### Aplicación:

Aceros resistentes al desgaste hasta 1200 N/mm<sup>2</sup>

- aceros altamente aleados
- materiales tenaces, mecanizado corto
- aceros inoxidable, mecanizado corto
- aceros aleados para herramientas
- para agujeros pasantes



## BLUE RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA AZUL

métrica ISO-rosca DIN 13

DIN 371

DIN 376



**DIN 371/376**

**Form C/39° RSP**

**HSS-E**

**Tolerance ISO2/6H**

Nominal Diameter D	L1	L2	D2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	6	3.5	2.7	36426	10,90
M 4 x 0,7	63	7	4.5	3.4	36430	10,90
M 5 x 0,8	70	8	6.0	4.9	36434	11,80
M 6 x 1,0	80	10	6.0	4.9	36438	11,80
M 8 x 1,25	90	14	8.0	6.2	36442	13,50
M 10 x 1,5	100	16	10.0	8.0	36446	16,40
<b>DIN 376</b>						
M 12 x 1,75	110	18	9.0	7.0	36450	19,80
M 14 x 2,0	110	20	11.0	9.0	36454	26,00
M 16 x 2,0	110	22	12.0	9.0	36458	29,50
M 18 x 2,5	125	25	14.0	11.0	36462	40,50
M 20 x 2,5	140	25	16.0	12.0	36466	56,70
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47864	95,00

### Application:

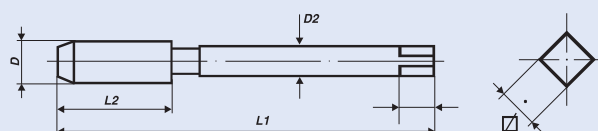
**wear resistant steel up to 1200 N/mm<sup>2</sup>**

- high alloy steel
- short chipping material
- short chipping stainless steel
- alloy tool steel
- for blind holes

### Aplicación:

**Aceros resistentes al desgaste hasta 1200 N/mm<sup>2</sup>**

- aceros altamente aleados
- materiales tenaces, mecanizado corto
- aceros inoxidable, mecanizado corto
- aceros aleados para herramientas
- para agujeros ciegos



## WHITE RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA BLANCA

métrica ISO-rosca DIN 13



### DIN 371/376 Form B HSS-E Tolerance ISO2/6H

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	11	3.5	2.7	35226	9,10
M 4 x 0,7	63	13	4.5	3.4	35230	9,10
M 5 x 0,8	70	16	6.0	4.9	35234	9,80
M 6 x 1,0	80	19	6.0	4.9	35238	9,80
M 8 x 1,25	90	22	8.0	6.2	35242	11,30
M 10 x 1,5	100	24	10.0	8.0	35246	13,80
<b>DIN 376</b>						
M 12 x 1,75	110	29	9.0	7.0	35250	16,50
M 14 x 2,0	110	30	11.0	9.0	35254	21,60
M 16 x 2,0	110	32	12.0	9.0	35258	24,90
M 18 x 2,5	125	34	14.0	11.0	35262	35,20
M 20 x 2,5	140	34	16.0	12.0	35266	48,50
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47852	79,00

#### Application:

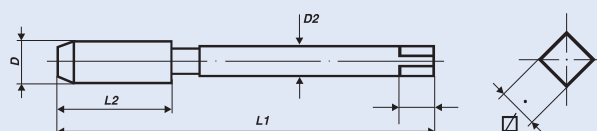
**Stainless Steel (INOX),  
long chipping up to 1000 N/mm<sup>2</sup>**

- abrasive material
- chrome-nickel alloys
- surface treatment: steam tempered
- for through holes

#### Aplicación:

**INOX (Acero inoxidable),  
mecanizado largo hasta 1000 N/mm<sup>2</sup>**

- materiales de difícil mecanizado
- aleaciones Cromo-Niquel
- superficies tratadas al vaporizado
- para agujeros pasantes



## WHITE RING-Machine Taps

### Machos Máquina BANDA BLANCA



#### Form B HSS-E

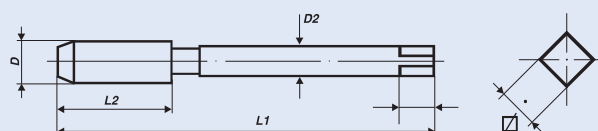
Nominal Diameter D	L 1	L 2	D 2	Ø	Art.-No.	Price per Piece €
<b>MF</b> DIN 374						
M 5 x 0.5	70	12	3.5	2.7	35903	16,50
M 6 x 0.75	80	14	4.5	3.4	35904	16,50
M 8 x 0.75	80	19	6.0	4.9	35906	16,50
M 8 x 1.0	90	22	6.0	4.9	35907	16,50
M 10 x 1.0	90	20	7.0	5.5	35909	19,30
M 10 x 1.25	100	24	7.0	5.5	35910	19,30
M 12 x 1.25	100	22	9.0	7.0	35913	26,40
M 12 x 1.5	100	22	9.0	7.0	35914	26,40
M 14 x 1.5	100	22	11.0	9.0	35917	33,00
M 16 x 1.5	100	22	12.0	9.0	35921	38,00
M 18 x 1.5	110	25	14.0	11.0	35925	46,20
M 20 x 1.5	125	25	16.0	12.0	35929	51,20
<b>UNC</b> DIN 371						
UNC 1/4 x 20	80	17	7.0	5.5	35945	12,10
UNC 5/16 x 18	90	20	8.0	6.2	35946	15,40
UNC 3/8 x 16	100	22	9.0	7.0	35947	17,60
DIN 376						
UNC 7/16 x 14	100	22	8.0	6.2	35948	20,90
UNC 1/2 x 13	110	25	9.0	7.0	35949	20,90
<b>UNF</b> DIN 371						
UNF 1/4 x 28	80	17	7.0	5.5	35965	12,10
UNF 5/16 x 24	90	17	8.0	6.2	35966	15,40
UNF 3/8 x 24	100	18	9.0	7.0	35967	17,60
DIN 376						
UNF 7/16 x 20	100	22	8.0	6.2	35968	20,90
UNF 1/2 x 20	100	22	9.0	7.0	35969	20,90
<b>G (BSP)</b> DIN 5156						
G 1/8 x 28	90	20	7.0	5.5	35992	19,80
G 1/4 x 19	100	22	11.0	9.0	35993	24,20
G 3/8 x 19	100	22	12.0	9.0	35994	28,60
G 1/2 x 14	125	25	16.0	12.0	35995	41,80

#### Application:

**Stainless Steel (INOX),  
long chipping up to 1000 N/mm<sup>2</sup>**  
 - abrasive material  
 - chrome-nickel alloys  
 - surface treatment: steam tempered  
 - for through holes

#### Aplicación:

**INOX (Acero inoxidable),  
mecanizado largo hasta 1000 N/mm<sup>2</sup>**  
 - materiales de difícil mecanizado  
 - aleaciones Cromo-Níquel  
 - superficies tratadas al vaporizado  
 - para agujeros pasantes



## WHITE RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA BLANCA

métrica ISO-rosca DIN 13



**DIN 371/376**

**Form C/39° RSP**

**HSS-E**

**Tolerance ISO2/6H**

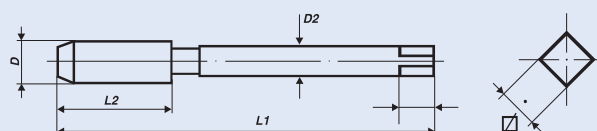
Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	6	3.5	2.7	36226	11,40
M 4 x 0,7	63	7	4.5	3.4	36230	11,40
M 5 x 0,8	70	8	6.0	4.9	36234	12,30
M 6 x 1,0	80	10	6.0	4.9	36238	12,30
M 8 x 1,25	90	14	8.0	6.2	36242	14,20
M 10 x 1,5	100	16	10.0	8.0	36246	17,00
<b>DIN 376</b>						
M 12 x 1,75	110	18	9.0	7.0	36250	20,90
M 14 x 2,0	110	20	11.0	9.0	36254	27,00
M 16 x 2,0	110	22	12.0	9.0	36258	30,80
M 18 x 2,5	125	25	14.0	11.0	36262	42,90
M 20 x 2,5	140	25	16.0	12.0	36266	60,10
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47862	99,00

### Application:

**Stainless steel (INOX),  
long chipping up to 1000 N/mm<sup>2</sup>**  
 - abrasive material  
 - chrome-nickel alloys  
 - surface treatment: steam tempered  
 - for blind holes

### Aplicación:

**INOX (Acero inoxidable),  
mecanizado largo hasta 1000 N/mm<sup>2</sup>**  
 - materiales de difícil mecanizado  
 - aleaciones Cromo-Niquel  
 - superficies tratadas al vaporizado  
 - para agujeros ciegos



## WHITE RING-Machine Taps

### Machos Máquina BANDA BLANCA



Form C/39° RSP

HSS-E

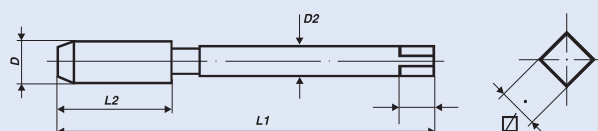
Nominal Diameter D	L 1	L 2	D 2	Ø	Art.-No.	Price per Piece €
<b>MF</b> DIN 374						
M 5 x 0.5	70	5	3.5	2.7	36903	18,70
M 6 x 0.75	80	8	4.5	3.4	36904	18,70
M 8 x 0.75	80	8	6.0	4.9	36906	18,70
M 8 x 1.0	90	10	6.0	4.9	36907	18,70
M 10 x 1.0	90	10	7.0	5.5	36909	22,50
M 10 x 1.25	100	16	7.0	5.5	36910	22,20
M 12 x 1.25	100	15	9.0	7.0	36913	28,60
M 12 x 1.5	100	15	9.0	7.0	36914	28,60
M 14 x 1.5	100	15	11.0	9.0	36917	35,20
M 16 x 1.5	100	15	12.0	9.0	36921	40,70
M 18 x 1.5	110	17	14.0	11.0	36925	50,60
M 20 x 1.5	125	17	16.0	12.0	36929	56,10
<b>UNC</b> DIN 371						
UNC 1/4 x 20	80	13	7.0	5.5	36945	15,10
UNC 5/16 x 18	90	14	8.0	6.2	36946	18,20
UNC 3/8 x 16	100	16	9.0	7.0	36947	20,00
DIN 376						
UNC 7/16 x 14	100	17	8.0	6.2	36948	25,30
UNC 1/2 x 13	110	20	9.0	7.0	36949	25,30
<b>UNF</b> DIN 371						
UNF 1/4 x 28	80	10	7.0	5.5	36965	15,10
UNF 5/16 x 24	90	10	8.0	6.2	36966	18,20
UNF 3/8 x 24	100	10	9.0	7.0	36967	20,00
DIN 376						
UNF 7/16 x 20	100	13	8.0	6.2	36968	25,30
UNF 1/2 x 20	100	13	9.0	7.0	36969	25,30
<b>G (BSP)</b> DIN 5156						
G 1/8 x 28	90	20	7.0	5.5	36992	22,00
G 1/4 x 19	100	22	11.0	9.0	36993	27,50
G 3/8 x 19	100	22	12.0	9.0	36994	37,70
G 1/2 x 14	125	25	16.0	12.0	36995	48,40

#### Application:

**Stainless steel (INOX),  
long chipping up to 1000 N/mm<sup>2</sup>**  
 - abrasive material  
 - chrome-nickel alloys  
 - surface treatment: steam tempered  
 - for blind holes

#### Aplicación:

**INOX (Acero inoxidable),  
mecanizado largo hasta 1000 N/mm<sup>2</sup>**  
 - materiales de difícil mecanizado  
 - aleaciones Cromo-Níquel  
 - superficies tratadas al vaporizado  
 - para agujeros ciegos



## BLACK RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA NEGRA

métrica ISO-rosca DIN 13



### DIN 371/376 Form C HSS-E Tolerance ISO2/6H

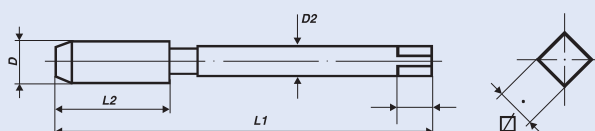
Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	11	3.5	2.7	35126	9,40
M 4 x 0,7	63	13	4.5	3.4	35130	9,40
M 5 x 0,8	70	16	6.0	4.9	35134	10,10
M 6 x 1,0	80	19	6.0	4.9	35138	10,10
M 8 x 1,25	90	22	8.0	6.2	35142	11,60
M 10 x 1,5	100	24	10.0	8.0	35146	14,00
<b>DIN 376</b>						
M 12 x 1,75	110	29	9.0	7.0	35150	17,00
M 14 x 2,0	110	30	11.0	9.0	35154	21,70
M 16 x 2,0	110	32	12.0	9.0	35158	24,90
M 18 x 2,5	125	34	14.0	11.0	35162	34,10
M 20 x 2,5	140	34	16.0	12.0	35166	47,30
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47851	81,50

#### Application:

- Cast iron GG**  
**Spheroidal cast iron GGG**
- Magnesium alloys
  - surface treatment nitrided
  - Form C: for through and blind holes

#### Aplicación:

- fundición gris GG**  
**fundición esferolítica GGG**
- aleaciones de magnesio
  - superficies tratadas con nitruro
  - para agujeros pasantes y ciegos





## YELLOW RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA AMARILLA

métrica ISO-rosca DIN 13



**DIN 371/376      Form C/40° RSP      HSS-E      Tolerance ISO2/6H**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	6	3.5	2.7	36526	10,90
M 4 x 0,7	63	7	4.5	3.4	36530	10,90
M 5 x 0,8	70	8	6.0	4.9	36534	11,80
M 6 x 1,0	80	10	6.0	4.9	36538	11,80
M 8 x 1,25	90	14	8.0	6.2	36542	13,50
M 10 x 1,5	100	16	10.0	8.0	36546	16,40
<b>DIN 376</b>						
M 12 x 1,75	110	18	9.0	7.0	36550	19,80
M 14 x 2,0	110	20	11.0	9.0	36554	26,00
M 16 x 2,0	110	22	12.0	9.0	36558	29,50
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47860	95,00

### Application:

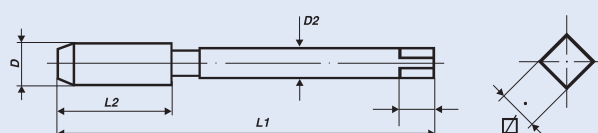
Aluminium-alloys, long chipping

- for blind holes
- with 2 flutes

### Aplicación:

Aluminio, mecanizado largo

- para agujeros ciegos
- con 2 ranuras



**ORANGE RING-Machine Taps**

metric ISO-thread DIN 13

**Machos Máquina BANDA NARANJA**

métrica ISO-rosca DIN 13



**DIN 371/376 Form C HSS-E Tolerance ISO2/6H**

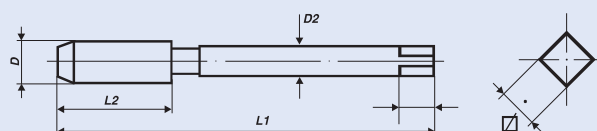
Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0,5	56	11	3.5	2.7	35726	9,40
M 4 x 0,7	63	13	4.5	3.4	35730	9,40
M 5 x 0,8	70	16	6.0	4.9	35734	10,10
M 6 x 1,0	80	19	6.0	4.9	35738	10,10
M 8 x 1,25	90	22	8.0	6.2	35742	11,60
M 10 x 1,5	100	24	10.0	8.0	35746	14,00
<b>DIN 376</b>						
M 12 x 1,75	110	29	9.0	7.0	35750	17,00
M 14 x 2,0	110	30	11.0	9.0	35754	21,70
M 16 x 2,0	110	32	12.0	9.0	35758	24,90
<b>SET</b>						
M 3 - 12	M 3-4-5-6-8-10 (DIN 371), M 12 (DIN 376)				47850	81,50

**Application:**

**Ms**  
**Brass, short chipping**  
- for through and blind holes

**Aplicación:**

**Ms**  
**Latón, mecanizado corto**  
- para agujeros pasantes y ciegos



## RED RING-Machine Taps

metric ISO-thread DIN 13

## Machos Máquina BANDA ROJA

métrica ISO-rosca DIN 13



**DIN 371      Form A      HSS-E      Tolerance ISO2/6H**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 4 x 0,7	63	9	4.5	3.4	36130	10,60
M 5 x 0,8	70	11	6.0	4.9	36134	11,80
M 6 x 1,0	80	13	6.0	4.9	36138	11,80
M 8 x 1,25	90	15	8.0	6.2	36142	13,00
M 10 x 1,5	100	16	10.0	8.0	36146	15,30

### Application:

**short-chipping Material from 1200 N/mm<sup>2</sup> tensile strength**

For through and blind holes.

Due to the very robust execution and the special profile of the flutes this Machine Tap is suitable for extreme applications.

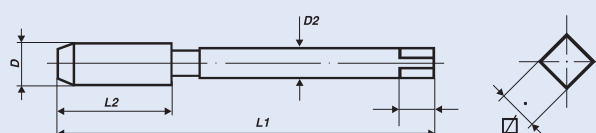
The lead Form A and an additional short lead make working easier.

### Aplicación:

**Materiales de más de 1200 N/mm<sup>2</sup> de resistencia a la tracción, mecanizado corto**

Para agujeros pasantes y ciegos.

Debido a la gran resistencia de ejecución y el especial perfil de la faja, este macho máquina es apropiado para aplicaciones extremas. La entrada en forma A, adicionalmente corta, le hace trabajar más fácilmente.





## TwinBox

Machine Tap + Twist Drill

## TwinBox

Machos Máquina + Broca

## GREEN RING TwinBox

Machine Tap + Twist Drill  
metric ISO-thread DIN 13

## TwinBox BANDA VERDE

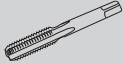

Machos Máquina + Broca  
métrica ISO-rosca DIN 13



**DIN 371/376**

**HSS-E**

**Tolerance ISO2/6H**

Nominal Diameter D			Art.-No.	Price per Piece €
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### Form B, Spiral Point / punta en espiral (pasante)

M 3 x 0,5	DIN 371	2,5 mm	35390	9,80
M 4 x 0,7	DIN 371	3,3 mm	35391	10,00
M 5 x 0,8	DIN 371	4,2 mm	35392	11,00
M 6 x 1,0	DIN 371	5,0 mm	35393	11,30
M 8 x 1,25	DIN 371	6,8 mm	35394	14,00
M 10 x 1,5	DIN 371	8,5 mm	35395	17,40
M 12 x 1,75	DIN 376	10,2 mm	35396	23,10
M 14 x 2,0	DIN 376	12,0 mm	35397	30,30
M 16 x 2,0	DIN 376	14,0 mm	35398	38,30

### Form C, Spiral Flute / Helicoidal 35° (ciego)

M 3 x 0,5	DIN 371	2,5 mm	36390	12,00
M 4 x 0,7	DIN 371	3,3 mm	36391	12,20
M 5 x 0,8	DIN 371	4,2 mm	36392	13,30
M 6 x 1,0	DIN 371	5,0 mm	36393	13,60
M 8 x 1,25	DIN 371	6,8 mm	36394	16,60
M 10 x 1,5	DIN 371	8,5 mm	36395	20,40
M 12 x 1,75	DIN 376	10,2 mm	36396	26,40
M 14 x 2,0	DIN 376	12,0 mm	36397	35,20
M 16 x 2,0	DIN 376	14,0 mm	36398	44,10

#### Application:

##### for general use

- non abrasive material up to 1000 N/mm<sup>2</sup>
  - unalloyed and low alloyed steel
  - malleable cast iron and zinc alloys
- Spiral Point for through holes  
Spiral Flute for blind holes

##### HSS-CO Twist Drills DIN 338

Type N right, 118° - Spiral: 25-30°

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 1000 N/mm<sup>2</sup>
  - aceros no aleados y de baja aleación
  - fundición maleable y aleaciones de cinc
- Punta en espiral para agujeros pasantes  
Helicoidal 35° para agujeros ciegos

##### Broca DIN 338 HSS-CO

Tipo N a derechas, 118° - Espiral: 25-30°

## BLUE RING TwinBox

Machine Tap + Twist Drill  
metric ISO-thread DIN 13

## TwinBox BANDA AZUL

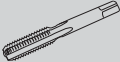
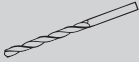
Machos Máquina + Broca  
métrica ISO-rosca DIN 13



**DIN 371/376**

**HSS-E**

**Tolerance ISO2/6H**

Nominal Diameter D			Art.-No.	Price per Piece €
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### Form B, Spiral Point / punta en espiral (pasante)

M 3 x 0,5	DIN 371	2,5 mm	35490	10,60
M 4 x 0,7	DIN 371	3,3 mm	35491	10,90
M 5 x 0,8	DIN 371	4,2 mm	35492	11,80
M 6 x 1,0	DIN 371	5,0 mm	35493	12,20
M 8 x 1,25	DIN 371	6,8 mm	35494	15,00
M 10 x 1,5	DIN 371	8,5 mm	35495	18,50
M 12 x 1,75	DIN 376	10,2 mm	35496	24,10
M 14 x 2,0	DIN 376	12,0 mm	35497	32,00
M 16 x 2,0	DIN 376	14,0 mm	35498	40,50

### Form C, Spiral Flute / Helicoidal 35° (ciego)

M 3 x 0,5	DIN 371	2,5 mm	36490	12,80
M 4 x 0,7	DIN 371	3,3 mm	36491	13,10
M 5 x 0,8	DIN 371	4,2 mm	36492	14,10
M 6 x 1,0	DIN 371	5,0 mm	36493	14,50
M 8 x 1,25	DIN 371	6,8 mm	36494	17,50
M 10 x 1,5	DIN 371	8,5 mm	36495	21,70
M 12 x 1,75	DIN 376	10,2 mm	36496	28,10
M 14 x 2,0	DIN 376	12,0 mm	36497	37,20
M 16 x 2,0	DIN 376	14,0 mm	36498	46,30

