



» THREAD-CUTTING TOOLS



Product description for hand tapping tools

HSS

The hand tap consists of heavy-duty high-speed steel. For through threads and bottoming threads in unalloyed and low-alloyed steels up to a strength of 800 N/mm², malleable cast iron and non-ferrous metals. The thread is cut in three operation.

HSSE-Co 5

The hand tap consists of 5 % cobalt alloyed heavy-duty high-speed steel. For through threads and bottoming threads in unalloyed and alloyed steels up to a strength of 900 N/mm², malleable cast iron and non-ferrous metals. The thread is cut in three operation.

Product description for dies

HSS + HSSE-Co 5






































The round die consists of heavy-duty high-speed steel (HSS) in unalloyed and low-alloyed steels up to a strength of 800 N/mm². The round die consists of 5 % cobalt alloyed heavy-duty high-speed steel (HSSE-Co 5) in unalloyed and alloyed steels up to a strength of 1000 N/mm² and non-ferrous metals.

The thread is cut in one operation.

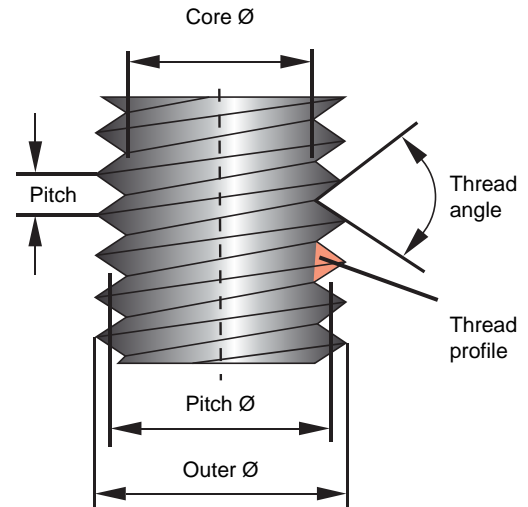
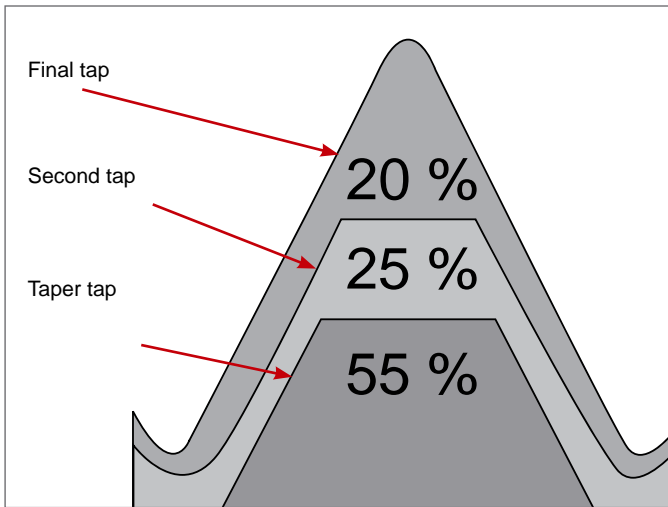


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Overview of symbols

 HSS High-speed steel	 B Type B, 4 - 5 threads with progressive tap	 2B Thread tolerance for American threads for internal threads
 HSSE Co 5 High-speed steel with 5 % Cobalt content, ground	 C Type C / 35° right-hand spiral flutes, 2 - 3 threads	 2A Thread tolerance for American threads for external threads
 left hand cutting	 D Type D, 4 - 6 threads	 ISO 2 6H Thread tolerance for metric and metric fine threads according to DIN ISO 13 for internal threads
 right hand cutting	 AZ Interrupted threads for machining soft materials	 ISO 6g Thread tolerance for metric and metric fine threads according to DIN ISO 13 for external threads
 Blind hole	 Through hole	 Ø tolerance: work's specification
 M metric, DIN ISO 13	 UNC American UNC coarse thread ANSI / ASME B 1.1	 DIN 371 Machine taps with reinforced shank
 MF metric fine, DIN ISO 13	 UNF American UNF fine thread ANSI / ASME B 1.1	 DIN 376 Machine taps with overflow shank
 Ww (BSW) British Standard Whitworth thread according to BS 84	 NPT American conical pipe thread to ANSI B.1.20.1	 800 N/mm² Tenacity classes
 BSF British Standard Fine thread according to BS 84	 Rp DIN 2999 "Rp" Whitworth pipe thread	 60° Thread angle
 G (BSP) DIN ISO 228 "G" (cylindrical pipe thread)	 PG DIN 40 430 steel conduit thread	 Coloured ring mark
 bright surface	 TiAlN TiAlN coating	 Bit shank: 6,35 mm x 27,0 mm
 Black surface	 TiN TiN coating	 Shank: square as per DIN 10
	 TiCN TiCN coating	





Form B dies = Closed, pre-slotted version!

Thread-cutting tools

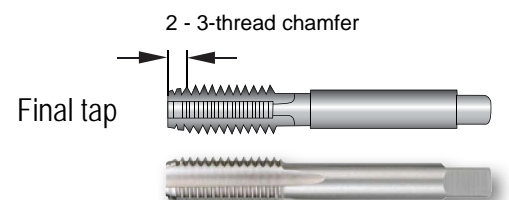
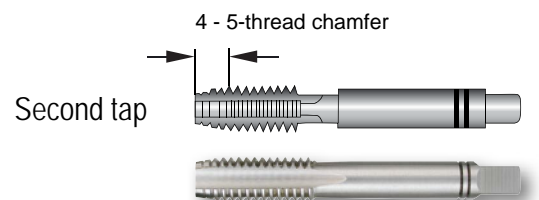
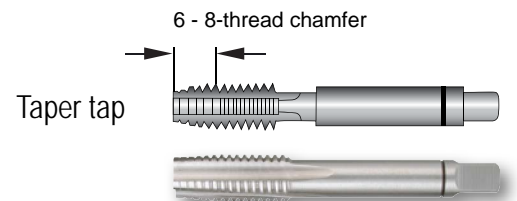
To cut an internal thread, at first a core hole is drilled, whose diameter is approximately smaller by the pitch of the thread than the nominal diameter of the thread.

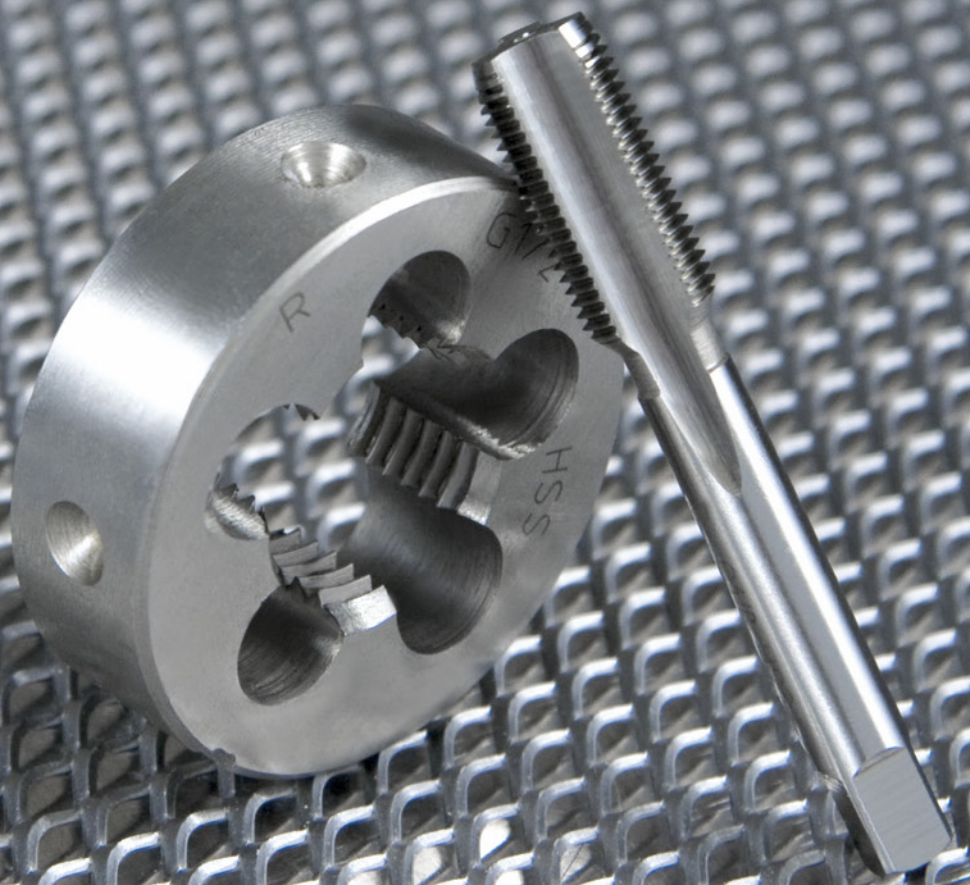
Subsequently tapered counter bores are placed, which match the size of the thread diameter plus 10 % of it. This is done to get a better insertion into the bore hole and to prevent the first and the last thread from being pushed out when beginning to cut.

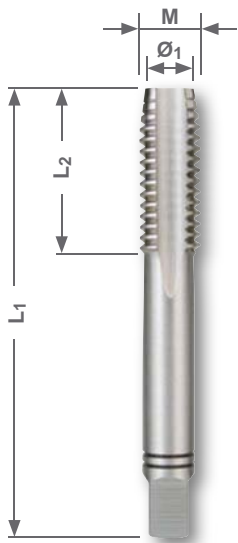
Then the taps are screwed in and out in order. The final core hole diameter is created through the additional plastic deformation of the thread flanks.

To increase the tool life and for optimum surface qualities, RUKO cutting oils or other cooling lubricants for the lubrication are used, as it minimises the friction between the chip and the cutting of the tap and thereby also reduce the necessary torque.

In hand taps, after two rotations of the drill, 1/3 rotation is rotated back to break the chip. In this way the stressing on the drill drops and it doesn't break so quickly.







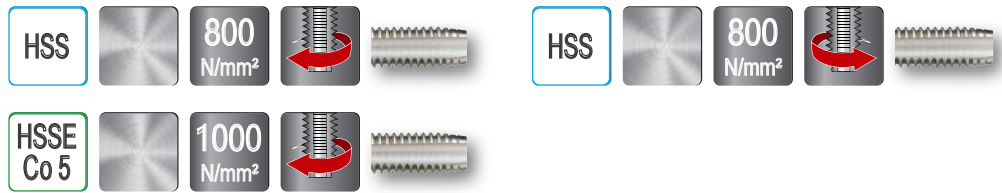
Hand taps M DIN 352 HSS, HSS-left-handed thread and HSSE-Co 5 ground



Set: 3-piece
 Taper tap: 6 - 8-thread chamfer
 Second tap: 4 - 5-thread chamfer
 Final tap: 2 - 3-thread chamfer
 Thread: metric, DIN ISO 13
 Flanks: relief-ground

Also available individually

Taper tap: Article no. 230-1
 Second tap: Article no. 230-2
 Final tap: Article no. 230-3

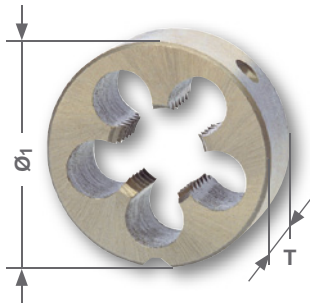


Packing unit: set in plastic pack

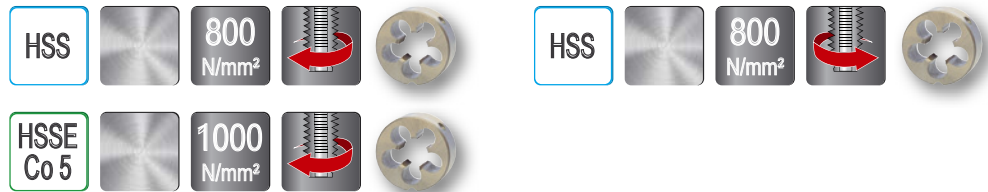
Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Article no. HSS	Article no. HSS-left-hand	Article no. HSSE-Co 5
M 1	0,25	0,75	32,0	5,5	230 010	—	—
M 1,2	0,25	0,95	32,0	5,5	230 012	—	—
M 1,4	0,30	1,10	32,0	7,0	230 014	—	—
M 1,6	0,35	1,25	32,0	7,0	230 016	—	—
M 1,7	0,35	1,35	32,0	8,0	230 017	—	—
M 1,8	0,35	1,45	32,0	8,0	230 018	—	—
M 2	0,40	1,60	36,0	8,0	230 020	—	230 020 E
M 2,2	0,45	1,75	36,0	9,0	230 022	—	—
M 2,3	0,40	1,90	36,0	9,0	230 023	—	—
M 2,5	0,45	2,10	40,0	8,0	230 025	—	—
M 2,6	0,45	2,10	40,0	8,0	230 026	—	—
M 3	0,50	2,50	40,0	10,0	230 030	230 030 Li	230 030 E
M 3,5	0,60	2,90	45,0	12,0	230 035	—	—
M 4	0,70	3,30	45,0	12,0	230 040	230 040 Li	230 040 E
M 4,5	0,75	3,70	50,0	16,0	230 045	—	—
M 5	0,80	4,20	50,0	13,0	230 050	230 050 Li	230 050 E
M 6	1,00	5,00	56,0	15,0	230 060	230 060 Li	230 060 E
M 7	1,00	6,00	56,0	16,0	230 070	—	—
M 8	1,25	6,80	63,0	18,0	230 080	230 080 Li	230 080 E
M 9	1,25	7,80	63,0	22,0	230 090	—	—
M 10	1,50	8,50	70,0	24,0	230 100	230 100 Li	230 100 E
M 11	1,50	9,50	70,0	24,0	230 110	—	—
M 12	1,75	10,20	75,0	29,0	230 120	230 120 Li	230 120 E
M 14	2,00	12,00	80,0	30,0	230 140	230 140 Li	230 140 E
M 15	2,00	13,00	80,0	32,0	230 150	—	—
M 16	2,00	14,00	80,0	32,0	230 160	230 160 Li	230 160 E
M 18	2,50	15,50	95,0	40,0	230 180	230 180 Li	230 180 E
M 20	2,50	17,50	95,0	40,0	230 200	230 200 Li	230 200 E
M 22	2,50	19,50	100,0	40,0	230 220	—	230 220 E
M 24	3,00	21,00	110,0	45,0	230 240	—	230 240 E
M 27	3,00	24,00	110,0	50,0	230 270	—	—
M 30	3,50	26,50	125,0	56,0	230 300	—	—
M 33	3,50	29,50	125,0	56,0	230 330	—	—
M 36	4,00	32,00	150,0	63,0	230 360	—	—
M 39	4,00	35,00	150,0	63,0	230 390	—	—
M 42	4,50	37,50	150,0	63,0	230 420	—	—
M 45	4,50	40,50	160,0	70,0	230 450	—	—
M 48	5,00	43,00	180,0	75,0	230 480	—	—
M 52	5,00	47,00	180,0	75,0	230 520	—	—



Round dies M DIN EN 22568 HSS, HSS-left-handed thread and HSSE-Co 5 ground



Type: Type B closed, preslotted
Thread: metric, DIN ISO 13

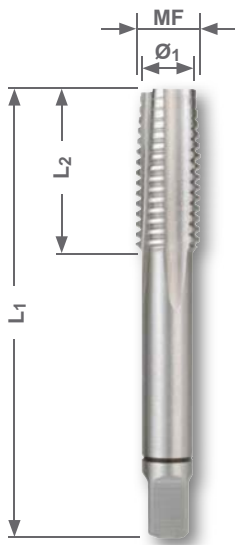


Packing unit: in plastic tubes of 1

Nominal thread size M	Pitch mm	Outside Ø ₁ mm	Thickness T mm	Article no. HSS	Article no. HSS	Article no. HSS-left-hand	Article no. HSSE-Co 5
M 1	0,25	16,0	5,0	237 010	—	—	—
M 1,2	0,25	16,0	5,0	237 012	—	—	—
M 1,4	0,30	16,0	5,0	237 014	—	—	—
M 1,6	0,35	16,0	5,0	237 016	—	—	—
M 1,7	0,35	16,0	5,0	237 017	—	—	—
M 1,8	0,35	16,0	5,0	237 018	—	—	—
M 2	0,40	16,0	5,0	237 020	—	—	237 020 E
M 2,2	0,45	16,0	5,0	237 022	—	—	—
M 2,3	0,40	16,0	5,0	237 023	—	—	—
M 2,5	0,45	16,0	5,0	237 025	—	—	—
M 2,6	0,45	16,0	5,0	237 026	—	—	—
M 3	0,50	20,0	5,0	237 030	—	237 030 Li	237 030 E
M 3	0,50	25,0	9,0	—	238 030	—	—
M 3,5	0,60	20,0	5,0	237 035	—	—	—
M 4	0,70	20,0	5,0	237 040	—	237 040 Li	237 040 E
M 4	0,70	25,0	9,0	—	238 040	—	—
M 4,5	0,75	20,0	7,0	237 045	—	—	—
M 5	0,80	20,0	7,0	237 050	—	237 050 Li	237 050 E
M 5	0,80	25,0	9,0	—	238 050	—	—
M 6	1,00	20,0	7,0	237 060	—	237 060 Li	237 060 E
M 6	1,00	25,0	9,0	—	238 060	—	—
M 7	1,00	25,0	9,0	237 070	—	237 070 Li	—
M 8	1,25	25,0	9,0	237 080	238 080	237 080 Li	237 080 E
M 9	1,25	25,0	9,0	237 090	—	—	—
M 10	1,50	30,0	11,0	237 100	—	237 100 Li	237 100 E
M 10	1,50	25,0	9,0	—	238 100	—	—
M 11	1,50	30,0	11,0	237 110	—	—	—
M 12	1,75	38,0	14,0	237 120	—	237 120 Li	237 120 E
M 12	1,75	25,0	9,0	—	238 120	—	—
M 14	2,00	38,0	14,0	237 140	—	237 140 Li	237 140 E
M 16	2,00	45,0	18,0	237 160	—	237 160 Li	237 160 E
M 18	2,50	45,0	18,0	237 180	—	237 180 Li	237 180 E
M 20	2,50	45,0	18,0	237 200	—	237 200 Li	237 200 E
M 22	2,50	55,0	22,0	237 220	—	—	237 220 E
M 24	3,00	55,0	22,0	237 240	—	—	237 240 E
M 27	3,00	65,0	25,0	237 270	—	—	—
M 30	3,50	65,0	25,0	237 300	—	—	—
M 33	3,50	65,0	25,0	237 330	—	—	—
M 36	4,00	65,0	25,0	237 360	—	—	—
M 39	4,00	75,0	30,0	237 390	—	—	—
M 42	4,50	75,0	30,0	237 420	—	—	—
M 45	4,50	90,0	36,0	237 450	—	—	—
M 48	5,00	90,0	36,0	237 480	—	—	—
M 52	5,00	90,0	36,0	237 520	—	—	—



