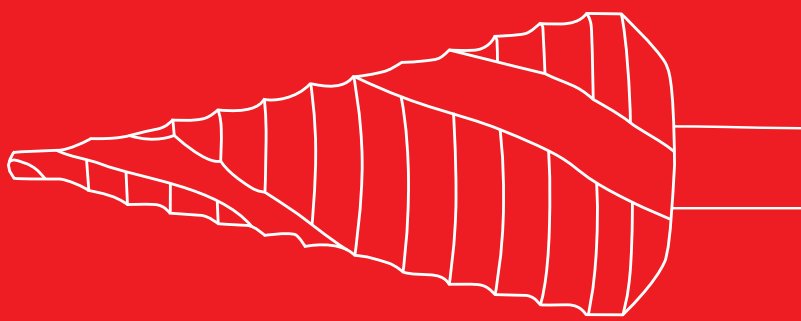
STEP DRILLS

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04



ULTIMATECUT©
Step drill with FLOWSTEP® tip

It lets you drill 6x more.
It lets you drill 75% faster.
It lets you center perfectly.



FLOW STEP TIP

C
≥ Ø 2.0 mm

RUKO FLOWSTEP® tip

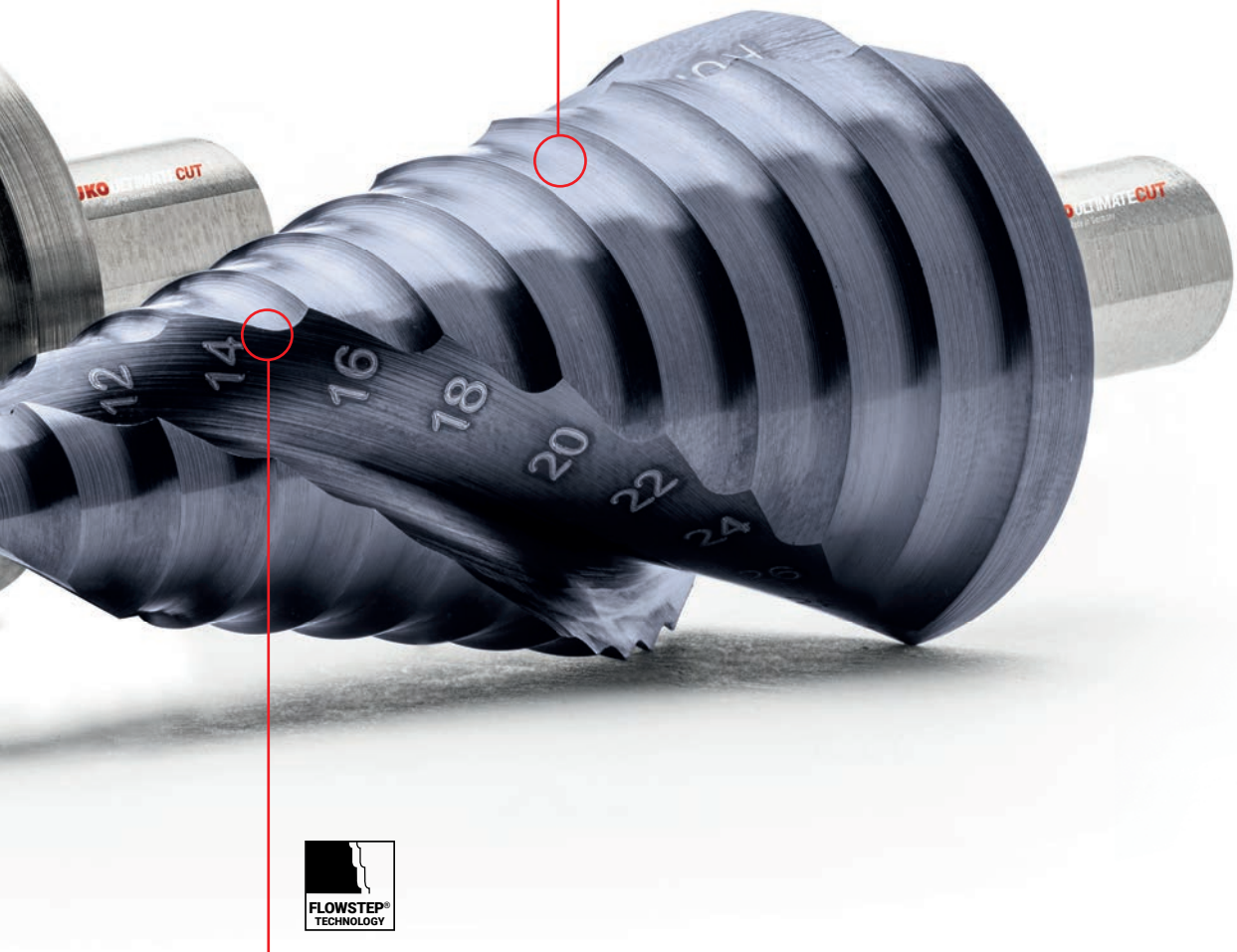
Precise centring = no slipping when drilling.
Time saving due to faster drilling = drill more holes in the same time.
Energy-saving drilling = drill more holes without stopping.

RUna TEC

RUKO RUnaTEC coating

Thanks to RUKO nano Technology (RUnaTEC), very high cutting speeds can be achieved in addition to low cutting speeds, thus significantly accelerating work processes.

Other positive properties are the extremely high wear resistance and the significant reduction in material welding.



FLOWSTEP® TECHNOLOGY

RUKO FLOWSTEP® Technology

Controllable on sensitive materials such as thin-walled sheet metal and acrylic glass. Powerful with tough materials such as stainless steel.

The cutting edge geometry enables a smooth, seamless transition between the different diameters.

Type and applications overview

	Material	Surface	Cutting edges	Material thickness	Point angle	Point cut	Shank	Ø mm	Item no.	Page/s
NEW ULTIMATECUT© 	HSSE Co5	RUna TEC		4 mm				5 – 38	101 6xx EP	80
	HSSE Co5	Blank		4 mm					101 6xx E	
	HSS	RUna TEC		4 mm					101 6xx	81
	HSS	Blank		4 mm					101 6xx P	
ULTIMATECUT© 	HSS	RUna TEC		10 mm				6,0 – 27,0	101 0xx P	94
	HSS	Blank		4 mm	118°	C		4,0 – 40,0	101 xxx	82 – 83
	HSSE Co5	Blank		4 mm	118°	C		4,0 – 32,5	101 xxx E	
	HSS	TiN		4 mm	118°	C		4,0 – 40,0	101 xxx T	
	HSS	TiAlN		4 mm	118°	C		4,0 – 40,0	101 xxx F	
	HSS	TiAlN		3.5 mm	118°	C		6,0 – 18,0	101 068 F-1	83
	HSS	Blank		4 mm	118°	C		4,0 – 12,0	101 xxx H	84
	HSS	TiN		4 mm	118°	C		4,0 – 30,0	101 xxx H	
	HSS	Blank		2 mm	118°	C		4,0 – 30,0	101 06x	84
	HSS	TiN		2 mm	118°	C		4,0 – 30,0	101 06x T	
	HSS	Blank		4 mm	118°	C		3/16 – 1 1/8"	101 70x	85
	HSSE Co5	Blank		4 mm	118°	C		3/16 – 1 1/8"	101 70x E	
	HSS	TiN		4 mm	118°	C		3/16 – 1 1/8"	101 70x T	
	HSS	TiAlN		4 mm	118°	C		3/16 – 1 1/8"	101 70x F	
	HSS	Blank		4 mm	118°			4,0 – 30,0	101 35x	86
	HSS	TiN		4 mm	118°			4,0 – 30,0	101 35x T	

