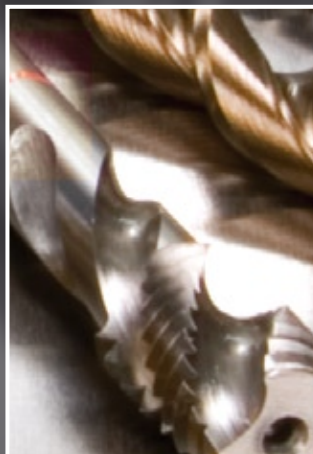
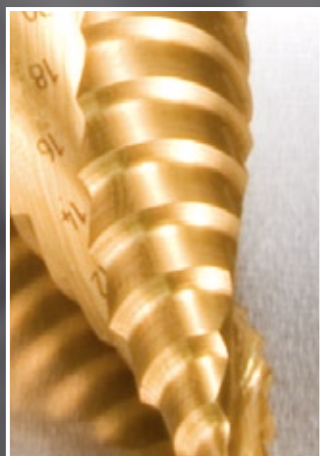
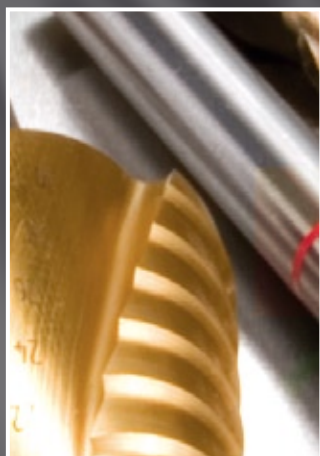




for professionals

PRECISION TOOLS

COMPETENCE IN PRECISION AND QUALITY



» catalog
and price list
2007/2008



« Quality as standard »

« Company history »

Customer satisfaction through a constant high quality. RUKO has lived up to this claim throughout its company history.

RUKO OHG was founded in November 1974 in Böblingen. It was reorganised into RUKO GmbH Precision Tools in July 1980.

At this time it also concentrated its activities on the manufacture of drilling and cutting tools.

Since November 1990 the headquarters of „RUKO“ GmbH have been in Holzgerlingen (near Stuttgart).

The modern building has a useful floor space of around 5,600 m².

Around 1,000 m² of this is office space for the head office, 2,400 m² is production space and 2,200 m² stores.



CERTIFICATE

DIN EN ISO 9001:2000



herewith certifies that the company



business field:
Development, production and distribution
of drilling, countersinking and deburring tools

location:
Robert-Bosch-Straße 7-9 • D-71088 Holzgerlingen

has implemented and effectively applies a quality management system according to the standard (12/2000) mentioned above. The conformity was inspected during the certification audit documented in audit report no. Z-A0205445. This certificate is only valid in connection with the successful performance of the surveillance audits.

Date of the first certification: 29.01.1998
This certificate is valid until: 02.03.2007

Date of the last recertification: 03.03.2004
Certificate registration no.: 30298084/1
duplicate



DEKRA-ITS Certification Services GmbH
Stuttgart, 03.03.2004



Reg.Nr.: TGA-ZM-05-91-00

DEKRA-ITS Certification Services GmbH, Handwerksstraße 15, D-70565 Stuttgart

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Domestic sales
Tel. 0 70 31 / 68 00-28 / 29 / 77 / 78
Fax. 0 70 31 / 68 00-24

Foreign sales
Tel. 0049-70 31 / 68 00-54 / 84 / 85
Fax. 0049-70 31 / 68 00-21

« Plant No. 1 in Holzgerlingen »

« Productivity »

RUKO have some of the most up-to-date machinery with a high production capacity. With the intention of achieving permanent increases in productivity, we are continually investing in the latest manufacturing technology and production plant.

Fully-automatic CNC grinding centres, aided by CBN (cubic crystalline boron nitride) grinding techniques, permit maximum precision and repeatability in tool manufacture.

This means that RUKO GmbH currently has one of the most up-to-date production methods in the world.

« Innovation »

Our development department is constantly working to improve our existing products and develop new tools to meet the demands of the market. From development (CAD) via CNC programming to production simulation, all work sequences are produced via modern networked computer systems.

The focus of RUKO's activities in the near future, through also at the present, is in expanding and improving the entire range of metals.

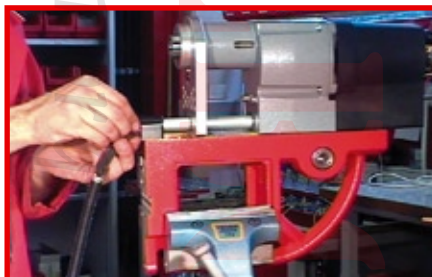
« Quality management »

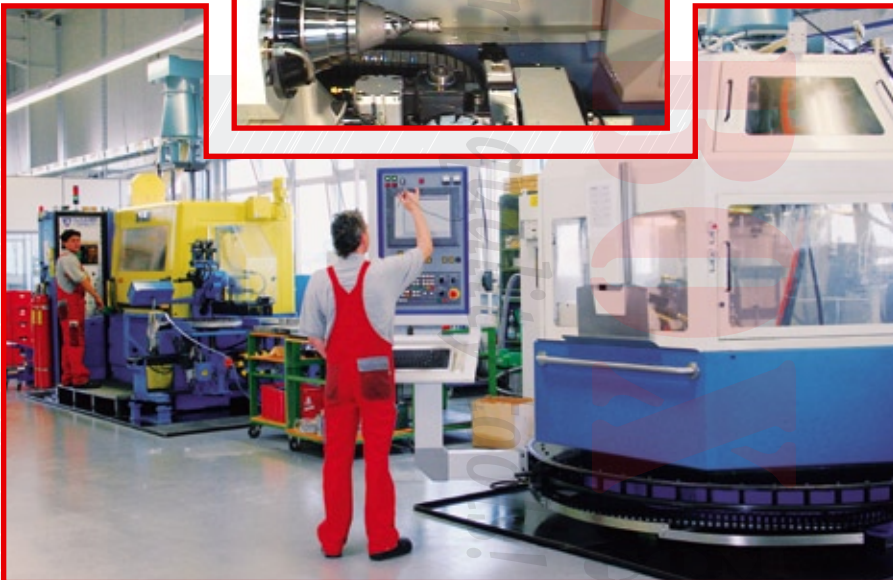
Our up-to-date quality control guarantees a uniform high standard of quality. The individual data obtained from the measurement series made on the tools we test are registered and stored with the help of the latest optical testing equipment.

Materials testing during production is also part of our day-to-day quality assurance. Certification in accordance with DIN EN ISO 9001 confirms the integrated quality philosophy we have been practicing for years.

« Close to our customers »

Our organization is characterized by lean structures. Motivated and qualified staff are supported by modern communications technology and EDP. All sectors of our organization are networking with each other via a Client Server System. The un-hierarchical organizational structure and the competence of our staff guarantee efficient, client-oriented service.





Twist drills	Page 7 - 22	- Pilot pins for annular cutters - cooling bottles	Page 62
- Jobber length parabolic flute, fractional sizes, H.S.S., H.S.S. cobalt (M35), H.S.S.-TiN, H.S.S.-TiAlN	Page 8 - 9	Hole saws	Page 65 - 76
- Jobber length kits, parabolic flute, fractional sizes, H.S.S., H.S.S. cobalt (M35), H.S.S.-TiN, H.S.S.-TiAlN	Page 9	- Tungsten carbide hole saws shallow cut, and pilot drills for tungsten carbide hole saws, shallow cut.....	Page 67
- Jobber length parabolic flute, metric sizes, H.S.S., H.S.S. cobalt (M35), H.S.S.-TiN, H.S.S.-TiAlN	Page 10 - 11	- Kit of TC hole saws in plastic case.....	Page 68
- Jobber length kits parabolic flute, metric sizes, H.S.S., H.S.S. cobalt (M35), H.S.S.-TiN, H.S.S.-TiAlN	Page 12	- Tungsten carbide multigrade hole saws.....	Page 68
- Jobber length ground, fractional sizes, with split point H.S.S., H.S.S. cobalt (M35), H.S.S.-TiN	Page 13 - 14	- Arbor holders for tungsten carbide multigrade hole saws	Page 69
- Jobber length kits, fractional sizes with split point H.S.S., H.S.S. cobalt (M35), H.S.S.-TiN	Page 13	- Pilot drills and Adapter for tungsten carbide multigrade hole saws	Page 70
- Jobber length ground, metric sizes H.S.S., H.S.S. cobalt (M35), H.S.S.-TiN	Page 15 - 17	- Bi-metal hole saws HSS with varied toothing HSS Co 8 with fine toothing.....	Page 72
- Jobber length kits, metric sizes, H.S.S., H.S.S. cobalt (M35), H.S.S.-TiN	Page 17	- Arbor holders and accessories for bi-metal hole saws HSS and HSS Co 8	Page 73
		- Kits of bi-metal hole saws HSS / HSS Co 8 in plastic cases	Page 74
Step drills	Page 21 - 26	Program of saws	Page 77 - 98
- Step drills H.S.S., H.S.S.-TiN inch sizes, spiral fluted with split point.....	Page 23	- Hacksaw blades and hacksaw frame	Page 79
- Step drill kits H.S.S., H.S.S.-TiN inch sizes in steel case.....	Page 23	- T shank style jig-saw blades	Page 82 - 87
- Step drills H.S.S., H.S.S.-TiN metric sizes, spiral fluted with split point	Page 24	- Reciprocating blades.....	Page 89 - 96
- Step drill kits H.S.S., H.S.S.-TiN metric sizes in steel case.....	Page 25	Deburring program	Page 99 - 106
- Step drills H.S.S., H.S.S.-TiN for metric cable connections.....	Page 25	- Unigrat system, Unigrat kits	Page 101 - 103
		- Edge trimmers	Page 103
		- Rapid deburrer, Unigrat action edge trimmer "Profi", Quickgrat action "Rapid", Tube deburrer	Page 104
		- Sheet-metal deburrer and Groove deburrer	Page 105
Precision countersinks	Page 27 - 30	Displays	Page 107 - 114
- Precision countersinks type C 82° H.S.S., fractional sizes	Page 29	- Step drills H.S.S.	Page 108
- Precision countersink kit type C 82° H.S.S., in steel case.....	Page 29	- Annular cutters H.S.S. cutting depth 1"	Page 109
- Precision countersinks type C 90° H.S.S., metric sizes.....	Page 29	- Annular cutters H.S.S. cutting depth 2"	Page 110
- Zero flute countersinks 82° H.S.S.	Page 30	- Hole saws H.S.S. bi-metal.....	Page 111 - 112
- Zero flute countersink kit 82° H.S.S. in steel case	Page 30	- Jig saw blades.....	Page 113
- Milling drills H.S.S., H.S.S.-TiN	Page 30	- Reciprocating blades.....	Page 114
Thread cutting tools	Page 31 - 38		
- Hand taps UNC DIN 352 H.S.S.	Page 32		
- Round dies UNC DIN EN 22568 H.S.S.	Page 32		
- Hand taps UNF DIN 2181 H.S.S.	Page 33		
- Round dies UNF DIN EN 22568 H.S.S.	Page 33		
- Single cut taps NPT H.S.S.	Page 34		
- Tap wrench with ratchet.....	Page 34		
- Adjustable tap wrenches	Page 34		
- Ball tap wrenches.....	Page 35		
- Die stocks.....	Page 35		
- Machine taps UNC DIN 371 H.S.S. Co 5	Page 36		
- Machine taps UNC DIN 376 H.S.S. Co 5	Page 36		
- Machine taps UNF DIN 371 H.S.S. Co 5	Page 37		
- Machine taps UNF DIN 374 H.S.S. Co 5	Page 37		
Magnetic drill presses	Page 39 - 64		
- Magnetic drill presses RS5e - RS 40e	Page 40 - 51		
- Solid drills H.S.S., H.S.S.-TiAlN	Page 55		
- Step annular cutters H.S.S., kit step annular cutters in plastic case.....	Page 55		
- Annular cutters H.S.S., H.S.S.-TiAlN cutting depth 1"	Page 56		
- Annular cutters H.S.S., H.S.S.-TiAlN cutting depth 2"	Page 57		
- Annular cutters H.S.S. cutting depth 3"	Page 58		
- Annular cutters H.S.S. metric sizes.....	Page 59		
- EasyLock quick-in arbors, arbor holders.....	Page 60 - 61		

RUKO

COMPETENCE IN
PRECISION
AND QUALITY

TWIST DRILLS



Jobber length parabolic flute ground, with split point in fractional sizes

Multirange drill especially suitable for drilling deep holes.
Covers types N, H and W for a wide range of applications.

Point cut: helical point
from Ø 1/8 inch with split point DIN 1412 C
Point angle: 130°
Helix angle: 40°
Ø tolerance: h8
Right-hand cutting

Packing unit: in plastic box



H.S.S ground	H.S.S Cobalt ground	H.S.S-TiN ground	H.S.S-TiAlN ground
Surface: bright	Surface: golden brown	Surface: TiN coating	Surface: TiAlN coating
Multirange drill consisting of heavy-duty high speed steel with reinforced drill core and parabolic flute to give improved chip removal. Ideal for drilling medium and long chipping materials. Suitable for drilling depths < 3 x diameter.	Like HSS-G plus cobalt alloyed. The cobalt content ensures increased heat resistance.	Like HSS-G plus titanium nitride coating. The TiN wear-resistant coating increases the surface hardness to approx. 2,300 HV and the heat resistance to 600 °C.	Like HSS-G plus titanium aluminium nitride coating. The TiAlN wear-resistant coating increases the surface hardness to approx. 3,000 HV and the heat resistance to 900 °C.
Application areas: for steel, alloyed and unalloyed cast iron (up to a strength of 900 N/mm²), grey, malleable, ductile and die-cast iron, sintered iron, nickel silver, graphite, short chipping aluminium alloys, brass and bronze.	Application areas: for unalloyed and alloyed steel (up to a strength of 1200 N/mm²), steel resistant to rust and acid, cast iron, aluminium, aluminium alloys, copper, brass and bronze.	Application areas: for unalloyed and alloyed steel (up to a strength of 1200 N/mm²), high chrome alloyed steel such as stainless and acidresistant steel, steel resistant to rust and acid, titanium, titanium alloys, cast iron, aluminium, aluminium alloys, copper, brass and bronze.	Application areas: for unalloyed and alloyed steel (up to a strength of 1200 N/mm²), high chrome alloyed steel such as stainless and acidresistant steel, steel resistant to rust and acid, titanium, titanium alloys, cast iron, aluminium, aluminium alloys, copper, brass and bronze.

Jobber length parabolic flute ground, with split point

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground, H.S.S-TiAlN ground

Ø inch	Ø mm	Overall length inch	Flute length inch	Part no. H.S.S.	Cont. pcs.	Price each \$	Part no. H.S.S Co.	Cont. pcs.	Price each \$	Part no. H.S.S-TiN	Cont. pcs.	Price each \$	Part no. H.S.S-TiAlN	Cont. pcs.	Price each \$
1/16	1,59	1 7/8	7/8	258 801	10	1.47	229 801	10	1.62	258 801 T	10	1.99	258 801 F	10	2.04
5/64	1,98	2	1	258 802	10	1.47	229 802	10	1.62	258 802 T	10	1.99	258 802 F	10	2.04
3/32	2,38	2 1/4	1 1/4	258 803	10	1.54	229 803	10	1.62	258 803 T	10	1.99	258 803 F	10	2.04
7/64	2,78	2 5/8	1 1/2	258 804	10	1.71	229 804	10	1.77	258 804 T	10	2.17	258 804 F	10	2.22
1/8	3,18	2 3/4	1 5/8	258 805	10	1.77	229 805	10	1.85	258 805 T	10	2.27	258 805 F	10	2.33
9/64	3,57	2 7/8	1 3/4	258 806	10	1.99	229 806	10	2.10	258 806 T	10	2.57	258 806 F	10	2.63
5/32	3,97	3 1/8	2	258 807	10	1.99	229 807	10	2.23	258 807 T	10	2.74	258 807 F	10	2.81
11/64	4,37	3 1/4	2 1/8	258 808	10	2.06	229 808	10	2.54	258 808 T	10	3.10	258 808 F	10	3.18
3/16	4,76	3 1/2	2 5/16	258 809	10	2.22	229 809	10	2.54	258 809 T	10	3.10	258 809 F	10	3.18
13/64	5,16	3 5/8	2 7/16	258 810	10	2.43	229 810	10	2.96	258 810 T	10	3.63	258 810 F	10	3.73
7/32	5,56	3 3/4	2 1/2	258 811	10	2.74	229 811	10	3.14	258 811 T	10	3.86	258 811 F	10	3.96
15/64	5,95	3 7/8	2 5/8	258 812	10	2.98	229 812	10	3.54	258 812 T	10	4.24	258 812 F	10	4.34
1/4	6,35	4	2 3/4	258 813	10	3.18	229 813	10	3.64	258 813 T	10	4.36	258 813 F	10	4.47
17/64	6,75	4 1/8	2 7/8	258 814	10	3.74	229 814	10	4.14	258 814 T	10	4.97	258 814 F	10	5.10
9/32	7,14	4 1/4	2 15/16	258 815	10	3.98	229 815	10	5.27	258 815 T	10	6.12	258 815 F	10	6.27
19/64	7,54	4 3/8	3 1/16	258 816	10	4.42	229 816	10	5.27	258 816 T	10	6.12	258 816 F	10	6.27
5/16	7,94	4 1/2	3 3/16	258 817	10	4.83	229 817	10	5.94	258 817 T	10	6.88	258 817 F	10	7.06
21/64	8,33	4 5/8	3 5/16	258 818	10	5.39	229 818	10	7.28	258 818 T	10	8.30	258 818 F	10	8.51
11/32	8,73	4 3/4	3 7/16	258 819	10	5.94	229 819	10	7.85	258 819 T	10	8.95	258 819 F	10	9.18
23/64	9,13	4 7/8	3 1/2	258 820	10	6.53	229 820	10	7.85	258 820 T	10	8.95	258 820 F	10	9.18
3/8	9,53	5	3 5/8	258 821	10	6.89	229 821	10	8.27	258 821 T	10	9.43	258 821 F	10	9.67

Jobber length parabolic flute ground, with split point

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground, H.S.S-TiAlN ground

Ø inch	Ø mm	Overall length inch	Flute length inch	Part no. H.S.S	Cont. pcs.	Price each \$	Part no. H.S.S Co.	Cont. pcs.	Price each \$	Part no. H.S.S-TiN	Cont. pcs.	Price each \$	Part no. H.S.S-TiAlN	Cont. pcs.	Price each \$
25/64	9,92	5 1/8	3 3/4	258 822	10	8.11	229 822	10	9.14	258 822 T	10	10.42	258 822 F	10	10.69
13/32	10,32	5 1/4	3 7/8	258 823	10	8.37	229 823	10	9.32	258 823 T	10	10.63	258 823 F	10	10.90
27/64	10,72	5 3/8	3 15/16	258 824	5	8.97	229 824	5	11.51	258 824 T	5	13.13	258 824 F	5	13.46
7/16	11,11	5 1/2	4 1/16	258 825	5	9.91	229 825	5	11.51	258 825 T	5	13.13	258 825 F	5	13.46
29/64	11,51	5 5/8	4 3/16	258 826	5	10.98	229 826	5	13.52	258 826 T	5	15.42	258 826 F	5	15.82
15/32	11,91	5 3/4	4 5/16	258 827	5	11.70	229 827	5	13.90	258 827 T	5	15.90	258 827 F	5	16.31
31/64	12,30	5 7/8	4 3/8	258 828	5	11.98	229 828	5	17.20	258 828 T	5	19.62	258 828 F	5	20.13
1/2	12,70	6	4 1/2	258 829	5	12.60	229 829	5	19.03	258 829 T	5	21.71	258 829 F	5	22.26

Emphasised articles are new additions.

Jobber length kits parabolic flute with split point in fractional sizes

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground and H.S.S-TiAlN ground in steel case



No. 258 850



No. 229 850



No. 258 850 T



No. 258 850 F

Description	Part no. H.S.S	Price / kit \$	Part no. H.S.S Co.	Price / kit \$	Part no. H.S.S-TiN	Price / kit \$	Part no. H.S.S-TiAlN	Price / kit \$
Consisting of 21 jobber length parabolic flute Ø 1/16" up to 3/8" in increments of 1/64"	258 850	83.99	229 850	99.89	258 850 T	112.71	258 850 F	115.22
Consisting of 29 jobber length parabolic flute Ø 1/16" up to 1/2" in increments of 1/64"	258 851	174.68	229 851	209.69	258 851 T	236.67	258 851 F	242.26

Emphasised articles are new additions.

Jobber length parabolic flute ground, with split point in metric sizes

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground, H.S.S-TiAlN ground

Ø mm	Overall length mm	Flute length mm	Part no. H.S.S	Cont. pcs.	Price each \$	Part no. H.S.S Co.	Cont. pcs.	Price each \$	Part no. H.S.S-TiN	Cont. pcs.	Price each \$	Part no. H.S.S-TiAlN	Cont. pcs.	Price each \$
2,00	49	24	258 020	10	0.97	229 020	10	1.73	258 020 T	10	1.89	258 020 F	10	1.89
2,10	49	24	258 021	10	0.97	229 021	10	1.73	258 021 T	10	1.89	258 021 F	10	1.89
2,20	53	27	258 022	10	0.97	229 022	10	1.73	258 022 T	10	1.89	258 022 F	10	1.89
2,30	53	27	258 023	10	0.97	229 023	10	1.73	258 023 T	10	2.19	258 023 F	10	2.19
2,40	57	30	258 024	10	1.13	229 024	10	1.73	258 024 T	10	2.19	258 024 F	10	2.19
2,50	57	30	258 025	10	1.13	229 025	10	1.87	258 025 T	10	2.19	258 025 F	10	2.19
2,60	57	30	258 026	10	1.13	229 026	10	1.87	258 026 T	10	2.19	258 026 F	10	2.19
2,70	61	33	258 027	10	1.13	229 027	10	1.87	258 027 T	10	2.19	258 027 F	10	2.19
2,80	61	33	258 028	10	1.13	229 028	10	1.87	258 028 T	10	2.19	258 028 F	10	2.19
2,90	61	33	258 029	10	1.13	229 029	10	1.97	258 029 T	10	2.30	258 029 F	10	2.30
3,00	61	33	258 030	10	1.18	229 030	10	1.97	258 030 T	10	2.30	258 030 F	10	2.30
3,10	65	36	258 031	10	1.18	229 031	10	1.97	258 031 T	10	2.30	258 031 F	10	2.30
3,20	65	36	258 032	10	1.18	229 032	10	1.97	258 032 T	10	2.61	258 032 F	10	2.61
3,30	65	36	258 033	10	1.34	229 033	10	2.22	258 033 T	10	2.79	258 033 F	10	2.79
3,40	70	39	258 034	10	1.43	229 034	10	2.22	258 034 T	10	2.79	258 034 F	10	2.79
3,50	70	39	258 035	10	1.43	229 035	10	2.22	258 035 T	10	2.90	258 035 F	10	2.90
3,60	70	39	258 036	10	1.49	229 036	10	2.22	258 036 T	10	2.90	258 036 F	10	2.90
3,70	70	39	258 037	10	1.49	229 037	10	2.38	258 037 T	10	2.90	258 037 F	10	2.90
3,80	75	43	258 038	10	1.69	229 038	10	2.38	258 038 T	10	2.90	258 038 F	10	2.90
3,90	75	43	258 039	10	1.69	229 039	10	2.38	258 039 T	10	2.90	258 039 F	10	2.90
4,00	75	43	258 040	10	1.69	229 040	10	2.38	258 040 T	10	3.40	258 040 F	10	3.40
4,10	75	43	258 041	10	1.74	229 041	10	2.70	258 041 T	10	3.40	258 041 F	10	3.40
4,20	75	43	258 042	10	1.74	229 042	10	2.70	258 042 T	10	3.49	258 042 F	10	3.49
4,30	80	47	258 043	10	1.79	229 043	10	2.70	258 043 T	10	3.49	258 043 F	10	3.49
4,40	80	47	258 044	10	1.79	229 044	10	2.70	258 044 T	10	3.49	258 044 F	10	3.49
4,50	80	47	258 045	10	1.79	229 045	10	2.70	258 045 T	10	3.49	258 045 F	10	3.49
4,60	80	47	258 046	10	1.79	229 046	10	2.70	258 046 T	10	3.49	258 046 F	10	3.49
4,70	80	47	258 047	10	1.79	229 047	10	2.70	258 047 T	10	3.70	258 047 F	10	3.70
4,80	86	52	258 048	10	1.90	229 048	10	2.70	258 048 T	10	3.70	258 048 F	10	3.70
4,90	86	52	258 049	10	1.90	229 049	10	3.15	258 049 T	10	3.70	258 049 F	10	3.70
5,00	86	52	258 050	10	1.90	229 050	10	3.15	258 050 T	10	3.98	258 050 F	10	3.98
5,10	86	52	258 051	10	2.15	229 051	10	3.15	258 051 T	10	3.98	258 051 F	10	3.98
5,20	86	52	258 052	10	2.15	229 052	10	3.15	258 052 T	10	3.98	258 052 F	10	3.98
5,30	86	52	258 053	10	2.14	229 053	10	3.34	258 053 T	10	4.55	258 053 F	10	4.55
5,40	93	57	258 054	10	2.61	229 054	10	3.34	258 054 T	10	4.55	258 054 F	10	4.55
5,50	93	57	258 055	10	2.61	229 055	10	3.34	258 055 T	10	4.55	258 055 F	10	4.55
5,60	93	57	258 056	10	2.61	229 056	10	3.34	258 056 T	10	4.55	258 056 F	10	4.55
5,70	93	57	258 057	10	2.61	229 057	10	3.76	258 057 T	10	4.55	258 057 F	10	4.55
5,80	93	57	258 058	10	2.61	229 058	10	3.76	258 058 T	10	4.55	258 058 F	10	4.55
5,90	93	57	258 059	10	2.61	229 059	10	3.76	258 059 T	10	4.55	258 059 F	10	4.55
6,00	93	57	258 060	10	2.61	229 060	10	3.76	258 060 T	10	5.16	258 060 F	10	5.16
6,10	101	63	258 061	10	3.13	229 061	10	3.87	258 061 T	10	5.16	258 061 F	10	5.16
6,20	101	63	258 062	10	3.13	229 062	10	3.87	258 062 T	10	5.16	258 062 F	10	5.16
6,30	101	63	258 063	10	3.13	229 063	10	3.87	258 063 T	10	5.49	258 063 F	10	5.49
6,40	101	63	258 064	10	3.43	229 064	10	3.87	258 064 T	10	5.49	258 064 F	10	5.49
6,50	101	63	258 065	10	3.43	229 065	10	4.41	258 065 T	10	5.49	258 065 F	10	5.49
6,60	101	63	258 066	10	3.43	229 066	10	4.41	258 066 T	10	5.49	258 066 F	10	5.49
6,70	101	63	258 067	10	3.43	229 067	10	4.41	258 067 T	10	6.74	258 067 F	10	6.74
6,80	109	69	258 068	10	4.35	229 068	10	4.41	258 068 T	10	6.74	258 068 F	10	6.74
6,90	109	69	258 069	10	4.35	229 069	10	5.58	258 069 T	10	6.74	258 069 F	10	6.74
7,00	109	69	258 070	10	4.35	229 070	10	5.58	258 070 T	10	6.83	258 070 F	10	6.83
7,00	109	69	258 070	10	4.35	229 070	10	5.58	258 070 T	10	6.99	258 070 F	10	6.99
7,10	109	69	258 071	10	4.41	229 071	10	5.58	258 071 T	10	6.99	258 071 F	10	6.99
7,20	109	69	258 072	10	4.51	229 072	10	5.58	258 072 T	10	6.99	258 072 F	10	6.99
7,30	109	69	258 073	10	4.51	229 073	10	5.58	258 073 T	10	6.99	258 073 F	10	6.99
7,40	109	69	258 074	10	4.51	229 074	10	5.58	258 074 T	10	6.99	258 074 F	10	6.99
7,50	109	69	258 075	10	4.51	229 075	10	6.31	258 075 T	10	6.99	258 075 F	10	6.99
7,60	117	75	258 076	10	4.87	229 076	10	6.31	258 076 T	10	7.90	258 076 F	10	7.90
7,70	117	75	258 077	10	4.87	229 077	10	6.31	258 077 T	10	7.90	258 077 F	10	7.90
7,80	117	75	258 078	10	4.87	229 078	10	6.31	258 078 T	10	7.90	258 078 F	10	7.90

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground, H.S.S-TiAlN ground

[illegible]

Jobber length kits parabolic flute with split point in metric sizes
H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground and H.S.S-TiAlN ground
in steel case



No. 258 214



No. 229 214



No. 258 214 T



No. 258 214 F

Description	Part no.	Price / kit	Part no.	Price / kit	Part no.	Price / kit	Part no.	Price / kit
	H.S.S	\$	H.S.S Co.	\$	H.S.S-TiN	\$	H.S.S-TiAlN	\$
Consisting of 19 jobber length parabolic flute Ø 1,0 mm up to 10,0 mm in increments of 0,5 mm	258 214	73.21	229 214	97.66	258 214 T	95.29	258 214 F	95.29
Consisting of 25 jobber length parabolic flute Ø 1,0 mm up to 13,0 mm in increments of 0,5 mm	258 215	148.69	229 215	193.75	258 215 T	213.28	258 215 F	213.28

Emphasised articles are new additions.

Jobber length ground, with split point in fractional sizes

High performance twist drill suitable for all normal drilling in conventional materials.

Point cut: helical point
Helix angle: 20-30°
Ø tolerance: h8
Right-hand cutting

Packing unit: in plastic box



H.S.S ground

Point cut: from Ø 1/8 inch
with split point
DIN 1412 C
Point angle: 118°
Surface: bright

High performance ground twist drill consisting of heavy-duty high speed steel. The fully ground twist drill has a more precise concentricity.

Application areas: for steel, alloyed and unalloyed cast iron (up to a strength of 900 N/mm²), grey, malleable, ductile and die-cast iron, sintered iron, nickel silver, graphite, short chipping aluminium alloys, brass and bronze.

H.S.S Cobalt (M35) ground

Point cut: from Ø 1/8 inch
with split point
DIN 1412 C
Point angle: 130°
Surface: golden brown

Like HSS-G plus cobalt alloyed. The cobalt content ensures increased heat resistance.

