COUNTERSINKS & DEBURRERS

Professional
Cutting Tools

Spindle speeds for HSS countersinks

Material	Steel < 700 N/mm²	Steel > 700 N/mm²	Alloyed steel (stainless) < 1.000 N/mm²	Cast iron < 250 HB	Cast iron > 250 HB	CuZn-alloys (brittle)	CuZn-alloys (soft)	Aluminium alloys <11% Si	Plastics	Duroplast (Fibre reinforced plastic)
Vc [m/min]	20	15	10	10	8	40	20	20	15	10
Diameter	RPM	RPM	RPM	RPM	RPM	RPM	RPM	RPM	RPM	RPM
ø4,3	1481	1110	740	740	592	2961	1481	1480	1110	740
ø5,0	1273	955	637	637	509	2546	1273	1273	955	637
ø5,3	1201	901	601	601	480	2402	1201	1201	901	601
ø5,8	1098	823	549	549	439	2195	1098	1098	823	549
ø6,0	1061	796	531	531	424	2122	1061	1061	796	531
ø6,3	1011	758	505	505	404	2021	1011	1011	758	505
ø7,0	909	682	455	455	364	1819	909	909	682	455
ø7,3	872	654	436	436	349	1744	872	872	654	436
ø8,0	796	597	398	398	318	1592	796	796	597	398
ø8,3	767	575	384	384	307	1534	767	767	575	384
ø9,4	677	508	339	339	271	1355	677	677	508	339
ø10,0	637	477	318	318	255	1273	637	637	477	318
ø10,4	612	459	306	306	245	1224	612	612	459	306
ø11,5	554	415	277	277	221	1107	554	554	415	277
ø12,0	531	398	265	265	212	1061	531	531	398	265
ø12,4	513	385	257	257	205	1027	513	513	385	257
ø12,5	509	382	255	255	204	1019	509	509	382	255
ø13,4	475	356	238	238	190	950	475	475	356	238
ø15,0	424	318	212	212	170	849	424	424	318	212
ø16,0	398	298	199	199	159	796	398	398	298	199
ø16,5	386	289	193	193	154	772	386	386	289	193
ø19,0	335	251	168	168	134	670	335	335	251	168
ø20,0	318	239	159	159	127	637	318	318	239	159
ø20,5	311	233	155	155	124	621	311	311	233	155
ø23,0	277	208	138	138	111	554	277	277	208	138
ø25,0	255	191	127	127	102	509	255	255	191	127
ø26,0	245	184	122	122	98	490	245	245	184	122
ø28,0	227	171	114	114	91	455	227	227	171	114
ø30,0	212	159	106	106	85	424	212	212	159	106
ø31,0	205	154	103	103	82	411	205	205	154	103

Spindle speeds for rotary carbide burrs

Material	ø3mm	ø6mm	ø10mm	ø12mm	ø16mm
Steel	60.000 - 90.000	45.000 - 60.000	30.000 - 40.000	22.500 - 30.000	18.000 - 24.000
Steel, hardened	60.000 - 90.000	30.000 - 45.000	19.000 - 30.000	15.000 - 22.500	12.000 - 18.000
Stainless steel	60.000 - 90.000	30.000 - 45.000	19.000 - 30.000	15.000 - 22.500	12.000 - 18.000
Cast iron	45.000 - 90.000	22.500 - 60.000	15.000 - 40.000	11.000 - 30.000	9.000 - 24.000
Titanium	60.000 - 90.000	30.000 - 45.000	19.000 - 30.000	15.000 - 22.500	12.000 - 18.000
Nickel	60.000 - 90.000	30.000 - 45.000	19.000 - 30.000	15.000 - 22.500	12.000 - 18.000
Copper (alloys)	45.000 - 90.000	22.500 - 60.000	15.000 - 40.000	11.000 - 30.000	9.000 - 24.000
Aluminium (alloys)	30.000 - 90.000	15.000 - 70.000	10.000 - 50.000	7.000 - 38.000	6.000 - 30.000
Plastics	30.000 - 90.000	15.000 - 70.000	10.000 - 50.000	7.000 - 38.000	6.000 - 30.000
Cermets	60.000 - 90.000	30.000 - 45.000	19.000 - 30.000	15.000 - 22.500	12.000 - 18.000

DIMENSIONS

DIN 335C
Dimensions of 90° countersinks with relief ground both axially and radially and with cylindrical shank.

C Shape
Countersinks, other than 60° and 90° with relief ground both axially and radially and with cylindrical shank.

DIN 335D
Dimensions of 90° countersinks with relief ground both axially and radially and with morse taper shank.

DIN 373
Dimensions of counterbores with parallel shank and solid pilot.

MATERIALS

HSS G
High speed steel, ground.

HSSE
High-speed steel alloy with an extra element to increase material properties.

HSSE Co5
High-speed steel alloy with 5% cobalt for increased toughness and durability.

PM HSSE
Compacted and sintered HSS-steel with excellent toughness and wear resistance.

SC Ultra-Fine
Solid carbide, ultra fine grain for tougher and more wear resistant properties.

GEOMETRIES

ALU
Geometry specifically for non-ferrous metals like aluminium and other soft materials.

INOX
Geometry specifically for stainless steels and other difficult to cut materials.

60°
For 60° countersinking applications.

90°
For 90° countersinking applications.

120°
For 120° countersinking applications.

180°
For 180° counterboring applications.

Straight Cut
Rotary carbide burrs with 0° straight cut, for general purpose use.

Single Cut
Rotary carbide burrs with a right-hand spiral cut, for general purpose use.

Double Cut
Rotary carbide burrs with a right-hand spiral cut and left-hand cross cut for improved operator control.

HD Cut
Rotary carbide burrs with an angressive and strong double cut for high metal removal rates.

ALU Cut
Rotary carbide burrs with a positive right hand spiral cut, wide and open gullets, for soft materials.

SHANKS & DRIVES

DIN 228B
Morse Taper (MT) shanks with tang.

DIN 3126 C6.3
Hexagon shank ¼" (6.3mm) according to DIN 3126 shape C.

DIN 3126 E6.3
Hexagon shank ¼" (6.3mm) according to DIN 3126 shape E.

1/4"
Hexagon shank ¼" (6.3mm).

COATINGS

TiN
Coating based on Titanium-Nitride, reduced coefficient of friction due to smooth surface. Improves tool life and allows higher cutting speeds.

TiAlN
Coating based on Titanium-Aluminium-Nitride , more temperature resistant and wear resistant than TiN-coating.
For applications on (very) tough materials.

