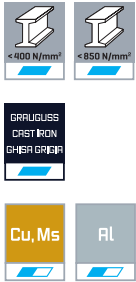


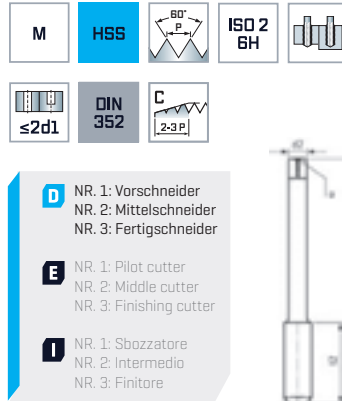
D Handgewindebohrer
gerade genutet, für metrisches ISO-Gewinde DIN 13

Einsatzbereich:
Für Durchgangs- und Grundgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm², Stahlguss, Temperguss, Messing, Aluminium und Kupfer.



E Hand taps
straight fluted, for metric ISO-threads DIN 13

Range of application:
For through hole and blind hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm², cast steels, malleable cast iron, brass, aluminium and copper.



I Maschi a mano
scanalature diritte, per filettatura metrica ISO, DIN 13

Impiego:
Per fori passanti e fori ciechi, adatti per acciai legati e non legati con R fino a 850 N/mm², acciaio fuso, ghisa malleabile, ottone, alluminio, rame.



d1 mm	P mm	l1 mm	l2 mm	d2 mm	a _{h12} mm		Code 4503 / Set* Art.-Nr.	Code 4503/Nr.1 Art.-Nr.	Code 4503/Nr. 2 Art.-Nr.	Code 4503/Nr. 3 Art.-Nr.
M 2	0,4	36	8	2,8	2,1	Ø 1,6 mm	0 4503008001 00	0 4503008101 00	0 4503008201 00	0 4503008301 00
M 2,2	0,45	36	9	2,8	2,1	Ø 1,75 mm	0 4503009001 00	0 4503009101 00	0 4503009201 00	0 4503009301 00
M 2,3	0,4	36	9	2,8	2,8	Ø 1,9 mm	0 4503010001 00	0 4503010101 00	0 4503010201 00	0 4503010301 00
M 2,5	0,45	40	9	2,8	2,1	Ø 2,05 mm	0 4503011001 00	0 4503011101 00	0 4503011201 00	0 4503011301 00
M 2,6	0,45	40	9	2,8	2,1	Ø 2,1 mm	0 4503012001 00	0 4503012101 00	0 4503012201 00	0 4503012301 00
M 3	0,5	40	11	3,5	2,7	Ø 2,5 mm	0 4503013001 00	0 4503013101 00	0 4503013201 00	0 4503013301 00
M 3,5	0,6	45	13	4	3	Ø 2,9 mm	0 4503014001 00	0 4503014101 00	0 4503014201 00	0 4503014301 00
M 4	0,7	45	13	4,5	3,4	Ø 3,3 mm	0 4503015001 00	0 4503015101 00	0 4503015201 00	0 4503015301 00
M 4,5	0,75	50	16	6	4,9	Ø 3,7 mm	0 4503016001 00	0 4503016101 00	0 4503016201 00	0 4503016301 00
M 5	0,8	50	16	6	4,9	Ø 4,2 mm	0 4503017001 00	0 4503017101 00	0 4503017201 00	0 4503017301 00
M 6	1	50	19	6	4,9	Ø 5,0 mm	0 4503019001 00	0 4503019101 00	0 4503019201 00	0 4503019301 00
M 7	1	50	19	6	4,9	Ø 6,0 mm	0 4503020001 00	0 4503020101 00	0 4503020201 00	0 4503020301 00
M 8	1,25	56	22	6	4,9	Ø 6,8 mm	0 4503021001 00	0 4503021101 00	0 4503021201 00	0 4503021301 00
M 9	1,25	63	22	7	5,5	Ø 7,8 mm	0 4503022001 00	0 4503022101 00	0 4503022201 00	0 4503022301 00
M 10	1,5	70	24	7	5,5	Ø 8,5 mm	0 4503023001 00	0 4503023101 00	0 4503023201 00	0 4503023301 00
M 11	1,5	70	24	8	6,2	Ø 9,5 mm	0 4503024001 00	0 4503024101 00	0 4503024201 00	0 4503024301 00
M 12	1,75	75	29	9	7	Ø 10,2 mm	0 4503025001 00	0 4503025101 00	0 4503025201 00	0 4503025301 00
M 14	2	80	30	11	9	Ø 12,0 mm	0 4503026001 00	0 4503026101 00	0 4503026201 00	0 4503026301 00
M 16	2	80	32	12	9	Ø 14,0 mm	0 4503027001 00	0 4503027101 00	0 4503027201 00	0 4503027301 00
M 18	2,5	95	40	14	11	Ø 15,5 mm	0 4503028001 00	0 4503028101 00	0 4503028201 00	0 4503028301 00
M 20	2,5	95	40	16	12	Ø 17,5 mm	0 4503029001 00	0 4503029101 00	0 4503029201 00	0 4503029301 00
M 22	2,5	100	40	18	14,5	Ø 19,5 mm	0 4503030001 00	0 4503030101 00	0 4503030201 00	0 4503030301 00
M 24	3	110	50	18	14,5	Ø 21,0 mm	0 4503031001 00	0 4503031101 00	0 4503031201 00	0 4503031301 00
M 27	3	110	50	20	16	Ø 24,0 mm	0 4503032001 00	0 4503032101 00	0 4503032201 00	0 4503032301 00
M 30	3,5	125	56	22	18	Ø 26,5 mm	0 4503033001 00	0 4503033101 00	0 4503033201 00	0 4503033301 00