Structural steel < 900 N/mm²	Inox <1100 N/mm²	High strength steel <1300 N/mm²	Brass	Bronze	Cast iron	Aluminium	Plastics
●	●	○	●	○	○	●	●
●	●		●	○	○	●	●
●			●	○	○	●	●
●			●			●	●
●	●		●	●	●	○	○
●			●	●	●	○	○
●	●		●	●	●	○	○
●					●	○	○
●	●		●	●	●	○	○
●	●	○	○	●	●	○	○
●				○	●	○	○
●	○	○	○	○	●	○	○
●				○	●	○	○
●	○	○	○	○	●	○	○
●				●	●	○	○
●	●		●	●	●	○	○
●	○		○		●	○	○
●	●	○	○	●	●	○	○
●	●	○	○	●	●	●	○
●				●	●	○	○

● Main application ○ Other application

Type and applications overview

	Material	Surface	Cutting edges	Material thickness	Point angle	Point cut	Shank	Ø mm	Item no.	Page/s
	HSS	Blank		4 mm	118°	C		5,3 – 32,5	101 09x	87
	HSS	TiN		4 mm	118°	C		5,3 – 32,5	101 09x T	
	HSS	TiAlN		4 mm	118°	C		5,3 – 32,5	101 09x F	
	HSS	Blank		4 mm				12,0 – 40,0	101 36x	87
	HSS	VAP			118°			M3 – M12	102 6xx	88
	HSS	VAP			118°				102 6xx	89

Structural steel < 900 N/mm²	Inox <1100 N/mm²	High strength steel <1300 N/mm²	Brass	Bronze	Cast iron	Aluminium	Plastics
●				●	●	○	○
●	○		○		●	○	○
●	●	○	○	●	●	○	○
●				●	●	○	○
●			●	○	○	●	●
●			●	○	○	●	●

● Main application ○ Other application

ULTIMATECUT step drill HSSE-Co 5, spiral fluted with FLOWSTEP® tip



HSSE Co5 | RUna TEC | INOX | STEEL | Cu Ni Ms Zn | ALU | PVC | BRONZE | CAST IRON

HSSE Co5 | INOX | STEEL | Cu Ni Ms Zn | ALU | PVC | BRONZE | CAST IRON

FLOWSTEP® tip
- Perfect centering, avoiding slipping even on round surfaces such as pipe and tube.
- Easy and smooth drilling process, without jamming in the material.
- Extremely fast and energy-saving drilling.
- Time savings of up to 75%.
- Significantly longer tool life - up to 6x more holes possible.
- Optimal performance in hand-held (cordless) power tool drill machines.

Packaging: plastic tube

Size no.	Ø1 - Ø2 mm	L1 mm	Steps	Ø3 mm	HSSE-Co 5		HSSE-Co 5 RUnaTEC	
0/9	5.0 - 12.0	66.0	8	6.0	101 650-9 E	1	101 650-9 EP	1
1	6.0 - 20.0	70.0	8	8.0	101 651 E	1	101 651 EP	1
2	8.0 - 30.0	95.0	12	10.0	101 652 E	1	101 652 EP	1
3	9.0 - 38.0	100.0	11	10.0	101 653 E	1	101 653 EP	1

Größe Nr.	Drilling range Ø mm
0/9	5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 mm
1	6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 mm
2	8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 | 28.0 | 30.0 mm
3	9.0 | 13.0 | 16.0 | 19.0 | 21.0 | 23.0 | 26.0 | 29.0 | 32.0 | 35.0 | 38.0 mm

		HSSE-Co 5	HSSE-Co 5 RUnaTEC
3 tlg./pcs.	ULTIMATECUT step drill set with FLOWSTEP® tip spiral fluted, sizes 0/9, 1, 2	101 626 ERO	101 626 EPRO

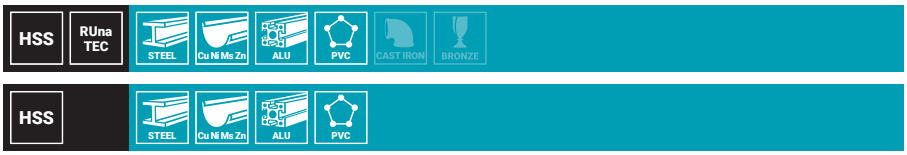


101 626 ERO



101 626 EPRO

ULTIMATECUT step drill HSS, spiral fluted with FLOWSTEP® tip





FLOWSTEP® tip
- Perfect centering, avoiding slipping even on round surfaces such as pipe and tube.
- Easy and smooth drilling process, without jamming in the material.
- Extremely fast and energy-saving drilling.
- Time savings of up to 75%.
- Significantly longer tool life - up to 6x more holes possible.
- Optimal performance in hand-held (cordless) power tool drill machines.

Packaging: plastic tube

Size no.	Ø1 - Ø2 mm	L1 mm	Steps	Ø3 mm	HSS		HSS RUnaTEC	
0/9	5.0 - 12.0	66.0	8	6.0	101 650-9	1	101 650-9 P	1
1	6.0 - 20.0	70.0	8	8.0	101 651	1	101 651 P	1
2	8.0 - 30.0	95.0	12	10.0	101 652	1	101 652 P	1
3	9.0 - 38.0	1.30	38.0	16.0	101 653	1	101 653 P	1

Größe Nr.	Drilling range Ø mm
0/9	5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 mm
1	6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 mm
2	8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 | 28.0 | 30.0 mm
3	9.0 | 13.0 | 16.0 | 19.0 | 21.0 | 23.0 | 26.0 | 29.0 | 32.0 | 35.0 | 38.0 mm

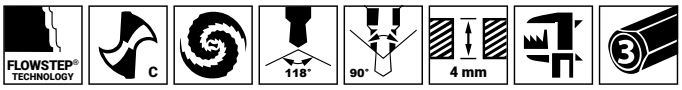
		HSS	HSS RUnaTEC
3 tlg./pcs.	ULTIMATECUT step drill set HSS with FLOWSTEP® tip spiral fluted, sizes 0/9, 1, 2	101 626 RO	101 626 PRO



101 626 RO

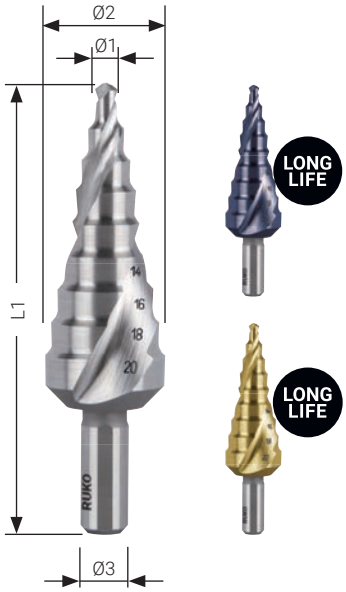
101 626 PRO

Main application Other application



Step drill HSS and HSSE-Co 5, spiral fluted





The step drill with specially developed FLOWSTEP® technology enables seamless transitions between the different diameters. Each individual step has a specially developed undercut that guides the step drill seamlessly and in a controlled manner to the next step after drilling through each step. This enables a noticeably smoother and quieter drilling process. The deep-ground and spiral-shaped flute offers absolutely smooth running and high cutting performance.