#### Application:

wear resistant steel up to 1200 N/mm<sup>2</sup>

- high alloy steel
- short chipping material
- short chipping stainless steel
- alloy tool steel

Spiral Point for through holes

Spiral Flute for blind holes

#### HSS-CO Twist Drills DIN 338

Form C right, 130° - Spiral: 25-30°  
with Split Point

#### Aplicación:

Aceros resistentes al desgaste hasta 1200 N/mm<sup>2</sup>

- aceros altamente aleados
- materiales tenaces, mecanizado corto
- aceros inoxidable, mecanizado cortio
- aceros aleados para herramientas

Punta en espiral para agujeros pasantes

Helicoidal 35° para agujeros ciegos

#### Broca DIN 338 HSS-CO

Forma C a derechas, 130° - Espiral: 25-30°  
afilado en cruz

## WHITE RING TwinBox

Machine Tap + Twist Drill  
metric ISO-thread DIN 13

## TwinBox BANDA BLANCA

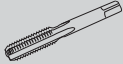

Machos Máquina + Broca  
métrica ISO-rosca DIN 13



**DIN 371/376**

**HSS-E**

**Tolerance ISO2/6H**

Nominal Diameter D			Art.-No.	Price per Piece €
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### Form B, Spiral Point / punta en espiral (pasante)

M 3 x 0,5	DIN 371	2,5 mm	35290	11,00
M 4 x 0,7	DIN 371	3,3 mm	35291	11,40
M 5 x 0,8	DIN 371	4,2 mm	35292	12,10
M 6 x 1,0	DIN 371	5,0 mm	35293	12,50
M 8 x 1,25	DIN 371	6,8 mm	35294	15,30
M 10 x 1,5	DIN 371	8,5 mm	35295	19,00
M 12 x 1,75	DIN 376	10,2 mm	35296	24,70
M 14 x 2,0	DIN 376	12,0 mm	35297	32,80
M 16 x 2,0	DIN 376	14,0 mm	35298	41,70

### Form C, Spiral Flute / Helicoidal 35° (ciego)

M 3 x 0,5	DIN 371	2,5 mm	36290	13,30
M 4 x 0,7	DIN 371	3,3 mm	36291	13,60
M 5 x 0,8	DIN 371	4,2 mm	36292	14,60
M 6 x 1,0	DIN 371	5,0 mm	36293	15,10
M 8 x 1,25	DIN 371	6,8 mm	36294	18,20
M 10 x 1,5	DIN 371	8,5 mm	36295	22,30
M 12 x 1,75	DIN 376	10,2 mm	36296	29,00
M 14 x 2,0	DIN 376	12,0 mm	36297	38,20
M 16 x 2,0	DIN 376	14,0 mm	36298	47,70

#### Application:

Stainless Steel (INOX),  
**long chipping up to 1000 N/mm<sup>2</sup>**  
- long chipping, heat resistant steel  
- abrasive material  
Spiral Point for through holes  
Spiral Flute for blind holes  
Surface treatment: steam tempered

#### HSS-CO Twist Drills DIN 338

Form C right, 130° - Spiral: 25-30°  
with Split Point

#### Aplicación:

Acero inoxidable,  
**mecanizado largo hasta 1000 N/mm<sup>2</sup>**  
- aceros resistentes al calor, mecanizado largo  
- materiales de difícil mecanizado  
- superficies tratadas al vaporizado  
Punta en espiral para agujeros pasantes  
Helicoidal 35° para agujeros ciegos

#### Broca DIN 338 HSS-CO

Forma C a derechas, 130° - Espiral: 25-30°  
afilado en cruz

## Fluteless Machine Taps

## Machos Máquina para Laminación

### Application:

Unalloyed and low alloyed Steel  
Constructional Steel  
heat resistant Steel  
Stainless Steel  
long-chipping nonferrous Metal  
Zinc Alloys  
for through and blind holes

### Aplicación:

Aceros no aleados y de baja aleación  
Aceros estructurales  
Aceros resistentes al calor  
Aceros inoxidables  
Metales no féreos de mecanización larga  
(aluminio, bronce, cobre, latón)  
Aleaciones de cinc  
  
para agujeros pasantes y ciegos



### bright:

for nonferrous metal of good ductility

### brillante:

para metales no féreos de buena ductilidad



### VAP (Steam Tempered):

for steel up to approx. 700 N/mm<sup>2</sup>

### VAP (vaporizado):

para materiales de acero hasta unos 700 N/mm<sup>2</sup>



### TIN (Titanium Nitride Coating):

for steel up to approx. 900 N/mm<sup>2</sup>  
and to increase endurance and cutting speed

### TIN (recubrimiento de nitruro de titanio):

para materiales de acero hasta unos 900 N/mm<sup>2</sup> y para aumentar la resistencia de la herramienta y velocidad de corte.



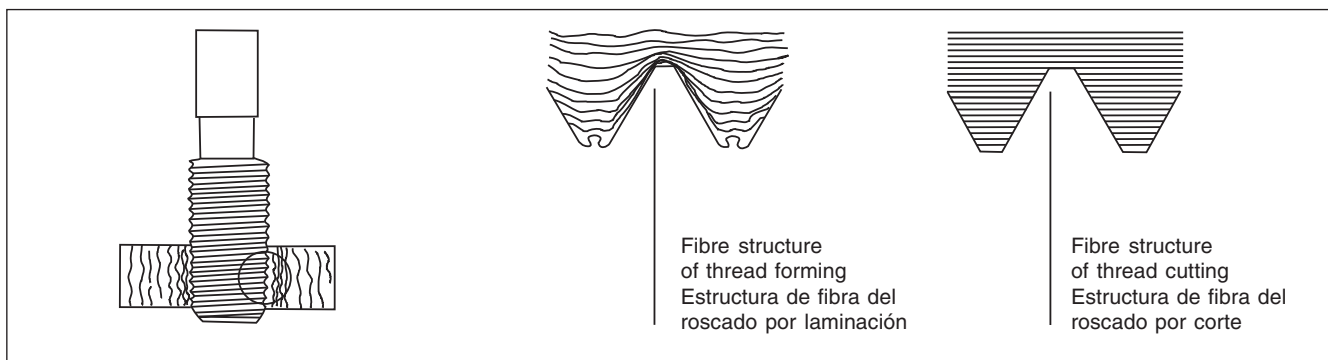
## Fluteless Machine Taps

## Machos Máquina para Laminación

M	6H ISO2	6G ISO3
without Oil Groove sin ranuras rectas para lubricación	139	141
with Oil Groove con ranuras rectas para lubricación	140	141

**Fluteless Taps (Forming Taps)** are threading tools to form internal threads without cutting. The thread is produced by deformation of the material without damaging the fibre structure.

Los Machos Máquina para laminación son herramientas de roscado para formar roscas internas sin corte (sin arranque de viruta). La rosca se produce por deformación del material sin dañar la estructura de fibra.



### Benefit:

- longer endurance as cutting taps
- higher possible cutting speed
- steady exactness of dimension and profile
- high stability of the forming threads
- high security against fracture
- no removal of swarf, no jamming of swarf

### Ventajas:

- Mayor vida de la herramienta como macho de roscar
- Posibilidad de mayor velocidad de corte
- Medida invariable y exactitud de perfil
- Alta capacidad de las roscas formadas
- Mayor seguridad contra la rotura
- Sin removimiento de viruta, sin atascos de viruta

## Recommended Application of Fluteless Machine Taps

## Aplicación recomendada para Machos Máquina para Laminación

Material	bright brillante	VAP	TIN
unalloyed and low alloyed Steel Aceros no aleados y de baja aleación			X
heat resistant Steel Aceros resistentes al calor			X
Stainless Steel Acero inoxidable		X	X
Constructional Steel Acero estructural		X	X
Brass, long-chipping Latón, mecanizado largo	X		
Bronzes, long-chipping Bronce, mecanizado largo	X		
Copper Cobre	X		
Al-alloys, long-chipping Aluminio, mecanizado largo	X		
Zinc Alloys Aleaciones de cinc	X		

### Oil Groove:

Use Fluteless Taps with Oil Groove for thread depth over 1,5 x D to optimize lubrication.

### Lubrication:

Good lubrication is very important when forming threads.  
Use graphitic lubrication/oil with lubricity or add suitable additives.

### Ranura de lubricación:

Utilizar machos por laminación con ranura de lubricación para roscas de más de 1,5 x D para optimizar la lubricación.

### Lubricación:

Una buena lubricación es importante cuando utilizamos machos para laminación.  
Utilizar lubricantes de grafito/aceite con lubricante o añadir aditivos apropiados.

## Recommended Core Hole Diameter

## Diámetro de la broca previa para roscar recomendado

D	M 3	M 4	M 5	M 6	M 8	M 10	M 12	M 14	M 16
Ø	2,80	3,70	4,65	5,55	7,45	9,30	11,20	13,00	15,10

## Fluteless Machine Taps (Forming Taps)

metric ISO-thread DIN 13

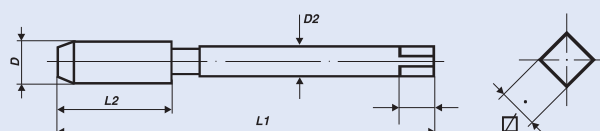
## Machos Máquina para Laminación

métrica ISO-rosca DIN 13



### DIN 371/376      2.1/2 Thread Start      HSS-E      Tolerance ISO2X/6HX

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	35510	9,00
M 4 x 0.7	63	13	4.5	3.4	35512	10,10
M 5 x 0.8	70	16	6.0	4.9	35513	11,00
M 6 x 1.0	80	19	6.0	4.9	35514	11,00
M 8 x 1.25	90	22	8.0	6.2	35515	13,20
M 10 x 1.5	100	24	10.0	8.0	35516	15,40
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	35517	19,80
M 14 x 2.0	110	30	11.0	9.0	35518	28,60
M 16 x 2.0	110	32	12.0	9.0	35519	35,20
<b>TIN</b>						
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	35530	12,10
M 4 x 0.7	63	13	4.5	3.4	35532	13,20
M 5 x 0.8	70	16	6.0	4.9	35533	14,10
M 6 x 1.0	80	19	6.0	4.9	35534	14,70
M 8 x 1.25	90	22	8.0	6.2	35535	17,90
M 10 x 1.5	100	24	10.0	8.0	35536	21,90
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	35537	29,70
M 14 x 2.0	110	30	11.0	9.0	35538	39,60
M 16 x 2.0	110	32	12.0	9.0	35539	47,20
<b>VAP</b>						
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	35550	9,90
M 4 x 0.7	63	13	4.5	3.4	35552	11,10
M 5 x 0.8	70	16	6.0	4.9	35553	12,10
M 6 x 1.0	80	19	6.0	4.9	35554	12,10
M 8 x 1.25	90	22	8.0	6.2	35555	14,50
M 10 x 1.5	100	24	10.0	8.0	35556	16,90
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	35557	21,80
M 14 x 2.0	110	30	11.0	9.0	35558	31,50
M 16 x 2.0	110	32	12.0	9.0	35559	38,70



## Fluteless Machine Taps with Oil Groove

metric ISO-thread DIN 13

## Machos Máquina para Laminación con ranuras rectas para lubricación

métrica ISO-rosca DIN 13



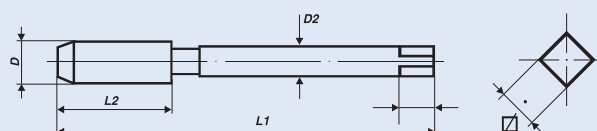
### DIN 371/376

### 2.1/2 Thread Start

### HSS-E

### Tolerance ISO2X/6HX

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	35610	10,10
M 4 x 0.7	63	13	4.5	3.4	35612	11,40
M 5 x 0.8	70	16	6.0	4.9	35613	12,50
M 6 x 1.0	80	19	6.0	4.9	35614	12,50
M 8 x 1.25	90	22	8.0	6.2	35615	14,90
M 10 x 1.5	100	24	10.0	8.0	35616	17,20
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	35617	21,50
M 14 x 2.0	110	30	11.0	9.0	35618	32,00
M 16 x 2.0	110	32	12.0	9.0	35619	38,50
<b>TIN</b>						
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	35630	13,20
M 4 x 0.7	63	13	4.5	3.4	35632	14,50
M 5 x 0.8	70	16	6.0	4.9	35633	15,60
M 6 x 1.0	80	19	6.0	4.9	35634	16,20
M 8 x 1.25	90	22	8.0	6.2	35635	19,60
M 10 x 1.5	100	24	10.0	8.0	35636	23,70
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	35637	31,40
M 14 x 2.0	110	30	11.0	9.0	35638	43,00
M 16 x 2.0	110	32	12.0	9.0	35639	50,50
<b>VAP</b>						
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	35650	11,10
M 4 x 0.7	63	13	4.5	3.4	35652	12,50
M 5 x 0.8	70	16	6.0	4.9	35653	13,70
M 6 x 1.0	80	19	6.0	4.9	35654	13,70
M 8 x 1.25	90	22	8.0	6.2	35655	16,40
M 10 x 1.5	100	24	10.0	8.0	35656	19,00
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	35657	23,70
M 14 x 2.0	110	30	11.0	9.0	35658	35,20
M 16 x 2.0	110	32	12.0	9.0	35659	42,40



## Fluteless Machine Taps (Forming Taps), *with oversize*

metric ISO-thread DIN 13

### Machos Máquina para Laminación

*Sobredimensionados*

métrica ISO-rosca DIN 13



**DIN 371/376**

**2.1/2 Thread Start**

**HSS-E**

**Tolerance ISO3X/6GX**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
<b>without Oil Groove/sin ranuras rectas para lubricación</b>						
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	35510-6G	9,50
M 4 x 0.7	63	13	4.5	3.4	35512-6G	10,60
M 5 x 0.8	70	16	6.0	4.9	35513-6G	11,60
M 6 x 1.0	80	19	6.0	4.9	35514-6G	11,60
M 8 x 1.25	90	22	8.0	6.2	35515-6G	13,80
M 10 x 1.5	100	24	10.0	8.0	35516-6G	16,00
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	35517-6G	20,90

### with Oil Groove/con ranuras rectas para lubricación

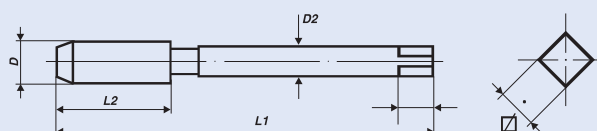
<b>DIN 371</b>						
M 3 x 0.5	56	11	3.5	2.7	35610-6G	10,60
M 4 x 0.7	63	13	4.5	3.4	35612-6G	11,90
M 5 x 0.8	70	16	6.0	4.9	35613-6G	13,10
M 6 x 1.0	80	19	6.0	4.9	35614-6G	13,10
M 8 x 1.25	90	22	8.0	6.2	35615-6G	15,50
M 10 x 1.5	100	24	10.0	8.0	35616-6G	17,90
<b>DIN 376</b>						
M 12 x 1.75	110	29	9.0	7.0	35617-6G	22,00

#### Application:

tolerance ISO 3 (6G) =  
oversize of 0,02 - 0,4 mm  
pre plate material for  
galvanising

#### Aplicación:

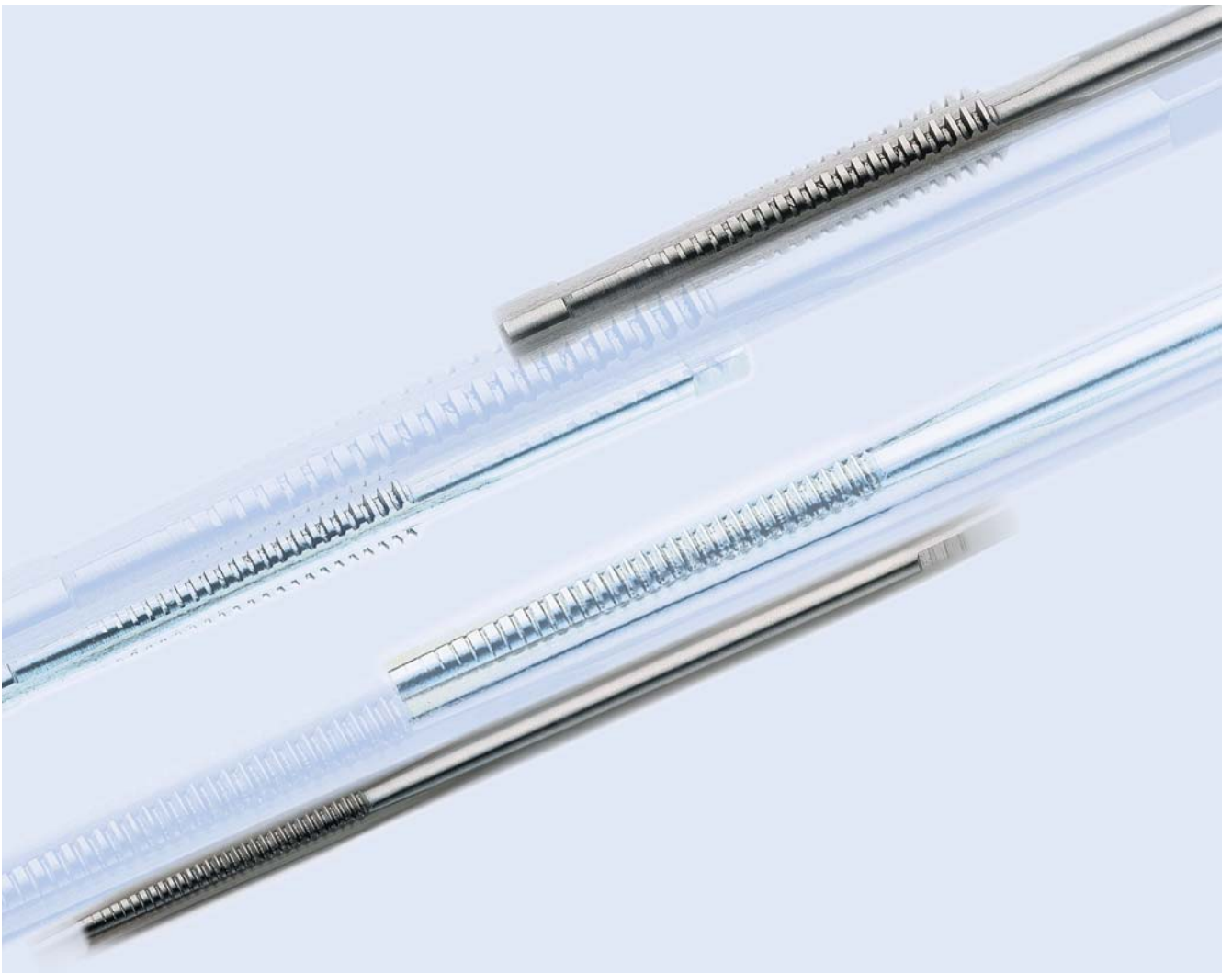
tolerancia ISO 3 (6G) =  
sobredimensión 0,02 - 0,04 mm  
para materiales galvanizados



**Machine Nut Taps**

**Machos para tuerquas**

	M	Tr
Machine Nut Taps Machos para tuerquas	143	144



## Machine Nut Taps

metric ISO-thread DIN 13

## Machos para tuerquas

métrica ISO-rosca DIN 13



**DIN 357 HSS-E Tolerance ISO2/6H**

**M**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
M 3 x 0.5	70	22	2.2	—	37126	12,60
M 4 x 0.7	90	25	2.8	2.1	37130	12,60
M 5 x 0.8	100	28	3.5	2.7	37134	13,50
M 6 x 1.0	110	32	4.5	3.4	37138	13,50
M 8 x 1.25	125	40	6.0	4.9	37142	15,60
M 10 x 1.5	140	45	7.0	5.5	37146	20,50
M 12 x 1.75	180	50	9.0	7.0	37150	28,50
M 14 x 2.0	200	56	11.0	9.0	37154	35,50
M 16 x 2.0	200	63	12.0	9.0	37158	43,50
M 18 x 2.5	220	63	14.0	11.0	37162	49,00
M 20 x 2.5	250	70	16.0	12.0	37166	54,00
M 22 x 2.5	280	80	18.0	14.5	37170	64,00
M 24 x 3.0	280	80	18.0	14.5	37174	72,50

### Application:

- long reduced shank to allow nuts to run over
- for thread depth up to 1 x D
- ideal for tapping difficult to reach holes
- for through holes

### for general use

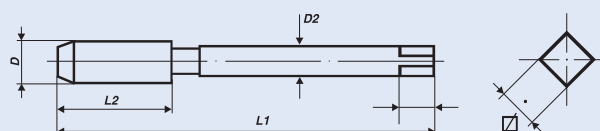
- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

### Aplicación:

- mango reducido largo para permitir una mayor penetración en roscas
- para roscas con profundidad hasta 1 x D
- roscada en agujeros de difícil acceso
- para agujeros pasantes

### para uso general

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación



## Machine Nut Taps

piloted, trapezoidal thread DIN 103

## Machos para tuerquas

piloto, rosca trapezoidal DIN 103



**HSS-G**

**Tolerance 7H**

**Tr**

Nominal Diameter D	L 1	L 2	D 2	∅	Art.-No.	Price per Piece €
Tr 10 x 2	110	63	7	5.5	79108	198,00
Tr 10 x 3	125	75	7	5.5	79112	198,00
Tr 12 x 3	165	111	8	6.2	79116	171,00
Tr 14 x 3	140	85	10	8.0	79120	182,00
Tr 14 x 4	170	112	10	8.0	79124	182,00
Tr 16 x 4	180	116	11	9.0	79128	199,00
Tr 18 x 4	190	120	12	9.0	79132	204,00
Tr 20 x 4	200	124	14	11.0	79136	212,00
Tr 22 x 4	210	130	16	12.0	79139	275,00
Tr 22 x 5	235	155	16	12.0	79140	275,00
Tr 24 x 5	245	160	18	14.5	79144	316,00
Tr 26 x 5	255	165	20	16.0	79148	330,00
Tr 28 x 5	265	170	22	18.0	79152	368,00
Tr 30 x 6	290	185	22	18.0	79156	432,00
Tr 32 x 6	300	191	25	20.0	79160	528,00
Tr 36 x 6	310	200	28	22.0	79164	540,00