Application areas: for unalloyed and alloyed steel (up to a strength of 900 N/mm²), hot and cold-working steel, reinforced and case-hardened steel, and also steel resistant to rust and acid.

H.S.S-TiN ground

Point cut: from Ø 1/8 inch
with split point
DIN 1412 C
Point angle: 118°
Surface: TiN coating

Like HSS-G plus titanium nitride coating. The TiN wear-resistant coating increases the surface hardness to approx. 2,300 HV and the heat resistance to 600 °C. Achieves longer tool life with increased cutting values.

Application areas: for steel, alloyed and unalloyed cast iron (up to a strength of 900 N/mm²), grey, malleable, ductile and die-cast iron, sintered iron, nickel silver, graphite, short chipping aluminium alloys, brass and bronze.

Jobber length ground, with split point

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground

Ø inch	Ø mm	Overall length inch	Flute length inch	Part no. H.S.S	Cont. pcs.	Price each \$	Part no. H.S.S Co.	Cont. pcs.	Price each \$	Part no. H.S.S-TiN	Cont. pcs.	Price each \$
1/16	1,59	1 7/8	7/8	214 801	10	0.62	215 801	10	1.46	250 801 T	10	1.48
5/64	1,98	2	1	214 802	10	0.62	215 802	10	1.46	250 802 T	10	1.48
3/32	2,38	2 1/4	1 1/4	214 803	10	0.66	215 803	10	1.46	250 803 T	10	1.48
7/64	2,78	2 5/8	1 1/2	214 804	10	0.73	215 804	10	1.50	250 804 T	10	1.94
1/8	3,18	2 3/4	1 5/8	214 805	10	0.75	215 805	10	1.50	250 805 T	10	2.19
9/64	3,57	2 7/8	1 3/4	214 806	10	0.85	215 806	10	1.56	250 806 T	10	2.19
5/32	3,97	3 1/8	2	214 807	10	0.85	215 807	10	1.61	250 807 T	10	2.39
11/64	4,37	3 1/4	2 1/8	214 808	10	0.87	215 808	10	1.75	250 808 T	10	2.99
3/16	4,76	3 1/2	2 5/16	214 809	10	0.94	215 809	10	2.02	250 809 T	10	3.02
13/64	5,16	3 5/8	2 7/16	214 810	10	1.03	215 810	10	2.41	250 810 T	10	3.54
7/32	5,56	3 3/4	2 1/2	214 811	10	1.16	215 811	10	2.70	250 811 T	10	3.54
15/64	5,95	3 7/8	2 5/8	214 812	10	1.26	215 812	10	2.90	250 812 T	10	3.54
1/4	6,35	4	2 3/4	214 813	10	1.35	215 813	10	3.07	250 813 T	10	4.42
17/64	6,75	4 1/8	2 7/8	214 814	10	1.58	215 814	10	3.58	250 814 T	10	4.57
9/32	7,14	4 1/4	2 15/16	214 815	10	1.69	215 815	10	3.76	250 815 T	10	5.30
19/64	7,54	4 3/8	3 1/16	214 816	10	1.87	215 816	10	4.30	250 816 T	10	5.30
5/16	7,94	4 1/2	3 3/16	214 817	10	2.05	215 817	10	4.92	250 817 T	10	5.91
21/64	8,33	4 5/8	3 5/16	214 818	10	2.29	215 818	10	5.42	250 818 T	10	7.11
11/32	8,73	4 3/4	3 7/16	214 819	10	2.52	215 819	10	5.96	250 819 T	10	7.34
23/64	9,13	4 7/8	3 1/2	214 820	10	2.77	215 820	10	6.98	250 820 T	10	8.21
3/8	9,53	5	3 5/8	214 821	10	2.92	215 821	10	7.13	250 821 T	10	8.21
25/64	9,92	5 1/8	3 3/4	214 822	10	3.44	215 822	10	8.06	250 822 T	10	8.70

Jobber length ground, with split point

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground

Ø inch	Ø mm	Overall length inch	Flute length inch	Part no. H.S.S	Cont. pcs.	Price each \$	Part no. H.S.S Co.	Cont. pcs.	Price each \$	Part no. H.S.S-TiN	Cont. pcs.	Price each \$
13/32	10,32	5 1/4	3 7/8	214 823	10	3.50	215 823	10	8.38	250 823 T	10	9.50
27/64	10,72	5 3/8	3 15/16	214 824	5	3.75	215 824	5	9.37	250 824 T	5	10.18
7/16	11,11	5 1/2	4 1/16	214 825	5	4.15	215 825	5	9.56	250 825 T	5	10.52
29/64	11,51	5 5/8	4 3/16	214 826	5	4.59	215 826	5	11.43	250 826 T	5	11.06
15/32	11,91	5 3/4	4 5/16	214 827	5	4.90	215 827	5	11.82	250 827 T	5	11.78
31/64	12,30	5 7/8	4 3/8	214 828	5	5.02	215 828	5	11.98	250 828 T	5	12.13
1/2	12,70	6	4 1/2	214 829	5	5.27	215 829	5	12.22	250 829 T	5	12.86

Jobber length kits with split point in fractional sizes

H.S.S ground, HSS Cobalt (M35) ground and H.S.S-TiN ground in steel case



No. 214 850



No. 215 850



No. 250 850 T

Description	Part no. H.S.S	Price / kit \$	Part no. H.S.S Co.	Price / kit \$	Part no. H.S.S-TiN	Price / kit \$
Consisting of 21 jobber length Ø 1/16" up to 3/8" in increments of 1/64"	214 850	44.39	215 850	82.45	250 850 T	101.14
Consisting of 29 jobber length Ø 1/16" up to 1/2" in increments of 1/64"	214 851	83.02	215 851	169.26	250 851 T	191.84

Jobber length ground, with split point in metric sizes

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground

Ø mm	Overall length mm	Flute length mm	Part no. H.S.S	Cont. pcs.	Price each \$	Part no. H.S.S Co.	Cont. pcs.	Price each \$	Part no. H.S.S-TiN	Cont. pcs.	Price each \$
0,30	19	3	214 003	10	0.66	—	—	—	250 003 T	10	1.82
0,40	20	5	214 004	10	0.66	—	—	—	250 004 T	10	1.82
0,50	22	6	214 005	10	0.66	—	—	—	250 005 T	10	1.82
0,60	24	7	214 006	10	0.66	—	—	—	250 006 T	10	1.58
0,70	28	9	214 007	10	0.66	—	—	—	250 007 T	10	1.58
0,80	30	10	214 008	10	0.66	—	—	—	250 008 T	10	1.58
0,90	32	11	214 009	10	0.66	—	—	—	250 009 T	10	1.58
1,00	34	12	214 010	10	0.66	215 010	10	1.25	250 010 T	10	1.48
1,10	36	14	214 011	10	0.66	215 011	10	1.25	250 011 T	10	1.48
1,20	38	16	214 012	10	0.66	215 012	10	1.25	250 012 T	10	1.48
1,30	38	16	214 013	10	0.66	215 013	10	1.25	250 013 T	10	1.48
1,40	40	18	214 014	10	0.66	215 014	10	1.25	250 014 T	10	1.48
1,50	40	18	214 015	10	0.66	215 015	10	1.25	250 015 T	10	1.48
1,60	43	20	214 016	10	0.66	215 016	10	1.25	250 016 T	10	1.57
1,70	43	20	214 017	10	0.66	215 017	10	1.25	250 017 T	10	1.57
1,80	46	22	214 018	10	0.66	215 018	10	1.25	250 018 T	10	1.57
1,90	46	22	214 019	10	0.66	215 019	10	1.25	250 019 T	10	1.57
2,00	49	24	214 020	10	0.66	215 020	10	1.25	250 020 T	10	1.57
2,10	49	24	214 021	10	0.69	215 021	10	1.25	250 021 T	10	1.62
2,20	53	27	214 022	10	0.69	215 022	10	1.25	250 022 T	10	1.62
2,30	53	27	214 023	10	0.69	215 023	10	1.25	250 023 T	10	1.62
2,40	57	30	214 024	10	0.69	215 024	10	1.25	250 024 T	10	1.62
2,50	57	30	214 025	10	0.78	215 025	10	1.34	250 025 T	10	1.74
2,60	57	30	214 026	10	0.78	215 026	10	1.34	250 026 T	10	1.74
2,70	61	33	214 027	10	0.78	215 027	10	1.34	250 027 T	10	1.74
2,80	61	33	214 028	10	0.78	215 028	10	1.34	250 028 T	10	1.94
2,90	61	33	214 029	10	0.80	215 029	10	1.34	250 029 T	10	1.94
3,00	61	33	214 030	10	0.80	215 030	10	1.34	250 030 T	10	1.94
3,10	65	36	214 031	10	0.80	215 031	10	1.34	250 031 T	10	1.94
3,20	65	36	214 032	10	0.80	215 032	10	1.34	250 032 T	10	2.19
3,30	65	36	214 033	10	0.90	215 033	10	1.55	250 033 T	10	2.19
3,40	70	39	214 034	10	0.90	215 034	10	1.55	250 034 T	10	2.19
3,50	70	39	214 035	10	0.90	215 035	10	1.55	250 035 T	10	2.19
3,60	70	39	214 036	10	0.90	215 036	10	1.55	250 036 T	10	2.19
3,70	70	39	214 037	10	0.90	215 037	10	1.61	250 037 T	10	2.19
3,80	75	43	214 038	10	0.90	215 038	10	1.61	250 038 T	10	2.19
3,90	75	43	214 039	10	0.90	215 039	10	1.61	250 039 T	10	2.19
4,00	75	43	214 040	10	0.90	215 040	10	1.61	250 040 T	10	2.36
4,10	75	43	214 041	10	0.93	215 041	10	1.75	250 041 T	10	2.36
4,20	75	43	214 042	10	0.93	215 042	10	1.75	250 042 T	10	2.36
4,30	80	47	214 043	10	0.93	215 043	10	1.75	250 043 T	10	2.36
4,40	80	47	214 044	10	0.93	215 044	10	1.75	250 044 T	10	2.99
4,50	80	47	214 045	10	1.01	215 045	10	2.02	250 045 T	10	2.99
4,60	80	47	214 046	10	1.01	215 046	10	2.02	250 046 T	10	2.99
4,70	80	47	214 047	10	1.01	215 047	10	2.02	250 047 T	10	2.99
4,80	86	52	214 048	10	1.01	215 048	10	2.02	250 048 T	10	3.02
4,90	86	52	214 049	10	1.10	215 049	10	2.41	250 049 T	10	3.02
5,00	86	52	214 050	10	1.10	215 050	10	2.41	250 050 T	10	3.02
5,10	86	52	214 051	10	1.10	215 051	10	2.41	250 051 T	10	3.02
5,20	86	52	214 052	10	1.10	215 052	10	2.41	250 052 T	10	3.54
5,30	86	52	214 053	10	1.23	215 053	10	2.70	250 053 T	10	3.54
5,40	93	57	214 054	10	1.23	215 054	10	2.70	250 054 T	10	3.54
5,50	93	57	214 055	10	1.23	215 055	10	2.70	250 055 T	10	3.54
5,60	93	57	214 056	10	1.23	215 056	10	2.70	250 056 T	10	3.82
5,70	93	57	214 057	10	1.34	215 057	10	2.90	250 057 T	10	3.82
5,80	93	57	214 058	10	1.34	215 058	10	2.90	250 058 T	10	3.82
5,90	93	57	214 059	10	1.34	215 059	10	2.90	250 059 T	10	3.82
6,00	93	57	214 060	10	1.34	215 060	10	2.90	250 060 T	10	3.82
6,10	101	63	214 061	10	1.43	215 061	10	3.07	250 061 T	10	3.82
6,20	101	63	214 062	10	1.43	215 062	10	3.07	250 062 T	10	3.82

Jobber length ground, with split point in metric sizes

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground

Ø mm	Overall length mm	Flute length mm	Part no. H.S.S	Cont. pcs.	Price each \$	Part no. H.S.S Co.	Cont. pcs.	Price each \$	Part no. H.S.S-TiN	Cont. pcs.	Price each \$
6,30	101	63	214 063	10	1.43	215 063	10	3.07	250 063 T	10	3.82
6,40	101	63	214 064	10	1.43	215 064	10	3.07	250 064 T	10	4.42
6,50	101	63	214 065	10	1.69	215 065	10	3.58	250 065 T	10	4.42
6,60	101	63	214 066	10	1.69	215 066	10	3.58	250 066 T	10	4.42
6,70	101	63	214 067	10	1.69	215 067	10	3.58	250 067 T	10	4.42
6,80	109	69	214 068	10	1.69	215 068	10	3.58	250 068 T	10	4.42
6,90	109	69	214 069	10	1.79	215 069	10	3.76	250 069 T	10	4.42
7,00	109	69	214 070	10	1.79	215 070	10	3.76	250 070 T	10	4.42
7,10	109	69	214 071	10	1.79	215 071	10	3.76	250 071 T	10	5.30
7,20	109	69	214 072	10	1.99	215 072	10	4.30	250 072 T	10	5.30
7,30	109	69	214 073	10	1.99	215 073	10	4.30	250 073 T	10	5.30
7,40	109	69	214 074	10	1.99	215 074	10	4.30	250 074 T	10	5.30
7,50	109	69	214 075	10	1.99	215 075	10	4.30	250 075 T	10	5.30
7,60	117	75	214 076	10	1.99	215 076	10	4.30	250 076 T	10	5.71
7,70	117	75	214 077	10	2.18	215 077	10	4.92	250 077 T	10	5.71
7,80	117	75	214 078	10	2.18	215 078	10	4.92	250 078 T	10	5.71
7,90	117	75	214 079	10	2.18	215 079	10	4.92	250 079 T	10	5.71
8,00	117	75	214 080	10	2.42	215 080	10	4.92	250 080 T	10	5.71
8,10	117	75	214 081	10	2.42	215 081	10	5.42	250 081 T	10	5.71
8,20	117	75	214 082	10	2.42	215 082	10	5.42	250 082 T	10	5.71
8,30	117	75	214 083	10	2.42	215 083	10	5.42	250 083 T	10	7.11
8,40	117	75	214 084	10	2.67	215 084	10	5.95	250 084 T	10	7.11
8,50	117	75	214 085	10	2.67	215 085	10	5.95	250 085 T	10	7.11
8,60	125	81	214 086	10	2.67	215 086	10	5.95	250 086 T	10	7.11
8,70	125	81	214 087	10	2.67	215 087	10	5.95	250 087 T	10	7.34
8,80	125	81	214 088	10	2.94	215 088	10	6.98	250 088 T	10	7.34
8,90	125	81	214 089	10	2.94	215 089	10	6.98	250 089 T	10	7.34
9,00	125	81	214 090	10	2.94	215 090	10	6.98	250 090 T	10	7.34
9,10	125	81	214 091	10	2.94	215 091	10	6.98	250 091 T	10	8.21
9,20	125	81	214 092	10	3.10	215 092	10	7.18	250 092 T	10	8.21
9,30	125	81	214 093	10	3.10	215 093	10	7.18	250 093 T	10	8.21
9,40	125	81	214 094	10	3.10	215 094	10	7.18	250 094 T	10	8.21
9,50	125	81	214 095	10	3.10	215 095	10	7.18	250 095 T	10	8.21
9,60	133	87	214 096	10	3.10	215 096	10	7.18	250 096 T	10	8.86
9,70	133	87	214 097	10	3.66	215 097	10	8.06	250 097 T	10	8.86
9,80	133	87	214 098	10	3.66	215 098	10	8.06	250 098 T	10	8.86
9,90	133	87	214 099	10	3.66	215 099	10	8.06	250 099 T	10	8.86
10,00	133	87	214 100	10	3.66	215 100	10	8.06	250 100 T	10	8.86
10,10	133	87	214 101	10	3.72	—	—	—	250 101 T	10	8.86
10,20	133	87	214 102	10	3.72	215 102	10	8.38	250 102 T	10	8.86
10,30	133	87	214 103	10	3.72	—	—	—	250 103 T	10	9.50
10,40	133	87	214 104	10	3.98	—	—	—	250 104 T	10	9.50
10,50	133	87	214 105	5	3.98	215 105	5	9.37	250 105 T	5	9.50
10,60	133	87	214 106	5	3.98	—	—	—	250 106 T	5	9.50
10,70	142	94	214 107	5	3.98	—	—	—	250 107 T	5	10.18
10,80	142	94	214 108	5	4.45	—	—	—	250 108 T	5	10.18
10,90	142	94	214 109	5	4.45	—	—	—	250 109 T	5	10.18
11,00	142	94	214 110	5	4.45	215 110	5	9.56	250 110 T	5	10.18
11,10	142	94	214 111	5	4.45	—	—	—	250 111 T	5	10.52
11,20	142	94	214 112	5	4.88	—	—	—	250 112 T	5	10.52
11,30	142	94	214 113	5	4.88	—	—	—	250 113 T	5	10.52
11,40	142	94	214 114	5	4.88	—	—	—	250 114 T	5	10.52
11,50	142	94	214 115	5	4.88	215 115	5	11.43	250 115 T	5	10.52
11,60	142	94	214 116	5	5.20	—	—	—	250 116 T	5	11.14
11,70	142	94	214 117	5	5.20	—	—	—	250 117 T	5	11.14
11,80	142	94	214 118	5	5.20	—	—	—	250 118 T	5	11.14
11,90	151	101	214 119	5	5.20	—	—	—	250 119 T	5	11.78
12,00	151	101	214 120	5	5.33	215 120	5	11.82	250 120 T	5	11.78
12,10	151	101	214 121	5	5.33	—	—	—	250 121 T	5	11.78
12,20	151	101	214 122	5	5.33	—	—	—	250 122 T	5	11.78

Jobber length ground, with split point in metric sizes

H.S.S ground, H.S.S Cobalt (M35) ground, H.S.S-TiN ground

Ø mm	Overall length mm	Flute length mm	Part no. H.S.S	Cont. pcs.	Price each \$	Part no. H.S.S Co.	Cont. pcs.	Price each \$	Part no. H.S.S-TiN	Cont. pcs.	Price each \$
12,30	151	101	214 123	5	5.33	—	—	—	250 123 T	5	12.13
12,40	151	101	214 124	5	5.61	—	—	—	250 124 T	5	12.13
12,50	151	101	214 125	5	5.61	215 125	5	12.87	250 125 T	5	12.13
12,60	151	101	214 126	5	5.61	—	—	—	250 126 T	5	12.13
12,70	151	101	214 127	5	5.61	—	—	—	250 127 T	5	12.86
12,80	151	101	214 128	5	5.78	—	—	—	250 128 T	5	12.86
12,90	151	101	214 129	5	5.78	—	—	—	250 129 T	5	12.86
13,00	151	101	214 130	5	5.78	215 130	5	13.26	250 130 T	5	13.94
13,50	160	108	214 135	5	9.13	215 135	5	14.54	250 135 T	5	14.41
14,00	160	108	214 140	5	10.75	215 140	5	9.38	250 140 T	5	15.98
14,50	169	114	214 145	5	12.86	215 145	5	17.81	250 145 T	5	17.79
15,00	169	114	214 150	5	14.70	215 150	5	19.10	250 150 T	5	19.49
15,50	178	120	214 155	5	16.58	215 155	5	20.53	250 155 T	5	21.38
16,00	178	120	214 160	5	18.31	215 160	5	22.36	250 160 T	5	22.97

Jobber length kits with split point in metric sizes

H.S.S ground, HSS Cobalt (M35) ground and H.S.S-TiN ground in steel case



No. 214 214



No. 215 214



No. 250 214 T



No. 215 223



No. 214 200

Description	Part no. H.S.S	Price / kit \$	Part no. H.S.S Co.	Price / kit \$	Part no. H.S.S-TiN	Price / kit \$
Consisting of 19 jobber length Ø 1.0 mm up to 10.0 mm in increments of 0.5 mm	214 214	45.30	215 214	79.35	250 214 T	92.50
Consisting of 25 jobber length Ø 1.0 mm up to 13.0 mm in increments of 0.5 mm	214 215	79.33	215 215	151.66	250 215 T	164.55
Bench stand - Consisting of 91 jobber length Ø 1.0 mm up to 10.0 mm in increments of 0.1 mm	214 223	157.54	215 223	319.34	—	—
Magazine - Consisting of 170 jobber length 10 x Ø 1.0 mm up to 8.0 mm in increments of 0.5 mm 5 x Ø 8.5 mm up to 10.0 mm in increments of 0.5 mm	214 200	269.60	215 200	431.37	—	—

Cutting speed Vc = m/min																		
		4	6	8	10	12	15	18	20	25	30	35	40	50	60	80	100	
Ø inch	Ø mm	r.p.m.																
1/16	1,6	800	1190	1590	1990	2390	2990	3580	3980	4980	5970	6970	7960	9950	11940	15920	19900	
5/64	2,0	640	960	1270	1590	1910	2390	2870	3180	3980	4780	5570	6370	7960	9550	12740	15920	
3/32	2,4	530	800	1060	1330	1590	1990	2390	2650	3320	3980	4640	5310	6630	7960	10620	13270	
7/64	2,8	450	680	910	1140	1360	1710	2050	2270	2840	3410	3980	4550	5690	6820	9100	11370	
1/8	3,2	400	600	800	1000	1190	1490	1790	1990	2490	2990	3480	3980	4980	5970	7960	9950	
9/64	3,6	350	530	710	880	1060	1330	1590	1770	2210	2650	3100	3540	4420	5310	7080	8850	
5/32	4,0	320	480	640	800	960	1190	1430	1590	1990	2390	2790	3180	3980	4780	6370	7960	
11/64	4,4	290	430	580	720	870	1090	1300	1450	1810	2170	2530	2900	3620	4340	5790	7240	
3/16	4,8	270	400	530	660	800	1000	1190	1330	1660	1990	2320	2650	3320	3980	5310	6630	
13/64	5,2	240	370	490	610	730	920	1100	1220	1530	1840	2140	2450	3060	3670	4900	6120	
7/32	5,6	230	340	450	570	680	850	1020	1140	1420	1710	1990	2270	2840	3410	4550	5690	
15/64	6,0	210	320	420	530	640	800	960	1060	1330	1590	1860	2120	2650	3180	4250	5310	
1/4	6,4	200	300	400	500	600	750	900	1000	1240	1490	1740	1990	2490	2990	3980	4980	
17/64	6,7	190	290	380	480	570	710	860	950	1190	1430	1660	1900	2380	2850	3800	4750	
9/32	7,1	180	270	360	450	540	670	810	900	1120	1350	1570	1790	2240	2690	3590	4490	
19/64	7,5	170	250	340	420	510	640	760	850	1060	1270	1490	1700	2120	2550	3400	4250	
5/16	7,9	160	240	320	400	480	600	730	810	1010	1210	1410	1610	2020	2420	3230	4030	
21/64	8,3	150	230	310	380	460	580	690	770	960	1150	1340	1530	1920	2300	3070	3840	
11/32	8,7	150	220	290	370	440	550	660	730	920	1100	1280	1460	1830	2200	2930	3660	
23/64	9,1	140	210	280	350	420	520	630	700	870	1050	1220	1400	1750	2100	2800	3500	
3/8	9,5	130	200	270	340	400	500	600	670	840	1010	1170	1340	1680	2010	2680	3350	
25/64	9,9	130	190	260	320	390	480	580	640	800	970	1130	1290	1610	1930	2570	3220	
13/32	10,3	120	190	250	310	370	460	560	620	770	930	1080	1240	1550	1860	2470	3090	
27/64	10,7	120	180	240	300	360	450	540	600	740	890	1040	1190	1490	1790	2380	2980	
7/16	11,1	110	170	230	290	340	430	520	570	720	860	1000	1150	1430	1720	2300	2870	
29/64	11,5	110	170	220	280	330	420	500	550	690	830	970	1110	1380	1660	2220	2770	
15/32	11,9	110	160	210	270	320	400	480	540	670	800	940	1070	1340	1610	2140	2680	
31/64	12,3	100	160	210	260	310	390	470	520	650	780	910	1040	1290	1550	2070	2590	
1/2	12,7	100	150	200	250	300	380	450	500	630	750	880	1000	1250	1500	2010	2510	
Material				Cutting speed Vc m/min			Coolant			Material				Cutting speed Vc m/min			Coolant	
High carbon struc. steel < 700 N/mm²				30 - 35			cutting spray			CuZn alloy tough				35 - 60			compressed air	
High carbon struc. steel > 700 N/mm²				20 - 25			cutting spray			Al alloy < 11% Si				30 - 50			cutting spray	
Alloyed steel < 1000 N/mm²				20 - 25			cutting spray			Thermoplastics				20 - 40			water	
Cast iron < 250 N/mm²				15 - 25			compressed air			Duroplastics with inorganic filling				15 - 25			compressed air	
Cast iron > 250 N/mm²				10 - 20			compressed air			Duroplastics with organic filling				15 - 35			compressed air	
CuZn alloy brittle				60 - 100			compressed air											

Cutting speed Vc = m/min																
Ø mm	4	6	8	10	12	15	18	20	25	30	35	40	50	60	80	100
	r.p.m.															
1,0	1274	1911	2548	3185	3822	4777	5732	6369	7962	9554	11146	12739	15924	19108	25478	31847
1,5	849	1274	1699	2123	2548	3185	3822	4246	5308	6369	7431	8493	10616	12739	16985	21231
2,0	637	955	1274	1592	1911	2389	2866	3185	3981	4777	5573	6369	7962	9554	12739	15924
2,5	510	764	1019	1274	1529	1911	2293	2548	3185	3822	4459	5096	6369	7643	10191	12739
3,0	425	637	849	1062	1274	1592	1911	2123	2654	3185	3715	4246	5308	6369	8493	10616
3,5	364	546	728	910	1092	1365	1638	1820	2275	2730	3185	3640	4550	5460	7279	9099
4,0	318	478	637	796	955	1194	1433	1592	1990	2389	2787	3185	3981	4777	6369	7962
4,5	283	425	566	708	849	1062	1274	1415	1769	2123	2477	2831	3539	4246	5662	7077
5,0	255	382	510	637	764	955	1146	1274	1592	1911	2229	2548	3185	3822	5096	6369
5,5	232	347	463	579	695	869	1042	1158	1448	1737	2027	2316	2895	3474	4632	5790
6,0	212	318	425	531	637	796	955	1062	1327	1592	1858	2123	2654	3185	4246	5308
6,5	196	294	392	490	588	735	882	980	1225	1470	1715	1960	2450	2940	3920	4900
7,0	182	273	364	455	546	682	819	910	1137	1365	1592	1820	2275	2730	3640	4550
7,5	170	255	340	425	510	637	764	849	1062	1274	1486	1699	2123	2548	3397	4246
8,0	159	239	318	398	478	597	717	796	995	1194	1393	1592	1990	2389	3185	3981
8,5	150	225	300	375	450	562	674	749	937	1124	1311	1499	1873	2248	2997	3747
9,0	142	212	283	354	425	531	637	708	885	1062	1238	1415	1769	2123	2831	3539
9,5	134	201	268	335	402	503	603	670	838	1006	1173	1341	1676	2011	2682	3352
10,0	127	191	255	318	382	478	573	637	796	955	1115	1274	1592	1911	2548	3185
11,0	116	174	232	290	347	434	521	579	724	869	1013	1158	1448	1737	2316	2895
12,0	106	159	212	265	318	398	478	531	663	796	929	1062	1327	1592	2123	2654
13,0	98	147	196	245	294	367	441	490	612	735	857	980	1225	1470	1960	2450
14,0	91	136	182	227	273	341	409	455	569	682	796	910	1137	1365	1820	2275
15,0	85	127	170	212	255	318	382	425	531	637	743	849	1062	1274	1699	2123
16,0	80	119	159	199	239	299	358	398	498	597	697	796	995	1194	1592	1990
17,0	75	112	150	187	225	281	337	375	468	562	656	749	937	1124	1499	1873
18,0	71	106	142	177	212	265	318	354	442	531	619	708	885	1062	1415	1769
19,0	67	101	134	168	201	251	302	335	419	503	587	670	838	1006	1341	1676
20,0	64	96	127	159	191	239	287	318	398	478	557	637	796	955	1274	1592
21,0	61	91	121	152	182	227	273	303	379	455	531	607	758	910	1213	1517
22,0	58	87	116	145	174	217	261	290	362	434	507	579	724	869	1158	1448
23,0	55	83	111	138	166	208	249	277	346	415	485	554	692	831	1108	1385
24,0	53	80	106	133	159	199	239	265	332	398	464	531	663	796	1062	1327
25,0	51	76	102	127	153	191	229	255	318	382	446	510	637	764	1019	1274
26,0	49	73	98	122	147	184	220	245	306	367	429	490	612	735	980	1225
27,0	47	71	94	118	142	177	212	236	295	354	413	472	590	708	944	1180
28,0	45	68	91	114	136	171	205	227	284	341	398	455	569	682	910	1137
29,0	44	66	88	110	132	165	198	220	275	329	384	439	549	659	879	1098
30,0	42	64	85	106	127	159	191	212	265	318	372	425	531	637	849	1062
31,0	41	62	82	103	123	154	185	205	257	308	360	411	514	616	822	1027
32,0	40	60	80	100	119	149	179	199	249	299	348	398	498	597	796	995
33,0	39	58	77	97	116	145	174	193	241	290	338	386	483	579	772	965
34,0	37	56	75	94	112	141	169	187	234	281	328	375	468	562	749	937
35,0	36	55	73	91	109	136	164	182	227	273	318	364	455	546	728	910
36,0	35	53	71	88	106	133	159	177	221	265	310	354	442	531	708	885
37,0	34	52	69	86	103	129	155	172	215	258	301	344	430	516	689	861
38,0	34	50	67	84	101	126	151	168	210	251	293	335	419	503	670	838
39,0	33	49	65	82	98	122	147	163	204	245	286	327	408	490	653	817
40,0	32	48	64	80	96	119	143	159	199	239	279	318	398	478	637	796
41,0	31	47	62	78	93	117	140	155	194	233	272	311	388	466	621	777
42,0	30	45	61	76	91	114	136	152	190	227	265	303	379	455	607	758
43,0	30	44	59	74	89	111	133	148	185	222	259	296	370	444	593	741
44,0	29	43	58	72	87	109	130	145	181	217	253	290	362	434	579	724
45,0	28	42	57	71	85	106	127	142	177	212	248	283	354	425	566	708
46,0	28	42	55	69	83	104	125	138	173	208	242	277	346	415	554	692
47,0	27	41	54	68	81	102	122	136	169	203	237	271	339	407	542	678
48,0	27	40	53	66	80	100	119	133	166	199	232	265	332	398	531	663
49,0	26	39	52	65	78	97	117	130	162	195	227	260	325	390	520	650
Material				Cutting speed Vc m/min			Coolant		Material				Cutting speed Vc m/min		Coolant	
High carbon struc. steel < 700 N/mm²				30 - 35			cutting spray		CuZn alloy tough				35 - 60		compressed air	
High carbon struc. steel > 700 N/mm²				20 - 25			cutting spray		Al alloy < 11% Si				30 - 50		cutting spray	
Alloyed steel < 1000 N/mm²				20 - 25			cutting spray		Thermoplastics				20 - 40		water	
Cast iron < 250 N/mm²				15 - 25			compressed air		Duroplastics with inorganic filling				15 - 25		compressed air	
Cast iron > 250 N/mm²				10 - 20			compressed air		Duroplastics with organic filling				15 - 35		compressed air	
CuZn alloy brittle				60 - 100			compressed air									



For your notes

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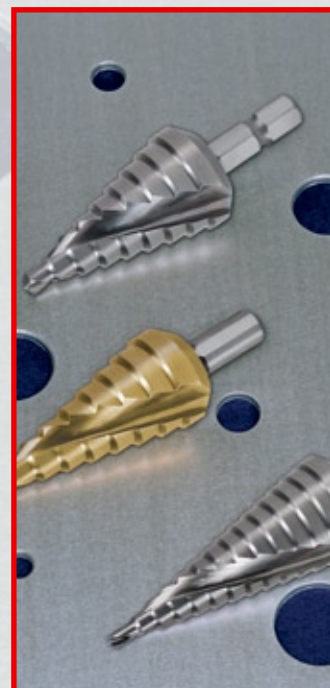
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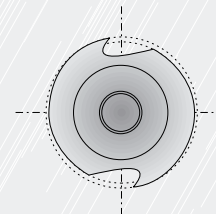
Product Information

The flutes of new RUKO high performance step drills are CBN ground from the solid hardened form. Because CBN (cubical boron nitride) is a much harder abrasive than even silicon carbide or corundum, a better and sharper cutting edge is achieved - without burrs. And, with higher dimensional precision the drills will last considerably longer while maintaining the precise process tolerances.