In particular, non-breaking chips are removed cleanly as with a twist drill.
This minimises the formation of built-up edges and cold welding on the cutting edges.
The cone facilitates retraction when drilling through sheet metal.

Packaging: plastic tube

Size no.	Ø1 - Ø2 mm	L1 mm	Steps	Ø3 mm	HSSE-Co 5	HSS TiAlN	HSS TiN	HSS	
0/5	4.0 - 12.0	65.0	5	6.0	–	101 050-5 F	101 050-5 T	101 050-5	1
0/9	4.0 - 12.0	65.0	9	6.0	101 050-9 E	101 050-9 F	101 050-9 T	101 050-9	1
1	4.0 - 20.0	75.0	9	8.0	101 051 E	101 051 F	101 051 T	101 051	1
2	4.0 - 30.0	100.0	14	10.0	101 052 E	101 052 F	101 052 T	101 052	1
3	6.0 - 38.0	100.0	12	10.0	–	101 053 F	101 053 T	101 053	1
4	6.0 - 26.75	75.0	8	10.0	–	101 055 F	101 055 T	101 055	1
5	4.0 - 39.0	107.0	13	10.0	101 056 E	101 056 F	101 056 T	101 056	1
6	6.0 - 32.0	75.0	8	10.0	–	101 057 F	101 057 T	101 057	1
7	5.0 - 28.0	69.0	7	10.0	–	101 058 F	101 058 T	101 058	1
8	6.0 - 30.5	80.0	9	10.0	–	101 098 F	101 098 T	101 098	1
9	6.0 - 37.0	100.0	12	10.0	101 060 E	101 060 F	101 060 T	101 060	1
12	6.0 - 32.0	76.0	9	10.0	–	101 096 F	101 096 T	101 096	1
13	6.0 - 40.0	105.0	16	13.0	–	101 097 F*	101 097 T*	101 097*	1
18	6.5 - 32.5	91.0	12	10.0	101 534 E	–	–	–	1

* straight flute

Size no.	Drilling range Ø mm
0/5	4.0 | 6.0 | 8.0 | 10.0 | 12.0 mm
0/9	4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 mm
1	4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 mm
2	4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 | 28.0 | 30.0 mm
3	6.0 | 9.0 | 13.0 | 16.0 | 19.0 | 21.0 | 23.0 | 26.0 | 29.0 | 32.0 | 35.0 | 38.0 mm
4	6.0 | 9.0 | 11.4 (PG7) | 14.0 (PG9) | 17.25 (PG11) | 19.0 (PG13.5) | 21.25 (PG16) | 26.75 mm (PG21)
5	4.0 | 6.0 | 9.0 | 12.0 | 15.0 | 18.0 | 21.0 | 24.0 | 27.0 | 30.0 | 33.0 | 36.0 | 39.0 mm
6	6.0 | 9.0 | 11.2 (R1/8) | 14.5 (R1/4) | 18.2 (R3/8) | 22.3 (R1/2) | 27.9 (R3/4) | 32.0 mm
7	5.0 | 8.8 (G1/8) | 11.8 (G1/4) | 15.3 (G3/8) | 19.0 (G1/2) | 24.5 (G3/4) | 28.0 mm
8	6.0 | 9.0 | 12.5 (PG7) | 15.2 (PG9) | 18.6 (PG11) | 20.4 (PG13.5) | 22.5 (PG16) | 28.3 (PG21) | 30.5 mm
9	6.0 | 9.0 | 12.5 (PG7) | 15.2 (PG9) | 18.6 (PG11) | 20.4 (PG13.5) | 22.5 (PG16) | 26.0 | 28.3 (PG21) | 30.5 | 34.0 | 37.0 mm (PG29)
12	6.0 | 9.0 | 12.0 | 16.0 | 20.0 | 22.5 | 25.0 | 28.5 | 32.0 mm
13	6.0 | 11.0 | 17.0 | 23.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 mm
18	6.5 | 8.5 | 10.5 | 12.7 | 15.2 (PG9) | 16.2 / 18.6 (PG11) | 20.4 (PG13.5) | 22.5 (PG16) | 25.5 | 28.3 (PG21) | 32.5 mm

		HSS	HSSE-Co 5	HSS TiN	HSS TiAlN
3 tlg./pcs.	Step drill set spiral fluted, sizes 0/9, 1, 2	101 026 RO	101 026 ERO	101 026 TRO	101 026 FRO



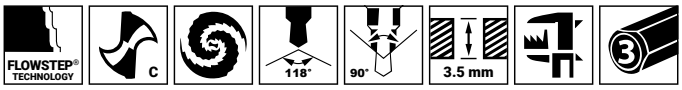
101 026 RO



101 026 TRO



101 026 FRO



Crash barrier step drill HSS TiAlN, spiral fluted



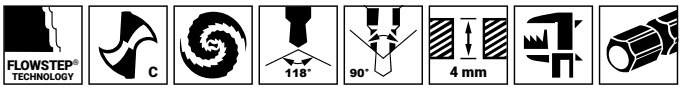
Specially designed for drilling crash barriers.
For use on material strengths of up to 3,5 mm.
Cooling recommended but not required (increased service life)

Packaging: plastic tube

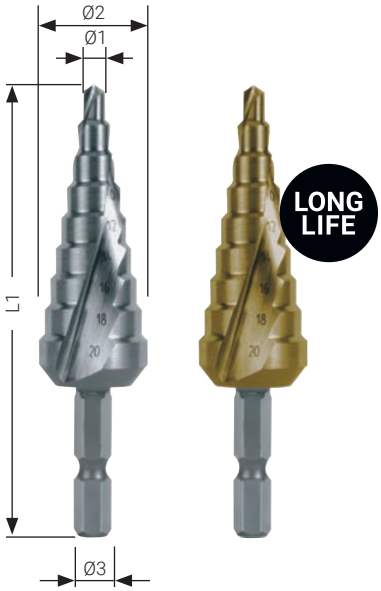


Ø1 - Ø2 mm		L1 mm	Steps	Ø3 mm	HSS TiAlN	
6.0 - 18.0	6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 mm	68,0	7	10,0	101 068 F-1	1

Step drill bit HSS, spiral fluted





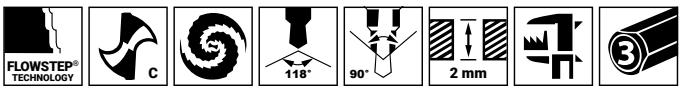


The CBN ground and spiral flutes guarantee quiet running and high cutting performance. Especially the chip flow is optimized, so even long, non-breaking chips will be removed easily. The optimized chip flow protects the cutting edges and reduces built-up edges and cold weld marks. The chamfer on the base of the cone makes withdrawal of the tool from the material simple when through hole drilling.