### LEFT HAND THREAD/ROSCA IZQUIERDAS

Tr 10 x 2	110	63	7	5.5	79108-L	278,00
Tr 10 x 3	125	75	7	5.5	79112-L	278,00
Tr 12 x 3	165	111	8	6.2	79116-L	240,00
Tr 14 x 3	140	85	10	8.0	79120-L	255,00
Tr 14 x 4	170	112	10	8.0	79124-L	255,00
Tr 16 x 4	180	116	11	9.0	79128-L	278,00
Tr 18 x 4	190	120	12	9.0	79132-L	287,00
Tr 20 x 4	200	124	14	11.0	79136-L	298,00
Tr 22 x 5	235	155	16	12.0	79140-L	385,00
Tr 24 x 5	245	160	18	14.5	79144-L	442,00
Tr 26 x 5	255	165	20	16.0	79148-L	462,00
Tr 28 x 5	265	170	22	18.0	79152-L	515,00
Tr 30 x 6	290	185	22	18.0	79156-L	605,00
Tr 32 x 6	300	191	25	20.0	79160-L	740,00
Tr 36 x 6	310	200	28	22.0	79164-L	755,00

#### Application:

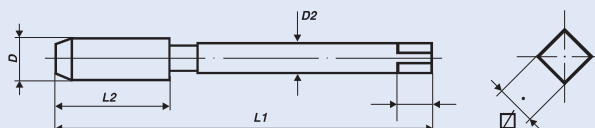
##### for general use

- non abrasive material up to 700 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread depth up to 1 x D
- for through holes

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 700 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación
- para roscas con profundidad hasta 1 x D
- para agujeros pasantes

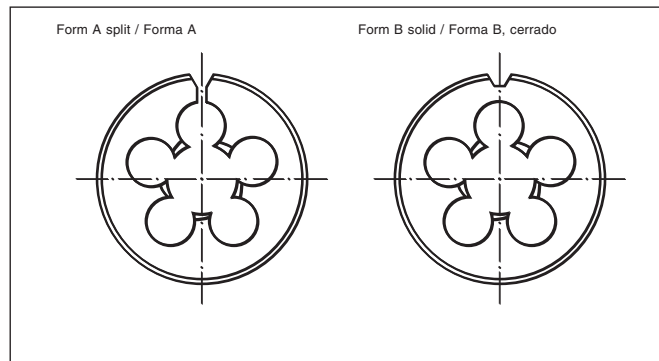
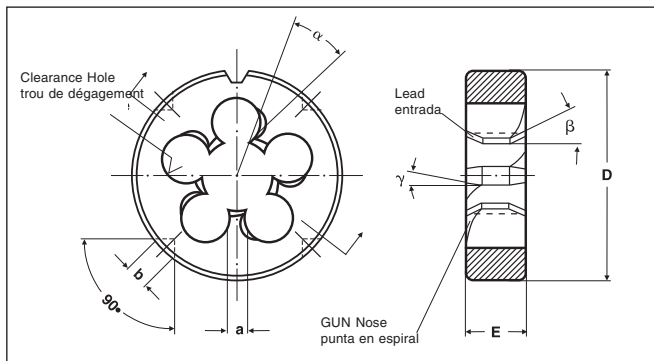




**Round Dies  
Hexagon Die Nuts**

**Cojinetes  
Cojinetes hexagonales**

	HSS 	HSSE 	LH 	HSS 	LH 
M	146	164	167	172	181
M - 6e	148				
Mf	149	165	168	173	
BSW	155		169	175	
BSF	155			175	
BA	156				
UNC	157		170	176	
UNF	158		170	176	
UNEF	159				
8 - UN				177	
G (BSP)	160	166	171	178	182
R (BSPT)	161			179	
PG	162				
NPT	163			180	
NPTF	163				



<b>D</b>	Outside diameter	Diámetro exterior
<b>E</b>	Width of die	Ancho del cojinete
<b>a</b>	Width of land	Ancho de contacto
<b>b</b>	Hole for holding screws	Agujero para tornillo
<b>α</b>	Rake angle	Angulo de arrastre
<b>β</b>	Lead angle	Angulo de entrada
<b>γ</b>	Angle of gun nose	Angulo de acabado

Unless otherwise requested,  
all dies are supplied solid  
(Form B).

A no ser que se indique lo contrario,  
todos los cojinetes son suministrados  
en Forma B (cerrado).



## Round Dies

metric ISO-thread DIN 13

## Cojinetes

métrica ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**M**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 1 x 0.25	16 x 5	27402	11,00
M 1.1 x 0.25	16 x 5	27404	11,00
M 1.2 x 0.25	16 x 5	27406	11,00
M 1.4 x 0.3	16 x 5	27408	11,00
M 1.6 x 0.35	16 x 5	27410	11,00
M 1.7 x 0.35	16 x 5	27412	11,00
M 1.8 x 0.35	16 x 5	27414	11,00
M 2 x 0.4	16 x 5	27416	9,60
M 2.2 x 0.45	16 x 5	27418	9,60
M 2.3 x 0.4	16 x 5	27420	9,60
M 2.5 x 0.45	16 x 5	27422	9,60
M 2.6 x 0.45	16 x 5	27424	9,60
M 3 x 0.5	20 x 5	27426	4,80
M 3.5 x 0.6	20 x 5	27428	7,40
M 4 x 0.7	20 x 5	27430	4,80
M 4.5 x 0.75	20 x 7	27432	7,40
M 5 x 0.8	20 x 7	27434	5,10
M 5.5 x 0.9	20 x 7	27436	7,40
M 6 x 1.0	20 x 7	27438	5,10
M 7 x 1.0	25 x 9	27440	8,00
M 8 x 1.25	25 x 9	27442	5,40
M 9 x 1.25	25 x 9	27444	9,10
M 10 x 1.5	30 x 11	27446	6,50
M 11 x 1.5	30 x 11	27448	10,20
M 12 x 1.75	38 x 14	27450	9,90
M 14 x 2.0	38 x 14	27454	11,00
M 15 x 2.0	38 x 14	27456	15,40
M 16 x 2.0	45 x 18	27458	15,40
M 18 x 2.5	45 x 18	27462	15,40
M 19 x 2.5	45 x 18	27464	15,40
M 20 x 2.5	45 x 18	27466	15,40
M 22 x 2.5	55 x 22	27470	29,20
M 24 x 3.0	55 x 22	27474	29,20
M 27 x 3.0	65 x 25	27476	42,00
M 30 x 3.5	65 x 25	27478	42,00
M 33 x 3.5	65 x 25	27480	42,00
M 36 x 4.0	65 x 25	27482	42,00
M 39 x 4.0	75 x 30	27484	66,00
M 42 x 4.5	75 x 30	27486	66,00
M 45 x 4.5	90 x 36	27488	116,00
M 48 x 5.0	90 x 36	27490	116,00
M 52 x 5.0	90 x 36	27492	116,00
M 56 x 5.5	105 x 36	27494	285,00
M 60 x 5.5	105 x 36	27496	285,00
M 64 x 6.0	120 x 36	27498	380,00
M 68 x 6.0	120 x 36	27499	380,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación



**Round Dies**  
metric ISO-thread DIN 13

**Cojinetes**  
métrica ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6e**

**M**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 3 x 0.5	20 x 5	27503	7,30
M 4 x 0.7	20 x 5	27505	7,30
M 5 x 0.8	20 x 7	27507	7,60
M 6 x 1.0	20 x 7	27509	7,60
M 8 x 1.25	25 x 9	27511	8,10
M 10 x 1.5	30 x 11	27513	10,50
M 12 x 1.75	38 x 14	27515	16,50
M 14 x 2.0	38 x 14	27516	21,00
M 16 x 2.0	45 x 18	27517	32,00
M 18 x 2.5	45 x 18	27518	32,00
M 20 x 2.5	45 x 18	27519	32,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

## Round Dies

metric-fine ISO-thread DIN 13

## Cojinetes

métrica fina ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 2.5 x 0.35	16 x 5	26404	11,00
M 2.6 x 0.35	16 x 5	26405	11,00
M 3 x 0.35	20 x 5	26408	10,30
M 3.5 x 0.35	20 x 5	26409	10,30
M 4 x 0.35	20 x 5	26410	10,30
M 4 x 0.5	20 x 5	26412	10,30
M 4.5 x 0.5	20 x 5	26413	10,30
M 5 x 0.5	20 x 5	26414	10,30
M 5 x 0.75	20 x 7	26416	10,30
M 5.5 x 0.5	20 x 5	26415	10,30
M 6 x 0.5	20 x 5	26417	10,30
M 6 x 0.75	20 x 7	26418	8,60
M 7 x 0.5	25 x 9	26419	11,00
M 7 x 0.75	25 x 9	26420	11,00
M 8 x 0.5	25 x 9	26422	11,00
M 8 x 0.75	25 x 9	26424	9,20
M 8 x 1.0	25 x 9	26426	9,20
M 9 x 0.5	25 x 9	26427	13,90
M 9 x 0.75	25 x 9	26428	13,90
M 9 x 1.0	25 x 9	26430	13,90
M 10 x 0.5	30 x 11	26431	13,90
M 10 x 0.75	30 x 11	26432	13,90
M 10 x 1.0	30 x 11	26436	11,00
M 10 x 1.25	30 x 11	26438	11,00
M 11 x 1.0	30 x 11	26440	15,90
M 11 x 1.25	30 x 11	26442	15,90
M 12 x 0.5	38 x 10	26445	15,90
M 12 x 0.75	38 x 10	26443	15,90
M 12 x 1.0	38 x 10	26444	13,90
M 12 x 1.25	38 x 10	26446	13,90
M 12 x 1.5	38 x 10	26448	13,50
M 13 x 0.5	38 x 10	26447	22,00
M 13 x 0.75	38 x 10	26449	22,00
M 13 x 1.0	38 x 10	26450	17,60
M 13 x 1.5	38 x 10	26451	17,60
M 14 x 0.5	38 x 10	26455	22,00
M 14 x 0.75	38 x 10	26452	17,60
M 14 x 1.0	38 x 10	26453	17,60
M 14 x 1.25	38 x 10	26454	15,40
M 14 x 1.5	38 x 10	26456	15,40
M 15 x 0.75	38 x 10	26457	28,60
M 15 x 1.0	38 x 10	26458	24,20
M 15 x 1.5	38 x 10	26460	24,20
M 16 x 0.5	45 x 14	26461	31,00
M 16 x 0.75	45 x 14	26463	31,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación



## Round Dies

metric-fine ISO-thread DIN 13

## Cojinetes

métrica fina ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 16 x 1.0	45 x 14	26462	24,20
M 16 x 1.25	45 x 14	26464	24,20
M 16 x 1.5	45 x 14	26466	18,70
M 17 x 1.0	45 x 14	26468	33,00
M 17 x 1.5	45 x 14	26469	33,00
M 18 x 0.5	45 x 14	26467	33,00
M 18 x 0.75	45 x 14	26473	33,00
M 18 x 1.0	45 x 14	26470	22,60
M 18 x 1.25	45 x 14	26471	22,60
M 18 x 1.5	45 x 14	26472	18,70
M 18 x 2.0	45 x 14	26474	22,60
M 19 x 1.0	45 x 14	26475	33,00
M 19 x 1.5	45 x 14	26476	22,60
M 20 x 0.5	45 x 14	26477	33,00
M 20 x 0.75	45 x 14	26479	33,00
M 20 x 1.0	45 x 14	26478	22,60
M 20 x 1.25	45 x 14	26480	22,60
M 20 x 1.5	45 x 14	26484	18,70
M 20 x 2.0	45 x 14	26486	22,60
M 21 x 1.0	45 x 14	26487	34,10
M 21 x 1.5	45 x 14	26488	34,10
M 22 x 0.5	55 x 16	26489	47,50
M 22 x 0.75	55 x 16	26491	47,50
M 22 x 1.0	55 x 16	26490	36,50
M 22 x 1.25	55 x 16	26492	36,50
M 22 x 1.5	55 x 16	26494	31,00
M 22 x 2.0	55 x 16	26496	36,50
M 23 x 1.0	55 x 16	26497	47,50
M 23 x 1.5	55 x 16	26498	36,50
M 24 x 0.5	55 x 16	26601	47,50
M 24 x 0.75	55 x 16	26603	47,50
M 24 x 1.0	55 x 16	26600	36,50
M 24 x 1.25	55 x 16	26602	36,50
M 24 x 1.5	55 x 16	26604	31,00
M 24 x 2.0	55 x 16	26606	36,50
M 25 x 1.0	55 x 16	26607	47,50
M 25 x 1.5	55 x 16	26608	47,50
M 26 x 1.0	55 x 16	26610	47,50
M 26 x 1.5	55 x 16	26612	47,50
M 26 x 2.0	55 x 16	26614	47,50
M 27 x 1.0	65 x 18	26616	54,00
M 27 x 1.5	65 x 18	26617	54,00
M 27 x 2.0	65 x 18	26618	54,00
M 28 x 1.0	65 x 18	26620	54,00
M 28 x 1.5	65 x 18	26622	54,00
M 28 x 2.0	65 x 18	26624	54,00
M 29 x 1.5	65 x 18	26626	54,00
M 30 x 1.0	65 x 18	26628	54,00
M 30 x 1.5	65 x 18	26630	54,00
M 30 x 2.0	65 x 18	26632	54,00



## Round Dies

metric-fine ISO-thread DIN 13

## Cojinetes

métrica fina ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 30 x 2.5	65 x 18	26633	54,00
M 30 x 3.0	65 x 25	26634	54,00
M 32 x 1.0	65 x 18	26639	76,00
M 32 x 1.5	65 x 18	26636	54,00
M 32 x 2.0	65 x 18	26635	54,00
M 32 x 3.0	65 x 25	26637	54,00
M 33 x 1.5	65 x 18	26638	54,00
M 33 x 2.0	65 x 18	26640	54,00
M 33 x 3.0	65 x 25	26642	54,00
M 34 x 1.0	65 x 18	26643	76,00
M 34 x 1.5	65 x 18	26644	54,00
M 34 x 2.0	65 x 18	26646	54,00
M 35 x 1.0	65 x 18	26647	76,00
M 35 x 1.5	65 x 18	26648	54,00
M 35 x 2.0	65 x 18	26649	76,00
M 36 x 1.0	65 x 18	26651	76,00
M 36 x 1.5	65 x 18	26650	54,00
M 36 x 2.0	65 x 18	26652	54,00
M 36 x 3.0	65 x 25	26654	54,00
M 37 x 1.5	65 x 18	26653	116,00
M 38 x 1.0	75 x 20	26655	116,00
M 38 x 1.5	75 x 20	26656	86,00
M 38 x 2.0	75 x 20	26657	86,00
M 38 x 3.0	75 x 30	26659	116,00
M 39 x 1.5	75 x 20	26658	86,00
M 39 x 2.0	75 x 20	26660	86,00
M 39 x 3.0	75 x 30	26662	86,00
M 40 x 1.0	75 x 20	26663	116,00
M 40 x 1.5	75 x 20	26664	86,00
M 40 x 2.0	75 x 20	26666	86,00
M 40 x 3.0	75 x 30	26668	86,00
M 42 x 1.0	75 x 20	26669	116,00
M 42 x 1.5	75 x 20	26670	86,00
M 42 x 2.0	75 x 20	26672	86,00
M 42 x 3.0	75 x 30	26674	86,00
M 44 x 1.5	90 x 22	26671	188,00
M 44 x 2.0	90 x 22	26673	188,00
M 45 x 1.0	90 x 22	26675	188,00
M 45 x 1.5	90 x 22	26676	138,00
M 45 x 2.0	90 x 22	26678	138,00
M 45 x 3.0	90 x 36	26680	138,00
M 46 x 1.5	90 x 22	26681	188,00
M 48 x 1.0	90 x 22	26683	188,00
M 48 x 1.5	90 x 22	26682	138,00
M 48 x 2.0	90 x 22	26684	138,00
M 48 x 3.0	90 x 36	26686	138,00
M 50 x 1.5	90 x 22	26688	138,00
M 50 x 2.0	90 x 22	26690	138,00
M 50 x 3.0	90 x 36	26692	138,00
M 52 x 1.5	90 x 22	26694	138,00

## Round Dies

metric-fine ISO-thread DIN 13

## Cojinetes

métrica fina ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 52 x 2.0	90 x 22	26696	138,00
M 52 x 3.0	90 x 36	26698	138,00
M 54 x 1.0	105 x 22	28267	254,00
M 54 x 1.5	105 x 22	28150	254,00
M 54 x 2.0	105 x 22	28151	254,00
M 54 x 3.0	105 x 36	28152	254,00
M 54 x 4.0	105 x 36	28153	254,00
M 55 x 1.5	105 x 22	28154	254,00
M 55 x 2.0	105 x 22	28155	254,00
M 55 x 3.0	105 x 36	28156	254,00
M 55 x 4.0	105 x 36	28157	254,00
M 56 x 1.0	105 x 22	28268	254,00
M 56 x 1.5	105 x 22	28158	254,00
M 56 x 2.0	105 x 22	28159	254,00
M 56 x 3.0	105 x 36	28160	254,00
M 56 x 4.0	105 x 36	28161	254,00
M 58 x 1.0	105 x 22	28269	254,00
M 58 x 1.5	105 x 22	28162	254,00
M 58 x 2.0	105 x 22	28163	254,00
M 58 x 3.0	105 x 36	28164	254,00
M 58 x 4.0	105 x 36	28165	254,00
M 60 x 1.5	105 x 22	28166	254,00
M 60 x 2.0	105 x 22	28167	254,00
M 60 x 3.0	105 x 36	28168	254,00
M 60 x 4.0	105 x 36	28169	254,00
M 62 x 1.5	105 x 22	28170	254,00
M 62 x 2.0	105 x 22	28171	254,00
M 62 x 3.0	105 x 36	28172	254,00
M 62 x 4.0	105 x 36	28173	254,00
M 63 x 1.5	105 x 22	28174	254,00
M 64 x 1.5	120 x 22	28175	288,00
M 64 x 2.0	120 x 22	28176	288,00
M 64 x 3.0	120 x 36	28177	288,00
M 64 x 4.0	120 x 36	28178	288,00
M 65 x 1.5	120 x 22	28179	288,00
M 65 x 2.0	120 x 22	28180	288,00
M 65 x 3.0	120 x 36	28181	288,00
M 65 x 4.0	120 x 36	28182	288,00
M 68 x 1.5	120 x 22	28183	288,00
M 68 x 2.0	120 x 22	28184	288,00
M 68 x 3.0	120 x 36	28185	288,00
M 68 x 4.0	120 x 36	28186	288,00
M 70 x 1.5	120 x 22	28187	288,00
M 70 x 2.0	120 x 22	28188	288,00
M 70 x 3.0	120 x 36	28189	288,00
M 70 x 4.0	120 x 36	28190	288,00
M 72 x 1.5	120 x 22	28191	288,00
M 72 x 2.0	120 x 22	28192	288,00
M 72 x 3.0	120 x 36	28193	288,00
M 72 x 4.0	120 x 36	28194	288,00





## Round Dies

metric-fine ISO-thread DIN 13

## Cojinetes

métrica fina ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 74 x 1.5	120 x 22	28195	288,00
M 74 x 2.0	120 x 22	28196	288,00
M 74 x 3.0	120 x 36	28197	288,00
M 74 x 4.0	120 x 36	28198	288,00
M 75 x 1.5	120 x 22	28199	288,00
M 75 x 2.0	120 x 22	28200	288,00
M 75 x 3.0	120 x 36	28201	288,00
M 75 x 4.0	120 x 36	28202	288,00
M 76 x 1.5	120 x 22	28203	288,00
M 76 x 2.0	120 x 22	28204	288,00
M 76 x 3.0	120 x 36	28205	288,00
M 76 x 4.0	120 x 36	28206	288,00
M 78 x 1.5	120 x 22	28207	288,00
M 78 x 2.0	120 x 22	28208	288,00
M 78 x 3.0	120 x 36	28209	288,00
M 78 x 4.0	120 x 36	28210	288,00
M 80 x 1.5	120 x 22	28211	288,00
M 80 x 2.0	120 x 22	28212	288,00
M 80 x 3.0	120 x 36	28213	288,00
M 80 x 4.0	120 x 36	28214	288,00
M 82 x 1.5	130 x 25	28215	365,00
M 82 x 2.0	130 x 25	28216	365,00
M 82 x 3.0	130 x 36	28217	365,00
M 82 x 4.0	130 x 36	28218	365,00
M 84 x 1.5	130 x 25	28219	365,00
M 84 x 2.0	130 x 25	28220	365,00
M 84 x 3.0	130 x 36	28221	365,00
M 84 x 4.0	130 x 36	28222	365,00
M 85 x 1.5	130 x 25	28223	365,00
M 85 x 2.0	130 x 25	28224	365,00
M 85 x 3.0	130 x 36	28225	365,00
M 85 x 4.0	130 x 36	28226	365,00
M 86 x 1.5	140 x 22	28227	455,00
M 86 x 2.0	140 x 22	28228	455,00
M 86 x 3.0	140 x 22	28229	455,00
M 86 x 4.0	140 x 22	28230	455,00
M 88 x 1.5	140 x 22	28231	455,00
M 88 x 2.0	140 x 22	28232	455,00
M 88 x 3.0	140 x 22	28233	455,00
M 88 x 4.0	140 x 22	28234	455,00
M 90 x 1.5	140 x 22	28235	455,00
M 90 x 2.0	140 x 22	28236	455,00
M 90 x 3.0	140 x 22	28237	455,00
M 90 x 4.0	140 x 22	28238	455,00
M 92 x 1.5	140 x 22	28239	455,00
M 92 x 2.0	140 x 22	28240	455,00
M 92 x 3.0	140 x 22	28241	455,00
M 92 x 4.0	140 x 22	28242	455,00
M 95 x 1.5	140 x 22	28243	455,00
M 95 x 2.0	140 x 22	28244	455,00