Hand taps MF DIN 2181 HSS, ground



Set: 2-piece
 Taper tap: 5 - 6-thread chamfer
 Final tap: 2 - 3-thread chamfer
 Thread: metric, fine, DIN ISO 13
 Flanks: relief-ground

Also available individually
 Taper tap: Article no. 235-1
 Final tap: Article no. 235-2

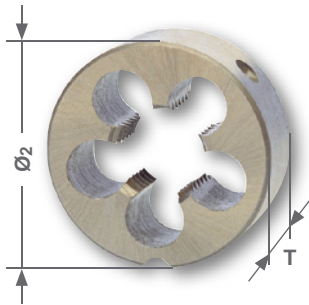
Packing unit: set in plastic pack

Nominal thread size MF	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Article no. HSS
MF 3	0,35	2,60	40,0	10,0	235 030
MF 4	0,35	3,10	45,0	10,0	235 040
MF 4	0,50	3,50	45,0	12,0	235 041
MF 5	0,50	4,50	50,0	13,0	235 050
MF 5	0,75	4,25	50,0	13,0	235 051
MF 6	0,50	5,50	50,0	14,0	235 061
MF 6	0,75	5,20	50,0	15,0	235 060
MF 7	0,75	6,20	50,0	14,0	235 070
MF 8	0,50	7,50	50,0	19,0	235 082
MF 8	0,75	7,20	56,0	18,0	235 080
MF 8	1,00	7,00	56,0	18,0	235 081
MF 9	0,75	8,20	56,0	19,0	235 092
MF 9	1,00	8,00	63,0	20,0	235 090
MF 10	0,75	9,20	63,0	20,0	235 102
MF 10	1,00	9,00	63,0	18,0	235 100
MF 10	1,25	8,70	70,0	24,0	235 101
MF 11	1,00	9,20	63,0	20,0	235 110
MF 11	1,25	9,80	63,0	22,0	235 111
MF 12	1,00	11,00	70,0	20,0	235 122
MF 12	1,25	10,70	70,0	20,0	235 121
MF 12	1,50	10,50	70,0	20,0	235 120
MF 13	1,00	12,00	70,0	22,0	235 130
MF 13	1,50	11,50	70,0	22,0	235 131
MF 14	1,00	13,00	70,0	20,0	235 142
MF 14	1,25	12,70	70,0	20,0	235 140
MF 14	1,50	12,50	70,0	20,0	235 141
MF 15	1,50	13,50	70,0	22,0	235 150
MF 16	1,00	15,00	70,0	20,0	235 161
MF 16	1,25	14,75	70,0	20,0	235 162
MF 16	1,50	14,50	70,0	20,0	235 160
MF 18	1,00	17,00	80,0	22,0	235 181
MF 18	1,25	16,80	80,0	22,0	235 183

Nominal thread size MF	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Article no. HSS
MF 18	1,50	16,50	80,0	22,0	235 180
MF 18	2,00	16,00	80,0	22,0	235 182
MF 20	1,00	19,00	80,0	22,0	235 201
MF 20	1,25	18,80	80,0	22,0	235 203
MF 20	1,50	18,50	80,0	22,0	235 200
MF 20	2,00	18,00	80,0	22,0	235 202
MF 22	1,00	21,00	80,0	22,0	235 221
MF 22	1,50	20,50	80,0	22,0	235 220
MF 22	2,00	20,00	80,0	22,0	235 222
MF 24	1,00	23,00	90,0	22,0	235 242
MF 24	1,50	22,50	90,0	22,0	235 240
MF 24	2,00	22,00	90,0	22,0	235 241
MF 25	1,50	23,50	90,0	22,0	235 250
MF 26	1,50	24,50	90,0	22,0	235 261
MF 26	2,00	24,00	90,0	22,0	235 260
MF 27	1,50	25,50	90,0	22,0	235 270
MF 27	2,00	25,00	90,0	22,0	235 271
MF 28	1,50	26,50	90,0	22,0	235 280
MF 28	2,00	26,00	90,0	22,0	235 281
MF 30	1,00	29,00	90,0	22,0	235 300
MF 30	1,50	28,50	90,0	22,0	235 301
MF 30	2,00	28,00	90,0	22,0	235 302
MF 32	1,50	30,50	90,0	22,0	235 320
MF 35	1,50	33,50	100,0	25,0	235 350
MF 38	1,50	36,50	110,0	25,0	235 380
MF 40	1,50	38,50	110,0	25,0	235 400
MF 42	1,50	40,50	110,0	25,0	235 420
MF 45	1,50	43,50	110,0	25,0	235 450
MF 48	1,50	46,50	125,0	40,0	235 480
MF 50	1,50	48,50	125,0	40,0	235 500
MF 52	1,50	50,50	125,0	40,0	235 520



Round dies MF DIN EN 22568 HSS, ground



Type: Type B closed, preslotted
Thread: metric fine, DIN ISO 13

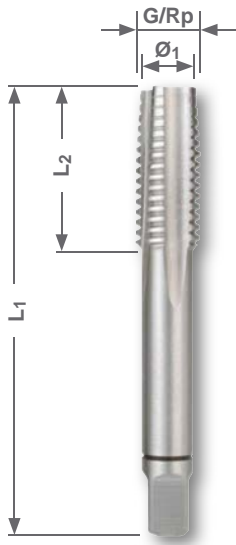
Packing unit: in plastic tubes of 1

Nominal thread size MF	Pitch mm	Outside Ø ₂ mm	Thickness T mm	Article no. HSS
MF 3	0,35	20,0	5,0	239 030
MF 4	0,35	20,0	5,0	239 040
MF 4	0,50	20,0	5,0	239 041
MF 5	0,50	20,0	5,0	239 050
MF 5	0,75	20,0	7,0	239 051
MF 6	0,50	20,0	5,0	239 061
MF 6	0,75	20,0	7,0	239 060
MF 7	0,75	25,0	9,0	239 070
MF 8	0,50	25,0	9,0	239 082
MF 8	0,75	25,0	9,0	239 080
MF 8	1,00	25,0	9,0	239 081
MF 9	0,75	25,0	9,0	239 090
MF 9	1,00	25,0	9,0	239 091
MF 10	0,75	30,0	11,0	239 102
MF 10	1,00	30,0	11,0	239 100
MF 10	1,25	30,0	11,0	239 101
MF 11	1,00	30,0	11,0	239 110
MF 11	1,25	30,0	11,0	239 111
MF 12	1,00	38,0	10,0	239 121
MF 12	1,25	38,0	10,0	239 122
MF 12	1,50	38,0	10,0	239 120
MF 13	1,00	38,0	10,0	239 131
MF 13	1,50	38,0	10,0	239 130
MF 14	1,00	38,0	10,0	239 142
MF 14	1,25	38,0	10,0	239 140
MF 14	1,50	38,0	10,0	239 141
MF 15	1,50	38,0	10,0	239 150
MF 16	1,00	45,0	14,0	239 161
MF 16	1,25	45,0	14,0	239 162
MF 16	1,50	45,0	14,0	239 160
MF 18	1,00	45,0	14,0	239 181
MF 18	1,25	45,0	14,0	239 183

Nominal thread size MF	Pitch mm	Outside Ø ₂ mm	Thickness T mm	Article no. HSS
MF 18	1,50	45,0	14,0	239 180
MF 18	2,00	45,0	14,0	239 182
MF 20	1,00	45,0	14,0	239 201
MF 20	1,25	45,0	14,0	239 203
MF 20	1,50	45,0	14,0	239 200
MF 20	2,00	45,0	14,0	239 202
MF 22	1,00	55,0	16,0	239 221
MF 22	1,50	55,0	16,0	239 220
MF 22	2,00	55,0	16,0	239 222
MF 24	1,00	55,0	16,0	239 242
MF 24	1,50	55,0	16,0	239 240
MF 24	2,00	55,0	16,0	239 241
MF 25	1,50	55,0	16,0	239 250
MF 26	1,50	55,0	16,0	239 261
MF 26	2,00	55,0	16,0	239 262
MF 27	1,50	65,0	18,0	239 270
MF 27	2,00	65,0	18,0	239 271
MF 28	1,50	65,0	18,0	239 281
MF 28	2,00	65,0	18,0	239 282
MF 30	1,00	65,0	18,0	239 300
MF 30	1,50	65,0	18,0	239 301
MF 30	2,00	65,0	18,0	239 302
MF 32	1,50	65,0	18,0	239 320
MF 35	1,50	65,0	18,0	239 350
MF 38	1,50	75,0	20,0	239 380
MF 40	1,50	75,0	20,0	239 400
MF 42	1,50	75,0	20,0	239 420
MF 45	1,50	90,0	22,0	239 450
MF 48	1,50	90,0	22,0	239 480
MF 50	1,50	90,0	22,0	239 500
MF 52	1,50	90,0	22,0	239 520



Hand taps G DIN 5157 HSS, ground



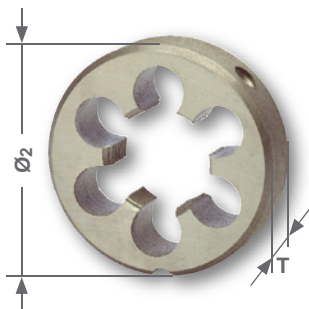
Set: 2-piece
 Taper tap: 5 - 6-thread chamfer
 Final tap: 2 - 3-thread chamfer
 Thread: DIN ISO 228 "G" (cylindrical pipe thread)
 DIN 2999 "Rp" (Whitworth pipe thread)
 Flanks: relief-ground

Also available individually
 Taper tap: Article no. 236-1
 Final tap: Article no. 236-2

Packing unit: set in plastic pack

Nominal thread size G / Rp		Threads per inch	Thread core hole Ø1 mm	L1 mm	L2 mm	Article no. HSS
G 1/8	Rp 1/8	28	8,80	63,0	18,0	236 018
G 1/4	Rp 1/4	19	11,80	70,0	20,0	236 014
G 3/8	Rp 3/8	19	15,25	70,0	20,0	236 038
G 1/2	Rp 1/2	14	19,00	80,0	22,0	236 012
G 5/8	Rp 5/8	14	21,00	80,0	22,0	236 058
G 3/4	Rp 3/4	14	24,50	90,0	22,0	236 034
G 7/8	Rp 7/8	14	28,25	90,0	22,0	236 078
G 1"	Rp 1"	11	30,75	100,0	25,0	236 010
G 1 1/8	Rp 1 1/8	11	35,50	125,0	40,0	236 118
G 1 1/4	Rp 1 1/4	11	39,50	125,0	40,0	236 114
G 1 3/8	Rp 1 3/8	11	41,50	140,0	40,0	236 138
G 1 1/2	Rp 1 1/2	11	45,25	140,0	40,0	236 112
G 1 3/4	Rp 1 3/4	11	51,00	140,0	40,0	236 134
G 2"	Rp 2"	11	57,00	160,0	40,0	236 020

Round dies G DIN EN 24231 HSS, ground



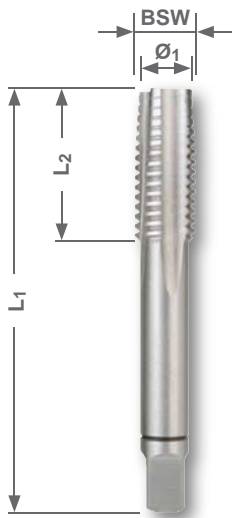
Type: Type B closed, preslotted
 Thread: DIN ISO 228 "G" (cylindrical pipe thread)

Packing unit: individual plastic pack

Nominal thread size G	Threads per inch	Outside Ø2 mm	Thickness T mm	Article no. HSS
G 1/8	28	30,0	11,0	240 018
G 1/4	19	38,0	10,0	240 014
G 3/8	19	45,0	14,0	240 038
G 1/2	14	45,0	14,0	240 012
G 5/8	14	55,0	16,0	240 058
G 3/4	14	55,0	16,0	240 034
G 7/8	14	65,0	18,0	240 078
G 1"	11	65,0	18,0	240 010

Nominal thread size G	Threads per inch	Outside Ø2 mm	Thickness T mm	Article no. HSS
G 1 1/8	11	75,0	20,0	240 118
G 1 1/4	11	75,0	20,0	240 114
G 1 3/8	11	90,0	22,0	240 138
G 1 1/2	11	90,0	22,0	240 112
G 1 5/8	11	90,0	22,0	240 158
G 1 3/4	11	105,0	22,0	240 134
G 2"	11	105,0	22,0	240 020

Hand taps BSW ≈ DIN 352 HSS, ground



Set: 3-piece
 Taper tap: 5 - 6-thread chamfer
 Second tap: 4 - 5-thread chamfer
 Final tap: 2 - 3-thread chamfer
 Thread: BSW, formerly DIN 11
 Flanks: relief-ground

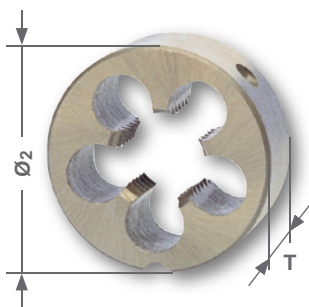
Also available individually
 Taper tap: Article no. 246-1
 Second tap: Article no. 246-2
 Final tap: Article no. 246-3

Packing unit: set in plastic pack

Nominal thread size BSW	Threads per inch	Thread core hole Ø1 mm	L1 mm	L2 mm	Article no. HSS
1/16	60	1,15	32,0	7,0	246 116
3/32	48	1,80	40,0	8,0	246 332
1/8	40	2,60	40,0	10,0	246 018
5/32	32	3,10	45,0	12,0	246 532
3/16	24	3,60	50,0	13,0	246 316
7/32	24	4,40	50,0	15,0	246 732
1/4	20	5,10	50,0	16,0	246 014
5/16	18	6,50	56,0	18,0	246 516
3/8	16	7,90	70,0	24,0	246 038
7/16	14	9,30	70,0	24,0	246 716
1/2	12	10,50	80,0	30,0	246 012
9/16	12	12,00	80,0	30,0	246 916

Nominal thread size BSW	Threads per inch	Thread core hole Ø1 mm	L1 mm	L2 mm	Article no. HSS
5/8	11	13,50	80,0	32,0	246 058
3/4	10	16,50	95,0	40,0	246 034
7/8	9	19,25	100,0	40,0	246 078
1"	8	22,00	110,0	50,0	246 010
1 1/8	7	24,75	125,0	50,0	246 118
1 1/4	7	27,75	125,0	50,0	246 114
1 3/8	6	30,20	150,0	63,0	246 138
1 1/2	6	33,50	150,0	63,0	246 112
1 5/8	5	35,50	150,0	63,0	246 158
1 3/4	5	38,50	160,0	70,0	246 134
1 7/8	4 1/2	41,50	180,0	75,0	246 178
2"	4 1/2	44,50	180,0	75,0	246 020

Round dies BSW ≈ DIN EN 22568 HSS, ground



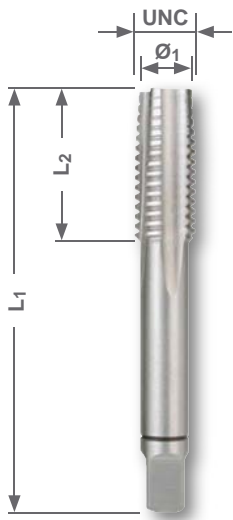
Type: Type B closed, preslotted
 Thread: BSW, formerly DIN 11

Packing unit: individual plastic pack

Nominal thread size BSW	Threads per inch	Outside Ø2 mm	Thickness T mm	Article no. HSS
1/16	60	16,0	5,0	247 116
3/32	48	16,0	5,0	247 332
1/8	40	20,0	5,0	247 018
5/32	32	20,0	5,0	247 532
3/16	24	20,0	7,0	247 316
7/32	24	20,0	7,0	247 732
1/4	20	25,0	9,0	247 014
5/16	18	25,0	9,0	247 516
3/8	16	30,0	11,0	247 038
7/16	14	30,0	11,0	247 716
1/2	12	38,0	14,0	247 012
9/16	12	38,0	14,0	247 916