HSS-G Countersinks 90°

HSS G | DIN 335C | 90°

Execution: 90° HSS-G countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Diameter	Length	Shank	For
4,3	40	4	-
5,0	40	4	-
5,3	40	4	-
6,0	45	5	-
6,3	45	5	M3
7,0	50	6	-
7,3	50	6	-
8,0	50	6	-
8,3	50	6	M4
9,4	50	6	-
10,0	50	6	-

Diameter	Length	Shank	For
10,4	50	6	M5
11,5	56	8	-
12,4	56	8	M6
13,4	56	8	-
15,0	60	10	-
16,5	60	10	M8
19,0	63	10	-
20,5	63	10	M10
25,0	67	10	M12
28,0	71	12	M14
31,0	71	12	M16

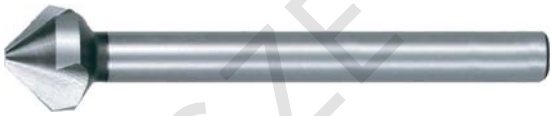
HSS-G Countersinks 90°, in ABS-cassette

Execution: 90° HSS-G countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Description	Type	Content
6 piece set HSS-G countersinks	"400"	1x ø6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5mm
7 piece set HSS-G countersinks	"400"	1x ø6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 - 25,0mm

HSS-G Countersinks 90°, extra long



HSS G | DIN 335C | 90°

Execution: 90° HSS-G countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Diameter	Length	Shank	For
6,3	85	5	M3
8,3	85	6	M4
10,4	88	6	M5
12,4	108	8	M6

Diameter	Length	Shank	For
15,0	110	10	-
16,5	112	10	M8
20,5	115	10	M10
25,0	118	10	M12

HSS-G Countersinks 90°, 1/4"-bit shank

HSS G | 90° | 1/4" Zeskant | DIN 3126 C6.3

Execution: 90° HSS-G countersinks, 3 flutes, ¼"-hexagon shank according to DIN 3126-C6.3.

Application: For deburring or countersinking of the most commonly used materials. Best results with low rpms.
Ideal for (cordless) portable power tools.

Diameter	Length	Shank	For
6,3	31	1/4"	M 3
8,3	31	1/4"	M 4
10,4	34	1/4"	M 5
12,4	35	1/4"	M 6
16,5	40	1/4"	M 8
20,5	41	1/4"	M10

HSS-G Countersinks 90°, 1/4"-bit shank, in plastic cassette

Execution: 90° HSS-G countersinks, 3 flutes, ¼"-hexagon shank according to DIN 3126-C6.3.

Application: For deburring or countersinking of the most commonly used materials. Best results with low rpms.
Ideal for (cordless) portable power tools.

Description	Type	Content
6 piece set HSS-G countersinks (1/4" hex.)	"319"	1x ø6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5mm

HSS-G Countersinks 90°, MT-shank

HSS G | DIN 335D | DIN 228B | 90°

Execution: 90° HSS-G countersinks according to DIN 335-D, morse-taper shank according to DIN 228-B, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Diameter	Length	Shank	For
20,5	100	MT2	M10
25,0	106	MT2	M12
31,0	112	MT2	M16
37,0	118	MT2	M20
40,0	140	MT3	-
50,0	150	MT3	-
63,0	180	MT4	-
80,0	190	MT4	-

HSS-G Countersinks 90°, ALU

HSS G | DIN 335C | 90° | ALU

ALU

Execution: 90° HSS-G countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges, specifically for aluminium.

Application: Ideal for deburring or countersinking of aluminium and similar soft materials. Best results with low rpms.

Diameter	Length	Shank	For
6,3	45	5	M3
8,3	50	6	M4
10,4	50	6	M5
12,4	56	8	M6
16,5	60	8	M8
20,5	63	10	M10
25,0	67	10	M12

HSS-Co Countersinks 90°

HSS Co-5% | DIN 335C | 90° | INOX

Execution: 90° HSS-Co countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges, specifically for difficult to cut materials.

Application: Ideal for deburring or countersinking of difficult to cut materials. Best results with low rpms!

Diameter	Length	Shank	For
6,3	45	5	M3
8,0	50	6	-
8,3	50	6	M4
10,0	50	6	-
10,4	50	6	M5
12,4	56	8	M6
15,0	60	10	-
16,5	60	8	M8
20,5	63	10	M10
25,0	67	10	M12
31,0	71	12	M16

HSS-Co Countersink sets 90°, in metal cassette

Execution: 90° HSS-Co countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges, specifically for difficult to cut materials.

Application: Ideal for deburring or countersinking of difficult to cut materials. Best results with low rpms!

Description	Type	Content
6 piece set HSS-Co5 countersinks	" 6 "	1x ø6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5mm
7 piece set HSS-Co5 countersinks	" 7 "	1x ø6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 - 25,0mm

HSS-G Countersinks 90°, coated (TiN)

HSS G | DIN 335C | 90° | TiN

Execution: 90° HSS-G countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges. TiN-coated for better cutting conditions and increased tool life.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Diameter	Length	Shank	For
6,3	45	5	M3
8,3	50	6	M4
10,4	50	6	M5
12,4	56	8	M6
16,5	60	8	M8
20,5	63	10	M10
25,0	67	10	M12
31,0	71	12	M16

HSS-G Countersink sets 90°, coated (TiN), in cassette

Execution: 90° HSS-G countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges. TiN-coated for better cutting conditions and increased tool life.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Description	Type	Content
6 piece set HSS-G countersinks, TiN-coated	" 6 "	1x ø6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5mm
7 piece set HSS-G countersinks, TiN-coated	" 7 "	1x ø6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 - 25,0mm

PM Countersinks 90°

HSSE PM | DIN 335C | 90°

Execution: 90° PM (powder metallurgical steel) countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of difficult to cut materials. Best results with low rpms!

Diameter	Length	Shank	For
6,3	45	5	M3
8,3	50	6	M4
10,4	50	6	M5
12,4	56	8	M6
16,5	60	10	M8
20,5	63	10	M10
25,0	67	10	M12
31,0	71	12	M16

Solid carbide countersinks 90°

VHM | DIN 335C | 90°

Execution: 90° solid carbide (grade ISO K20) countersinks according to DIN 335-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of high tensile steels (>1.000N/mm²) or high abbrasive materials like GG cast iron with a hardness of 240HB or more.