* Satz bestehend aus je 1 Stk. Vor-, Mittel- und Fertigschneider
 * Set consisting 1 pc. each pilot, middle and finishing cutter
 * Serie composta di 1 sbozzatore, 1 intermedio, 1 finitore

HSS-Gewindewerkzeuge
HSS taps and dies
HSS maschi e filiere

D Handgewindebohrer
gerade genutet, für metrisches ISO-Gewinde DIN 13

Einsatzbereich:
Für Durchgangs- und Grundgewinde, besonders geeignet für rost- und säurebeständige Stähle sowie legierte und unlegierte Stähle bis ca. 1.000 N/mm², Stahlguss, Temperguss, Messing, Aluminium und Kupfer.



E Hand taps
straight fluted, for metric ISO-threads DIN 13

Range of application:
For through hole and blind hole threads, especially suitable for stainless and acid-resistant steels as well as alloyed and unalloyed steels up to appr. 1.000 N/mm², cast steels, malleable cast iron, brass, aluminium and copper.

D NR. 1: Vorschneider
NR. 2: Mittelschneider
NR. 3: Fertigschneider

E NR. 1: Pilot cutter
NR. 2: Middle cutter
NR. 3: Finishing cutter

I NR. 1: Sbozzatore
NR. 2: Intermedio
NR. 3: Finitore

I Maschi a mano
scanalature diritte, per filettatura metrica ISO, DIN 13

Impiego:
Per fori passanti e fori ciechi, particolarmente adatti per acciai inossidabili, acciai resistenti agli acidi, acciai legati e non legati con R fino a 1.000 N/mm², acciaio fuso, ghisa malleabile, ottone, alluminio, rame.