**Round Dies**

metric-fine ISO-thread DIN 13

**Cojinetes**

métrica fina ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 95 x 3.0	140 x 22	28245	455,00
M 95 x 4.0	140 x 22	28246	455,00
M 96 x 1.5	140 x 22	28247	455,00
M 96 x 2.0	140 x 22	28248	455,00
M 96 x 3.0	140 x 22	28249	455,00
M 96 x 4.0	140 x 22	28250	455,00
M 98 x 1.5	150 x 25	28251	547,00
M 98 x 2.0	150 x 25	28252	547,00
M 98 x 3.0	150 x 25	28253	547,00
M 98 x 4.0	150 x 25	28254	547,00
M 100 x 1.5	150 x 25	28255	547,00
M 100 x 2.0	150 x 25	28256	547,00
M 100 x 3.0	150 x 25	28257	547,00
M 100 x 4.0	150 x 25	28258	547,00
M 105 x 1.5	150 x 25	28259	547,00
M 105 x 2.0	150 x 25	28260	547,00
M 105 x 3.0	150 x 25	28261	547,00
M 105 x 4.0	150 x 25	28262	547,00
M 110 x 1.5	160 x 25	28263	597,00
M 110 x 2.0	160 x 25	28264	597,00
M 110 x 3.0	160 x 25	28265	597,00
M 110 x 4.0	160 x 25	28266	597,00

## Round Dies

Whitworth-thread BS 84

## Cojinetes

rosca-Whitworth BS 84



**DIN 223 (DIN EN 22568) HSS**

**BSW / BSF**

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
<b>BSW</b>			
BSW 1/16 x 60	16 x 5	22402	9,60
BSW 3/32 x 48	16 x 5	22404	9,60
BSW 1/8 x 40	20 x 5	22406	9,70
BSW 5/32 x 32	20 x 5	22408	9,70
BSW 3/16 x 24	20 x 7	22410	9,70
BSW 7/32 x 24	20 x 7	22412	9,70
BSW 1/4 x 20	20 x 7	22414	9,70
BSW 5/16 x 18	25 x 9	22416	11,00
BSW 3/8 x 16	30 x 11	22418	12,10
BSW 7/16 x 14	30 x 11	22420	14,00
BSW 1/2 x 12	38 x 14	22422	15,90
BSW 9/16 x 12	38 x 14	22424	19,40
BSW 5/8 x 11	45 x 18	22426	21,30
BSW 3/4 x 10	45 x 18	22430	21,30
BSW 7/8 x 9	55 x 22	22434	33,00
BSW 1" x 8	55 x 22	22438	33,00
BSW 1.1/8 x 7	65 x 25	22442	55,00
BSW 1.1/4 x 7	65 x 25	22446	55,00
BSW 1.3/8 x 6	65 x 25	22450	55,00
BSW 1.1/2 x 6	65 x 25	22452	55,00
BSW 1.1/2 x 6	75 x 30	22454	98,00
BSW 1.5/8 x 5	75 x 30	22458	98,00
BSW 1.3/4 x 5	90 x 36	22462	148,00
BSW 1.7/8 x 4.1/2	90 x 36	22466	148,00
BSW 2" x 4.1/2	90 x 36	22470	148,00
BSW 2.1/4 x 4	105 x 36	22472	385,00
BSW 2.1/2 x 4	105 x 36	22474	385,00
BSW 2.3/4 x 3.1/2	120 x 36	22476	473,00
BSW 3" x 3.1/2	120 x 36	22478	473,00
<b>BSF</b>			
BSF 3/16 x 32	20 x 7	22810	9,70
BSF 1/4 x 26	20 x 7	22814	9,70
BSF 5/16 x 22	25 x 9	22816	11,00
BSF 3/8 x 20	30 x 11	22818	13,20
BSF 7/16 x 18	30 x 11	22820	14,00
BSF 1/2 x 16	38 x 10	22822	19,80
BSF 9/16 x 16	38 x 10	22824	22,00
BSF 5/8 x 14	45 x 14	22826	30,00
BSF 3/4 x 12	45 x 14	22830	30,00
BSF 7/8 x 11	55 x 22	22834	38,50
BSF 1" x 10	55 x 20	22838	38,50

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

**Round Split Dies**

BA-thread BS 93

**Cojinetes**

rosca BA, BS 93



**BS1127**

**HSS**

**BA**

Nominal Diameter	Ø o / d		Art.-No.	Price per Piece €
BA 0	20.6 x 6.35	Form A	89000	9,70
BA 1	20.6 x 6.35	Form A	89001	9,70
BA 2	20.6 x 6.35	Form A	89002	9,70
BA 3	20.6 x 6.35	Form A	89003	9,70
BA 4	20.6 x 6.35	Form A	89004	9,70
BA 5	20.6 x 6.35	Form A	89005	9,70
BA 6	20.6 x 6.35	Form A	89006	9,70

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

## Round Dies

Unified Coarse thread

## Cojinetes

rosca gruesa unificada ANSI B 1.1



**DIN 223 (DIN EN 22568)**

**HSS**

**UNC**

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
Nr. 1 x 64	16 x 5	23401	16,50
Nr. 2 x 56	16 x 5	23402	16,50
Nr. 3 x 48	16 x 5	23403	16,50
Nr. 4 x 40	20 x 5	23404	12,10
Nr. 5 x 40	20 x 5	23405	12,10
Nr. 6 x 32	20 x 7	23406	12,10
Nr. 8 x 32	20 x 7	23408	12,10
Nr. 10 x 24	20 x 7	23410	12,10
Nr. 12 x 24	20 x 7	23412	12,10
1/4 x 20	20 x 7	23414	9,70
5/16 x 18	25 x 9	23416	11,00
3/8 x 16	30 x 11	23418	12,10
7/16 x 14	30 x 11	23420	14,00
1/2 x 13	38 x 14	23422	15,90
9/16 x 12	38 x 14	23424	19,40
5/8 x 11	45 x 18	23426	21,30
3/4 x 10	45 x 18	23430	21,30
7/8 x 9	55 x 22	23434	33,00
1" x 8	55 x 22	23438	33,00
1.1/8 x 7	65 x 25	23442	55,00
1.1/4 x 7	65 x 25	23446	55,00
1.3/8 x 6	65 x 25	23450	55,00
1.1/2 x 6	65 x 25	23452	55,00
1.1/2 x 6	75 x 30	23454	98,00
1.5/8 x 5	75 x 30	23458	98,00
1.3/4 x 5	90 x 36	23462	148,00
1.7/8 x 4.1/2	90 x 36	23466	148,00
2" x 4.1/2	90 x 36	23470	148,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

**Round Dies**  
Unified Fine thread

**Cojinetes**  
rosca fina unificada ANSI B 1.1



**DIN 223 (DIN EN 22568)**

**HSS**

**UNF**

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
Nr. 0 x 80	16 x 5	24400	16,50
Nr. 1 x 72	16 x 5	24401	16,50
Nr. 2 x 64	16 x 5	24402	16,50
Nr. 3 x 56	16 x 5	24403	16,50
Nr. 4 x 48	20 x 5	24404	12,10
Nr. 5 x 44	20 x 5	24405	12,10
Nr. 6 x 40	20 x 5	24406	12,10
Nr. 8 x 36	20 x 7	24408	12,10
Nr. 10 x 32	20 x 7	24410	12,10
Nr. 12 x 28	20 x 7	24412	12,10
1/4 x 28	20 x 7	24414	9,70
5/16 x 24	25 x 9	24416	11,00
3/8 x 24	30 x 11	24418	12,10
7/16 x 20	30 x 11	24420	14,00
1/2 x 20	38 x 10	24422	15,90
9/16 x 18	38 x 10	24424	19,40
5/8 x 18	45 x 14	24426	21,30
3/4 x 16	45 x 14	24430	21,30
7/8 x 14	55 x 16	24434	33,00
1" x 12	55 x 16	24438	33,00
1" x 14	55 x 16	24440	33,00
1.1/8 x 12	65 x 18	24442	55,00
1.1/4 x 12	65 x 18	24446	55,00
1.3/8 x 12	65 x 18	24450	55,00
1.1/2 x 12	65 x 18	24452	55,00
1.1/2 x 12	75 x 20	24454	98,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

## Round Dies

Unified Extra Fine thread ANSI B 1.1

## Cojinetes

rosca extra fina unificada ANSI B 1.1



### DIN 223 (DIN EN 22568)

HSS

### UNEF

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
UNEF Nr. 12 x 32	20 x 7	24612	12,10
UNEF 1/4 x 32	20 x 7	24614	12,10
UNEF 5/16 x 32	25 x 9	24615	15,40
UNEF 3/8 x 32	30 x 11	24616	17,60
UNEF 7/16 x 28	30 x 11	24620	17,60
UNEF 1/2 x 28	38 x 10	24621	26,40
UNEF 9/16 x 24	38 x 10	24625	26,40
UNEF 5/8 x 24	45 x 14	24626	42,00
UNEF 11/16 x 24	45 x 14	24627	42,00
UNEF 3/4 x 20	45 x 14	24633	42,00
UNEF 13/16 x 20	55 x 16	24634	49,50
UNEF 7/8 x 20	55 x 16	24635	49,50
UNEF 15/16 x 20	55 x 16	24636	49,50
UNEF 1" x 20	55 x 16	24637	49,50
UNEF 1.1/16 x 18	65 x 18	24645	79,20
UNEF 1.1/8 x 18	65 x 18	24646	79,20
UNEF 1.3/16 x 18	65 x 18	24647	79,20
UNEF 1.1/4 x 18	65 x 18	24648	79,20
UNEF 1.5/16 x 18	65 x 18	24649	79,20
UNEF 1.3/8 x 18	65 x 18	24650	79,20
UNEF 1.7/16 x 18	75 x 20	24651	99,00
UNEF 1.1/2 x 18	75 x 20	24652	99,00

#### Application:

##### for general use

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

**Round Dies**  
Pipe-thread DIN ISO 228

**Cojinetes**  
rosca Gas DIN ISO 228



**DIN 5158 (DIN EN 24231) HSS**

**G (BSP)**

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
G 1/8 x 28	30 x 11	25412	14,50
G 1/4 x 19	38 x 10	25414	14,50
G 3/8 x 19	45 x 14	25416	19,20
G 1/2 x 14	45 x 14	25418	19,20
G 5/8 x 14	55 x 16	25420	32,00
G 3/4 x 14	55 x 16	25422	32,00
G 7/8 x 14	65 x 18	25424	42,00
G 1" x 11	65 x 18	25426	42,00
G 1.1/8 x 11	75 x 20	25430	66,00
G 1.1/4 x 11	75 x 20	25434	66,00
G 1.3/8 x 11	90 x 22	25438	112,00
G 1.1/2 x 11	90 x 22	25442	112,00
G 1.5/8 x 11	90 x 22	25446	112,00
G 1.3/4 x 11	105 x 22	25450	235,00
G 2" x 11	90 x 22	25452	112,00
G 2" x 11	105 x 22	25454	235,00
G 2.1/4 x 11	120 x 22	25458	320,00
G 2.1/2 x 11	120 x 22	25462	425,00
G 2.3/4 x 11	120 x 22	25466	425,00
G 3" x 11	130 x 25	25470	470,00
G 3.1/2 x 11	150 x 25	25474	760,00
G 4" x 11	160 x 25	25478	940,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación



## Round Dies

tapered pipe thread, taper 1:16, con. 55°

## Cojinetes

rosca inglesa para tubo, conicidad 1:16



## HSS

## R (BSPT)

Nominal Diameter	Ø o / d		Art.-No.	Price per Piece €
PT 1/8 x 28	38 x 11	Form A	97006	16,00
PT 1/4 x 19	38 x 16	Form A	97014	16,00
PT 3/8 x 19	50 x 18	Form A	97020	32,50
PT 1/2 x 14	50 x 22	Form A	97022	32,50
PT 3/4 x 14	50 x 24	Form A	97030	32,50
PT 1" x 11	63 x 28	Form A	97040	54,00
PT 1.1/4 x 11	75 x 32	Form A	97048	73,00

### Application:

#### for general use

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

### Aplicación:

#### para uso general

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

## Round Dies

armoured tube thread DIN 40 430

## Cojinetes

rosca para tubos blindados DIN 40 430



**DIN 40434**

**HSS**

**PG**

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
PG 7 x 20	38 x 10	25807	35,60
PG 9 x 18	45 x 14	25809	43,50
PG 11 x 18	45 x 14	25811	43,50
PG 13.5 x 18	45 x 14	25813	43,50
PG 16 x 18	55 x 16	25816	51,00
PG 21 x 16	65 x 18	25821	79,00
PG 29 x 16	65 x 18	25829	79,00
PG 36 x 16	90 x 22	25836	155,00
PG 42 x 16	105 x 22	25842	197,00
PG 48 x 16	105 x 22	25848	197,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

## Round Dies

american tapered pipe thread, taper 1:16

## Cojinetes

rosca american para tubo, conicidad 1:16



### HSS

### NPT / NPTF

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
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#### NPT

NPT 1/16 x 27	25 x 9	23610	29,00
NPT 1/8 x 27	30 x 11	23612	31,20
NPT 1/4 x 18	38 x 14	23614	37,50
NPT 3/8 x 18	45 x 14	23616	47,50
NPT 1/2 x 14	45 x 18	23618	47,50
NPT 5/8 x 14	55 x 22	23620	76,00
NPT 3/4 x 14	55 x 22	23622	76,00
NPT 7/8 x 14	65 x 25	23624	112,00
NPT 1" x 11.5	65 x 25	23626	112,00
NPT 1.1/4 x 11.5	75 x 26	23634	132,00
NPT 1.1/2 x 11.5	90 x 27	23642	215,00
NPT 2" x 11.5	105 x 28	23654	286,00

#### NPTF

NPTF 1/8 x 27	50 x 11	Form A	98072	32,30
NPTF 1/4 x 18	50 x 14	Form A	98074	32,30
NPTF 3/8 x 18	50 x 14	Form A	98076	32,30
NPTF 1/2 x 14	50 x 18	Form A	98078	32,30
NPTF 3/4 x 14	50 x 22	Form A	98080	32,30
NPTF 1" x 11.5	50 x 25	Form A	98082	32,30

#### Application:

##### for general use

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

#### Aplicación:

##### para uso general

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

**Round Dies, gun nosed**

metric ISO-thread DIN 13

**Cojinetes, corte en espiral**

métrica ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS-E**

**Tolerance 6g**

**M**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 3 x 0.5	20 x 5	57426	7,40
M 4 x 0.7	20 x 5	57430	7,40
M 5 x 0.8	20 x 7	57434	7,60
M 6 x 1.0	20 x 7	57438	7,60
M 8 x 1.25	25 x 9	57442	10,80
M 10 x 1.5	30 x 11	57446	15,40
M 12 x 1.75	38 x 14	57450	24,20
M 14 x 2.0	38 x 14	57454	24,20
M 16 x 2.0	45 x 18	57458	36,50
M 18 x 2.5	45 x 18	57462	36,50
M 20 x 2.5	45 x 18	57466	36,50
M 22 x 2.5	55 x 22	57470	65,00
M 24 x 3.0	55 x 22	57474	65,00
M 27 x 3.0	65 x 25	57476	96,00
M 30 x 3.5	65 x 25	57478	96,00

**Benefit:**

- high cutting ability
- reduction of torque
- uninterrupted swarf flow in direction of feed
- prevents jamming of swarf

**Application:**

- abrasive material up to 1200 N/mm<sup>2</sup>
- INOX (stainless steel)
- and general use

**Ventajas:**

- gran capacidad de corte
- reduce el esfuerzo
- expulsión continua de viruta en la dirección del giro
- previene atascos por viruta

**Aplicación:**

- materiales de difícil mecanizado hasta 1200 N/mm<sup>2</sup>
- aceros inoxidables (materiales VA)
- uso general

## Round Dies, gun nosed

metric-fine ISO-thread DIN 13

## Cojinetes, corte en espiral

métrica fina ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS-E**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 6 x 0.75	20 x 7	56418	10,40
M 8 x 0.75	25 x 9	56424	11,60
M 8 x 1.0	25 x 9	56426	11,60
M 10 x 1.0	30 x 11	56436	12,80
M 10 x 1.25	30 x 11	56438	12,80
M 12 x 1.0	38 x 10	56444	22,00
M 12 x 1.25	38 x 10	56446	22,00
M 12 x 1.5	38 x 10	56448	22,00
M 14 x 1.25	38 x 10	56454	22,00
M 14 x 1.5	38 x 10	56456	22,00
M 16 x 1.5	45 x 14	56466	35,20
M 18 x 1.5	45 x 14	56472	35,20
M 18 x 2.0	45 x 14	56474	35,20
M 20 x 1.5	45 x 14	56484	35,20
M 20 x 2.0	45 x 14	56486	35,20
M 22 x 1.5	55 x 16	56494	78,00
M 24 x 1.5	55 x 16	56604	78,00

### Benefit:

- high cutting ability
- reduction of torque
- uninterrupted swarf flow in direction of feed
- prevents jamming of swarf

### Application:

- abrasive material up to 1200 N/mm<sup>2</sup>
- INOX (stainless steel)
- and general use

### Ventajas:

- gran capacidad de corte
- reduce el esfuerzo
- expulsión continua de viruta en la dirección del giro
- previene atascos por viruta

### Aplicación:

- materiales de difícil mecanizado hasta 1200 N/mm<sup>2</sup>
- aceros inoxidables (materiales VA)
- uso general

**Round Dies, gun nosed**

Pipe-thread DIN ISO 228

**Cojinetes, corte en espiral**

rosca Gas DIN ISO 228



**DIN 5158 (DIN EN 24231) HSS-E**

**G (BSP)**

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
G 1/8 x 28	30 x 11	55412	22,00
G 1/4 x 19	38 x 10	55414	22,00
G 3/8 x 19	45 x 14	55416	33,00
G 1/2 x 14	45 x 14	55418	33,00
G 3/4 x 14	55 x 16	55422	60,00
G 1" x 11	65 x 18	55426	86,00

**Benefit:**

- high cutting ability
- reduction of torque
- uninterrupted swarf flow in direction of feed
- prevents jamming of swarf

**Application:**

- abrasive material up to 1200 N/mm<sup>2</sup>
- INOX (stainless steel)
- and general use

**Ventajas:**

- gran capacidad de corte
- reduce el esfuerzo
- expulsión continua de viruta en la dirección del giro
- previene atascos por viruta

**Aplicación:**

- materiales de difícil mecanizado hasta 1200 N/mm<sup>2</sup>
- aceros inoxidables (materiales VA)
- uso general

**Round Dies, *Left Hand***

metric ISO-thread DIN 13

**Cojinetes, *izquierdas***

métrica ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**M**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 2 x 0.4	16 x 5	27216	17,60
M 3 x 0.5	20 x 5	27226	7,70
M 4 x 0.7	20 x 5	27230	7,70
M 5 x 0.8	20 x 7	27234	8,30
M 6 x 1.0	20 x 7	27238	8,30
M 8 x 1.25	25 x 9	27242	9,60
M 10 x 1.5	30 x 11	27246	12,70
M 12 x 1.75	38 x 14	27250	17,90
M 14 x 2.0	38 x 14	27254	20,50
M 16 x 2.0	45 x 18	27258	28,60
M 18 x 2.5	45 x 18	27262	28,60
M 20 x 2.5	45 x 18	27266	28,60
M 22 x 2.5	55 x 22	27270	42,00
M 24 x 3.0	55 x 22	27274	42,00
M 27 x 3.0	65 x 25	27276	77,00
M 30 x 3.5	65 x 25	27278	77,00
M 33 x 3.5	65 x 25	27280	77,00
M 36 x 4.0	65 x 25	27282	77,00
M 39 x 4.0	75 x 30	27284	127,00
M 42 x 4.5	75 x 30	27286	127,00
M 45 x 4.5	90 x 36	27288	201,00
M 48 x 5.0	90 x 36	27290	201,00
M 52 x 5.0	90 x 36	27292	201,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

**Round Dies, *Left Hand***

metric-fine ISO-thread DIN 13

**Cojinetes, *izquierdas***

métrica fina ISO-rosca DIN 13



**DIN 223 (DIN EN 22568)**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
M 6 x 0.75	20 x 7	26207	12,70
M 8 x 0.75	25 x 9	26210	13,80
M 8 x 1.0	25 x 9	26211	13,80
M 10 x 1.0	30 x 11	26215	16,50
M 10 x 1.25	30 x 11	26216	16,50
M 12 x 1.0	38 x 10	26220	20,20
M 12 x 1.25	38 x 10	26221	20,20
M 12 x 1.5	38 x 10	26222	20,20
M 14 x 1.25	38 x 10	26227	21,00
M 14 x 1.5	38 x 10	26228	21,00
M 16 x 1.0	45 x 14	26231	28,60
M 16 x 1.5	45 x 14	26233	28,60
M 18 x 1.5	45 x 14	26236	32,00
M 20 x 1.5	45 x 14	26240	32,00
M 22 x 1.5	55 x 16	26245	45,50
M 24 x 1.5	55 x 16	26250	45,50
M 24 x 2.0	55 x 16	26251	45,50
M 30 x 2.0	65 x 18	26264	88,50

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación



**Round Dies, *Left Hand***

Whitworth-thread BS 84

**Cojinetes, *izquierdas***

rosca-Whitworth BS 84



**DIN 223 (DIN EN 22568)**

**HSS**

**BSW**

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
1/8 x 40	20 x 5	22206	14,90
5/32 x 32	20 x 5	22208	14,90
3/16 x 24	20 x 7	22210	14,90
1/4 x 20	20 x 7	22214	14,90
5/16 x 18	25 x 9	22216	17,60
3/8 x 16	30 x 11	22218	21,00
7/16 x 14	30 x 11	22220	21,00
1/2 x 12	38 x 14	22222	33,00
9/16 x 12	38 x 14	22224	33,00
5/8 x 11	45 x 18	22226	42,00
3/4 x 10	45 x 18	22230	42,00
7/8 x 9	55 x 22	22234	61,00
1" x 8	55 x 22	22238	61,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