1. Because CBN ground flutes have better and sharper cutting edges - without burrs - unlike the conventional milled flutes. This guarantees a superior cutting edge and longer tool life.
2. Each step has a radially adjusted relief produced by CBN grinding that relates directly to the diameter of the step. This means the cutting edge is always the highest point of the diameter.
3. Each step is axially CBN relief ground. This means the cutting edge is always the highest point of the axial cutting axis.
4. The cutting edge of each step has relief angle. This means the cutting edge is also the highest point in advance direction.
5. The CBN ground bit ensures centering and spot-drilling even in thin-walled material.



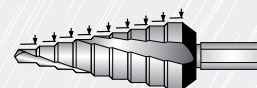
1. CBN ground flute



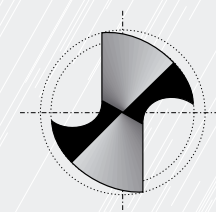
2. Radially adjusted relief produced by CBN grinding



3. Axially relief produced by CBN grinding



4. CBN ground relief angle



5. CBN ground bit with split point DIN 1412 C

Product Application

1. The ideal tool for sheet metal working in the following sectors of industries: electrical (size 4 + size 9), sanitary engineering and heating technologies (size 6 + size 7) or automotive, mechanical engineering, switching systems and aviation (size 0/5, size 0/9, size 1, size 2, size 3, size 5).
2. This tough tool is suitable for all standard industrial materials: nonferrous metal, special steel, thermoplastics and duroplastics as well as sheet metals up to 4 mm thickness.
3. This durable and versatile tool will center, spot-drill, bore and debur - all in one smooth, high performance working cycle.
4. By using RUKO cutting spray or RUKO cutting paste tool life will be considerably prolonged.

Step Drills - Table of Cutting Speeds

Material		High carb. struc. steel up to 700 N/mm ²	High carb. struc. steel over 700 N/mm ²	Alloyed steel up to 1000 N/mm ²	Cast iron up to 250 N/mm ²	Cast iron over 250 N/mm ²	CuZn-alloy brittle	CuZn-alloy tough	Al-alloy up to 11% Si	Thermoplastics	Duroplastics
Sheet thickness inch		up to 5/32	up to 5/32	up to 5/32	up to 5/32	up to 5/32	up to 5/32	up to 5/32	up to 5/32	up to 5/32	up to 5/32
Vc = m/min		30	20	20	15	10	60	35	30	20	15
Coolant		Cutting spray	Cutting spray	Cutting spray	Compr. air	Compr. air	Compr. air	Compr. air	Cutting spray	Water	Compr. air
Size no.	Ø inch	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.
1	3/16 - 1/2	2010 - 750	1340 - 500	1340 - 500	1000 - 380	670 - 250	4010 - 1500	2340 - 880	2010 - 750	1340 - 500	1000 - 380
2	1/8 - 1/2	3010 - 750	2010 - 500	2010 - 500	1500 - 380	1000 - 250	6020 - 1500	3510 - 880	3010 - 750	2010 - 500	1500 - 380
3	1/4 - 3/4	1500 - 500	1000 - 330	1000 - 330	750 - 250	500 - 170	3010 - 1000	1760 - 590	1500 - 500	1000 - 330	750 - 250
4	3/16 - 7/8	2010 - 430	1340 - 290	1340 - 290	1000 - 210	670 - 140	4010 - 860	2340 - 500	2010 - 430	1340 - 290	1000 - 210
5	1/2 - 1	1500 - 380	1000 - 250	1000 - 250	750 - 190	500 - 130	3010 - 750	1760 - 440	1500 - 380	1000 - 250	750 - 190
6	7/8 - 1 3/8	1500 - 270	1000 - 180	1000 - 180	750 - 140	500 - 90	3010 - 550	1760 - 320	1500 - 270	1000 - 180	750 - 140
7	3/8 - 1/2	2410 - 750	1600 - 500	1600 - 500	1200 - 380	800 - 250	4810 - 1500	2810 - 880	2410 - 750	1600 - 500	1200 - 380
8	7/8	2410 - 430	1600 - 290	1600 - 290	1200 - 210	800 - 140	4810 - 860	2810 - 500	2410 - 430	1600 - 290	1200 - 210
9	7/8 - 1 1/8	2410 - 330	1600 - 220	1600 - 220	1200 - 170	800 - 110	4810 - 670	2810 - 390	2410 - 330	1600 - 220	1200 - 170

Step drills H.S.S., H.S.S.-TiN, inch sizes, CBN ground, spiral fluted with split point

Point cut: work's specification
with split point DIN 1412 C
Point angle: 118°
Step angle: 90°
Ø tolerance: work's specification
Surface: bright / titanium-nitride coated
Right hand cutting



Packing unit:
in plastic boxes of 1

Size no.	Drilling range inch	Overall length inch	Steps	Shank-Ø inch	Part no. H.S.S.	Price each \$	Part no. H.S.S.-TiN	Price each \$
1	3/16 - 1/2	3 1/8	6	1/4	101 701	23.30	101 701 T	37.20
2	1/8 - 1/2	3 1/8	13	1/4	101 702	26.60	101 702 T	40.95
3	1/4 - 3/4	2 3/4	9	3/8	101 703	30.45	101 703 T	47.95
4	3/16 - 7/8	3 1/4	12	3/8	101 704	41.15	101 704 T	54.25
5	13/32 - 1	3 1/4	9	3/8	101 705	41.65	101 705 T	57.75
6	7/8 - 1 3/8	3 1/4	5	3/8	101 706	58.46	101 706 T	90.65
7	3/8 - 1/2	1 7/8	2	1/4	101 707 A	23.80	101 707 TA	37.80
8	7/8	2 19/32	1	3/8	101 708 A	36.25	101 708 TA	50.75
9	7/8 - 1 1/8	3 7/64	2	3/8	101 709	46.75	101 709 T	74.76

Step drill kits H.S.S. and H.S.S.-TiN in steel case

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.



No. 101 026 US

No. 101 026 UST

Description	Part no. H.S.S.	Price each \$	Part no. H.S.S.-TiN	Price each \$
Step drills spiral fluted, sizes 1, 2, 3	101 026 US	91.35	101 026 UST	137.10

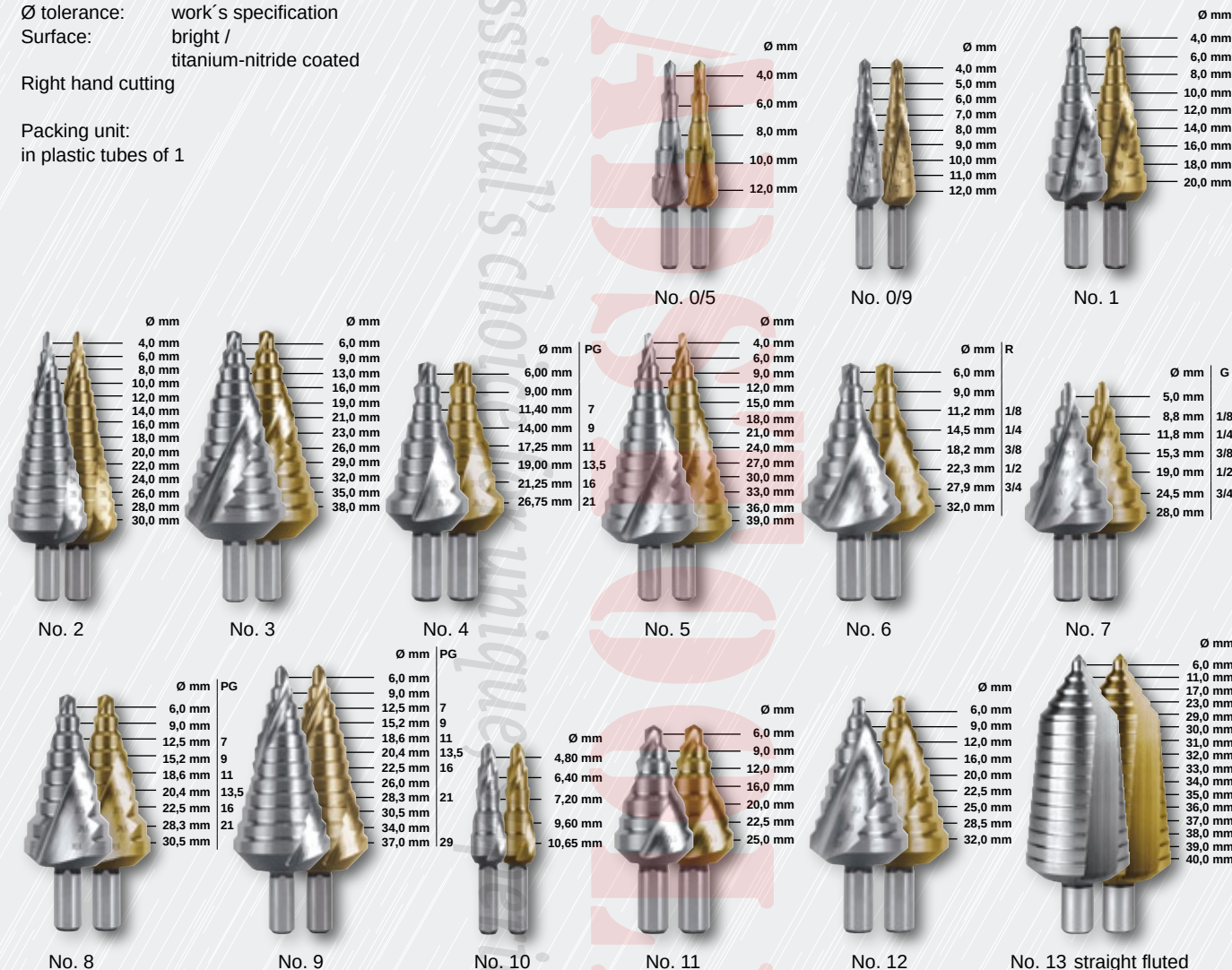
Step drills, metric sizes, H.S.S., H.S.S.-TiN CBN ground, spiral fluted with split point

Point cut: work's specification
with split point DIN 1412 C
Point angle: 118°
Step angle: 90°
Ø tolerance: work's specification
Surface: bright /
titanium-nitride coated

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	Overall length mm	Steps	Shank-Ø mm	Part no. H.S.S.	Price each \$	Part no. H.S.S.-TiN	Price each \$
0/5	4,0 - 12,00	65	5	6	101 050-5	29.45	101 050-5 T	40.45
0/9	4,0 - 12,00	65	9	6	101 050-9	30.25	101 050-9 T	41.25
1	4,0 - 20,00	75	9	8	101 051	39.15	101 051 T	58.90
2	4,0 - 30,00	100	14	10	101 052	57.57	101 052 T	92.30
3	6,0 - 38,00	100	12	10	101 053	92.43	101 053 T	174.40
4	6,0 - 26,75	75	8	10	101 055	77.15	101 055 T	53.15
5	4,0 - 39,00	107	13	10	101 056	93.30	101 056 T	169.41
6	6,0 - 32,00	75	8	10	101 057	79.80	101 057 T	54.15
7	5,0 - 28,00	69	7	10	101 058	46.75	101 058 T	49.89
8	6,0 - 30,50	80	9	10	101 098	79.85	101 098 T	91.55
9	6,0 - 37,00	100	12	10	101 060	92.43	101 060 T	159.15
10	4,8 - 10,65	54	5	6	101 094	19.60	101 094 T	38.40
11	6,0 - 25,00	65	7	10	101 095	38.15	101 095 T	56.95
12	6,0 - 32,00	76	9	10	101 096	52.45	101 096 T	98.65
13	6,0 - 40,00	105	16	13	101 097	118.10	101 097 T	136.41

Step drill kits H.S.S. and H.S.S.-TiN in steel case

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.



No. 101 026



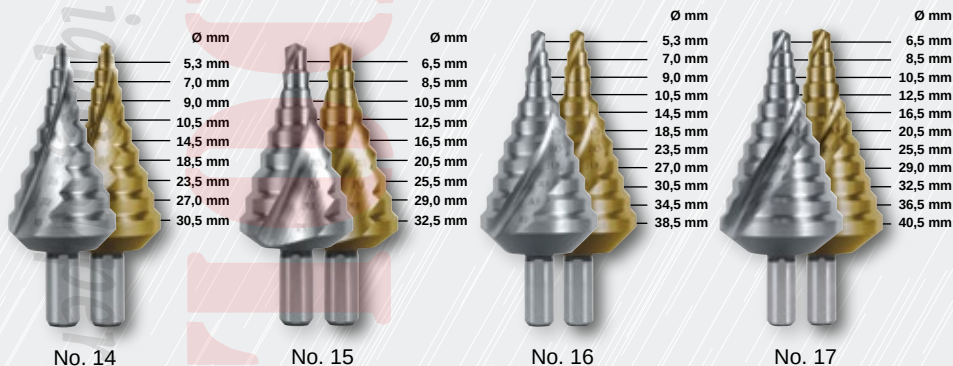
No. 101 026 T

Description	Part no. H.S.S.	Price each \$	Part no. H.S.S.-TiN	Price each \$
Step drills spiral fluted, sizes 1, 2, 3	101 026	91.35	101 026 T	217.25

Step drills H.S.S. and H.S.S.-TiN, CBN ground, spiral fluted with split point for metric cable connections

Point cut: work's specification
with split point DIN 1412 C
Point angle: 118°
Step angle: 90°
Ø tolerance: work's specification
Surface: bright /
titanium-nitride coated

Right hand cutting



Packing unit:
in plastic boxes of 1

Size no.	DIN/EN	Measurements	Drilling range mm	Overall length mm	Steps	Shank-Ø mm	Part no. H.S.S.	Price each \$	Part no. H.S.S.-TiN	Price each \$
14	60423	Core holes	5,3 - 30,5	79	9	10	101 093	80.00	101 093 T	138.85
15	50262	Through holes	6,5 - 32,5	79	9	10	101 092	78.20	101 092 T	89.55
16	60423	Core holes	5,3 - 38,5	96	11	10	101 091	96.15	101 091 T	97.05
17	50262	Through holes	6,5 - 40,5	96	11	10	101 090	93.30	101 090 T	157.30

Emphasised articles are new additions.

Handwritten notes area with horizontal lines.

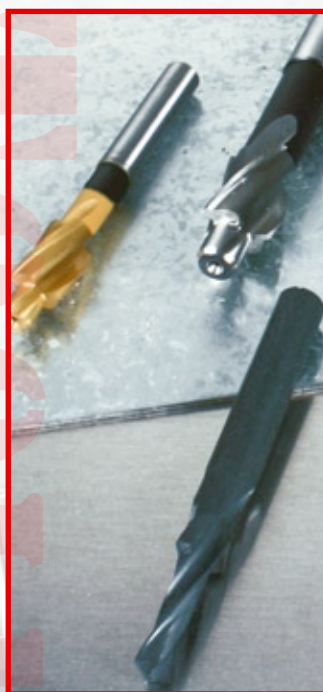
The professional's choice for unique, superior quality tools!

CHANDS' TOOLBOX.COM



COUNTERSINKS AND DEBURRING TOOLS

COMPETENCE IN
PRECISION
AND QUALITY



Product Information

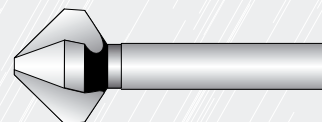
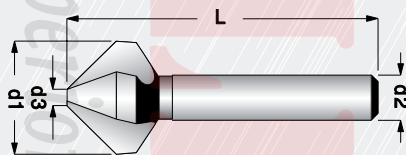
The flutes of the new RUKO high-performance taper and deburring countersinks are CBN ground from the fully hardened material. Because CBN (cubic crystalline boron nitride) is a much harder abrasive than even silicon carbide or corundum, a better and sharper cutting edge is achieved - without burrs. And, with higher dimensional precision the countersinks will last considerably longer while maintaining the precise tolerances.

1. CBN deep-ground flutes have better and sharper cutting edges - without burrs - unlike conventional milled flutes. This guarantees a superior cutting edge and considerably longer tool life.
2. Because the radially-adjusted relief produced by CBN grinding relates directly to its diameter, the cutting edge is always the highest point of the diameter.
3. Each diameter has its own relief angle. Consequently the cutting edge is always the highest point, too.
4. The axial relief produced by CBN grinding guarantees a smooth low-heat cut.
5. The CBN ground countersinkers ensure an excellent chip flow, chatter free working, scratch-free surface and have ideal centering features.

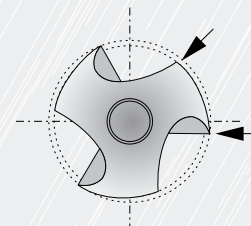
Product Application

1. The ideal tool for countersinking and deburring in the following sectors of industry: electrical, sanitary engineering, heating techniques, mechanical engineering, switching systems, tubular steel construction, furniture and wood working, automotive and aviation.
2. This tough tool is suitable for all standard industrial materials: non-ferrous metal, stainless steel, thermoplastics and duroplastics as well as sheet metals.
3. By using RUKO cutting spray or RUKO cutting paste, longer tool life and superior surface quality of the workpiece is guaranteed.

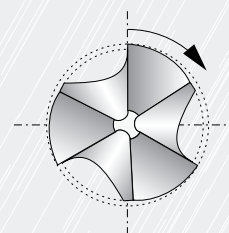
d1 Nominal diameter
d2 Shank diameter
d3 Nose diameter
L Overall length



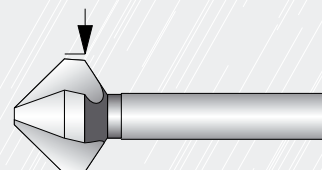
1. CBN deep-ground flute



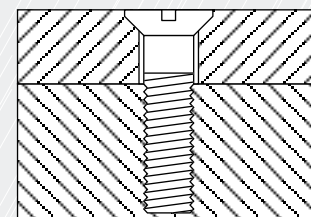
2. Radially adjusted relief produced by CBN grinding



3. CBN ground relief angle



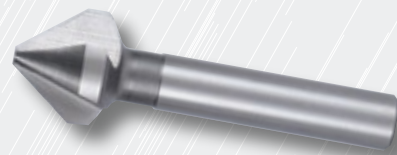
4. Axial relief produced by CBN grinding



Precision countersinks type C 82° H.S.S., CBN ground

Counters. angle: 82°
Shank: cylindrical
Cutting edges: 3
Surface: bright
Right-hand cutting

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.



Packing unit: in plastic tubes of 1

Nominal Ø d1		Ø d3	Shank Ø d2		Overall length L		Content pcs.	Part no.	Price each \$
inch	mm	inch	inch	mm	inch	mm			
1/4	6.4	3/64	3/16	5	1 3/4	45	1	102 182	10.50
5/16	7.9	4/64	1/4	6	2	50	1	102 183	11.75
3/8	9.5	5/64	1/4	6	2	50	1	102 184	13.65
1/2	12.7	6/64	5/16	8	2 3/16	56	1	102 186	14.20
5/8	15.9	7/64	3/8	10	2 3/8	60	1	102 188	14.70
3/4	19.1	8/64	3/8	10	2 1/2	63	1	102 189	21.00
7/8	22.2	9/64	3/8	10	2 5/8	67	1	102 190	25.20
1	25.4	9/64	3/8	10	2 5/8	67	1	102 191	26.25

Precision countersink kit type C 82° H.S.S. CBN ground in steel case

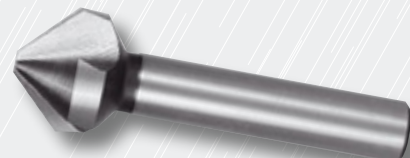
Description	Part no.	Price / kit \$
Taper and deburring countersinks H.S.S. 82° type C Ø 1/4 - 3/8 - 1/2 - 3/4 - 1 inch	102 193	111.65



Precision countersinks type C 90° H.S.S. (metric sizes) CBN ground

Counters. angle: 90°
Shank: cylindrical
Cutting edges: 3
Surface: bright
Right-hand cutting

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.



Packing unit: in plastic tubes of 1

Nominal Ø d1		Ø d3	Shank Ø d2		Overall length L		Content pcs.	Part no.	Price each \$
inch	mm	inch	inch	mm	inch	mm			
1/4	6.3	1/16	3/16	5	1 3/4	45	1	102 107	11.20
5/16	8.0	5/64	1/4	6	2	50	1	102 110	12.08
3/8	9.4	3/32	1/4	6	2	50	1	102 112	13.65
31/64	12.4	7/64	5/16	8	2 3/16	56	1	102 116	15.95
21/32	16.5	1/8	3/8	10	2 3/8	60	1	102 119-1	17.35
13/16	20.5	9/64	3/8	10	2 1/2	63	1	102 121	21.35
29/32	23.0	5/32	3/8	10	2 5/8	67	1	102 122	28.70
63/64	25.0	5/32	3/8	10	2 5/8	67	1	102 123	29.05

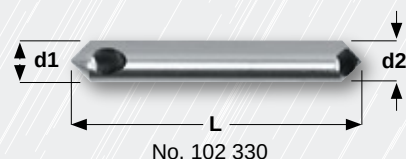
Further 90° countersinks with metric measures see main catalogue

Zero flute countersinks 82° H.S.S.

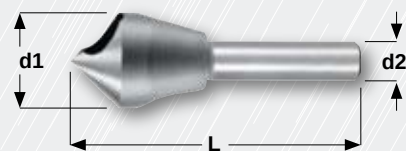
Counters. angle: 82°
Shank: cylindrical
Cutting edges: diagonal slot
Surface: bright
Right-hand cutting

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



No. 102 330



No. 102 334

Countersinks size	single or double	Range in inches	Head Ø d1 inch	Shank Ø d2 inch	Total length inch	Content pcs.	Part no.	Price each \$
0	double	1/16 - 15/64	1/4	1/4	1 7/8	1	102 330	9.80
1	single	5/32 - 13/32	1/2	1/4	1 3/4	1	102 331	11.20
2	single	3/16 - 17/32	5/8	5/16	2	1	102 332	14.53
3	single	5/16 - 25/32	7/8	1/2	2 3/4	1	102 333	17.50
4	single	7/32 - 1 1/16	1 1/8	1/2	3 1/4	1	102 334	24.15

Zero flute countersinks kit 82° H.S.S. in steel case

Description	Part no.	Price / kit \$
Zero flute countersinks H.S.S. 82° size 1 - 2 - 3 - 4	102 340	67.38



No. 102 340

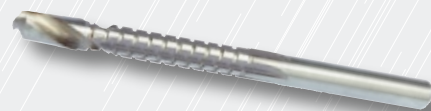
Milling drills H.S.S., H.S.S.-TiN

Point cut: helical point
Point angle: 118°
Surface: blank / TiN
Right-hand cutting

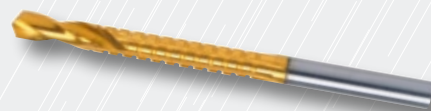
For drilling and milling contours into wood, sheet metal, plastics and other thin-walled materials. Twist drill at the front, turning into a milling cutter with chip breakers.

Packing unit: in plastic tubes of 1

Ø inch	Total length inch	Material	Content pcs.	Part no.	Price / each \$
1/4	3 9/16	H.S.S.	1	101 201	10.15
5/16	3 9/16	H.S.S.	1	101 202	19.25
1/4	3 9/16	H.S.S.-TiN	1	101 201 T	11.90
5/16	3 9/16	H.S.S.-TiN	1	101 202 T	21.90



No. 102 201



No. 102 201 T



COMPETENCE IN
PRECISION
AND QUALITY

THREAD- CUTTING TOOLS



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
 Tolerance: 2 B
 Surface: bright
 Right-hand cutting

For through threads and bottoming threads in unalloyed or low-alloyed steels up to 800 N/mm² strength, malleable cast iron and non-ferrous metals. The thread is cut in three operations.

Also available individually

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



Packing unit:
 Set in plastic pack

Nominal thread size	Threads per inch	Thread core hole mm	Total length mm	Thread length mm	Part no.	Price each \$
No. 2	56	1,85	36,0	11,0	246 020 UNC	45.36
No. 3	48	2,10	36,0	11,0	246 030 UNC	45.36
No. 4	40	2,35	40,0	12,0	246 040 UNC	27.22
No. 5	40	2,65	40,0	12,0	246 050 UNC	27.22
No. 6	32	2,85	45,0	14,0	246 060 UNC	27.22
No. 8	32	3,50	45,0	14,0	246 080 UNC	27.22
No. 10	24	3,90	50,0	16,0	246 100 UNC	27.22
No. 12	24	4,50	50,0	18,0	246 120 UNC	27.22
1/4	20	5,10	50,0	19,0	246 014 UNC	14.69

Nominal thread size	Threads per inch	Thread core hole mm	Total length mm	Thread length mm	Part no.	Price each \$
5/16	18	6,60	56,0	22,0	246 516 UNC	15.98
3/8	16	8,00	70,0	24,0	246 038 UNC	18.14
7/16	14	9,40	70,0	24,0	246 716 UNC	22.68
1/2	13	10,80	75,0	29,0	246 012 UNC	27.22
9/16	12	12,20	80,0	30,0	246 916 UNC	35.42
5/8	11	13,50	80,0	32,0	246 058 UNC	40.18
3/4	10	16,50	95,0	40,0	246 034 UNC	53.37
7/8	9	19,50	100,0	40,0	246 078 UNC	66.10
1"	8	22,25	110,0	50,0	246 010 UNC	79.48

Round dies UNC DIN EN 22568 HSS, ground (formerly DIN 223)

Type: Type B closed, preslotted
 Thread: american UNC
 coarse thread
 Tolerance: 2 A
 Surface: bright
 Right-hand cutting

For unalloyed or low-alloyed steels up to 800 N/mm² strength and non-ferrous metals. The thread is cut in one operation.



Packing unit:
 Individual plastic pack

Nominal thread size	Threads per inch	Outside Ø mm	Thickness mm	Part no.	Price each \$
No. 2	56	16,0	5,0	240 020 UNC	19.81
No. 3	48	16,0	5,0	240 030 UNC	19.81
No. 4	40	20,0	5,0	240 040 UNC	16.38
No. 5	40	20,0	5,0	240 050 UNC	16.38
No. 6	32	20,0	7,0	240 060 UNC	16.38
No. 8	32	20,0	7,0	240 080 UNC	16.38
No. 10	24	20,0	7,0	240 100 UNC	16.38
No. 12	24	20,0	7,0	240 120 UNC	16.38
1/4	20	20,0	7,0	240 014 UNC	13.10

Nominal thread size	Threads per inch	Outside Ø mm	Thickness mm	Part no.	Price each \$
5/16	18	25,0	9,0	240 516 UNC	14.82
3/8	16	30,0	11,0	240 038 UNC	16.38
7/16	14	30,0	11,0	240 716 UNC	18.88
1/2	13	38,0	14,0	240 012 UNC	21.32
9/16	12	38,0	14,0	240 916 UNC	26.21
5/8	11	45,0	18,0	240 058 UNC	28.70
3/4	10	45,0	18,0	240 034 UNC	28.70
7/8	9	55,0	22,0	240 078 UNC	44.30
1"	8	55,0	22,0	240 010 UNC	44.30

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
 Tolerance: 2 B
 Surface: bright
 Right-hand cutting

For through threads and bottoming threads in unalloyed or low-alloyed steels up to 800 N/mm² strength, malleable cast iron and non-ferrous metals. The thread is cut in two operations.