Nominal thread size BSW	Threads per inch	Outside Ø2 mm	Thickness T mm	Article no. HSS
5/8	11	45,0	18,0	247 058
3/4	10	45,0	18,0	247 034
7/8	9	55,0	22,0	247 078
1"	8	55,0	22,0	247 010
1 1/8	7	65,0	25,0	247 118
1 1/4	7	65,0	25,0	247 114
1 3/8	6	65,0	25,0	247 138
1 1/2	6	75,0	30,0	247 112
1 5/8	5	75,0	30,0	247 158
1 3/4	5	90,0	36,0	247 134
1 7/8	4 1/2	90,0	36,0	247 178
2"	4 1/2	90,0	36,0	247 020





Hand taps UNC ≈ DIN 352 HSS, ground



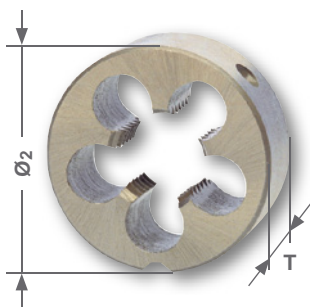
Set: 3-piece
 Taper tap: 5 - 6-thread chamfer
 Second tap: 4 - 5-thread chamfer
 Final tap: 2 - 3-thread chamfer
 Thread: American UNC coarse thread
 Flanks: relief-ground

Also available individually
 Taper tap: Article no. 246 UNC1
 Second tap: Article no. 246 UNC2
 Final tap: Article no. 246 UNC3

Packing unit: set in plastic pack

Nominal thread size UNC	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Article no. HSS
Nr. 2	56	1,85	36,0	11,0	246 020 UNC
Nr. 3	48	2,1	36,0	11,0	246 030 UNC
Nr. 4	40	3,5	40,0	12,0	246 040 UNC
Nr. 5	40	3,5	40,0	12,0	246 050 UNC
Nr. 6	32	4,0	45,0	14,0	246 060 UNC
Nr. 8	32	4,5	45,0	14,0	246 080 UNC
Nr. 10	24	6,0	50,0	16,0	246 100 UNC
Nr. 12	24	6,0	50,0	18,0	246 120 UNC
1/4	20	6,0	50,0	19,0	246 014 UNC
5/16	18	6,0	56,0	22,0	246 516 UNC
3/8	16	7,0	70,0	24,0	246 038 UNC
7/16	14	8,0	70,0	24,0	246 716 UNC

Nominal thread size UNC	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Article no. HSS
1/2	13	9,0	75,0	29,0	246 012 UNC
9/16	12	11,0	80,0	30,0	246 916 UNC
5/8	11	12,0	80,0	32,0	246 058 UNC
3/4	10	14,0	95,0	40,0	246 034 UNC
7/8	9	18,0	100,0	40,0	246 078 UNC
1"	8	18,0	110,0	50,0	246 010 UNC
1 1/8	7	22,0	132,0	56,0	246 118 UNC
1 1/4	7	22,0	132,0	56,0	246 114 UNC
1 3/8	6	28,0	150,0	63,0	246 138 UNC
1 1/2	6	32,0	150,0	63,0	246 112 UNC
1 3/4	5	36,0	160,0	70,0	246 134 UNC
2"	4 1/2	40,0	190,0	80,0	246 200 UNC



Round dies UNC ≈ DIN EN 22568 HSS, ground



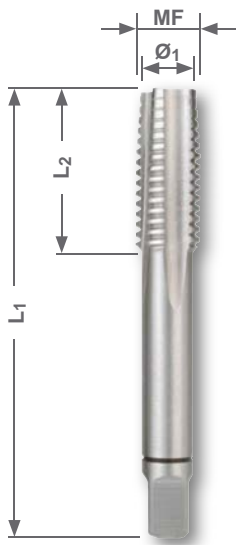
Type: Type B closed, preslotted
 Thread: American UNC coarse thread

Packing unit: individual plastic pack

Nominal thread size UNC	Threads per inch	Outside Ø ₂ mm	Thickness T mm	Article no. HSS
Nr. 2	56	16,0	5,0	240 020 UNC
Nr. 3	48	16,0	5,0	240 030 UNC
Nr. 4	40	20,0	5,0	240 040 UNC
Nr. 5	40	20,0	5,0	240 050 UNC
Nr. 6	32	20,0	7,0	240 060 UNC
Nr. 8	32	20,0	7,0	240 080 UNC
Nr. 10	24	20,0	7,0	240 100 UNC
Nr. 12	24	20,0	7,0	240 120 UNC
1/4	20	20,0	7,0	240 014 UNC
5/16	18	25,0	9,0	240 516 UNC
3/8	16	30,0	11,0	240 038 UNC
7/16	14	30,0	11,0	240 716 UNC

Nominal thread size UNC	Threads per inch	Outside Ø ₂ mm	Thickness T mm	Article no. HSS
1/2	13	38,0	14,0	240 012 UNC
9/16	12	38,0	14,0	240 916 UNC
5/8	11	45,0	18,0	240 058 UNC
3/4	10	45,0	18,0	240 034 UNC
7/8	9	55,0	22,0	240 078 UNC
1"	8	55,0	22,0	240 010 UNC
1 1/8	7	65,0	25,0	240 118 UNC
1 1/4	7	65,0	25,0	240 114 UNC
1 3/8	6	65,0	25,0	240 138 UNC
1 1/2	6	75,0	30,0	240 112 UNC
1 3/4	5	90,0	36,0	240 134 UNC
2"	4,5	90,0	36,0	240 200 UNC

Hand taps UNF ≈ DIN 2181 HSS, ground



Set: 2-piece
 Taper tap: 5 - 6-thread chamfer
 Final tap: 2 - 3-thread chamfer
 Thread: American UNF fine thread
 Flanks: relief-ground

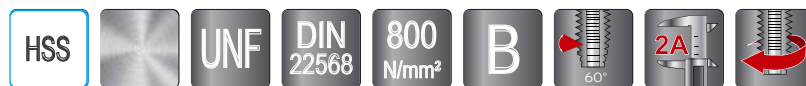
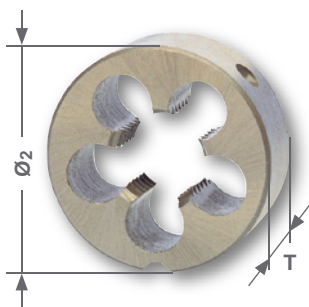
Also available individually
 Taper tap: Article no. 246 UNF1
 Final tap: Article no. 246 UNF2

Packing unit: set in plastic pack

Nominal thread size UNF	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Article no. HSS
Nr. 2	64	1,85	32,0	10,0	246 020 UNF
Nr. 3	56	2,15	32,0	10,0	246 030 UNF
Nr. 4	48	2,40	36,0	11,0	246 040 UNF
Nr. 5	44	2,70	36,0	11,0	246 050 UNF
Nr. 6	40	2,95	40,0	12,0	246 060 UNF
Nr. 8	36	3,50	40,0	12,0	246 080 UNF
Nr. 10	32	4,10	45,0	14,0	246 100 UNF
Nr. 12	28	4,60	50,0	14,0	246 120 UNF
1/4	28	5,50	50,0	18,0	246 014 UNF
5/16	24	6,90	56,0	22,0	246 516 UNF
3/8	24	8,50	63,0	22,0	246 038 UNF

Nominal thread size UNF	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Article no. HSS
7/16	20	9,90	63,0	22,0	246 716 UNF
1/2	20	11,50	75,0	24,0	246 012 UNF
9/16	18	12,90	80,0	28,0	246 916 UNF
5/8	18	14,50	80,0	28,0	246 058 UNF
3/4	16	17,50	95,0	32,0	246 034 UNF
7/8	14	20,50	100,0	36,0	246 078 UNF
1"	12	23,25	110,0	40,0	246 010 UNF
1 1/8	12	22,00	110,0	50,0	246 118 UNF
1 1/4	12	22,00	132,0	56,0	246 114 UNF
1 3/8	12	28,00	132,0	56,0	246 138 UNF
1 1/2	12	32,00	150,0	63,0	246 112 UNF

Round dies UNF ≈ DIN EN 22568 HSS, ground



Type: Type B closed, preslotted
 Thread: American UNF fine thread

Packing unit: individual plastic pack

Nominal thread size UNF	Threads per inch	Outside Ø ₂ mm	Thickness T mm	Article no. HSS
Nr. 2	64	16,0	5,0	240 020 UNF
Nr. 3	56	16,0	5,0	240 030 UNF
Nr. 4	48	16,0	5,0	240 040 UNF
Nr. 5	44	20,0	5,0	240 050 UNF
Nr. 6	40	20,0	5,0	240 060 UNF
Nr. 8	36	20,0	7,0	240 080 UNF
Nr. 10	32	20,0	7,0	240 100 UNF
Nr. 12	28	20,0	7,0	240 120 UNF
1/4	28	20,0	7,0	240 014 UNF
5/16	24	25,0	9,0	240 516 UNF
3/8	24	30,0	11,0	240 038 UNF

Nominal thread size UNF	Threads per inch	Outside Ø ₂ mm	Thickness T mm	Article no. HSS
7/16	20	30,0	11,0	240 716 UNF
1/2	20	38,0	10,0	240 012 UNF
9/16	18	38,0	10,0	240 916 UNF
5/8	18	45,0	11,0	240 058 UNF
3/4	16	45,0	14,0	240 034 UNF
7/8	14	55,0	16,0	240 078 UNF
1"	12	55,0	16,0	240 010 UNF
1 1/8	12	65,0	18,0	240 118 UNF
1 1/4	12	65,0	18,0	240 114 UNF
1 3/8	12	65,0	18,0	240 138 UNF
1 1/2	12	75,0	20,0	240 112 UNF



Hand tap sets HSS and HSSE-Co 5 in steel case



245 001



245 002



245 003



245 003 E

Description	Article no. HSS	Article no. HSSE-Co 5
21-piece set of hand taps M DIN 352 one three-piece set each of M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12	245 001	245 001 E
22-piece set of hand taps M DIN 352 one three-piece set each of M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 1 tap wrench DIN 1814 size 1 1/2	245 002	245 002 E
29-piece set of hand taps DIN 352 one three-piece set each of M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 Type N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm + 1 tap wrench DIN 1814 size 1 1/2	245 003	245 003 E

Hand tap sets HSS and HSSE-Co 5 in plastic case



245 001 RO



245 001 ERO



245 003 RO



245 003 ERO

Description	Article no. HSS	Article no. HSSE-Co 5
21-piece set of hand taps M DIN 352 one three-piece set each of M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12	245 001 RO	245 001 ERO
28-piece set of hand taps DIN 352 one three-piece set each of M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 Type N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	245 003 RO	245 003 ERO

Thread-cutting sets HSS and HSSE-Co 5 in steel case



245 020



245 030

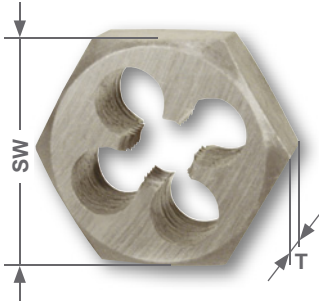


245 040

Description	Article no.	Article no.
	HSS	HSSE-Co 5
31-piece set of DIY thread-cutting tools one three-piece set each of hand taps M DIN 352 M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 dies Ø 25,0 mm ≈ DIN EN 22568 in each of the sizes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 1 die stock 25,0 x 9,0 mm DIN 225 + 1 tap wrench, size 1½ DIN 1814 + 1 screwdriver	245 010	245 010 E
37-piece set of thread-cutting tools one three-piece set each of hand taps M DIN 352 M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 dies M DIN EN 22568 in each of the sizes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 5 die stocks DIN 225 in each of the sizes 20,0 x 5,0 mm - 20,0 x 7,0 mm - 25,0 x 9,0 mm - 30,0 x 11,0 mm - 38,0 x 14,0 mm + 2 tap wrenches, size 1 and size 2 DIN 1814 + 1 screwdriver + 1 screw-pitch gauge	245 020	245 020 E
44-piece set of thread-cutting tools one three-piece set each of hand taps M DIN 352 M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 type N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm + 7 dies M DIN EN 22568 in each of the sizes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 5 die stocks DIN 225 in each of the sizes 20,0 x 5,0 mm - 20,0 x 7,0 mm - 25,0 x 9,0 mm - 30,0 x 11,0 mm - 38,0 x 14,0 mm + 2 tap wrenches, size 1 and size 2 DIN 1814 + 1 screwdriver + 1 screw-pitch gauge	245 030	245 030 E
54-piece set of thread-cutting tools one three-piece set each of hand taps M DIN 352 M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 - M 14 - M 16 - M 18 - M 20 + 11 dies M DIN EN 22568 in each of the sizes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 - M 14 - M 16 - M 18 - M 20 + 6 die stocks DIN 225 in each of the sizes 20,0 x 5,0 mm - 20,0 x 7,0 mm - 25,0 x 9,0 mm - 30,0 x 11,0 mm - 38,0 x 14,0 mm - 45,0 x 18,0 mm + 2 tap wrenches, size 1 and size 3 DIN 1814 + 1 screwdriver + 1 screw-pitch gauge	245 040	245 040 E
43-piece set of thread-cutting tools MF (metric fine) one two-piece set each of hand taps MF DIN 2181 MF 3 x 0,35 - MF 4 x 0,35 - MF 5 x 0,5 - MF 6 x 0,75 - MF 8 x 0,75 - MF 10 x 1,0 - MF 12 x 1,5 - MF 14 x 1,5 - MF 16 x 1,5 - MF 18 x 1,5 - MF 20 x 1,5 mm + 11 dies MF DIN 22568 in each of the sizes MF 3 - MF 4 - MF 5 - MF 6 - MF 8 - MF 10 - MF 12 - MF 14 - MF 16 - MF 18 - MF 20 + 6 die stocks DIN 225 in each of the sizes 20,0 x 5,0 mm - 20,0 x 7,0 mm - 25,0 x 9,0 mm - 30,0 x 11,0 mm - 38,0 x 10,0 mm - 45,0 x 14,0 mm + 2 tap wrenches, size 1 and 3 DIN 1814 + 1 screwdriver + 1 screw-pitch gauge	245 041	—



Hexagonal solid square bolt die M DIN 382 HSS ground



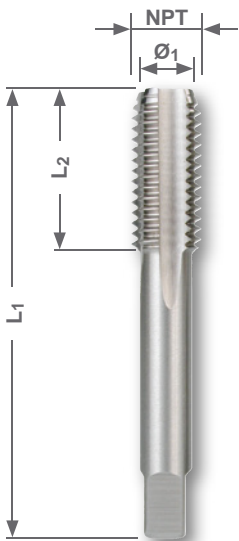
Thread: metric, DIN ISO 13

Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Outside Ø SW mm	Thickness T mm	Article no. HSS
M 3	0,50	18,0	5,0	267 030
M 4	0,70	18,0	5,0	267 040
M 5	0,80	18,0	7,0	267 050
M 6	1,00	18,0	7,0	267 060
M 8	1,25	21,0	9,0	267 080
M 10	1,50	27,0	11,0	267 100
M 12	1,75	36,0	14,0	267 120
M 14	2,00	36,0	14,0	267 140

Nominal thread size M	Pitch mm	Outside Ø SW mm	Thickness T mm	Article no. HSS
M 16	2,00	41,0	18,0	267 160
M 18	2,50	41,0	18,0	267 180
M 20	2,50	41,0	18,0	267 200
M 22	2,50	50,0	22,0	267 220
M 24	3,00	50,0	22,0	267 240
M 27	3,00	60,0	25,0	267 270
M 30	3,50	60,0	25,0	267 300

Single-cut taps NPT HSS, ground



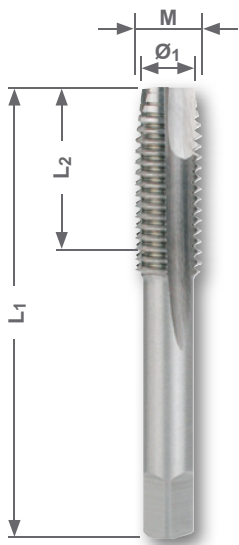
Thread: American conical pipe thread to ANSI B.1.20.1
 Flanks: relief-ground
 Cone: 1:16

For through threads in unalloyed or low-alloyed steels up to 800 N/mm² strength, malleable cast iron and non-ferrous metals. The thread can be cut in one operation by hand or machine.

Note: pilot drill cylindrically

Packing unit: individual plastic pack

Nominal thread size NPT	Threads per inch	Thread core hole Ø ₁ mm	Cutting depth mm	L ₁ mm	L ₂ mm	Article no. HSS
1/16	27,0	6,00	12,00	65,0	19,0	231 116 NPT
1/8	27,0	8,25	12,00	65,0	19,0	231 018 NPT
1/4	18,0	10,70	17,50	70,0	25,0	231 014 NPT
3/8	18,0	14,10	17,50	75,0	26,0	231 038 NPT
1/2	14,0	17,40	22,90	80,0	31,0	231 012 NPT
3/4	14,0	22,60	23,00	100,0	33,0	231 034 NPT
1"	11,5	28,50	27,40	110,0	38,0	231 010 NPT
1 1/4"	11,5	37,00	28,10	125,0	41,0	231 114 NPT
1 1/2"	11,5	43,50	28,40	140,0	42,0	231 112 NPT
2"	11,5	55,00	28,40	160,0	44,0	231 020 NPT



Single-cut taps M ≈ DIN 352 HSS and HSSE-Co 5 ground



Thread: metric, DIN ISO 13
Flanks: relief-ground

The single-cut tap HSS for through threads in unalloyed and low-alloyed steels up to a strength of 800 N/mm². The single-cut tap HSSE-Co 5 for through threads in unalloyed and alloyed steels up to a strength of 1000 N/mm², malleable cast iron and non-ferrous metals. The thread can be cut in one operation by hand or machine.



Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Article no. HSS	Article no. HSSE-Co 5
M 3	0,50	2,50	40,0	10,0	231 030	231 030 E
M 4	0,70	3,30	45,0	12,0	231 040	231 040 E
M 5	0,80	4,20	50,0	13,0	231 050	231 050 E
M 6	1,00	5,00	50,0	15,0	231 060	231 060 E
M 8	1,25	6,80	56,0	18,0	231 080	231 080 E
M 9	1,25	7,80	67,0	22,0	231 090	–
M 10	1,50	8,50	70,0	24,0	231 100	231 100 E
M 12	1,75	10,20	75,0	29,0	231 120	231 120 E



Single-cut tap set HSS in steel case

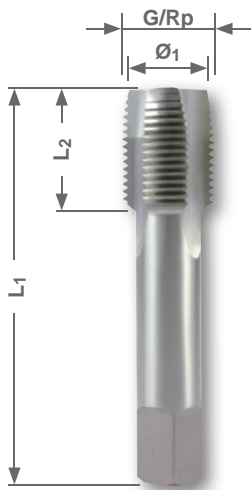
Description	Article no.
15-piece set of single-cut taps 7 single-cut taps ≈ DIN 352 HSS, ground M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 Type N HSS, ground Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm + 1 tap wrench, size 1 1/2 DIN 1814	245 004



Single-cut tap set HSS in plastic case

Description	Article no.
15-piece set of single-cut taps 7 single-cut taps ≈ DIN 352 HSS, ground M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 Type N HSS, ground Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm + 1 tap wrench, size 1 1/2 DIN 1814	245 004 RO





Single-cut taps G ≈ DIN 5157 HSS, ground

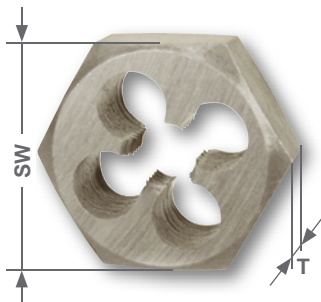


Thread: DIN ISO 228 "G" (cylindrical pipe thread)
DIN 2999 "Rp" (Whitworth pipe thread)
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size G / Rp		Threads per inch	Thread core hole Ø1 mm	L1 mm	L2 mm	Article no. HSS
G 1/8	Rp 1/8	28	8,6	63,0	20,0	236 218
G 1/4	Rp 1/4	19	11,5	70,0	22,0	236 214
G 3/8	Rp 3/8	19	15,0	70,0	22,0	236 238
G 1/2	Rp 1/2	14	19,0	80,0	22,0	236 212
G 3/4	Rp 3/4	14	24,5	90,0	22,0	236 234
G 1"	Rp 1"	11	30,5	100,0	25,0	236 210

Hexagonal solid square bolt die G DIN 382 HSS, ground



Thread: DIN ISO 228 "G" (cylindrical pipe thread)

Packing unit: individual plastic pack

Nominal thread size G	Threads per inch	Outside Ø SW mm	Thickness T mm	Article no. HSS
G 1/8	28	27,0	11,0	267 618
G 1/4	19	36,0	10,0	267 614
G 3/8	19	41,0	14,0	267 638
G 1/2	14	41,0	14,0	267 612
G 3/4	14	50,0	16,0	267 634
G 1"	11	60,0	18,0	267 610

Sanitary repair thread-cutting set HSS for cylindrical pipe thread in plastic case



Description	Article no.
13-piece set of sanitary repair thread-cutting tools 6 single-cut taps G/Rp ≈ DIN 5157 HSS, ground G/Rp 1/8" x 28 - G/Rp 1/4" x 19 - G/Rp 3/8" x 19 - G/Rp 1/2" x 14 - G/Rp 3/4" x 14 - G/Rp 1" x 11 + 6 hexagonal dies G DIN 382 HSS, ground G 1/8" x 28 - G 1/4" x 19 - G 3/8" x 19 - G 1/2" x 14 - G 3/4" x 14 - G 1" x 11 + 1 cutting spray, 50 ml	245 059

Extension sleeves DIN 377



**As extension for hand thread-cutting tools.
Inside and outside square of identical size.**




Version: hardened and ground

Shank: square as per DIN 10

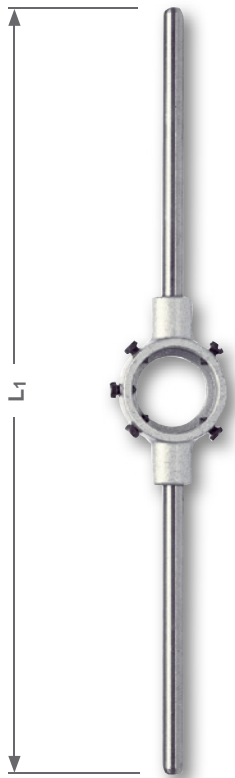
Packing unit: individual plastic pack

Square mm	Length mm	M	for hand tap size Ww	G	Article no.
2,1	60,0	M 1 - M 2,6	1/16 - 3/32	—	241 021
2,7	80,0	M 3	—	—	241 027
3,4	95,0	M 4	5/32	—	241 034
4,9	110,0	M 5 - M 8	7/32 - 5/16	—	241 049
5,5	115,0	M 9 - M 10	3/8	1/8	241 055
7,0	125,0	M 12	1/2	—	241 070
9,0	135,0	M 13 - M 16	9/16 - 5/8	1/4	241 090
11,0	150,0	M 18	11/16 - 3/4	—	241 110
12,0	155,0	M 20	13/16	1/2	241 120
14,5	174,0	M 22 - M 24	7/8 - 15/16	5/8	241 145
16,0	185,0	M 27 - M 28	1	3/4	241 160
18,0	195,0	M 30 - M 32	1 1/8	7/8	241 180

Thread-cutting sets HSS in wood case

Description	Article no. HSS
 <p>28-piece set of thread-cutting tools one two-piece set each of hand taps G DIN 5157 — 1/8 - 1/4 - 3/8 - 1/2 - 5/8 - 3/4 - 1" + 7 dies G DIN EN 24231 in each of the sizes 1/8 - 1/4 - 3/8 - 1/2 - 5/8 - 3/4 - 1" + 5 die stocks DIN 225 in each of the sizes 30,0 x 11,0 mm - 38,0 x 10,0 mm - 45,0 x 14,0 mm - 55,0 x 16,0 mm - 65,0 x 18,0 mm + 2 tap wrenches, size 3 and size 5 DIN 1814</p>	245 074
 <p>35-piece set of thread-cutting tools one two-piece set each of hand taps UNF ≈ DIN 2181 — 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4 - 7/8 - 1" + 9 dies UNF ≈ DIN EN 22568 in each of the sizes 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4 - 7/8 - 1" + 6 die stocks DIN 225 in each of the sizes 20,0 x 7,0 - 25,0 x 9,0 - 30,0 x 11,0 - 38,0 x 10,0 - 45,0 x 14,0 - 55,0 x 16,0 mm + 2 tap wrenches, size 2 and size 4 DIN 1814</p>	245 073
 <p>44-piece set of thread-cutting tools one three-piece set each of hand taps UNC ≈ DIN 352 — 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4 - 7/8 - 1" + 9 dies UNC ≈ DIN EN 22568 in each of the sizes 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4 - 7/8 - 1" + 6 die stocks DIN 225 in each of the sizes 20,0 x 7,0 mm - 25,0 x 9,0 mm - 30,0 x 11,0 mm - 38,0 x 10,0 mm - 45,0 x 14,0 mm - 55,0 x 16,0 mm + 2 tap wrenches, size 2 and size 4 DIN 1814</p>	245 072





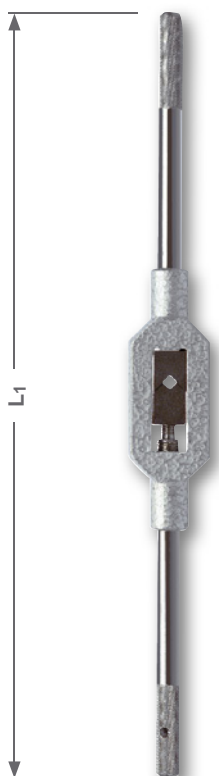
Die stocks as per DIN 225

For closed and slotted taps as per DIN EN 24231.
With steel handles one of which can be unscrewed and five screws for clamping the tap.

Version: die-cast zinc housing

Packing unit: individual plastic pack

Size	Thickness mm	L ₁ mm	M + MF	for tap size Ww	G	Article no.
16	5,0	160,0	M 1 - M 2,6	1/16 - 3/32	—	242 165
20	5,0	200,0	M 3 - M 4	1/8 - 5/32	—	242 205
20	7,0	200,0	M 4,5 - M 6	3/16 - 1/4	—	242 207
25	9,0	224,0	M 7 - M 9	5/16	1/16	242 259
30	11,0	280,0	M 10 - M 11	3/8 - 7/16	1/8	242 3011
38	14,0	315,0	M 12 - M 14	1/2 - 9/16	—	242 3814
45	18,0	450,0	M 16 - M 20	5/8 - 3/4	—	242 4518
55	22,0	560,0	M 22 - M 24	7/8 - 1	—	242 5522
65	25,0	630,0	M 27 - M 36	1 1/8 - 1 3/8	—	242 6525
75	30,0	740,0	M 38 - M 42	1 1/2 - 1 5/8	—	242 7530
90	36,0	900,0	M 45 - M 52	1 3/4 - 2	—	242 9036
105	36,0	975,0	M 54 - M 63	2 1/4 - 2 3/4	—	242 10536
38	10,0	315,0	MF 12 - MF 14	—	1/4	242 3810
45	14,0	450,0	MF 16 - MF 20	—	3/8 - 1/2	242 4514
55	16,0	560,0	MF 22 - MF 24	—	5/8 - 3/4	242 5516
65	18,0	630,0	MF 27 - MF 36	—	7/8 - 1	242 6518
75	20,0	740,0	MF 38 - MF 42	—	1 1/8 - 1 1/4	242 7520
90	22,0	900,0	MF 45 - MF 52	—	1 3/8 - 1 5/8	242 9022
105	22,0	975,0	MF 54 - MF 63	—	1 3/4 - 2	242 10522



Adjustable tap wrenches as per DIN 1814

Ideal for thread-cutting in inaccessible places.
With two-jaw chuck for tensioning square shanks.
With steel handles one of which can be unscrewed.

Version: die-cast zinc housing

Chuck jaws: hardened

Packing unit: individual plastic pack

Size	L ₁ mm	M	for hand tape size Ww	G	Article no.
0	130,0	M 1 - M 8	1/16 - 5/16	—	241 100
1	180,0	M 1 - M 10	1/8 - 3/8	—	241 101
1 1/2	180,0	M 1 - M 12	1/8 - 1/2	1/8	241 112
2	280,0	M 4 - M 12	3/16 - 5/8	1/8 - 3/8	241 102
3	380,0	M 5 - M 20	1/4 - 3/4	1/8 - 1/2	241 103
4	500,0	M 11 - M 27	1/2 - 1	1/8 - 3/4	241 104
5	700,0	M 13 - M 32	5/8 - 1 1/4	1/4 - 1	241 105
6	1000,0	M 19 - M 38	3/4 - 1 1/2	1/4 - 1 1/4	241 106
7	1200,0	M 25 - M 52	7/8 - 2	5/8 - 2 1/4	241 107

Tap wrench with ratchet

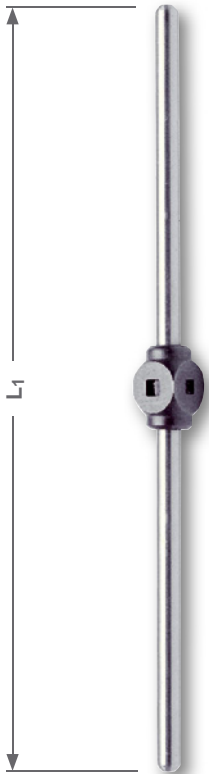


**Ideal for thread-cutting in inaccessible places.
With two-jaw chuck for tensioning square shanks.**

Version: adjustable left, right, fixed
Shank: sliding cross-handle with grooves at both ends
Surface: chromium-plated

Packing unit: individual plastic pack

Size	L ₁ mm	M	for hand tape size Ww	G	Article no.
1	85,0	M 3 - M 10	1/8 - 3/8	—	241 001
2	110,0	M 5 - M 12	7/32 - 1/2	1/8	241 002
10	250,0	M 3 - M 10	1/8 - 3/8	—	241 010
20	300,0	M 5 - M 12	7/32 - 1/2	1/8	241 020



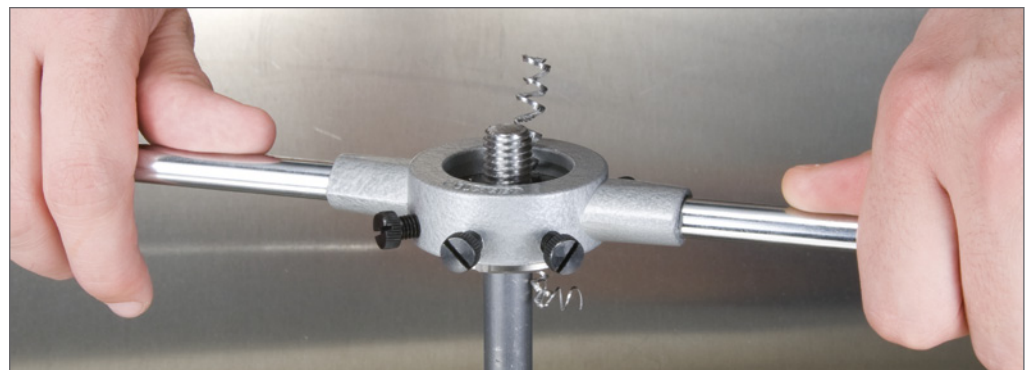
Ball tap wrenches

Ideal for rapid fitting of taps.

Version: die-cast zinc housing
Shank: square as per DIN 10

Packing unit: individual plastic pack

Size	L ₁ mm	M	for hand tape size Ww	G	Article no.
0	200,0	M 1 - M 4	1/16 - 5/32	—	241 200
1	200,0	M 3,5 - M 8	5/32 - 5/16	—	241 201
2	240,0	M 4 - M 10	5/32 - 3/8	—	241 202
3	300,0	M 5 - M 12	7/32 - 1/2	—	241 203
4	340,0	M 9 - M 12	3/8 - 5/8	—	241 204
5	450,0	M 12 - M 20	1/2 - 13/16	—	241 205
6	650,0	M 18 - M 27	11/16 - 1	—	241 206



Thread-cutting tools

To cut an internal thread, at first a core hole is drilled, whose diameter is approximately smaller by the pitch of the thread than the nominal diameter of the thread.

Subsequently tapered counter bores are placed, which match the size of the thread diameter plus 10 % of it. This is done to get a better insertion into the bore hole and to prevent the first and the last thread from being pushed out when beginning to cut.

Then the taps are screwed in and out in order. The final core hole diameter is created through the additional plastic deformation of the thread flanks.







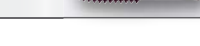
To increase the tool life and for optimum surface qualities, RUKO cutting oils or other cooling lubricants for the lubrication are used, as it minimises the friction between the chip and the cutting of the tap and thereby also reduce the necessary torque.

In hand taps, after two rotations of the drill, 1/3 rotation is rotated back to break the chip. In this way the stressing on the drill drops and it doesn't break so quickly.



1.06

Application table

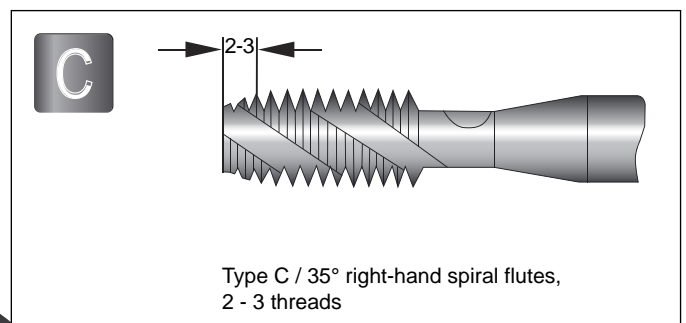
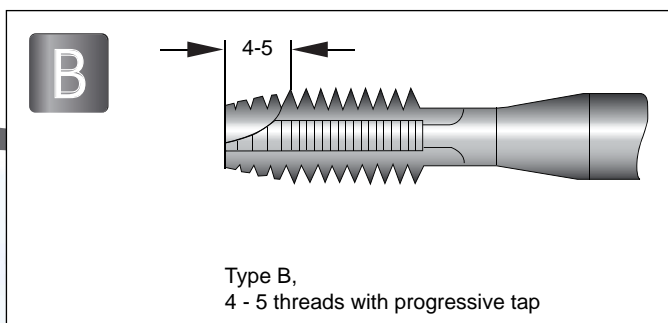
Material:	Unalloyed steels up to 500 N/mm ²	Low alloy steels up to 800 N/mm ²	Alloyed steel up to 1000 N/mm ²	Alloyed steel over 1000 N/mm ²	V2A V4A	Cast iron up to 300 N/mm ²	Copper alloy	Nonferrous metals	Al-alloy	Plastics long chipping
Cooling lubricant:	Cutting oil	Cutting oil	Cutting oil	Cutting oil	Cutting oil	Air	Air	Air	Cutting oil	Air
HSS 	■	■	■	□	□	□	□	□	□	■
HSSE-Co 5 	■	■	■	□	■	□	■	■	■	■
HSSE-Co 5 VAP 	■	■	■	■	■	□	■	■	■	□
HSS-TiN 	■	■	■	■	■	□	■	■	■	■
HSSE-Co 5 TiAlN 	■	■	■	■	■	■	■	■	■	■
HSS-AZ 	■	□	□	□	□	■	■	■	■	■
HSSE-Co 5 TiCN 	□	□	□	□	■	■	□	□	■	□

■ well applicable

■ efficient applicable

□ not recommended

Technical data:



Product information for machine taps



HSS

The machine tap consists of heavy-duty high-speed steel. For through threads and bottoming threads in unalloyed steels up to a strength of 800 N/mm², malleable. The thread is cut in one operation.