**Round Dies, *Left Hand***

Unified thread ANSI B 1.1

**Cojinetes, *izquierdas***

rosca unificada ANSI B 1.1



**DIN 223 (DIN EN 22568)**

**HSS**

**UNC / UNF**

Nominal Diameter mm	Ø o / d	Art.-No.	Price per Piece €
<b>UNC</b>			
UNC Nr. 6 x 32	20 x 7	23206	18,20
UNC Nr. 8 x 32	20 x 7	23208	18,20
UNC Nr. 10 x 24	20 x 7	23210	18,20
UNC 1/4 x 20	20 x 7	23214	14,90
UNC 5/16 x 18	25 x 9	23216	17,60
UNC 3/8 x 16	30 x 11	23218	21,00
UNC 7/16 x 14	38 x 14	23220	21,00
UNC 1/2 x 13	38 x 14	23222	33,00
UNC 9/16 x 12	38 x 14	23224	33,00
UNC 5/8 x 11	45 x 18	23226	42,00
UNC 3/4 x 10	45 x 18	23230	42,00
UNC 7/8 x 9	55 x 22	23234	61,00
UNC 1" x 8	55 x 22	23238	61,00
<b>UNF</b>			
UNF Nr. 10 x 32	20 x 7	24210	18,20
UNF 1/4 x 28	20 x 7	24214	14,90
UNF 5/16 x 24	25 x 9	24216	17,60
UNF 3/8 x 24	30 x 11	24218	21,00
UNF 7/16 x 20	30 x 11	24220	21,00
UNF 1/2 x 20	38 x 10	24222	33,00
UNF 9/16 x 18	38 x 10	24224	33,00
UNF 5/8 x 18	45 x 14	24226	42,00
UNF 3/4 x 16	45 x 14	24230	42,00
UNF 7/8 x 14	55 x 16	24234	61,00
UNF 1" x 12	55 x 16	24238	61,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

## Round Dies, *Left Hand*

Pipe-thread DIN ISO 228

## Cojinetes, *izquierdas*

rosca Gas DIN ISO 228



**DIN 5158 (DIN EN 24231) HSS**

**G (BSP)**

Nominal Diameter	Ø o / d	Art.-No.	Price per Piece €
G 1/8 x 28	30 x 11	25212	25,80
G 1/4 x 19	38 x 10	25214	29,70
G 3/8 x 19	45 x 14	25216	43,00
G 1/2 x 14	45 x 14	25218	43,00
G 5/8 x 14	55 x 16	25220	58,00
G 3/4 x 14	55 x 16	25222	73,00
G 7/8 x 14	65 x 18	25224	79,50
G 1" x 11	65 x 18	25226	79,50
G 1.1/8 x 11	75 x 20	25230	98,00
G 1.1/4 x 11	75 x 20	25234	98,00
G 1.3/8 x 11	90 x 22	25238	154,00
G 1.1/2 x 11	90 x 22	25242	154,00
G 1.5/8 x 11	90 x 22	25246	154,00
G 1.3/4 x 11	105 x 22	25250	286,00
G 2" x 11	105 x 22	25254	286,00

**Application:**

**for general use**

- non abrasive material up to 800 N/mm<sup>2</sup>
- unalloyed and low alloyed steel

**Aplicación:**

**para uso general**

- materiales de buena mecanización hasta 800 N/mm<sup>2</sup>
- aceros no aleados y de baja aleación

**Hexagon Die Nuts**  
metric ISO-thread DIN 13

**Cojinetes Hexagonales**  
métrica ISO-rosca DIN 13



**DIN 382**

**HSS**

**Tolerance 6g**

**M**

Nominal Diameter mm	Width across flats mm	Art.-No.	Price per Piece €
M 3 x 0.5	19 x 5	27126	9,50
M 3.5 x 0.6	19 x 5	27128	9,50
M 4 x 0.7	19 x 5	27130	9,50
M 5 x 0.8	19 x 7	27134	9,50
M 6 x 1.0	19 x 7	27138	9,50
M 7 x 1.0	22 x 9	27140	10,20
M 8 x 1.25	22 x 9	27142	10,20
M 9 x 1.25	22 x 9	27144	10,20
M 10 x 1.5	27 x 11	27146	12,10
M 11 x 1.5	27 x 11	27148	12,10
M 12 x 1.75	36 x 14	27150	16,80
M 14 x 2.0	36 x 14	27154	16,80
M 16 x 2.0	41 x 18	27158	23,70
M 18 x 2.5	41 x 18	27162	23,70
M 20 x 2.5	41 x 18	27166	23,70
M 22 x 2.5	50 x 22	27170	39,60
M 24 x 3.0	50 x 22	27174	48,50
M 27 x 3.0	60 x 25	27176	73,00
M 30 x 3.5	60 x 25	27178	73,00
M 33 x 3.5	60 x 25	27180	73,00
M 36 x 4.0	60 x 25	27182	73,00
M 39 x 4.0	70 x 30	27184	120,00
M 42 x 4.5	70 x 30	27186	120,00
M 45 x 4.5	85 x 36	27188	168,00
M 48 x 5.0	85 x 36	27190	168,00
M 52 x 5.0	85 x 36	27192	168,00
M 56 x 5.5	100 x 36	27194	293,00
M 60 x 5.5	100 x 36	27196	293,00
M 64 x 6.0	100 x 36	27198	293,00
M 68 x 6.0	115 x 36	27199	380,00

**Application:**

For cleaning and repairing damaged threads and for general use in awkward places.

**Aplicación:**

Para reparar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.

## Hexagon Die Nuts

metric-fine ISO-thread DIN 13

## Cojinetes Hexagonales

métrica fina ISO-rosca DIN 13



**DIN 382**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Width across flats mm	Art.-No.	Price per Piece €
M 3 x 0.35	19 x 5	26108	18,30
M 4 x 0.35	19 x 5	26110	18,30
M 4 x 0.5	19 x 5	26112	18,30
M 5 x 0.5	19 x 5	26114	18,30
M 5 x 0.75	19 x 7	26116	18,30
M 6 x 0.5	19 x 5	26117	18,30
M 6 x 0.75	19 x 7	26118	18,30
M 7 x 0.75	22 x 9	26120	19,50
M 8 x 0.5	22 x 9	26122	19,50
M 8 x 0.75	22 x 9	26124	19,50
M 8 x 1.0	22 x 9	26126	19,50
M 9 x 0.75	22 x 9	26128	19,50
M 9 x 1.0	22 x 9	26130	19,50
M 10 x 0.75	27 x 11	26132	19,50
M 10 x 1.0	27 x 11	26136	19,50
M 10 x 1.25	27 x 11	26138	19,50
M 11 x 1.0	27 x 11	26140	27,00
M 11 x 1.25	27 x 11	26142	27,00
M 12 x 0.75	36 x 10	26143	27,00
M 12 x 1.0	36 x 10	26144	27,00
M 12 x 1.25	36 x 10	26146	27,00
M 12 x 1.5	36 x 10	26148	27,00
M 13 x 1.0	36 x 10	26150	30,50
M 13 x 1.5	36 x 10	26151	30,50
M 14 x 0.75	36 x 10	26152	30,50
M 14 x 1.0	36 x 10	26153	30,50
M 14 x 1.25	36 x 10	26154	30,50
M 14 x 1.5	36 x 10	26156	30,50
M 15 x 1.0	36 x 10	26158	36,60
M 15 x 1.5	36 x 10	26160	36,60
M 16 x 1.0	41 x 14	26162	37,50
M 16 x 1.25	41 x 14	26164	37,50
M 16 x 1.5	41 x 14	26166	37,50
M 18 x 1.0	41 x 14	26170	39,60
M 18 x 1.25	41 x 14	26171	39,60
M 18 x 1.5	41 x 14	26172	39,60
M 18 x 2.0	41 x 14	26174	39,60
M 20 x 1.0	41 x 14	26178	39,60
M 20 x 1.25	41 x 14	26180	39,60
M 20 x 1.5	41 x 14	26184	39,60
M 20 x 2.0	41 x 14	26186	39,60
M 21 x 1.5	41 x 14	26188	57,20
M 22 x 1.0	50 x 16	26190	57,20
M 22 x 1.25	50 x 16	26192	57,20
M 22 x 1.5	50 x 16	26194	57,20
M 22 x 2.0	50 x 16	26196	57,20
M 23 x 1.5	50 x 16	26198	57,20
M 24 x 1.0	50 x 16	26700	57,20
M 24 x 1.25	50 x 16	26702	57,20
M 24 x 1.5	50 x 16	26704	57,20



**Hexagon Die Nuts**  
metric-fine ISO-thread DIN 13

**Cojinetes Hexagonales**  
métrica fina ISO-rosca DIN 13



**DIN 382**

**HSS**

**Tolerance 6g**

**Mf**

Nominal Diameter mm	Width across flats mm	Art.-No.	Price per Piece €
M 24 x 2.0	50 x 16	26706	57,20
M 25 x 1.0	50 x 16	26707	83,00
M 25 x 1.5	50 x 16	26708	83,00
M 26 x 1.0	50 x 16	26710	83,00
M 26 x 1.5	50 x 16	26712	83,00
M 26 x 2.0	50 x 16	26714	83,00
M 27 x 1.0	60 x 18	26717	86,00
M 27 x 1.5	60 x 18	26716	86,00
M 27 x 2.0	60 x 18	26718	86,00
M 28 x 1.0	60 x 18	26720	86,00
M 28 x 1.5	60 x 18	26722	86,00
M 28 x 2.0	60 x 18	26724	86,00
M 29 x 1.5	60 x 18	26726	86,00
M 30 x 1.0	60 x 18	26728	86,00
M 30 x 1.5	60 x 18	26730	86,00
M 30 x 2.0	60 x 18	26732	86,00
M 30 x 3.0	60 x 25	26734	86,00
M 32 x 1.5	60 x 18	26736	86,00
M 32 x 2.0	60 x 18	26735	86,00
M 32 x 3.0	60 x 25	26737	86,00
M 33 x 1.5	60 x 18	26738	86,00
M 33 x 2.0	60 x 18	26740	86,00
M 33 x 3.0	60 x 25	26742	86,00
M 34 x 1.5	60 x 18	26744	86,00
M 34 x 2.0	60 x 18	26746	86,00
M 35 x 1.5	60 x 18	26748	86,00
M 36 x 1.5	60 x 18	26750	86,00
M 36 x 2.0	60 x 18	26752	86,00
M 36 x 3.0	60 x 25	26754	86,00
M 38 x 1.5	70 x 20	26756	144,00
M 39 x 1.5	70 x 20	26758	144,00
M 39 x 2.0	70 x 20	26760	144,00
M 39 x 3.0	70 x 30	26762	144,00
M 40 x 1.5	70 x 20	26764	144,00
M 40 x 2.0	70 x 20	26766	144,00
M 40 x 3.0	70 x 30	26768	144,00
M 42 x 1.5	70 x 20	26770	144,00
M 42 x 2.0	70 x 20	26772	144,00
M 42 x 3.0	70 x 30	26774	144,00
M 45 x 1.5	85 x 22	26776	210,00
M 45 x 2.0	85 x 22	26778	210,00
M 45 x 3.0	85 x 36	26780	210,00
M 48 x 1.5	85 x 22	26782	210,00
M 48 x 2.0	85 x 22	26784	210,00
M 48 x 3.0	85 x 36	26786	210,00
M 50 x 1.5	85 x 22	26788	210,00
M 50 x 2.0	85 x 22	26790	210,00
M 50 x 3.0	85 x 36	26792	210,00
M 52 x 1.5	85 x 22	26794	210,00
M 52 x 2.0	85 x 22	26796	210,00
M 52 x 3.0	85 x 36	26798	210,00

## Hexagon Die Nuts

Whitworth-Gewinde BS 84

## Cojinetes Hexagonales

rosca-Whitworth BS 84



**DIN 382**

**HSS**

**BSW / BSF**

Nominal Diameter	Width across flats mm	Art.-No.	Price per Piece €
<b>BSW</b>			
BSW 1/8 x 40	19 x 5	22106	12,10
BSW 3/16 x 24	19 x 7	22110	12,10
BSW 1/4 x 20	19 x 7	22114	12,10
BSW 5/16 x 18	22 x 9	22116	12,60
BSW 3/8 x 16	27 x 11	22118	15,00
BSW 7/16 x 14	27 x 11	22120	15,00
BSW 1/2 x 12	36 x 14	22122	18,30
BSW 9/16 x 12	36 x 14	22124	18,30
BSW 5/8 x 11	41 x 18	22126	25,40
BSW 3/4 x 10	41 x 18	22130	25,40
BSW 7/8 x 9	50 x 22	22134	52,00
BSW 1" x 8	50 x 22	22138	52,00
BSW 1.1/8 x 7	60 x 25	22142	79,00
BSW 1.1/4 x 7	60 x 25	22146	79,00
BSW 1.3/8 x 6	60 x 25	22150	79,00
BSW 1.1/2 x 6	70 x 30	22154	93,50
BSW 2" x 4.1/2	85 x 36	22170	122,50
BSW 2.1/4 x 4	100 x 22	22172	430,00
BSW 2.1/2 x 4	115 x 22	22174	430,00
BSW 2.3/4 x 3.1/2	115 x 36	22176	534,00
BSW 3" x 3.1/2	115 x 36	22178	534,00
<b>BSF</b>			
BSF 3/16 x 32	19 x 7	22510	13,50
BSF 1/4 x 26	19 x 7	22514	13,50
BSF 5/16 x 22	22 x 9	22516	15,00
BSF 3/8 x 20	27 x 11	22518	18,40
BSF 7/16 x 18	27 x 11	22520	18,40
BSF 1/2 x 16	36 x 10	22522	28,80
BSF 9/16 x 16	36 x 10	22524	28,80
BSF 5/8 x 14	41 x 14	22526	44,00
BSF 3/4 x 12	41 x 14	22530	44,00
BSF 7/8 x 11	50 x 16	22534	52,00
BSF 1" x 10	50 x 16	22538	52,00

### Application:

For cleaning and repairing damaged threads and for general use in awkward places.

### Aplicación:

Para repasar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.

## Hexagon Die Nuts

Whitworth-thread BS 84

## Cojinetes Hexagonales

rosca-Whitworth BS 84



**DIN 382**

**HSS**

**UNC / UNF**

Nominal Diameter	Width across flats mm	Art.-No.	Price per Piece €
<b>UNC</b>			
UNC 1/4 x 20	19 x 7	23114	12,10
UNC 5/16 x 18	22 x 9	23116	12,60
UNC 3/8 x 16	27 x 11	23118	15,00
UNC 7/16 x 14	27 x 11	23120	15,00
UNC 1/2 x 13	36 x 14	23122	18,30
UNC 9/16 x 12	36 x 14	23124	18,30
UNC 5/8 x 11	41 x 18	23126	25,40
UNC 3/4 x 10	41 x 18	23130	25,40
UNC 7/8 x 9	50 x 22	23134	52,00
UNC 1" x 8	50 x 22	23138	52,00
UNC 1.1/8 x 7	60 x 25	23142	79,00
UNC 1.1/4 x 7	60 x 25	23146	79,00
UNC 1.3/8 x 6	60 x 25	23150	79,00
UNC 1.1/2 x 6	70 x 30	23154	93,50
<b>UNF</b>			
UNF 1/4 x 28	19 x 7	24114	12,10
UNF 5/16 x 24	22 x 9	24116	12,60
UNF 3/8 x 24	27 x 11	24118	15,00
UNF 7/16 x 20	27 x 11	24120	15,00
UNF 1/2 x 20	36 x 10	24122	18,30
UNF 9/16 x 18	36 x 10	24124	18,30
UNF 5/8 x 18	41 x 14	24126	25,40
UNF 3/4 x 16	41 x 14	24130	25,40
UNF 7/8 x 14	50 x 16	24134	52,00
UNF 1" x 12	50 x 16	24138	52,00
UNF 1.1/8 x 12	60 x 18	24142	79,00
UNF 1.1/4 x 12	60 x 18	24146	79,00
UNF 1.3/8 x 12	60 x 18	24150	79,00
UNF 1.1/2 x 12	70 x 20	24154	93,50

### Application:

For cleaning and repairing damaged threads and for general use in awkward places.

### Aplicación:

Para reparar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.



**Hexagon Die Nuts**  
Unified thread ANSI B 1.1

**Cojinetes Hexagonales**  
rosca unificada ANSI B 1.1



**DIN 382**

**HSS**

**Tolerance 2B**

**8-UN**

Nominal Diameter	Width across flats mm	Art.-No.	Price per Piece €
UN 1.1/8 x 8	60 x 25	24171	79,00
UN 1.1/4 x 8	60 x 25	24172	79,00
UN 1.3/8 x 8	60 x 25	24173	79,00
UN 1.1/2 x 8	70 x 30	24174	143,00
UN 1.5/8 x 8	70 x 30	24175	143,00
UN 1.3/4 x 8	85 x 36	24176	143,00
UN 1.7/8 x 8	85 x 22	24177	143,00
UN 2" x 8	85 x 22	24178	143,00
UN 2.1/8 x 8	85 x 22	24179	242,00
UN 2.1/4 x 8	100 x 22	24180	242,00
UN 2.1/2 x 8	115 x 22	24181	363,00

**Application:**

For cleaning and repairing damaged threads and for general use in awkward places.

**Aplicación:**

Para repasar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.

**Hexagon Die Nuts**  
Pipe-thread DIN ISO 228

**Cojinetes Hexagonales**  
rosca Gas DIN ISO 228



**DIN 382**

**HSS**

**G (BSP)**

Nominal Diameter	Width across flats mm	Art.-No.	Price per Piece €
G 1/8 x 28	27 x 11	25512	17,00
G 1/4 x 19	36 x 10	25514	19,80
G 3/8 x 19	41 x 14	25516	29,30
G 1/2 x 14	41 x 14	25518	29,30
G 5/8 x 14	50 x 16	25520	49,50
G 3/4 x 14	50 x 16	25522	49,50
G 7/8 x 14	60 x 18	25524	66,00
G 1" x 11	60 x 18	25526	66,00
G 1.1/8 x 11	70 x 20	25530	98,00
G 1.1/4 x 11	70 x 20	25534	98,00
G 1.3/8 x 11	85 x 22	25538	161,00
G 1.1/2 x 11	85 x 22	25542	161,00
G 1.5/8 x 11	85 x 22	25546	161,00
G 1.3/4 x 11	100 x 22	25550	242,00
G 2" x 11	100 x 22	25554	242,00

**Application:**

For cleaning and repairing damaged threads and for general use in awkward places.

**Aplicación:**

Para reparar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.

## Hexagon Die Nuts

tapered pipe thread, taper 1:16, con. 55°

## Cojinetes Hexagonales

rosca inglesa para tubo, conicidad 1:16



**DIN 382**

**HSS**

**R (BSPT)**

Nominal Diameter	Width across flats mm	Art.-No.	Price per Piece €
R 1/8 x 28	27 x 11	23562	36,00
R 1/4 x 19	36 x 14	23564	43,00
R 3/8 x 19	41 x 15	23566	55,00
R 1/2 x 14	50 x 19	23568	55,00
R 3/4 x 14	60 x 20	23572	87,00
R 1" x 11	60 x 25	23576	128,00
R 1.1/4 x 11	85 x 26	23578	152,00
R 1.1/2 x 11	85 x 26	23580	247,00
R 2" x 11	100 x 31	23584	330,00

### Application:

For cleaning and repairing damaged threads and for general use in awkward places.

### Aplicación:

Para repasar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.

## Hexagon Die Nuts

american tapered pipe thread, taper 1:16

## Cojinetes Hexagonales

rosca american para tubo conicidad 1:16



**DIN 382**

**HSS**

**NPT**

Nominal Diameter	Width across flats mm	Art.-No.	Price per Piece €
NPT 1/16 x 27	22 x 9	23510	33,00
NPT 1/8 x 27	27 x 11	23512	36,00
NPT 1/4 x 18	36 x 14	23514	43,00
NPT 3/8 x 18	41 x 14	23516	55,00
NPT 1/2 x 14	41 x 14	23518	55,00
NPT 3/4 x 14	50 x 22	23522	87,00
NPT 1" x 11.5	60 x 25	23526	128,00
NPT 1.1/4 x 11.5	70 x 25	23528	152,00
NPT 1.1/2 x 11.5	85 x 28	23530	247,00
NPT 2" x 11.5	100 x 28	23534	330,00

**Application:**

For cleaning and repairing damaged threads and for general use in awkward places.

**Aplicación:**

Para repasar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.

## Hexagon Die Nuts, *Left Hand*

metric ISO-thread DIN 13

## Cojinetes Hexagonales, *izquierdas*

métrica ISO-rosca DIN 13



**DIN 382**

**HSS**

**M**

Nominal Diameter	Width across flats mm	Art.-No.	Price per Piece €
M 3 x 0.5	19 x 5	28426	11,00
M 4 x 0.7	19 x 5	28430	11,00
M 5 x 0.8	19 x 7	28434	12,20
M 6 x 1.0	19 x 7	28438	12,20
M 8 x 1.25	22 x 9	28442	13,30
M 10 x 1.5	27 x 11	28446	18,80
M 12 x 1.75	36 x 14	28450	28,70
M 14 x 2.0	36 x 14	28454	28,70
M 16 x 2.0	41 x 18	28458	45,30
M 18 x 2.5	41 x 18	28462	45,30
M 20 x 2.5	41 x 18	28466	45,30
M 22 x 2.5	50 x 22	28470	60,70
M 24 x 3.0	50 x 22	28474	60,70
M 27 x 3.0	60 x 25	28476	93,00
M 30 x 3.5	60 x 25	28478	93,00
M 33 x 3.5	60 x 25	28480	93,00
M 36 x 4.0	60 x 25	28482	93,00
M 39 x 4.0	70 x 30	28484	155,00
M 42 x 4.5	70 x 30	28486	155,00
M 45 x 4.5	85 x 36	28488	219,00
M 48 x 5.0	85 x 36	28490	219,00
M 52 x 5.0	85 x 36	28492	219,00

**Application:**

For cleaning and repairing damaged threads and for general use in awkward places.

