



JHV TOOLS B.V.

Wood- and board material

Plastic

Composite

Aluminium



CNC milling tools

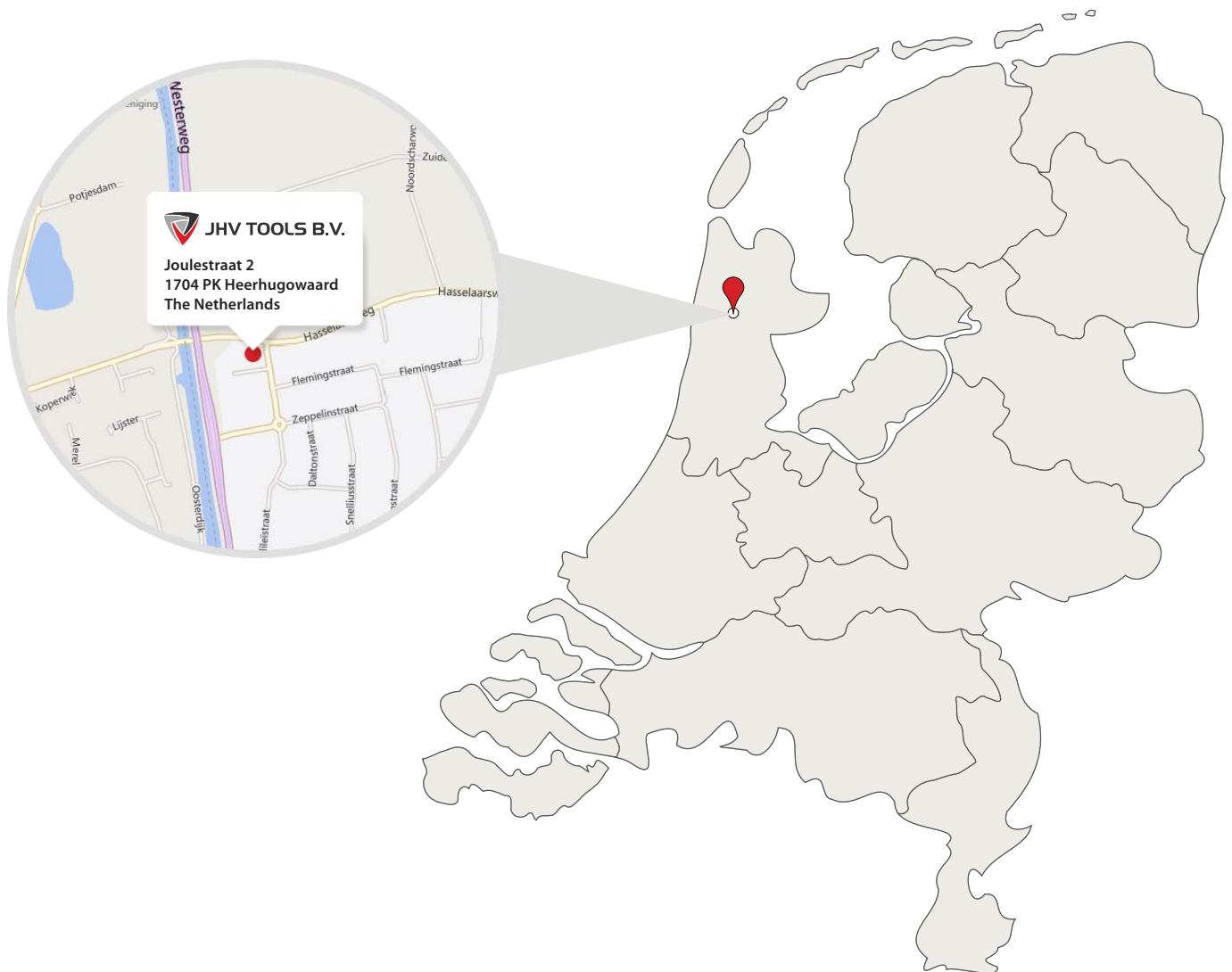
www.jhvtools.nl

INTRODUCTION

JHV Tools produce solid carbide shank cutters for working of all materials. JHV Tools has particularly specialized in producing high quality cutting tools for working wood and sheet metal, plastics, aluminium and composite materials. We use the most modern CNC grinding and measurement technology which enables us to produce distinctive milling tools for you 24 hours a day.

Special tools

Besides our standard program, JHV produces also bespoke solid carbide cutters. Through delivering drawing/sketch or precise specifications of the milling or the performed work, you receive the tool for your specific needs.



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www.jhvtools.nl

Solide carbide	Solid carbide		Feed direction		Ball nose
ALU Aluminium	Material		Sharp-edged flute		Conical ball nose
2 Cutting edges	Number of cutting edges		Spiral angle		Cutting edge with corner radius
DIN 6535 Form HA	Shank form		Point angle		Cutting edge with 45° chamfer

Used abbreviations

Abbreviation	Full description
A	Bevel
D	Diameter
DR	Direction of rotation
H	Angle
HR	Corner radius
R	Radius
S	Shank

Abbreviation	Full description
SH	Cutting edge angle
SL	Cutting length
TB	Top width
TL	Total length
VG	Grinding
Z	Number of cutting edges

CUTTING DATA RECOMMENDATIONS

Material	R_m /UTS (N/mm ²)	Cutting speed V_c m/min		Feed per tooth (f_z cutter ϕ)			
		<i>coated</i>	<i>uncoated</i>	2 - 4	5 - 10	11 - 16	> 16
Metals, soft	400 -800 (120 - 310HB)	400	320	0,020	0,040	0,08	0,14
Aluminum alloys, long chipping	100 -400 (120 - 260HB)	1000	800	0,030	0,060	0,10	0,15
Aluminum alloys, short chipping	-400	300	240	0,030	0,060	0,10	0,15
Copper alloys, long chipping	150 -250 (160 - 230HB)	300	240	0,025	0,050	0,09	0,14
Copper alloys, short chipping	-500	250	200	0,025	0,050	0,09	0,14
Magnesium alloys	160 -300	400	320	0,030	0,060	0,09	0,14
Thermoplastics	350 -700 (150 - 280HB)	250	200	0,030	0,060	0,10	0,15
Duroplastics	20 -40	350	280	0,025	0,050	0,10	0,15
Graphite	-	400	320	0,040	0,080	0,15	0,20

Speed	Feed rate	a_e = Width of cut (mm) a_p = Depth of cut (mm) d_1 = Diameter (mm) f_z = Feed per tooth (mm) LF = Efficiency factor (cm ³ /min/kW) n = Speed (min -1) P_e = Drive power (kW) Q = Chip volume (cm ³ /min) V_c = Cutting speed (m/min) V_f = Feed rate z = No. of teeth λ = Helix angle
$n = \frac{V_c \cdot 1000}{\pi \cdot d_1}$	$V_f = f_z \cdot z \cdot n$	
Chip volume	Drive power	
$Q = \frac{a_e \cdot a_p \cdot V_f}{1000}$	$P_e \approx \frac{Q}{LF}$	

Example of a calculation

Cutter : 3201.060.00
 Cutter diameter : 6
 No. of teeth : 1
 Depth of cut (a_p) : 3
 Width of cut (a_e) : 6
 Material to be processed : Aluminium
 Cutting speed : 300
 Fz : 0,06

Speed : $300 \times 1000 / 3,14 \times 6 = 15923$
 Feed rate : $15923 \times 1 \times 0,06 = 955 \text{ mm/min.}$
 Verspaningsvolume : $3 \times 6 \times 955 / 1000 = 17,19 \text{ cm}^3/\text{min.}$

3003	Solid carbide cylindrical spiral cutter positive (Z=2)		12
30032	Solid carbide cylindrical spiral cutter with ballnose (Z=2)		13
30033	Solid carbide conical cutter with ballnose (Z=2)		14
30034	Solid carbide conical cutter with ballnose (Z=3)		15
3004	Solid carbide cylindrical spiral cutter negative (Z=2)		16
3005	Solid carbide cylindrical spiral cutter positive (Z=3)		17
3006	Solid carbide cylindrical spiral cutter negative (Z=3)		18
3007	Solid carbide cylindrical spiral cutter positive with roughing cutter (Z=3)		19
30071	Solid carbide cylindrical spiral cutter positive with roughing cutter (Z=4)		20
3008	Solid carbide cylindrical spiral cutter negative with roughing cutter (Z=3)		21
3009	Solid carbide cylindrical spiral cutter up/down (Z=1+1 of Z=2+2)		22

30091	Solid carbide Solid carbide cylindrical spiral cutter roughing/finishing up/down (Z=4+4)		23
3010	Solid carbide router cutter for locks (Z=3)		24
3011	Solid carbide bore cutter (Z=3)		25
3012	Solid carbide bore cutter with roughing cutter (Z=3)		26
30362	Solid carbide grooving and engraving cutter (Z=1)		27
31011	Solid carbide straight shank cutter (Z=2)		28
31012	Solid carbide straight shank cutter (Z=3)		29

3001	Solid carbide polished spiral cutter positive (Z=1)		31
30011	Solid carbide cylindrical spiral cutter for PMMA (acrylate), ACP, massive aluminium and foamed PVC (Z=1)		32
3002	Solid carbide polished spiral cutter negative (Z=1)		33
3003	Solid carbide cylindrical spiral cutter positive (Z=2)		34
30031	Solid carbide cylindrical spiral cutter positive (Z=2)		35
30032	Solid carbide cylindrical spiral cutter with ballnose (Z=2)		36
30033	Solid carbide conical cutter with ballnose (Z=2)		37
3004	Solid carbide cylindrical spiral cutter negative (Z=2)		38
30051	Solid carbide cylindrical spiral cutter with geringe spiraalhoek (Z=3)		38
30052	Solid carbide cylindrical spiral cutter with chip breaker (Z=3)		39
30365	Solid carbide folding cutter for ACP		40