Diameter	Length	Shank	For
6,3	45	5	M3
8,3	50	6	M4
10,4	50	6	M5
12,4	56	8	M6
16,5	60	10	M8
20,5	63	10	M10
25,0	67	10	M12
31,0	71	12	M16

HSS-G Countersinks 60°

HSS G | DIN 334C | 60°

Execution: 60° HSS-G countersinks according to DIN 334-C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Diameter	Length	Shank
6,3	45	5
8,0	45	5
10,0	53	6
12,5	56	8
16,0	63	10
20,0	67	10
25,0	71	10

HSS-G Countersinks 120°

HSS G | C Vorm | 120°

Execution: 120° HSS-G countersinks, shape C, cylindrical shank, robust design with 3 flutes. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Diameter	Length	Shank
6,3	45	5
8,3	50	6
10,4	50	6
12,4	56	8
16,5	63	10
20,5	67	10
25,0	71	10

HSS-G Countersinks 90°, 1 flute

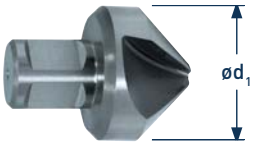
HSS G | C Vorm | 90°

Execution: 90° HSS-G countersinks, shape C, cylindrical shank, robust design with 1 flute. Due to CBN precision ground geometry very sharp and precise cutting edges.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Diameter	Length	Shank
6,0	45	5
8,0	50	6
10,0	50	6
12,0	56	8
16,0	60	10
20,0	63	10
25,0	67	10
30,0	71	12

HSS-G Countersinks 90°, weldon 19mm



HSS | Weldon 19 | 90°

Execution: HSS-G countersinks, 90°, CBN ground cutting edges and flutes for extremely stable countersinking/chamfering applications. With WELDON 19mm shank.

Application: For magnetic core drills or drill presses with either WELDON-type spindle mount or morse taper spindle mount in conjunction with an appropriate adaptor.
For drilling in most commonly used materials such as construction steels, mild steels and alloyed steels.

Diameter	Length
25,0	43,0
30,0	47,0
40,0	52,0
55,0	63,0

Universal handles

Execution: Ergonomically designed handles for manual deburring operations. For countersinks with ø8 or ø10mm cylindrical shanks.

Application: Manually deburring of holes.

Diameter
ø8mm
ø10mm

HSS-G Countersinks with handle

Execution: 90° HSS-G Hand deburrers with countersinks according to DIN 335-C, robust design with 3 flutes with a fixed ergonomically designed handle.
The countersink tool bit is NOT replacable!

Application: Manually deburring of holes.

Diameter	Length
12,4	130
15,0	150
16,5	150
20,5	150
25,0	150

HSS-E Cross hole countersinks 90°

HSS Co-5% 90°

Execution: 90° HSS-Co5 cross hole countersinks, cylindrical shank. Chip evacuation through cross hole avoids chips getting stuck between cutter and workpiece.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Range	Diameter	Length	Shank
1 - 4	6,35	45	6,35
2 - 5	10	45	6
5 - 10	14	48	8
10 - 15	21	65	10
15 - 20	28	85	12
20 - 25	35	102	15
25 - 30	44	115	15
35 - 40	53	136	15
40 - 50	64	166	18

HSS-E Cross hole countersink sets 90°, in cassette

Execution: 90° HSS-Co5 cross hole countersinks, cylindrical shank. Chip evacuation through cross hole avoids chips getting stuck between cutter and workpiece.

Application: Ideal for deburring or countersinking of the most commonly used materials. Best results with low rpms.

Description	Type	Content
4 piece set cross hole countersinks	" 4"	1x ø10 - 14 - 21 - 28mm

HSS-G Counterbores, fine tolerance

HSS G | DIN 373 | 180°

Execution: HSS-G counterbores, 180°, according to DIN 373, cylindrical shank and fixed pilot tip. For through holes.

Application: For countersinking all types of cilinder head screws and nuts. Best results with low rpms.

For	Bore ø	Pilot ø	Shank
M3	6,0	3,2	5
M4	8,0	4,3	5
M5	10,0	5,3	8
M6	11,0	6,4	8
M8	15,0	8,4	12,5
M10	18,0	10,5	12,5
M12	20,0	13,0	12,5

HSS-G Counterbores, medial tolerance

HSS G | DIN 373 | 180°

Execution: HSS-G counterbores, 180°, according to DIN 373, cylindrical shank and fixed pilot tip. For through holes.

Application: For countersinking all types of cilinder head screws and nuts. Best results with low rpms.

For	Bore ø	Pilot ø	Shank
M3	6,0	3,4	5
M4	8,0	4,5	5
M5	10,0	5,5	8
M6	11,0	6,6	8
M8	15,0	9,0	12,5
M10	18,0	11,0	12,5
M12	20,0	13,5	12,5

HSS-G Counterbores, core holes

HSS G | DIN 373 | 180°

Execution: HSS counterbores, 180°, according to DIN 373, cylindrical shank and fixed pilot tip. For core holes (same as the pre-tap diameter for metric threads).

Application: For countersinking all types of cilinder head screws and nuts. Best results with low rpms.

For	Bore ø	Pilot ø	Shank
M3	6,0	2,5	5
M4	8,0	3,3	5
M5	10,0	4,2	8
M6	11,0	5,0	8
M8	15,0	6,8	12,5
M10	18,0	8,5	12,5
M12	20,0	10,2	12,5

HSS-G Counterbore sets, in metal cassette

Execution: HSS-G counterbores, 180°, according to DIN 373, cylindrical shank and fixed pilot tip. For through holes.

Application: For countersinking all types of cilinder head screws and nuts. Best results with low rpms.

Description	Type	Content
6 piece counterbore set, fine	" 6 "	1x M3, M4, M5, M6 M8 and M10
6 piece counterbore set, medial	" 6 "	1x M3, M4, M5, M6 M8 and M10
6 piece counterbore set, core holes	" 6 "	1x M3, M4, M5, M6 M8 and M10

HSS Tube & sheet drill bits

Execution: HSS tube & sheet drill bits with cylindrical shank. Split-point according to DIN1412-C. Cone shaped back-end of the tool facilititates easy withdrawal of the tool after having punctured sheet metal with the tool`s widest diameter.

Application: Ideal tool for automotive, electrical, aviation, machine building industry, switchboards and plumbers. Stepless centring, drilling and boring without deformation of the workpiece.

Nr.	Range	Length	Shank
1	3 - 14	58	6
2	5 - 20	71	8
3	16 - 30,5	76	8
4	24 - 40	89	10
5	36 - 50	97	12
6	40 - 61	103	13
7	5 - 25,4	87	10
8	5 - 31	103	9
9	5 - 22,5	79	8

HSS Tube & sheet drill bit sets, in metal cassette

Execution: HSS tube & sheet drill bits with cylindrical shank. Split-point according to DIN1412-C. Cone shaped back-end of the tool facilititates easy withdrawal of the tool after having punctured sheet metal with the tool`s widest diameter.

Application: Ideal tool for automotive, electrical, aviation, machine building industry, switchboards and plumbers. Stepless centring, drilling and boring without deformation of the workpiece.