High speed tool steel, best known as 'high speed steel', refers to a group of alloyed tool steels with up to 2,06 % carbon content and up to 30 % proportion of alloying elements such as tungsten, molybdenum, vanadium, cobalt, nickel and titanium. HSS materials are characterised by great hardness, wear resistance and heat resistance up to 600° C. The HSS tools are less sensitive to shocks and vibrations, which sometimes quickly lead to breaks in the harder cutting materials.



HSSE-Co 5

The machine tap consists of cobalt alloyed heavy-duty high-speed steel. Its high heat resistance means a longer tool life. For through threads and bottoming threads in unalloyed and alloyed steels up to a strength of 1000 N/mm², malleable cast iron and non-ferrous metals. The thread is cut in one operation.

Like high speed steel with cobalt alloy. This heat-resistant material is used for processing materials with high strength and in long cutting channels with correspondingly strong heating. The cobalt content of 5 % provides a higher heat resistance and higher stressing capacity.



HSSE-Co 5 VAP for stainless steel

The machine tap consists of cobalt alloyed and vaporised heavy-duty high-speed steel. For through threads and bottoming threads in unalloyed and alloyed steels up to a strength of 1000 N/mm², stainless steel. The thread is cut in one operation.

By "vaporisation" is meant the evaporation of a non-metallic oxide film. Vaporisation acts as a separating layer and reduces the occurrence of cold welding. In cold welding there are workpiece chips that build up on the flanks of the tap and damage the finished thread. Consequences of cold welding are torn and dirty flanks. VAP improves the adhesion of lubricants to the tool surface.



HSS-TiN

The machine tap consists of heavy-duty high-speed steel with a titanium nitride coating. For universal use on a wide range of materials due to layer of hard material! For through threads and bottoming threads in unalloyed and alloyed steels up to a strength of 1000 N/mm², stainless steel. The thread is cut in one operation. Note: cutting speeds from 10 m/min. By the TiN wear-resistant coating, the surface hardness increases to about 2500 HV. Titanium nitride is a chemical compound of the two elements, titanium and nitrogen. TiN is a metallic hard material with a typical golden yellow colour.

Advantages:

Increased hardness, low friction coefficient, more service life. Cooling is not necessary, but recommended.



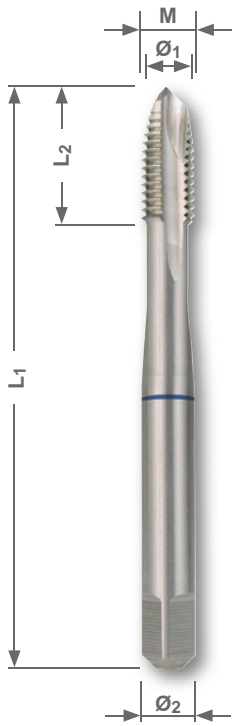
HSSE-Co 5 TiAlN

The machine tap consists of heavy-duty high-speed steel. For through-hole threads and blind-hole threads, in unalloyed, low alloy and alloyed steels up to 1200 N/mm² strength and cast. The thread is cut in one operation.

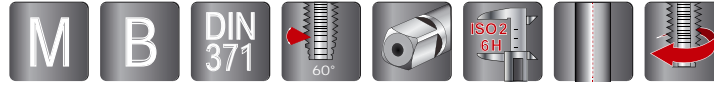
By the TiAlN wear-resistant coating, the surface hardness increases to about 3500 HV. Titanium aluminium nitride is a chemical compound of three elements titanium, aluminium and nitrogen. TiAlN is a metallic hard material with a typical black/violet colour.

Advantages: The TiAlN coating enables the dry machining tools to cut without a cooling. Increased hardness, very low friction coefficient, optimal service life.



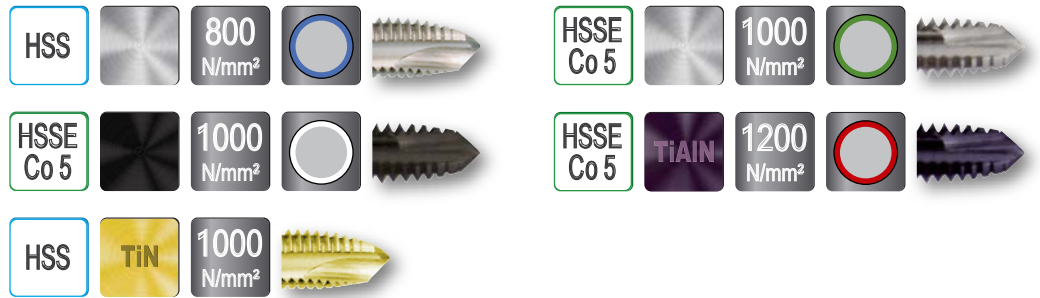


Machine taps M DIN 371 HSS und HSSE-Co 5, ground



**Machine taps with reinforced shank
for through threads.**

Chamfer: type B, 4 - 5 threads with progressive tap
Thread: metric, DIN ISO 13
Flanks: relief-ground

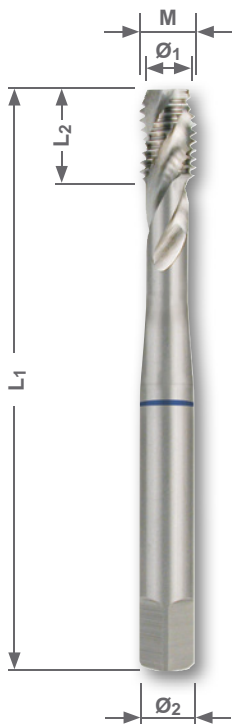


Packing unit: individual plastic pack

Nominal thread size	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm
M 2	0,40	1,60	45,0	8,0	2,8
M 2,5	0,45	2,05	50,0	9,0	2,8
M 3	0,50	2,50	56,0	9,0	3,5
M 4	0,70	3,30	63,0	12,0	4,5
M 5	0,80	4,20	70,0	13,0	6,0
M 6	1,00	5,00	80,0	15,0	6,0
M 8	1,25	6,80	90,0	18,0	8,0
M 10	1,50	8,50	100,0	20,0	10,0

Nominal thread size	Article no. HSS	Article no. HSSE-Co 5	Article no. HSSE-Co 5 VAP	Article no. HSS-TiN	Article no. HSSE-Co 5 TiAlN
M 2	232 020	232 020 E	232 020 VA	232 020 T	232 020 EF
M 2,5	232 025	232 025 E	232 025 VA	232 025 T	232 025 EF
M 3	232 030	232 030 E	232 030 VA	232 030 T	232 030 EF
M 4	232 040	232 040 E	232 040 VA	232 040 T	232 040 EF
M 5	232 050	232 050 E	232 050 VA	232 050 T	232 050 EF
M 6	232 060	232 060 E	232 060 VA	232 060 T	232 060 EF
M 8	232 080	232 080 E	232 080 VA	232 080 T	232 080 EF
M 10	232 100	232 100 E	232 100 VA	232 100 T	232 100 EF





Machine taps M DIN 371 HSS und HSSE-Co 5, ground



**Machine taps with reinforced shank and
35° right-hand spiral flutes for bottoming.**

Chamfer: type C / 35° right-hand spiral flutes, 2 - 3 threads
Thread: metric, DIN ISO 13
Flanks: relief-ground



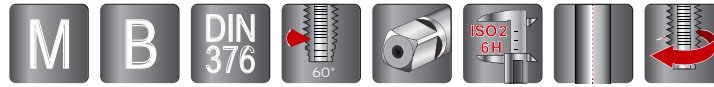
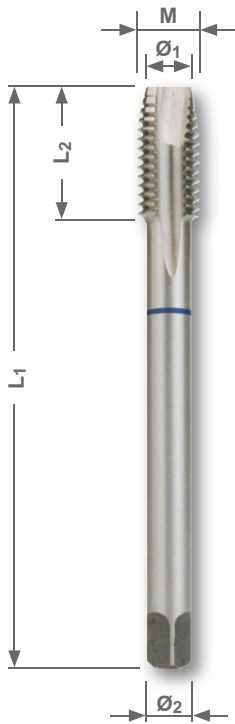
Packing unit: individual plastic pack

Nominal thread size	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm
M 2	0,40	1,60	45,0	6,0	2,8
M 2,5	0,45	2,05	50,0	7,5	2,8
M 3	0,50	2,50	56,0	5,0	3,5
M 4	0,70	3,30	63,0	7,0	4,5
M 5	0,80	4,20	70,0	8,0	6,0
M 6	1,00	5,00	80,0	10,0	6,0
M 8	1,25	6,80	90,0	13,0	8,0
M 10	1,50	8,50	100,0	15,0	10,0

Nominal thread size	Article no. HSS	Article no. HSSE-Co 5	Article no. HSSE-Co 5 VAP	Article no. HSS-TiN	Article no. HSSE-Co 5 TiAlN
M 2	234 020	234 020 E	234 020 VA	234 020 T	234 020 EF
M 2,5	234 025	234 025 E	234 025 VA	234 025 T	234 025 EF
M 3	234 030	234 030 E	234 030 VA	234 030 T	234 030 EF
M 4	234 040	234 040 E	234 040 VA	234 040 T	234 040 EF
M 5	234 050	234 050 E	234 050 VA	234 050 T	234 050 EF
M 6	234 060	234 060 E	234 060 VA	234 060 T	234 060 EF
M 8	234 080	234 080 E	234 080 VA	234 080 T	234 080 EF
M 10	234 100	234 100 E	234 100 VA	234 100 T	234 100 EF



Machine taps M DIN 376 HSS und HSSE-Co 5, ground



Machine taps with overflow shank for through threads.

Chamfer: type B, 4 - 5 threads with progressive tap
 Thread: metric, DIN ISO 13
 Flanks: relief-ground

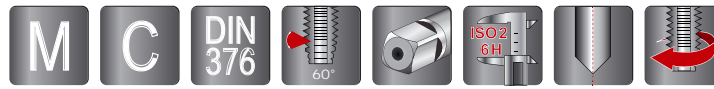
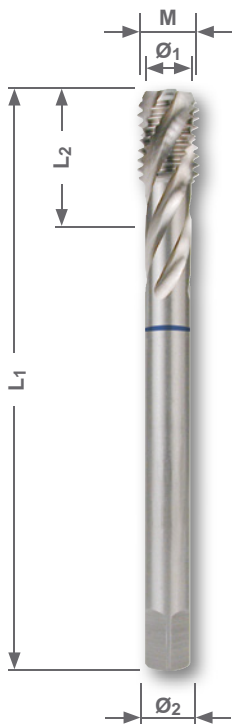


Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm
M 3	0,50	2,50	56,0	9,0	2,2
M 4	0,70	3,30	63,0	12,0	2,8
M 5	0,80	4,20	70,0	13,0	3,5
M 6	1,00	5,00	80,0	15,0	4,5
M 8	1,25	6,80	90,0	18,0	6,0
M 10	1,50	8,50	100,0	20,0	7,0
M 12	1,75	10,20	110,0	23,0	9,0
M 14	2,00	12,00	110,0	25,0	11,0
M 16	2,00	14,00	110,0	25,0	12,0
M 18	2,50	15,50	125,0	30,0	14,0
M 20	2,50	17,50	140,0	30,0	16,0
M 22	2,50	19,50	140,0	30,0	18,0
M 24	3,00	21,00	160,0	36,0	18,0
M 27	3,00	24,00	160,0	36,0	20,0
M 30	3,50	26,50	180,0	40,0	22,0

Nominal thread size M	Article no. HSS	Article no. HSSE-Co 5	Article no. HSSE-Co 5 VAP	Article no. HSS-TiN	Article no. HSSE-Co 5 TiAIN
M 3	—	232 031 E	232 031 VA	—	232 031 EF
M 4	—	232 041 E	232 041 VA	—	232 041 EF
M 5	—	232 051 E	232 051 VA	—	232 051 EF
M 6	—	232 061 E	232 061 VA	—	232 061 EF
M 8	—	232 081 E	232 081 VA	—	232 081 EF
M 10	—	232 101 E	232 101 VA	—	232 101 EF
M 12	232 120	232 120 E	232 120 VA	232 120 T	232 120 EF
M 14	232 140	232 140 E	232 140 VA	232 140 T	232 140 EF
M 16	232 160	232 160 E	232 160 VA	232 160 T	232 160 EF
M 18	232 180	232 180 E	232 180 VA	232 180 T	232 180 EF
M 20	232 200	232 200 E	232 200 VA	232 200 T	232 200 EF
M 22	232 220	232 220 E	232 220 VA	232 220 T	232 220 EF
M 24	232 240	232 240 E	232 240 VA	232 240 T	232 240 EF
M 27	232 270	232 270 E	232 270 VA	232 270 T	232 270 EF
M 30	232 300	232 300 E	232 300 VA	232 300 T	232 300 EF

Machine taps M DIN 376 HSS und HSSE-Co 5, ground



Machine taps with overflow shank and 35° right-hand spiral flutes for bottoming.

Chamfer: type C / 35° right-hand spiral flutes, 2 - 3 threads
 Thread: metric, DIN ISO 13
 Flanks: relief-ground



Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm
M 3	0,50	2,50	56,0	5,0	2,2
M 4	0,70	3,30	63,0	7,0	2,8
M 5	0,80	4,20	70,0	8,0	3,5
M 6	1,00	5,00	80,0	10,0	4,5
M 8	1,25	6,80	90,0	13,0	6,0
M 10	1,50	8,50	100,0	15,0	7,0
M 12	1,75	10,20	110,0	18,0	9,0
M 14	2,00	12,00	110,0	20,0	11,0
M 16	2,00	14,00	110,0	20,0	12,0
M 18	2,50	15,50	125,0	25,0	14,0
M 20	2,50	17,50	140,0	25,0	16,0
M 22	2,50	19,50	140,0	25,0	18,0
M 24	3,00	21,00	160,0	30,0	18,0
M 27	3,00	24,00	160,0	30,0	20,0
M 30	3,50	26,50	180,0	35,0	22,0

Nominal thread size M	Article no. HSS	Article no. HSSE-Co 5	Article no. HSSE-Co 5 VAP	Article no. HSS-TiN	Article no. HSSE-Co 5 TiAIN
M 3	—	233 030 E	233 030 VA	—	233 030 EF
M 4	—	233 040 E	233 040 VA	—	233 040 EF
M 5	—	233 050 E	233 050 VA	—	233 050 EF
M 6	—	233 060 E	233 060 VA	—	233 060 EF
M 8	—	233 080 E	233 080 VA	—	233 080 EF
M 10	—	233 100 E	233 100 VA	—	233 100 EF
M 12	233 120	233 120 E	233 120 VA	233 120 T	233 120 EF
M 14	233 140	233 140 E	233 140 VA	233 140 T	233 140 EF
M 16	233 160	233 160 E	233 160 VA	233 160 T	233 160 EF
M 18	233 180	233 180 E	233 180 VA	233 180 T	233 180 EF
M 20	233 200	233 200 E	233 200 VA	233 200 T	233 200 EF
M 22	233 220	233 220 E	233 220 VA	233 220 T	233 220 EF
M 24	233 240	233 240 E	233 240 VA	233 240 T	233 240 EF
M 27	233 270	233 270 E	233 270 VA	233 270 T	233 270 EF
M 30	233 300	233 300 E	233 300 VA	233 300 T	233 300 EF



Machine tap sets HSS and HSSE-Co 5, in steel case



245 061



245 062



245 063



245 064



245 065



245 066



245 051



245 052

Description	Article no.	Article no.	Article no.	Article no.	Article no.
	HSS	HSSE-Co 5	HSSE-Co 5 VAP	HSS-TiN	HSSE-Co 5 TiAlN
7-piece set of machine taps M DIN 371 / 376 type B with progressive tap M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12	245 057	245 061	245 063	245 065	245 068
7-piece set of machine taps M DIN 371 / 376 type C / 35° right-hand spiral flutes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12	245 058	245 062	245 064	245 066	245 069
14-piece set of machine taps 7 machine taps DIN 371 / 376 type B with progressive tap M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 type N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	245 048	245 051	—	—	—
14-piece set of machine taps 7 machine taps DIN 371 / 376 type C / 35° right-hand spiral flutes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 type N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	245 049	245 052	—	—	—
21-piece set of machine taps 7 machine taps DIN 371 / 376 type B with progressive tap M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 machine taps DIN 371 / 376 type C / 35° right-hand spiral flutes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 Typ N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	—	245 054	—	—	—