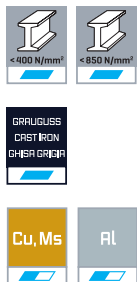
d1 mm	P mm	l1 mm	l2 mm	d2 mm	a _{h12} mm		Code 4523 / Set* Art.-Nr.	Code 4523/Nr.1 Art.-Nr.	Code 4523/Nr. 2 Art.-Nr.	Code 4523/Nr. 3 Art.-Nr.
M 3	0,5	40	12	3,5	2,7	Ø 2,5 mm	0 4523013001 00	04523013101 00	0 4523013201 00	0 4523013301 00
M 4	0,7	45	14	4,5	3,4	Ø 3,3 mm	0 4523015001 00	04523015101 00	0 4523015201 00	0 4523015301 00
M 5	0,8	50	16	6	4,9	Ø 4,2 mm	0 4523017001 00	04523017101 00	0 4523017201 00	0 4523017301 00
M 6	1	50	18	6	4,9	Ø 5,0 mm	0 4523019001 00	04523019101 00	0 4523019201 00	0 4523019301 00
M 8	1,25	56	18	6	4,9	Ø 6,8 mm	0 4523021001 00	04523021101 00	0 4523021201 00	0 4523021301 00
M 10	1,5	70	23	7	5,5	Ø 8,5 mm	0 4523023001 00	04523023101 00	0 4523023201 00	0 4523023301 00
M 12	1,75	75	28	9	7	Ø 10,2 mm	0 4523025001 00	04523025101 00	0 4523025201 00	0 4523025301 00
M 14	2	80	30	11	9	Ø 12,0 mm	0 4523026001 00	04523026101 00	0 4523026201 00	0 4523026301 00
M 16	2	80	30	12	9	Ø 14,0 mm	0 4523027001 00	04523027101 00	0 4523027201 00	0 4523027301 00
M 18	2,5	95	35	14	11	Ø 15,5 mm	0 4523028001 00	04523028101 00	0 4523028201 00	0 4523028301 00
M 20	2,5	95	35	16	12	Ø 17,5 mm	0 4523029001 00	04523029101 00	0 4523029201 00	0 4523029301 00

* Satz bestehend aus je 1 Stk. Vor-, Mittel- und Fertigschneider
 * Set consisting 1 pc. each pilot, middle and finishing cutter
 * Serie composta di 1 sbozzatore, 1 intermedio, 1 finitore

D Handgewindebohrer
gerade genutet, für metrisches ISO-Feingewinde DIN 13

Einsatzbereich:

Für Durchgangs- und Grundgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm², Stahlguss, Temperguss, Messing, Aluminium und Kupfer.



E Hand taps
straight fluted, for metric ISO fine threads DIN 13

Range of application:

For through hole and blind hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm², cast steels, malleable cast iron, brass, aluminium and copper.



- D** NR. 1: Vorschneider
NR. 2: Fertigschneider
- E** NR. 1: Pilot cutter
NR. 2: Finishing cutter
- I** NR. 1: Sbozzatore
NR. 2: Finitore



I Maschi a mano
scanalature diritte, per filettatura metrica ISO fine, DIN 13

Impiego:

Per fori passanti e fori ciechi, adatti per acciai legati e non legati con R fino a 850 N/mm², acciaio fuso, ghisa malleabile, ottone, alluminio, rame.



d1 mm	P mm	l1 mm	l2 mm	d2 mm	ah12 mm		Code 4533 / Set* Art.-Nr.
MF 3	0,35	40	9	3,5	2,7	Ø 2,65 mm	0 4533006001 00
MF 4	0,35	45	10	4,5	3,4	Ø 3,65 mm	0 4533008001 00
MF 4	0,5	45	10	4,5	3,4	Ø 3,5 mm	0 4533009001 00
MF 5	0,5	50	12	6	4,9	Ø 4,5 mm	0 4533011001 00
MF 6	0,5	50	14	6	4,9	Ø 5,5 mm	0 4533013001 00
MF 6	0,75	50	14	6	4,9	Ø 5,2 mm	0 4533015001 00
MF 8	0,75	50	19	6	4,9	Ø 7,2 mm	0 4533017001 00
MF 10	0,75	63	20	7	5,5	Ø 9,2 mm	0 4533019001 00
MF 14	0,75	70	16	11	9	Ø 13,0 mm	0 4533021001 00
MF 8	1	56	22	6	4,9	Ø 7,0 mm	0 4533022001 00
MF 10	1	63	20	7	5,5	Ø 9,0 mm	0 4533024001 00
MF 12	1	70	22	9	7	Ø 11,0 mm	0 4533026001 00
MF 14	1	70	22	11	9	Ø 13,0 mm	0 4533027001 00
MF 16	1	70	22	12	9	Ø 15,0 mm	0 4533029001 00
MF 18	1	80	22	14	11	Ø 17,0 mm	0 4533030001 00
MF 20	1	80	22	16	12	Ø 19,0 mm	0 4533031001 00
MF 22	1	80	22	18	14,5	Ø 21,0 mm	0 4533032001 00
MF 10	1,25	70	24	7	5,5	Ø 8,8 mm	0 4533037001 00
MF 12	1,25	70	22	9	7	Ø 10,8 mm	0 4533038001 00
MF 14	1,25	70	22	11	9	Ø 12,8 mm	0 4533039001 00
MF 12	1,5	70	22	9	7	Ø 10,5 mm	0 4533040001 00
MF 14	1,5	70	22	11	9	Ø 12,5 mm	0 4533041001 00
MF 16	1,5	70	22	12	9	Ø 14,5 mm	0 4533043001 00
MF 18	1,5	80	22	14	11	Ø 16,5 mm	0 4533044001 00
MF 20	1,5	80	22	16	12	Ø 18,5 mm	0 4533045001 00
MF 22	1,5	80	22	18	14,5	Ø 20,5 mm	0 4533046001 00