Also available individually

Taper tap: Article no. 246-1 UNF

Final tap: Article no. 246-2 UNF



Packing unit:
 Set in plastic pack

Nominal thread size	Threads per inch	Thread core hole mm	Total length mm	Thread length mm	Part no.	Price each \$	Nominal thread size	Threads per inch	Thread core hole mm	Total length mm	Thread length mm	Part no.	Price each \$
No. 2	64	1,85	32,0	10,0	246 020 UNF	30.24	5/16	24	6,90	56,0	22,0	246 516 UNF	11.54
No. 3	56	2,15	32,0	10,0	246 030 UNF	30.24	3/8	24	8,50	63,0	22,0	246 038 UNF	13.10
No. 4	48	2,40	36,0	11,0	246 040 UNF	18.14	7/16	20	9,90	63,0	22,0	246 716 UNF	16.38
No. 5	44	2,70	36,0	11,0	246 050 UNF	18.14	1/2	20	11,50	75,0	24,0	246 012 UNF	19.56
No. 6	40	2,95	40,0	12,0	246 060 UNF	18.14	9/16	18	12,90	80,0	28,0	246 916 UNF	25.58
No. 8	36	3,50	40,0	12,0	246 080 UNF	18.14	5/8	18	14,50	80,0	28,0	246 058 UNF	29.02
No. 10	32	4,10	45,0	14,0	246 100 UNF	18.14	3/4	16	17,50	95,0	32,0	246 034 UNF	38.69
No. 12	28	4,60	50,0	14,0	246 120 UNF	18.14	7/8	14	20,50	100,0	36,0	246 078 UNF	47.73
1/4	28	5,50	50,0	18,0	246 014 UNF	10.61	1"	12	23,25	110,0	40,0	246 010 UNF	57.41

Round dies UNF DIN EN 22568 HSS, ground (formerly DIN 223)

Type: Type B closed, preslotted
 Thread: american UNF
 fine thread
 Tolerance: 2 A
 Surface: bright
 Right-hand cutting

For unalloyed or low-alloyed steels up to 800 N/mm² strength and non-ferrous metals. The thread is cut in one operation.



Packing unit:
 Individual plastic pack

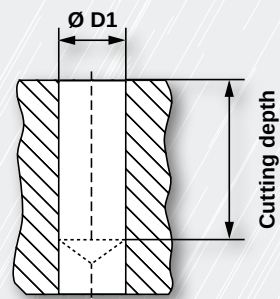
Nominal thread size	Threads per inch	Outside Ø mm	Thickness mm	Part no.	Price each \$	Nominal thread size	Threads per inch	Outside Ø mm	Thickness mm	Part no.	Price each \$
No. 2	64	16,0	5,0	240 020 UNF	19.81	5/16	24	25,0	9,0	240 516 UNF	14.82
No. 3	56	16,0	5,0	240 030 UNF	19.81	3/8	24	30,0	11,0	240 038 UNF	16.38
No. 4	48	16,0	5,0	240 040 UNF	16.38	7/16	20	30,0	11,0	240 716 UNF	18.88
No. 5	44	20,0	5,0	240 050 UNF	16.38	1/2	20	38,0	10,0	240 012 UNF	21.32
No. 6	40	20,0	5,0	240 060 UNF	16.38	9/16	18	38,0	10,0	240 916 UNF	26.21
No. 8	36	20,0	7,0	240 080 UNF	16.38	5/8	18	45,0	11,0	240 058 UNF	28.70
No. 10	32	20,0	7,0	240 100 UNF	16.38	3/4	16	45,0	14,0	240 034 UNF	28.70
No. 12	28	20,0	7,0	240 120 UNF	16.38	7/8	14	55,0	16,0	240 078 UNF	44.30
1/4	28	20,0	7,0	240 014 UNF	13.10	1"	12	55,0	16,0	240 010 UNF	44.30

Single-cut taps NPT HSS, ground

Chamfer: Type C,
ca. 2 - 3 threads
Thread: american conical pipe
thread to ANSI
B.1.20.1
Flanks: relief-ground
Cone: 1:16
Surface: bright
Right-hand cutting

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	Threads per inch	D1 mm	Cutting depth mm	Total length mm	Thread length mm	Part. no.	Price each \$
1/16	27	6,25	12,00	65,0	19,0	231 116 NPT	18.14
1/8	27	8,50	12,00	65,0	19,0	231 018 NPT	16.38
1/4	18	11,10	17,50	70,0	25,0	231 014 NPT	17.94
3/8	18	14,70	17,50	75,0	26,0	231 038 NPT	24.96
1/2	14	18,00	22,90	80,0	31,0	231 012 NPT	31.20
3/4	14	23,25	23,00	100,0	33,0	231 034 NPT	41.03
1"	11,5	29,25	27,40	110,0	38,0	231 010 NPT	60.50
1 1/4"	11,5	38,00	28,10	125,0	41,0	231 114 NPT	90.72
1 1/2"	11,5	44,25	28,40	140,0	42,0	231 112 NPT	169.92
2"	11,5	56,25	28,40	160,0	44,0	231 020 NPT	208.80

Tap wrench with ratchet

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

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

Packing unit: Individual plastic pack

Size	Length mm	for hand tape size			Part no.	Price / each \$
		M	Ww	G		
1	85,0	M 3 - M 10	1/8 - 3/8	—	241 001	12.40
2	100,0	M 5 - M 12	7/32 - 1/2	6 1/8	241 002	17.56
10	250,0	M 3 - M 10	1/8 - 3/8	—	241 010	29.38
20	300,0	M 5 - M 12	7/32 - 1/2	6 1/8	241 020	33.40

Adjustable tap wrenches as per DIN 1814

Version: die-cast zinc housing
Chuck jaws: hardened

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

Packing unit: Individual plastic pack

Size	Length mm	for hand tape size			Article no.	Price / each \$
		M	Ww	G		
0	130,0	M 1 - M 8	1/16 - 5/16	—	241 100	7.04
1	180,0	M 1 - M 10	1/8 - 3/8	—	241 101	7.63
1 1/2	180,0	M 1 - M 12	1/8 - 1/2	1/8	241 112	8.59
2	280,0	M 3,5 - M 12	3/16 - 5/8	1/8 - 3/8	241 102	11.06
3	380,0	M 5 - M 20	1/4 - 3/4	1/8 - 1/2	241 103	16.58
4	500,0	M 11 - M 27	1/2 - 1	1/8 - 3/4	241 104	33.39
5	700,0	M 13 - M 32	5/8 - 1 1/4	1/4 - 1	241 105	56.87
6	1000,0	M 19 - M 38	3/4 - 1 1/2	1/4 - 1 1/4	241 106	122.70
7	1200,0	M 25 - M 52	7/8 - 2	5/8 - 2 1/4	241 107	224.92



Ball tap wrenches

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

Ideal for rapid fitting of taps.

Packing unit:
Individual plastic pack

Size	Length mm	for hand tap size			Article no.	Price / each \$
		M	Ww	G		
0	200,0	M 1 - M 4	1/16 - 5/32	—	241 200	9.26
1	200,0	M 3,5 - M 8	5/32 - 5/16	—	241 201	9.26
2	240,0	M 4 - M 10	5/32 - 3/8	—	241 202	10.49
3	300,0	M 5 - M 12	7/32 - 1/2	—	241 203	12.32
4	340,0	M 9 - M 12	3/8 - 5/8	—	241 204	15.26
5	450,0	M 12 - M 20	1/2 - 13/16	—	241 205	26.92
6	650,0	M 18 - M 27	11/16 - 1	—	241 206	49.04

Die stocks as per DIN 225

Version: die-cast zinc housing

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.

Packing unit:
Individual plastic pack

Size	Thickness mm	Length mm	for tap size			Article no.	Price / each \$
			M + MF	Ww	G		
16	5,0	160,0	M 1 - M 2,6	1/16 - 3/32	—	242 165	5.33
20	5,0	200,0	M 3 - M 4	1/8 - 5/32	—	242 205	5.33
20	7,0	200,0	M 4,5 - M 6	3/16 - 1/4	—	242 207	5.33
25	9,0	224,0	M 7 - M 9	5/16	1/16	242 259	5.72
30	11,0	280,0	M 10 - M 11	3/8 - 7/16	1/8	242 3011	7.25
38	10,0	315,0	MF 12 - MF 14	—	1/4	242 3810	9.15
38	14,0	315,0	M 12 - M 14	1/2 - 9/16	—	242 3814	9.15
45	14,0	450,0	MF 16 - MF 20	—	3/8 - 1/2	242 4514	15.26
45	18,0	450,0	M 16 - M 20	5/8 - 3/4	—	242 4518	15.26
55	16,0	560,0	MF 22 - MF 24	—	5/8 - 3/4	242 5516	20.99
55	22,0	560,0	M 22 - M 24	7/8 - 1	—	242 5522	20.99
65	18,0	630,0	MF 27 - MF 36	—	7/8 - 1	242 6518	32.83
65	25,0	630,0	M 27 - M 36	1 1/8 - 1 3/8	—	242 6525	32.83
75	30,0	740,0	M 38 - M 42	1 1/2 - 1 5/8	—	242 7530	85.41
75	20,0	740,0	MF 38 - MF 42	—	1 1/8 - 1 1/4	242 7520	85.41
90	36,0	900,0	M 45 - M 52	1 3/4 - 2	—	242 9036	106.98
90	22,0	900,0	MF 45 - MF 52	—	1 3/8 - 1 5/8	242 9022	106.98
105	36,0	975,0	M 54 - M 63	2 1/4 - 2 3/4	—	242 10536	223.08
105	22,0	975,0	MF 54 - MF 63	—	1 3/4 - 2	242 10522	223.08



Machine taps UNC DIN 371 HSS Co 5, ground

Thread: american UNC
coarse thread
Flanks: relief-ground
Tolerance: 2 B
Surface: bright
Right-hand cutting

● For unalloyed or alloyed steels up to 900 N/mm² strength, malleable cast iron and non-ferrous metals. The thread is cut in one operation. The machine tap consists of cobalt alloyed heavy-duty high-speed steel with higher heat-resistance for a longer tool life.

Chamfer: Type B, 4 - 5 threads with progressive tap
Machine tap with reinforced shank for through threads



Chamfer: Type C / 35° right-hand spiral flutes, 2 - 3 threads
Machine tap with reinforced shank and 35° right-hand spiral flutes for bottoming



Packing unit: Individual plastic pack

Nominal thread size	Threads per inch	Thread core hole mm	Total length mm	Part. no.	Thread length mm	Price each \$	Part. no.	Thread length mm	Price each \$
No. 4	40	2,35	56,0	265 040 UNC	11,0	9.83	266 040 UNC	7,0	12.32
No. 5	40	2,65	56,0	265 050 UNC	11,0	9.83	266 050 UNC	7,0	12.32
No. 6	32	2,85	56,0	265 060 UNC	13,0	9.83	266 060 UNC	8,0	12.32
No. 8	32	3,50	63,0	265 080 UNC	13,0	9.83	266 080 UNC	8,0	12.32
No. 10	24	3,90	70,0	265 100 UNC	16,0	9.83	266 100 UNC	10,0	12.32
No. 12	24	4,50	70,0	265 120 UNC	16,0	9.83	266 120 UNC	10,0	12.32
1/4	20	5,10	80,0	265 014 UNC	17,0	9.83	266 014 UNC	13,0	12.32
5/16	18	6,60	90,0	265 516 UNC	20,0	12.32	266 516 UNC	14,0	14.82
3/8	16	8,00	100,0	265 038 UNC	22,0	13.88	266 038 UNC	16,0	16.38

Machine taps UNC DIN 376 HSS Co 5, ground

Thread: american UNC
coarse thread
Flanks: relief-ground
Tolerance: 2 B
Surface: bright
Right-hand cutting

● For unalloyed or alloyed steels up to 900 N/mm² strength, malleable cast iron and non-ferrous metals. The thread is cut in one operation. The machine tap consists of cobalt alloyed heavy-duty high-speed steel with higher heat-resistance for a longer tool life.

Chamfer: Type B, 4 - 5 threads with progressive tap
Machine tap with overflow shank for through threads



Chamfer: Type C / 35° right-hand spiral flutes, 2 - 3 threads
Machine tap with overflow shank and 35° right-hand spiral flutes for bottoming



Packing unit: Individual plastic pack

Nominal thread size	Threads per inch	Thread core hole mm	Total length mm	Part. no.	Thread length mm	Price each \$	Part. no.	Thread length mm	Price each \$
7/16	14	9,40	100,0	265 716 UNC	22,0	16.38	266 716 UNC	17,0	20.59
1/2	13	10,80	110,0	265 012 UNC	25,0	16.38	266 012 UNC	20,0	20.59
9/16	12	12,20	110,0	265 916 UNC	26,0	24.65	266 916 UNC	20,0	29.64
5/8	11	13,50	110,0	265 058 UNC	27,0	24.65	266 058 UNC	22,0	29.65
3/4	10	16,50	125,0	265 034 UNC	30,0	47.58	266 034 UNC	25,0	59.28
7/8	9	19,50	140,0	265 078 UNC	32,0	57.72	266 078 UNC	27,0	66.24
1"	8	22,25	160,0	265 010 UNC	36,0	65.52	266 010 UNC	30,0	74.88

Machine taps UNF DIN 371 HSS Co 5, ground

Thread: american UNF
fine thread
Flanks: relief-ground
Tolerance: 2 B
Surface: bright
Right-hand cutting

● For unalloyed or alloyed steels up to 900 N/mm² strength, malleable cast iron and non-ferrous metals. The thread is cut in one operation. The machine tap consists of cobalt alloyed heavy-duty high-speed steel with higher heat-resistance for a longer tool life.

Chamfer: Type B, 4 - 5 threads with progressive tap
Machine tap with reinforced shank for through threads



Chamfer: Type C / 35° right-hand spiral flutes, 2 - 3 threads
Machine tap with reinforced shank and 35° right-hand spiral flutes for bottoming



Packing unit: Individual plastic pack

Nominal thread size	Threads per inch	Thread core hole mm	Total length mm	Part. no.	Thread length mm	Price each \$	Part. no.	Thread length mm	Price each \$
No. 4	48	2,40	56,0	265 040 UNF	11,0	9.83	266 040 UNF	5,5	12.32
No. 5	44	2,70	56,0	265 050 UNF	11,0	9.83	266 050 UNF	6,0	12.32
No. 6	40	2,95	56,0	265 060 UNF	13,0	9.83	266 060 UNF	7,0	12.32
No. 8	36	3,50	63,0	265 080 UNF	13,0	9.83	266 080 UNF	7,5	12.32
No. 10	32	4,10	70,0	265 100 UNF	16,0	9.83	266 100 UNF	8,0	12.32
No. 12	28	4,60	70,0	265 120 UNF	16,0	9.83	266 120 UNF	9,0	12.32
1/4	28	5,50	80,0	265 014 UNF	17,0	9.83	266 014 UNF	10,0	12.32
5/16	24	6,60	90,0	265 516 UNF	17,0	12.32	266 516 UNF	10,0	14.82
3/8	24	8,50	100,0	265 038 UNF	18,0	13.88	266 038 UNF	10,0	16.38

Machine taps UNF DIN 374 HSS Co 5, ground

Thread: american UNF
fine thread
Flanks: relief-ground
Tolerance: 2 B
Surface: bright
Right-hand cutting

● For unalloyed or alloyed steels up to 900 N/mm² strength, malleable cast iron and non-ferrous metals. The thread is cut in one operation. The machine tap consists of cobalt alloyed heavy-duty high-speed steel with higher heat-resistance for a longer tool life.

Chamfer: Type B, 4 - 5 threads with progressive tap
Machine tap with overflow shank for through threads



Chamfer: Type C / 35° right-hand spiral flutes, 2 - 3 threads
Machine tap with overflow shank and 35° right-hand spiral flutes for bottoming



Packing unit: Individual plastic pack

Nominal thread size	Threads per inch	Thread core hole mm	Total length mm	Part. no.	Thread length mm	Price each \$	Part. no.	Thread length mm	Price each \$
7/16	20	9,90	100,0	265 716 UNF	22,0	16.38	266 716 UNF	13,0	20.59
1/2	20	11,50	100,0	265 012 UNF	22,0	16.38	266 012 UNF	13,0	20.59
9/16	18	12,90	100,0	265 916 UNF	22,0	24.65	266 916 UNF	15,0	29.64
5/8	18	14,50	100,0	265 058 UNF	22,0	24.65	266 058 UNF	15,0	29.64
3/4	16	17,50	110,0	265 034 UNF	25,0	47.58	266 034 UNF	17,0	54.72
7/8	14	20,50	140,0	265 078 UNF	26,0	53.28	266 078 UNF	17,0	66.24
1"	12	23,25	150,0	265 010 UNF	28,0	60.48	266 010 UNF	20,0	74.88

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The professional's choice for unique, superior quality tools!

CHANDS' TOOLBOX.COM

RUKO

MAGNETIC DRILL PRESSES ANNULAR CUTTERS

COMPETENCE IN
PRECISION
AND QUALITY



Angle core drilling machine RS5e

The magnetic-stand makes horizontal, vertical or overhead work possible. The machine's compact, light construction makes it extremely versatile and easily portable. An electronic protective switch prevents inadvertent operation until the magnet has been switched on. The machine is equipped with a safety cutoff if the magnet fails due to outside influences. Ideal for use in steel construction, industrial building, engineering, terotechnology, shipbuilding, bridge construction, crane building, assembly work in metalworking shops.

ULTRA compact, light and super-powerful!

The "new angle core drilling machine RS5e" by RUKO ensures optimal use in very cramped spaces, allowing it to be employed e.g. in iron girders, narrow steel structures or lorry frames.

The light weight of just 10.0 kg and the ergonomically formed handle make it easier to work with the machine and to transport it.



Technical data:

Magnetic clamping force:	9.000 N
Total Power consumption:	1.200 Watt
Rotation speeds:	140 - 350 r.p.m.
Height:	7 11/64"
Lift:	1 1/2"
Length and width:	6 1/3" x 3 1/7"
Weight:	22 lb
Adapter:	3/4"
Drilling range:	
Core drills:	up to Ø 1 3/8"
Cutting depth core drills:	1 3/16"
Input voltage:	110 V
Conformity with:	VDE, CEE

Accessories:

- 1 Carrying bag incl. 2 plastic boxes
- 1 Pilot pin Ø 6,35 x 70 mm
article no. 108 344
- 1 Cooling bottle article no. 108 101
- 1 Safety belt
- 1 Operating instructions



without arbor

Description	
Angle core drilling machine RS5e	
Part no.	108 006 RS
Price \$	1,699.00

Gearbox with hardened precision gear teeth

500 ml cooling bottle

Built-in electronics impervious to supply voltage fluctuations and other disturbing influences.

Defined feed of cooling lubricant: Internal cooling guarantees a clean cut and long service life of the tools.

Optimal for use in cramped spaces.

High-performance motor. For core drills up to Ø 35,0 mm.

Easy operation due to the ergonomically formed handle.

Very rugged plastic housing.

Suitable for left or right hand operation. Handle can be mounted easily on the right or the left.



Magnet: improved attraction with reduced heat generation.

Robust, durable, and lighted quality switches.

Cable protection

Magnetic drill press RS 10

The magnetic-stand makes horizontal, vertical or overhead work possible. The machine's compact, light construction makes it extremely versatile and easily portable. The core drills in the machine can easily be replaced by twist drills, thus allowing bottoming. An electronic protective switch prevents inadvertent operation until the magnet has been switched on. The machine is equipped with a safety cutoff if the magnet fails due to outside influences. Speeds and cutting speeds are ideally matched to our machines. Ideal for use in steel construction, industrial building, engineering, terotechnology, shipbuilding, bridge construction, crane building, assembly work in metalworking shops.

Technical data:

Magnetic clamping force:	9,000 N
Power consumption:	1,120 Watt
Rotation speeds:	450 r.p.m.
Height:	16 1/4" - 21 1/2"
Lift:	5 1/2"
Length and width:	6 1/3" x 3 1/7"
Weight:	26 1/2 lb
Adapter:	3/4"
Drill chuck:	1/16" - 1/2" with adapter
Drilling range:	
Jobber drills:	max. Ø 3/8"
Annular cutters:	up to Ø 1 3/8"
Cutting depth annular cutters:	1 3/16"
Input voltage:	110 V
Conformity with:	VDE, CEE

Accessories:

- 1 Carrying case in steel case
- 1 Drill chuck
- 1 Adapter for drill chuck
- 1 Cooling bottle including holding device
- 1 Allen key for Weldon shank
- 1 Safety belt
- 1 Operating instructions

without arbor



Description	
Magnetic drill press RS 10	
Part no.	108 001 RS
Price \$	1,299.00

Very rugged
plastic housing.

High-performance motor.
For annular cutters
up to Ø 35,0 mm.

6-point attachment
on the sled. Very sturdy
connection between
drill stand and drive.

Transmission:
**hardened
precision
gear teeth.**

**Defined feed of
cooling lubricant:**
Internal cooling
guarantees a clean cut
and long service life
of the tools.

Removable device
enables the use of
further arbors.

Suitable for left or right hand operation.
Handle can be mounted easily
on the right or the left.

**Full-brass
dovetail design.**

500 ml cooling bottle

Extremely
long service life due to
internal cable routing.
Contamination or damage
is no longer possible!

Built-in **electronics**
impervious to supply
voltage fluctuations and
other disturbing influences.

Ergonomic handles
for easy portability.

Robust, durable, and
lighted **quality switches.**

Cable protection.

Magnet:
improved attraction with
reduced heat generation.

The manually adjustable
extra support boosts the
attraction of the magnet.

Magnetic drill press RS 20

The magnetic-stand makes horizontal, vertical or overhead work possible. The machine's compact, light construction makes it extremely versatile and easily portable. The core drills in the machine can easily be replaced by twist drills, thus allowing bottoming. An electronic protective switch prevents inadvertent operation until the magnet has been switched on. The machine is equipped with a safety cutoff if the magnet fails due to outside influences. Speeds and cutting speeds are ideally matched to our machines. Ideal for use in steel construction, industrial building, engineering, terotechnology, shipbuilding, bridge construction, crane building, assembly work in metalworking shops.



Technical data:

Magnetic clamping force:	13,000 N
Power consumption:	1,200 Watt
Rotation speeds:	
1st gear:	250 r.p.m.
2nd gear:	450 r.p.m.
Height:	16" - 23 1/2"
Lift:	7 1/2"
Length and width:	7 1/2" x 3 9/16"
Weight:	35 lb
Adapter:	Morse taper MT 2
Drill chuck:	1/8" - 5/8"
Drilling range:	
Jobber drills:	max. Ø 1/2"
Annular cutters:	up to Ø 2"
Cutting depth annular cutters:	up to 2"
Input voltage:	110 V
Conformity with:	VDE, CEE

Accessories:

- 1 Carrying case in steel case
- 1 Drill drift
- 1 Drill chuck
- 1 Spike cone MT 2 / B16
- 1 Cooling bottle including holding device
- 1 Safety belt
- 1 Operating instructions

without arbor

Description	
Magnetic drill press RS 20	
Part no.	108 002 RS
Price \$	1,599.00

Very rugged **plastic housing**.

Extremely long service life due to **internal cable routing**. Contamination or damage is no longer possible!

500 ml cooling bottle

Full-brass dovetail design.

High-performance motor.
For annular cutters up to Ø 50,0 mm.

Precision rack-and-pinion gearbox.

2-speed gearbox with hardened precision gear teeth can be operated with **ergonomic rotary switch**.

Ergonomic handles for easy portability.

6-point attachment on the sled. Very sturdy connection between drill stand and drive.

Built-in electronics impervious to supply voltage fluctuations and other disturbing influences.

Defined feed of cooling lubricant:
Internal cooling guarantees a clean cut and long service life of the tools.

Ergonomic positioning of the motor and the solenoid switch.

Suitable for left or right hand operation. **Handle** can be mounted easily on the right or the left.

Cable protection.

Magnet:
improved attraction with reduced heat generation.

Robust, durable, and lighted **quality switches**.

The manually adjustable **extra support** boosts the attraction of the magnet.

Magnetic-stand drilling machine RS25e

The magnetic-stand makes horizontal, vertical or overhead work possible. The machine's compact, light construction makes it extremely versatile and easily portable. The core drills in the machine can easily be replaced by twist drills, thus allowing bottoming. An electronic protective switch prevents inadvertent operation until the magnet has been switched on. The machine is equipped with a safety cutoff if the magnet fails due to outside influences. Speeds and cutting speeds are ideally matched to our machines. Ideal for use in steel construction, industrial building, engineering, terotechnology, shipbuilding, bridge construction, crane building, assembly work in metalworking shops.



Technical data:

Like Magnetic-stand drilling machine RS20 in additional it works clockwise and counter-clockwise and with electronic controlled speed.

Magnetic clamping force: **13.000 N**
 Total Power consumption: **1.200 Watt**
 Rotation speeds: **1st gear: 100 - 250 r.p.m.**
 2nd gear: 180 - 450 r.p.m.
 Height: **16" - 23 1/2"**
 Lift: **7 1/2"**
 Length and width: **7 1/2" x 3 9/16"**
 Weight: **35 lb**
 Adapter: **Morse taper MT 2**
 Drill chuck: **1/8" - 5/8"**

Drilling range:

Jobber drills (DIN 338): **max. Ø 1/2"**
 Annular cutters: **up to Ø 2"**
 Cutting depth annular cutters: **up to 2"**
 Input voltage: **110 V**
 Conformity with: **VDE, CEE**

Accessories:

- 1 Carrying case in steel case
- 1 Drill drift
- 1 Drill chuck 3,0 - 16,0 mm article no. 108 117
- 1 Spike cone MT 2 / B16 article no. 108 120
- 1 Cooling bottle including holding device article no. 108 101
- 1 Safety belt
- 1 Operating instructions

without arbor

Description	
Magnetic drill press RS 25e	
Part no.	108 005 RS
Price \$	1,799.00

Very rugged **plastic housing**.

Extremely long service life due to **internal cable routing**. Contamination or damage is no longer possible!

500 ml cooling bottle

Full-brass dovetail design.

High-performance motor.
For core drills up to Ø 60,0 mm.

Precision rack-and-pinion gearbox.

2-speed gearbox with hardened precision gear teeth can be operated with **ergonomic rotary switch**.

Ergonomic handles for easy portability.

6-point attachment on the sled. Very sturdy connection between drill stand and drive.

Built-in electronics impervious to supply voltage fluctuations and other disturbing influences.

Defined feed of cooling lubricant:
Internal cooling guarantees a clean cut and long service life of the tools.

Ergonomic positioning of the motor and the solenoid switch.

Suitable for left or right hand operation. **Handle** can be mounted easily on the right or the left.

The manually adjustable **extra support** boosts the attraction of the magnet.

Magnet:
improved attraction with reduced heat generation. Available with 2 versions of magnet.

Continuously variable **speed controller** for optimum adjustment of cutting speed.

Right-/ left-handed rotation: reversible for threaded cutters up to M 20.

Robust, durable, and lighted **quality switches**.



Magnetic drill press RS 30e

The magnetic-stand makes horizontal, vertical or overhead work possible. The machine's compact, light construction makes it extremely versatile and easily portable. The core drills in the machine can easily be replaced by twist drills, thus allowing bottoming. An electronic protective switch prevents inadvertent operation until the magnet has been switched on. The machine is equipped with a safety cutoff if the magnet fails due to outside influences. Speeds and cutting speeds are ideally matched to our machines. Ideal for use in steel construction, industrial building, engineering, terotechnology, shipbuilding, bridge construction, crane building, assembly work in metalworking shops.



Technical data:

Magnetic clamping force:	13,000 N
Power consumption:	1,840 Watt
Rotation speeds:	
1st gear:	60 - 140 r.p.m.
2nd gear:	200 - 470 r.p.m.
Height:	17 3/4" - 25 1/4"
Lift:	7 1/2"
Weight:	47 1/2 lb
Adapter:	Morse taper MT 3
Drill chuck:	1/8" - 5/8"
Drilling range:	
Jobber drills:	max. Ø 5/8"
Annular cutters:	up to Ø 3 1/8"
Cutting depth annular cutters:	up to 2"
Turn field:	+/- 9°
Moveable field:	+/- 1/4"
Input voltage:	110 V
Conformity with:	VDE, CEE

Accessories:

- 1 Carrying case in steel case
- 1 Drill drift
- 1 Drill chuck
- 1 Spike cone MT 3 / B16
- 1 Cooling bottle including holding device
- 1 Safety belt
- 1 Operating instructions

without arbor

Description	
Magnetic drill press RS 30e	
Part no.	108 003 RS
Price \$	1,999.00

Very rugged **plastic housing**.

Extremely long service life due to **internal cable routing**. Contamination or damage is no longer possible!

Full wave electronics for speed control.

Full-brass dovetail design.

High-performance motor. For annular cutters up to Ø 80,0 mm.

Precision rack-and-pinion gearbox.

2-speed gearbox with hardened precision gear teeth can be operated with **ergonomic rotary switch**.

Ergonomic handles for easy portability.

6-point attachment on the sled. Very sturdy connection between drill stand and drive.

Built-in electronics impervious to supply voltage fluctuations and other disturbing influences.

Defined feed of cooling lubricant: Internal cooling guarantees a clean cut and long service life of the tools.

Ergonomic positioning of the motor and the solenoid switch.

Suitable for left or right hand operation. **Handle** can be mounted easily on the right or the left.

Robust, durable, and lighted quality switches.

Magnet: improved attraction with reduced heat generation.

Continuously variable **speed controller** for optimum adjustment of cutting speed.

The RUKO **auxiliary controller** enables positioning of +/- 20° and 15 mm length with a fixed magnet. Advantage: no tilting of the machine on the magnet.

The manually adjustable **extra support** boosts the attraction of the magnet.

Magnetic-stand drilling machine RS40e

The magnetic-stand makes horizontal, vertical or overhead work possible. The machine's compact, light construction makes it extremely versatile and easily portable. The core drills in the machine can easily be replaced by twist drills, thus allowing bottoming. An electronic protective switch prevents inadvertent operation until the magnet has been switched on. The machine is equipped with a safety cutoff if the magnet fails due to outside influences. Speeds and cutting speeds are ideally matched to our machines. Torque control in the RS40e. Ideal for use in steel construction, industrial building, engineering, terotechnology, shipbuilding, bridge construction, crane building, assembly work in metalworking shops.



Technical data:

Like Magnetic-stand drilling machine RS30e in additional it works clockwise and counter-clockwise and with electronic controlled speed.

Magnetic clamping force: **13,000 N**

Power consumption: **1,840 Watt**

Rotation speeds:

1st gear: **60 - 140 r.p.m.**

2nd gear: **200 - 470 r.p.m.**

Height: **17 3/4" - 25 1/4"**

Lift: **7 1/2"**

Weight: **47 1/2 lb**

Adapter: **Morse taper MT 3**

Drill chuck: **1/8" - 5/8"**

Drilling range:

Jobber drills: **max. Ø 5/8"**

Annular cutters: **up to Ø 3 1/8"**

Cutting depth annular cutters: **up to 2"**

Turn field: **+/- 9°**

Moveable field: **+/- 1/4"**

Input voltage: **110 V**

Conformity with: **VDE, CEE**

Accessories:

- 1 Carrying case in steel case
- 1 Drill drift
- 1 Drill chuck
- 1 Spike cone MT 3 / B16
- 1 Cooling bottle including holding device
- 1 Safety belt
- 1 Operating instructions

without arbor

Description	
Magnetic drill press RS 40e	
Part no.	108 004 RS
Price \$	2,299.00

Very rugged **plastic housing**.