30366	Solid carbide folding cutter for plastic (Z=2)		42
3101	Solid carbide shank cutter straight (Z=1)		43
3501	Solid carbide spiral cutter for finishing (Z=5)		44
3601	Solid carbide twist drill for plastic / aluminium (Z=2)		45

COMPOSITE

3307	Solid carbide cylindrical shank cutter for composite plastics		47
33071	Solid carbide cylindrical shank cutter for composite plastics		48
33072	Solid carbide cylindrical shank cutter for composite plastics		49
3308	Solid carbide cylindrical spiral cutter up/down (Z=4 + 4, 5 + 5 or 6 + 6)		50
3309	Solid carbide cylindrical shank cutter for SMC (Z=6)		51
3310	Solid carbide cylindrical shank cutter for honeycomb (Z=4)		52
3400	Solid carbide spiral drill for kevlar and graphite (Z=2)		53

3201	Solid carbide spiral cutter positive (Z=1)		55
3202	Solid carbide spiral cutter positive (Z=2)		56
3203	Solid carbide spiral cutter positive (Z=3)		57
3204	Solid carbide spiral cutter positive with 45° spiral angle (Z=3)		58
3210	Solid carbide spiral cutter with roughing cutter with 40° spiral angle (Z=3)		59
3220	Solid carbide radius cutter for aluminium (Z=2)		60
3230	Solid carbide torus spiral cutter for aluminium (Z=2)		61



Wood

Multiplex / triplex

MDF

Chipboard

Wood and board material

3003

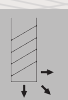
Solid carbide cylindrical spiral cutter positive (Z=2)

Wood Plastic

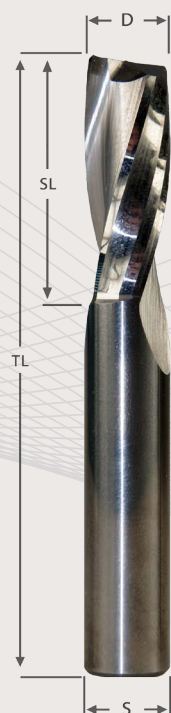
Board material

Solide carbide

2
Cutting edges



DIN 6535
Form HA



Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing and routing milling operations, including solid wood, sheeting, medium density fibreboard and various plastics. Perfect finishing touch for bottom side material.

Article Nr.	D	SL	TL	S
3003.030.00	3	12	50	3
3003.040.00	4	12	50	4
3003.040.01	4	20	60	4
3003.050.00	5	20	50	5
3003.060.00	6	20	60	6
3003.060.01	6	27	70	6
3003.080.00	8	22	70	8
3003.080.01	8	32	80	8
3003.080.02	8	42	90	8
3003.100.00	10	32	80	10
3003.100.01	10	42	90	10
3003.100.02	10	52	100	10
3003.120.00	12	32	80	12
3003.120.01	12	42	90	12
3003.120.02	12	52	100	12

Article Nr.	D	SL	TL	S
3003.140.00	14	32	80	14
3003.140.01	14	42	90	14
3003.140.02	14	52	100	14
3003.160.00	16	32	80	16
3003.160.01	16	42	90	16
3003.160.02	16	52	100	16
3003.160.03	16	72	120	16
3003.180.00	18	52	100	18
3003.180.01	18	72	120	18
3003.180.02	18	102	150	18
3003.200.00	20	52	100	20
3003.200.01	20	72	120	20
3003.200.02	20	120	180	20
3003.200.03	20	150	200	20
3003.200.04	20	200	260	20

Solid carbide cylindrical spiral cutter with full radius (Z=2)

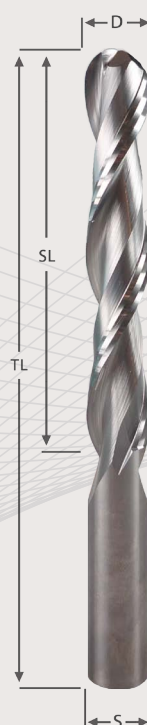
30032

Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- With ballnose
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing milling and 3D milling operations.



Wood

Plastic

board
material

Solide
carbide

2
cutting edges



DIN 6535
Form HA



Article Nr.	D	R	SL	TL	S
30032.030.00	3	1,5	20	60	3
30032.040.00	4	2	24	60	4
30032.040.01	4	2	40	100	4
30032.040.02	4	2	40	150	4
30032.050.00	5	2,5	17	50	5
30032.050.01	5	2,5	30	70	5
30032.060.00	6	3	27	65	6
30032.060.01	6	3	40	100	6
30032.060.02	6	3	40	150	6
30032.080.00	8	4	32	80	8
30032.080.01	8	4	40	100	8
30032.080.02	8	4	40	150	8
30032.080.03	8	4	40	250	8
30032.100.00	10	5	32	80	10
30032.100.01	10	5	40	100	10

Article Nr.	D	R	SL	TL	S
30032.100.02	10	5	40	150	10
30032.100.03	10	5	40	250	10
30032.120.00	12	6	40	100	12
30032.120.01	12	6	40	150	12
30032.120.02	12	6	40	250	12
30032.140.00	14	7	42	90	14
30032.140.01	14	7	50	120	14
30032.160.00	16	8	52	100	16
30032.160.01	16	8	60	150	16
30032.180.00	18	9	52	100	18
30032.180.01	18	9	60	150	18
30032.180.02	18	9	60	250	18
30032.200.00	20	10	52	100	20
30032.200.01	20	10	60	150	20
30032.200.02	20	10	60	250	20

30033

Solid carbide conical cutter with ballnose (Z=2)

Wood

Plastic

Board
material

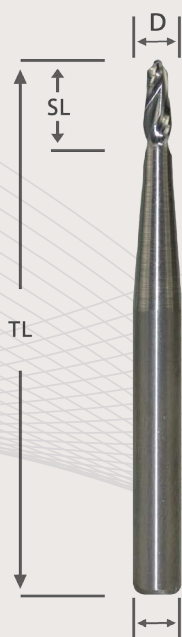
Solide
carbide

2

Cutting edges



DIN 6535
Form HA



Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- With ballnose
- Bottom side cutting

Application

For jointing milling and 3D milling operations.

Article Nr.	D	SL	TL	S	H	R
30033.030.00	3	6	65	6	2°	1,5
30033.040.00	4	7	70	6	1°	2
30033.050.00	5	8	75	8	1°	2,5
30033.060.00	6	9	80	8	2°	3
30033.080.00	8	12	90	10	2°	4
30033.100.00	10	14	100	12	1°	5
30033.120.00	12	16	120	16	2°	6

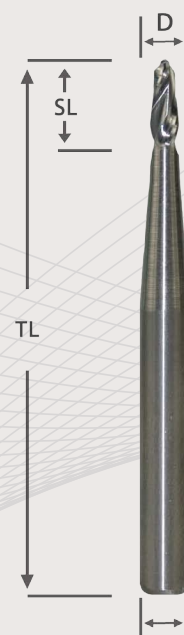
Solid carbide conical cutter with ballnose (Z=3)

Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- With ballnose
- Bottom side cutting

Application

For jointing milling and 3D milling operations.



Wood

Plastic

Board
material

Solid
carbide

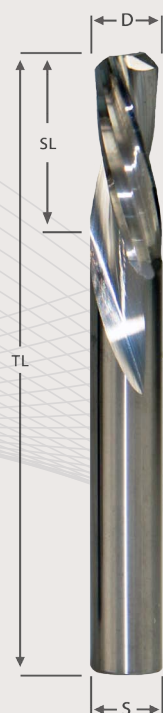
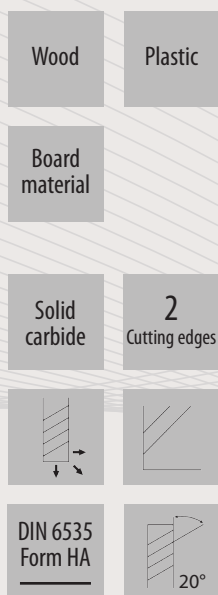
3
Cutting edges



DIN 6535
Form HA



Article Nr.	D	SL	TL	S	H	R
30034.030.00	3	6	65	6	2°	1,5
30034.040.00	4	7	70	6	1°	2
30034.050.00	5	8	75	8	1°	2,5
30034.060.00	6	9	80	8	2°	3
30034.080.00	8	12	90	10	2°	4
30034.100.00	10	14	100	12	1°	5
30034.120.00	12	16	120	16	2°	6



Description

- Two cutting edges
- Right handed / clockwise
- Negative axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing and routing milling operations, including solid wood, sheeting, medium density fibreboard and various plastics. Perfect finishing touch for bottom side material.

Negative helical cutters are mainly used to clamp on thin and/or too difficult to stretch small workpieces. Thus the workpiece stays better by pushing actions.