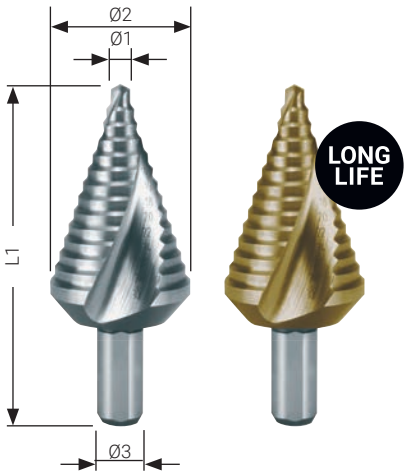
Packaging: plastic tube

Size no.	Ø1 - Ø2 mm	L1 mm	Steps	Ø3 mm	Ø3 inch	HSS TiN	HSS	
0/9	4.0 - 12.0	72.0	9	6.35 x 27.0	1/4"	101 050-9 TH	101 050-9 H	1
1	4.0 - 20.0	81.0	9	6.35 x 27.0	1/4"	101 051 TH	101 051 H	1
2	4.0 - 30.0	105.0	14	6.35 x 27.0	1/4"	101 052 TH	101 052 H	1

Step drill HSS, spiral fluted – *short*



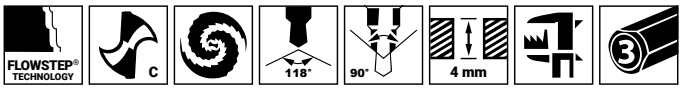




Packaging: plastic tube

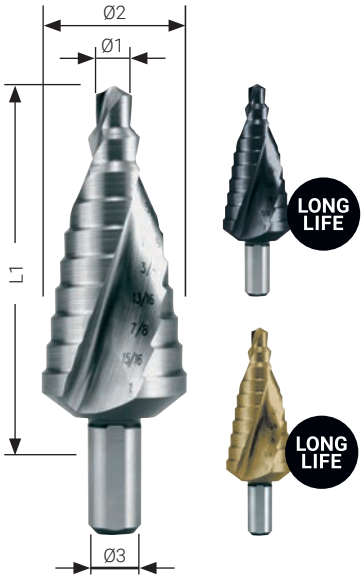
Size no.	Ø1 - Ø2 mm	L1 mm	Steps	Ø3 mm	HSS TiN	HSS	
0/9k	4.0 - 12.0	48.0	9	6.0	101 061 T	101 061	1
1k	4.0 - 20.0	58.0	9	8.0	101 062 T	101 062	1
2k	4.0 - 30.0	72.0	14	10.0	101 063 T	101 063	1

Size no.	Drilling range Ø mm
0/9	4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 mm
1	4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 mm
2	4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 | 28.0 | 30.0 mm



Step drill HSS and HSSE-Co 5, spiral fluted – *inch dimensions*





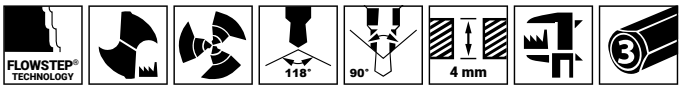
The deep-ground and spiral flute offers absolutely smooth running and high cutting performance. In particular, non-breaking chips are removed cleanly as with a twist drill. This minimises the formation of built-up edges and cold welding on the cutting edges. The cone facilitates retraction when drilling through sheet metal.

Inch Size

Packaging: plastic tube

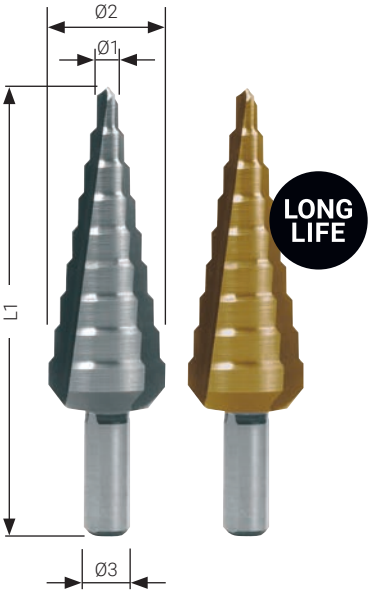
Size no.	Ø1 - Ø2 inch	L1 inch	Steps	Ø3 inch	HSSE-Co 5	HSS TiAlN	HSS TiN	HSS	
1	3/16" - 1/2"	3 1/8"	6	1/4"	101 701 E	101 701 F	101 701 T	101 701	1
2	1/8" - 1/2"	3 1/8"	13	1/4"	101 702 E	101 702 F	101 702 T	101 702	1
3	1/4" - 3/4"	2 3/4"	9	3/8"	101 703 E	101 703 F	101 703 T	101 703	1
4	3/16" - 7/8"	3 1/4"	12	3/8"	101 704 E	101 704 F	101 704 T	101 704	1
5	5/16" - 1"	3 1/4"	9	3/8"	101 705 E	101 705 F	101 705 T	101 705	1
6	7/8" - 1 3/8"	3 1/4"	5	3/8"	101 706 E	101 706 F	101 706 T	101 706	1
7	3/8" - 1/2"	1 7/8"	2	1/4"	101 707 E	101 707 F	101 707 T	101 707	1
8	7/8"	2 19/32"	1	3/8"	101 708 E	101 708 F	101 708 T	101 708	1
9	7/8" - 1 1/8"	3 7/64"	2	3/8"	101 709 E	101 709 F	101 709 T	101 709	1

Size no.	Drilling range Ø inch
1	3/16" | 1/4" | 5/16" | 3/8" | 7/16" | 1/2"
2	1/8" | 5/32" | 3/16" | 7/32" | 1/4" | 9/32" | 5/16" | 11/32" | 3/8" | 19/32" | 3/16" | 15/32" | 1/2"
3	1/4" | 5/16" | 3/8" | 7/16" | 1/2" | 9/16" | 5/8" | 11/16" | 3/4"
4	3/16" | 1/4" | 5/16" | 3/8" | 7/16" | 1/2" | 9/16" | 5/8" | 11/16" | 3/4" | 13/16" | 7/8"
5	5/16" | 1/2" | 9/16" | 5/8" | 11/16" | 3/4" | 13/16" | 7/8" | 15/16" | 1"
6	7/8" | 1 1/8" | 1 7/32" | 1 1/4" | 1 3/8"
7	3/8" | 1/2"
8	7/8"
9	7/8" | 1 1/8"



Step drill HSS, with 3 cutting edges, straight groove





The deep-ground flutes on step drills with 3 cutting edges ensure absolutely chatter-free work. Due to the lower cutting edge load, a higher feed rate is possible, especially with soft materials such as non-ferrous metals. The cone facilitates retraction when drilling through sheet metal.