**Aplicación:**

Para repasar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.

**Hexagon Die Nuts, *Left Hand***

Pipe-thread DIN ISO 228

**Cojinetes Hexagonales, *izquierdas***

rosca Gas DIN ISO 228



**DIN 382**

**HSS**

**G (BSP)**

Nominal Diameter	Width across flats mm	Art.-No.	Price per Piece €
G 1/8 x 28	27 x 11	25612	28,60
G 1/4 x 19	36 x 10	25614	33,00
G 3/8 x 19	41 x 14	25616	48,50
G 1/2 x 14	41 x 14	25618	48,50
G 5/8 x 14	50 x 16	25620	64,00
G 3/4 x 14	50 x 16	25622	64,00
G 1" x 11	60 x 18	25626	82,00
G 1.1/8 x 11	70 x 20	25630	127,00
G 1.1/4 x 11	70 x 20	25634	127,00
G 1.3/8 x 11	85 x 22	25638	210,00
G 1.1/2 x 11	85 x 22	25642	210,00
G 1.3/4 x 11	100 x 22	25650	315,00
G 2" x 11	100 x 22	25654	315,00

**Application:**

For cleaning and repairing damaged threads and for general use in awkward places.

**Aplicación:**

Para repasar y reparar las roscas deterioradas, y uso en general en puntos de difícil acceso.

Sets	Juegos
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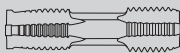
## HexTap Sets

in wooden boxes

## Juegos de HexTap

en cajas de madera



	Art.-No.	Preis
		€
		
<b>M</b>		
M 3-4-5-6-8-10-12-14-16-18-20	48601	143,00
M 3-4-5-6-8-10-12-14-16-18-20-22-24	48602	209,00
M 3-4-5-6-8-10-12-14-16-18-20-22-24-27-30	48603	324,00
<b>Mf</b>		
M 4x0,5 - 5x0,5 - 6x0,75 - 8x0,75 - 8x1 - 10x1		
M 12x1 - 12x1,5 - 14x1,25 - 14x1,5 - 16x1,5		
M 18x1,5 - M 20x1,5	48605	187,00
M 4x0,5 - 5x0,5 - 6x0,75 - 8x0,75 - 8x1 - 10x1		
M 12x1 - 12x1,5 - 14x1,25 - 14x1,5 - 16x1,5		
M 18x1,5 - M 20x1,5 - 22x1,5 - 24x1,5	48606	275,00
<b>G (BSP)</b>		
G 1/8 - 1/4 - 3/8 - 1/2 - 3/4 - 1"	48608	176,00
G 1/8 - 1/4 - 3/8 - 1/2 - 3/4 - 1" - 1.1/4 - 1.1/2	48609	407,00



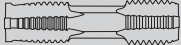

## HexTap Sets

in wooden boxes

## Juegos de HexTap

en cajas de madera



	Art.-No.	Preis
		€
 		
<b>M</b>		
M 3-4-5-6-8-10-12-14-16-18-20	48621	264,00
M 3-4-5-6-8-10-12-14-16-18-20-22-24	48622	385,00
M 3-4-5-6-8-10-12-14-16-18-20-22-24-27-30	48623	605,00
<b>Mf</b>		
M 4x0,5 - 5x0,5 - 6x0,75 - 8x0,75 - 8x1 - 10x1		
M 12x1 - 12x1,5 - 14x1,25 - 14x1,5 - 16x1,5		
M 18x1,5 - M 20x1,5	48625	374,00
M 4x0,5 - 5x0,5 - 6x0,75 - 8x0,75 - 8x1 - 10x1		
M 12x1 - 12x1,5 - 14x1,25 - 14x1,5 - 16x1,5		
M 18x1,5 - M 20x1,5 - 22x1,5 - 24x1,5	48626	533,00
<b>G (BSP)</b>		
G 1/8 - 1/4 - 3/8 - 1/2 - 3/4 - 1"	48628	330,00
G 1/8 - 1/4 - 3/8 - 1/2 - 3/4 - 1" - 1.1/4 - 1.1/2	48629	759,00

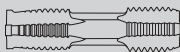

## HexTap Sets

in wooden boxes

## Juegos de HexTap

en cajas de madera



	Art.-No.	Preis
		€
 		
<b>M</b>		
M 3-4-5-6-8-10-12-14-16-18-20	48641	297,00
M 3-4-5-6-8-10-12-14-16-18-20-22-24	48642	434,00
M 3-4-5-6-8-10-12-14-16-18-20-22-24-27-30	48643	665,00
<b>Mf</b>		
M 4x0,5 - 5x0,5 - 6x0,75 - 8x0,75 - 8x1 - 10x1		
M 12x1 - 12x1,5 - 14x1,25 - 14x1,5 - 16x1,5		
M 18x1,5 - M 20x1,5	48645	418,00
M 4x0,5 - 5x0,5 - 6x0,75 - 8x0,75 - 8x1 - 10x1		
M 12x1 - 12x1,5 - 14x1,25 - 14x1,5 - 16x1,5		
M 18x1,5 - M 20x1,5 - 22x1,5 - 24x1,5	48646	594,00
<b>G (BSP)</b>		
G 1/8 - 1/4 - 3/8 - 1/2 - 3/4 - 1"	48648	363,00
G 1/8 - 1/4 - 3/8 - 1/2 - 3/4 - 1" - 1.1/4 - 1.1/2	48649	836,00

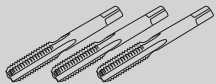

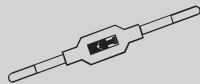
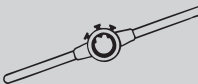
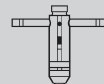
## Tap & Die Sets

in metal cases  
DIN standards

## Juegos de machos y cojinetes

en cajas metálicas  
DIN-standard



							Art.-No.	Price
								€
<b>M</b>								
M 1-1.2-1.4-1.7-2.0-2.3-2.6	No. 0	16 x 5	20 x 5	20 x 7	No. 1	48002	330,00	
M 3-3.5-4-5-6-8-10	No. 1	25 x 9	30 x 11					
M 3-4-5-6-7-8-9-10-11-12	No. 1 + 2	20 x 5 30 x 11	20 x 7 38 x 14	25 x 9	No. 1	48003	305,00	
M 5-6-7-8-9-10-11-12	No. 1 + 2	20 x 7 30 x 11	25 x 9 38 x 14		No. 1	48004	280,00	
M 5-6-7-8-9-10-11-12-14-16	No. 1 + 3	20 x 7 38 x 14	25 x 9 45 x 18	30 x 11		48005	460,00	
M 18-20								
M 3-4-5-6-8-10-12-14-16-18-20	No. 1 + 4	20 x 5 30 x 11 55 x 22	20 x 7 38 x 14	25 x 9 45 x 18		48006	625,00	
M 22-24								
M 5-6-8-10-12-14-16-18-20-22	No. 1	20 x 7	25 x 9	30 x 11		48007	1098,00	
M 24-27-30	No. 3 + 5	38 x 14 65 x 25	45 x 18	55 x 22				

<b>Mf</b>								
Mf 3 x 0.35-4 x 0.5-5 x 0.5	No. 1 + 2	20 x 5	25 x 9	30 x 11	No. 1	48010	240,00	
Mf 6 x 0.75-8 x 0.75-8 x 1.0		38 x 10						
Mf 10 x 1.0-12 x 1.5								
Mf 6 x 0.75-8 x 0.75-8 x 1.0-10 x 1.0	No. 1 + 3	20 x 7	25 x 9	30 x 11		48011	420,00	
Mf 12 x 1.0-12 x 1.5-14 x 1.25-14 x 1.5		38 x 10	45 x 14					
Mf 16 x 1.5-18 x 1.5-20 x 1.5								
Mf 6 x 0.75-8 x 0.75-8 x 1.0-10 x 1.0								
Mf 12 x 1.0-12 x 1.5-14 x 1.25-14 x 1.5	No. 1 + 4	20 x 7	25 x 9	30 x 11		48012	605,00	
Mf 16 x 1.5-18 x 1.5-20 x 1.5-22 x 1.5		38 x 10	45 x 14	55 x 16				
Mf 24 x 1.5								

## Tap & Die Sets

in metal cases  
DIN standards

## Juegos de machos y cojinetes

en cajas metálicas  
DIN-standard



						Art.-No.	Price
							€
<b>G (BSP)</b>							
G 1/8-1/4-3/8-1/2-3/4-1"	No. 1 + 3 + 5	30 x 11 55 x 16	38 x 10 65 x 18	45 x 14		48020	515,00
G 1/8-1/4-3/8-1/2-5/8-3/4-7/8-1"	No. 1 + 3 + 5	30 x 11 55 x 16	38 x 10 65 x 18	45 x 14		48021	690,00
G 1/4-3/8-1/2-3/4-1"-1.1/4-1.1/2	No. 2 + 4 + 7	38 x 10 65 x 18	45 x 14 75 x 20	55 x 16 90 x 22		48022	1.385,00
<b>BSW</b>							
BSW 1/8-3/16-1/4-5/16-3/8-7/16-1/2	No. 1 + 2	20 x 5 30 x 11	20 x 7 38 x 14	25 x 9	No. 1	48030	275,00
BSW 1/4-5/16-3/8-7/16-1/2	No. 1 + 2	20 x 7 38 x 14	25 x 9	30 x 11	No. 1	48031	225,00
BSW 1/4-5/16-3/8-7/16-1/2-5/8-3/4	No. 1 + 3	20 x 7 38 x 14	25 x 9 45 x 18	30 x 11		48032	395,00
BSW 1/4-5/16-3/8-7/16-1/2-5/8 BSW 3/4-7/8-1"	No. 1 + 4	20 x 7 38 x 14	25 x 9 45 x 18	30 x 11 55 x 22		48034	590,00
BSW 1/4-5/16-3/8-7/16-1/2-5/8-3/4	No. 1	20 x 7	25 x 9	30 x 11		48035	1.496,00
BSW 7/8-1"-1.1/8-1.1/4-1.3/8-1.1/2"	No. 3 + 5	38 x 14 65 x 25	45 x 18	55 x 22			
<b>BSF</b>							
BSF 1/4-5/16-3/8-7/16-1/2	No. 1 + 2	20 x 7 38 x 10	25 x 9	30 x 11	No. 1	48041	225,00
BSF 1/4-5/16-3/8-7/16-1/2-5/8-3/4	No. 1 + 3	20 x 7 38 x 10	25 x 9 45 x 14	30 x 11		48042	395,00
BSF 1/4-5/16-3/8-7/16-1/2-5/8 BSF 3/4-7/8-1"	No. 1 + 4	20 x 7 38 x 10	25 x 9 45 x 14	30 x 11 55 x 16		48044	590,00
<b>BSW / BSF</b>							
BSW/BSF 1/4-5/16-3/8-7/16-1/2	No. 1 + 3	20 x 7 38 x 14	25 x 9 45 x 18	30 x 11		48046	670,00
BSW/BSF 5/8-3/4							

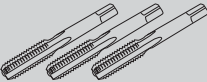

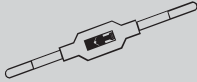

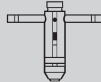
## Tap & Die Sets

in metal cases  
DIN standards

## Juegos de machos y cojinetes

en cajas metálicas  
DIN-standard



					Art.-No.	Price
						€
<b>NPT</b>						
NPT 1/8-1/4-3/8-1/2-3/4-1"	No. 1 + 3 + 5	30 x 11 55 x 22	38 x 14 65 x 25	45 x 18	48025	690,00
NPT 1/8-1/4-3/8-1/2-3/4-1" NPT 1.1/4-1.1/2-2"	No. 2 + 4 + 7	30 x 11 55 x 22 90 x 36	38 x 14 65 x 25 105 x 36	45 x 18	48027	2.560,00
<b>UNC</b>						
UNC 1/4-5/16-3/8-7/16-1/2	No. 1 + 2	20 x 7 38 x 14	25 x 9 45 x 18	30 x 11	No. 1 48050	225,00
UNC 1/4-5/16-3/8-7/16-1/2-5/8-3/4	No. 1 + 3	20 x 7 38 x 14	25 x 9 45 x 18	30 x 11	48051	395,00
UNC 1/4-5/16-3/8-7/16-1/2-5/8 UNC 3/4-7/8-1"	No. 1 + 4	20 x 7 38 x 14	25 x 9 45 x 18	30 x 11 55 x 22	48053	590,00
UNC 1/4-5/16-3/8-7/16-1/2-5/8-3/4 UNC 7/8-1"-1.1/8-1.1/4-1.3/8-1.1/2"	No. 1 No. 3 + 5	20 x 7 38 x 14 65 x 25	25 x 9 45 x 18	30 x 11 55 x 22	48054	1.496,00
<b>UNF</b>						
UNF 1/4-5/16-3/8-7/16-1/2	No. 1 + 2	20 x 7 38 x 10	25 x 9 45 x 14	30 x 11	No. 1 48060	209,00
UNF 1/4-5/16-3/8-7/16-1/2-5/8-3/4	No. 1 + 3	20 x 7 38 x 10	25 x 9 45 x 14	30 x 11	48061	360,00
UNF 1/4-5/16-3/8-7/16-1/2-5/8 UNF 3/4-7/8-1"	No. 1 + 4	20 x 7 38 x 10	25 x 9 45 x 14	30 x 11 55 x 16	48063	525,00
<b>UNC / UNF</b>						
UNC/UNF 1/4-5/16-3/8-7/16-1/2 UNC/UNF 5/8-3/4	No. 1 + 3	20 x 7 38 x 14	25 x 9 45 x 18	30 x 11	48066	670,00

## Tap & Die Sets

in metal cases  
DIN standards

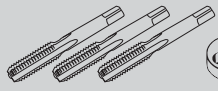

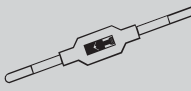
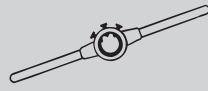





## Juegos de machos y cojinetes

en cajas metálicas  
DIN-standard



Hand Taps DIN 352  
in sets of 3 pieces  
Round Dies DIN 223

Machos Mano DIN 352  
juegos de 3 piezas  
Cojinetes DIN 223

							Art.-No.	Price	
								€	
P.V.1 	M 3-4-5-6-8	2.5/3.3/4.2/5.0	No. 1	20 x 5	20 x 7	25 x 9	No. 1	49101	170,00
	M 10-12	6.8/8.5/10.2 mm	No. 2	30 x 11	38 x 14				
	M 3-4-5-6-8		No. 1	20 x 5	20 x 7	25 x 9		49107	154,00
	M 10-12		No. 2	30 x 11	38 x 14				
<b>HSSE</b> 	M 3-4-5-6-8	2.5/3.3/4.2/5.0	No. 1	20 x 5	20 x 7	25 x 9	No. 1	49151	252,00
	M 10-12	6.8/8.5/10.2 mm	No. 2	30 x 11	38 x 14				
<b>LH</b> 	M 3-4-5-6-8	2.5/3.3/4.2/5.0	No. 1	20 x 5	20 x 7	25 x 9	No. 1	49171	236,00
	M 10-12	6.8/8.5/10.2 mm	No. 2	30 x 11	38 x 14				
	M 3-4-5-6-8	2.5/3.3/4.2/5.0	No. 1	20 x 5	20 x 7	25 x 9		49111	137,00
	M 10-12	6.8/8.5/10.2 mm	No. 2	30 x 11	38 x 14				

## Tap & Die Sets

in metal cases  
DIN standards

## Juegos de machos y cojinetes

en cajas metálicas  
DIN-standard



### F.Z. 1

Hand Taps DIN 352, HSSE  
**Rougher piloted**  
Round Dies DIN 223, HSSE  
+ 7 Guides for Round Dies

### S.F. 1

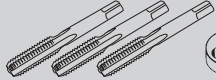

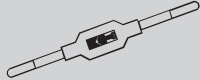

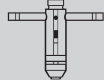


Hand Taps DIN 352, HSS-G  
Round Dies DIN 223, HSS  
+ 7 Guides for Round Dies

Machos Mano DIN 352, HSSE

**desbaste con punta piloto**  
Cojinetes DIN 223, HSSE  
+ 7 guías para cojinetes

Machos Mano DIN 352, HSS-G

Cojinetes DIN 223, HSS  
+ 7 guías para cojinetes

						Art.-No.	Price		
							€		
F.Z. 1	M 3-4-5-6-8	2.5/3.3/4.2/5.0	No. 1	20 x 5	20 x 7	25 x 9	No. 1	49150	258,00
	M 10-12	6.8/8.5/10.2 mm	No. 2	30 x 11	38 x 14				
S.F. 1	M 3-4-5-6-8	2.5/3.3/4.2/5.0	No. 1	20 x 5	20 x 7	25 x 9	No. 1	49106	187,00
	M 10-12	6.8/8.5/10.2 mm	No. 2	30 x 11	38 x 14				

## Tap & Die Sets

in metal cases  
DIN standards

## Juegos de machos y cojinetes

en cajas metálicas  
DIN-standard



Hand Taps DIN 352  
in sets of 3 pieces  
Round Dies DIN 223

Machos Mano DIN 352  
juegos de 3 piezas  
Cojinetes DIN 223

								Art.-No.	Price
									€
P.V.2	M 3-4-5-6-8-10-12-14	No. 1	20 x 5	20 x 7	25 x 9	No. 1	49201	298,00	
	M 16-18-20	No. 3	30 x 11	38 x 14	45 x 18				
<b>HSSE</b> <b>drillbox</b>	M 3-4-5-6-8-10-12-14	No. 1	20 x 5	20 x 7	25 x 9	No. 2	49251	560,00	
	M 16-18-20	No. 3	30 x 11	38 x 14	45 x 18				
<b>LH</b> <b>drillbox</b>	M 3-4-5-6-8-10-12-14	No. 1	20 x 5	20 x 7	25 x 9	No. 1	49271	506,00	
	M 16-18-20	No. 3	30 x 11	38 x 14	45 x 18				
P.V.3	M 5-6-8-10-12-14	No. 1	20 x 7	25 x 9	30 x 11	No. 1	49301	297,00	
	M 16-18-20	No. 3	38 x 14	45 x 18					
P.V.5 <b>drillbox</b>	M 3-4-5-6-8-10-12-14	No. 1	20 x 5	20 x 7	25 x 9	No. 2	49205	352,00	
	M 16-18-20	No. 3	30 x 11	38 x 14	45 x 18				



## Tap & Die Sets

in metal cases

## Juegos de machos y cojinetes

en cajas metálicas

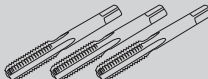
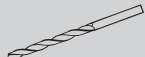
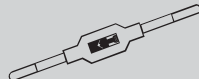
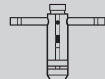


Hand Taps DIN 352

in sets of 3 pieces

Machos Mano DIN 352

juegos de 3 piezas



									Art.-No.	Price
										€
P.V.22	M 3-4-5-6-8	2.5/3.3/4.2/5.0			No. 1.1/2				49510	90,00
	M 10-12	6.8/8.5/10.2 mm								
P.V.23	M 3-4-5-6-8	2.5/3.3/4.2/5.0			No. 1.1/2	No. 1			49511	97,00
	M 10-12	6.8/8.5/10.2 mm								

Hand Taps DIN 352

in sets of 3 pieces

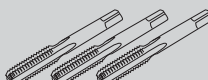

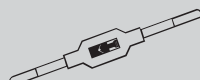


Round Dies 25 x 9 mm ø

Machos Mano DIN 352

juegos de 3 piezas

Cojinetes 25 x 9 mm ø



									Art.-No.	Price
										€
P.V.12	M 3-4-5-6-8-10-12		No. 1.1/2	25 x 9	No. 1			49501	98,00	
P.V.15	M 3-4-5-6-8-10-12		No. 1.1/2	25 x 9	No. 1			49505	109,00	
										






## Die Sets

in metal cases  
DIN standards

## Juegos de cojinetes

en cajas metálicas  
DIN-standard





			Art.-No.	Price
				€
P.V.97 	M 3-4-5-6-8-10-12		49521	66,00
P.V.98 <b>HSSE</b> 	M 3-4-5-6-8-10-12		49522	86,00
P.V.99 		M 3-4-5-6-8-10-12	49520	77,00
		UNC 1/4-5/16-3/8-7/16-1/2	49530	105,00
		UNF 1/4-5/16-3/8-7/16-1/2	49540	105,00

Round Dies DIN 223  
+ 7 Guides

Cojinetes DIN 223  
+ 7 guías



			Art.-No.	Price
				€
P.V.14	M 3-4-5-6-8-10-12	20 x 5    20 x 7    25 x 9 30 x 11    38 x 14	49599	75,00
<b>LH</b>	M 3-4-5-6-8-10-12	20 x 5    20 x 7    25 x 9 30 x 11    38 x 14	49598	101,00

## Tap Sets

in plastic boxes  
DIN standards

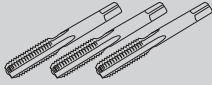
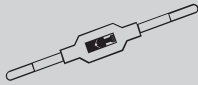
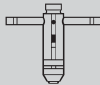
## Juegos de machos

en cajas de plástico  
DIN-standard

Hand Taps DIN 352  
in sets of 3 pieces

Machos Mano DIN 352  
juegos de 3 piezas

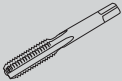

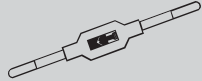
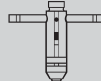


					Art.-No.	Price
						€
P.K.20	M 3-4-5-6-8-10-12		No. 1.1/2		47001	66,00
P.K.21	M 3-4-5-6-8-10-12		No. 1.1/2	No. 1	47005	73,50
<b>HSSE</b>	M 3-4-5-6-8-10-12		No. 1.1/2	No. 1	47055	115,00
<b>LH</b>	M 3-4-5-6-8-10-12		No. 1.1/2	No. 1	47075	105,00

Short Machine Taps DIN 352,  
Spiral Point

Machos Máquina cortos DIN 352/B  
punta en espiral



						Art.-No.	Price
							€
P.K.25	M 3-4-5-6-8	2.5/3.3/4.2/5.0	No. 1.1/2	No. 1	47605	52,50	
	M 10-12	6.8/8.5/10.2 mm					
P.K.26	M 3-4-5-6-8	2.5/3.3/4.2/5.0	No. 1.1/2		47601	47,00	
	M 10-12	6.8/8.5/10.2 mm					