Article Nr.	D	SL	TL	S
3004.030.00	3	12	50	3
3004.040.00	4	12	50	4
3004.040.01	4	20	60	4
3004.050.00	5	20	50	5
3004.060.00	6	20	60	6
3004.060.01	6	27	70	6
3004.080.00	8	22	70	8
3004.080.01	8	32	80	8
3004.080.02	8	42	100	8
3004.100.00	10	32	80	10
3004.100.01	10	42	100	10
3004.100.02	10	52	110	10
3004.120.00	12	32	80	12
3004.120.01	12	42	100	12
3004.120.02	12	52	110	12

Article Nr.	D	SL	TL	S
3004.140.00	14	32	80	14
3004.140.01	14	42	90	14
3004.140.02	14	52	110	14
3004.160.00	16	32	80	16
3004.160.01	16	42	100	16
3004.160.02	16	52	110	16
3004.160.03	16	72	130	16
3004.180.00	18	52	110	18
3004.180.01	18	72	130	18
3004.180.02	18	102	160	18
3004.200.00	20	52	110	20
3004.200.01	20	72	130	20
3004.200.02	20	102	160	20
3004.200.03	20	150	210	20
3004.200.04	20	200	270	20

Solid carbide cylindrical spiral cutter positive (Z=3)

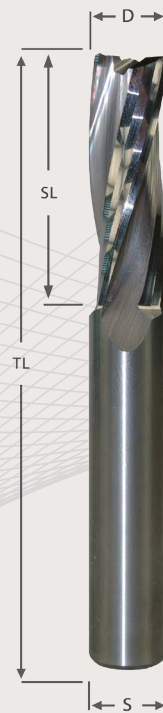
3005

Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing and routing milling operations, including solid wood, sheeting, medium density fibreboard and various plastics. Perfect finishing touch for bottom side material.



Wood

Plastic

Board material

Solid carbide

3 Cutting edges



DIN 6535 Form HA



Article Nr.	D	SL	TL	S
3005.060.00	6	27	70	6
3005.080.00	8	22	70	8
3005.080.01	8	32	80	8
3005.080.02	8	42	90	8
3005.100.00	10	32	80	10
3005.100.01	10	42	90	10
3005.100.02	10	52	100	10
3005.120.00	12	32	80	12
3005.120.01	12	42	90	12
3005.120.02	12	52	100	12
3005.140.00	14	32	80	14
3005.140.01	14	42	90	14
3005.140.02	14	52	100	14

Article Nr.	D	SL	TL	S
3005.160.00	16	32	80	16
3005.160.01	16	42	90	16
3005.160.02	16	52	100	16
3005.160.03	16	72	120	16
3005.180.00	18	52	100	18
3005.180.01	18	72	120	18
3005.180.02	18	102	150	18
3005.200.00	20	52	100	20
3005.200.01	20	72	120	20
3005.200.02	20	102	150	20
3005.200.03	20	150	200	20
3005.200.04	20	200	260	20

Wood

Plastic

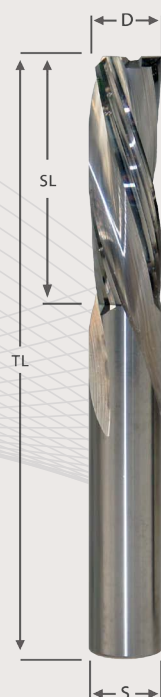
Board material

Solide carbide

3 Cutting edges

DIN 6535 Form HA

20°



Description

- Three cutting edges
- Right handed / clockwise
- Negative axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing and routing milling operations, including solid wood, sheeting, medium density fibreboard and various plastics. Perfect finishing touch for bottom side material.

Negative helical cutters are mainly used to clamp on thin and/or too difficult to stretch small workpieces. Thus the workpiece stays better by pushing actions.

Article Nr.	D	SL	TL	S
3006.060.00	6	27	70	6
3006.080.00	8	22	70	8
3006.080.01	8	32	90	8
3006.080.02	8	42	100	8
3006.100.00	10	32	90	10
3006.100.01	10	42	100	10
3006.100.02	10	52	110	10
3006.120.00	12	32	90	12
3006.120.01	12	42	100	12
3006.120.02	12	52	110	12
3006.140.00	14	32	90	14
3006.140.01	14	42	100	14
3006.140.02	14	52	110	14

Article Nr.	D	SL	TL	S
3006.160.00	16	32	90	16
3006.160.01	16	42	100	16
3006.160.02	16	52	110	16
3006.160.03	16	72	130	16
3006.180.00	18	52	110	18
3006.180.01	18	72	130	18
3006.180.02	18	102	160	18
3006.200.00	20	52	110	20
3006.200.01	20	72	130	20
3006.200.02	20	102	160	20
3006.200.03	20	150	210	20
3006.200.04	20	200	260	20

Solid carbide cylindrical spiral cutter positive with roughing cutter (Z=3)

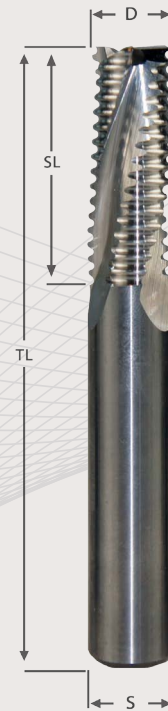
3007

Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For pre-cutting including solid wood, sheeting, medium density fibreboard and various plastics.



Wood

Plastic

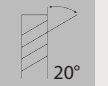
Board material

Solide carbide

3 Cutting edges



DIN 6535 Form HA



Article Nr.	D	SL	TL	S
3007.080.00	8	22	70	8
3007.080.01	8	32	80	8
3007.080.02	8	42	90	8
3007.100.00	10	32	80	10
3007.100.01	10	42	90	10
3007.100.02	10	52	100	10
3007.120.00	12	32	80	12
3007.120.01	12	42	90	12
3007.120.02	12	52	100	12
3007.140.00	14	32	80	14
3007.140.01	14	42	90	14
3007.140.02	14	52	100	14

Article Nr.	D	SL	TL	S
3007.160.00	16	32	80	16
3007.160.01	16	42	90	16
3007.160.02	16	52	100	16
3007.160.03	16	72	120	16
3007.180.00	18	52	100	18
3007.180.01	18	72	120	18
3007.180.02	18	102	150	18
3007.200.00	20	52	100	20
3007.200.01	20	72	120	20
3007.200.02	20	102	150	20
3007.200.03	20	150	200	20
3007.200.04	20	200	260	20

Available with several teeth according to the preferences.



Standard
runvanding



Straight vanding



JHV speed
tooth design



Profile tooth design

30071

Solid carbide cylindrical spiral cutter positive with roughing cutter (Z=4)

Wood Plastic

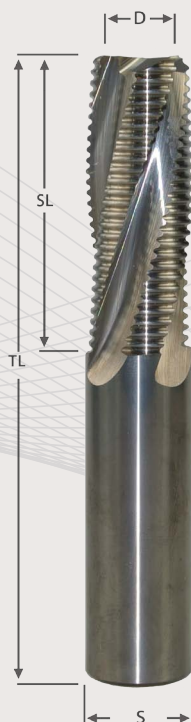
Board material

Solid carbide

4 Cutting edges



DIN 6535 Form HA



Description

- Four cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For pre-cutting including solid wood, sheeting, medium density fibreboard and various plastics.

Article Nr.	D	SL	TL	S
30071.100.00	10	32	80	10
30071.100.01	10	42	90	10
30071.100.02	10	52	100	10
30071.120.00	10	32	80	12
30071.120.01	12	42	90	12
30071.120.02	12	52	100	12
30071.140.00	14	32	80	14
30071.140.01	14	42	90	14
30071.140.02	14	52	100	14
30071.160.00	16	32	80	16
30071.160.01	16	42	90	16

Article Nr.	D	SL	TL	S
30071.160.02	16	52	100	16
30071.160.03	16	72	120	16
30071.180.00	18	52	100	18
30071.180.01	18	72	120	18
30071.180.02	18	102	150	18
30071.200.00	20	52	100	20
30071.200.01	20	72	120	20
30071.200.02	20	102	150	20
30071.200.03	20	150	200	20
30071.200.04	20	200	260	20

Available with several teeth according to the preferences.



Standaard
ruwvertanding



Rechte vertanding



JHV speed
vertanding



Profiel vertanding

Solid carbide cylindrical spiral cutter negative with roughing cutter (Z=3)

3008

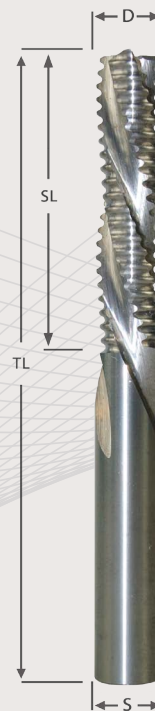
Description

- Three cutting edges
- Right handed / clockwise
- Negative axial angle
- Downward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For pre-cutting including solid wood, sheeting, medium density fibreboard and various plastics.

Negative helical cutters are mainly used to clamp on thin and/or too difficult to stretch small workpieces. Thus the workpiece stays better by pushing actions.



Wood

Plastic

Board material

Solid carbide

3 Cutting edges



DIN 6535 Form HA



Article Nr.	D	SL	TL	S
3008.080.00	8	22	70	8
3008.080.01	8	32	90	8
3008.080.02	8	42	100	8
3008.100.00	10	32	90	10
3008.100.01	10	42	100	10
3008.100.02	10	52	110	10
3008.120.00	12	32	90	12
3008.120.01	12	42	100	12
3008.120.02	12	52	110	12
3008.140.00	14	32	90	14
3008.140.01	14	42	100	14
3008.140.02	14	52	110	14

Article Nr.	D	SL	TL	S
3008.160.00	16	32	90	16
3008.160.01	16	42	100	16
3008.160.02	16	52	110	16
3008.160.03	16	72	130	16
3008.180.00	18	52	110	18
3008.180.01	18	72	130	18
3008.180.02	18	102	160	18
3008.200.00	20	52	110	20
3008.200.01	20	72	130	20
3008.200.02	20	102	160	20
3008.200.03	20	150	210	20
3008.200.04	20	200	260	20

Available with several teeth according to the preferences.