Machine tap sets HSS in HSSE-Co 5, in plastic case



245 061 RO



245 062 RO



245 063 RO



245 064 RO



245 065 RO



245 066 RO



245 051 RO

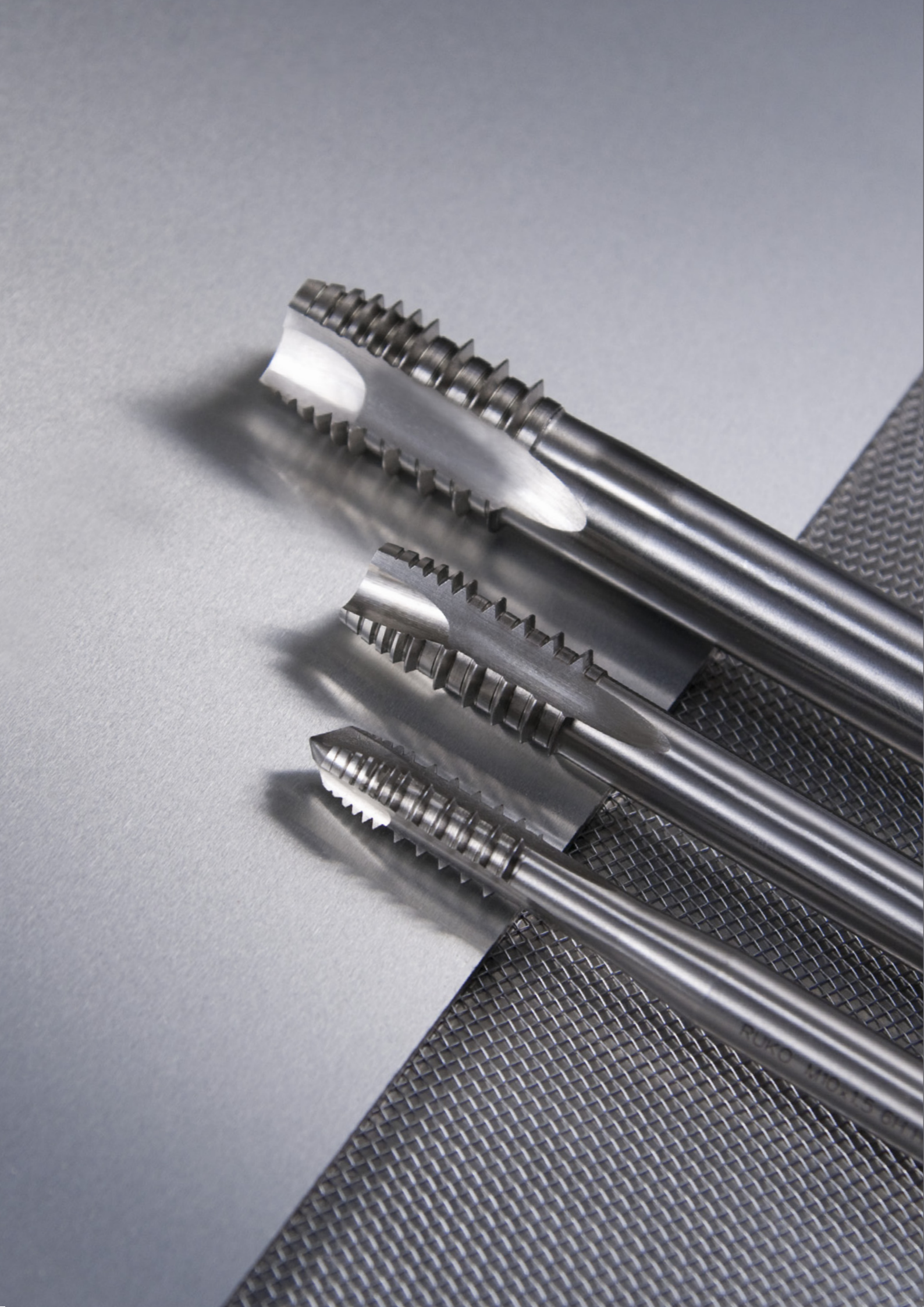


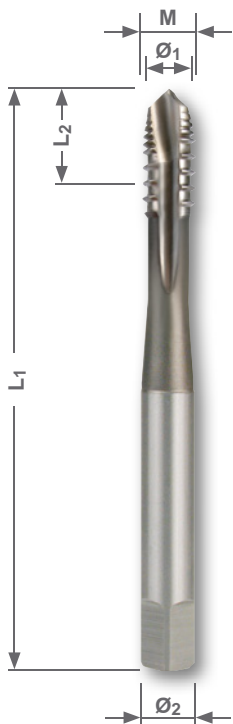
245 052 RO

Description	Article no. HSS	Article no. HSSE-Co 5	Article no. HSSE-Co 5 VAP	Article no. HSS-TiN	Article no. HSSE-Co 5 TiAlN
7-piece set of machine taps M DIN 371 / 376 type B with progressive tap M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12	245 057 RO	245 061 RO	245 063 RO	245 065 RO	245 068 RO
7-piece set of machine taps M DIN 371 / 376 type C / 35° right-hand spiral flutes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12	245 058 RO	245 062 RO	245 064 RO	245 066 RO	245 069 RO
14-piece set of machine taps 7 machine taps DIN 371 / 376 type B with progressive tap M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 type N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	245 048 RO	245 051 RO	—	—	—
14-piece set of machine taps 7 machine taps DIN 371 / 376 type C / 35° right-hand spiral flutes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 type N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	245 049 RO	245 052 RO	—	—	—
21-piece set of machine taps 7 machine taps DIN 371 / 376 type B with progressive tap M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 machine taps DIN 371 / 376 type C / 35° right-hand spiral flutes M 3 - M 4 - M 5 - M 6 - M 8 - M 10 - M 12 + 7 twist drills DIN 338 Typ N Ø 2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	—	—	—	—	—



1.06





Machine taps M DIN 371 HSS, ground with interrupted threads



Machine tap with reinforced shank, for through threads in aluminium, aluminium alloys, bronze, copper, nickel and plastics.

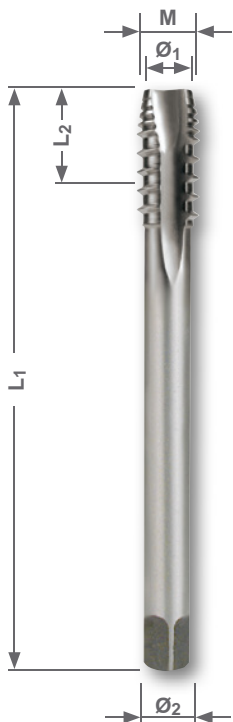
Chamfer: type B, 4 - 5 threads with progressive tap and interrupted threads

Thread: metric, DIN ISO 13

Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size	Pitch mm	Thread core hole \varnothing_1 mm	L ₁ mm	L ₂ mm	\varnothing_2 mm	Article no. HSS
M 3	0,50	2,50	56,0	11,0	3,5	272 030
M 4	0,70	3,30	63,0	13,0	4,5	272 040
M 5	0,80	4,20	70,0	16,0	6,0	272 050
M 6	1,00	5,00	80,0	19,0	6,0	272 060
M 8	1,25	6,80	90,0	22,0	8,0	272 080
M 10	1,50	8,50	100,0	24,0	10,0	272 100



Machine taps M DIN 376 HSS, ground with interrupted threads



Machine tap with overflow shank, for through threads in aluminium, aluminium alloys, bronze, copper, nickel and plastics.

Chamfer: type B, 4 - 5 threads with progressive tap and interrupted threads

Thread: metric, DIN ISO 13

Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size	Pitch mm	Thread core hole \varnothing_1 mm	L ₁ mm	L ₂ mm	\varnothing_2 mm	Article no. HSS
M 12	1,75	10,20	110,0	29,0	9,0	272 120
M 14	2,00	12,00	110,0	30,0	11,0	272 140
M 16	2,00	14,00	110,0	32,0	12,0	272 160
M 18	2,50	15,50	125,0	34,0	14,0	272 180
M 20	2,50	17,50	140,0	34,0	16,0	272 200
M 22	2,50	19,50	140,0	34,0	18,0	272 220
M 24	3,00	21,00	160,0	38,0	18,0	272 240



Machine taps M DIN 371 HSSE-Co 5 TiCN, ground



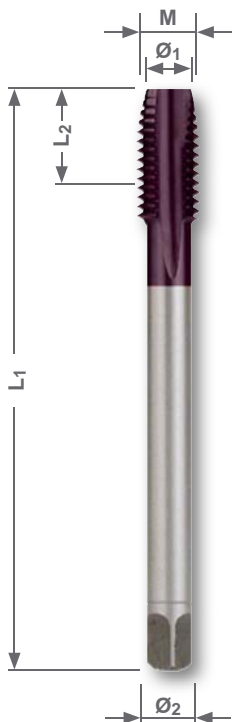
Machine taps with reinforced shank for through-hole thread in cast iron and cast alloys.

Chamfer: type C / 2 - 3 threads
Thread: metric, DIN ISO 13
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5 TiCN
M 3	0,50	2,50	56,0	11,0	3,5	273 030 ETC
M 4	0,70	3,30	63,0	13,0	4,5	273 040 ETC
M 5	0,80	4,20	70,0	16,0	6,0	273 050 ETC
M 6	1,00	5,00	80,0	19,0	6,0	273 060 ETC
M 8	1,25	6,80	90,0	22,0	8,0	273 080 ETC
M 10	1,50	8,50	100,0	24,0	10,0	273 100 ETC

Machine taps M DIN 376 HSSE-Co 5 TiCN, ground

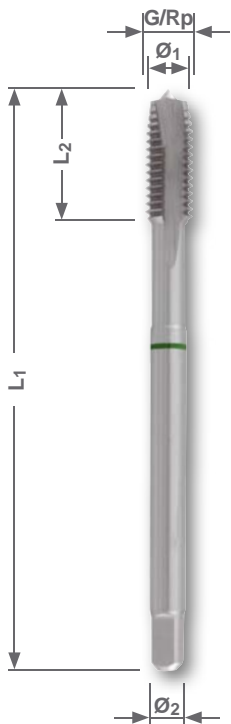


Machine taps with reduced shank for through-hole thread in cast iron and cast alloys.

Chamfer: type C / 2 - 3 threads
Thread: metric, DIN ISO 13
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5 TiCN
M 12	1,75	10,20	110,0	29,0	9,0	273 120 ETC
M 14	2,00	12,00	110,0	30,0	11,0	273 140 ETC
M 16	2,00	14,00	110,0	32,0	12,0	273 160 ETC
M 18	2,50	15,50	125,0	34,0	14,0	273 180 ETC
M 20	2,50	17,50	140,0	34,0	16,0	273 200 ETC
M 22	2,50	19,50	140,0	34,0	18,0	273 220 ETC
M 24	3,00	21,00	160,0	38,0	18,0	273 240 ETC



Machine taps G DIN 5156 HSS Co 5, ground

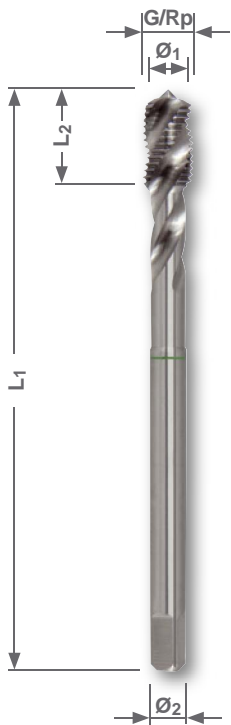


Machine taps with overflow shank for through threads.

Thread: DIN ISO 228 "G" (cylindrical pipe thread)
 DIN 2999 "Rp" (Whitworth pipe thread)
 Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size G / Rp		Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no.
G 1/8	Rp 1/8	28	8,80	90,0	20,0	7,0	262 018 E
G 1/4	Rp 1/4	19	11,80	100,0	21,0	11,0	262 014 E
G 3/8	Rp 3/8	19	15,25	100,0	21,0	12,0	262 038 E
G 1/2	Rp 1/2	14	19,00	125,0	24,0	16,0	262 012 E
G 5/8	Rp 5/8	14	21,00	125,0	24,0	18,0	262 058 E
G 3/4	Rp 3/4	14	24,50	140,0	26,0	20,0	262 034 E
G 7/8	Rp 7/8	14	28,25	150,0	28,0	22,0	262 078 E
G 1"	Rp 1"	11	30,75	160,0	30,0	25,0	262 010 E
G 1 1/8	Rp 1 1/8	11	35,50	170,0	30,0	28,0	262 118 E
G 1 1/4	Rp 1 1/4	11	39,50	170,0	30,0	32,0	262 114 E
G 1 3/8	Rp 1 3/8	11	41,80	180,0	32,0	36,0	262 138 E
G 1 1/2	Rp 1 1/2	11	45,25	190,0	32,0	36,0	262 112 E
G 1 3/4	Rp 1 3/4	11	51,30	190,0	32,0	40,0	262 134 E
G 2"	Rp 2"	11	57,20	220,0	40,0	45,0	262 020 E



Machine taps G DIN 5156 HSS Co 5, ground



Machine taps with overflow shank and 35° right-hand spiral flutes for bottoming.

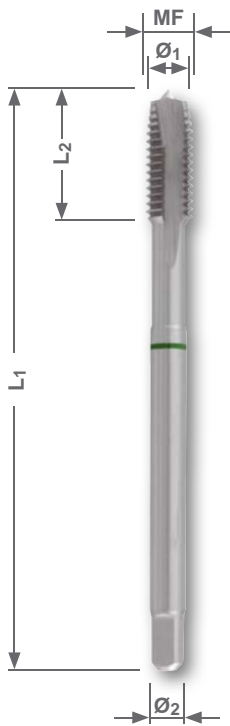
Thread: DIN ISO 228 "G" (cylindrical pipe thread)
 DIN 2999 "Rp" (Whitworth pipe thread)
 Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size G / Rp		Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no.
G 1/8	Rp 1/8	28	8,80	90,0	12,0	7,0	263 018 E
G 1/4	Rp 1/4	19	11,80	100,0	16,0	11,0	263 014 E
G 3/8	Rp 3/8	19	15,25	100,0	16,0	12,0	263 038 E
G 1/2	Rp 1/2	14	19,00	125,0	20,0	16,0	263 012 E
G 5/8	Rp 5/8	14	21,00	125,0	20,0	18,0	263 058 E
G 3/4	Rp 3/4	14	24,50	140,0	22,0	20,0	263 034 E
G 7/8	Rp 7/8	14	28,25	150,0	26,0	22,0	263 078 E
G 1"	Rp 1"	11	30,75	160,0	30,0	25,0	263 010 E
G 1 1/8	Rp 1 1/8	11	35,50	170,0	30,0	28,0	263 118 E
G 1 1/4	Rp 1 1/4	11	39,50	170,0	30,0	32,0	263 114 E
G 1 3/8	Rp 1 3/8	11	41,80	180,0	32,0	36,0	263 138 E
G 1 1/2	Rp 1 1/2	11	45,25	190,0	32,0	36,0	263 112 E
G 1 3/4	Rp 1 3/4	11	51,30	190,0	32,0	40,0	263 134 E
G 2"	Rp 2"	11	57,20	220,0	40,0	45,0	263 020 E



1.06



Machine taps MF DIN 374 HSSE-Co 5, ground

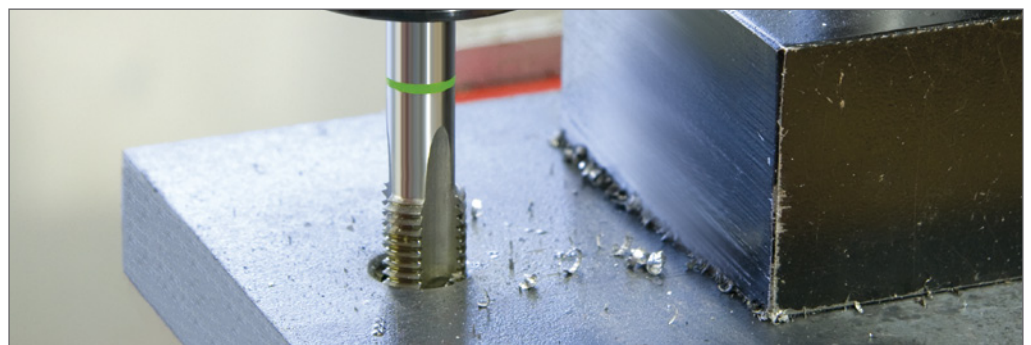


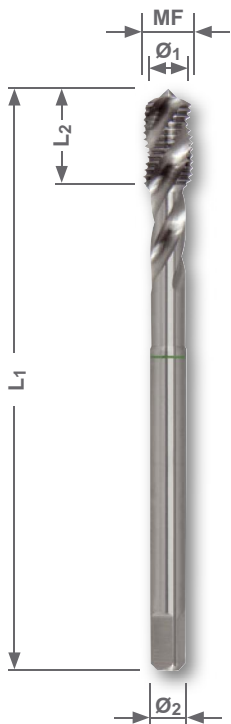
**Machine tap with overflow shank
for through threads.**