Extremely long service life due to **internal cable routing**. Contamination or damage is no longer possible!

Full wave electronics for speed and torque control.

Full-brass dovetail design.

High-performance motor. For annular cutters up to Ø 80,0 mm.

2-speed gearbox with hardened precision gear teeth can be operated with **ergonomic rotary switch**.

Precision rack-and-pinion gearbox.

6-point attachment on the sled. Very sturdy connection between drill stand and drive.

Ergonomic handles for easy portability.

Defined feed of cooling lubricant: Internal cooling guarantees a clean cut and long service life of the tools.

Built-in electronics impervious to supply voltage fluctuations and other disturbing influences.

Suitable for left or right hand operation. **Handle** can be mounted easily on the right or the left.

Ergonomic positioning of the motor and the solenoid switch.

Continuously variable speed controller for optimum adjustment of cutting speed.

Robust, durable, and lighted quality switches.

Continuously variable Power-Controller for adjustment of torque.

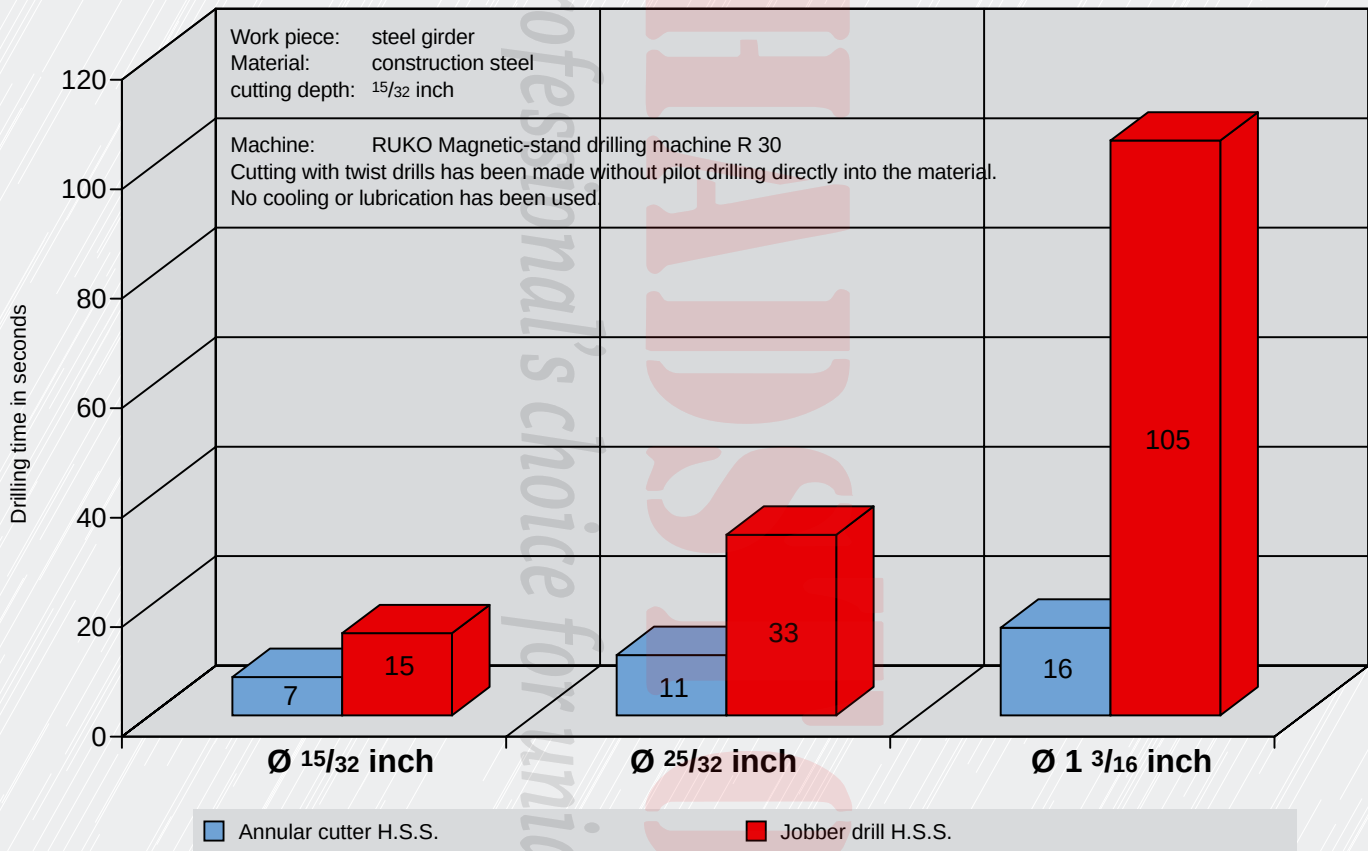
Right-/ left-handed rotation: reversible for threaded cutters up to M 30.

Magnet: improved attraction with reduced heat generation.

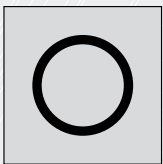
The RUKO **auxiliary controller** enables positioning of +/- 20° and 15,0 mm length with a fixed magnet. Advantage: no tilting of the machine on the magnet.

The manually adjustable **extra support** boosts the attraction of the magnet.

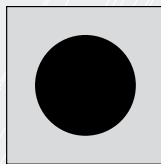
Comparison cutting times annular cutters H.S.S. - jobber drill H.S.S.



Cutting volume with:



Core drills



Twist drills

RUKO core drills will save you costs and time. As core drills only cut the width of the teeth and as twist drills cut the entire diameter of the hole, core drills are many times faster (see diagram). Centering and pilot drilling are not necessary anymore.

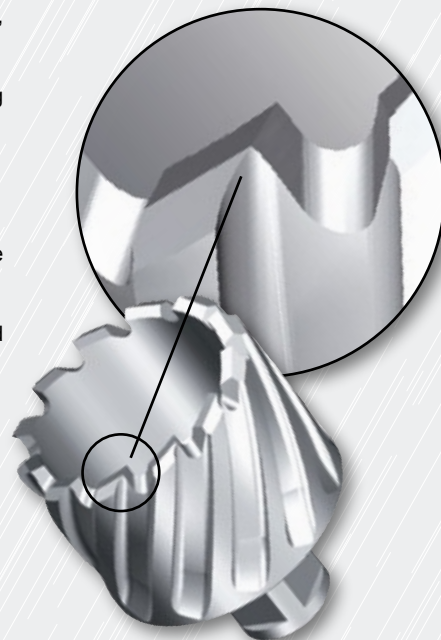
Core drills cut up to ten times faster than twist drills. Core drills only cut the width of the teeth. The core is ejected. Lower energy requirements and less wear result in a longer working life.

Twist drills have to machine the entire diameter of the hole. This calls for considerable downward pressure and high driving power.

The cutting edge is the important thing ...

Considerably improved cutting behavior was attained by research into the cutting geometry, which has a beneficial effect on cutting performance and drill life.

1. Optimised cutting edge geometry for increased cutting performances and reduced cutting forces.
2. The effective cutting angles are designed for universal use in various sorts of steel.
3. Improved removal of chips thanks to U-shaped recesses.
The specific geometry of the recess reduces the thermal load on the HSS core drill as the heat created in cutting is removed with the chips to a very great extent.
4. Reduction of the friction between the HSS core drill and the workpiece thanks to optimised spiral-shaped guide chamfers.



Product information

Core drills HSS

Core drill made of heavy-duty high speed steel.

Suitable for steel (such as T-brackets, large sheets), cast iron, non-ferrous and light metals.

Core drills HSS-TiAlN

Core drills made of heavy-duty high speed steel with titanium aluminium nitride coating.

The TiAlN wear-resistant coating increases the surface hardness of the tool to approx. 3,000 HV / micro-hardness and the heat resistance to 900° C. It is characterised by high tenacity plus high thermal and chemical stability and helps to achieve better tool life and cutting values. Suitable for dry finishing due to TiAlN coating.

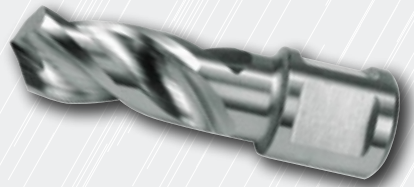
Especially suitable for working with unalloyed and alloyed steel (up to a strength of 1200 N/mm²), high-alloyed chromium steel such as stainless and acidresistant steel, as well as cast iron and tough brass.

Solid drills with weldon shank ($\frac{3}{4}$ "

For use in magnetic-stand and pillar drilling machines with morse taper retainer. In connection with RUKO arbor holders no. 108 302 / 108 303 / 108 315 / 108 316, with RUKO EasyLock no. 108 312 / 108 313 / 108 314 or a weldon direct shank such as the RUKO magnetic-stand RS5e / RS10 drill.

Handling

- Push Solid drill „Solid 3S“ into arbor and tighten hexagon socket screw firmly.
- Check proper seating of Solid drill „Solid 3S“ in arbor holder.
- With the EasyLock arbor, the Solid drill „Solid 3S“ gets automatically locked.
- Drill to full dimension straight away. No centring or pre-drilling required.
- The blade geometry of the Solid drill „Solid 3S“ permits rapid upward chip removal.
- Observe table of cutting speeds and employ appropriate cooling agent.

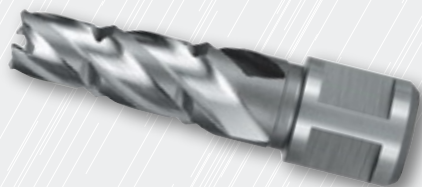


Step core drills with weldon shank ($\frac{3}{4}$ "

For use in magnetic-stand and pillar drilling machines with morse taper retainer. In connection with RUKO arbor holders no. 108 302 / 108 303 / 108 315 / 108 316, with RUKO EasyLock no. 108 312 / 108 313 / 108 314 or a weldon direct shank such as the RUKO magnetic-stand RS5e / RS10 drill.

Handling

- Insert pilot pin into step core drill.
- Push step core drill into arbor and tighten hexagon socket screw firmly.
- Check proper seating of step core drill in arbor holder.
- With the EasyLock arbor, the step core drill gets automatically locked.
- Drill to full dimension straight away. No centring or pre-drilling required.
- The blade geometry of the step core drill permits rapid upward chip removal.
- The spring-loaded pilot pin facilitates removal of the cut-out.
- Observe table of cutting speeds and employ appropriate cooling agent.

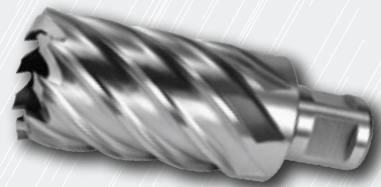


Core drills with weldon shank ($\frac{3}{4}$ "

For use in magnetic-stand and pillar drilling machines with morse taper retainer. In connection with RUKO arbor holders no. 108 302 / 108 303 / 108 315 / 108 316, with RUKO EasyLock no. 108 312 / 108 313 / 108 314 or a weldon direct shank such as the RUKO magnetic-stand RS5e / RS10 drill.

Handling

- Insert Weldon shank pilot pin into core drill.
- Push core drill into arbor and tighten hexagon socket screw firmly.
- Check proper seating of core drill in arbor holder.
- With the EasyLock arbor, the core drill gets automatically locked.
- Drill to full dimension straight away. No centring or pre-drilling required.
- The blade geometry of the core drill permits rapid upward chip removal.
- The spring-loaded pilot pin facilitates removal of the cut-out.
- Observe table of cutting speeds and employ appropriate cooling agent.





Solid drill „Solid 3S“ H.S.S., H.S.S.-TiAlN with 3/4" shank, CBN ground and 3 cutting edges

The spiral-grooved geometry with 3 cutting edges ensures extremely high stability of the "Solid 3S" solid drill, thus preventing the risk of breakage of the cutting edges by overloading or jamming of the chips. Thanks to the high stability, the service life of the "Solid 3S" is considerably increased. This reduces the costs of use. The "Solid 3S" enables drilling to full dimension without centring or pre-drilling. The "Solid 3S" can be ground more simply than core drills of the same diameter.

Cutting edges: H.S.S. / H.S.S.-TiAlN
Cutting depth: 1"
Adapter: 3/4"
Machine no.: RS 5e / RS 10 / RS 20 / RS 30e / RS 40e
Right-hand cutting



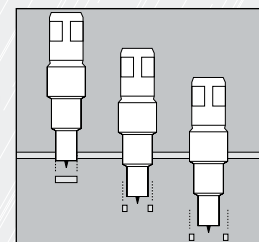
Packing unit: individual plastic pack

Ø inch	Ø shank inch	Overall length inch	Cutting depth inch	Part no.	Price / each \$	Part no.	Price / each \$
3/8"	3/4"	2 1/2"	1"	108 1230	25.94	108 1230 F	42.90
7/16"	3/4"	2 1/2"	1"	108 1231	25.94	108 1231 F	42.90
1/2"	3/4"	2 1/2"	1"	108 1232	26.28	108 1232 F	42.90
9/16"	3/4"	2 1/2"	1"	108 1233	26.63	108 1233 F	43.26
5/8"	3/4"	2 1/2"	1"	108 1234	27.69	108 1234 F	44.71

Step annular cutters HSS with 3/4", CBN ground, cutting depth 19/32" each step

Up to 3 different diameters can be drilled with the step annular cutter without tool change. The drilled diameter can be deburred with the next step.

Cutting edges: H.S.S.
Cutting depth: 19/32" each step
Adapter: 3/4"
Machine no.: RS 10 / RS 20 / RS 25e / RS 30e / RS 40e
Right-hand cutting



Size	Ø1 / Ø2 / Ø3 mm	Ø shank inch	Overall length inch	Number of teeth	Part no.	Price / each \$
1	9/16 - 11/16 - 13/16	3/4	3 1/16	4	108 341	53.68
2	5/8 - 3/4 - 7/8	3/4	3 1/16	6	108 342	70.61
3	15/16 - 1 1/16 - 1 1/8	3/4	3 1/16	7	108 343	86.27

Kit of step annular cutters H.S.S. with 3/4" CBN ground, in plastic case

Description	Part no.	Price each \$
3 step annular cutters H.S.S. cutting depth 19/32" per Ø Size 1 Ø 9/16" - 11/16" - 13/16" Size 2 Ø 5/8" - 3/4" - 7/8" Size 3 Ø 15/16" - 1 1/16" - 1 1/8" 1 Cutting spray 50 ml 1 Pilot pin Ø 1/4" x 3 3/4"	108 819	220.13



No. 108 819

Annular cutters H.S.S., H.S.S.-TiAlN with 3/4" shank, CBN ground, cutting depth 1"

Cutting edges: H.S.S., H.S.S.-TiAlN
 Cutting depth: 1"
 Adapter: 3/4"
 Machine no.: RS5e / RS10 / RS20 / RS25e / RS30e / RS40e
 Right-hand cutting

Packing unit: individual plastic pack



Ø inch	Ø mm	Shank inch	Overall length inch	Number of teeth	Content pcs.	Part no.	Price each \$	Part no.	Price each \$
7/16	11.1	3/4"	2 7/16	4	1	108 600	30.40	108 600 F	55.20
1/2	12.7	3/4"	2 7/16	4	1	108 601	35.00	108 601 F	58.10
9/16	14.3	3/4"	2 7/16	4	1	108 602	35.00	108 602 F	58.10
5/8	15.9	3/4"	2 7/16	5	1	108 603	35.00	108 603 F	58.10
11/16	17.5	3/4"	2 7/16	5	1	108 604	37.10	108 604 F	60.00
3/4	19.0	3/4"	2 7/16	5	1	108 605	37.10	108 605 F	60.00
13/16	20.7	3/4"	2 7/16	6	1	108 606	41.30	108 606 F	74.00
7/8	22.2	3/4"	2 7/16	6	1	108 607	44.45	108 607 F	77.00
15/16	23.8	3/4"	2 7/16	6	1	108 608	46.20	108 608 F	78.75
1	25.4	3/4"	2 7/16	6	1	108 609	51.80	108 609 F	84.55
1 1/16	27.0	3/4"	2 7/16	7	1	108 610	53.74	108 610 F	86.45
1 1/8	28.6	3/4"	2 7/16	8	1	108 611	59.50	108 611 F	92.40
1 3/16	30.2	3/4"	2 7/16	8	1	108 612	62.50	108 612 F	95.20
1 1/4	31.8	3/4"	2 7/16	8	1	108 613	63.70	108 613 F	96.60
1 5/16	33.3	3/4"	2 7/16	8	1	108 614	71.25	108 614 F	106.75
1 3/8	34.9	3/4"	2 7/16	9	1	108 615	76.30	108 615 F	114.10
1 7/16	36.5	3/4"	2 7/16	9	1	108 616	80.50	108 616 F	120.75
1 1/2	38.1	3/4"	2 7/16	9	1	108 617	85.40	108 617 F	127.71
1 9/16	39.7	3/4"	2 7/16	10	1	108 618	93.10	108 618 F	139.65
1 5/8	41.3	3/4"	2 7/16	10	1	108 619	97.85	108 619 F	146.65
1 3/4	44.5	3/4"	2 7/16	12	1	108 620	107.30	108 620 F	160.65
1 7/8	47.6	3/4"	2 7/16	12	1	108 621	116.20	108 621 F	174.15
1 15/16	49.2	3/4"	2 7/16	12	1	108 622	121.20	108 622 F	181.85
2	50.8	3/4"	2 7/16	12	1	108 623	126.70	108 623 F	190.00

Annular cutter kits, H.S.S. cutting depth 1"



No. 108 815



No. 108 817

Description	Part no.	Price / each \$
5 annular cutters H.S.S. cutting depth 1" Ø 9/16" - 11/16" - 13/16" - 15/16" - 1 1/16" 1 pilot pin cutting depth 1"	108 815	221.13
10 annular cutters H.S.S. cutting depth 1" Ø 1/2" - 9/16" - 5/8" - 11/16" - 3/4" - 13/16" - 7/8" - 15/16" - 1" - 1 1/16" 1 pilot pin cutting depth 1"	108 817	424.48

Annular cutters H.S.S., H.S.S.-TiAlN with 3/4" shank, CBN ground, cutting depth 2"

Cutting edges: H.S.S., H.S.S.-TiAlN
 Cutting depth: 5"
 Adapter: 3/4"
 Machine no.: RS10 / RS20 / RS25e / RS30e / RS40e
 Right-hand cutting

Packing unit: individual plastic pack



Ø inch	Ø mm	Shank inch	Overall length inch	Number of teeth	Content pcs.	Part no.	Price each \$	Part no.	Price each \$
7/16	11.1	3/4"	3 11/32	4	1	108 650	38.61	108 650 F	61.44
1/2	12.7	3/4"	3 11/32	4	1	108 651	46.00	108 651 F	70.22
9/16	14.3	3/4"	3 11/32	4	1	108 652	46.00	108 652 F	70.22
5/8	15.9	3/4"	3 11/32	5	1	108 653	50.03	108 653 F	73.42
11/16	17.5	3/4"	3 11/32	5	1	108 654	55.65	108 654 F	81.98
3/4	19.0	3/4"	3 11/32	5	1	108 655	55.65	108 655 F	81.98
13/16	20.7	3/4"	3 11/32	6	1	108 656	57.40	108 656 F	84.33
7/8	22.2	3/4"	3 11/32	6	1	108 657	62.31	108 657 F	91.73
15/16	23.8	3/4"	3 11/32	6	1	108 658	63.35	108 658 F	96.60
1	25.4	3/4"	3 11/32	6	1	108 659	70.70	108 659 F	103.04
1 1/16	27.0	3/4"	3 11/32	7	1	108 660	71.94	108 660 F	104.97
1 1/8	28.6	3/4"	3 11/32	8	1	108 661	81.40	108 661 F	112.38
1 3/16	30.2	3/4"	3 11/32	8	1	108 662	83.65	108 662 F	125.50
1 1/4	31.8	3/4"	3 11/32	8	1	108 663	85.74	108 663 F	128.65
1 5/16	33.3	3/4"	3 11/32	8	1	108 664	94.70	108 664 F	141.75
1 3/8	34.9	3/4"	3 11/32	9	1	108 665	100.45	108 665 F	150.50
1 7/16	36.5	3/4"	3 11/32	9	1	108 666	106.00	108 666 F	159.10
1 1/2	38.1	3/4"	3 11/32	9	1	108 667	112.35	108 667 F	168.54
1 9/16	39.7	3/4"	3 11/32	10	1	108 668	115.35	108 668 F	173.00
1 5/8	41.3	3/4"	3 11/32	10	1	108 669	128.80	108 669 F	193.20
1 3/4	44.5	3/4"	3 11/32	12	1	108 670	140.70	108 670 F	211.05
1 7/8	47.6	3/4"	3 11/32	12	1	108 671	152.25	108 671 F	228.40
1 15/16	49.2	3/4"	3 11/32	12	1	108 672	158.75	108 672 F	238.00
2	50.8	3/4"	3 11/32	12	1	108 673	167.30	108 673 F	250.94

Annular cutter kits, H.S.S. cutting depth 2"



No. 108 816



No. 108 818

Description	Part no.	Price each \$
5 annular cutters H.S.S. cutting depth 2" Ø 9/16" - 11/16" - 13/16" - 15/16" - 1 1/16" 1 pilot pin cutting depth 2"	108 816	303.98
10 annular cutters H.S.S. cutting depth 2" Ø 1/2" - 9/16" - 5/8" - 11/16" - 3/4" - 13/16" - 7/8" - 15/16" - 1" - 1 1/16" 1 pilot pin cutting depth 2"	108 818	588.60

Annular cutters H.S.S. with 3/4" shank, CBN ground, cutting depth 3"

Cutting edges:	H.S.S.
Cutting depth:	3"
Adapter:	3/4"
Machine no.:	RS10 / RS20 / RS25e / RS30e / RS40e
Right-hand cutting	



Packing unit: individual plastic pack

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Annular cutters H.S.S., metric sizes, with 3/4" shank, CBN ground, cutting depth 1 11/64"

Cutting edges: H.S.S.
Cutting depth: 1 $\frac{11}{64}$ " (30 mm)
Adapter: 19 mm shank ($\frac{3}{4}$ ")
Machine no.: R 10 / R 20 / R 30
Right-hand cutting



Packing unit: individual plastic pack

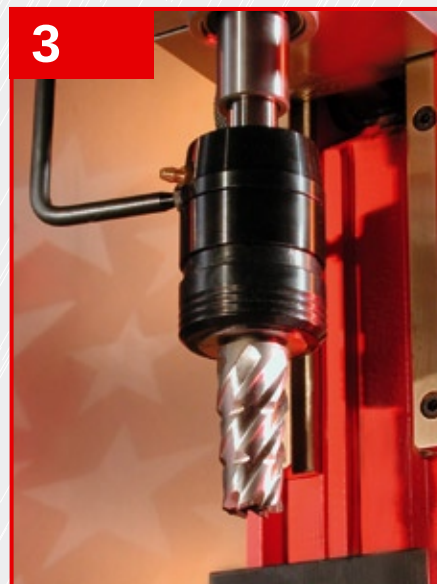
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Automatic EasyLock quick-in arbor for core drills with $\frac{3}{4}$ " shank



The EasyLock quick-in arbor enables a very quick tool change without additional tools.

Can be operated with one hand.



Picture 1: Push the ring spanner up until it sits tight.

Picture 2: Insert the core drill in the EasyLock. This locks in with a loud "click." The ring spanner snaps down.

Picture 3: The core drill is fixed securely in the EasyLock. The machine is now ready for operation.

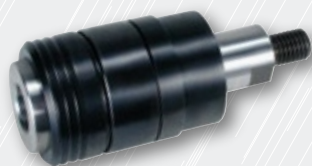


Picture 4: To release the core drill, push the ring spanner up.

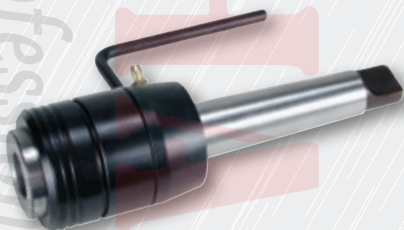
Picture 5: Caution! The core drill will fall out of the EasyLock.

Automatic EasyLock quick-in arbor for annular cutters with 3/4"

Packing unit: individual carton



No. 108 314



No. 108 313



No. 108 318

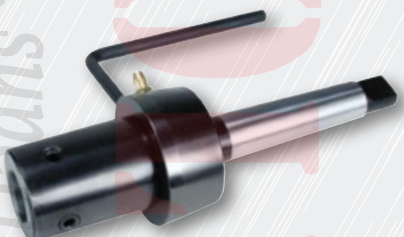
Description	Magnetic-stand drilling machine	Ø annular cutters	Annular cutters cutting depth	Part no.	Price / each \$
EasyLock with thread M 14 and interior cooling	RS10	7/16" - 1 3/8"	1 3/16"	108 314	207.76
EasyLock with morse taper no. 2 shank and cooling bottle article no. 108 101	RS20 / RS25e	7/16" - 2"	1" - 2"	108 312	218.76
EasyLock with morse taper no. 2 shank and interior cooling	RS20 / RS25e	7/16" - 2"	1" - 2"	108 317	218.76
EasyLock with morse taper no. 3 shank and cooling bottle article no. 108 101	RS30e / RS40e	7/16" - 2"	1" - 2"	108 313	229.76
EasyLock with morse taper no. 3 shank and interior cooling	RS30e / RS40e	7/16" - 2"	1" - 2"	108 318	229.76

Arbor holders for annular cutters with 3/4"

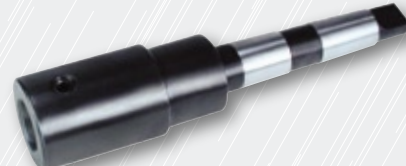
Packing unit: individual carton



No. 108 159



No. 108 303



No. 108 316

Description	Magnetic-stand drilling machine	Ø annular cutters	annular cutters cutting depth	Part no.	Price / each \$
Arbor holder with thread M 14	RS10	7/16" - 1 3/8"	1 3/16"	108 159	141.00
Arbor holder with morse taper no. 2 shank and cooling bottle article no. 108 101	RS20 / RS25e	7/16" - 2"	1" - 2"	108 302	165.00
Arbor holder with morse taper no. 2 shank and interior cooling	RS20 / RS25e	7/16" - 2"	1" - 2"	108 315	210.36
Arbor holder with morse taper no. 3 shank and cooling bottle article no. 108 101	RS30e / RS40e	7/16" - 2"	1" - 2"	108 303	170.50
Arbor holder with morse taper no. 3 shank and interior cooling	RS30e / RS40e	7/16" - 2"	1" - 2"	108 316	217.74

Pilot pins for annular cutters

Packing unit: individual plastic pack

Description		Annular cutters cutting depth	Part no.	Price / each \$
Pilot pin Ø 1/4" x 3 3/4" for step annular cutters HSS with 3/4" shank		19/32"	108 310	9.57
Pilot pin Ø 1/4" x 3" for annular cutters HSS with 3/4" shank		1"	108 307	10.20
Pilot pin Ø 1/4" x 4" for annular cutters HSS with 3/4" shank		2"	108 308	11.81
Pilot pin Ø 1/4" x 3" for annular cutters HSS with 3/4" shank		1"	108 304	7.78
Pilot pin Ø 1/4" x 2 3/4" for angle core drilling machine RS5e and annular cutters HSS with 3/4" shank	 NEW	1"	108 344	6.95
Pilot pin Ø 1/4" x 4" for annular cutters HSS with 3/4" shank		2"	108 305	9.57
Pilot pin Ø 1/4" x 4 27/32" for annular cutters HSS with 3/4" shank		2" + adapter	108 110	12.75
Pilot pin Ø 1/4" x 5" for annular cutters HSS with 3/4" shank		3"	108 699	13.95

Cooling-spray bottle

Packing unit: individual carton

Description	Part no.	Price / each \$
Cooling-spray bottle, 500 ml	108 101	14.70



No. 108 101

Cooling bottle with regulating tap

Packing unit: individual carton

Description	Part no.	Price / each \$
Cooling bottle with regulating tap, 500 ml	108 122	46.85



No. 108 122

Recommended cutting speeds for H.S.S. annular cutters

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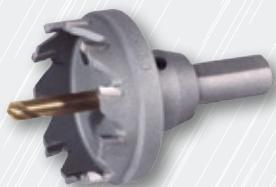


COMPETENCE IN
PRECISION
AND QUALITY

HOLE SAWS



Tungsten carbide hole saws, shallow cut



The RUKO tungsten-carbide-tipped hole saws can be used in hand and pillar drills. When employing pillar drills, use manual advance only.

Suitable for high-alloyed steels such as stainless and acidresistant steel (up to 2 mm), steel and cast steel, non-ferrous and light metals, plastics, reinforced fabrics, plasterboard and light building boards, wood.

Characteristics:

- Pilot drill HSS Co 5
- High rotational precision
- Sturdy construction
- Hole saw and shank in one piece
- Triangular shank
- With cutting-depth limiter
- Positive chipping angle with specially ground cutting edge
- Good chip removal
- Exchangeable centring drill
- Regrindable tungsten-carbide blades
- Unsuitable for percussion-drill operation
- Only slight pressure required to start drilling
- Drill with light, steady pressure
- Avoid pendulum movements while drilling
- Observe table of drilling speeds
- Use prescribed cooling agents

Tungsten carbide multigrade hole saws MHS



The RUKO tungsten-carbide-multigrade hole saws MHS can be used in magnetic and standard drills to a maximum of 20 mm in steel. For hand drills up to 6mm in steel.

Suitable for high-alloyed steels such as stainless and acidresistant steel, steel and cast steel (up to 20 mm), non-ferrous and light metals, plastics (up to 28 mm). Applications: drills flat materials, tubes, vaulted surfaces, overlapped holes possible.