Standaard
ruwveranding



Rechte veranding



JHV speed
veranding



Profiel veranding

Wood

Plastic

Board
materialSolid
carbide1+1 of 2+2
Cutting edgesDIN 6535
Form HA**Description**

- 1+1 or 2+2 cutting edges
- Right handed / clockwise
- Positive and negative axial angle (up/down)
- Upward and downwards chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For joining milling operations to top and bottom material on double-sided sheeting, chipboard, medium density fibreboard.

Article Nr.	D	SL	TL	Z	S
3009.050.00	5	15	60	1 + 1	5
3009.060.00	6	20	70	1 + 1	6
3009.080.00	8	32	90	2 + 2	8
3009.100.00	10	32	90	2 + 2	10
3009.100.01	10	42	100	2 + 2	10
3009.120.00	12	32	90	2 + 2	12
3009.120.01	12	42	100	2 + 2	12
3009.140.00	14	32	90	2 + 2	14
3009.140.01	14	42	100	2 + 2	14
3009.160.00	16	32	90	2 + 2	16
3009.160.01	16	42	100	2 + 2	16
3009.180.00	18	32	90	2 + 2	18
3009.180.01	18	42	100	2 + 2	18
3009.200.00	20	32	90	2 + 2	20
3009.200.01	20	42	100	2 + 2	20

Solid carbide cylindrical spiral cutter roughing/finishing up/down (Z=4+4)

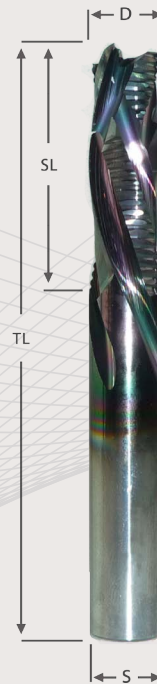
30091

Description

- 4 + 4 cutting edges (4 with roughing cutter and 4 with smooth cutting edges)
- Right handed / clockwise
- Positive and negative axial angle (up/down)
- Upward and downward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For joining milling operations with high milling speed with good finishing to top and bottom material on double-sidedsheeting, chipboard, medium density fibreboard.



Wood

Board material

Solid carbide

4+4
Cutting edges



DIN 6535
Form HA



Article Nr.	D	SL	TL	S
30091.120.00	12	32	90	12
30091.120.01	12	42	100	12
30091.140.00	14	32	90	14
30091.140.01	14	42	100	14
30091.160.00	16	32	90	16
30091.160.01	16	42	100	16
30091.180.00	18	32	90	18
30091.180.01	18	42	100	18
30091.200.00	20	32	90	20
30091.200.01	20	42	100	20

Wood

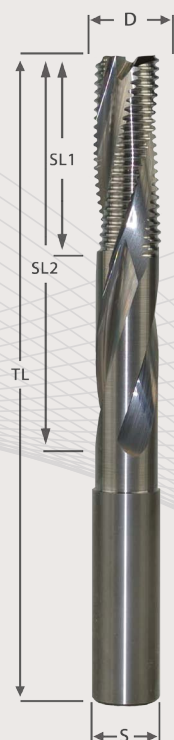
Board material

Solid carbide

3 Cutting edges



DIN 6535
Form HA



Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting

Application

For milling of lock cases.

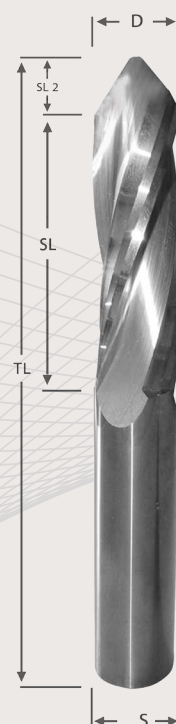
Article Nr.	D	SL 1/2	TL	S
3010.140.00	14	32/100	150	14
3010.150.00	15	32/100	150	16
3010.160.00	16	42/100	150	16
3010.160.01	16	42/125	175	16
3010.180.00	18	42/125	175	18
3010.200.00	20	42/125	175	20

Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For milling of spies and keyholes.



Wood

Board material

Solid carbide

3 Cutting edges

DIN 6535
Form HA

20°

Article Nr.	D	SL	TL	S
3011.140.00	14	6/52	100	14
3011.160.00	16	9/72	120	16

Wood

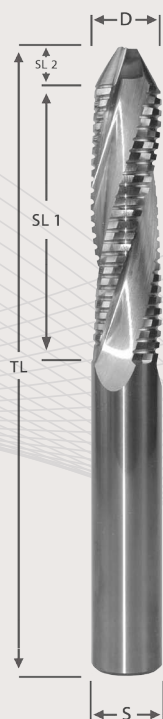
Board material

Solid carbide

3 Cutting edges



DIN 6535
Form HA



Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For milling of spies and keyholes.

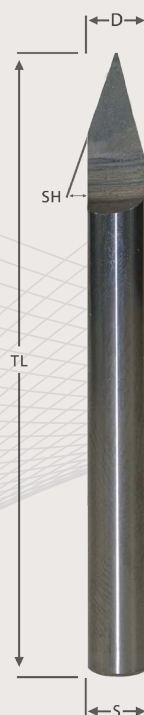
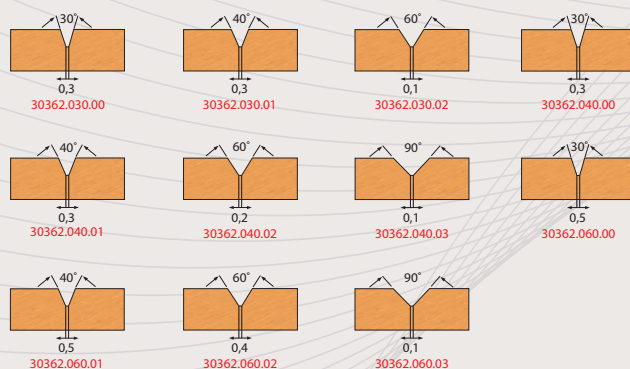
Article Nr.	D	SL	TL	S
3012.140.00	14	6/52	100	14
3012.160.00	16	9/72	120	16

Description

- One cutting edge
- Right handed / clockwise
- Standard cutting angles 15° / 20° / 30° and 45°
- Every other cutting angle on request

Application

For engraving milling operations on solid wood, sheeting, medium density fibreboard and various plastics.



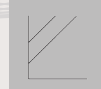
Wood

Board material

Solid carbide

1 Cutting edge

DIN 6535 Form HA



Article Nr.	D x SH	TL	S	DR
30362.030.00	3 x 15°	50	3	R
30362.030.01	3 x 20°	50	3	R
30362.030.02	3 x 30°	50	3	R
30362.040.00	4 x 15°	60	4	R
30362.040.01	4 x 20°	60	4	R
30362.040.02	4 x 30°	60	4	R
30362.040.03	4 x 45°	60	4	R
30362.060.00	6 x 15°	60	6	R
30362.060.01	6 x 20°	60	6	R
30362.060.02	6 x 30°	60	6	R
30362.060.03	6 x 45°	60	6	R

31011

Solid carbide straight shank cutter (Z=2)

Wood Plastic

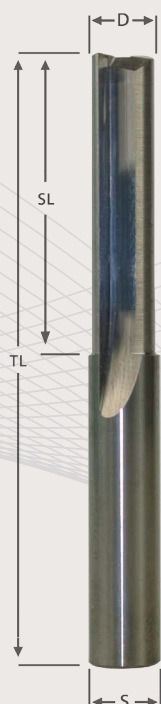
Board material

Solid carbide

2 Cutting edges



DIN 6535 Form HA



Description

- Two cutting edges
- Right handed / clockwise
- Bottom side cutting

Application

For jointing and routing milling operations, including solid wood, sheeting, medium density fibreboard and various plastics.

Article Nr.	D	SL	TL	S
31011.020.00	2	8	50	3
31011.030.00	3	12	50	3
31011.040.00	4	12	50	4
31011.050.00	5	20	60	6
31011.060.00	6	22	60	6
31011.080.00	8	22	60	8
31011.080.01	8	32	80	8
31011.100.00	10	32	80	10
31011.100.01	10	42	100	10
31011.120.00	12	32	80	12
31011.120.01	12	42	100	12
31011.140.00	14	32	80	14

Article Nr.	D	SL	TL	S
31011.140.01	14	42	90	14
31011.160.00	16	32	80	16
31011.160.01	16	42	90	16
31011.160.02	16	52	100	16
31011.180.00	18	32	80	18
31011.180.01	18	42	90	18
31011.180.02	18	52	100	18
31011.200.00	20	32	80	20
31011.200.01	20	42	90	20
31011.200.02	20	52	100	20

Solid carbide straight shank cutter (Z=3)

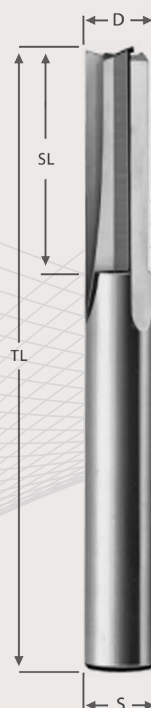
31012

Description

- Three cutting edges
- Right handed / clockwise
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing and routing milling operations, including solid wood, sheeting, medium density fibreboard and various plastics.