Packaging: plastic tube

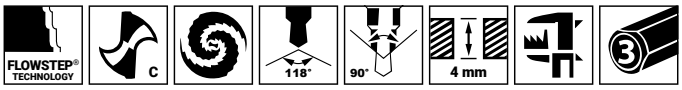
Size no.	Ø1 - Ø2 mm	L1 mm	Steps	Ø3 mm	HSS TiN	HSS	
0/9	4.0 - 12.0	65.0	9	6.0	101 350-9 T	101 350-9	1
1	4.0 - 20.0	75.0	9	8.0	101 351 T	101 351	1
2	4.0 - 30.0	100.0	14	10.0	101 352 T	101 352	1

Size no.	Drilling range Ø mm
0/9	4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 mm
1	4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 mm
2	4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 | 28.0 | 30.0 mm

		HSS TiN	HSS
3 tlg./pcs.	Step drill set with 3 cutting edges, sizes 0/9, 1, 2	101 326 TRO	101 326 RO

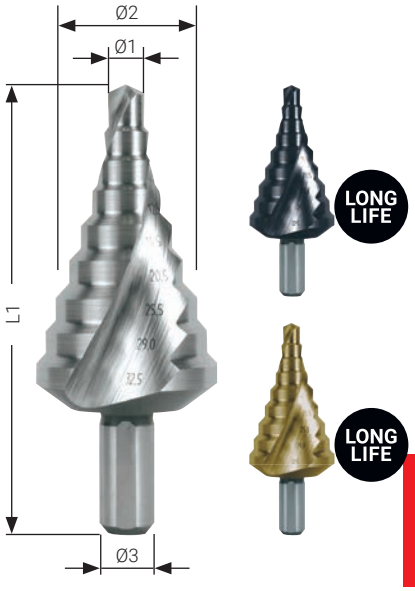


101 326 TRO



Step drill HSS, spiral fluted, for metric cable connections





04

Packaging: plastic tube

Size no.	Measurements	Ø1 - Ø2 mm	L1 mm	Steps	Ø3 mm	HSS TiAlN	HSS TiN	HSS	
14	Core holes	5.3 - 30.5	79.0	9	10.0	101 093 F	101 093 T	101 093	1
15	Through holes	6.5 - 32.5	79.0	9	10.0	101 092 F	101 092 T	101 092	1
16	Core holes	5.3 - 38.5	96.0	11	10.0	101 091 F	101 091 T	101 091	1
17	Through holes	6.5 - 40.5	96.0	11	10.0	101 090 F	101 090 T	101 090	1

14	DIN/EN 60423	5.3 | 7.0 | 9.0 | 10.5 | 14.5 | 18.5 | 23.5 | 27.0 | 30.5
15	DIN/EN 50262	6.5 | 8.5 | 10.5 | 12.5 | 16.5 | 20.5 | 25.5 | 29.0 | 32.5
16	DIN/EN 60423	5.3 | 7.0 | 9.0 | 10.5 | 14.5 | 18.5 | 23.5 | 27.0 | 30.5 | 34.5 | 38.5
17	DIN/EN 50262	6.5 | 8.5 | 10.5 | 12.5 | 16.5 | 20.5 | 25.5 | 29.0 | 32.5 | 36.5 | 40.5



Step drill (reamer) HSS, without tip





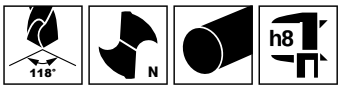
Packaging: plastic tube

Size no.	Ø1 - Ø2 mm	L1 mm	Steps	Ø3 mm	HSS	
20	12.0 - 20.0	66.0	9	8.0	101 361	1
30	20.0 - 30.0	78.0	11	10.0	101 362	1
40	30.0 - 40.0	78.0	11	10.0	101 363	1

Size no.	Drilling range Ø mm
20	12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 18.0 | 19.0 | 20.0 mm
30	20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 | 27.0 | 28.0 | 29.0 | 30.0 mm
40	30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 mm

Main application Other application

Subland drill type N HSS







Enables drilling and sinking combined in one step. Note: adjust the cutting speed according to the big diameter and the feed rate according to the small diameter.

04

Packaging: plastic tube



90° fine grade for through hole

For efficient drilling of through holes and screw head counterborings with 90° angle.

For thread	Ø1 mm	Ø2 / Ø3 mm	L3 mm	L2 mm	L1 mm	HSS	
M 3	3.2	6.0	9.0	57.0	93.0	102 601	1
M 4	4.3	8.0	11.0	75.0	117.0	102 602	1
M 5	5.3	10.0	13.0	87.0	133.0	102 603	1
M 6	6.4	11.5	15.0	94.0	142.0	102 604	1
M 8	8.4	15.0	19.0	114.0	169.0	102 605	1
M 10	10.5	19.0	23.0	135.0	198.0	102 606	1



180° medium grade for through hole

For efficient drilling of through holes and screw head counterborings with 180° angle.

For thread	Ø1 mm	Ø2 / Ø3 mm	L3 mm	L2 mm	L1 mm	HSS	
M 3	3.4	6.0	9.0	57.0	93.0	102 607	1
M 4	4.5	8.0	11.0	75.0	117.0	102 608	1
M 5	5.5	10.0	13.0	87.0	133.0	102 609	1
M 6	6.6	11.0	15.0	94.0	142.0	102 610	1
M 8	9.0	15.0	19.0	114.0	169.0	102 611	1
M 10	11.0	18.0	23.0	130.0	191.0	102 612	1

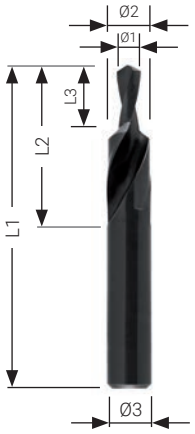


90° for thread core hole

For efficient drilling of tapping holes and countersinkings with 90° angle.

For thread	Ø1 mm	Ø2 / Ø3 mm	L3 mm	L2 mm	L1 mm	HSS	
M 3	2.5	3.4	8.8	39.0	70.0	102 613	1
M 4	3.3	4.5	11.4	47.0	80.0	102 614	1
M 5	4.2	5.5	13.6	57.0	93.0	102 615	1
M 6	5.0	6.6	16.5	63.0	101.0	102 616	1
M 8	6.8	9.0	21.0	81.0	125.0	102 617	1
M 10	8.5	11.0	25.5	94.0	142.0	102 618	1
M 12	10.2	13.5	30.0	108.0	160.0	102 619	1

Short subland drill type N HSS



HSS VAP STEEL Cu Ni Mg Zn ALU PVC CAST IRON BRONZE

Short and torsion stable drill, suitable for the use on CNC or NC machines. The drilling and countersinking is made in one step. Note: adjust the cutting speed according to the big diameter and the feed rate according to the small diameter.

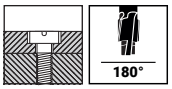
Packaging: plastic tube



90° fine grade for through hole

For efficient drilling of through holes and screw head counterborings with 90° angle.