Characteristics:

- Pilot pin HSS Co 5
- High rotational precision
- Sturdy construction
- Adapter with triangular shank
- Exchangeable pilot pin
- Regrindable tungsten-carbide blades
- Unsuitable for percussion-drill operation
- Only slight pressure required to start drilling
- Drill with light, steady pressure
- Avoid pendulum movements while drilling
- Observe table of drilling speeds (see also tungsten carbide core drill speed table)
- Use prescribed cooling agents

Bi-metal hole saws HSS / HSS Co 8



The RUKO bi-metal hole saws can be used in hand and pillar drills. When employing pillar drills, use manual advance only.

Bimetal compass saws HSS with varied toothing

On easily cut materials the varied toothing ensures that the cut is more even and requires less effort. The reduction in vibrations and heat development during cutting achieves up to three times the tool life.

Suitable for unalloyed steel (up to 700 N/mm² strength), non-ferrous and light metals, plastics, plasterboard and light building boards, fibreboard, plywood and wood.

Bi-metal hole saws HSS Co 8 with fine toothing

The fine toothing is particularly suitable for cutting metals. It ensures smoother running and reduces the necessary effort. The reduction in heat development during cutting increases tool life, especially in the case of metals.

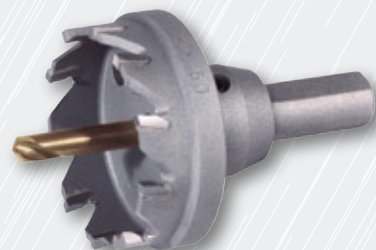
Suitable for alloyed and non-alloyed steels (up to 1,000 N/mm² strength), high chromium alloyed steels such as stainless steel, steels resistant to rusts and acids, non-ferrous and light metals.

Characteristics:

- High rotational precision
- Sturdy construction
- Hole saw and shank in two parts, so hole saws of different diameters can be exchanged and fitted more rapidly
- Positive chipping and cutting angles ensure more aggressive cutting
- The teeth are welded onto a jacket of special steel
- Good chip removal
- Slots in the jacket side assist removal of cutouts
- Exchangeable centring drill
- Unsuitable for percussion-drill operation
- Only slight pressure required to start drilling
- Drill with light, steady pressure
- Avoid pendulum movements while drilling
- Observe table of drilling speeds
- Use prescribed cooling agents

Tungsten carbide hole saws, shallow cut

Cutting edges: tungsten carbide
 Material thickness: up to 5/32" / 4 mm
 Cutting depth: up to max. 3/8" / 10 mm
 Cutting angle: works standard
 Right-hand cutting



Packing unit:
 individual carton

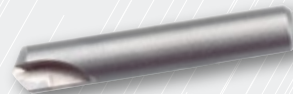
Ø inch	Ø mm	Through dimensions M + PG	Tube dim. inch	Shank Ø inch	Part no.	Price each \$	Ø inch	Ø mm	Through dimensions M + PG	Tube dim. inch	Shank Ø inch	Part no.	Price each \$
5/8	16,0	M 16	~ PG 9	3/8	105 016	38.22	1 11/16	43,0	M 50	1 1/2	3/8	105 043	57.29
	16,5			3/8	105 165	38.22	1 3/4	44,0			3/8	105 044	57.29
	17,0			3/8	105 017	38.22		45,0			3/8	105 045	57.29
	18,0			3/8	105 018	38.22		46,0			3/8	105 046	71.40
	18,6			3/8	105 186	38.22	1 7/8	47,0			3/8	105 047	71.40
3/4	19,0	M 20	PG 11	3/8	105 019	38.22		48,0	PG 36	1 1/2	3/8	105 048	71.40
	20,0			3/8	105 020	38.22		49,0			3/8	105 049	71.40
13/16	20,4			3/8	105 204	38.22	1 31/32	50,0			3/8	105 050	71.40
	21,0			3/8	105 021	38.22		50,5			3/8	105 051	75.37
	22,0			3/8	105 022	38.22	2	51,0			1/2	105 052	75.37
7/8	22,5	PG 16	1/2	3/8	105 225	38.22		52,0	PG 42	1/2	1/2	105 053	75.37
	23,0			3/8	105 023	38.22		53,0			1/2	105 054	75.37
15/16	24,0			3/8	105 024	38.22	2 1/8	54,0			1/2	105 055	75.37
	25,0			3/8	105 025	38.22		55,0			1/2	105 056	94.19
1	25,5			3/8	105 255	42.29	2 1/4	56,0			1/2	105 057	94.19
	26,0	M 25		3/8	105 026	42.29		57,0	M 63	2	1/2	105 058	94.19
1 1/16	27,0			3/8	105 027	42.29		58,0			1/2	105 059	94.19
1 3/32	28,0			3/8	105 028	42.29	2 3/8	59,0			1/2	105 060	101.65
1 1/8	28,3			3/8	105 283	42.29	2 1/2	60,0			1/2	105 635	101.65
	29,0			3/8	105 029	42.29		63,5			1/2	105 065	101.65
1 3/16	30,0	M 32	3/4	3/8	105 030	42.29		65,0			1/2	105 068	110.28
1 7/32	31,0			3/8	105 031	48.42	2 3/4	68,0			1/2	105 070	116.04
1 1/4	32,0			3/8	105 032	48.42		70,0			1/2	105 075	128.08
	32,5			3/8	105 325	48.42		75,0			1/2	105 080	139.80
	33,0			3/8	105 033	48.42		80,0			1/2	105 085	156.70
	34,0	M 40	1	3/8	105 034	48.42		85,0			1/2	105 090	171.11
1 3/8	35,0			3/8	105 035	48.42	3 3/4	90,0			1/2	105 095	185.92
	36,0			3/8	105 036	53.23		95,0			1/2	105 100	188.69
1 7/16	37,0			3/8	105 037	53.23		100,0			1/2	105 110	238.00
1 1/2	38,0			3/8	105 038	53.23		110,0			1/2	105 120	273.71
	39,0	PG 29		3/8	105 039	53.23		120,0			1/2	105 130	324.28
1 9/16	40,0			3/8	105 040	53.23	5 1/8	130,0			1/2	105 140	390.25
	40,5			3/8	105 405	57.29	5 1/2	140,0			1/2	105 150	432.39
1 5/8	41,0			3/8	105 041	57.29		150,0					
	42,0			3/8	105 042	57.29							

Pilot drills for tungsten carbide hole saws, shallow cut

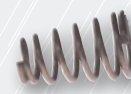
Version: • HSS Co 5 ground blade split point in accordance with DIN 1412 C
 • tungsten carbide blade
 Right-hand cutting



No. 105 171



No. 105 173



No. 105 174

Packing unit: individual carton

Ø inch	Length inch	For hole saws Ø inch	For hole saws cutting depth	Part no. HSS Co 5	Price / each \$	Part no. tungsten carbide	Price / each \$
15/64	2"	5/8" - 2 3/4"	shallow	105 170	2.80	105 172	11.38
5/16	2"	3" - 5 1/2"	shallow	105 171	5.50	105 173	12.98
Ejector spring						105 174	0.80

Kit of TC hole saws in plastic case

Description	Part no.	Price each \$
3 TC hole saws, inch sizes Ø 7/8" - 1 1/8" - 1 3/8" 1 pilot drill, 1 allen key	105 301	136.05



No. 105 301

Tungsten carbide multigrade hole saws MHS

Ø 19/32" up to 1 3/16" hole saw MHS and shank in one piece. Complete with pilot pin and wrench.

Ø 1 7/32" up to 3 15/16" hole saws MHS without arbor.

Ø 2 9/16" up to 3 15/16" on we recommend to use our morse taper holder article no. 113 203, 108 102 - 108 105.

Cutting edge: tungsten carbide
Material thickness: 5/64" to 1 3/32"
Cutting depth: up to 1 3/32"
Cutting angle: work's standard
Adapter: thread M 18 x 6 P1,5
Right-hand cutting

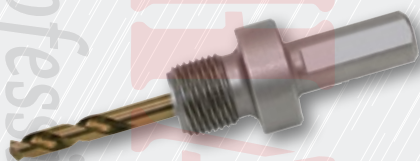


Packing unit:
individual plastic pack

Ø inch	Ø mm	Tube dimensions inch	Shank-Ø	Part no.	Price / each \$	Ø inch	Ø mm	Tube dimensions inch	Shank-Ø	Part no.	Price / each \$
	15,0		1/2"	113 015	64.97	1 11/16	43,0		1/2" / MT 2 / 3	113 043	102.61
5/8	16,0		1/2"	113 016	64.97	1 3/4	44,0	1 1/4	1/2" / MT 2 / 3	113 044	105.77
	17,0		1/2"	113 017	64.97		45,0		1/2" / MT 2 / 3	113 045	105.77
	18,0		1/2"	113 018	66.97		46,0		1/2" / MT 2 / 3	113 046	108.37
3/4	19,0	3/8	1/2"	113 019	66.97		47,0		1/2" / MT 2 / 3	113 047	108.37
	20,0		1/2"	113 020	66.97	1 7/8	48,0		1/2" / MT 2 / 3	113 048	110.99
	21,0		1/2"	113 021	68.91		49,0		1/2" / MT 2 / 3	113 049	110.99
7/8	22,0	1/2	1/2"	113 022	68.91		50,0		1/2" / MT 2 / 3	113 050	113.65
	23,0		1/2"	113 023	69.39	2	51,0	1 1/2	1/2" / MT 2 / 3	113 051	116.27
15/16	24,0		1/2"	113 024	69.39		52,0		1/2" / MT 2 / 3	113 052	121.33
1	25,0		1/2"	113 025	71.71		53,0		1/2" / MT 2 / 3	113 053	121.33
	26,0		1/2"	113 026	71.71	2 1/8	54,0		1/2" / MT 2 / 3	113 054	126.58
1 1/16	27,0		1/2"	113 027	71.71		55,0		1/2" / MT 2 / 3	113 055	131.85
1 3/32	28,0		1/2"	113 028	74.98		56,0		1/2" / MT 2 / 3	113 056	131.85
1 1/8	29,0	3/4	1/2"	113 029	74.98	2 1/4	57,0		1/2" / MT 2 / 3	113 057	137.13
1 3/16	30,0		1/2"	113 030	74.98		58,0		1/2" / MT 2 / 3	113 058	142.42
	31,0		1/2" / MT 2 / 3	113 031	82.46		59,0		1/2" / MT 2 / 3	113 059	145.04
1 1/4	32,0		1/2" / MT 2 / 3	113 032	82.46	2 3/8	60,0		1/2" / MT 2 / 3	113 060	150.30
	33,0		1/2" / MT 2 / 3	113 033	82.46		65,0		1/2" / MT 2 / 3	113 065	165.79
	34,0		1/2" / MT 2 / 3	113 034	82.46		68,0		1/2" / MT 2 / 3	113 068	176.30
1 3/8	35,0	1	1/2" / MT 2 / 3	113 035	82.46	2 3/4	70,0		1/2" / MT 2 / 3	113 070	189.81
	36,0		1/2" / MT 2 / 3	113 036	82.46		75,0		1/2" / MT 2 / 3	113 075	205.65
	37,0		1/2" / MT 2 / 3	113 037	82.46		80,0		1/2" / MT 2 / 3	113 080	264.29
1 1/2	38,0		1/2" / MT 2 / 3	113 038	82.46		85,0		1/2" / MT 2 / 3	113 085	244.34
	39,0		1/2" / MT 2 / 3	113 039	91.53		90,0		1/2" / MT 2 / 3	113 090	265.44
	40,0		1/2" / MT 2 / 3	113 040	91.53	3 3/4	95,0		1/2" / MT 2 / 3	113 095	286.52
1 5/8	41,0		1/2" / MT 2 / 3	113 041	99.76		100,0		1/2" / MT 2 / 3	113 100	310.27
	42,0		1/2" / MT 2 / 3	113 042	102.61						

Arbor holders for tungsten carbide multigrade hole saws MHS with threaded retainer M18 x 6 P1,5

Packing unit: individual plastic pack



No. 113 201



No. 113 203

Description	For hole saws MHS Ø inch	Shank	Magnetic-stand drilling machine	Part no.	Price / each \$
Arbor holder including pilot drill part no. 113 216	1 7/32" - 3 15/16"	1/2"	RS10	113 201	20.73
Arbor holder including pilot drill part no. 113 216	1 7/32" - 3 15/16"	MT 2	RS20 / RS25e	113 203	35.70

Arbor holders for tungsten carbide multigrade hole saws MHS with threaded retainer M18 x 6 P1,5

Packing unit: individual carton



No. 108 103



No. 108 105

Description	For hole saws MHS Ø inch	Shank morse taper	Magnetic-stand drilling machine	Part no.	Price / each \$
Arbor holder including adapter part no. 108 108, pilot pin part no. 108 110 and cooling bottle part no. 108 101	1 7/32" - 3 15/16"	MT 2	RS20 / RS25e	108 102	149.06
Arbor holder with interior cooling including adapter part no. 108 108 and pilot pin part no. 108 110	1 7/32" - 3 15/16"	MT 2	RS20 / RS25e	108 104	158.81
Arbor holder including adapter part no. 108 108, pilot pin part no. 108 110 and cooling bottle part no. 108 101	1 7/32" - 3 15/16"	MT 3	RS30e / RS40e	108 103	172.90
Arbor holder with interior cooling including adapter part no. 108 108 and pilot pin part no. 108 110	1 7/32" - 3 15/16"	MT 3	RS30e / RS40e	108 105	174.51

Pilot drills for tungsten carbide multigrade hole saws MHS

Version:

- HSS Co 5 ground blade split point in accordance with DIN 1412 C
- tungsten carbide blade

Right-hand cutting

Packing unit:
individual plastic pack

Ø inch	Length inch	For hole saws MHS Ø inch	Part no. HSS Co 5	Price each \$	Part no. tungsten carbide	Price each \$
15/16"	2 51/64"	19/32 - 3 15/16"	113 216	9.32	113 217	13.95
Ejector spring					113 218	0.80



No. 113 216



No. 113 218

Adapter for tungsten carbide multigrade hole saws MHS with threaded retainer M18 x 6 P1,5

Packing unit: individual plastic pack

Description	For hole saws MHS Ø inch	Part no.	Price each \$
Adapter with Weldon shank 3/4"	1 7/32" - 3 15/16"	108 108	29.58
Pilot pin Ø 1/4" x 3 3/4"	1 7/32" - 3 15/16"	108 110	11.96



No. 108 108



No. 108 110



Recommended cutting speeds for TC hole saws

Material:		High carbon struc. steel up to 700 N/mm ²	Alloyed steel up to 1000 N/mm ²	Cast iron over 250 N/mm ²	CuZn alloy	Aluminium alloy up to 11% Si	Thermo- plastics	Duro- plastics	Wood
Vc = m/min		50	35	40	60	60	45	40	50
Coolant		Cutting spray	Cutting spray	Compressed air	Compressed air	Cutting spray	Water	Compressed air	Compressed air
Ø inch	Ø mm	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.
5/8	16	995	697	796	1194	1194	896	796	995
43/64	17	937	656	749	1124	1124	843	749	937
23/32	18	885	619	708	1062	1062	796	708	885
3/4	19	838	587	670	1006	1006	754	670	838
25/32	20	796	557	637	955	955	717	637	796
53/64	21	758	531	607	910	910	682	607	758
7/8	22	724	507	579	869	869	651	579	724
29/32	23	692	485	554	831	831	623	554	692
15/16	24	663	464	531	796	796	597	531	663
1	25.4	637	446	510	764	764	573	510	637
1 1/32	26	612	429	490	735	735	551	490	612
1 1/16	27	590	413	472	708	708	531	472	590
1 3/32	28	569	398	455	682	682	512	455	569
1 1/8	29	549	384	439	659	659	494	439	549
1 3/16	30	531	372	425	637	637	478	425	531
1 7/32	31	514	360	411	616	616	462	411	514
1 1/4	32	498	348	398	597	597	448	398	498
1 19/64	33	483	338	386	579	579	434	386	483
1 11/32	34	468	328	375	562	562	422	375	468
1 3/8	35	455	318	364	546	546	409	364	455
1 27/64	36	442	310	354	531	531	398	354	442
1 29/64	37	430	301	344	516	516	387	344	430
1 1/2	38	419	293	335	503	503	377	335	419
1 17/32	39	408	286	327	490	490	367	327	408
1 37/64	40	398	279	318	478	478	358	318	398
1 5/8	41	388	272	311	466	466	350	311	388
1 21/32	42	379	265	303	455	455	341	303	379
1 11/16	43	370	259	296	444	444	333	296	370
1 3/4	44	362	253	290	434	434	326	290	362
1 25/32	45	354	248	283	425	425	318	283	354
1 13/16	46	346	242	277	415	415	312	277	346
1 27/32	47	339	237	271	407	407	305	271	339
1 7/8	48	332	232	265	398	398	299	265	332
1 15/16	49	325	227	260	390	390	292	260	325
1 31/32	50	318	223	255	382	382	287	255	318
2	51	312	219	250	375	375	281	250	312
2 3/64	52	306	214	245	367	367	276	245	306
1 3/32	53	300	210	240	361	361	270	240	300
2 1/8	54	295	206	236	354	354	265	236	295
1 11/64	55	290	203	232	347	347	261	232	290
1 13/64	56	284	199	227	341	341	256	227	284
2 1/4	57	279	196	223	335	335	251	223	279
1 9/32	58	275	192	220	329	329	247	220	275
1 21/64	59	270	189	216	324	324	243	216	270
2 3/8	60	265	186	212	318	318	239	212	265
2 9/16	65	245	171	196	294	294	220	196	245
2 3/4	70	227	159	182	273	273	205	182	227
2 61/64	75	212	149	170	255	255	191	170	212
2 5/32	80	199	139	159	239	239	179	159	199
2 11/32	85	187	131	150	225	225	169	150	187
2 9/16	90	177	124	142	212	212	159	142	177
3 3/4	95	168	117	134	201	201	151	134	168
3 15/16	100	159	111	127	191	191	143	127	159
4 11/32	110	145	101	116	174	174	130	116	145
4 3/4	120	133	93	106	159	159	119	106	133
5 1/8	130	122	86	98	147	147	110	98	122
5 1/2	140	114	80	91	136	136	102	91	114
5 29/32	150	106	74	85	127	127	96	85	106

Bi-metal hole saws HSS with varied toothing / HSS Co 8 with fine toothing

Cutting edges: HSS / HSS Co 8
 Jacket: special steel
 Cutting depth: up to max. 1 1/2" 38 mm
 Cutting teeth: HSS with varied toothing / HSS Co 8 with fine toothing
 Right-hand cutting

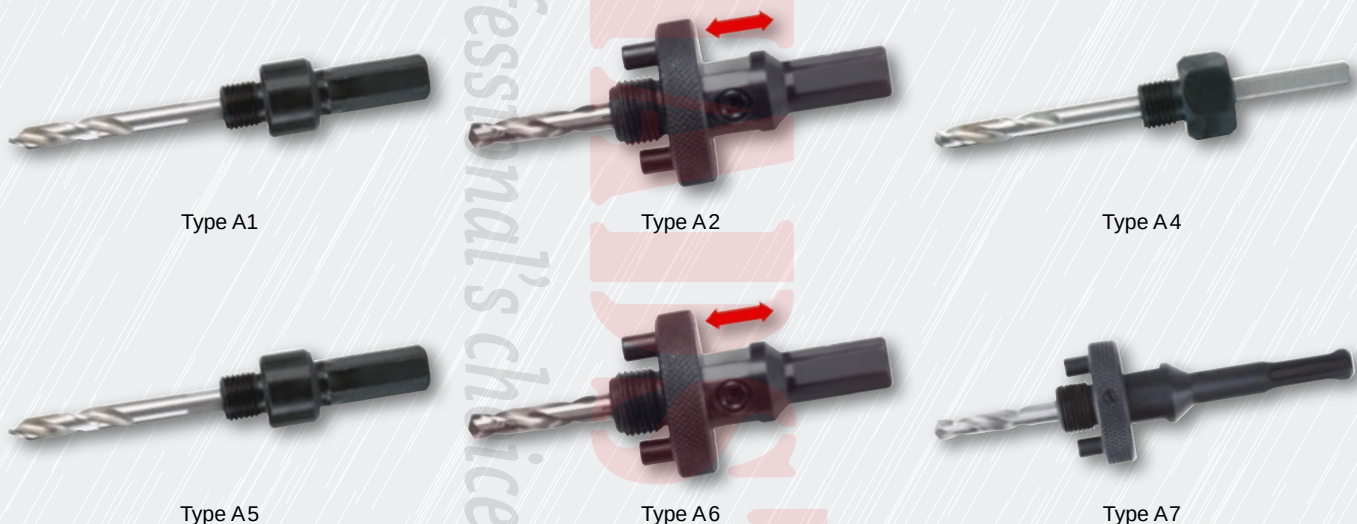


Packing unit: individual carton

Ø mm	Ø inch	Through dimensions PG	Tube dimensions inch	For arbor holders	Part no. HSS	Price / each \$	Part no. HSS Co 8	Price / each \$
14	9/16			A1 / A4 / A5	106 014	4.97	126 014	6.21
16	5/8	~ PG 9		A1 / A4 / A5	106 016	4.97	126 016	6.21
17				A1 / A4 / A5	106 017	5.07	126 017	6.33
19	3/4	~ PG 11	3/8	A1 / A4 / A5	106 019	5.07	126 019	6.39
20				A1 / A4 / A5	106 020	5.07	126 020	6.43
21		~ PG 13,5		A1 / A4 / A5	106 021	5.07	126 021	6.49
22	7/8		1/2	A1 / A4 / A5	106 022	5.20	126 022	6.64
24	15/16	~ PG 16		A1 / A4 / A5	106 024	5.40	126 024	6.91
25	1			A1 / A4 / A5	106 025	5.43	126 025	6.95
27	1 1/16			A1 / A4 / A5	106 027	5.53	126 027	7.08
28	1 3/32			A1 / A4 / A5	106 028	5.76	126 028	7.39
29	1 1/8	~ PG 21	3/4	A1 / A4 / A5	106 029	5.87	126 029	7.51
30	1 3/16			A1 / A4 / A5	106 030	5.93	126 030	7.59
32	1 1/4			A2 / A6 / A7	106 032	6.07	126 032	7.79
33				A2 / A6 / A7	106 033	6.07	126 033	7.79
35	1 3/8		1	A2 / A6 / A7	106 035	6.77	126 035	8.54
36				A2 / A6 / A7	106 036	6.77	126 036	8.54
37		PG 29		A2 / A6 / A7	106 037	6.77	126 037	8.54
38	1 1/2			A2 / A6 / A7	106 038	6.93	126 038	8.87
40				A2 / A6 / A7	106 040	6.93	126 040	8.87
41	1 5/8			A2 / A6 / A7	106 041	7.33	126 041	9.38
43	1 11/16			A2 / A6 / A7	106 043	7.33	126 043	9.38
44	1 3/4		1 1/4	A2 / A6 / A7	106 044	7.57	126 044	9.69
46	1 13/16			A2 / A6 / A7	106 046	7.70	126 046	9.86
48	1 7/8	~ PG 36		A2 / A6 / A7	106 048	7.77	126 048	9.94
51	2		1 1/2	A2 / A6 / A7	106 051	8.10	126 051	10.37
52				A2 / A6 / A7	106 052	8.10	126 052	10.37
54	2 1/8	PG 42		A2 / A6 / A7	106 054	8.70	126 054	11.13
55				A2 / A6 / A7	106 055	8.83	126 055	11.30
57	2 1/4			A2 / A6 / A7	106 057	8.93	126 057	11.61
59				A2 / A6 / A7	106 059	9.07	126 059	11.79
60	2 3/8	~ PG 48		A2 / A6 / A7	106 060	9.43	126 060	12.26
63				A2 / A6 / A7	106 063	9.83	126 063	12.78
64	2 1/2		2	A2 / A6 / A7	106 064	9.83	126 064	12.78
65				A2 / A6 / A7	106 065	9.83	126 065	12.78
67	2 5/8			A2 / A6 / A7	106 067	10.03	126 067	13.04
68				A2 / A6 / A7	106 068	10.03	126 068	13.04
70	2 3/4			A2 / A6 / A7	106 070	10.37	126 070	13.48
73	2 7/8			A2 / A6 / A7	106 073	10.67	126 073	13.87
76	3		2 1/2	A2 / A6 / A7	106 076	11.17	126 076	14.52
79	3 1/8			A2 / A6 / A7	106 079	12.27	126 079	15.95
83	3 1/4			A2 / A6 / A7	106 083	13.13	126 083	17.07
86	3 3/8			A2 / A6 / A7	106 086	13.46	126 086	17.49
89	3 1/2			A2 / A6 / A7	106 089	13.80	126 089	17.94
92	3 5/8		3	A2 / A6 / A7	106 092	14.57	126 092	18.94
95	3 3/4			A2 / A6 / A7	106 095	15.57	126 095	20.24
98	3 7/8			A2 / A6 / A7	106 098	16.47	126 098	21.41
102	4			A2 / A6 / A7	106 102	17.53	126 102	22.78
105			3 1/2	A2 / A6 / A7	106 105	18.43	126 105	23.96
108	4 1/4			A2 / A6 / A7	106 108	19.43	126 108	25.26
111	4 3/8			A2 / A6 / A7	106 111	20.43	126 111	26.56
114	4 1/2		4	A2 / A6 / A7	106 114	21.00	126 114	27.30
121	4 3/4			A2 / A6 / A7	106 121	21.73	126 121	28.24
127	5			A2 / A6 / A7	106 127	23.57	126 127	30.64
140	5 1/2			A2 / A6 / A7	106 140	26.97	126 140	35.06
152	6			A2 / A6 / A7	106 152	30.53	126 152	39.68
160	6 5/16			A2 / A6 / A7	106 160	34.19	126 160	44.43
168	6 3/8			A2 / A6 / A7	106 168	38.29	126 168	49.78
177				A2 / A6 / A7	106 177	42.11	126 177	53.90
210	8 9/32			A2 / A6 / A7	106 200	46.33	126 200	59.30

Arbor holders including pilot drill for bi-metal hole saws HSS and HSS Co 8

Packing unit: individual carton



Hole saws Ø inch	Arbor holders Type	Shank Ø inch	Shank shape	Thread	Part no. HSS	Price / each \$	Part no. HSS Co	Price / each \$
9/16" - 1 3/16"	A1	7/16"	⬡	1/2" x 20	106 201	6.70	126 201	10.30
1 1/4" - 6"	A2	7/16"	⬡	5/8" x 18	106 202	12.43	126 202	16.03
9/16" - 1 3/16"	A4	1/4"	⬡	1/2" x 20	106 204	6.07	126 204	9.67
9/16" - 1 3/16"	A5	7/16"	⬡	1/2" x 20	106 210	8.95	126 210	12.55
1 1/4" - 6"	A6	7/16"	⬡	5/8" x 18	106 209	12.43	126 209	16.03
1 1/4" - 6"	A7	7/16"	SDS-Plus	5/8" x 18	106 211	10.38	126 211	13.98

Accessories for bi-metal hole saws HSS and HSS Co 8

Packing unit: individual plastic pack



Description	Arbor holders Type	Part no. HSS	Price / each \$	Part no. HSS Co	Price / each \$
Adapter to support HSS and HSS Co 8 bi-metal hole saws from Ø 32 to Ø 210 mm	A1 / A4 / A5	106 212	3.67	—	—
Pilot drill HSS / HSS Co 5, ground, Ø 6.35 mm x 102 mm and split point in accordance with DIN 1412 C	A4	106 207	3.80	126 207	7.40
Pilot drill HSS / HSS Co 5, ground, Ø 6.35 mm x 82 mm and split point in accordance with DIN 1412 C	A1/A2/A5 / A6/A7	106 206	3.80	126 206	7.40
Extension 300 mm, shank shape ⬡ 11 mm	A1/A2	106 205	7.13	—	—
Ejector spring	—	106 208	0.80	—	—

Kits of bi-metal hole saws HSS / HSS Co 8 in plastic cases



No. 106 306



No. 106 304



No. 106 318



No. 126 303

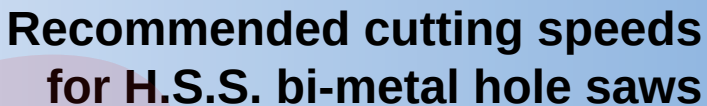


No. 126 304



No. 126 318

Type	Description	Part no. HSS	Price / each \$	Part no. HSS Co 8	Price / each \$
PK 1	For plumbers 6 bi-metal hole saws Ø 3/4" - 7/8" - 1 1/8" - 1 1/2" - 1 3/4" - 2 1/4" + 2 arbor holders A2 and A4	106 301	83.90	126 301	84.21
PK 2	For plumbers 9 bi-metal hole saws Ø 3/4" - 7/8" - 1 1/8" - 1 3/8" - 1 1/2" - 1 3/4" - 2" - 2 1/4" - 2 1/2" + 2 arbor holders A2 and A4	106 306	94.76	126 306	122.60
EK 1	For electricians 6 bi-metal hole saws Ø 7/8" - 1 1/8" - 1 3/8" - 1 3/4" - 2 - 2 1/2" + 2 arbor holders A2 and A4	106 305	76.84	126 305	95.39
EK 2	For electricians 6 bi-metal hole saws Ø 7/8" - 1 1/8" - 1 3/8" - 1 3/4" - 2" - 2 11/16" + 2 arbor holders A2 and A4	106 302	79.83	126 302	99.65
Universal	10 bi-metal hole saws Ø 3/4" - 7/8" - 1" - 1 1/8" - 1 3/8" - 1 1/2" - 1 3/4" - 2" - 2 1/4" - 2 1/2" + 2 arbor holders A2 and A4	106 303	99.85	126 303	129.66
Super	10 bi-metal hole saws Ø 7/8" - 1" - 1 1/4" - 1 3/8" - 1 5/8" - 1 3/4" - 2" - 2 1/8" - 2 3/8" - 2 1/2" + 2 arbor holders A2 and A4	106 304	108.93	126 304	135.81
Premium	15 bi-metal hole saws Ø 5/8" - 3/4" - 13/16" - 15/16" - 1" - 1 1/8" - 1 1/4" - 1 7/16" - 1 9/16" - 1 7/8" - 2" - 2 1/8" - 2 3/8" - 2 7/8" - 3 1/4" + 2 arbor holders A1 and A2 + 1 Pilot drill HSS Ø 6,35 mm x 82 mm + 1 Extension 300 mm, arbors for A1 and A2	106 318	208.87	126 318	259.23



- 75 -



For your notes

THE FALL SIL CO RI W BO V COM



SAW PROGRAM

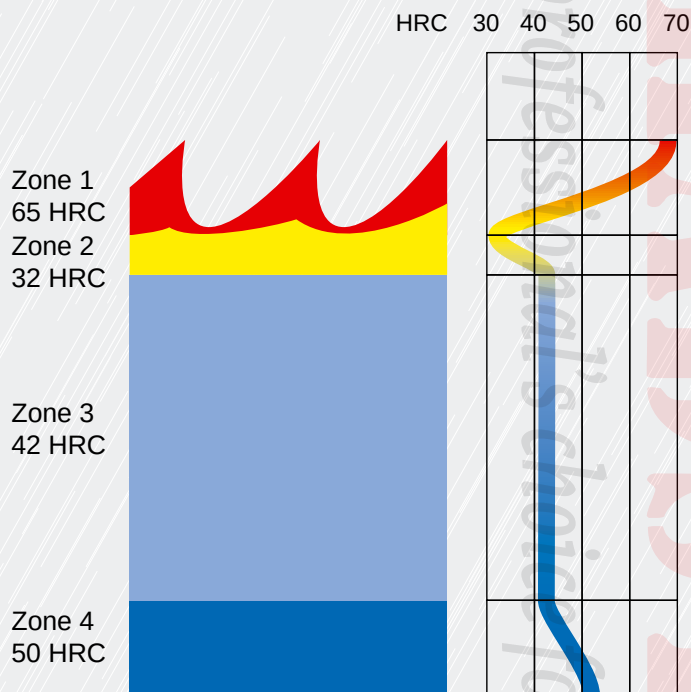
The professional's choice for unique, superior quality tools!

