

Tube and sheet drills HSS, CBN ground with split point

Point cut: works specification with split point DIN 1412C
 Point angle: 118° Ø tolerance: works specification
 Cone angle: 20-30° Surface: bright
 Right hand cutting Packing unit: in plastic tubes of 1

Size no.	Drilling range mm	Total length mm	Shank Ø mm	Part no.
1.0	3.0 - 14.0	58	6	R101001
2.0	5.0 - 20.0	71	8	R101002
3.0	16.0 - 30.5	76	9	R101003
4.0	24.0 - 40.0	89	10	R101004
5.0	36.0 - 50.0	97	12	R101005
6.0	40.0 - 61.0	103	13	R101006
7.0	5.0 - 25.4	87	10	R101007
8.0	5.0 - 31.0	103	9	R101008
9.0	5.0 - 22.5	79	8	R101022

The CBN ground flutes guarantee quiet running and high cutting performance. The cone makes it easier to withdraw the tool from the material.



Tube & Sheet Drill Set HSS

Description	Part no.
3pcs in steel case 3 tube & sheet drills HSS milled, signed in groove size 1 (Ø3.0 - 14.0mm) size 2 (Ø5.0 - 20.0mm) size 3 (Ø16.0 - 30.5mm)	R101020

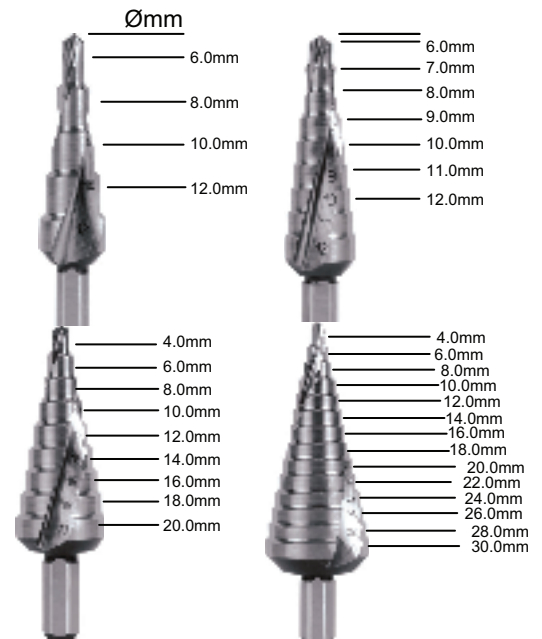


Step drills HSS, CBN ground, spiral fluted with split point

Point cut: works specification with split point DIN 1412C
 Point /Step angle: 118°/90°
 Ø tolerance: works specification
 Surface: bright
 Right hand cutting
 Packing unit: in plastic tubes of 1

The CBN ground and spiral flutes guarantee quiet running and high cutting performance. Especially the chip flow is optimized, so even long, non-breaking chips will be removed easily. The optimized chip flow protects the cutting edges and reduces built-up edges and cold weld marks. The cone makes it easier to withdraw the tool from the material.

Size no.	Drilling range mm	Total length mm	Steps	Shank Ø mm	Part no.
0/5	4.0 - 12.00	65	5	6	R101050-5
0/9	4.0 - 12.00	65	9	6	R101050-9
1	4.0 - 20.00	75	9	8	R101051
2	4.0 - 30.00	100	14	10	R101052
3	6.0 - 38.00	100	12	10	R101053
4	6.0 - 26.75	75	8	10	R101055
5	4.0 - 39.00	107	13	10	R101056
6	6.0 - 32.00	75	8	10	R101057
7	5.0 - 28.00	69	7	10	R101058
8	6.0 - 30.50	80	9	10	R101098
9	6.0 - 37.00	100	12	10	R101060
10	4.8 - 10.65	54	5	6	R101094
11	6.0 - 25.00	65	7	10	R101095
12	6.0 - 32.00	76	9	10	R101096
13*	6.0 - 40.00	105	16	13	R101097



Step Drill Set HSS CBN ground

Description	Part no.
3pcs in mini box 3 step drills HSS CBN Ground for sheet metals up to 2mm size 0/9 (Ø4.0 - 12.0mm) size 1 (Ø4.0 - 20.0mm) size 2 (Ø4.0 - 30.0mm)	RA101038



Taper and deburring countersinkers DIN 335 type C 90° HSS CBN ground

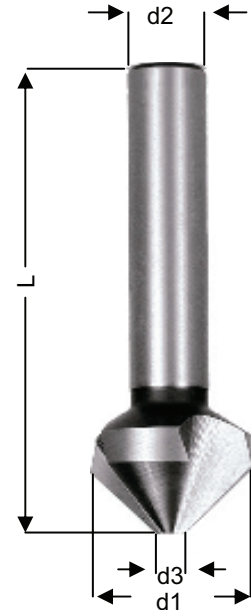
Counters. Angle: 90°
 Shank: cylindrical
 Cutting edges: 3
 Surface: bright

Because of the CBN deep-ground flutes the cutting edges are extremely sharp. Ideal for burr and chatter free deburring and countersinking. Applicable for steel, cast iron, non-ferrous and light metals. Best results at low cutting speeds.