Wood

Plastic

Board material

Solid carbide

3 Cutting edges



DIN 6535 Form HA

Article Nr.	D	SL	TL	S
31012.060.00	6	22	60	6
31012.080.00	8	22	60	8
31012.080.01	8	32	80	8
31012.100.00	10	32	80	10
31012.100.01	10	42	100	10
31012.120.00	12	32	80	12
31012.120.01	12	42	100	12
31012.140.00	14	32	80	14
31012.140.01	14	42	100	14
31012.160.00	16	32	80	16

Article Nr.	D	SL	TL	S
31012.160.01	16	42	100	16
31012.160.02	16	52	110	16
31012.180.00	18	32	80	18
31012.180.01	18	42	100	18
31012.180.02	18	52	110	18
31012.200.00	20	32	80	20
31012.200.01	20	42	100	20
31012.200.02	20	52	110	20



ACP (Dibond / Skybond / Alucobond)

PMMA (Acrylate)

Foamed PVC (Forex / Vikupor)

Plastic

Plastic

Wood

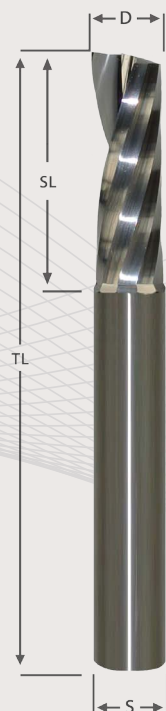
Board
material

Solid
carbide

1
Cutting edge



DIN 6535
Form HA



Description

- One cutting edge
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting

Application

For working of various plastics (including polystyrene, ABS, PVC, plexiglas, acetate, hard rubber, formica, methacrylate en polycarbonate).

Through the polishing operation there is no adhesion material on the cutter and therefore the chip evacuation is good.

Article Nr.	D	SL	TL	S
3001.010.00	1	4	30	3
3001.010.01	1	8	30	3
3001.015.00	1,5	6	30	3
3001.020.00	2	8	30	3
3001.025.00	2,5	8	30	3
3001.030.30	3	10	50	3
3001.030.31	3	20	60	3
3001.030.00	3	12	50	6
3001.030.01	3	20	60	6
3001.040.40	4	12	50	4
3001.040.41	4	20	60	4
3001.040.00	4	12	50	6
3001.040.01	4	20	60	6

Article Nr.	D	SL	TL	S
3001.040.02	4	30	70	6
3001.050.00	5	20	60	6
3001.050.01	5	30	70	6
3001.060.00	6	20	60	6
3001.060.01	6	30	70	6
3001.060.02	6	38	80	6
3001.080.00	8	22	70	8
3001.080.01	8	30	80	8
3001.080.02	8	38	70	8
3001.100.00	10	30	80	10
3001.100.01	10	38	70	12
3001.120.00	12	30	70	12
3001.120.01	12	38	80	12

Solid carbide cylindrical spiral cutter for PMMA (acrylate), ACP, massive aluminium and foamed PVC (Z=1)

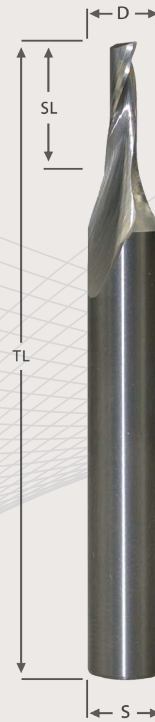
30011

Description

- One cutting edge
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting

Application

Special geometry with very good results in the treatment of particular PMMA (acrylic) and aluminium composite material (eg. dibond, alucopal and reynobond), solid aluminium and PVC foamed (including forex, vikupor, kömacel, veka, etc.). Also for the working of various plastics.



ACP

Plastic

Wood

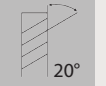
Board material

Solid carbide

1 Cutting edge



DIN 6535 Form HA



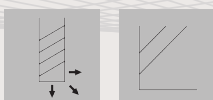
Artikelnummer	D	SL	TL	S
30011.010.00	1	4	30	3
30011.010.01	1	8	30	3
30011.015.00	1,5	6	30	3
30011.020.00	2	8	30	3
30011.025.00	2,5	8	30	3
30011.030.30	3	10	50	3
30011.030.31	3	20	60	3
30011.030.00	3	12	50	6
30011.030.01	3	20	60	6
30011.040.40	4	12	50	4
30011.040.41	4	20	60	4
30011.040.00	4	12	50	6
30011.040.01	4	20	60	6

Artikelnummer	D	SL	TL	S
30011.040.02	4	30	70	6
30011.050.00	5	20	60	6
30011.050.01	5	30	70	6
30011.060.00	6	20	60	6
30011.060.01	6	30	70	6
30011.060.02	6	38	80	6
30011.080.00	8	22	70	8
30011.080.01	8	30	80	8
30011.080.02	8	38	70	8
30011.100.00	10	30	80	10
30011.100.01	10	38	70	12
30011.120.00	12	30	70	12
30011.120.01	12	38	80	12

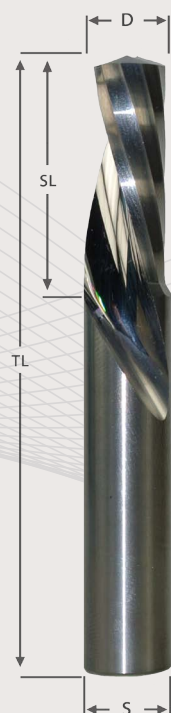
Plastic Wood

Board material

Solid carbide 1 Cutting edge



DIN 6535 Form HA 20°



Description

- One cutting edge
- Right handed / clockwise
- Negative axial angle
- Downward chip removal
- Bottom side cutting

Application

For working of various plastics (including polystyrene, ABS, PVC, plexiglas, acetate, hard rubber, formica, methacrylate en polycarbonate).

Through the polishing operation there is no adhesion material on the cutter and therefore the chip evacuation is good.

Negative helical cutters are mainly used to clamp on thin and/or too difficult to stretch small workpieces. Thus the workpiece stays better by pushing actions.

Article Nr.	D	SL	TL	S
3002.010.00	1	4	30	3
3002.010.01	1	8	30	3
3002.015.00	1,5	6	30	3
3002.020.00	2	8	30	3
3002.025.00	2,5	8	30	3
3002.030.30	3	10	50	3
3002.030.31	3	20	60	3
3002.030.00	3	12	50	6
3002.030.01	3	20	60	6
3002.040.40	4	12	50	4
3002.040.41	4	20	60	4
3002.040.00	4	12	50	6
3002.040.01	4	20	60	6

Article Nr.	D	SL	TL	S
3002.040.02	4	30	70	6
3002.050.00	5	20	60	6
3002.050.01	5	30	70	6
3002.060.00	6	20	60	6
3002.060.01	6	30	70	6
3002.060.02	6	38	80	6
3002.080.00	8	22	70	8
3002.080.01	8	30	80	8
3002.080.02	8	38	70	8
3002.100.00	10	30	80	10
3002.100.01	10	38	70	12
3002.120.00	12	30	70	12
3002.120.01	12	38	80	12

Solid carbide cylindrical spiral cutter positive (Z=2)

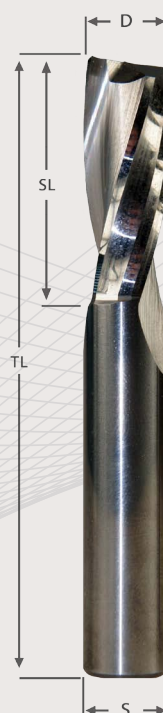
3003

Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For working of various plastics (including polystyrene, ABS, PVC, plexiglas, acetate, hard rubber, formica, methacrylate en polycarbonate).



Plastic

Wood

Board material

Solid carbide

2 Cutting edges



DIN 6535 Form HA



Article Nr.	D	SL	TL	S
3003.030.00	3	12	50	3
3003.040.00	4	12	50	4
3003.040.01	4	20	60	4
3003.050.00	5	20	50	5
3003.060.00	6	20	60	6
3003.060.01	6	27	70	6
3003.080.00	8	22	70	8
3003.080.01	8	32	80	8
3003.080.02	8	42	90	8
3003.100.00	10	32	80	10
3003.100.01	10	42	90	10
3003.100.02	10	52	100	10
3003.120.00	12	32	80	12
3003.120.01	12	42	90	12
3003.120.02	12	52	100	12

Article Nr.	D	SL	TL	S
3003.140.00	14	32	80	14
3003.140.01	14	42	90	14
3003.140.02	14	52	100	14
3003.160.00	16	32	80	16
3003.160.01	16	42	90	16
3003.160.02	16	52	100	16
3003.160.03	16	72	120	16
3003.180.00	18	52	100	18
3003.180.01	18	72	120	18
3003.180.02	18	102	150	18
3003.200.00	20	52	100	20
3003.200.01	20	72	120	20
3003.200.02	20	120	180	20
3003.200.03	20	150	200	20
3003.200.04	20	200	260	20

30031

Solid carbide cylindrical spiral cutter (Z=2)

Plastic

Wood

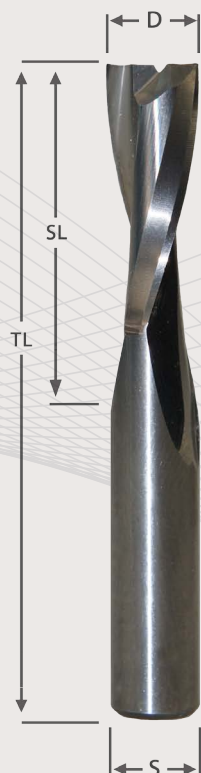
Board
material

Solid
carbide

2
Cutting edges



DIN 6535
Form HA



Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing and routing milling of various plastics. Special geometry with very good results in working of particularly Polyethyl (PE) and other thermoplastics.