COMPETENCE IN
PRECISION
AND QUALITY



COM

Stepped-zone hardening



This new microprocessor-controlled hardening process makes it possible to achieve different hardening zones within a single blade. The blade is given optimum properties in accordance with the specific requirements.

Zone 1: Tooth hardness = 65 HRC. This is the highest level of hardness that can be achieved with a cobalt alloy steel. Due to the cobalt content in the alloy, this tooth hardness is maintained up to a temperature of 600° C.

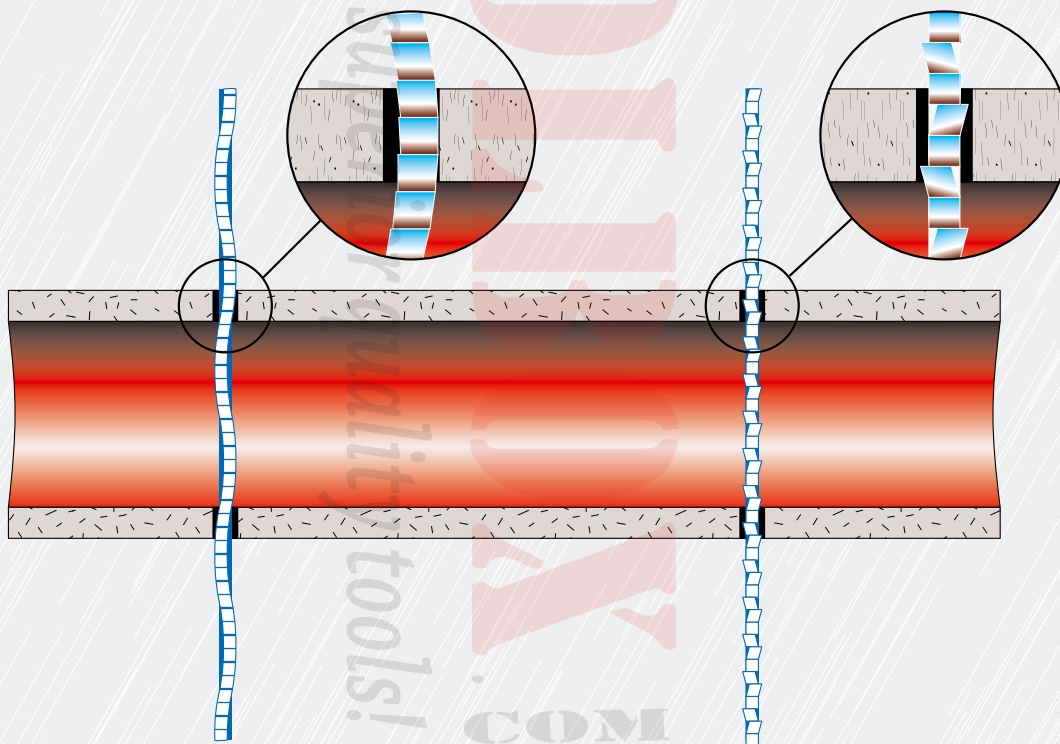
Zone 2: Hardness of tooth bed = 32 HRC. A 32 HRC hardness is imparted to the tooth bed in order to prevent teeth from being torn out. The treatment given to this zone imparts a high level of toughness to the blade.

Zone 3: Hardness of saw-blade body = 42 HRC. The average hardness of 42 HRC gives the body of the blade a high level of elasticity and significantly reduces the risk of the blade snapping.

Zone 4: Hardness of the blade spine = 50 HRC. Imparting this hardness to the spine of the blade gives it stability.

1 In the case of conventional saw blades, the set of the teeth is usually wavy. Hand saws with wavy-set teeth tend to clamp in the work piece. This constantly interrupts the sawing rhythm and requires extra effort to free the blade.

2 RUKO hacksaw blades, on which the teeth alone are side set, cut the work piece without clamping and the sawing rhythm is maintained throughout. This means that cutting performance is improved and considerably less effort is required to produce the cut.



H.S.S.-Co Bihart cobalt hacksaw blade

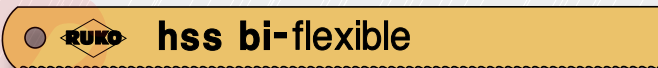
This globally unique all-cobalt-alloy H.S.S. steel safety blade has four hardness zones each with the optimum properties: extreme tooth hardness (65 HCR), soft tooth bed to prevent the teeth from breaking off and a blade body which is extremely elastic and stable. The special set of each tooth prevents clamping in the work piece. Packing unit: 100 blades per carton (10 x 10 pieces)



Dimensions		Tooth spacing		Packing unit loose per carton	Part no.	Unit price \$
inch	mm	teeth inch	teeth cm			
12 x 1/2 x 0.025	300 x 13 x 0,65	18	8	100	3121 300 18 R	1.40
12 x 1/2 x 0.025	300 x 13 x 0,65	24	10	100	3121 300 24 R	1.40
12 x 1/2 x 0.025	300 x 13 x 0,65	32	12	100	3121 300 32 R	1.40

H.S.S. bi-flexible hacksaw blade

Due to a special heat treatment, this new H.S.S. all-steel blade combines the apparently incompatible properties - hardness and elasticity. Because this blade has two hardness zones, it has the properties of a bi-metal blade with set teeth - the ideal blade for the craftsman. Packing unit: 100 blades per carton (10 x 10 pieces)



Dimensions		Tooth spacing		Packing unit loose per carton	Part no.	Unit price \$
inch	mm	teeth inch	teeth cm			
12 x 1/2 x 0.025	300 x 13 x 0,65	18	8	100	3181 300 18 R	1.15
12 x 1/2 x 0.025	300 x 13 x 0,65	24	10	100	3181 300 24 R	1.15
12 x 1/2 x 0.025	300 x 13 x 0,65	32	12	100	3181 300 32 R	1.15

Compact 33 hacksaw frame

Handle made from lacquered light-metal pressure-die casting. Frame made from polished chrome-plated square tube. **Suitable for 12" (300 mm) saw blades.** Includes 1 Bihart cobalt saw blade art. no. 3121 300 24 R



Dimensions				Weight lb	Packing unit SB carton	Part no.	Unit price \$
inch	mm	inch	mm				
16 1/2	420	5 1/8	130	1.3	1	317 000 33 R	18.75



Pictograms for jig-saw and reciprocating blades



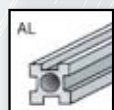
Steel, iron



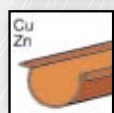
Sheet steel



Stainless steel



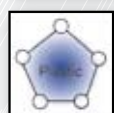
Aluminium



Non-ferrous metals



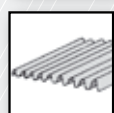
Wood with nails embedded



Plastics



Sandwich materials



Asbestos cement plates



Glass



Ceramic, clay



Hardwoods and softwoods



Chipboard



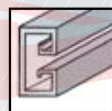
Blockboard



Carpet



Leather



Profiled section



Porous concrete



Pipe



Profiled cuts



Clean cuts



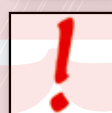
Straight cuts



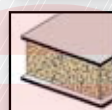
Right-angled cuts



Fast cuts



Special technology



Laminated/coated boards



Plywood



Pruning

Technical advice for jig-saw and reciprocating blades

Tooth spacing

In order to prevent the teeth from breaking off or the blade from snapping, at least three teeth should be cutting at the same time. The thickness of the work piece should determine whether a coarse- or fine-toothed saw blade is to be used.

The following information can be used as a rule of thumb for selecting the correct saw blade for the job in hand:

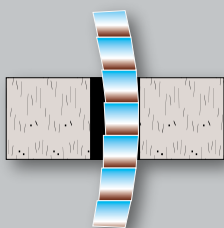
A tooth spacing of $1/32"$ to $3/64"$ is suitable for thin materials and fine cuts.

A tooth spacing of $3/32"$ to $3/16"$ is suitable for thick materials and coarse cuts.

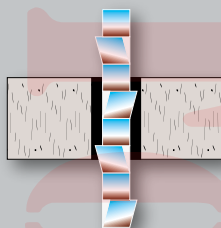


Cutting quality

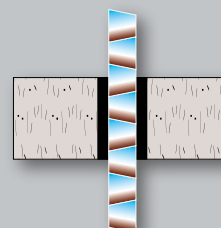
The quality of the saw cut is largely determined by the type and geometry of the teeth on the saw blade. In order to prevent clamping of the saw blade in the work piece, three tooth systems are currently used:



Wavy set



Tooth side set



Blade tapered-ground away from the teeth
(saw blades are thinner at the spine)

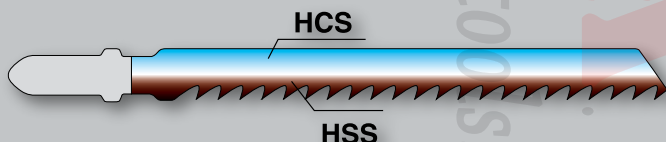
Blades for profiled cuts

The blades which are most suitable for cutting tight-profiled cuts are narrow saw blades or narrow saw blades with toothed spines.



HSS bimetal

HSS bimetal saw blades are the correct choice where the material to be cut and the conditions of use subject the saw-blade to extreme stresses. The teeth of the saw blade are made of HSS steel whereas the spine is made of a softer and more elastic HCS steel. This combination of materials makes the HSS bimetal saw blades highly flexible and gives them high cutting performance and long service life at the same time.



T-shank jig-saw blades for power tools by Bosch®, Atlas Copco®, AEG®, Makita®, Metabo®, B & D®, Hitachi®

RUKO 8011 HSS steel Standard saw blade, wavy set.							Blades to replace Competitive blades may vary from our specifications	
Application range: St 37 up to 5/32" thick, high-alloyed chromium steel such as stainless and acid resistant steel up to 1/8" thick, non-ferrous metals, aluminium 1/8" - 3/8" cooled with RUKO cutting spray. Hard plastics, Plexiglas 1/8" - 5/16" Pertinax, Resitex. Asbestos cement 5/64" - 5/32". Fiberboards up to 3/8", cooled with water.							Bosch® T 118 B Metabo® 23 638 MP.S® 3113 Wilpu® MG 12 AEG® 254-064	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$		
3 x 5/16 x .039	2,0 13 Tpi		321 8011	6.30	323 8011	25.75	    	

RUKO 8009 HSS steel Standard saw blade, wavy set. Narrow blade suitable for profiled cuts.							Blades to replace Competitive blades may vary from our specifications	
Application range: St 37, sheet high-alloyed chromium steel such as stainless and acid resistant steel up to 5/64" thick, non-ferrous metals. Suitable for profiled cuts. Suitable for glass-fibre reinforced plastics up to 5/32" thick, plexiglas up to 5/16", cooled with water. Pressed materials, hard fabrics, insulation materials up to 5/16" thick, cooled with water.							Bosch® T 218 A Metabo® 23 647 MP.S® 3112 Wilpu® MG 21 AEG® 254-063	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$		
3 x 9/32 x .039	1,2 21 Tpi		321 8009	5.95	323 8009	24.50	    	

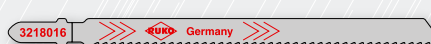
RUKO 8010 HSS steel Standard saw blade, wavy set. Narrow blade suitable for profiled cuts.							Blades to replace Competitive blades may vary from our specifications	
Application range: St 37, non-ferrous metals, aluminium up to 5/32" thick, high-alloyed chromium steel such as stainless and acidresistant steel sheet up to 5/64". Hard and softwood, insulation material up to 5/16". Suitable for glassfibre reinforced plastics up to 5/64", acrylic glass, pressed materials, hard fabrics, plexiglas, cooled with water.							Bosch® T 118 A Metabo® 23 637 MP.S® 3111 Wilpu® MG 11 AEG® 254-063	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$		
3 x 5/16 x .039	1,2 21 Tpi		321 8010	7.35	323 8010	30.10	    	

RUKO 8012 HSS steel Standard saw blade, wavy set. For thin sheet steel.							Blades to replace Competitive blades may vary from our specifications	
Application range: Thin-gauged sheet and profiled section less than 3/64". St 37, non-ferrous metals, aluminium up to 5/16". Armoured plastics, Plexiglas, cooled with water. Thin-gauged hard fabrics, insulation materials, cooled with water.							Bosch® T 118 G Metabo® 23 636 MP.S® 3110 Wilpu® HG 107 AEG® 274-652	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$		
3 x 5/16 x .039	0,7 36 Tpi		321 8012	5.95	323 8012	24.50	    	

T-shank jig-saw blades for power tools by Bosch®, Atlas Copco®, AEG®, Makita®, Metabo®, B & D®, Hitachi®

RUKO 8013 HSS steel Standard saw blade, side set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Mild steel 1/8" - 15/64", non-ferrous metals, aluminium and aluminium alloys 1/8" - 19/32", cooled with RUKO cutting spray. Plastics, armoured plastics. Asbestos cement, fiberboards and hard materials.						Bosch® T 127 D Metabo® 23 639 MP.S® 3118 Wilpu® K 14 AEG® 274-315	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$	 
4 x 5/16 x .039	3,0	8 Tpi	321 8013	7.35	323 8013	30.10	

RUKO 8017 HSS steel Standard saw blade, extra long, wavy set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Profiled section, mild steel, aluminium 5/64" - 25/64", composite materials, sandwich materials up to 2 3/4". Insulation materials.						Bosch® T 318 B Metabo® — MP.S® 3115 Wilpu® MG 32 bi AEG® 274-653	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$	 
4 x 5/16 x .051	2,0	13 Tpi	321 8017	10.85	323 8017	43.75	

RUKO 8016 HSS steel Standard saw blade, extra long, wavy set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Profiled section, mild steel, aluminium 1/16" - 5/32", composite materials, sandwich materials up to 2 3/4". Insulation materials.						Bosch® T 318 A Metabo® 23 629 MP.S® 3114 Wilpu® MG 31 bi AEG® 274-654	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$	 
4 x 3/8 x .039	1,2	21 Tpi	321 8016	10.85	323 8016	43.75	

RUKO 8028 HSS bimetal Saw blade, wavy set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Mild steel, non-ferrous metals 1/8" - 3/8" thick as well as sheet high-alloyed chromium steel such as stainless and acidresistant steel, wood with nails, plexiglas.						Bosch® T 118 BF Metabo® 23 973 MP.S® 3113 F Wilpu® MG 12 bi AEG® 340-012	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$	 
3 x 5/16 x .039	2,0	13 Tpi	321 8028	9.30	323 8028	38.15	

T-shank jig-saw blades for power tools by Bosch®, Atlas Copco®, AEG®, Makita®, Metabo®, B & D®, Hitachi®

RUKO 8033 HSS bimetal Saw blade wavy set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Mild steel, non-ferrous metals, aluminium and aluminium alloys 1/16" - 5/32" thick, sheet high-alloyed chromium steel such as stainless and acid resistant steel.						Bosch® T 118 AF Metabo® 23 971 MP.S® 3111 F Wilpu® MG 11 bi AEG® 340-011	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack	Part no. Cont. pcs.	Price per pack	     
per mm	per inch		5	\$	20	\$	
3 x 5/16 x .039	1,2	21 Tpi	321 8033	9.30	323 8033	38.15	
RUKO 8020 HSS bimetal Saw blade wavy set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Profiled section, pipe up to 2 3/8" with wall thickness 1/8" - 25/64", non-ferrous metals, high-alloyed chromium steel such as stainless and acid resistant steel. Wood with nails, plexiglas, armoured plastics.						Bosch® T 318 BF Metabo® — MP.S® — Wilpu® K 14 bi AEG® 274-653	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack	Part no. Cont. pcs.	Price per pack	     
per mm	per inch		5	\$	20	\$	
5 x 5/16 x .039	2,0	13 Tpi	321 8020	9.45	323 8020	38.15	
RUKO 8019 HSS bimetal Saw blade wavy set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Profiled section, pipe up to 2 3/8" with wall thickness 1/16" - 5/32", high-alloyed chromium steel such as stainless and acid resistant steel.						Bosch® T 318 AF Metabo® — MP.S® — Wilpu® MG 31 bi AEG® 274-654	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack	Part no. Cont. pcs.	Price per pack	     
per mm	per inch		5	\$	20	\$	
5 3/16 x 5/16 x .039	1,2	21 Tpi	321 8019	9.45	323 8019	38.15	

T-shank jig-saw blades for power tools by Bosch®, Atlas Copco®, AEG®, Makita®, Metabo®, B & D®, Hitachi®

RUKO 8021 HSS bimetal Blade sharpened, teeth side set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwood and softwood up to 2 3/8", rough cut, high cutting performance (can take heavy cuts). Suitable for wood with nails.						Bosch® T 144 DF Metabo® — MP.S® — Wilpu® HGS 14 bi AEG® —	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$	  
4 x 5/16 x .051	4,0	6 Tpi	321 8021	14.00	323 8021	56.90	

RUKO 8005 HCS Standard saw blade, wavy set.						Blades to replace Competitive blades may vary from our specifications	
Application range: Plywood and wood-fibre board up to 1 3/16" thick. Insulating materials, plexiglas up to 15/64", cooled with water. Pressed material, hard fabric up to 5/32" thick, cardboard, linoleum up to 15/64" thick, cooled with water.						Bosch® T 119 B Metabo® 23 631 MP.S® 3108 Wilpu® HW 12 AEG® 274-353	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$	 
3 x 5/16 x .039	2,0	13 Tpi	321 8005	3.15	323 8005	13.30	

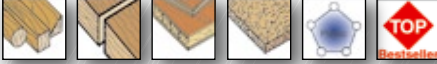
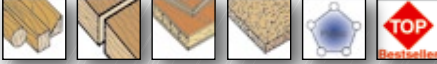
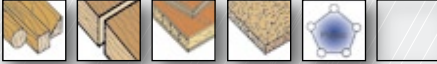
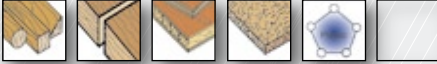
RUKO 8007 HCS Tapered blade, ground teeth. Fast and rough cut. Narrow blade suitable for profiled cuts.						Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwood, softwood, plywood and wood-fibre boards up to 2" thick, clean cut, suitable for slots and grooves. Various soft plastics up to 1 3/16", clean cuts.						Bosch® T 101 D Metabo® 23 635 MP.S® 3105 Wilpu® HGS 24 AEG® 274-351	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$	  
4 x 5/16 x .055	4,0	6 Tpi	321 8007	5.25	323 8007	31.35	

RUKO 8002 HCS Tapered blade, ground teeth. Clean and fast cut.						Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwood, softwood, plywood and wood-fibre board up to 2 3/8". Parallel cuts and clean cuts. Various soft plastics up to 1" thick, clean cuts.						Bosch® T 101 DP Metabo® 23 655 MP.S® 3103 Wilpu® HC 14 D AEG® 274-351	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth per mm per inch		Part no. Cont. pcs. 5	Price per pack \$	Part no. Cont. pcs. 20	Price per pack \$	 
4 x 5/16 x .066	4,0	6 Tpi	321 8002	5.95	323 8002	24.50	

T-shank jig-saw blades for power tools by Bosch®, Atlas Copco®, AEG®, Makita®, Metabo®, B & D®, Hitachi®

RUKO 8006 HCS Blade sharpened and side set. Fast and rough cut.							Blades to replace Competitive blades may vary from our specifications		
Application range: Hardwood and softwood up to 2 3/8" thick. Fast and rough cut. Polystyrene, polyamide, soft plastics up to 2" thick and plexiglas up to 1 3/16" thick, cooled with water. Hard fabric, insulation material and cardboard.							Bosch® T 144 D Metabo® 23 633 MP.S® 3104 Wilpu® HGS 14 AEG® 213-116		
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack	Part no. Cont. pcs.	Price per pack	      		
	per mm	per inch							
4 x 5/16 x .051	4,0	6 Tpi	321 8006	4.20	323 8006	17.35			
RUKO 8072 HCS Blade side set and sharpened. Suitable for profiled cuts.								Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwoods and softwoods up to 2 3/8" thick, rough cut, especially suitable for profiled cuts. Polystyrene, polyamide, soft plastics up to 2".								Bosch® T 244 D Metabo® 23 649 MP.S® — Wilpu® — AEG® 346-078	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack	Part no. Cont. pcs.	Price per pack	      		
	per mm	per inch							
4 x 1/4 x .051	4,0	6 Tpi	321 8072	5.80	323 8072	24.15			
RUKO 8070 HCS Saw blade side set. Rough cut with high cutting performance.								Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwoods and softwoods up to 2 3/8" thick, rough cut, high cutting performance (can take heavy cuts). Polystyrene, polyamide, soft plastics up to 1 3/16" thick.								Bosch® T 111 C Metabo® 23 632 MP.S® — Wilpu® HG 13 AEG® 254-071	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack	Part no. Cont. pcs.	Price per pack	      		
	per mm	per inch							
4 x 5/16 x .051	3,0	8 Tpi	321 8070	3.15	323 8070	13.30			
RUKO 8001 HCS Tapered blade, ground teeth. Clean and fast cut.								Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwood, softwood, plywood and wood-fibre board up to 2" thick. Suitable for slots and grooves. Various soft plastics up to 3/4" thick.								Bosch® T 101 B Metabo® 23 634 MP.S® 3101 Wilpu® HC 12 AEG® 254-061	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack	Part no. Cont. pcs.	Price per pack	      		
	per mm	per inch							
4 x 5/16 x .055	2,5	10 Tpi	321 8001	5.95	323 8001	24.50			

T-shank jig-saw blades for power tools by Bosch®, Atlas Copco®, AEG®, Makita®, Metabo®, B & D®, Hitachi®

RUKO 8018 HCS Tapered blade, ground teeth. Clean cut. Reversed cutting direction.						Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwoods and softwoods, plywood, wood-fibre boards up to 2 3/8", Formica and laminated / coated boards. Soft plastics.						Bosch® T 101 BR Metabo® 23 650 MP.S® 3102 Wilpu® HC 12 R AEG® 346-079	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack \$	Part no. Cont. pcs.	Price per pack \$	 
	per mm	per inch					
4 x 5/16 x .055	2,5	10 Tpi	321 8018	7.35	323 8018	29.75	 
RUKO 8023 HCS Tapered blade, ground teeth.						Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwood and softwood, plywood and wood-fibre boards up to 2 3/4", clean cut, suitable for slots and grooves. Various soft plastics up to 1 9/16", clean cut.						Bosch® T 301 D Metabo® 23 654 MP.S® 3101 L Wilpu® — AEG® —	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack \$	Part no. Cont. pcs.	Price per pack \$	 
	per mm	per inch					
4 1/2 x 5/16 x .055	4,0	6 Tpi	321 8023	6.65	323 8023	26.95	 
RUKO 8024 HCS Tapered blade, ground teeth. Very clean and fast cut.						Blades to replace Competitive blades may vary from our specifications	
Application range: Hardwood and softwood, plywood and wood-fibre boards up to 2 3/4", clean and fast cut, suitable for slots and grooves. Various soft plastics up to 1 9/16", clean cut.						Bosch® T 301 DL Metabo® — MP.S® 3104 L Wilpu® HGS 34 AEG® —	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs.	Price per pack \$	Part no. Cont. pcs.	Price per pack \$	 
	per mm	per inch					
5 x 3/8 x .055	4,0	6 Tpi	321 8024	6.65	323 8024	26.95	 

Reference table for RUKO jig-saw blades

Competitive blades may vary from our specifications

Article no.	Bosch®	D+N®	Gematic®	Hawera®	Lenox®	Metabo®	M.P.S®	Wilpu®	Atlas Copco®/ AEG®	Holz-Her®	Festo®
321 8001	T 101 B	3 22 25	10 2255	240 515	F 450 S	23 634	3101	HC 12	254-061	Ho 75 F	S 75/2,5
321 8002	T 101 DP	3 29 40	10 2258	240 516	F 456 S	23 655	3103	HC 14 D	274-351	—	S 75/4
321 8005	T 119 B	3 20 20	10 2249	144 212	F 410 S	23 631	3108	HW 12	274-353	SP 50 G	—
321 8006	T 144 D	3 23 40	10 2270	240 520	F 406 S	23 633	3104	HGS 14	213-116	HW 75 G	S75/4
321 8007	T 101 D	3 22 40	—	240 521	F 416 SC	23 635	3105	HGS 24	274-351	HO 75 G	—
321 8009	T 218 A	3 13 12	10 2104	240 523	F 324 S	23 647	3112	MG 21	254-063	ME 50 M	—
321 8010	T 118 A	3 10 12	—	—	F 318 SC	23 637	3111	MG 11	254-063	AK 50 M	HS 50/1.2
321 8011	T 118 B	3 10 20	10 2107	240 525	F 340 SV	23 638	3113	MG 12	254-064	ME 50 G	HS 50/2
321 8012	T 118 G	3 10 07	10 2101	240 526	—	23 636	3110	HG 107	274-652	ME 50 F	—
321 8013	T 127 D	3 10 30	10 2110	240 528	F 410 S	23 639	3118	K 14	274-315	AL 75 G	HS 75/3
321 8016	T 318 A	3 11 12	10 2113	240 527	F 518 S	23 629	3114	MG 31 bi	274-654	AK 100 M	—
321 8017	T 318 B	3 11 20	10 2116	240 534	F 410 S	—	3115	MG 32 bi	274-653	ME 100 G	—
321 8018	T 101 BR	3 26 25	10 2264	240 545	F 450 SR	23 650	3102	HC 12 R	346-079	—	—
321 8019	T 318 AF	3 15 12	—	144 223	F 324 S	—	—	MG 31 bi	274-654	HS 105	—
										/1,2 bi	—
321 8020	T 318 BF	3 15 20	—	144 227	—	—	—	K 14 bi	274-653	HS 105	—
										/2,0 bi	—
321 8021	T 144 DF	3 33 40	—	144 220	F 456 S	—	—	HGS 14 bi	—	—	HS 75/4 bi
321 8023	T 301 D	3 27 40	—	—	F 410 S	23 654	3101 L	—	—	HO 90 G	—
321 8024	T 301 DL	3 40 40	10 2253	144 213	F 686 S	—	3104 L	HGS 34	—	—	—
321 8028	T 118 BF	3 14 20	10 2322	144 225	F 314 S	23 973	3113 F	MG 12 bi	340-012	—	—
321 8033	T 118 AF	3 14 12	10 2319	240 503	F 324 S	23 971	3111 F	MG 11 bi	340-011	—	—
321 8070	T 111 C	3 20 30	—	—	—	23 632	—	HG 13	254-071	HO 75 R	S 75/3
321 8072	T 244 D	3 24 40	—	—	—	23 649	—	—	346-078	HW 75 K	S 75/4 K



Reciprocating blades for metal

Reciprocating blades for power tools by Bosch®, Porter Cable®, Metabo®, Milwaukee®, Hitachi®, Atlas Copco®, DeWalt®

RUKO 8939 TC (Tungsten carbide)
Toothing ground.

Application range:
Inox sheeting from 5/64" - 5/32" material thickness,
Inox profiles from Ø 5/64" - 2", FRP / epoxy from 5/64" - 19/32".
For material with reduced stroke rate and cooling, work without oscillation.

NEW

Blades to replace
Competitive blades may vary from our specifications

Bosch®	S 518 EHM	Metabo®	—
MP.S®	—	Wilpu®	—
AEG®	—		

Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
	per mm	per inch		
4 1/2 x 3/4 x .050	1,4	18 Tpi	331 89395	49.65

RUKO 8915 H.S.S. bimetal
Toothing crossed and milled.

Application range:
Thick sheeting from 1/8" - 5/16" material thickness,
solid pipes and profiles Ø 3/8" - 4", fast cutting.

Blades to replace
Competitive blades may vary from our specifications

Bosch®	S 922 BF	Metabo®	31130
MP.S®	4411	Wilpu®	3013-150
AEG®	323-810		

Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
	per mm	per inch		
6 x 3/4 x .039	1,8	14 Tpi	331 89155	11.80

RUKO 8940 H.S.S. bimetal
Toothing crossed and milled.

Application range:
Thick sheeting from 1/8" - 5/16" material thickness,
solid pipes and profiles Ø 3/8" - 4", fast cutting.

NEW

Blades to replace
Competitive blades may vary from our specifications

Bosch®	S 123 XF	Metabo®	—
MP.S®	—	Wilpu®	—
AEG®	—		

Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
	per mm	per inch		
6 x 3/4 x .039	1,8	14 Tpi	331 89405	13.95

RUKO 8908 H.S.S. bimetal
Toothing crossed and milled.

Application range:
Thin sheeting from 1/16" - 5/32" material thickness,
pipes and profiles Ø 3/16" - 4".