Right hand cutting

Packing unit: in plastic tubes of 1

Countersinker		Total length L mm	Shank Ø d2 mm	Countersinkings as per DIN 74		Part no.
nominal Ø d1mm	d3 mm			AF	BF	
4.3	1.3	40.0	4.0			R102101
4.8	1.5	40.0	4.0			R102102
5.0	1.5	40.0	4.0	M 2.5		R102103
5.3	1.5	40.0	4.0			R102104
5.8	1.5	45.0	5.0			R102105
6.0	1.5	45.0	5.0	M 3		R102106
6.3	1.5	45.0	5.0		M 3	R102107
7.0	1.8	50.0	6.0	M 3.5		R102108
7.3	1.8	50.0	6.0			R102109
8.0	2.0	50.0	6.0	M 4		R102110
8.3	2.0	50.0	6.0		M 4	R102111
9.4	2.2	50.0	6.0			R102112
10.0	2.5	50.0	6.0	M 5		R102113
10.4	2.5	50.0	6.0		M 5	R102114
11.5	2.8	56.0	8.0	M 6		R102115
12.4	2.8	56.0	8.0		M 6	R102116
13.4	2.9	56.0	8.0			R102117
15.0	3.2	60.0	10.0	M 8		R102118
16.5	3.2	60.0	8.0		M 8	R102119
16.5	3.2	60.0	10.0		M 8	R102119-1
19.0	3.5	63.0	10.0	M 10		R102120
20.5	3.5	63.0	10.0		M 10	R102121
23.0	3.8	67.0	10.0	M 12		R102122
25.0	3.8	67.0	10.0		M 12	R102123
26.0	3.9	71.0	12.0	M 14		R102171
28.0	4.0	71.0	12.0		M 14	R102124
30.0	4.1	71.0	12.0	M 16		R102172
31.0	4.2	71.0	12.0		M 16	R102125
*37.0	4.8	90.0	12.0			R102173
*40.0	10.0	80.0	15.0			R102174



Countersinker		Total length L mm	Shank Ø d2 mm	Countersinkings as per DIN 74		Part no.
nominal Ø d1mm	d3 mm			AF	BF	
8.3	2	50	6		M4	R102111T
10.4	2.5	50	6		M5	R102114T
12.4	2.8	56	8		M6	R102116T
16.5	3.2	60	8		M8	R102119T
20.5	3.5	63	10		M10	R102121T
25.0	3.8	67	10		M12	R102123T
31.0	4.2	71	12		M16	R102125T



Taper and deburring countersinker set HSS CBN ground

Description	Part no.
6 pcs in mini box 6 taper and deburring Countersinkers DIN 335 Form C90° HSS CBN ground Ø 6.3 - 8.3 - 10.4 - 12.4 - 16.5 - 20.5mm	RA102156



Taper and deburring counter sinker sets DIN 335 type C 90° in steel case

Description	Part no.
Taper and deburring countersinkers DIN 335 type C 90° HSS-TiN Ø 6.3 - 10.4 - 16.5 (shank Ø 10mm) - 20.5 - 25.0mm	R102154T



Slotted taper and deburring countersinkers 90° HSS Co5

Countersinker Angle: 90°
 Shank: cylindrical
 Cutting edges: diagonal slot
 Surface: bright
 Right hand cutting
 Peeling cut. Chip removal through the slot prevents chips from clogging the workpiece. Ideal for burr and chatter free deburring and countersinking. Applicable for steel, cast iron, non-ferrous and light metals. Best results at low cutting speeds.
 Packing unit: in plastic tubes of 1

Countersinker nominal Ø mm	Countersinker range mm	Head Ø d1 mm	Shank Ø d2 mm	Total length L mm	Part no.
1/4	1 - 4	6.35	6.35	45	R102300
2/5	2 - 5	10.00	6.00	45	R102301
5/10	5 - 10	14.00	8.00	48	R102302
10/15	10 - 15	21.00	10.00	65	R102303
15/20	15 - 20	28.00	12.00	85	R102304
20/25	20 - 25	35.00	15.00	102	R102305
25/30	25 - 30	44.00	15.00	115	R102306
30/35	30 - 35	48.00	15.00	127	R102307
35/40	35 - 40	53.00	15.00	136	R102308
40/50	40 - 50	64.00	18.00	166	R102309



R102300



R102300

Flat countersinker sets DIN 373 HSS / HSS-TiN with straight shank and fixed pilot in steel case

Description	Part no.
Flat countersinkers HSS for through holes, fine grade for threads: M3 - M4 - M5 - M6 - M8 - M10	R102450
Flat countersinkers HSS for through holes, medium grade for threads: M3 - M4 - M5 - M6 - M8 - M10	R102451
Flat countersinkers HSS for core holes for threads: M3 - M4 - M5 - M6 - M8 - M10	R102452
Flat countersinkers HSS - TiN for through holes, fine grade for threads: M3 - M4 - M5 - M6 - M8 - M10	R102450T
Flat countersinkers HSS - TiN for through holes, medium grade for threads: M3 - M4 - M5 - M6 - M8 - M10	R102451R
Flat countersinkers HSS - TiN for core holes for threads: M3 - M4 - M5 - M6 - M8 - M10	R102542T



Flat countersinkers DIN 373 HSS with fixed guide fine grade for through hole

Counters. Angle: 180°
 Shank: cylindrical
 Cutting edges: 3
 Surface: bright
 Right hand cutting
 Packing unit: in individual plastic packs

For producing counterinkings for cylinder head screws, thread-cutting screws and thread-furrowing screws. Ideal for burr and chatter free deburring and countersinking. Applicable for steel, cast iron, non-ferrous and light metals. Best results at low cutting speeds.

For thread	CSK Ø d2 mm	Pilot Ø d1 mm	Shank Ø d1 mm	Shank Ø d3 mm	Total length L mm	Part no.
M3	6.00	3.20	5.00	71.00	71.00	R102401
M4	8.00	4.30	5.00	71.00	71.00	R102402
M5	10.00	5.30	8.00	80.00	80.00	R102403
M6	11.00	6.40	8.00	80.00	80.00	R102404
M8	15.00	8.40	12.50	100.00	100.00	R102405
M10	18.00	10.50	12.50	100.00	100.00	R102406
M12	20.00	13.00	12.50	100.00	100.00	R102407