Article Nr.	D	SL	TL	S
30031.030.00	3	12	50	3
30031.040.00	4	12	50	4
30031.040.01	4	20	60	4
30031.050.00	5	20	50	5
30031.060.00	6	20	60	6
30031.060.01	6	27	70	6
30031.080.00	8	22	70	8
30031.080.01	8	32	80	8
30031.080.02	8	42	90	8
30031.100.00	10	32	80	10
30031.100.01	10	42	90	10
30031.100.02	10	52	100	10
30031.120.00	12	32	80	12
30031.120.01	12	42	90	12
30031.120.02	12	52	100	12

Solid carbide cylindrical spiral cutter with ballnose (Z=2)

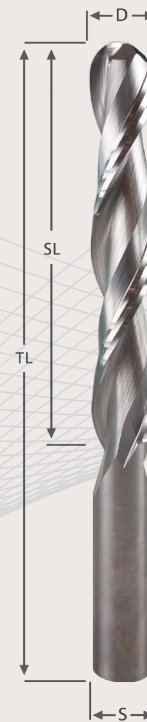
30032

Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- With ballnose
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing milling and 3D milling operations.



Plastic

Wood

Board material

Solid carbide

2 Cutting edges



DIN 6535 Form HA



Article Nr.	D	R	SL	TL	S
30032.030.00	3	1,5	20	60	3
30032.040.00	4	2	24	60	4
30032.040.01	4	2	40	100	4
30032.040.02	4	2	40	150	4
30032.050.00	5	2,5	17	50	5
30032.050.01	5	2,5	30	70	5
30032.060.00	6	3	27	65	6
30032.060.01	6	3	40	100	6
30032.060.02	6	3	40	150	6
30032.080.00	8	4	32	80	8
30032.080.01	8	4	40	100	8
30032.080.02	8	4	40	150	8
30032.080.03	8	4	40	250	8
30032.100.00	10	5	32	80	10
30032.100.01	10	5	40	100	10

Article Nr.	D	R	SL	TL	S
30032.100.02	10	5	40	150	10
30032.100.03	10	5	40	250	10
30032.120.00	12	6	40	100	12
30032.120.01	12	6	40	150	12
30032.120.02	12	6	40	250	12
30032.140.00	14	7	42	90	14
30032.140.01	14	7	50	120	14
30032.160.00	16	8	52	100	16
30032.160.01	16	8	60	150	16
30032.180.00	18	9	52	100	18
30032.180.01	18	9	60	150	18
30032.180.02	18	9	60	250	18
30032.200.00	20	10	52	100	20
30032.200.01	20	10	60	150	20
30032.200.02	20	10	60	250	20

30033

Solid carbide conical cutter with ballnose (Z=2)

Plastic

Wood

Board
material

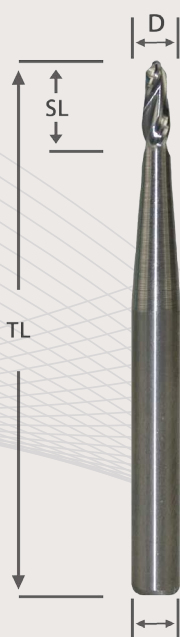
Solide
carbide

2

Cutting edges



DIN 6535
Form HA



Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- With ballnose
- Bottom side cutting

Application

For 3D milling operations.

Article Nr.	D	SL	TL	S	H	R
30033.030.00	3	6	65	6	2°	1,5
30033.040.00	4	7	70	6	1°	2
30033.050.00	5	8	75	8	1°	2,5
30033.060.00	6	9	80	8	2°	3
30033.080.00	8	12	90	10	2°	4
30033.100.00	10	14	100	12	1°	5
30033.120.00	12	16	120	26	2°	6

Solid carbide cylindrical spiral cutter negative (Z=2)

3004

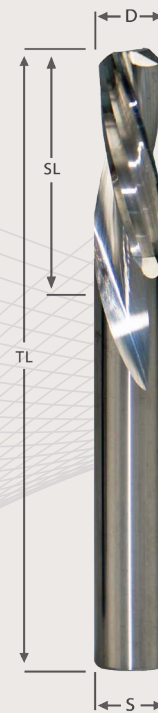
Description

- Two cutting edges
- Right handed / clockwise
- Negative axial angle
- Downward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing and routing milling operations, including solid wood, sheeting, medium density fibreboard and various plastics. Perfect finishing touch for bottom side material.

Negative helical cutters are mainly used to clamp on thin and/or too difficult to stretch small workpieces. Thus the workpiece stays better by pushing actions.



Plastic

Wood

Board material

Solide carbide

2 Cutting edges



DIN 6535 Form HA



Article Nr.	D	SL	TL	S
3004.030.00	3	12	50	3
3004.040.00	4	12	50	4
3004.040.01	4	20	60	4
3004.050.00	5	20	50	5
3004.060.00	6	20	60	6
3004.060.01	6	27	70	6
3004.080.00	8	22	70	8
3004.080.01	8	32	80	8
3004.080.02	8	42	100	8
3004.100.00	10	32	80	10
3004.100.01	10	42	100	10
3004.100.02	10	52	110	10
3004.120.00	12	32	80	12
3004.120.01	12	42	100	12
3004.120.02	12	52	110	12

Article Nr.	D	SL	TL	S
3004.140.00	14	32	80	14
3004.140.01	14	42	90	14
3004.140.02	14	52	110	14
3004.160.00	16	32	80	16
3004.160.01	16	42	100	16
3004.160.02	16	52	110	16
3004.160.03	16	72	130	16
3004.180.00	18	52	110	18
3004.180.01	18	72	130	18
3004.180.02	18	102	160	18
3004.200.00	20	52	110	20
3004.200.01	20	72	130	20
3004.200.02	20	102	160	20
3004.200.03	20	150	210	20
3004.200.04	20	200	270	20

30051

Solid carbide cylindrical spiral cutter with low helix angle (Z=3)

Foam

Solid
carbide

3

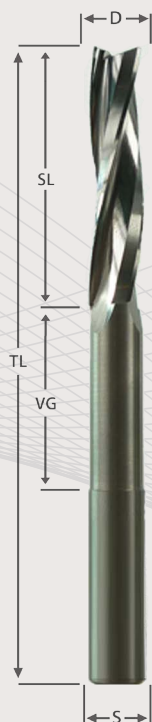
Cutting edges



DIN 6535
Form HA



14°



Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- Slight increase in coil
- With corner radius
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For milling of PG and PU foams. On request there is also available version with internal radius for 3D operations.

Article Nr.	D	SL	VG	TL	S
30051.030.00	3	15	25	75	3
30051.040.00	4	15	25	75	4
30051.050.00	5	15	35	100	5
30051.060.00	6	20	55	125	6
30051.060.01	6	20	80	150	6
30051.080.00	8	40	35	100	8
30051.080.01	8	20	80	150	8
30051.100.00	10	50	35	130	10
30051.100.01	10	25	90	160	10
30051.120.00	12	50	35	130	12
30051.120.01	12	25	90	160	12
30051.160.00	16	50	35	130	16
30051.160.01	16	70	55	160	16
30051.160.02	16	80	90	210	16

Solid carbide cylindrical spiral cutter with chip breaker (Z=3)

30052

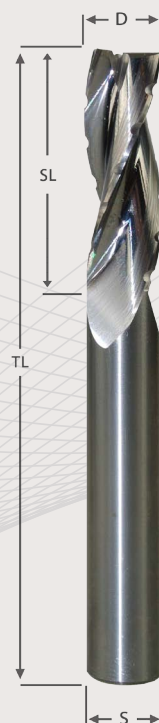
Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For jointing and routing milling of various plastics. Special geometry with very good results in working of particularly polyethyl (PE) and other thermoplastics.

Due to the presence of chip breakers there are no chips left on the tool. Therefore high volumes of chippings can be achieved.



Plastic

Wood

Board material

Solid carbide

3 Cutting edges



DIN 6535 Form HA



Article Nr.	D	SL	TL	S
30052.060.00	6	27	70	6
30052.080.00	8	22	70	8
30052.080.01	8	32	80	8
30052.080.02	8	42	90	8
30052.100.00	10	32	80	10
30052.100.01	10	42	90	10
30052.100.02	10	52	100	10
30052.120.00	12	32	80	12

Article Nr.	D	SL	TL	S
30052.120.01	12	42	90	12
30052.120.02	12	52	100	12
30052.140.00	14	32	80	14
30052.140.01	14	42	90	14
30052.140.02	14	52	100	14
30052.160.00	16	32	80	16
30052.160.01	16	42	90	16
30052.160.02	16	42	90	16

30365

Solid carbide folding cutter for ACP

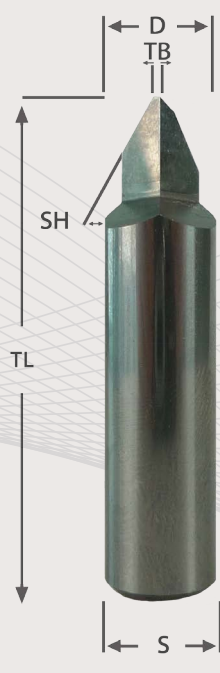
ACP

Solid
carbide

1
Cutting edge



DIN 6535
Form HA

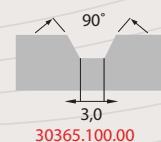
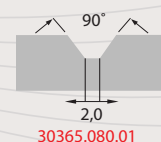
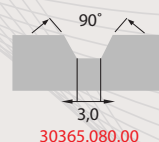


Description

- One cutting edge
- Right handed / clockwise

Application

For making of creases in aluminium composite panels e.g. Dibond, Skybond, Alucobond en Reynobond.