Blades to replace
Competitive blades may vary from our specifications

Bosch®	S 922 EF	Metabo®	31132
MP.S®	4401	Wilpu®	3014-150
AEG®	323-809		

Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
	per mm	per inch		
6 x 3/4 x .039	1,4	18 Tpi	331 89085	11.80



Reciprocating blades for metal and wood

Reciprocating blades for power tools by Bosch®, Porter Cable®, Metabo®, Milwaukee®, Hitachi®, Atlas Copco®, DeWalt®

RUKO 8985 H.S.S. bimetal
Toothing crossed and milled.

Application range:
Wood with nails, metal, chipboard from 3/8" - 4" material thickness, plastic profiles from Ø 3/16" - 4", solid plastics / FRP from 5/16" - 2", wood and metal window frames. Especially suitable for plunge cuts.

Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
	per mm	per inch		
6 x 7/8 x .0625	4,2	6 Tpi	331 89855	19.95

NEW

Blades to replace
Competitive blades may vary from our specifications

Bosch® S 610 DF Metabo® —
MP.S® — Wilpu® —
AEG® —



RUKO 8986 H.S.S. bimetal
Toothing crossed and milled.

Application range:
Plates from 5/32" - 3/8", solid pipes and profiles from Ø 3/4" - 4". Ideal for pipe cutting equipment, rescue and demolition work. Powerful, coarse cut.

Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
	per mm	per inch		
6 x 7/8 x .0625	2,9	8-10 Tpi	331 89865	24.95

Blades to replace
Competitive blades may vary from our specifications

Bosch® S 920 CF Metabo® —
MP.S® — Wilpu® —
AEG® —



RUKO 8988 H.S.S. bimetal
Toothing crossed and milled.

Application range:
Wood with nails, metal, chipboard from 3/8" - 6 7/8" material thickness, solid plastics / FRP from 5/16" - 2", wood and metal wall pieces to 6". For rescue and demolition work.

Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
	per mm	per inch		
9 x 7/8 x .0625	4,2	6 Tpi	331 89885	28.95

NEW

Blades to replace
Competitive blades may vary from our specifications

Bosch® S 1110 DF Metabo® —
MP.S® — Wilpu® —
AEG® —



RUKO 8989 H.S.S. bimetal
Toothing crossed and milled.

Application range:
Plates from 5/32" - 3/8", solid pipes and profiles from Ø 3/4" - 6 7/8". Ideal for pipe cutting equipment, rescue and demolition work. Powerful, coarse cut.

Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
	per mm	per inch		
9 x 7/8 x .0625	2,9	8-10 Tpi	331 89895	33.95

Blades to replace
Competitive blades may vary from our specifications

Bosch® S 1120 CF Metabo® —
MP.S® — Wilpu® —
AEG® —



Reciprocating blades for power tools by Bosch®, Porter Cable®, Metabo®, Milwaukee®, Hitachi®, Atlas Copco®, DeWalt®

RUKO 8937 H.S.S. bimetal Toothing crossed and milled.				Blades to replace Competitive blades may vary from our specifications	
Application range: Wood with nails, metal and chipboard from 3/8" - 9 7/8" material thickness, gas concrete from 3/8" - 9 7/8", plastics / FRP and profiles from 3/16" - 2 3/8".				Bosch® S 1411 DF Metabo® — MP.S® — Wilpu® 3021-300 bi AEG® —	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$	
	per mm	per inch			
12 x 3/4 x .050	4,2	6 Tpi	331 89375	27.30	     
RUKO 8910 H.S.S. bimetal Toothing crossed and milled.				Blades to replace Competitive blades may vary from our specifications	
Application range: Wood with nails and metal from 3/8" - 9 7/8" material thickness, metal sheeting, aluminium profiles from 1/8" - 3/8" and plastic profiles from Ø 1/8" - 9 7/8". Flexible, flush cut.				Bosch® S 1222 VF Metabo® 31125 / MP.S® 4432 31475 AEG® 323-813 Wilpu® 3018-280	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$	
	per mm	per inch			
12 x 3/4 x .039	2,5	10 - 14 Tpi	331 89105	19.95	     
RUKO 8929 H.S.S. bimetal Toothing crossed and milled.				Blades to replace Competitive blades may vary from our specifications	
Application range: Wood with nails and metal from 3/16" - 9 7/8" material thickness, metal sheeting, aluminium profiles from 1/8" - 3/8" and plastic profiles from Ø 1/8" - 9 7/8".				Bosch® S 1225 VF Metabo® 31124 / MP.S® 4422 31474 AEG® — Wilpu® —	
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$	
	per mm	per inch			
12 x 3/4 x .050	1,8 - 2,4	10 - 14 Tpi	331 89295	23.90	     

Reciprocating blades for power tools by Bosch®, Porter Cable®, Metabo®, Milwaukee®, Hitachi®, Atlas Copco®, DeWalt®

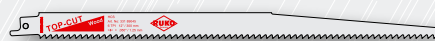
RUKO 8923 HCS Toothing crossed and milled.				Blades to replace Competitive blades may vary from our specifications Bosch® S 1111 K Metabo® — MP.S® — Wilpu® — AEG® —
Application range: Coarse and nail-free wood from 3/4" - 6 7/8" mm, firewood from Ø 3/4" - 6 7/8".				
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
per mm	per inch			
9 x 3/4 x .050	8,5	3 Tpi	331 89235	15.85



RUKO 8922 HCS Toothing crossed and ground.				Blades to replace Competitive blades may vary from our specifications Bosch® S 1531 L Metabo® 31139 / MP.S® 4052 31488 AEG® 323-803 Wilpu® 3029-240
Application range: Coarse and nail-free wood from 5/8" - 7 1/2", living wood, pruned to Ø 7 1/2", firewood from Ø 5/8" - 7 1/2".				
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
per mm	per inch			
10 x 3/4 x .050	4,0 - 6,5	5 Tpi	331 89225	16.85



RUKO 8904 HCS Toothing crossed and ground.				Blades to replace Competitive blades may vary from our specifications Bosch® S 1344 D Metabo® 31122 / MP.S® 4015 31472 AEG® 323-802 Wilpu® 3021-300
Application range: Structural wood, wooden wall, chipboard, MDF, plywood, plastics.				
Dimensions Length x Height x Thickness inch	Tooth spacing teeth		Part no. Cont. pcs. 5	Price per pack \$
per mm	per inch			
12 x 3/4 x .050	4,2	6 Tpi	331 89045	17.85





Reciprocating blades

Reference table for RUKO reciprocating blades

Competitive blades may vary from our specifications

Part no.	Bosch®	Lenox®	Milwaukee®	Morse®	Starrett®
8905	—	—	—	—	—
8902	—	—	—	—	—
8903	S828D, S811D	-606R	-5012, -6012	RB610STB, -P, -C, RB61014B, -P, RC610B, -P	B66-, B6610-
8924	S644D	-656R	-5031, -6031, -5035, -6035, -5015, -3031, -3035, -1012, -1031	RB6306B, RB533606P, RC606STB, RC606B, -P, RB65006B, -P, -C, RC606STP	BT66
8920	S811H	-610R	-5092, -6092, -3092, -1064	RB610B, -P, -C, RB61014B, -P, RC610B, -P	B66-, B6610-
8922	S1531L	—	—	—	—
8923	S1617K, S1542K	—	—	—	—
8904	S1344D	-156R	-5037, -6037, -5017, -3037, -1032, -1302	RB125006B, -P, -C, RB123506B, -P, RC1206C, -P, RH414B, -C	BT126-, B1260-, B41014
8912	S522EF, S518E	-418R	-5183, -6183, -1183, -1174, -1183	RB418B, -P, -C, RH418B, -P	B418
8917	S610DF, S611DF, S644DF, S711DF, S811DF	-656R	-5031, -6031, -5035, -6035, -5015, -3031, -3035, -1012, -1031	RB6306B, RB533606P, RC606STB, RC606B, -P, RB65006B, -P, -C, RC606STP	BT66
8938	S611VF	-656R	-5031, -6031, -5035, -6035, -5015, -3031, -3035, -1012, -1031	RB6306B, RB533606P, RC606STB, RC606B, -P, RB65006B, -P, -C, RC606STP	BT66
8901	S922HF, S811HF	-610R	-5092, -6092, -3092, -1064	RB610B, -P, -C, RB61014B, -P, RC610B, -P	B610-, B6812-
8915	S918B, S918BF, S922BF	-614R	-5182, -6182, -5282, -6282, -1182, -1179	RB614B, -P, -C, RH614B, -P	B614, B61014
8908	S922EF, S918EF	-618R	-5184, -6184, -5284, -6284, -1184, -2170	RB618B, -C, -P, RH618B, -P	B618-
8906	S 918 A, S922AF	-624R	-5186, -6186, -5286, -6286, -1186, -2171	RB624B, -P, -C, RH624B, -P	B624-
8909	S1018H, S1122HF	-810R	-5093, -6093, -5193, -6193, -3093, -2175	RB8501014B, -P, -C, RB810B, -P, RB81014B, -P, -C	B81014-
8918	S1118VF, S1122VF	-650R	-5091, -6091	RB6501014B, -P, -C	—
8916	S1122BF	—	—	—	—
8913	S1122EF	-818R	-5188, -6188	RB818B, -P, RB814B, -P, -C	B818
8928	S1122VF	—	—	—	—
8936	S1544DF, S1511DF	-956R	-5036, -6036, -5016, -3036, -1033	RB95006B, -P, -C, RB93506B, -P, RC905B, -P, RC906B, -P	BT96-, BT86-
8933	S1018H, S1122HF	-810R	-5093, -6093, -5193, -6193, -3093, -2175	RB8501014B, -P, -C, RB810B, -P, RB81014B, -P, -C	B81014-
8937	S1411DF, S1344DF	-156R	-5037, -6037, -5017, -3037, -1032, -1302	RB125006B, -P, -C, RB123506B, -P, RC1206C, -P	BT126-, B1260-
8910	S1211H, 1222VF	-110R	-5094, -6094, -5194, -6194, -3094	RB12501014B, -P, -C, RB121014B, -P, RB1214B, -P	B121014-, B1210-
8929	S1222VF, S1122E	-110R	-5094, -6094, -5194, -6194, -3094	RB12501014B, -P, -C, RB121014B, -P, RB1214B, -P	B121014-, B1210-

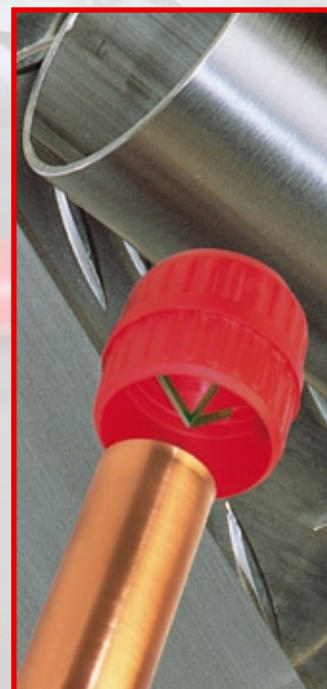
The professional's choice for unique, superior quality tools!

CHANDS' TOOLBOX.
COM



DEBURRING PROGRAM

COMPETENCE IN
PRECISION
AND QUALITY



Unigrat „Universal Handle”, designed in accordance with the latest *ergonomic research*.

One-hand operation

The locking head can be drawn back with thumb and finger of the hand holding the tool. With the locking head withdrawn, all steel holders (B-C-D-E-F) can be used and adjusted to lengths of up to 4 inch.

Grip grooves

The ends of the grip grooves are raised, preventing the tool from slipping out of the hand.

Offset surfaces

The offset between the surfaces means that the Unigrat „Universal Handle” can be held firmly for maximum torque.

Tapered handle

gets narrower towards the base, giving improved grip.

Removable cap

The relevant blades can be stored inside the handle.



Unigrat System

Packing unit: in plastic pack

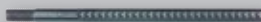


Description	Part no.	Content pieces	Price each \$	
Universal handle A This handle fits all holders B-C-D-E-F. With the locking head withdrawn, the steel holders can be adjusted up to 4" in length and can be locked in any position. The replacement blades fit in the bottom cavity of the handle.	107 010	1	5.60	
Steel holder B	107 011	1	3.50	
Blade B 10 The HSS blade most commonly used for internal and external deburring work on long-chipping materials such as steel, aluminium, plastics etc.	107 012	10	1.00	
Blade B 20 This HSS blade is used for short-chipping materials such as brass and cast iron. Can be used in both directions.	107 014	10	1.00	
Blade B 30 This HSS blade is suitable for the simultaneous deburring of inside and outside bores in material up to 5/32" thick.	107 015	10	1.15	
Blade B 50 Scriber with carbide-tipped point, regrindable.	107 016	1	8.40	
Blade B 60 This HSS blade removes burrs from the back of material up to 3/4" thick.	107 017	10	1.35	
Blade B 70 This carbide-tipped blade deburs workpieces made of material up to 1/8" thick.	107 018	1	11.05	
Steel holder C	107 019	1	3.50	
Blade C 40 Small HSS triangular scraper 5/32" x 3/4" for precision work on surfaces up to 5/32" wide.	107 020	1	9.45	
Blade C 42 Large HSS triangular scraper 5/16" x 1 3/16" for standard work on surfaces up to 5/16" wide.	107 021	1	11.90	
Steel holder D	107 022	1	3.50	
Blade D 80 Reversible tungsten-carbide insert for blunt scraping and deburring sheet metal up to 1/8" thick. 6 cutting edges.	107 023	1	14.55	
Blade D 82 Reversible tungsten-carbide insert for deburring sheet metal up to 5/16" thick. 2 cutting edges.	107 024	1	20.15	
Steel holder E	107 025	1	3.50	
Blade E 100 HSS blade with B 10 cutting edge, long shank only. For internal and external deburring work on long-chipping materials such as steel, aluminium, plastics etc.	107 026	10	1.15	
Blade E 200 HSS blade with B 20 cutting edge, long shank only. For short-chipping materials such as brass and cast iron. Usable in both directions.	107 027	10	1.15	
Blade E 300 HSS blade with B 30 cutting edge, long shank only. For simultaneous deburring of internal and external bores in materials up to 5/32" thick.	107 028	10	1.15	
Blade E 350 This HSS blade is suitable for deburring straight edges, keyways etc.	107 029	10	1.15	
Blade E 600 This HSS blade is suitable for deburring from behind in materials up to 3/4" thick.	107 030	5	3.50	

Unigrat System

Packing unit: in plastic pack

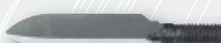


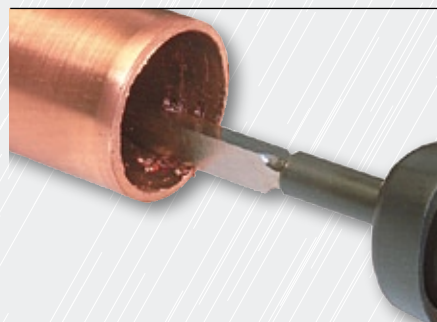
Description	Part no.	Content pieces	Price each \$	
Steel holder F	107 031	1	3.50	
Countersinker F 12 HSS countersinker for deburring bores up to $\varnothing 1/2"$	107 032	1	8.75	
Countersinker F 20 HSS countersinker for deburring bores up to $\varnothing 3/4"$	107 033	1	14.90	
Countersinker F 30 HSS countersinker for deburring bores up to $\varnothing 1 3/16"$	107 034	1	29.25	

Unigrat kits

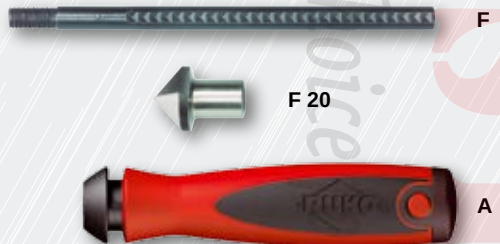
A rational deburring system for all deburring work that has to be done by hand. The wide selection of blades provides a wide range of deburring possibilities for bores and edges. The various blades enable you to debur bores from inside, outside or on both sides, as the blade itself adapts to the contours.

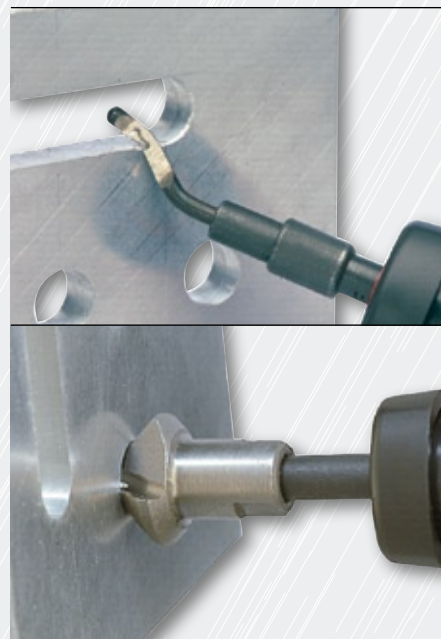
Packing unit: in plastic packs

Description	Part no.	Price each \$
Unigrat deburrer set "B", 4 pieces	107 003	11.20
 B		
 B 20		
 B 10		
 A		
Unigrat deburrer set "C", 3 pieces	107 004	22.75
 C		
 C 42		
 A		
Unigrat deburrer set "D", 4 pieces	107 005	25.40
 D		
 D 80		
 A		



Unigrat sets

Description	Part no.	Price each \$
Unigrat deburrer set "E", 5 pieces 	107 006	12.60
Unigrat deburrer set "F", 3 pieces 	107 007	25.75



Edge trimmer with HSS blades

- Plastic handle with removable back for spare blade storage.
- Exchangeable blades.
- Ideal for trimming edges, tubes, steel, aluminium, brass and copper sheets, cast iron and plastic sheets.

Packing unit: in plastic pack

Description	Part no.	Price each \$
Edge trimmer A1 complete with E 100 HSS blade 	107 050	9.45
Edge trimmer complete A3 with one HSS blade in each of the sizes E 100, E 200 and E 350 	107 051	11.75



Rapid deburrer with HSS blade

- Hexagonal aluminium handle.
- Small and handy.
- Pocket-sized for permanent readiness.

Packing unit: in plastic bags of 1 each

Description	Part no.	Price each \$
Rapid deburrer with non-exchangeable E 100 HSS blade	107 052	4.90
Rapid deburrer with exchangeable E 100 HSS blade	107 054	8.60



Unigrat action edge trimmer "Profi"

Description	Part no.	Price each \$
20 pieces edge trimmer art. no. 107 050 complete with exchangeable E 100 HSS blade in a convenient table display	107 107	213.50



No. 107 107



No. 107 108

Quickgrat action "Rapid"

Description	Part no.	Price each \$
80 pieces rapid deburrer art. no. 107 052 with non-exchangeable E 100 HSS blade in a convenient table display	107 108	416.50

Tube deburrer with HSS cutting edges

- Ideal for internal tube deburring.
- Ideal for external tube deburring.
- Suitable for tube diameters from $\frac{5}{32}$ " to $1 \frac{7}{16}$ ".

Packing unit: individual cartons

Description	Article no.	Price each \$
Tube deburrer	107 053	12.10



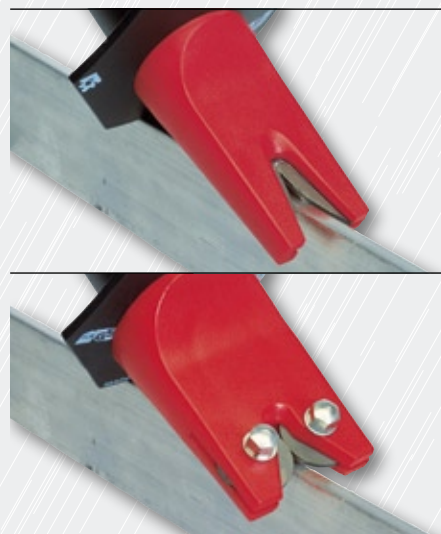
Sheet-metal deburrer with tungsten-carbide cutting edges

- Plastic handle with hand protector and 2 tungsten-carbide blades.

- This sheet-metal deburrer processes two edges in one operation.
- Suitable for double-sided deburring of steel, aluminium, brass, copper and plastic sheets.

Packing unit:
in plastic pack

Description	Part no.	Price each \$
Sheet-metal deburrer for materials up to $\frac{3}{16}$ " thick	107 064	19.25
Sheet-metal deburrer for materials up to $\frac{3}{8}$ " thick	107 065	35.00
Sheet-metal deburrer with exchangeable cutting blades	107 066	31.85
2 replacement tungsten-carbide cutting blades	107 067	28.70



Groove deburrer set "N" with HSS disk blade

- Plastic handle.
- Exchangeable HSS disk blade.

- Ideal for grooves from $\frac{3}{32}$ " - $\frac{7}{16}$ " wide.
- Especially suitable for deburring shaft keyways and bores in steel and aluminium.

Packing unit: in plastic pack

Description	Part no.	Price each \$
Groove deburrer set "N" 3 pieces with RUKO universal handle A	107 062	18.20
1 replacement steel holder N	107 037	5.79
1 replacement HSS disk blade	107 063	6.85



Double deburrer with HSS disk blades

- Plastic handle with hand protector and 2 HSS blades.
- Exchangeable HSS disk blades.
- The disk blades can be turned when the cutting surfaces become worn, enabling the whole blade circumference to be utilized.
- The distance between the disk blades can be adjusted.
- Suitable for double-sided deburring of steel, aluminium, brass, copper and plastic sheets up to $\frac{3}{8}$ " thick.

Packing unit: in plastic pack

Description	Part no.	Price each \$
Double deburrer, complete	107 060	23.10
1 replacement HSS disk blade	107 061	6.15



Application table

+ well applicabel ● efficient applicabel ■ not recommended	Alloyed steel	Rust-resistant steel	Steel	Sheet metal	Cast iron	Aluminium	Copper	Brass	Polyacetal	Polyamid (PA)	Polyvinyl chlorid (PVC)	Polyphenylene oxide	Polyethylene	Polypropylene	Acrylic acid	Poly carbonate	Polytetrafluoroethylene	Polystyrene
Unigrat B 10			+			+	+		+	●	+	+	+	+	+	+	+	+
Unigrat B 20					+			+	+	●	+	+	+	+	+	+	+	+
Unigrat B 30			+			+	+		+	+	+	+	+	+	+	+	+	+
Unigrat B 50	●	●	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Unigrat B 60			+			+	+		+	●	●	●	●	●	●	●	●	●
Unigrat B 70	●	+	+	+	●	+	+	●	●	●	+	+			●	●	●	●
Unigrat C 40		+	+	●	●	●	+	●	●	●	●	●	●	●	●	●	●	●
Unigrat C 42		+	+	●	●	●	+	●	●	●	●	●	●	●	●	●	●	●
Unigrat D 80	●	+	+	+	●	●	●	●	●	●	+	+			●	●	●	●
Unigrat D 82	●	+	+	+	●	●	●	●	●	●	+	+			●	●	●	●
Unigrat E 100			+			+	+		+	●	+	+	+	+	+	+	+	+
Unigrat E 200					+			+	+	●	+	+	●	+	●	+	+	+
Unigrat E 300			+			+	+		+	+	+	+	+	+	+	+	+	●
Unigrat E 350					+			+		●								
Unigrat E 600			+			+	+		+	●	●	●	●	●	+	+	+	●
Unigrat F 12		●	+	●	●	+	+	●	+	+	+	+	+	+	+	●	●	+
Unigrat F 20		●	+	●	●	+	+	●	+	+	+	+	+	+	+	●	●	+
Unigrat F 30		●	+	●	●	+	+	●	+	+	+	+	+	+	+	●	●	+
Double deburrer		●	+	●	●	+	+	●	+	+	●	●	●	●	+	●	●	●
Groove deburrer		●	+		●	+	+	●	+	+	+	+	+	+	+	+	+	+
Sheet-metal deburrer	●	+	+	+	●	+	+	●	+	+	+	+	+	+	+	+	+	+
Tube deburrer		●	●		●	+	+	●	+	●	+	+	+	+	+	+	●	+

RUKO

COMPETENCE IN
PRECISION
AND QUALITY

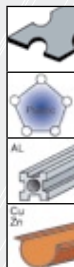
DISPLAYS

The professional's choice for unique, superior quality tools!

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**Display containing step drills
H.S.S. + H.S.S.-TiN, CBN ground, spiral fluted
with split point in plastic box**



1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

[illegible]

**Display containing annular cutters
H.S.S. with weldon shank 3/4", CBN ground,
cutting depth 1 inch in plastic box**



1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

[illegible]

Position	Description	Quantity plastic boxes	Content pieces	Part no.	Price / each \$
18	Pilot pins for annular cutters H.S.S. with weldon shank Ø 1/4 x 3 inch, cutting depth 1 inch	4	1	108 304 B	10.20

**Display containing annular cutters
H.S.S. with weldon shank 3/4", CBN ground,
cutting depth 2 inch in plastic box**



1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

[illegible]

Position	Description	Quantity plastic boxes	Content pieces	Part no.	Price / each \$
18	Pilot pins for annular cutters H.S.S. with weldon shank Ø 1/4 x 4 inch, cutting depth 2 inch	4	1	108 305 B	10.20

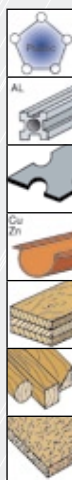
**Display containing H.S.S. bi-metal
hole saws in carton**



1	2	3	4	5
6	7	8	9	10
11	12	13	14	
15	16	17		

[illegible]

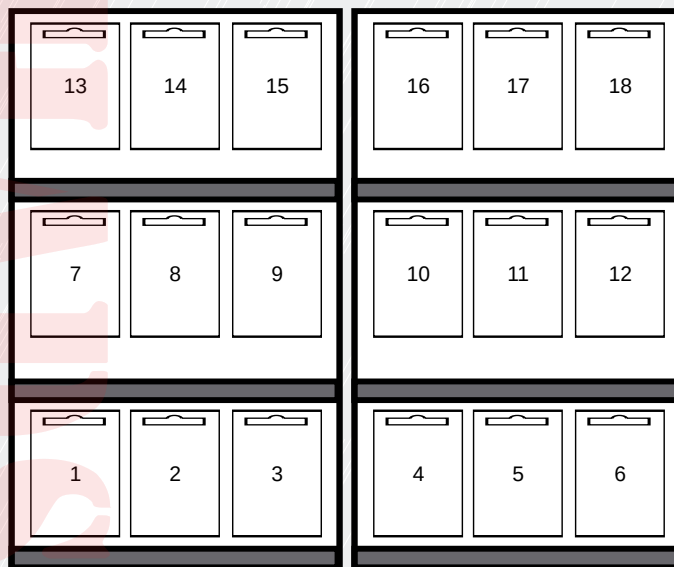
Display containing H.S.S. bi-metal hole saws in carton



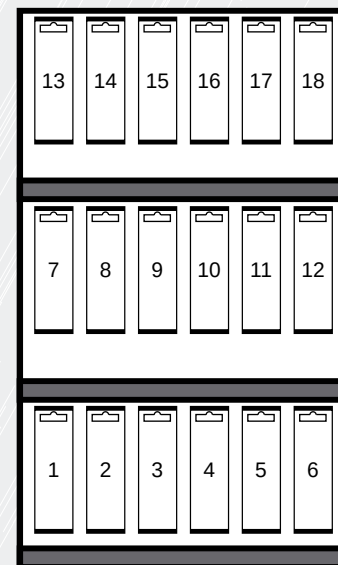
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26				
27	28	29	30	31	32				

Description						Part no.	Price / display \$
H.S.S. bi-metal hole saws			Breadth 26 inch, height 23 1/2 inch, depth 13 3/4 inch including 80 H.S.S. bi-metal hole saws + 6 arbor holders			219 570	723.28
Position	Drill-Ø mm	Drill-Ø inch	For arbor holders	Quantity cartons	Content pieces	Part no.	Price / each \$
1	16,0	5/8	A1 / A4 / A5	3	1	106 016	4.97
2	19,0	3/4	A1 / A4 / A5	3	1	106 019	5.07
3	22,0	7/8	A1 / A4 / A5	3	1	106 022	5.20
4	25,0	1	A1 / A4 / A5	3	1	106 025	5.43
5	29,0	1 1/8	A1 / A4 / A5	3	1	106 029	5.87
6	30,0	1 1/5	A1 / A4 / A5	3	1	106 030	5.93
7	32,0	1 1/4	A2 / A6 / A7	3	1	106 032	6.07
8	35,0	1 3/8	A2 / A6 / A7	3	1	106 035	6.77
9	38,0	1 1/2	A2 / A6 / A7	3	1	106 038	6.93
10	41,0	1 5/8	A2 / A6 / A7	3	1	106 041	7.33
11	44,0	1 3/4	A2 / A6 / A7	3	1	106 044	7.57
12	51,0	2	A2 / A6 / A7	3	1	106 051	8.10
13	54,0	2 1/8	A2 / A6 / A7	2	1	106 054	8.70
14	57,0	2 1/4	A2 / A6 / A7	2	1	106 057	8.93
15	60,0	2 3/8	A2 / A6 / A7	2	1	106 060	9.43
16	64,0	2 1/2	A2 / A6 / A7	2	1	106 064	9.83
17	67,0	2 5/8	A2 / A6 / A7	2	1	106 067	10.03
18	70,0	2 3/4	A2 / A6 / A7	2	1	106 070	10.37
19	76,0	3	A2 / A6 / A7	2	1	106 076	11.17
20	79,0	3 1/8	A2 / A6 / A7	2	1	106 079	12.27
21	83,0	3 1/4	A2 / A6 / A7	2	1	106 083	13.13
22	86,0	3 3/8	A2 / A6 / A7	2	1	106 086	13.46
23	89,0	3 1/2	A2 / A6 / A7	2	1	106 089	13.80
24	92,0	3 5/8	A2 / A6 / A7	2	1	106 092	14.57
25	95,0	3 3/4	A2 / A6 / A7	2	1	106 095	15.57
26	102,0	4	A2 / A6 / A7	2	1	106 102	17.53
27	105,0	4 1/8	A2 / A6 / A7	2	1	106 105	18.43
28	108,0	4 1/4	A2 / A6 / A7	2	1	106 108	19.43
30	114,0	4 1/2	A2 / A6 / A7	2	1	106 114	21.00
31	121,0	4 3/4	A2 / A6 / A7	2	1	106 121	21.73
29	Arbor holder including pilot drill type A1			3	1	106 201	6.70
32	Arbor holder including pilot drill type A2			3	1	106 202	12.43

Display jig-saw blades T shank style

[illegible]

Display Reciprocating blades with 1/2 inch universal fitting

[illegible]

« www.rukotool.com »



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