Thread: metric, fine, DIN ISO 13
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
MF 4	0,50	3,50	63,0	12,0	2,8	260 041 E
MF 5	0,50	4,50	70,0	13,0	3,5	260 050 E
MF 6	0,75	5,20	80,0	15,0	4,5	260 060 E
MF 8	1,00	7,00	90,0	18,0	6,0	260 081 E
MF 10	1,00	9,00	90,0	20,0	7,0	260 100 E
MF 10	1,25	8,80	100,0	20,0	7,0	260 101 E
MF 12	1,00	11,00	100,0	21,0	9,0	260 122 E
MF 12	1,25	10,80	100,0	21,0	9,0	260 121 E
MF 12	1,50	10,50	100,0	21,0	9,0	260 120 E
MF 14	1,00	13,00	100,0	21,0	11,0	260 142 E
MF 14	1,25	12,80	100,0	21,0	11,0	260 143 E
MF 14	1,50	12,50	100,0	21,0	11,0	260 141 E
MF 16	1,00	15,00	100,0	21,0	12,0	260 161 E
MF 16	1,50	14,50	100,0	21,0	12,0	260 160 E
MF 18	1,00	17,00	110,0	24,0	14,0	260 181 E
MF 18	1,50	16,50	110,0	24,0	14,0	260 180 E
MF 18	2,00	16,00	125,0	24,0	14,0	260 182 E
MF 20	1,00	19,00	125,0	24,0	16,0	260 201 E
MF 20	1,50	18,50	125,0	24,0	16,0	260 200 E
MF 20	2,00	18,00	140,0	30,0	16,0	260 202 E
MF 22	1,50	20,50	125,0	24,0	18,0	260 220 E
MF 22	2,00	20,00	140,0	30,0	18,0	260 222 E
MF 24	1,00	23,00	140,0	26,0	18,0	260 242 E
MF 24	1,50	22,50	140,0	26,0	18,0	260 240 E
MF 24	2,00	22,00	140,0	26,0	18,0	260 241 E
MF 28	1,50	26,50	140,0	26,0	20,0	260 281 E
MF 28	2,00	26,00	140,0	26,0	20,0	260 282 E
MF 30	1,50	28,50	150,0	28,0	22,0	260 301 E
MF 30	2,00	28,00	150,0	28,0	22,0	260 302 E





Machine taps MF DIN 374 HSSE-Co 5, ground

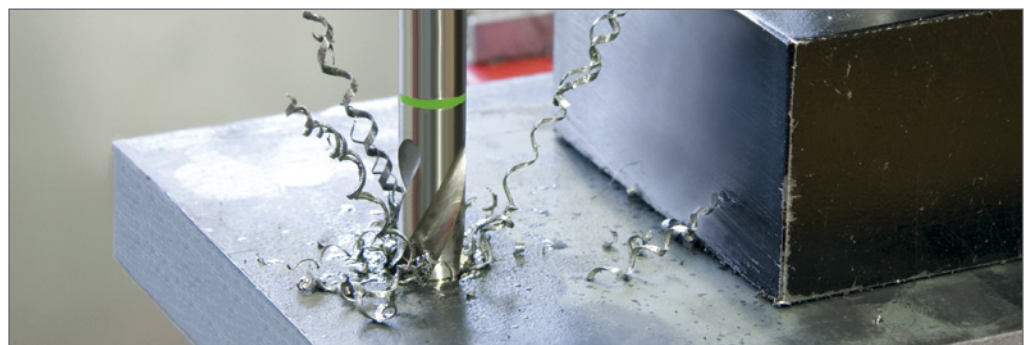


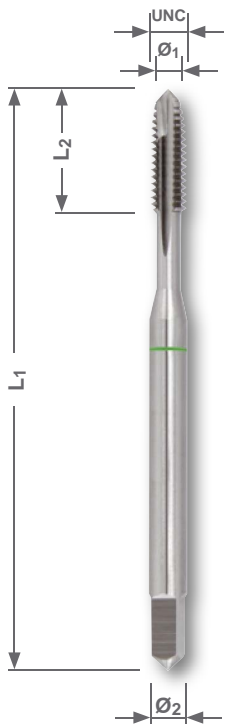
**Machine taps with overflow shank
and 35° right-hand spiral flutes for bottoming.**

Thread: metric, fine, DIN ISO 13
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
MF 4	0,50	3,50	63,0	7,0	2,8	261 041 E
MF 5	0,50	4,50	70,0	8,0	3,5	261 050 E
MF 6	0,75	5,20	80,0	10,0	4,5	261 060 E
MF 8	1,00	7,00	90,0	13,0	6,0	261 081 E
MF 10	1,00	9,00	90,0	12,0	7,0	261 100 E
MF 10	1,25	8,80	100,0	15,0	7,0	261 101 E
MF 12	1,00	11,00	100,0	14,0	9,0	261 122 E
MF 12	1,25	10,80	100,0	14,0	9,0	261 121 E
MF 12	1,50	10,50	100,0	14,0	9,0	261 120 E
MF 14	1,00	13,00	100,0	16,0	11,0	261 142 E
MF 14	1,25	12,80	100,0	16,0	11,0	261 143 E
MF 14	1,50	12,50	100,0	16,0	11,0	261 141 E
MF 16	1,00	15,00	100,0	16,0	12,0	261 161 E
MF 16	1,50	14,50	100,0	16,0	12,0	261 160 E
MF 18	1,00	17,00	110,0	20,0	14,0	261 181 E
MF 18	1,50	16,50	110,0	20,0	14,0	261 180 E
MF 18	2,00	16,00	125,0	20,0	14,0	261 182 E
MF 20	1,00	19,00	125,0	20,0	16,0	261 201 E
MF 20	1,50	18,50	125,0	20,0	16,0	261 200 E
MF 20	2,00	18,00	140,0	20,0	16,0	261 202 E
MF 22	1,50	20,50	125,0	20,0	18,0	261 220 E
MF 22	2,00	20,00	140,0	20,0	18,0	261 222 E
MF 24	1,00	23,00	140,0	22,0	18,0	261 242 E
MF 24	1,50	22,50	140,0	22,0	18,0	261 240 E
MF 24	2,00	22,00	140,0	22,0	18,0	261 241 E
MF 28	1,50	26,50	140,0	22,0	20,0	261 281 E
MF 28	2,00	26,00	140,0	22,0	20,0	261 282 E
MF 30	1,50	28,50	150,0	26,0	22,0	261 301 E
MF 30	2,00	28,00	150,0	26,0	22,0	261 302 E





Machine taps UNC ≈ DIN 371 HSSE-Co 5, ground

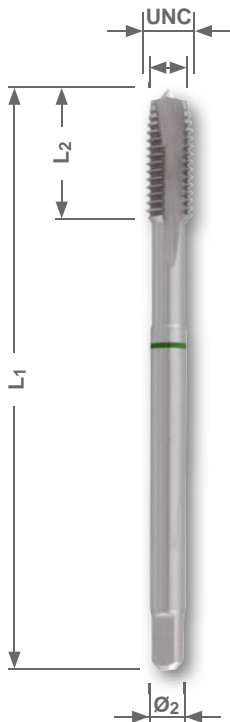


Machine taps with reinforced shank for through threads.

Thread: American UNC coarse thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size UNC	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
Nr. 4	40	2,35	56,0	11,0	3,5	265 040 UNC
Nr. 5	40	2,65	56,0	11,0	3,5	265 050 UNC
Nr. 6	32	2,85	56,0	13,0	4,0	265 060 UNC
Nr. 8	32	3,50	63,0	13,0	4,5	265 080 UNC
Nr. 10	24	3,90	70,0	16,0	6,0	265 100 UNC
Nr. 12	24	4,50	70,0	16,0	6,0	265 120 UNC
1/4	20	5,10	80,0	17,0	7,0	265 014 UNC
5/16	18	6,60	90,0	20,0	8,0	265 516 UNC
3/8	16	8,00	100,0	22,0	10,0	265 038 UNC



Machine taps UNC ≈ DIN 376 HSSE-Co 5, ground

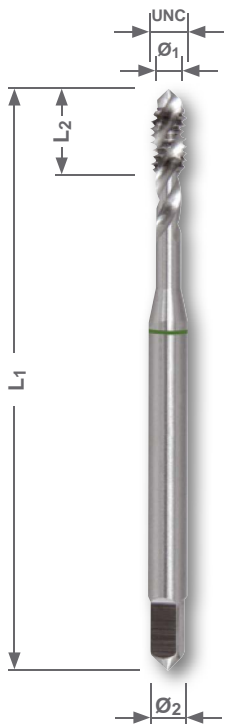


Machine taps with overflow shank for through threads.

Thread: American UNC coarse thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size UNC	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
7/16	14	9,40	100,0	22,0	8,0	265 716 UNC
1/2	13	10,80	110,0	25,0	9,0	265 012 UNC
9/16	12	12,20	110,0	26,0	11,0	265 916 UNC
5/8	11	13,50	110,0	27,0	12,0	265 058 UNC
3/4	10	16,50	125,0	30,0	14,0	265 034 UNC
7/8	9	19,50	140,0	32,0	18,0	265 078 UNC
1"	8	22,25	160,0	36,0	18,0	265 010 UNC



Machine taps UNC ≈ DIN 371 HSSE-Co 5, ground

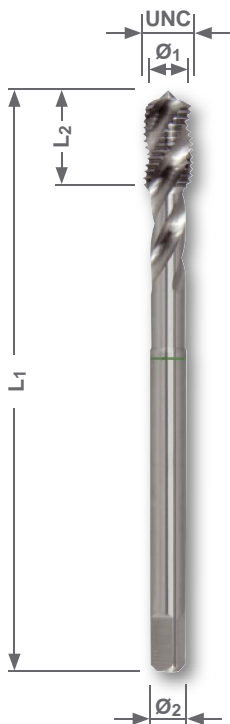


Machine taps with reinforced shank and 35° right-hand spiral flutes for bottoming.

Thread: american UNC coarse thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size UNC	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
Nr. 4	40	2,35	56,0	7,0	3,5	266 040 UNC
Nr. 5	40	2,65	56,0	7,0	3,5	266 050 UNC
Nr. 6	32	2,85	56,0	8,0	4,0	266 060 UNC
Nr. 8	32	3,50	63,0	8,0	4,5	266 080 UNC
Nr. 10	24	3,90	70,0	10,0	6,0	266 100 UNC
Nr. 12	24	4,50	70,0	10,0	6,0	266 120 UNC
1/4	20	5,10	80,0	13,0	7,0	266 014 UNC
5/16	18	6,60	90,0	14,0	8,0	266 516 UNC
3/8	16	8,00	100,0	16,0	10,0	266 038 UNC



Machine taps UNC ≈ DIN 376 HSSE-Co 5, ground



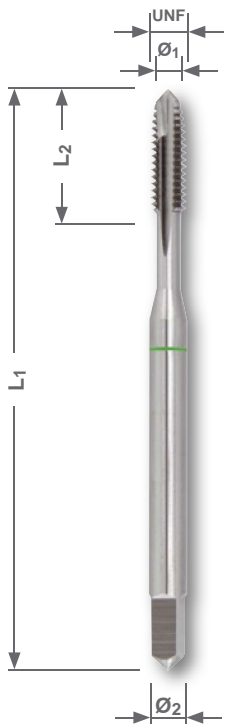
Machine taps with overflow shank and 35° right-hand spiral flutes for bottoming.

Thread: American UNC coarse thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size UNC	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
7/16	14	9,40	100,0	17,0	8,0	266 716 UNC
1/2	13	10,80	110,0	20,0	9,0	266 012 UNC
9/16	12	12,20	110,0	20,0	11,0	266 916 UNC
5/8	11	13,50	110,0	22,0	12,0	266 058 UNC
3/4	10	16,50	125,0	25,0	14,0	266 034 UNC
7/8	9	19,50	140,0	27,0	18,0	266 078 UNC
1"	8	22,25	160,0	30,0	18,0	266 010 UNC





Machine taps UNF ≈ DIN 371 HSSE-Co 5, ground

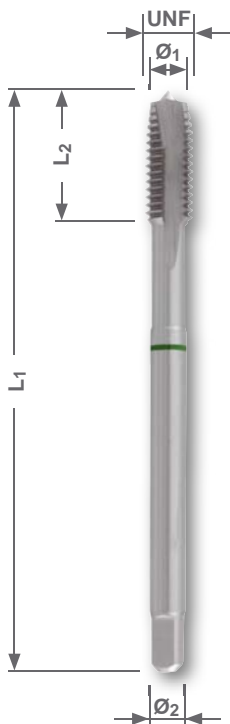


Machine taps with reinforced shank for through threads.

Thread: American UNF fine thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size UNF	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
Nr. 4	48	2,40	56,0	11,0	3,5	265 040 UNF
Nr. 5	44	2,70	56,0	11,0	3,5	265 050 UNF
Nr. 6	40	2,95	56,0	13,0	4,0	265 060 UNF
Nr. 8	36	3,50	63,0	13,0	4,5	265 080 UNF
Nr. 10	32	4,10	70,0	16,0	6,0	265 100 UNF
Nr. 12	28	4,60	70,0	16,0	6,0	265 120 UNF
1/4	28	5,50	80,0	17,0	7,0	265 014 UNF
5/16	24	6,60	90,0	17,0	8,0	265 516 UNF
3/8	24	8,50	100,0	18,0	10,0	265 038 UNF



Machine taps UNF ≈ DIN 374 HSSE-Co 5, ground

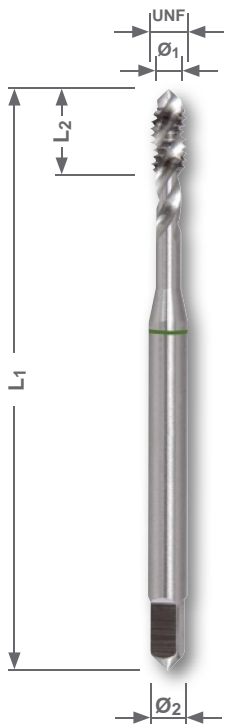


Machine taps with overflow shank for through threads.

Thread: American UNF fine thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size UNF	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
7/16	20	9,90	100,0	22,0	8,0	265 716 UNF
1/2	20	11,50	100,0	22,0	9,0	265 012 UNF
9/16	18	12,90	100,0	22,0	11,0	265 916 UNF
5/8	18	14,50	100,0	22,0	12,0	265 058 UNF
3/4	16	17,50	110,0	25,0	14,0	265 034 UNF
7/8	14	20,50	140,0	26,0	18,0	265 078 UNF
1"	12	23,25	150,0	28,0	18,0	265 010 UNF



Machine taps UNF ≈ DIN 371 HSSE-Co 5, ground

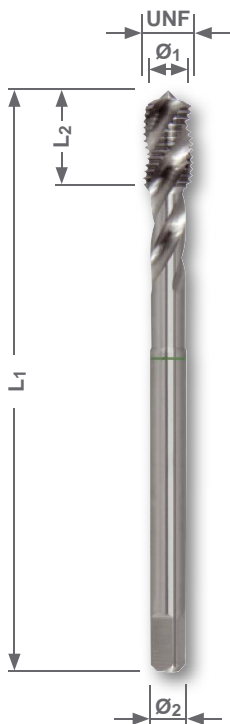


Machine taps with reinforced shank and 35° right-hand spiral flutes for bottoming.

Thread: American UNF fine thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size UNF	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
Nr. 4	48	2,40	56,0	5,5	3,5	266 040 UNF
Nr. 5	44	2,70	56,0	6,0	3,5	266 050 UNF
Nr. 6	40	2,95	56,0	7,0	4,0	266 060 UNF
Nr. 8	36	3,50	63,0	7,5	4,5	266 080 UNF
Nr. 10	32	4,10	70,0	8,0	6,0	266 100 UNF
Nr. 12	28	4,60	70,0	9,0	6,0	266 120 UNF
1/4	28	5,50	80,0	10,0	7,0	266 014 UNF
5/16	24	6,90	90,0	10,0	8,0	266 516 UNF
3/8	24	8,50	100,0	10,0	10,0	266 038 UNF



Machine taps UNF ≈ DIN 374 HSSE-Co 5, ground



Machine taps with overflow shank and 35° right-hand spiral flutes for bottoming.

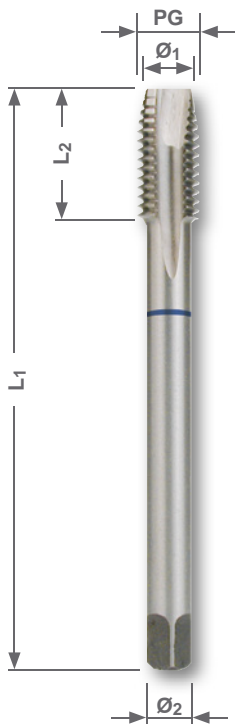
Thread: American UNF fine thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size UNF	Threads per inch	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no. HSSE-Co 5
7/16	20	9,90	100,0	13,0	8,0	266 716 UNF
1/2	20	11,50	100,0	13,0	9,0	266 012 UNF
9/16	18	12,90	100,0	15,0	11,0	266 916 UNF
5/8	18	14,50	100,0	15,0	12,0	266 058 UNF
3/4	16	17,50	110,0	17,0	14,0	266 034 UNF
7/8	14	20,50	140,0	17,0	18,0	266 078 UNF
1"	12	23,25	150,0	20,0	18,0	266 010 UNF



Machine taps PG HSS, ground



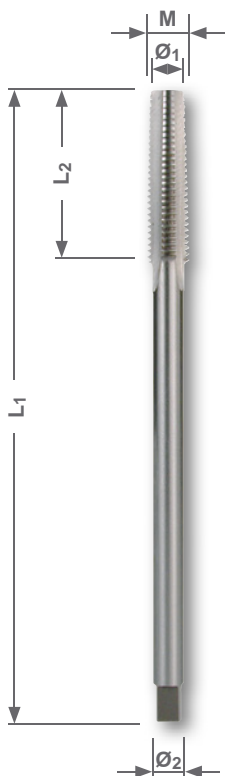
Machine taps with overflow shank for through threads.