Description	Type	Content
4 piece tube & sheet drill bit set	" 4 "	Nr. 1, 2 and 3 / 1 piece each. Stick with cutting paste / 1 piece.

HSS-Co Tube & sheet drill bits

Execution: HSS-Co5 tube & sheet drill bits with cylindrical shank. Split-point according to DIN1412-C. Cone shaped back-end of the tool facilititates easy withdrawal of the tool after having punctured sheet metal with the tool`s widest diameter.

Application: Ideal tool for automotive, electrical, aviation, machine building industry, switchboards and plumbers. Stepless centring, drilling and boring without deformation of the workpiece.

Nr.	Range	Length	Shank
1	3 - 14	58	6
2	5 - 20	71	8
3	16 - 30,5	76	9
8	5 - 31	103	9

HSS Tube & sheet drill bits, coated (TiN)

Nr.1 3-14 mm Ø | Nr.2 5-20 mm Ø | Nr.3 16-30,5 mm Ø | Nr.8 5-31 mm Ø

Execution: HSS tube & sheet drill bits with cylindrical shank. Split-point according to DIN1412-C. Cone shaped back-end of the tool facilititates easy withdrawal of the tool after having punctured sheet metal with the tool`s widest diameter. TiN-coated for increased tool life.

Application: Ideal tool for automotive, electrical, aviation, machine building industry, switchboards and plumbers. Stepless centring, drilling and boring without deformation of the workpiece.

Nr.	Range	Length	Shank
1	3 - 14	58	6
2	5 - 20	71	8
3	16 - 30,5	76	9
8	5 - 31	103	9

HSS Tube & sheet drill bit sets, coated (TiN), in metal cassette

Execution: HSS tube & sheet drill bits with cylindrical shank. Split-point according to DIN1412-C. Cone shaped back-end of the tool facilititates easy withdrawal of the tool after having punctured sheet metal with the tool`s widest diameter. TiN-coated for increased tool life.

Application: Ideal tool for automotive, electrical, aviation, machine building industry, switchboards and plumbers. Stepless centring, drilling and boring without deformation of the workpiece.

Description	Type	Content
4 piece TiN-coated tube & sheet drill bit set	" 4 "	Nr. 1, 2 and 3 (TiN-coated) / 1 piece each. Stick with cutting paste / 1 piece.

HSS Tube & sheet drill bits, with stopper

Nr.1 | Nr.2 | Nr.3

Execution: HSS tube & sheet drill bits with stopper and spot facer for cavity sealing. With split-point according to DIN1412-C and 3-flat cylindrical shank.

Application: Ideal tool for automotive, electrical, aviation, machine building industry, switchboards and plumbers. Stepless centring, drilling and boring without deformation of the workpiece.

Nr.	Range	Length	Shank
1	3 - 7,8	48	6
2	3 - 10,2	52	6
3	3 - 11,8	56	6

HSS Tube & sheet drill bits, 1/4" bit shank

Nr.2 5-20 mm Ø

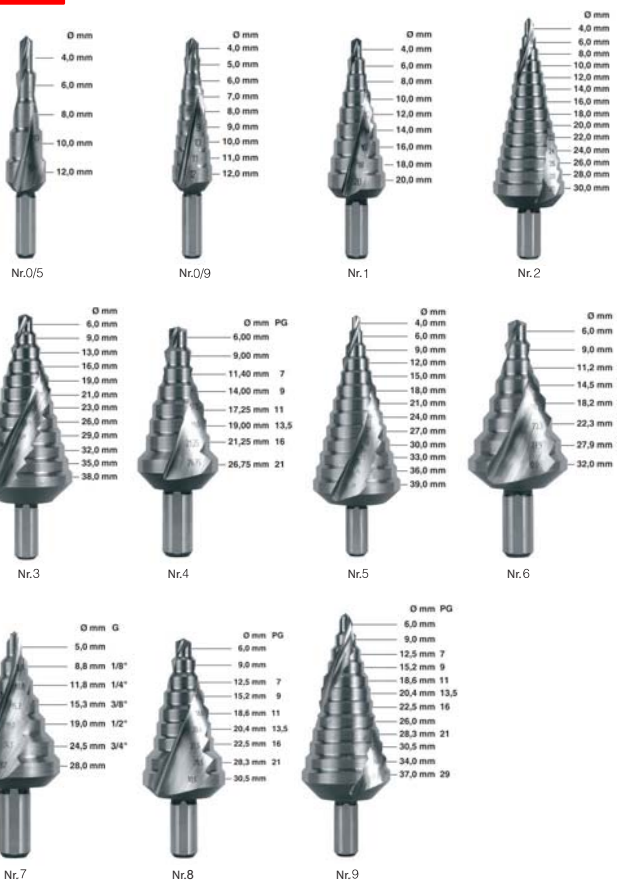
DIN 3126 E6.3 | 1/4"

Execution: HSS tube & sheet drill bits with ¼" hexagon shank. Split-point according to DIN1412-C. Cone shaped back-end of the tool facilititates easy withdrawal of the tool after having punctured sheet metal with the tool`s widest diameter.

Application: Ideal tool for automotive, electrical, aviation, machine building industry, switchboards and plumbers. Stepless centering, drilling and boring without deformation of the workpiece.

Nr.	Range	Length	Shank
2	5 - 20	78	1/4"

HSS Step drill bits



Execution: HSS step drill bits with spiral flutes, split-point according to DIN1412-C and a 3-flat cylindrical shank. Optimized chip-flow, also of non-breaking chips, protects cuttings edges and guarantees a smooth and high-performance cutting process.

Application: Suitable for most common materials. Steel sheet material up to 4mm thickness.

Nr.	Range	Steps	Length	Shank
0/5	4 - 12	5	65	6
0/9	4 - 12	9	65	6
1	4 - 20	9	75	8
2	4 - 30	14	100	10
3	6 - 38	12	100	10
4	6 - 26,75	8	75	10
5	4 - 39	13	107	10
6	6 - 32	8	75	10
7	5 - 28	7	69	10
8	6 - 30,5	9	80	10
9	6 - 37	12	100	10
13	6 - 40	12	100	10

HSS Step drill bit sets, in metal cassette

Execution: HSS step drill bits with spiral flutes, split-point according to DIN1412-C and a 3-flat cylindrical shank. Optimized chip-flow, also of non-breaking chips, protects cuttings edges and guarantees a smooth and high-performance cutting process.

Application: Suitable for most common materials. Steel sheet material up to 4mm thickness.

Description	Type	Content
4 piece step drill bit set	"004"	Nr. 0/9, 1 and 2 / 1 pc each. Stick with cutting paste / 1 pc.

HSS-Co Step drill bits

Execution: HSS-Co5 step drill bits with spiral flutes, split-point according to DIN1412-C and a 3-flat cylindrical shank. Optimized chip-flow, also of non-breaking chips, protects cuttings edges and guarantees a smooth and high-performance cutting process.