Article Nr.	D	SH	TB	TL	S
30365.080.00	8	90°	3	38	8
30365.080.01	8	135°	2	38	8
30365.100.00	10	90°	3	40	8

Solid carbide folding cutter for plastic (Z=2)

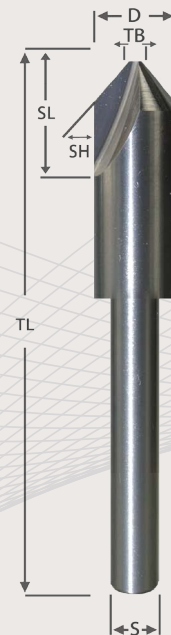
30366

Description

- Two cutting edges
- Right handed / clockwise

Application

For making of creases in plastics and aluminium composite panels e.g. Dibond, Skybond, Alucobond en Reynobond.



Plastic

Solid
carbide

2
Cutting edges



DIN 6535
Form HA

Article Nr.	D	SH	TB	TL	S
30366.080.00	8	90°	0,2	50	8
30366.120.00	12	90°	0,2	50	12
30366.160.00	16	90°	0,2	50	8
30366.160.01	16	90°	0,5	50	8
30366.160.02	16	90°	1,0	50	8

Plastic

Wood

Board
material

Solid
carbide

1
Cutting edge



DIN 6535
Form HA



Description

- One cutting edge
- Right handed / clockwise
- Bottom side cutting
- Polished cutting edge

Application

For milling of softer plastics (including Polyethylene).

Article Nr.	D	SL	TL	S
3101.050.00	5	20	70	6
3101.060.00	6	20	70	6
3101.060.01	6	30	80	6
3101.080.00	8	30	80	8
3101.100.00	10	30	80	10
3101.120.00	12	30	80	12
3101.160.00	16	50	100	16

Solid carbide spiral cutter for finishing (Z=5)

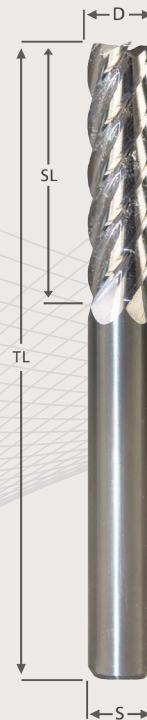
3501

Description

- Five cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For the finishing of PMMA (acrylic) with almost polished result.



Plastic

Wood

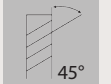
Board material

Solid carbide

5 Cutting edges



DIN 6535 Form HA



Article Nr.	D	SL	TL	S
3501.030.00	3	15	60	3
3501.040.00	4	15	60	4
3501.050.00	5	15	60	5
3501.060.00	6	15	60	6
3501.080.00	8	15	60	8

Plastic

Aluminium

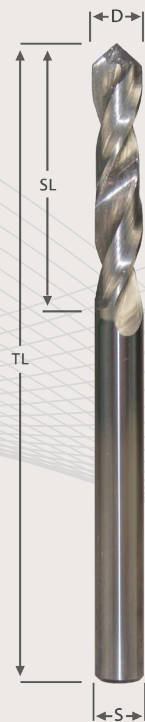
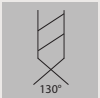
Solide
carbide

2

Cutting edges



DIN 6535
Form HA



Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter

Application

For drilling operations in different plastics and aluminium.

Article Nr.	D	SL	TL	S
3601.030.00	3	18	50	3
3601.040.00	4	24	60	4
3601.060.00	6	30	80	6
3601.080.00	8	40	100	8
3601.100.00	10	50	100	10
3601.120.00	12	60	120	12
3601.140.00	14	70	130	14
3601.160.00	16	70	130	16
3601.200.00	20	80	150	20



Carbon

Honeycomb

Kevlar

Sheet moulding compound

Composite

3307

Solide carbide cylindrical shank cutter for composite plastics

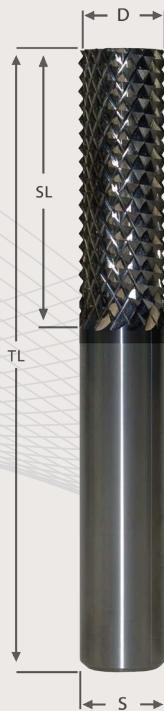
GFK

CFK

AFK

Solid
carbide

DIN 6535
Form HA



Description

- Staggered teeth
- Right handed / clockwise
- Standard with diamond coating

Application

For milling of fiber, carbon fiber and aramid fiber reinforced plastics.

Article Nr.	D	SL	TL	S
3307.020.00	2	7	40	2
3307.030.00	3	10	40	3
3307.030.01	3	10	75	3
3307.040.00	4	15	40	4
3307.040.01	4	15	75	4
3307.050.00	5	16	50	5
3307.050.01	5	16	75	5
3307.060.00	6	18	50	6

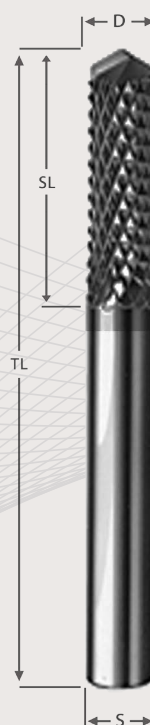
Article Nr.	D	SL	TL	S
3307.060.01	6	18	75	6
3307.080.00	8	25	60	8
3307.080.01	8	25	75	8
3307.100.00	10	30	70	10
3307.120.00	12	30	80	12
3307.140.00	14	30	80	14
3307.160.00	16	40	100	16
3307.200.00	20	45	100	20

Description

- Right handed / clockwise
- 135° vertical angle
- Plunge cutting
- Standard with diamond coating

Application

For milling of fiber, carbon fiber and aramid fiber reinforced plastics.



GFK

CFK

AFK

Solide
carbide

DIN 6535
Form HA



Article Nr.	D	SL	TL	S
33071.020.00	2	7	40	2
33071.030.00	3	10	40	3
33071.030.01	3	10	75	3
33071.040.00	4	15	40	4
33071.040.01	4	15	75	4
33071.050.00	5	16	50	5
33071.050.01	5	16	75	5
33071.060.00	6	18	50	6

Article Nr.	D	SL	TL	S
33071.060.01	6	18	75	6
33071.080.00	8	25	60	8
33071.080.01	8	25	75	8
33071.100.00	10	30	70	10
33071.120.00	12	30	80	12
33071.140.00	14	30	80	14
33071.160.00	16	40	100	16
33071.200.00	20	45	100	20

33072

Solid carbide cylindrical shank cutter for composite plastics

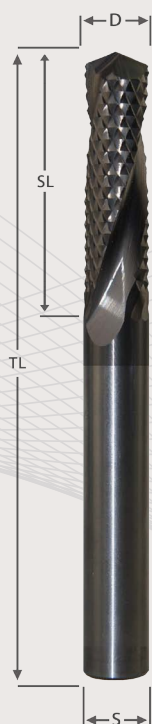
GFK

CFK

AFK

Solid
carbide

DIN 6535
Form HA



Description

- Positive axial angle
- Right handed / clockwise
- 135° vertical angle
- Plunge cutting
- Standard with diamond coating

Application

For milling of fiber, carbon fiber and aramid fiber reinforced plastics.

Article Nr.	D	SL	TL	S
33072.020.00	2	7	40	2
33072.030.00	3	10	40	3
33072.030.01	3	10	75	3
33072.040.00	4	15	40	4
33072.040.01	4	15	75	4
33072.050.00	5	16	50	5
33072.050.01	5	16	75	5
33072.060.00	6	18	50	6

Article Nr.	D	SL	TL	S
33072.060.01	6	18	75	6
33072.080.00	8	25	60	8
33072.080.01	8	25	75	8
33072.100.00	10	30	70	10
33072.120.00	12	30	80	12
33072.140.00	14	30	80	14
33072.160.00	16	40	100	16
33072.200.00	20	45	100	20

Solid carbide cylindrical spiral cutter up/down (Z = 2 + 2, 3 + 3 or 4 + 4)

3308

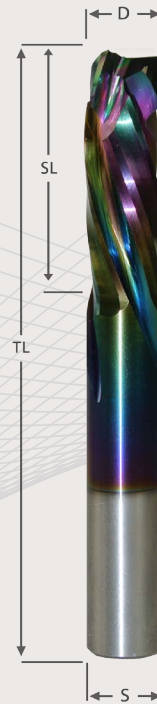
Description

- With 2 + 2, 3 + 3 or 4 + 4 cutting edges
- Right handed / clockwise
- Positive and negative axial angle (up/down)
- Upward and downward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter
- Standard with diamond coating

Application

Fiber-reinforced plastics

Delamination is prevented by simultaneously towing and pushing the cutting edge. Therefore the cutter must be positioned in the center of the processed material.