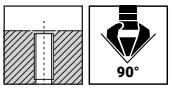
For thread	Ø1 mm	Ø2 / Ø3 mm	L3 mm	L2 mm	L1 mm	HSS	
M 3	3,2	6,0	9,0	28,0	66,0	102 620	1
M 4	4,3	8,0	11,0	37,0	79,0	102 621	1
M 5	5,3	10,0	13,0	43,0	89,0	102 622	1
M 6	6,4	11,5	15,0	47,0	95,0	102 623	1
M 8	8,4	15,0	19,0	56,0	111,0	102 624	1
M 10	10,5	19,0	23,0	64,0	127,0	102 625	1



180° medium grade for through hole

For efficient drilling of through holes and screw head counterborings with 180° angle.

For thread	Ø1 mm	Ø2 / Ø3 mm	L3 mm	L2 mm	L1 mm	HSS	
M 3	3,4	6,0	9,0	28,0	66,0	102 626	1
M 4	4,5	8,0	11,0	37,0	79,0	102 627	1
M 5	5,5	10,0	13,0	43,0	89,0	102 628	1
M 6	6,6	11,0	15,0	47,0	95,0	102 629	1
M 8	9,0	15,0	19,0	56,0	111,0	102 630	1
M 10	11,0	18,0	23,0	62,0	123,0	102 631	1



90° for thread core hole

For efficient drilling of tapping holes and countersinkings with 90° angle.

For thread	Ø1 mm	Ø2 / Ø3 mm	L3 mm	L2 mm	L1 mm	HSS	
M 3	2,5	3,4	8,8	20,0	52,0	102 632	1
M 4	3,3	4,5	11,4	24,0	58,0	102 633	1
M 5	4,2	5,5	13,6	28,0	66,0	102 634	1
M 6	5,0	6,6	16,5	31,0	70,0	102 635	1
M 8	6,8	9,0	21,0	40,0	84,0	102 636	1
M 10	8,5	11,0	25,5	47,0	95,0	102 637	1
M 12	10,2	13,5	30,0	54,0	107,0	102 638	1

Table of cutting speeds for step drills

Material:		High carbon struc. steel up to 700 N/mm²	High carbon struc. steel over 700 N/mm²	Alloyed steel over 1000 N/mm²	Cast iron up to 250 N/mm²	Cast iron over 250 N/mm²	CuZn-alloy brittle	CuZn-alloy tough	Al-alloy up to 11% Si	Thermo-plastics	Duro-plastics
Sheet thickness mm:		up to 4.0	up to 4.0	up to 4.0	up to 4.0	up to 4.0	up to 4.0	up to 4.0	up to 4.0	up to 4.0	up to 4.0
Vc = m/min		30	20	20	15	10	60	35	30	20	15
Cooling lubricant:		Cutting spray	Cutting spray	Cutting spray	Air	Air	Air	Air	Cutting spray	Water	Air
Size	Ø mm	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m
0/5	4.0 - 12.0	800 - 2400	500 - 1600	500 - 1600	400 - 1200	300 - 800	1600 - 4800	900 - 2800	800 - 2400	500 - 1600	400 - 1200
0/9	4.0 - 12.0	800 - 2400	500 - 1600	500 - 1600	400 - 1200	300 - 800	1600 - 4800	900 - 2800	800 - 2400	500 - 1600	400 - 1200
1	4.0 - 20.0	500 - 2400	300 - 1600	300 - 1600	200 - 1200	200 - 800	1000 - 4800	600 - 2800	500 - 2400	300 - 1600	200 - 1200
2	4.0 - 30.0	300 - 2400	200 - 1600	200 - 1600	200 - 1200	100 - 800	600 - 4800	400 - 2800	300 - 2400	200 - 1600	200 - 1200
3	6.0 - 38.0	300 - 1600	200 - 1100	200 - 1100	100 - 800	100 - 500	500 - 3200	300 - 1900	300 - 1600	200 - 1100	100 - 800
4	6.0 - 26.8	400 - 1600	200 - 1100	200 - 1100	200 - 800	100 - 500	700 - 3200	400 - 1900	400 - 1600	200 - 1100	200 - 800
5	4.0 - 32.0	300 - 2400	200 - 1600	200 - 1600	1200 - 100	100 - 800	600 - 4800	300 - 2800	300 - 2400	200 - 1600	100 - 1200
6	6.0 - 32.0	300 - 1600	200 - 1100	200 - 1100	800 - 100	100 - 500	600 - 3200	300 - 1900	300 - 1600	200 - 1100	100 - 800
7	5.0 - 28.0	300 - 1900	200 - 1300	200 - 1300	200 - 1000	100 - 600	700 - 3800	400 - 2200	300 - 1900	200 - 1300	200 - 1000
8	6.0 - 30.5	300 - 1600	200 - 1100	200 - 1100	200 - 800	100 - 500	600 - 3200	400 - 1900	300 - 1600	200 - 1100	200 - 800
9	6.0 - 37.0	300 - 1600	200 - 1100	200 - 1100	100 - 800	100 - 500	500 - 3200	300 - 1900	300 - 1600	200 - 1100	100 - 800
10	4.8 - 10.7	900 - 2000	600 - 1300	600 - 1300	400 - 1000	300 - 700	1800 - 4000	1000 - 2300	900 - 2000	600 - 1300	400 - 1000
11	6.0 - 25.0	400 - 1600	300 - 1100	300 - 1100	200 - 800	100 - 500	800 - 3200	400 - 1900	400 - 1600	300 - 1100	200 - 800
12	6.0 - 32.0	300 - 1600	200 - 1100	200 - 1100	100 - 800	100 - 500	600 - 3200	300 - 1900	300 - 1600	200 - 1100	100 - 800
13	6.0 - 40.0	200 - 1600	200 - 1100	200 - 1100	100 - 800	100 - 500	500 - 3200	300 - 1900	200 - 1600	200 - 1100	100 - 800
14	5.3 - 30.5	300 - 1800	200 - 1200	200 - 1200	200 - 900	100 - 600	600 - 3600	400 - 2100	300 - 1800	200 - 1200	200 - 900
15	6.5 - 32.5	300 - 1500	200 - 1000	200 - 1000	100 - 700	100 - 500	600 - 2900	300 - 700	300 - 1500	200 - 1000	100 - 700
16	5.3 - 38.5	200 - 1800	200 - 1200	200 - 1200	100 - 900	100 - 600	500 - 3600	300 - 2100	200 - 1800	200 - 1200	100 - 900
17	6.5 - 40.5	200 - 1500	200 - 1000	200 - 1000	100 - 700	100 - 500	500 - 2900	300 - 1700	200 - 1500	200 - 1000	100 - 700
18	6.5 - 32.5	300 - 1500	200 - 1000	200 - 1000	100 - 700	100 - 500	600 - 2900	300 - 1700	300 - 1500	200 - 1000	100 - 700
20	12.0 - 20.0	500 - 800	300 - 500	300 - 500	200 - 400	200 - 300	600 - 1600	600 - 900	500 - 800	300 - 500	200 - 400
30	20.0 - 30.0	300 - 500	200 - 300	200 - 300	200 - 200	100 - 200	600 - 1000	400 - 600	300 - 500	200 - 300	200 - 200
40	30.0 - 40.0	200 - 300	200 - 200	200 - 200	100 - 200	100 - 100	500 - 600	300 - 400	200 - 300	200 - 200	100 - 200