Thread: DIN 40 430 steel conduit thread
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size PG	Threads per inch	Thread core hole \varnothing_1 mm	L ₁ mm	L ₂ mm	\varnothing_2 mm	Article no. HSS
PG 7	20	11,35	70,0	22,0	9,0	264 007
PG 9	18	13,95	70,0	22,0	12,0	264 009
PG 11	18	17,35	80,0	22,0	14,0	264 011
PG 13,5	18	19,15	80,0	22,0	16,0	264 135
PG 16	18	21,25	80,0	22,0	18,0	264 016
PG 21	16	26,95	90,0	22,0	22,0	264 021
PG 29	16	35,60	100,0	25,0	28,0	264 029
PG 36	16	45,60	140,0	40,0	36,0	264 036
PG 42	16	52,60	140,0	40,0	40,0	264 042
PG 48	16	57,90	160,0	40,0	45,0	264 048

Nut taps M DIN 357 HSS, ground



Long shank to retain several cut nuts.

Chamfer: 2/3 of the thread length
Thread: metric, DIN ISO 13
Flanks: relief-ground

Packing unit: individual plastic pack

Nominal thread size M	Pitch mm	Thread core hole \varnothing_1 mm	L ₁ mm	L ₂ mm	\varnothing_2 mm	Article no. HSS
M 3	0,50	2,5	70,0	22,0	2,2	243 030
M 4	0,70	3,3	90,0	25,0	2,8	243 040
M 5	0,80	4,2	100,0	28,0	3,5	243 050
M 6	1,00	5,0	110,0	32,0	4,5	243 060
M 8	1,25	6,8	125,0	40,0	6,0	243 080
M 10	1,50	8,5	140,0	45,0	7,0	243 100
M 12	1,75	10,2	180,0	50,0	9,0	243 120
M 14	2,00	12,0	200,0	56,0	11,0	243 140
M 16	2,00	14,0	200,0	63,0	12,0	243 160
M 18	2,50	15,5	220,0	63,0	14,0	243 180
M 20	2,50	17,5	250,0	70,0	16,0	243 200
M 22	2,50	19,5	280,0	80,0	18,0	243 220
M 24	3,00	21,0	280,0	80,0	18,0	243 240





Forming taps DIN 2174 HSS Co 5-nitrated-VAP and HSS Co 5-TiAlN, ground

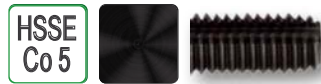


Forming taps with reinforced shank for through threads and bottoming.

Thread: metric, DIN ISO 13
Flanks: relief-ground

As shaping is done without cutting, no interruption of the course of the fibre in the material. The deformation creates very rigid threads. Consistent accuracy even with high productivity.

Packing unit: individual plastic pack



HSS Co 5-nitrated-VAP

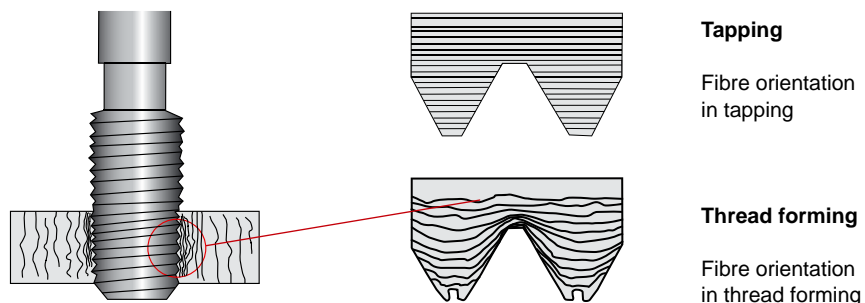
The forming tap consists of cobalt alloyed, nitrated and vaporised heavy-duty high-speed steel. Applications: for non-alloyed and alloyed steels up to a strength of 1000 N/mm² and non-ferrous metals.

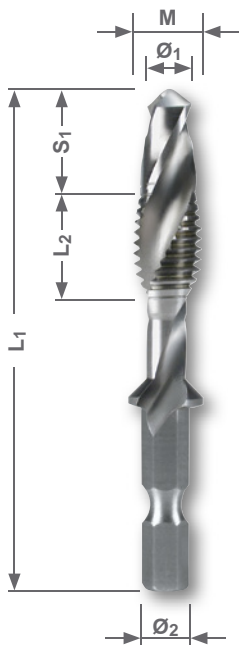
HSS Co 5-TiAlN

The forming tap consists of cobalt alloyed heavy-duty high-speed steel with titanium aluminium nitride coating. Applications: for non-alloyed and alloyed steels up to a strength of 1000 N/mm², V2A and non-ferrous metals.

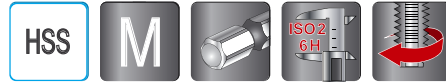
Nominal thread size M	Pitch mm	Thread core hole Ø ₁ mm	L ₁ mm	L ₂ mm	Ø ₂ mm	Article no.	Article no.
						HSSE-Co 5 nitrated VAP	HSSE-Co 5 TiAlN
M 3	0,50	2,80	56,0	11,0	3,5	271 003 N	271 003 F
M 4	0,70	3,70	63,0	13,0	4,5	271 004 N	271 004 F
M 5	0,80	4,65	70,0	16,0	6,0	271 005 N	271 005 F
M 6	1,00	5,55	80,0	19,0	6,0	271 006 N	271 006 F
M 8	1,25	7,45	90,0	22,0	8,0	271 008 N	271 008 F
M 10	1,50	9,35	100,0	24,0	10,0	271 010 N	271 010 F
M 12	1,75	11,20	110,0	28,0	9,0	271 012 N	271 012 F

General information:





Combined machine taps bit "long" and bit "short" HSS and HSS-TiN, ground



In one working stroke:

- ✓ hole drilling
- ✓ thread cutting (tapping)
- ✓ thread deburring
- ✓ thread cleaning

Combined machine tap with 1/4" hexagon shank for tapping drill hole and through thread.

Flanks: relief-ground
Shank: 6,35 x 27,0 mm

The combined machine tap is suitable for sheet metal working with right/left handed rotation cordless drilling machines. The thread is cut in one operation, without any tool changing. The tool incorporates a twist drill before the thread-tapping part.

Packing unit: individual plastic pack



HSS

Applications:
for unalloyed and low-alloyed steels up to 600 N/mm² strength, malleable cast iron and non-ferrous metals.



HSS-TiN

Applications:
for unalloyed and low-alloyed steels up to 1000 N/mm² strength, malleable cast iron and non-ferrous metals.

Combined machine taps bit "long" HSS and HSS-TiN, ground

Nominal thread size M	Pitch mm	L ₁ mm	S ₁ mm	L ₂ mm	Ø ₁ mm	Ø ₂ mm	Article no.	
							HSS	HSS-TiN
M 3	0,50	51,0	5,0	7,0	2,5	7,0	270 014	270 014 T
M 4	0,70	54,0	6,0	8,5	3,3	7,0	270 015	270 015 T
M 5	0,80	57,0	7,0	10,0	4,2	7,0	270 016	270 016 T
M 6	1,00	60,0	8,0	12,0	5,0	7,0	270 017	270 017 T
M 8	1,25	68,0	11,0	15,0	6,8	9,5	270 018	270 018 T
M 10	1,50	75,0	15,0	17,0	8,5	11,5	270 019	270 019 T

Combined machine taps bit "short" HSS and HSS-TiN, ground

Nominal thread size M	Pitch mm	L ₁ mm	S ₁ mm	L ₂ mm	Ø ₁ mm	Ø ₂ mm	Article no.	
							HSS	HSS-TiN
M 3	0,50	36,0	5,0	6,0	2,5	7,2	R 270 014	R 270 014 T
M 4	0,70	39,0	6,0	8,0	3,3	7,2	R 270 015	R 270 015 T
M 5	0,80	41,0	7,0	9,0	4,2	7,2	R 270 016	R 270 016 T
M 6	1,00	44,0	8,0	11,0	5,0	7,2	R 270 017	R 270 017 T
M 8	1,25	51,0	11,0	14,0	6,8	8,8	R 270 018	R 270 018 T
M 10	1,50	59,0	15,0	15,0	8,5	11,0	R 270 019	R 270 019 T





Hexagonal magnetic holder

Packing unit: in plastic tubes of 1

Description	Article no.	Cont. pcs.
Hexagonal magnetic holder	270 013	1



Combined machine tap sets "long" HSS and HSS-TiN in steel case

Description	Article no. HSS	Article no. HSS-TiN
7-piece set of combined machine taps "long" 6 combined machine taps M 3 - M 4 - M 5 - M 6 - M 8 - M 10 + 1 hexagon magnetic holder	270 020	270 020 T



Combined machine tap sets "short" HSS and HSS-TiN in steel case

Description	Article no. HSS	Article no. HSS-TiN
7-piece set of combined machine taps "short" 6 combined machine taps M 3 - M 4 - M 5 - M 6 - M 8 - M 10 + 1 hexagon magnetic holder	R 270 020	R 270 021 T



1.06



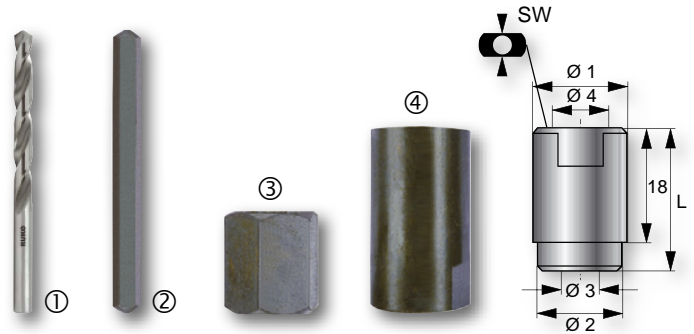
Thread-extractor sets in plastic case

Description	Article no.
Set 1: 21-pieces in plastic case 4 twist drills, 4 studs, 4 extractor nuts and 9 drilling jigs	244 150
Set 2: 25-pieces in plastic case 5 twist drills, 5 studs, 5 extractor nuts and 10 drilling jigs	244 151

① High-performance twist drills DIN 338 HSS

ground version, made to match the drilling jigs exactly

Ø mm	Ø inch	for stud size	Length mm	Article no.
3,2	1/8	1 - 4	65,0	214 032
4,8	3/16	5 - 7	86,0	214 048
6,4	1/4	8	101,0	214 064
8,0	5/16	9	117,0	214 080
8,7	11/32	10	125,0	214 087



② Studs

made of special steel profile, hardened, gunmetal finish

Size	For threads	Ø mm	Ø inch	Length mm	Article no.
1	M 5 - M 6	3,2	1/8	60,0	244 001
2	M 7 - M 8	4,8	3/16	70,0	244 002
3	M 9 - M 10	6,4	1/4	78,0	244 003
4	M 12	8,0	5/16	83,0	244 004
5	M 14 - M 16	8,7	11/32	94,0	244 005

③ Extractor nuts

with special inside profile, hardened, gunmetal finish

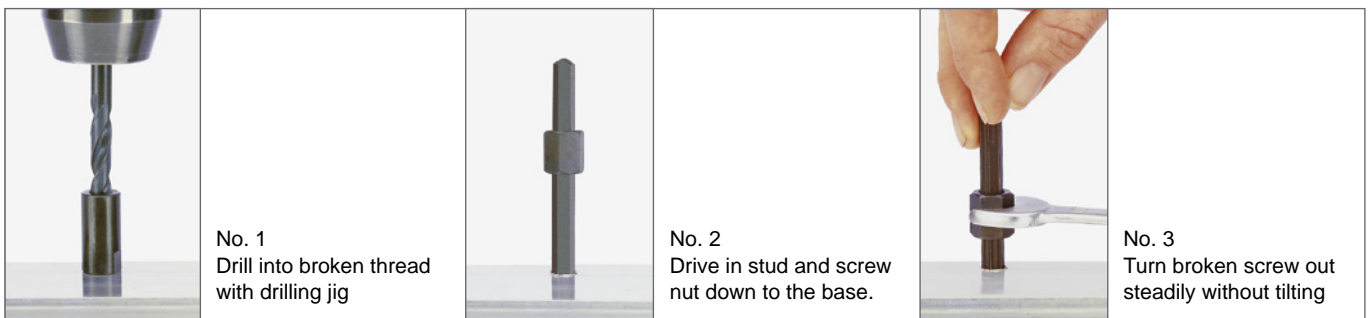
Size	For stud size	Spanner width mm	Length mm	Article no.
1	1	10,0	16,0	244 032
2	2	11,0	16,0	244 046
3	3	13,0	16,0	244 064
4	4	14,0	16,0	244 080
5	5	17,0	16,0	244 087

④ Drilling jigs

reduced shank, hardened, gunmetal finish, for lower-lying broken screws (Ø 1 + Ø 2), for protruding broken screws (Ø 4)

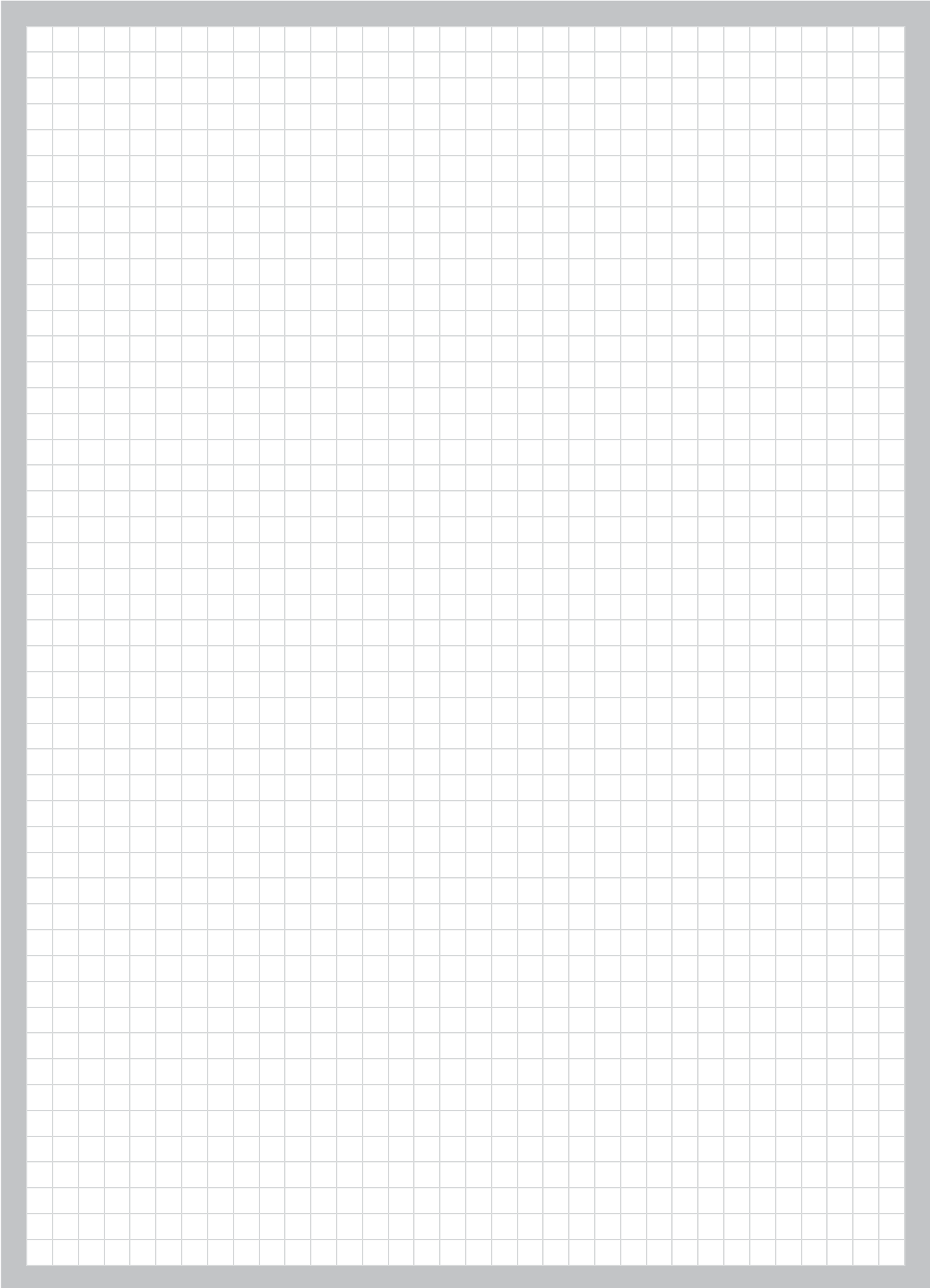
Size	Ø 1 mm	Ø 2 mm	Ø 3 mm	Ø 4 mm	Ø 3 inch	Ø 4 inch	SW mm	L mm	Article no.
1	7,0	6,0	3,2	5,0	1/8	3/16	6,0	30,0	244 101
2	8,0	7,0	3,2	6,0	1/8	—	7,0	30,0	244 102
3	9,0	—	3,2	7,0	1/8	1/4	8,0	30,0	244 103
4	10,0	—	3,2	8,0	1/8	5/16	9,0	30,0	244 104
5	11,0	—	4,8	8,0	3/16	5/16	9,0	30,0	244 105
6	12,0	—	4,8	9,0	3/16	—	10,0	30,0	244 106
7	13,0	—	4,8	10,0	3/16	1/8	11,0	30,0	244 107
8	14,0	—	6,4	11,0	1/4	7/16	12,0	30,0	244 108
9	15,0	—	8,0	12,0	5/16	—	13,0	30,0	244 109
10	17,0	16,0	8,7	14,0	11/32	—	14,0	30,0	244 110

Instructions for use





1.06



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