Application: Suitable for most common materials. Steel sheet material up to 4mm thickness.

Nr.	Range	Steps	Length	Shank
0/9	4 - 12	9	65	6
1	4 - 20	9	75	8
2	4 - 30	14	100	10
9	6 - 37	12	100	10

HSS Step drill bits, coated (TiN)

Execution: HSS step drill bits with spiral flutes, split-point according to DIN1412-C and a 3-flat cylindrical shank. Optimized chip-flow, also of non-breaking chips, protects cuttings edges and guarantees a smooth and high-performance cutting process. TiN-coating for increased tool-life.

Application: Suitable for most common materials. Steel sheet material up to 4mm thickness.

Nr.	Range	Steps	Length	Shank
0/9	4 - 12	9	65	6
1	4 - 20	9	75	8
2	4 - 30	14	100	10
9	6 - 37	12	100	10

HSS Step drill bits (<2mm)

Execution: HSS step drill bits with spiral flutes, split-point according to DIN1412-C and a 3-flat cylindrical shank. Thanks to 2.0mm step height ideal for the switchboard producing industry and for use on thin sheets in general.

Application: Suitable for most common materials. Steel sheet material up to 2mm thickness.

Nr.	Range	Steps	Length	Shank
0/9	4 - 12	9	48	6
1	4 - 20	9	58	8
2	4 - 30	14	72	10

HSS Step drill bits, for metric cable connectors, through holes

Execution: HSS step drill bits with spiral flutes, split-point according to DIN1412-C and a 3-flat cylindrical shank. Specifically designed for metric cable connectors, through holesm (DIN/EN 50262).

Application: Suitable for most common materials. Steel sheet material up to 2mm thickness.

Nr.	Range	Steps	Length	Shank
15	6,5 - 32,5	9	79	10
17	6,5 - 40,5	11	96	10

HSS Step drill bits, for metric cable connectors, core holes

Execution: HSS step drill bits with spiral flutes, split-point according to DIN1412-C and a 3-flat cylindrical shank. Specifically designed for metric cable connectors, core holes (DIN/EN 50262.

Application: Suitable for most common materials. Steel sheet material up to 4mm thickness.

Nr.	Range	Steps	Length	Shank
14	5,3 - 30,5	9	79	10
16	5,3 - 38,5	11	96	10

HSS Step drill bits, imperial sizes

Execution: HSS step drill bits with straight flutes, cylindrical shank. Specifically designed for guardrail assembly.

Application: Suitable for most common materials. Steel sheet material up to 2mm thickness.

Nr.	Range	Steps	Length	Shank
3	1/4" - 3/4"	9	2 3/4"	3/8"

HSS-Co Spot weld drill bits

HSSE

Execution: HSS-Co spot weld drill bits, cylindrical shank, very robust design. Specifically designed for drilling spot welds and other difficult drilling applications on sheet materials with (cordless) portable drills.

Application: Burr-free drilling on sheet materials (steel, brass, aluminium, zinc, copper and plastics) without spotting, removal of spot-welds.

Diameter	Length	Materiaal
6	66	HSS-Co
6,5	40	HSS-Co
8	79	HSS-Co
8	40	HSS-Co

HSS-Co Spot weld drill bits, coated (TiAlN)

HSSE TiAlN

Execution: HSS-Co spot weld drill bits, cylindrical shank, very robust design. Specifically designed for drilling spot welds and other difficult drilling applications on sheet materials with (cordless) portable drills.

Application: Burr-free drilling on sheet materials (steel, brass, aluminium, zinc, copper and plastics) without spotting, removal of spot-welds.

Diameter	Length	Materiaal
8	79	HSS-Co

Solid carbide spot weld drill bits, coated (TiAlN)

VHM TiAlN

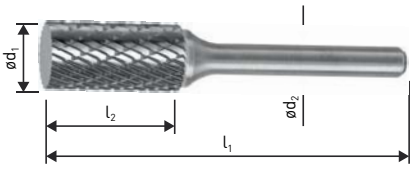
Execution: Solid carbide spot weld drill bits, cylindrical shank, very robust design. Specifically designed for the toughest applications.

Application: Burr-free drilling on sheet materials (steel, brass, aluminium, zinc, copper and plastics) without spotting, removal of spot-welds.

Description	Diameter	Length	Material
Fast Cut	**6**	66	Carbide
Fast Cut	**8**	80	Carbide
Spotle Drill	**6,5**	40	Carbide
Spotle Drill (V)	**6,5**	40	Carbide
Spotle Drill	**8**	40	Carbide
Spotle Drill (V)	**8**	44	Carbide

Carbide burrs, cylinder, shape A (ZYA)

Execution: Carbide rotary burrs, cylinder shape, without end cut, in different cuts. Shape A (ISO: ZYA).



Double cut (Z6)

ød1	l2	l1	ød2	Execution
2	11	38	3	Solid
3	14	38	3	Solid
4	13	50	4	Solid
6	18	50	6	Solid
6	18	100	6	Solid
6	18	150	6	Solid
8	19	64	6	Brazed
9,6	19	64	6	Brazed
9,6	19	172	6	Brazed
12,7	25	70	6	Brazed
12,7	25	178	6	Brazed
16	25	70	6	Brazed

Spiral cut (Z3)

6	18	50	6	Solid
8	19	64	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

ALU-cut (Z1)

9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

STEEL-cut (Z7)

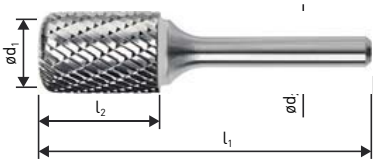
8	19	64	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

INOX-cut (Z9)

6	18	50	6	Solid
8	19	64	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

Carbide burrs, cylinder with radius, shape AR

Execution: With corner radius giving the operator extra control of the tool. The radius avoids "biting" in the material causing the tool to run-off and damage the workpiece.



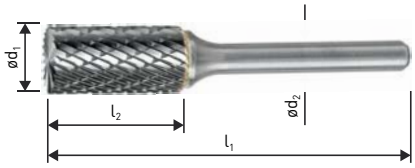
Double cut (Z6)

ød1	l2	l1	ød2	Execution
3	14	38	3	Solid
6	18	50	6	Solid
8	19	65	6	Brazed
10	19	65	6	Brazed
12	25	70	6	Brazed
15	25	70	6	Brazed

Corner radius for stronger edges and more control of the burr when operating.