* Satz bestehend aus je 1 Stk. Vor- und Fertigschneider
 * Set consisting 1 pc. each pilot and finishing cutter
 * Serie composta di 1 sbozzatore, 1 finitore

HSS-Gewindewerkzeuge
HSS taps and dies
HSS maschi e filiere

D Handgewindebohrer

gerade genutet, für Whitworth-Rohrgewinde DIN ISO 228

Einsatzbereich:

Für Durchgangs- und Grundgewinde, geeignet für legierte und unlegierte Stähle bis ca. 850 N/mm², Stahlguss, Temperguss, Messing, Aluminium und Kupfer.

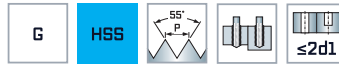


E Hand taps

straight fluted, for whitworth pipe threads DIN ISO 228

Range of application:

For through hole and blind hole threads, suitable for alloyed and unalloyed steels up to appr. 850 N/mm², cast steels, malleable cast iron, brass, aluminium and copper.



- D** NR. 1: Vorschneider
NR. 2: Fertigschneider
- E** NR. 1: Pilot cutter
NR. 2: Finishing cutter
- I** NR. 1: Sbozzatore
NR. 2: Finitore



I Maschi a mano

scanalature diritte, per filettatura whitworth per tubi DIN ISO 228

Impiego:

Per fori passanti e fori ciechi, adatti per acciai legati e non legati con R fino a 850 N/mm², acciaio fuso, ghisa malleabile, ottone, alluminio, rame.



d1 inch	P Gg / 1"	l1 mm	l2 mm	d2 mm	a _{H12} mm		Code 4573/ Set* Art.-Nr.	Code 4573/Nr. 1 Art.-Nr.	Code 4573/Nr. 2 Art.-Nr.
G 1/8"	28	63	20	7	5,5	Ø 8,8 mm	0 4573016001 00	0 4573016101 00	0 4573016201 00
G 1/4"	19	70	22	11	9	Ø 11,8 mm	0 4573020001 00	0 4573020101 00	0 4573020201 00
G 3/8"	19	70	22	12	9	Ø 15,25 mm	0 4573024001 00	0 4573024101 00	0 4573024201 00
G 1/2"	14	80	22	16	12	Ø 19,0 mm	0 4573028001 00	0 4573028101 00	0 4573028201 00
G 5/8"	14	80	22	18	14,5	Ø 21,0 mm	0 4573032001 00	0 4573032101 00	0 4573032201 00
G 3/4"	14	90	22	20	16	Ø 24,5 mm	0 4573034001 00	0 4573034101 00	0 4573034201 00
G 7/8"	14	90	22	22	18	Ø 28,25 mm	0 4573036001 00	0 4573036101 00	0 4573036201 00
G 1"	11	100	25	25	20	Ø 30,75 mm	0 4573038001 00	0 4573038101 00	0 4573038201 00

* Satz bestehend aus je 1 Stk. Vor- und Fertigschneider

* Set consisting 1 pc. each pilot and finishing cutter

* Serie composta di 1 sbozzatore, 1 finitore