## Tap & Die Sets

in plastic box  
ISO standards


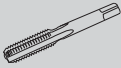

## Juegos de machos y cojinetes

en cajas de plástico  
ISO-standard

Machine Taps ISO 529  
Spiral Point (Form B)

Machos Máquina ISO 529  
punta en espiral (Forma B)

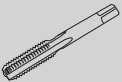


				Art.-No.	Price
P.K. 85	M 3-4-5-6-8-10	2.5/3.3/4.2/5.0/6.8/8.5		80501	€ 65,00

Machine Taps ISO 529

Machos Máquina ISO 529



		Art.-No.	Price
Form B	M 3-4-5-6-8-10-12	80500	€ 37,50
Form B-AZ	M 3-4-5-6-8-10-12	80900	€ 49,50
Form C/35°RSP	M 3-4-5-6-8-10-12	80700	€ 42,90

## Machine Tap Sets

in plastic boxes


## Machos Máquina

en cajas de plástico

Machine Taps **HSSE**  
Spiral Point and Spiral Flute

Machos Máquina **HSSE**  
punta en espiral + helicoidal 35°

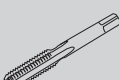


			Art.-No.	Price
				€
	P.K.40	M 3-4-5-6-8-10-12	47901	114,00
	P.K.41	M 3-4-5-6-8-10-12 <b>TIN</b>	47921	190,00

Combined Taps **HSSE**

Machos Combinados **HSSE**



			Art.-No.	Price
				€
	P.K.370	M 3-4-5-6-8-10-12	47837	126,50
	P.K.700	BSW 1/8-5/32-3/16-1/4-5/16-3/8-1/2	47870	127,00

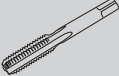

**Machine Tap Sets**  
in plastic boxes

**Machos Máquina**  
en cajas de plástico



Machine Taps **HSSE**  
Spiral Point

Machos Máquina **HSSE**  
punta en espiral

				Art.-No.	Price
					€
					
P.K.28	M 3-4-5-6-8-10-12			47815	52,80
P.K.29	M 3-4-5-6-8-10-12	<b>TIN</b>		47825	92,50
●	M 3-4-5-6-8-10-12			47853	71,50
●	M 3-4-5-6-8-10-12			47854	76,00
○	M 3-4-5-6-8-10-12			47852	79,00
P.K. 35	M 3-4-5-6-8-10-12		2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47835	64,00
P.K. 36	M 3-4-5-6-8-10-12	<b>TIN</b>	2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47836	103,50
●	M 3-4-5-6-8-10-12		2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47856	96,00
●	M 3-4-5-6-8-10-12		2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47857	104,50
○	M 3-4-5-6-8-10-12		2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47855	101,00

## Machine Tap Sets

in plastic boxes









## Machos Máquina

en cajas de plástico



Machine Taps **HSSE**  
Spiral Flute

Machos Máquina **HSSE**  
helicoidal 35°

			Art.-No.	Price	
				€	
	P.K.30	M 3-4-5-6-8-10-12	47817	61,50	
	P.K.31	M 3-4-5-6-8-10-12 <b>TIN</b>	47827	98,00	
		M 3-4-5-6-8-10-12	47863	90,00	
		M 3-4-5-6-8-10-12	47864	95,00	
		M 3-4-5-6-8-10-12	47862	99,00	
	P.K. 47	M 3-4-5-6-8-10-12	2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47847	72,50
	P.K. 48	M 3-4-5-6-8-10-12 <b>TIN</b>	2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47848	109,00
		M 3-4-5-6-8-10-12	2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47866	114,00
		M 3-4-5-6-8-10-12	2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47867	120,00
		M 3-4-5-6-8-10-12	2.5/3.3/4.2/5.0/6.8/8.5/10.2 mm	47865	126,00




## Electrical Conduit Set

in plastic box

## Juego para conductas electricos

en caja de plástico



			Art.-No.	Preis
				€
M 20x1,5 - M 25x1,25	M 20x1,5 - M 25x1,25	42 mm	18012	49,50
M 20x1,5			18002	6,80
M 25x1,5			18003	6,80

## Tap Sets

in wooden boxes

DIN standards

## Juego de machos

en cajas de madera

DIN-standard

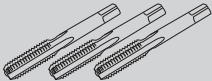
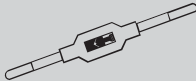


Hand Taps DIN 352

in sets of 3 pieces

Machos Mano DIN 352

juegos de 3 piezas

		Art.-No.	Preis
			€
M 1-1.2-1.4-1.7 M 2.0-2.3-2.6	No. 0	48001	185,00



## Combined-Bit-Set



in pastic box

## Juego de Machos Combinados

con amarre hexagonal 1/4" en caja de plástico



## HSS-G

		Art.-No.	€
M 3-4-5-6-8-10	1/4"	67200	46,00
M 3-4-5-6-8-10 <i>TIN</i>	1/4"	67209	87,00
UNC No.8 - No.10 - No.12 - 1/4 - 5/16 - 3/8"	1/4"	67272	59,00
UNF No.8 - No.10 - No.12 - 1/4 - 5/16 - 3/8"	1/4"	67274	59,00

## Threading-Bit-Set




with Twist-Drill-Bits in plastic box

## Juego de Machos y Brocas

con amarre hexagonal 1/4" en caja de plástico



## Form D M 3-10 HSS-G Tolerance ISO2/6H

			Art.-No.	€
M 3-4-5-6-8-10	2.5/3.3/4.2/5.0/6.8/8.5 mm	1/4"	67020	42,00

## Threading-Bit-Set

in plastic box

### Juego de Machos con amarre hexagonal

en caja de plástico




**Form D**

**M 3-10**

**HSS-G**

**Tolerance ISO2/6H**

	Art.-No.	€
M 3-4-5-6-8-10	67010	28,00

## Drill Bit-Set

in plastic box


### Juego de Brocas con amarre hexagonal

en caja de plástico



**1,0 - 10,0 mm**

**HSS-G**

	Art.-No.	€
1.0 / 1.5 / 2.0 / 2.5 / 3.0 / 3.5	67100	53,50
4.0 / 4.5 / 5.0 / 5.5 / 6.0 / 6.5		
7.0 / 7.5 / 8.0 / 8.5 / 9.0 / 9.5 / 10.0		

## Countersink-Bit-Set

in plastic box

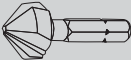
### Juego de Avellanadores 90°

con amarre hexagonal 1/4" en caja de plástico



**6,3 - 20,5 mm**

**HSS**

	Art.-No.	€
6,3/8,3/10,4/12,4/16,5/20,5	67300	56,00

**Q.C. 1**

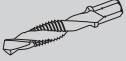
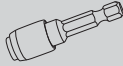
**Combined Bits**

**Machos Combinados**  
con amarre hexagonal 1/4"



**M 3 - M 10**

**HSS-G**

		Art.-No.	€
M 3-4-5-6-8-10	non-magnetic 1/4"	67421	57,00

**Q.C. 2**


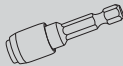
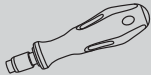
**Threading-Bits**

**Machos Máquina**  
con amarre hexagonal 1/4"



**M 3 - M 10**

**HSS-G**

			Art.-No.	€
M 3-4-5-6-8-10	non-magnetic 1/4"	non-magnetic 1/4"	67422	50,50

**Q.C. 3**

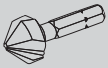
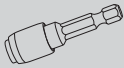

**Countersink Bits**

**Avellanador 90°**  
con amarre hexagonal 1/4"



**6,3 - 20,5 mm**

**HSS**

			Art.-No.	€
6,3/8,3/10,4/12,4/16,5/20,5	non-magnetic 1/4"	non-magnetic 1/4"	67423	75,50

**Q.C. 4**




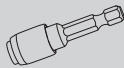
**Drill Bits**

**Bruca**  
con amarre hexagonal 1/4"



**3,0 - 10,0 mm**

**HSS-G**

				Art.-No.	€
3,0/4,0/5,0/6,0/8,0/10,0	6 Bits: 2xPH1, 3xPH2, 1xPH3	6 Torx Bits: T10, T15, T20, T25, T30, T40	non-magnetic 1/4"	67424	37,50

**Q.C. 5**




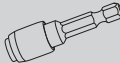
**WOOD Drill Bits**

**Broca para madera**  
con amare hexagonal 1/4"



**3,0 - 10,0 mm**

**HSS-G**

				Art.-No.	€
3,0/4,0/5,0/6,0/8,0/10,0	6 Bits: 2xPZ1, 3xPZ2, 1xPZ3	6 Torx Bits: T10, T15, T20, T25, T30, T40	magnetic 1/4"	67425	37,50

**Drill Bit-Set**



in plastic box

**Juego de Brocas con amarre hexagonal**  
en caja de plástico



**3,0 - 10,0 mm**

**HSS-G**

		Art.-No.	€
3,0 / 4,0 / 5,0 / 6,0 / 8,0 / 10,0	for wood / para madera 3,0 / 4,0 / 5,0 / 6,0 / 8,0 / 10,0	67101	41,50

**SD 2600**

Art.-No. 48926

€ 1.650,00



**SD 6000**

Art.-No. 48960

€ 520,00



**SD 670**

Art.-No. 48967

€ 725,00



**SD 3000**

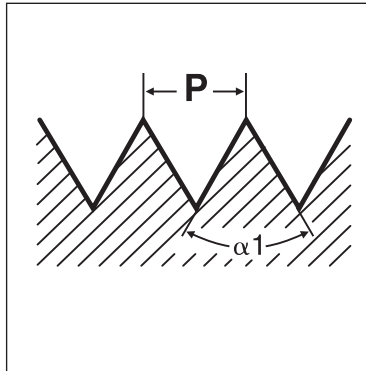
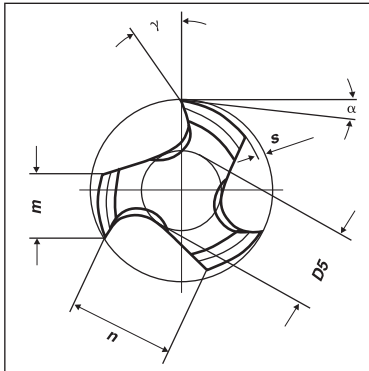
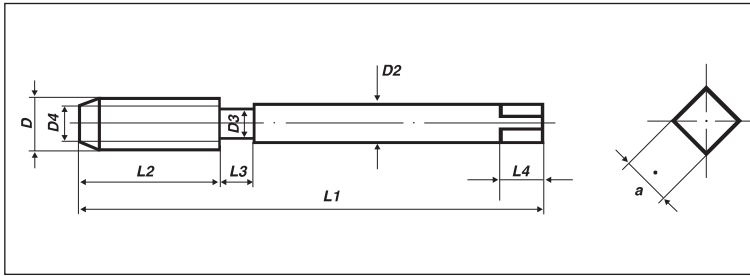


**SD 672**

Art.-No.	Contents	Price €
48980	20 Sets 67200	920,00
48981	10 Sets 67200 10 Sets 67020	880,00
48982	10 Sets 67200 10 Sets 67100	995,00
48983	10 Sets 67200 10 Sets 67300	1.020,00

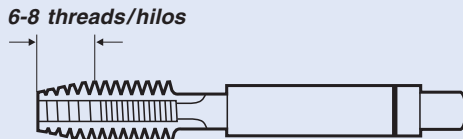




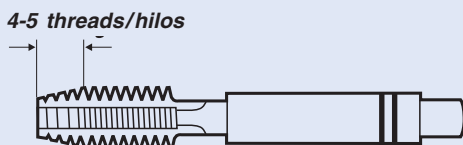


<b>D</b>	Nominal diameter	Diámetro nominal
<b>D2</b>	Shank diameter	Diámetro del mango
<b>D3</b>	Neck diameter	Diámetro del cuello
<b>D4</b>	Point diameter	Diámetro de la punta
<b>D5</b>	Web diameter	Diámetro menor
<b>L1</b>	Overall length	Longitud total
<b>L2</b>	Thread length	Longitud de corte
<b>L3</b>	Neck length	Longitud del cuello
<b>L4</b>	Square length	Longitud del cuadrado
<b>P</b>	Pitch	Paso
<b>a</b>	Square size	Tamaño del cuadrado
<b>m</b>	Land width	Ancho del contacto
<b>n</b>	Flute width	Anchura del canal
<b>s</b>	Thread relief	Acabado de la rosca
<b>α</b>	Relief angle	Angulo de desalajo
<b>γ</b>	Rake angle	Angulo de arrastre
<b>α1</b>	Thread angle	Angulo de la rosca

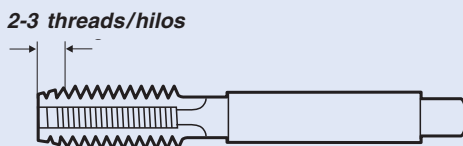
**Leads of Hand Taps, Sets of 3 pcs.  
Orden de los machos, juegos de 3 piezas**



**Nr. 1**  
Rougher, 6-8 Threads Lead  
Desbaste, 6-8 hilos de entrada

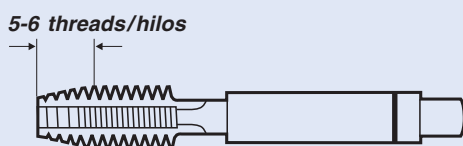


**Nr. 2**  
Intermediate, 4-5 Threads Lead  
Intermedio, 4-5 hilos de entrada

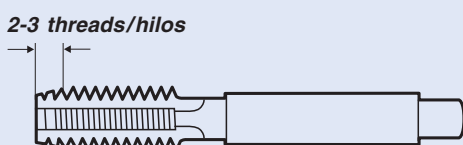


**Nr. 3**  
Finisher, 2-3 Threads Lead  
Acabado, 2-3 hilos de entrada

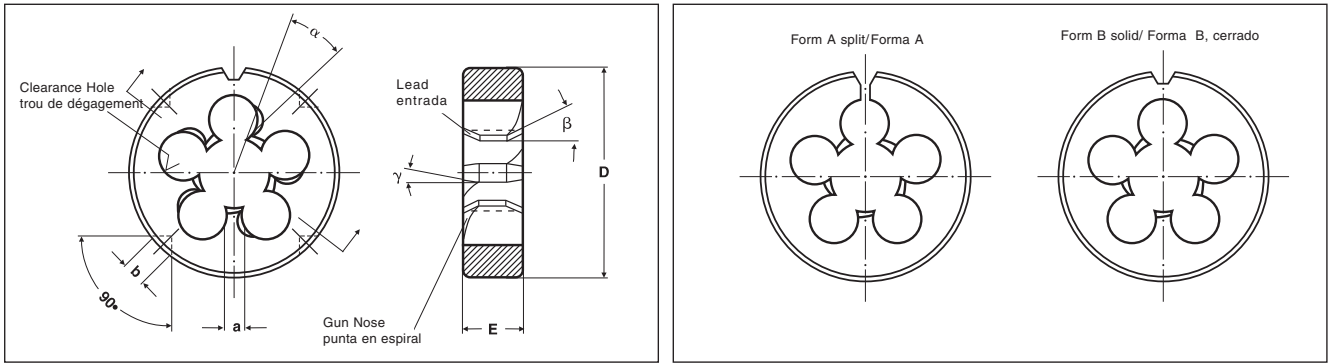
**Leads of Hand Taps, Sets of 2 pcs.  
Orden de los machos, juegos de 2 piezas**



**Nr. 1**  
Rougher, 5-6 Threads Lead  
Desbaste, 5-6 hilos de entrada

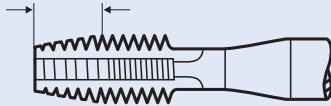


**Nr. 2**  
Finisher, 2-3 Threads Lead  
Acabado, 2-3 hilos de entrada



<b>D</b>	Outside diameter	Diámetro exterior
<b>E</b>	Width of die	Ancho del cojinete
<b>a</b>	Width of land	Ancho de contacto
<b>b</b>	Hole for holding screws	Agujero para tornillo
<b>α</b>	Rake angle	Angulo de arrastre
<b>β</b>	Lead angle	Angulo de entrada
<b>γ</b>	Angle of gun nose	Angulo de acabado

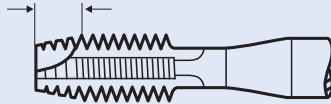
6-8 threads/hilos



**Form A**

6-8 Threads Lead, for short through holes  
6-8 hilos de entrada, agujero pasante

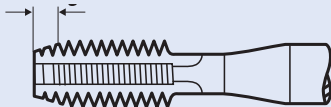
4-5 threads/hilos



**Form B**

4-5 Threads Lead with Spiral Point for through holes  
4-5 hilos de entrada con punta espiral, agujero pasante

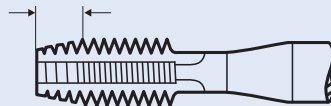
2-3 threads/hilos



**Form C**

2-3 Threads Lead, for blind holes  
2-3 hilos de entrada, agujero ciego

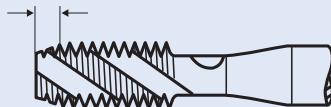
4-5 threads/hilos



**Form D**

4-5 Threads Lead, for through and blind holes  
4-5 hilos de entrada, agujero pasante y ciego

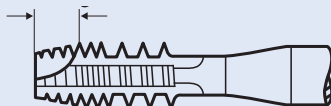
2-3 threads/hilos



**Form C/35° RSP**

2-3 Threads Lead, 35° Spiral Flute, for blind holes  
2-3 hilos de entrada con canal helicoidal 35°, agujero ciego

4-5 threads/hilos



**Form B-AZ**

4-5 Threads Lead with Spiral Point and interrupted threads for through holes  
4-5 hilos de entrada con punta espiral y diente alterno, agujero pasante

## Surface Finishes

## Acabados Superficiales

### Steam Tempered:

An iron oxide film is created on the tool surface by heat treatment.

This improves the adhesion of the coolant and as a result helps to prevent cold welding of the chip to the tool surface.

### Vaporizado (VAP):

Debido al tratamiento de calor, una capa de Oxido de Hierro es creada en la superficie de la herramienta.

Esto mejora la adhesión del refrigerante y como resultado obtenemos una ayuda para prevenir la unión (soldadura) de la viruta a la superficie del material a roscar.

### Nitriding:

The surface hardness is increased by enriching the surface of the tap with nitrogen.

This results in high abrasion resistance and improved anti-friction properties.

### Nitrogenación:

La dureza de la superficie es Incrementada mediante el enriquecimiento de la superficie del macho con Nitrógeno.

Como consecuencia obtenemos una gran resistencia a la Abrasión y mejora de las propiedades anti-fricción.

### Titanium Nitride Coating:

Following PVD processing, the tap undergoes titanium nitride vapour-deposition within the vacuum chamber at approx. 500°C. Excellent anti-friction properties and high resistance to wear and abrasion result from the reduced surface roughness and remarkable hardness.

**TIN** coated taps can be employed using considerably faster cutting speeds.

### Recubrimiento de Titanio:

Siguiendo el proceso PVD, el macho es sometido a un baño de Nitruro de Titanio dentro de la cámara de vacío, que se encuentra aproximadamente a 500° C.

Se obtienen excelentes propiedades antifricción alta resistencia al Desgaste y a la Abrasión al reducir la rugosidad de la superficie y aumentar considerablemente su Dureza.

Los machos con baño de TIN pueden ser empleados utilizando velocidades de corte considerablemente más rápidas.