Carbide burrs, cylinder with end cut, shape B (ZYA-S)

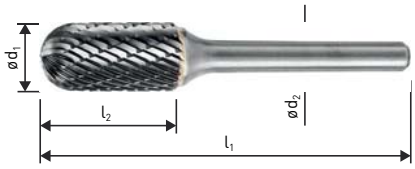
Execution: Carbide rotary burrs, cylinder shape, with end cut, in different cuts. Shape B (ISO: ZYA-S).



	ød1	l2	l1	ød2	Execution
Double cut (Z6)	2	11	38	3	Solid
	3	14	38	3	Solid
	4	13	50	4	Solid
	6	18	50	6	Solid
	6	18	100	6	Solid
	6	18	150	6	Solid
	8	19	64	6	Brazed
	9,6	19	64	6	Brazed
	9,6	19	172	6	Brazed
	12,7	25	70	6	Brazed
	12,7	25	178	6	Brazed
	16	25	70	6	Brazed
Spiral cut (Z3)	6	18	50	6	Solid
	8	19	64	6	Brazed
	9,6	19	64	6	Brazed
	12,7	25	70	6	Brazed
ALU-cut (Z1)	9,6	19	64	6	Brazed
	12,7	25	70	6	Brazed
STEEL-cut (Z7)	8	19	64	6	Brazed
	9,6	19	64	6	Brazed
	12,7	25	70	6	Brazed

Carbide burrs, ball nosed cylinder, shape C (WRC)

Execution: Carbide rotary burrs, cylinder shape, with ball nose, in different cuts. Shape C (ISO: WRC).

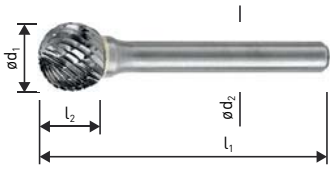


	ød1	l2	l1	ød2	Execution
Double cut (Z6)	2	11	38	3	Solid
	3	14	38	3	Solid
	6	18	50	6	Solid
	8	19	64	6	Brazed
	9,6	19	64	6	Brazed
	9,6	19	172	6	Brazed
	12,7	25	70	6	Brazed
	12,7	25	178	6	Brazed
	16	25	70	6	Brazed
Spiral cut (Z3)	6	18	50	6	Solid
	8	19	64	6	Brazed
	9,6	19	64	6	Brazed
	12,7	25	70	6	Brazed
ALU-cut (Z1)	9,6	19	64	6	Brazed
	12,7	25	70	6	Brazed
STEEL-cut (Z7)	8	19	64	6	Brazed
	9,6	19	64	6	Brazed
	12,7	25	70	6	Brazed
INOX-cut (Z9)	6	18	50	6	Solid
	8	19	64	6	Brazed
	9,6	19	64	6	Brazed
	12,7	25	70	6	Brazed
Double cut (Z6)	6	19	60	6	Solid
	6	19	80	6	Solid
	6	19	100	6	Solid
	6	19	150	6	Solid

Ideal for locksmiths!!

Carbide burrs, ball, shape D (KUD)

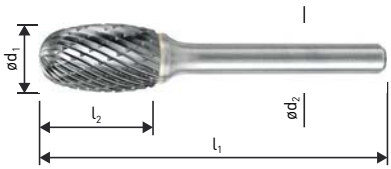
Execution: Carbide rotary burrs, ball shape, in different cuts. Shape D (ISO: KUD).



	ød1	l2	l1	ød2	Execution
Double cut (Z6) 	**3**	2,5	38	3	Solid
	4	3,4	38	3	Solid
	6	4,7	50	6	Solid
	8	6	52	6	Brazed
	9,6	8,0	54	6	Brazed
	9,6	8	187	6	Brazed
	12,7	11	56	6	Brazed
	12,7	11	164	6	Brazed
	16	14	59	6	Brazed
ALU-cut (Z1) 	**9,6**	8,0	54	6	Brazed
	12,7	11	56	6	Brazed
	16	14	59	6	Brazed
STEEL-cut (Z7) 	**8**	6	52	6	Brazed
	9,6	8	54	6	Brazed
	12,7	11	56	6	Brazed
INOX-cut (Z9) 	**6**	4,7	50	6	Solid
	8	6	52	6	Brazed
	9,6	8	54	6	Brazed
	12,7	11	56	6	Brazed

Carbide burrs, oval, shape E (TRE)

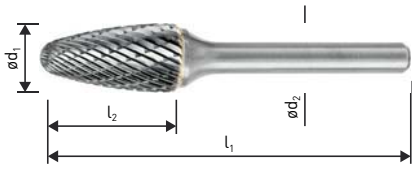
Execution: Carbide rotary burrs, oval shape, in different cuts. Shape E (ISO: TRE).



	ød1	l2	l1	ød2	Execution
Double cut (Z6) 	**3**	6	38	3	Solid
	6,3	9,5	42	3	Brazed
	6	10	50	6	Solid
	8	15	60	6	Brazed
	9,6	16	60	6	Brazed
	9,6	16	168	6	Brazed
	12,7	22	67	6	Brazed
	12,7	22	175	6	Brazed
	16	25	70	6	Brazed
ALU-cut (Z1) 	**9,6**	16	60	6	Brazed
	12,7	22	67	6	Brazed
STEEL-cut (Z7) 	**12,7**	22	67	6	Brazed
INOX-cut (Z9) 	**8**	15	60	6	Brazed
	9,6	16	60	6	Brazed
	12,7	22	67	6	Brazed

Carbide burrs, ball nosed tree F (RBF)

Execution: Carbide rotary burrs, ball nosed tree shape, in different cuts. Shape F (ISO: RBF.



Double cut (Z6)

ød1	l2	l1	ød2	Execution
3	14	38	3	Solid
6	18	50	6	Solid
6	18	150	6	Solid
8	20	65	6	Brazed
9,6	19	64	6	Brazed
9,6	19	172	6	Brazed
12,7	25	70	6	Brazed
12,7	25	178	6	Brazed
16	25	70	6	Brazed

Spiral cut (Z3)

6	18	50	6	Solid
8	20	65	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

ALU-cut (Z1)

9,6	19	64	6	Brazed
12,7	25	70	6	Brazed
16	25	70	6	Brazed

STEEL-cut (Z7)

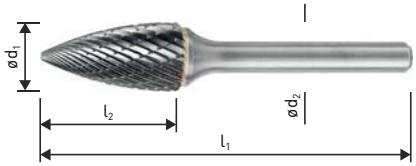
8	20	65	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

INOX-cut (Z9)

6	18	50	6	Solid
8	20	65	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

Carbide burrs, pointed tree G (RBG)

Execution: Carbide rotary burrs, pointed tree shape, in different cuts. Shape G (ISO: RBG).