Size	Ø inch	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m	n = r.p.m
1	3/16 - 1/2	800 - 2000	500 - 1300	1300 - 500	400 - 1000	300 - 700	1500 - 4000	900 - 2300	800 - 2000	500 - 1300	400 - 1000
2	1/8 - 1/2	800 - 3000	500 - 2000	2000 - 500	400 - 1500	300 - 1000	1500 - 6000	900 - 3500	800 - 3000	500 - 2000	400 - 1500
3	1/4 - 3/4	500 - 1500	300 - 1000	1000 - 300	300 - 800	200 - 500	1000 - 3000	600 - 1800	500 - 1500	300 - 1000	300 - 800
4	3/16 - 7/8	400 - 2000	300 - 1300	1300 - 300	200 - 1000	100 - 700	900 - 4000	500 - 2300	400 - 2000	300 - 1300	200 - 1000
5	5/16 - 1	400 - 1200	300 - 800	800 - 300	200 - 600	100 - 400	800 - 2400	400 - 1400	400 - 1200	300 - 800	200 - 600
6	7/8 - 1 3/8	300 - 400	200 - 300	300 - 200	100 - 200	100 - 100	500 - 900	300 - 500	300 - 400	200 - 300	100 - 200
7	3/8 - 1/2	800 - 1000	500 - 700	700 - 500	400 - 500	300 - 300	1500 - 2000	900 - 1200	800 - 1000	500 - 700	400 - 500
8	7/8	400	300	300	200	100	900	500	400	300	200
9	7/8 - 1 1/8	300 - 400	200 - 300	300 - 200	200 - 200	100 - 100	700 - 900	400 - 500	300 - 400	200 - 300	200 - 200

Table of application for step drills

Size No.	Drilling range Ø mm													
0/5	for metric hole diameters													
	Ø 4.0	Ø 6.0	Ø 8.0	Ø 10.0	Ø 12.0									
0/9	for metric hole diameters													
	Ø 4.0	Ø 5.0	Ø 6.0	Ø 7.0	Ø 8.0	Ø 9.0	Ø 10.0	Ø 11.0	Ø 12.0					
1	for metric hole diameters													
	Ø 4.0	Ø 6.0	Ø 8.0	Ø 10.0	Ø 12.0	Ø 14.0	Ø 16.0	Ø 18.0	Ø 20.0					
2	for metric hole diameters													
	Ø 4.0	Ø 6.0	Ø 8.0	Ø 10.0	Ø 12.0	Ø 14.0	Ø 16.0	Ø 18.0	Ø 20.0	Ø 22.0	Ø 24.0	Ø 26.0	Ø 28.0	Ø 30.0
3	for metric hole diameters													
	Ø 6.0	Ø 9.0	Ø 13.0	Ø 16.0	Ø 19.0	Ø 21.0	Ø 23.0	Ø 26.0	Ø 29.0	Ø 32.0	Ø 35.0	Ø 38.0		
4	for steel conduit threads (core holes)													
	PG 7 / Ø 11.4		PG 9 / Ø 14.0		PG 11 / Ø 17.25		PG 13.5 / Ø 19.0		PG 16 / Ø 21.25		PG 21 / Ø 26.75			
5	for metric hole diameters													
	Ø 4.0	Ø 6.0	Ø 9.0	Ø 12.0	Ø 15.0	Ø 18.0	Ø 21.0	Ø 24.0	Ø 27.0	Ø 30.0	Ø 33.0	Ø 36.0	Ø 39.0	
6	for pipe threads (external Ø. through holes)													
	R 1/8" / Ø 11.2		R 1/4" / 14.5		R 3/8" / Ø 18.2		R 1/2" / Ø 22.3		R 3/4" / Ø 27.9					
7	for pipe threads (core holes)													
	G 1/8" / Ø 8.8		G 1/4" / 11.8		G 3/8" / Ø 15.3		G 1/2" / Ø 19.0		G 3/4" / Ø 24.5					
8	for steel conduit threads (through holes)													
	PG 7 / Ø 12.5		PG 9 / Ø 15.2		PG 11 / Ø 18.6		PG 13.5 / Ø 20.4		PG 16 / Ø 22.5		PG 21 / Ø 28.3			
9	for steel conduit threads (through holes)													
	PG 7 / Ø 12.5		PG 9 / Ø 15.2		PG 11 / Ø 18.6		PG 13.5 / Ø 20.4		PG 16 / Ø 22.5		PG 21 / Ø 28.3		PG 29 / Ø 37.0	
10	for blind rivets M3 - M4 - M5 - M6 - M8													
	Ø 4.8	Ø 6.4	Ø 7.2	Ø 9.6	Ø 10.65									
11	for metric hole diameters with high steps													
	Ø 6.0	Ø 9.0	Ø 12.0	Ø 16.0	Ø 20.0	Ø 22.5	Ø 25.0							
12	for metric hole diameters with high steps													
	Ø 6.0	Ø 9.0	Ø 12.0	Ø 16.0	Ø 20.0	Ø 22.5	Ø 25.0	Ø 28.5	Ø 32.0					
13	for metric hole diameters and large diameters													
	Ø 6.0 Ø 39.0	Ø 11.0 Ø 40.0	Ø 17.0	Ø 23.0	Ø 29.0	Ø 30.0	Ø 31.0	Ø 32.0	Ø 33.0	Ø 34.0	Ø 35.0	Ø 36.0	Ø 37.0	Ø 38.0
14	for metric cable connections. core holes after DIN/EN 60423													
	M 6 Ø 5.3	M 8 Ø 7.0	M 10 Ø 9.0	M 12 Ø 10.5	M 16 Ø 14.5	M 20 Ø 18.5	M 25 Ø 23.5	M 32 Ø 30.5						
15	for metric cable connections. through holes after DIN/EN 50262													
	M 6 Ø 6.5	M 8 Ø 8.5	M 10 Ø 10.5	M 12 Ø 12.5	M 16 Ø 16.5	M 20 Ø 20.5	M 25 Ø 25.5	M 32 Ø 32.5						
16	for metric cable connections. core holes after DIN/EN 60423													
	M 6 Ø 5.3	M 8 Ø 7.0	M 10 Ø 9.0	M 12 Ø 10.5	M 16 Ø 14.5	M 20 Ø 18.5	M 25 Ø 23.5	M 32 Ø 30.5	M 40 Ø 38.5					
17	for metric cable connections. through holes after DIN/EN 50262													
	M 6 Ø 6.5	M 8 Ø 8.5	M 10 Ø 10.5	M 12 Ø 12.5	M 16 Ø 16.5	M 20 Ø 20.5	M 25 Ø 25.5	M 32 Ø 32.5	M 40 Ø 40.5					
18	for metric cable connections / for steel conduit threads. through holes													
	M 6 Ø 6.5	M 8 Ø 8.5	M 10 Ø 10.5	M 12 / PG 7 Ø 12.7	PG 9 Ø 15.7	M 16 Ø 16.2	PG 11 Ø 18.6	M 20 / PG 13.5 Ø 20.4		PG 16 Ø 22.5	M 25 Ø 25.5	PG 21 Ø 28.3	M 32 Ø 32.5	

ULTIMATECUT©
Multidrill with Turbo tip

It is your 5-in-1 tool.
It lets you drill 75% faster.
It gives you ultimate flexibility.