**Conversion Table of Cutting Speed m/min. to r/min.  
Conversión de la velocidad de corte de m/min. en revoluciones/min.**

m/min.		4	6	8	9	10	12	15	18	21	25	27	30	36	
Size mm	inch	Revolutions per Minute (rpm) Revoluciones/min													
1,6	1/16	800	1194	1592	1791	1988	2386	2983	3579	4176	4971	5369	5965	7158	
1,8		708	1065	1415	1598	1768	2121	2652	3182	3712	4419	4743	5303	6364	
2		637	955	1274	1433	1591	1909	2386	2863	3341	3977	4295	4773	5727	
2,2	3/32	579	869	1158	1303	1446	1736	2169	2603	3037	3616	3905	4339	5207	
2,5		510	764	1019	1147	1274	1527	1909	2291	2673	3182	3436	3818	4582	
3	1/8	425	637	849	955	1061	1273	1591	1909	2227	2651	2864	3182	3818	
3,5		364	546	728	819	909	1091	1364	1636	1909	2273	2455	2727	3273	
4	5/32	318	478	637	718	796	955	1193	1432	1671	1989	2148	2387	2864	
4,5		283	425	566	637	707	849	1061	1273	1485	1768	1909	2122	2546	
5	3/16	255	382	510	573	637	764	955	1146	1337	1591	1719	1909	2292	
6	1/4	212	319	425	477	530	636	795	954	1113	1326	1432	1592	1909	
7	9/32	182	273	364	409	455	546	682	818	955	1136	1227	1364	1636	
8	5/16	159	239	319	358	398	477	597	716	835	994	1074	1193	1432	
9		142	212	283	318	354	425	531	637	742	885	955	1061	1293	
10	3/8	127	191	255	286	318	382	477	573	668	795	859	955	1146	
11		116	174	232	260	289	347	434	521	608	723	781	868	1041	
12	1/2	106	159	212	238	265	318	398	477	557	663	716	796	955	
13		98	147	196	220	245	294	367	441	514	612	661	734	881	
14	9/16	91	136	182	205	227	273	341	409	477	568	614	682	818	
16	5/8	80	119	159	179	199	239	298	358	418	497	537	597	716	
18		71	106	141	159	177	212	265	318	371	442	477	530	636	
20	3/4	64	96	127	143	159	191	239	286	334	398	430	477	573	
22	7/8	58	87	116	130	145	174	217	260	304	362	391	434	521	
24	1"	53	80	106	119	133	159	199	239	275	331	353	398	477	
27		47	71	94	106	118	141	177	212	245	295	318	354	424	
30	1-1/8	43	64	85	95	106	127	159	191	223	265	286	318	382	
33	1-1/4	39	58	77	87	96	116	145	174	203	241	260	289	347	
36		35	53	71	80	88	106	133	159	186	221	239	265	318	
39	1-1/2	33	49	65	73	82	98	122	147	171	204	220	245	294	
42		30	46	61	68	76	91	114	136	159	189	205	227	273	
45	1-3/4	28	42	57	64	71	85	106	127	149	177	191	212	255	
48		27	40	53	60	66	80	99	119	139	166	179	199	239	
52		24	37	49	55	61	73	92	110	129	153	165	184	220	
56	2"	23	34	46	51	57	68	85	102	119	142	153	170	205	

## Recommended Tapping Drill Sizes Diámetro recomendado de las brocas previas a utilizar

M	Ø mm	Mf	Ø mm	Mf	Ø mm	Mf	Ø mm	Mf	Ø mm	Mf	Ø mm	Mf	Ø mm
M 1	0,25	M 2,5 x 0,35	2,15	M 16 x 0,5	15,5	M 27 x 2,0	25	M 44 x 2	42	M 62 x 4,0	58	M 82 x 2,0	80
M 1,1	0,25	M 2,6 x 0,35	2,25	M 16 x 1,0	15	M 28 x 1,0	27	M 42 x 3,0	39	M 63 x 1,5	61,5	M 82 x 3,0	79
M 1,2	0,25	M 3 x 0,35	2,65	M 16 x 0,75	15,25	M 28 x 1,5	26,5	M 45 x 1	44	M 64 x 1,5	62,5	M 82 x 4,0	78
M 1,4	0,3	M 3,5 x 0,35	3,15	M 16 x 1,25	14,75	M 28 x 2,0	26	M 45 x 1,5	43,5	M 64 x 2,0	62	M 84 x 1,5	82,5
M 1,6	0,35	M 4 x 0,35	3,65	M 16 x 1,5	14,5	M 29 x 1,5	27,5	M 45 x 2,0	43	M 64 x 3,0	61	M 84 x 2,0	82
M (1,7)	0,35	M 4 x 0,5	3,5	M 18 x 0,5	17,5	M 30 x 1,0	29	M 45 x 3,0	42	M 64 x 4,0	60	M 84 x 3,0	81
M 1,8	0,35	M 4,5 x 0,5	4	M 17 x 1,0	16	M 30 x 1,5	28,5	M 46 x 1,5	44,5	M 65 x 1,5	63,5	M 84 x 4,0	80
M 2	0,4	M 5 x 0,5	4,5	M 18 x 1,0	17	M 30 x 2,0	28	M 48 x 1,5	46,5	M 65 x 2,0	63	M 85 x 1,5	83,5
M 2,2	0,45	M 5 x 0,75	4,25	M 18 x 1,25	16,75	M 30 x 2,5	27,5	M 48 x 1	47	M 65 x 3,0	62	M 85 x 2,0	83
M (2,3)	0,4	M 5,5 x 0,5	5	M 18 x 1,5	16,5	M 30 x 3,0	27	M 48 x 2,0	46	M 65 x 4,0	61	M 85 x 3,0	82
M (2,5)	0,45	M 6 x 0,5	5,5	M 18 x 0,75	17,25	M 32 x 2	30	M 48 x 3,0	45	M 68 x 1,5	66,5	M 85 x 4,0	81
M 2,6	0,45	M 6 x 0,75	5,2	M 18 x 2,0	16	M 32 x 1,5	30,5	M 50 x 1,5	48,5	M 68 x 2,0	66	M 86 x 1,5	84,5
M 3	0,5	M 7 x 0,5	6,5	M 19 x 1,0	18	M 32 x 3,0	29	M 50 x 2,0	48	M 68 x 3,0	65	M 86 x 2,0	84
M 3,5	0,6	M 7 x 0,75	6,2	M 19 x 1,5	17,5	M 33 x 1,5	31,5	M 50 x 3,0	47	M 68 x 4,0	64	M 86 x 3,0	83
M 4	0,7	M 8 x 0,5	7,5	M 20 x 0,5	19,5	M 32 x 1	31	M 52 x 1,5	50,5	M 70 x 1,5	68,5	M 86 x 4,0	82
M 4,5	0,75	M 8 x 0,75	7,2	M 20 x 1,0	19	M 33 x 2,0	31	M 52 x 2,0	50	M 70 x 2,0	68	M 88 x 1,5	86,5
M 5	0,8	M 8 x 1,0	7	M 20 x 0,75	19,25	M 33 x 3,0	30	M 52 x 3,0	49	M 70 x 3,0	67	M 88 x 2,0	86
M 6	1	M 9 x 0,5	8,5	M 20 x 1,25	18,75	M 34 x 1	33	M 54 x 1,0	53	M 70 x 4,0	66	M 88 x 3,0	85
M 7	1	M 9 x 0,75	8,2	M 20 x 1,5	18,5	M 34 x 1,5	32,5	M 54 x 1,5	52,5	M 72 x 1,5	70,5	M 88 x 4,0	84
M 8	1,25	M 9 x 1,0	8	M 20 x 2,0	18	M 34 x 2,0	32	M 54 x 2,0	52	M 72 x 2,0	70	M 90 x 1,5	88,5
M 9	1,25	M 10 x 0,5	9,5	M 21 x 1,0	20	M 35 x 1	34	M 54 x 3,0	51	M 72 x 3,0	69	M 90 x 2,0	88
M 10	1,5	M 10 x 0,75	9,2	M 21 x 1,5	19,5	M 35 x 1,5	33,5	M 54 x 4,0	50	M 72 x 4,0	68	M 90 x 3,0	87
M 11	1,5	M 10 x 1,0	9	M 22 x 0,5	21,5	M 35 x 2	33	M 55 x 1,5	53,5	M 74 x 1,5	72,5	M 90 x 4,0	86
M 12	1,75	M 10 x 1,25	8,8	M 22 x 1,0	21	M 36 x 1,5	34,5	M 55 x 2,0	53	M 74 x 2,0	72	M 92 x 1,5	90,5
M 14	2	M 11 x 1,0	10	M 22 x 0,75	21,25	M 36 x 1	35	M 56 x 1,5	54,5	M 74 x 3,0	71	M 92 x 2,0	90
M 16	2,5	M 11 x 1,25	9,8	M 22 x 1,25	20,75	M 36 x 2,0	34	M 56 x 2,0	54	M 75 x 1,5	73,5	M 92 x 3,0	89
M 18	2,5	M 12 x 0,75	11,2	M 22 x 1,5	20,5	M 37 x 1,5	35,5	M 56 x 3,0	55	M 75 x 2,0	73	M 92 x 4,0	88
M 20	2,5	M 12 x 1,0	11	M 22 x 2,0	20	M 36 x 3,0	33	M 56 x 1,5	54,5	M 75 x 3,0	72	M 95 x 1,5	93,5
M 22	2,5	M 12 x 1,25	11,5	M 23 x 1,0	22	M 38 x 1	37	M 56 x 2,0	54	M 75 x 4,0	72	M 95 x 2,0	93
M 24	3	M 12 x 1,5	10,8	M 23 x 1,5	21,5	M 38 x 1,5	36,5	M 56 x 3,0	53	M 75 x 5,0	71	M 95 x 3,0	92
M 27	3	M 13 x 0,5	12,5	M 24 x 1,0	23	M 38 x 2,0	36	M 56 x 4,0	52	M 76 x 1,5	74,5	M 95 x 4,0	91
M 30	3,5	M 12 x 1,5	10,5	M 24 x 0,5	23,5	M 39 x 1,5	37,5	M 58 x 1,0	57	M 76 x 2,0	74	M 96 x 1,5	94,5
M 33	3,5	M 13 x 0,75	12,25	M 24 x 1,25	22,75	M 38 x 3	35	M 58 x 1,5	56,5	M 76 x 3,0	73	M 96 x 2,0	94
M 36	4	M 13 x 1,0	12	M 24 x 0,75	23,25	M 39 x 2,0	37	M 58 x 2,0	56	M 76 x 4,0	72	M 96 x 3,0	93
M 39	4	M 13 x 1,5	11,5	M 24 x 1,5	22,5	M 39 x 3,0	36	M 58 x 3,0	55	M 78 x 1,5	76,5	M 96 x 4,0	92
M 42	4,5	M 14 x 0,75	13,25	M 24 x 2,0	22	M 40 x 1	39	M 58 x 4,0	54	M 78 x 2,0	76	M 98 x 1,5	96,5
M 45	4,5	M 14 x 1,0	13	M 25 x 1,0	24	M 40 x 1,5	38,5	M 60 x 1,5	58,5	M 78 x 3,0	75	M 98 x 2,0	96
M 48	5	M 14 x 1,25	12,8	M 25 x 1,5	23,5	M 40 x 2,0	37	M 60 x 2,0	58	M 78 x 4,0	74	M 98 x 3,0	95
M 52	5	M 14 x 1,5	13,5	M 26 x 1,0	25	M 40 x 3,0	37	M 60 x 3,0	57	M 80 x 1,5	78,5	M 98 x 4,0	94
M 3	0,6	M 14 x 1,5	12,5	M 26 x 1,5	24,5	M 42 x 1	41	M 60 x 4,0	56	M 80 x 2,0	78	M 100 x 1,5	98,5
M 3,5	0,75	M 15 x 0,75	14,25	M 26 x 2,0	24	M 42 x 1,5	40,5	M 62 x 1,5	60,5	M 80 x 3,0	77	M 100 x 2,0	98
M 4	0,75	M 15 x 1,0	14	M 27 x 1,0	26	M 44 x 1,5	42,5	M 62 x 2,0	60	M 80 x 4,0	76	M 100 x 3,0	97
M 5	0,9	M 15 x 1,5	13,5	M 27 x 1,5	25,5	M 42 x 2,0	40	M 62 x 3,0	59	M 82 x 1,5	80,5	M 100 x 4,0	96



## Recommended Cutting Speed

coolants and lubricants

## Velocidad de corte recomendada

lubricantes y refrigerantes

Material	Lubricant Lubricante	Cutting Speed Velocidad de corte m/min.
Steel, unalloyed and low alloyed, short-chipping Aceros no aleados y de baja aleación, mecanizado corto	S/E	10-20
non abrasive Material, short-chipping Materiales de buena mecanización, mecanizado corto	S/E	6-15
Steel, heat resistant, long-chipping Aceros resistentes al calor, mecanizado largo	S	4- 8
Steel, heat resistant, short-chipping Aceros resistentes al calor, mecanizado corto	S	4- 8
Steel, cementation and heat treatable, short-chipping Aceros de cementacion y bonificados, mecanizado corto	S	4- 8
Steel, Tool Steel up to 1200 N/mm <sup>2</sup> Aceros para herramientas hasta 1200 N/mm <sup>2</sup>	S	2- 5
Steel, Tool Steel over 1200 N/mm <sup>2</sup> Aceros para herramientas de más de 1200 N/mm <sup>2</sup>	S	2- 5
Steel stainless, short-chipping Aceros inoxidable, mecanizado corto	S	5-10
Steel stainless, long-chipping Aceros inoxidable, mecanizado largo	S	5-10
Iron, Cast Fundición gris	P/T	6-20
Iron, spheroidal graphite Fundición con grafito esferoidal	P/T	6-20
Iron, Malleable Cast Fundición maleable	E	6-12
Brass, short-chipping Latón, mecanizado corto	E	20-30
Brass, long-chipping Latón, mecanizado largo	S/E	10-15
Bronze, short-chipping Bronce, mecanizado corto	S/E	6-15
Bronze, long-chipping Bronce, mecanizado largo	S/E	6-15
Copper Cobre	S/E	10-15
Aluminium-alloys, short-chipping Aluminio, mecanizado corto	S/E	15-30
Aluminium-alloys, long-chipping Aluminio, mecanizado largo	E	10-20
Zinc Alloys Cinc, aleaciones de	S/E	10-15
Magnesium Alloys Magnesio, aleaciones de	E/T	10-20
Titanium, short-chipping Titanio, mecanizado corto	S	3- 4
Titanium, long-chipping Titanio, mecanizado largo	S	3- 4
Plastics, thermoplastics Plásticos, Termoplásticos	E/T	5-15
Plastics, thermosetting Plásticos, duroplásticos	T	5-15

S = cutting oil/aceite para corte

E = oil emulsion/taladrina

P = kerosene/petróleo

T = dry/seco

## Recommended outside Diameter Diámetro del eje antes de roscar con cojinete

M	Ø mm	Mf	Ø mm	Mf	Ø mm	Mf	Ø mm	BSW	UNC	UNF	PG	Ø mm
M 1	0,25	M 3	2,94	M 24	22,82	W 1/4	6,16	No. 1-64	No. 0-80	1,47	PG 7	12,4
M 1,1	0,25	M 3,5	3,44	M 25	24,88	W 5/16	7,76	No. 2-56	No. 1-72	1,79	PG 9	15,1
M 1,2	0,25	M 4	3,94	M 25	24,85	W 3/8	9,30	No. 3-48	No. 2-64	2,12	PG 11	18,5
M 1,4	0,3	M 4	3,93	M 26	25,88	W 7/16	10,89	No. 4-40	No. 3-56	2,44	PG 13,5	20,3
M 1,6	0,35	M 5	4,93	M 26	25,85	W 1/2	12,43	No. 5-40	No. 4-48	2,77	PG 16	22,4
M (1,7)	0,35	M 6	5,93	M 27	26,88	W 9/16	13,92	No. 6-32	No. 5-44	3,10	PG 21	28,15
M 1,8	0,35	M 6	5,90	M 27	26,85	W 5/8	15,62	No. 8-32	No. 6-40	3,42	PG 29	36,85
M 2	0,4	M 7	6,90	M 27	26,82	W 3/4	18,76	No. 10-24	No. 8-36	4,08	PG 36	46,85
M 2,2	0,45	M 8	7,93	M 28	27,85	W 7/8	21,89	No. 12-24	No. 10-32	4,73	PG 42	53,85
M (2,3)	0,4	M 8	7,90	M 28	27,82	W 1"	25,08	No. 14-20	No. 12-28	5,38	PG 48	59,15
M 2,5	0,45	M 8	7,83	M 30	29,88	W 1.1/8	28,21	5/16-18	1/4-28	6,24		
M (2,6)	0,45	M 9	8,88	M 30	29,85			3/8-16	5/16-24	7,82		
M 3	0,5	M 10	9,93	M 30	29,82			7/16-14	3/8-24	9,41		
M 3	0,6	M 10	9,90	M 32	31,85			1/2-13	7/16-20	10,98		
M 3,5	0,6	M 10	9,88	M 33	32,85			9/16-12	1/2-20	12,56		
M 3,5	0,75	M 10	9,86	M 33	32,82			5/8-11	9/16-18	14,14		
M 4	0,7	M 11	10,88	M 34	33,85	BSF 3/16	4,67	3/4-10	5/8-18	15,73		
M 4	0,75	M 12	11,90	M 35	34,85	BSF 1/4	6,25	7/8-9	5/8-18	18,84		
M 4,5	0,75	M 12	11,88	M 35	34,85	BSF 5/16	7,82	1"-8	3/4-16	18,89		
M 5	0,8	M 12	11,86	M 36	35,85	BSF 3/8	9,39	1"-8	7/8-14	22,05		
M 5	0,9	M 12	11,85	M 36	35,82	BSF 7/16	10,97	1.1/8-7	1"-12	25,21		
M 6	1	M 13	12,88	M 36	35,76	BSF 1/2	12,54	1.1/4-7	1.1/8-12	28,31		
M 7	1	M 13	12,85	M 38	37,85	BSF 9/16	14,12	1.3/8-6	1.1/4-12	28,38		
M 8	1,25	M 13	12,83	M 39	38,85	BSF 5/8	15,71	1.1/2-6	1.1/4-12	31,56		
M 9	1,25	M 14	13,88	M 39	38,82	BSF 3/4	18,85	1.3/4-5	1.3/8-12	34,73		
M 10	1,5	M 14	13,86	M 40	39,85	BSF 7/8	22,02	2"-4,5	1.1/2-12	37,91		
M 11	1,5	M 14	13,85	M 40	39,82	BSF 1"	25,17	2.1/4-4,5				
M 12	1,75	M 15	14,88	M 40	39,76			2.1/2-4				
M 14	2	M 15	14,85	M 42	41,85			2.3/4-4				
M 16	2	M 15	14,82	M 42	41,82			3"-4				
M 18	2,5	M 16	15,88	M 42	41,76							
M 20	2,5	M 16	15,85	M 45	44,85							
M 22	2,5	M 18	17,88	M 45	44,82							
M 24	3	M 18	17,85	M 45	44,76							
M 27	3	M 18	17,82	M 48	47,85							
M 30	3,5	M 20	19,88	M 48	47,82							
M 33	3,5	M 20	19,85	M 48	47,46							
M 36	4	M 20	19,82	M 50	49,85							
M 39	4	M 22	21,88	M 50	49,82							
M 42	4,5	M 22	21,85	M 50	49,76							
M 45	4,5	M 22	21,82	M 52	51,85							
M 48	5	M 24	23,88	M 52	51,82							
M 52	5	M 24	23,85	M 52	51,76							
<b>BSP</b>												
<b>G</b>												
Ø mm												
G 1/8 9,62												
G 1/4 13,03												
G 3/8 16,53												
G 1/2 20,81												
G 5/8 22,77												
G 3/4 26,30												
G 7/8 30,06												
G 1" 33,07												
G 1.1/8 37,71												
G 1.1/4 41,73												
G 1.3/8 44,14												
G 1.1/2 47,62												
G 1.3/4 53,56												
G 2" 59,43												



## Conversion Table Inch-mm

### Conversión pulgadas-mm

Whitworth-Thread BSW			Pipe-Thread DIN ISO 228		
Nominal-Ø Inch	Pitch	Thread-Ø mm	Nominal-Ø Inch	Pitch	Thread-Ø mm
1/16	60	1,587	G 1/8	28	9,728
3/32	48	2,381	G 1/4	19	13,157
1/8	40	3,175	G 3/8	19	16,662
5/32	32	3,969	G 1/2	14	20,955
3/16	24	4,762	G 5/8	14	22,911
7/32	24	5,556	G 3/4	14	26,441
1/4	20	6,350	G 7/8	14	30,201
5/16	18	7,938	G 1	11	33,249
3/8	16	9,525	G 1 1/8	11	37,897
7/16	14	11,113	G 1 1/4	11	41,910
1/2	12	12,700	G 1 3/8	11	44,323
9/16	12	14,288	G 1 1/2	11	47,803
5/8	11	15,876	G 1 3/4	11	53,746
3/4	10	19,051	G 2	11	59,614
7/8	9	22,226	G 2 1/4	11	65,710
1	8	25,401	G 2 1/2	11	75,184
1 1/8	7	28,576	G 2 3/4	11	81,534
1 1/4	7	31,751	G 3	11	87,884
1 3/8	6	34,926	G 3 1/4	11	93,980
1 1/2	6	38,101	G 3 1/2	11	100,330
1 5/8	5	41,277	G 3 3/4	11	106,680
1 3/4	5	44,452	G 4	11	113,030
1 7/8	4 1/2	47,627			
2	4 1/2	50,802			
2 1/4	4	57,152			
2 1/2	4	63,502			
2 3/4	3 1/2	69,853			
3	3 1/2	76,203			

UNC- und UNF-Thread				Armoured tube thread DIN 40430 PG		
Nominal-No.	Pitch UNC	UNF	Thread-Ø mm	Nominal-Ø	Pitch	Thread-Ø mm
0	-	80	1,52	PG 7	20	12,500
1	64	72	1,85	PG 9	18	15,200
2	56	72	1,85	PG 11	18	18,600
3	48	56	2,52	PG 13,5	18	20,400
4	40	48	2,85	PG 16	18	22,500
5	40	44	3,18	PG 21	16	28,300
6	32	40	3,51	PG 29	16	37,000
8	32	36	4,17	PG 36	16	47,000
10	24	32	4,83	PG 42	16	54,000
12	24	38	5,49	PG 48	16	59,500

**Conversion Table of Tensile Strength and Hardness\***  
**Tabla de conversión de resistencia a la tracción y de durezas\***

N/mm <sup>2</sup>	HRC	Rockwell HRA	HRB	HRF	Vickers HV (≥98N)	Brinell HB 30
255	-	-	-	-	80	76
285	-	-	48	83	90	86
320	-	-	56	87	100	95
350	-	-	62	91	110	105
385	-	-	67	94	120	114
415	-	-	71	96	130	124
450	-	-	75	99	140	133
480	-	-	79	101	150	143
510	-	-	82	104	160	152
545	-	-	85	106	170	162
575	-	-	87	107	180	171
610	-	-	90	109	190	181
640	-	-	92	110	200	190
675	-	-	94	111	210	199
705	-	-	95	112	220	209
740	-	-	97	113	230	219
770	20	61	98	114	240	228
800	22	62	100	115	250	238
835	24	62	101	-	260	247
865	26	63	102	-	270	257
900	27	64	104	-	280	266
930	29	65	105	-	290	276
965	30	65	-	-	300	285
1030	32	66	-	-	320	304
1095	34	68	-	-	340	323
1155	37	69	-	-	360	342
1220	39	70	-	-	380	361
1290	41	71	-	-	400	380
1350	43	72	-	-	420	399
1420	45	73	-	-	440	418
1485	46	74	-	-	460	437
1555	48	75	-	-	480	456
1595	48	75	-	-	490	466
1665	50	76	-	-	510	485
1740	51	76	-	-	530	504
1810	52	77	-	-	550	523
1880	54	78	-	-	570	542
1955	55	78	-	-	590	561
2030	56	79	-	-	610	580
2105	57	80	-	-	630	599
2180	58	80	-	-	650	618
-	59	81	-	-	670	636
-	60	81	-	-	690	-
-	61	82	-	-	720	-
-	63	83	-	-	760	-
-	64	83	-	-	800	-
-	65	84	-	-	840	-
-	66	85	-	-	880	-



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