Double cut (Z6)

ød1	l2	l1	ød2	Execution
3	14	38	3	Solid
6	18	50	6	Solid
8	19	64	6	Brazed
9,6	19	64	6	Brazed
9,6	19	172	6	Brazed
12,7	19	64	6	Brazed
12,7	25	178	6	Brazed
12,7	25	70	6	Brazed
16	25	70	6	Brazed

Spiral cut (Z3)

3	14	38	3	Solid
6	18	50	6	Solid
8	19	64	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

ALU-cut (Z1)

9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

STEEL-cut (Z7)

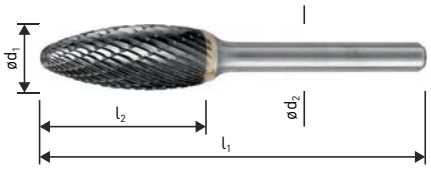
8	19	64	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

INOX-cut (Z9)

6	18	50	6	Solid
8	19	64	6	Brazed
9,6	19	64	6	Brazed
12,7	25	70	6	Brazed

Carbide burrs, flame, shape H

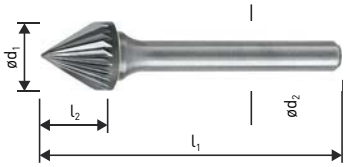
Execution: Carbide rotary burrs, flame shape, in different cuts. Shape H.



	ød1	l2	l1	ød2	Execution
Double cut (Z6)	**3**	6	38	3	Solid
	6	14	50	6	Solid
	8	19	64	6	Brazed
	8	19	172	6	Brazed
	9,6	19	65	6	Brazed
	12,7	32	77	6	Brazed
	12,7	32	178	6	Brazed
ALU-cut (Z1)	**9,6**	19	65	6	Brazed
	12,7	32	77	6	Brazed
STEEL-cut (Z7)	**8**	19	64	6	Brazed
	12,7	32	77	6	Brazed
INOX-cut (Z9)	**8**	19	64	6	Brazed
	9,6	19	65	6	Brazed
	12,7	32	77	6	Brazed

Carbide burrs, countersink 60°, shape J (KSJ)

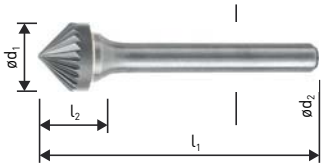
Execution: Carbide rotary burrs, 60° countersink shape, in different cuts. Shape J (ISO: KSJ).



	ød1	l2	l1	ød2	Execution
Spiral cut (Z3)	**3**	2,5	38	3	Solid
	9,6	8	56	6	Brazed
Double cut (Z6)	**12,7**	11	59	6	Brazed

Carbide burrs, countersink 90°, shape K (KSK)

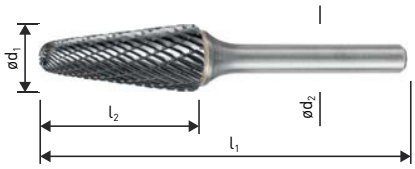
Execution: Carbide rotary burrs, 90° countersink shape, in different cuts. Shape K (ISO: KSK).



	ød1	l2	l1	ød2	Execution
Spiral cut (Z3)	**3**	1,5	38	3	Solid
	6	3	50	6	Solid
	12,7	6,3	55	6	Brazed
Double cut (Z6)	**9,6**	4,7	53	6	Brazed
	16	8	57	6	Brazed

Carbide burrs, ball nosed cone, shape L (KEL)

Execution: Carbide rotary burrs, ball nosed cone shape, in different cuts. Shape L (ISO: KEL).



Double cut (Z6)

ød1	l2	l1	ød2	Execution
6	18	50	6	Solid
8	25,4	70	6	Brazed
10	20	65	6	Brazed
9,6	30	76	6	Brazed
9,6	30	183	6	Brazed
12,7	32	77	6	Brazed
12,7	32	185	6	Brazed
16	33	78	6	Brazed

Spiral cut (Z3)

8	25,4	70	6	Brazed
9,6	30	76	6	Brazed
12,7	32	77	6	Brazed

ALU-cut (Z1)

9,6	30	76	6	Brazed
12,7	32	77	6	Brazed

STEEL-cut (Z7)

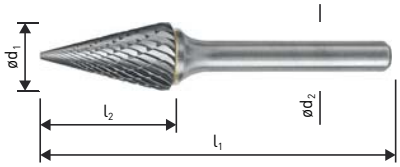
10	20	65	6	Brazed
12,7	32	77	6	Brazed

INOX-cut (Z9)

8	25,4	70	6	Brazed
10	20	65	6	Brazed
12,7	32	77	6	Brazed

Carbide burrs, cone, shape M (SKM)

Execution: Carbide rotary burrs, cone shape, in different cuts. Shape M (ISO: SKM).



Double cut (Z6)

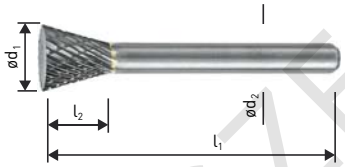
ød1	l2	l1	ød2	Execution
6,3	12,7	49	3	Brazed
6	20	50	6	Solid
9,6	16	64	6	Brazed
12,7	22	71	6	Brazed

ALU-cut (Z1)

9,6	16	64	6	Brazed
12,7	22	71	6	Brazed

Carbide burrs, inverted cone, shape N (WKN)

Execution: Carbide rotary burrs, inverted cone shape, in different cuts. Shape N (ISO: WKN).

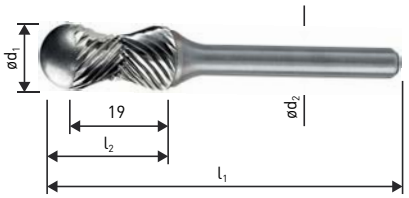


Double cut (Z6)

ød1	l2	l1	ød2	Execution
3	(10°)	4	38	Solid
6	8	50	6	Solid
12,7	12,7	58	6	Brazed

Carbide burrs, multi-edge, shape X

Execution: Single cut multi-edge carbide burr with X-design assures perfect guidance along the edges. Can be used on a wide range of materials such as cast iron, cast steel, brass, stainless steel etc.



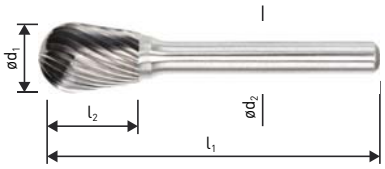
Spiral cut
(Z3)

ød1	l2	l1	ød2	Execution
12,7	25	70	6	Brazed

X Shape

Carbide burrs, combi, shape DN

Execution: Single cut carbide Combi-burr combines inverted cone and ball shape into one. Result is a very versatile tool that can be used in many different applications and on a wide range of materials such as cast iron, cast steel, brass, bronze, stainless steel etc.