RUKO Turbo tip

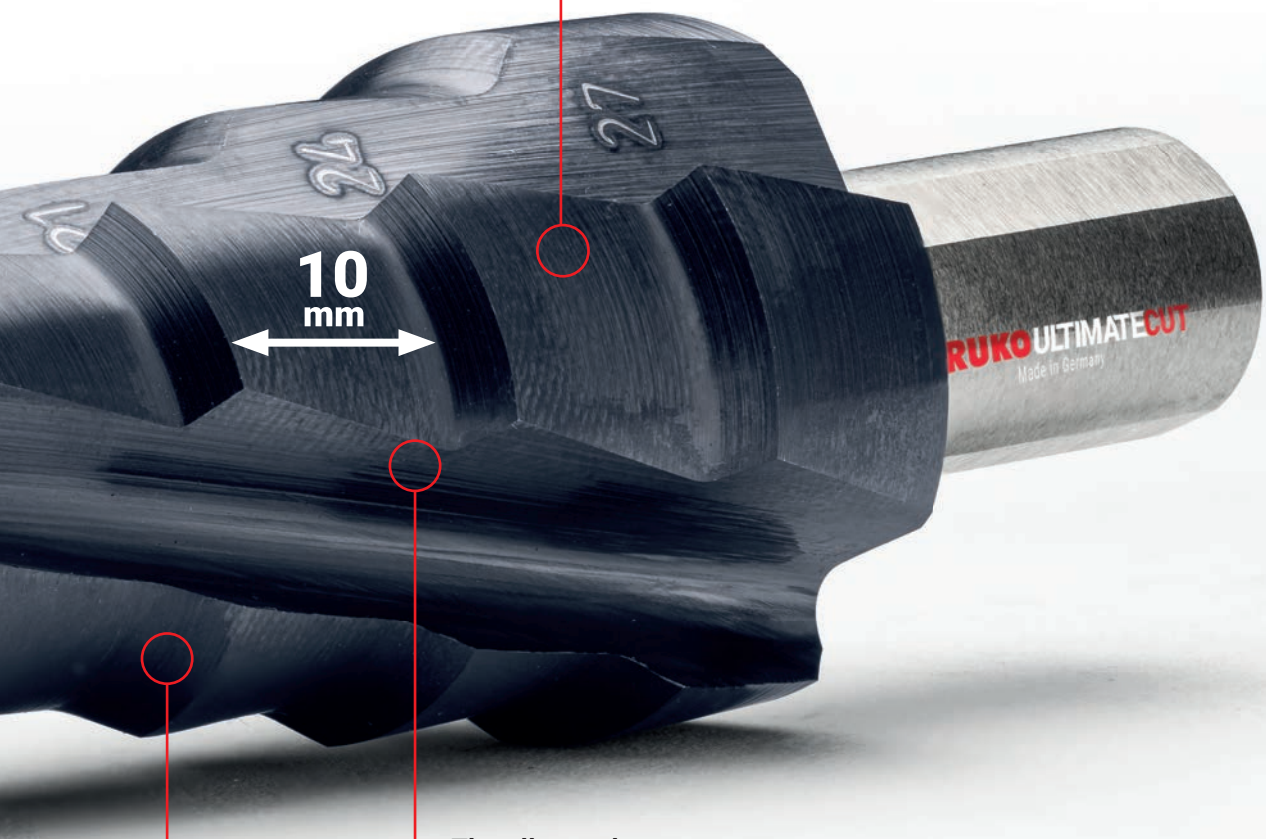
Precise centring = no more centre punching required.
Time saving thanks to faster spot drilling = more holes drilled in the same time.

RUna TEC

RUKO RUnaTEC coating

Thanks to RUKO nano Technology (RUnaTEC), very high cutting speeds can be achieved in addition to low cutting speeds, thus significantly accelerating work processes.

Other positive properties are the extremely high wear resistance and the significant reduction in material welding.



The all-rounder

Where magnetic drills have problems with low adhesive force, the ULTIMATECUT Multidrill offers ultimate flexibility thanks to its use in hand drills.

It can also reach hard-to-access areas such as T-beams.

FLOWSTEP® TECHNOLOGY

RUKO FLOWSTEP® Technology

Controllable on sensitive materials such as thin-walled sheet metal and acrylic glass. Powerful on tough materials such as stainless steel.

The cutting edge geometry enables a smooth, seamless transition between the different diameters.

ULTIMATECUT Multidrill HSS RUnaTEC, spiral fluted with turbo tip



The ULTIMATECUT multidrill revolutionizes the work process and sets new standards in machining time with time savings of up to 75%. The step drill from RUKO achieves this through its revolutionary cutting edge geometry by combining the most diverse applications and tools. This means less tools needed, no tool changes and ultimate flexibility.



Application tip

- Cooling.
- Adjust speed.
- Low speeds for hand drills.
- Follow table of cutting sppeds for ULTIMATECUT step drills.
- Pay attention to total length of drill while drilling.

Packaging: plastic tube

Size no.	Ø1 - Ø2 mm	Drilling range Ø mm	L1 mm	Steps	Ø3 mm	HSS RUnaTEC	
S1	6.0 - 12.0	6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 mm	105,0	7	8,0	101 082 P	1
M2	6.0 - 20.0	6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 mm	120,0	8	10,0	101 083 P	1
L3	6.0 - 27.0	6.0 | 9.0 | 12.0 | 15.0 | 18.0 | 21.0 | 24.0 | 27.0 mm	125,0	8	12,0	101 084 P	1

		HSS RUnaTEC
3 tlg./pcs.	ULTIMATECUT multidrill set, spiral fluted, sizes S1, M2, L3	101 087 PRO



Table of cutting speeds

Material	Application	Working step	Hand drill	Pillar drill manual feed	Pillar drill / CNC machine automatic feed
STEEL, Cu Ni Mn Zn	**Main application**	tapping (drilling through 1st step)	bis 1000 U/min Kühlung empfohlen	up to 1000 rpm cooling recommended	approx. 750 rpm f = 0,1mm/rev cooling necessary
		reaming (from 2nd step)	100-250 U/min Kühlung empfohlen	250- 350 rpm cooling recommended	
INOX	**Other application** (conditionally suitable)	tapping (drilling through 1st step)	bis 600 U/min Kühlung notwendig	up to 600 rpm cooling necessary	approx. 600 rpm f = 0,05mm/rev cooling necessary
		reaming (from 2nd step)	100-200 U/min Kühlung notwendig	200 - 300 rpm cooling necessary	


7
12
15