Spiral cut
(Z3)

ød1	l2	l1	ød2	Execution
12,7	20	63	6	Brazed

DN Shape

Carbide mini-burr sets, in ABS-cassette

Execution: Miniature carbide burrs, DC (Double cut), shank ø3mm

Z6 Universal

Double cut
The most versatile cut for rotary burrs. Suitable for almost all applications.

Description	Content	Diameter	Cut
10 piece set carbide burrs ø3mm / Z6	Shape A, B, C, D, E, F, G, H, L and M / 1 piece each	ø3mm	Z6 / Double cut

Carbide burr 5 pc sets, in ABS-cassette

Z6 Universal

Double cut
The most versatile cut for rotary burrs. Suitable for almost all applications.

Z3 Spiral

Single cut
Single spiral cut for the best finishes. Very wide application range.

Z1 ALU

ALU-cut
Sharp geometry and wide chip gullets, specifically for aluminium and other non-ferrous metals.

Z7 STEEL

STEEL-cut
Newly developped cut specifically for steels and cast steels. Achieve very high metal removing rates with excellent tool life!

Z9 INOX

INOX-cut
Newly developped cut specifically for stainless steels offering high metal removing rates, excellent surface finishes and tool life!

Description	Content	Diameter	Cut
5 piece set carbide burrs ø9,6 / Z6	Shape B, C, F, G and L / 1 piece each	ø9,6mm	Z6 / Double cut
5 piece set carbide burrs ø9,6 / Z3	Shape B, C, F, G and L / 1 piece each	ø9,6mm	Z3 / Single cut
5 piece set carbide burrs ø9,6 / Z1	Shape B, C, F, G and L / 1 piece each	ø9,6mm	Z1 / ALU-cut
5 piece set carbide burrs ø9,6 / Z7	Shape A, C, F, G and L / 1 piece each	ø9,6mm	Z7 / STEEL-cut
5 piece set carbide burrs ø9,6 / Z9	Shape A, C, F, G and L / 1 piece each	ø9,6mm	Z9 / INOX-cut
5 piece set carbide burrs ø12,7 / Z6	Shape B, C, F, G and L / 1 piece each	ø12,7mm	Z6 / Double cut
5 piece set carbide burrs ø12,7 / Z3	Shape B, C, F, G and L / 1 piece each	ø12,7mm	Z3 / Single cut
5 piece set carbide burrs ø12,7 / Z1	Shape B, C, F, G and L / 1 piece each	ø12,7mm	Z1 / ALU-cut
5 piece set carbide burrs ø12,7 / Z7	Shape A, C, F, G and L / 1 piece each	ø12,7mm	Z7 / STEEL-cut
5 piece set carbide burrs ø12,7 / Z9	Shape A, C, F, G and L / 1 piece each	ø12,7mm	Z9 / INOX-cut

Carbide burr 10 pc sets, in ABS-cassette

Z6 Universal

Double cut
The most versatile cut for rotary burrs. Suitable for almost all applications.

Description	Content	Diameter	Cut
10 piece set carbide burrs ø9,6 / ø12,7 / Z6	Shape B, C, F, G and L / 1 stuks per diameter	ø9,6mm ø12,7mm	Z6 / Double cut
10 piece set carbide burrs ø12,7 / Z6	Shape A, B, C, D, E, F, G, H, L and M / 1 piece each	ø12,7mm	Z6 / Double cut

Scribers

Execution: Hexagonal shank and CBN precision ground carbide tip.

Shank	Length
6-kant	150mm

Utility knives, Premium

Application: Premium quality retractable blade utility knife for professionals. The ergonomically designed firm metal handle with anti-slip pad can be opened with a slider on the side. The handle provides storage for spare blades. Exchange blades without tools! Including 2 blades type 1992.

Type	# blades incl.	PU
Premium	2	1

Utility knives, Standard

Application: Retractable blade utility knife with firm metal handle. The handle provides storage for spare blades. Exchange blades without tools! Including 2 blades type 1992.

Type	# blades incl.	PU
Standard	2	1

Application: Safety retractable utility blade knife with firm metal handle. The handle provides storage for spare blades. Exchange blades without tools! The blade is extended by operating the slider with the thumb. When the slider is relaesed, the blade automatically retracts into the handle.
Including 2 blades type 1992.

Type	# blades incl.	PU
Safety	2	1

Snap-off utility knives, Premium, 9mm

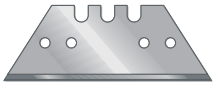
Application: Premium quality retractable snap-off utility knife for professionals. Firm metal handle with locking mechanism and blade storage.
Including 3 blades (9mm height)

Type	# blades incl.	PU
Premium 9mm	3	1

Application: Premium quality retractable snap-off utility knife for professionals. Firm metal handle with locking mechanism and blade storage.
Including 3 blades (18mm height)

Type	# blades incl.	PU
Premium 18mm	3	1

Spare blades, straight, L=50



Execution: Blade for professional use in general applications. Short model, regular thickness, ice-hardened steel with 3-facet precision ground cutting edge. Made in Germany. Comparable to Stanley`s model 1991.
Packed per 5 pieces on a card with handy dispenser.

Length	Height	Thickness	PU
50	19	0,43	5

Execution: Blade for professional use in general applications. Long model, extra thick (heavy duty), ice-hardened steel with 3-facet precision ground cutting edge. Made in Germany. Comparable to Stanley`s model 1992.
Packed per 5 pieces on a card with handy dispenser.
Packed per 100 pieces in a tin can.

Length	Height	Thickness	PU
62	19	0,65	5
62	19	0,65	100

Spare blades, hook

Execution: Hook blade for professional use. Extra thick (heavy duty), ice-hardened steel with 3-facet precision ground cutting edge. Made in Germany. Comparable to Stanley`s model 1996.
Packed per 5 pieces on a card with handy dispenser.
Packed per 100 pieces in a tin can.

Length	Height	Thickness	PU
50	19	0,65	5
50	19	0,65	100

Spare snap-off blades, 9mm

Execution: Snap-off blade for professional use in general applications. Suitable for all 9mm snap-off utility knives. Each blade has 12 segments. Ice-hardened steel with 3-facet precision ground cutting edge. Made in Germany.
Packed per 10 pieces on a card with handy dispenser.

Length	Height	Thickness	PU
80	9	0,4	10

Execution: Snap-off blade for professional use in general applications. Suitable for all 18mm snap-off utility knives. Each blade has 7 segments. Ice-hardened steel with 3-facet precision ground cutting edge. Made in Germany.
Packed per 10 pieces on a card with handy dispenser.
Packed per 100 pieces in a tin can.

Length	Height	Thickness	PU
100	18	0,5	10
100	18	0,5	100

SAWS BLADES

Professional
Cutting Tools