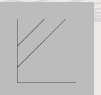
GFK

CFK

AFK

Solid carbide

2+2, 3+3 of 4+4 Cutting edges



DIN 6535 Form HA



Article Nr.	D	SL	TL	Z	S
3308.080.00	8	32	80	2 + 2	8
3308.080.01	8	42	100	2 + 2	8
3308.100.00	10	32	80	2 + 2	10
3308.100.01	10	42	100	2 + 2	10
3308.120.00	12	32	90	3 + 3	12
3308.120.01	12	42	100	3 + 3	12
3308.140.00	14	32	90	3 + 3	14
3308.140.01	14	42	100	3 + 3	14
3308.160.00	16	32	90	4 + 4	16
3308.160.01	16	42	100	4 + 4	16
3308.180.00	18	32	90	4 + 4	18
3308.180.01	18	42	100	4 + 4	18
3308.200.00	20	32	90	4 + 4	20
3308.200.01	20	42	100	4 + 4	20

3309

Solide carbide cylindrical shank cutter for SMC (Z=4)

GFK

CFK

AFK

Solid
carbide

4
Cutting edges



DIN 6535
Form HA



Description

- Four cutting edges
- Right handed / clockwise
- Positive axial angle
- Upward chip removal
- Bottom side cutting
- Cutting diameter equal to shank diameter
- Standard with diamond coating

Application

Suitable for high speed milling of reinforced materials, fiber-glas, SMC and carbon.

Article Nr.	D	SL	TL	S
3309.040.00	4	16	60	4
3309.050.00	5	18	60	5
3309.060.00	6	20	60	6
3309.060.01	6	25	70	6
3309.060.02	6	28	80	6
3309.080.00	8	22	70	8
3309.080.01	8	32	80	8
3309.100.00	10	32	80	10
3309.160.00	16	36	100	16
3309.200.00	20	45	110	20

Solide carbide cylindrical shank cutter for honeycomb (Z=6)

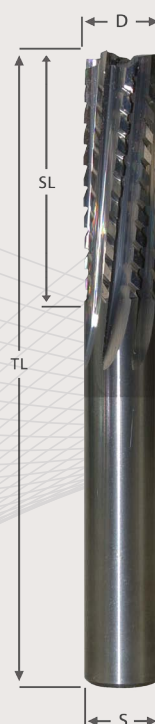
3310

Description

- Four cutting edges
- Right handed / clockwise
- Plunge cutting
- Standard with diamond coating

Application

For milling of honeycomb structures.



GFK

CFK

AFK

Solid
carbide

6
Cutting edges



DIN 6535
Form HA



Article Nr.	D	SL	TL	S
3310.040.00	4	16	60	4
3310.050.00	5	18	60	5
3310.060.00	6	20	60	6
3310.060.01	6	25	70	6
3310.060.02	6	28	80	6
3310.080.00	8	32	80	8

Article Nr.	D	SL	TL	S
3310.080.01	8	42	100	8
3310.100.00	10	32	80	10
3310.120.00	12	32	90	12
3310.160.00	16	36	100	16
3310.200.00	20	45	110	20

3400

Solide carbide twist drill for kevlar and graphite (Z=2)

Kevlar

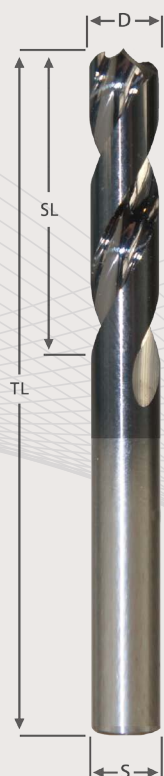
Graphite

Solid
carbide

2
Cutting edges



DIN 6535
Form HA



Description

- Two cutting edges
- Positive axial angle
- Standard with diamond coating

Application

Suitable for high speed milling of composite, fiberglass, SMC and carbon.

Article Nr.	D	SL	TL	S
3400.030.00	3	12	40	3
3400.040.00	4	18	60	4
3400.060.00	6	28	80	6
3400.080.00	8	37	80	8
3400.100.00	10	48	100	10
3400.120.00	12	50	100	12

Aluminium

Aluminium



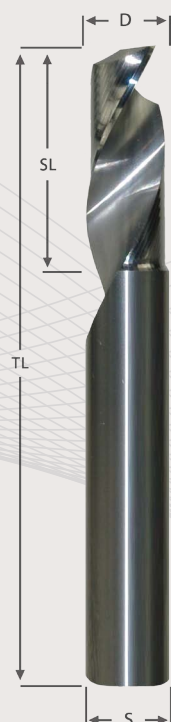
ALU
Aluminium

Solid
carbide

1
Cutting edge



DIN 6535
Form HA



Description

- One cutting edge
- Right handed / clockwise
- Positive axial angle

Provide various coatings

Pure aluminium	DLC (Aluspeed)
Aluminium with Si to 5%	DLC (Aluspeed)
Aluminium with Si top 5%	Diamond

Application

For milling of aluminium sheetings. Because of the polished flute no adhesive material is left and therefore there is excellent material discharge.

Article Nr.	D	SL	VG	TL	S
3201.020.00	2	8	-	40	3
3201.030.00	3	12	-	50	3
3201.040.00	4	15	-	50	4
3201.050.00	5	20	-	70	5
3201.060.00	6	20	-	70	6
3201.060.01	6	20	20	80	6

Article Nr.	D	SL	VG	TL	S
3201.080.00	8	20	-	70	8
3201.080.01	8	20	20	60	8
3201.100.00	10	20	-	70	10
3201.100.01	10	20	20	80	10
3201.120.00	12	20	-	70	12
3201.120.01	12	20	20	80	12

Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- With corner radius

Provide various coatings

Pure aluminium

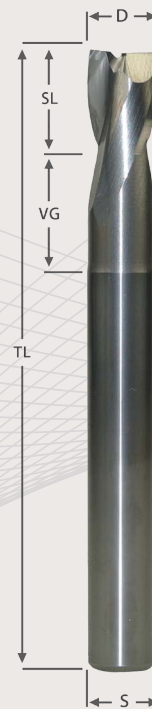
Aluminium with Si to 5%

Aluminium with Si top 5%

DLC (Aluspeed)

DLC (Aluspeed)

Diamond



ALU
Aluminium

Solid
carbide

2
Cutting edges



DIN 6535
Form HA



Article Nr.	D	HR	SL	VG	TL	S
3202.020.00	2	0,1	3	6	50	3
3202.030.00	3	0,1	4	9	70	3
3202.040.00	4	0,1	5	12	70	4
3202.050.00	5	0,1	8	15	70	5
3202.060.00	6	0,1	8	18	70	6
3202.060.01	6	0,1	8	24	100	6
3202.080.00	8	0,1	10	24	70	8

Article Nr.	D	HR	SL	VG	TL	S
3202.080.01	8	0,1	10	32	100	8
3202.100.00	10	0,1	14	30	100	10
3202.120.00	12	0,1	16	36	100	12
3202.120.01	12	0,1	16	48	130	12
3202.160.00	16	0,1	20	40	100	16
3202.200.00	20	0,1	25	50	110	20

ALU
Aluminium

Solid
carbide

3
Cutting edges



DIN 6535
Form HA



Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle

Provide various coatings

Pure aluminium

Aluminium with Si to 5%

Aluminium with Si top 5%

DLC (Aluspeed)

DLC (Aluspeed)

Diamond

Article Nr.	D	SL	TL	S
3203.040.00	4	11	70	4
3203.050.00	5	13	70	5
3203.060.00	6	13	70	6
3203.080.00	8	19	70	8

Article Nr.	D	SL	TL	S
3203.100.00	10	22	70	10
3203.120.00	12	26	80	12
3203.160.00	16	32	90	16
3203.200.00	20	38	100	20

Solide carbide spiral cutter positive with 45° spiral angle (Z=3)

3204

Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle

Provide various coatings

Pure aluminium

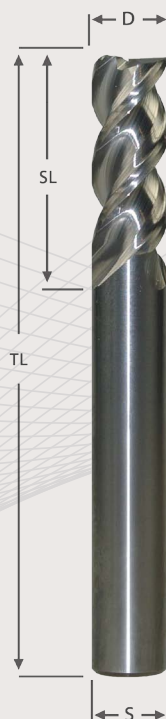
Aluminium with Si to 5%

Aluminium with Si top 5%

DLC (Aluspeed)

DLC (Aluspeed)

Diamond



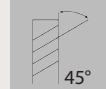
ALU
Aluminium

Solid
carbide

3
Cutting edges



DIN 6535
Form HA



Article Nr.	D	HR	SL	TL	S
3204.040.00	4	0,1	11	60	6
3204.050.00	5	0,2	13	60	6
3204.060.00	6	0,2	16	60	6
3204.080.00	8	0,2	19	70	8
3204.100.00	10	0,2	22	70	10
3204.120.00	12	0,2	26	80	12
3204.160.00	16	0,2	32	100	16
3204.200.00	20	0,2	38	100	20

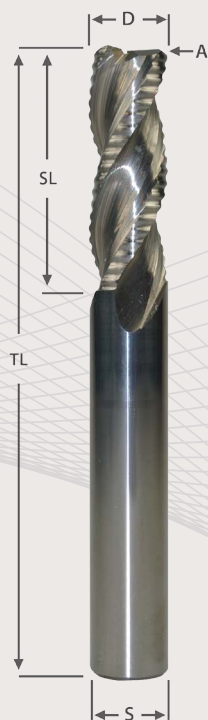
ALU
Aluminium

Solid
carbide

3
Cutting edges



DIN 6535
Form HA



Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle

Provide various coatings

Pure aluminium	DLC (Aluspeed)
Aluminium with Si to 5%	DLC (Aluspeed)
Aluminium with Si top 5%	Diamond

Article Nr.	D	A	SL	TL	S
3210.060.00	6	0,25	16	70	6
3210.080.00	8	0,50	20	70	8
3210.100.00	10	0,50	22	70	10
3210.120.00	12	0,50	25	80	12
3210.160.00	16	1,00	35	90	16
3210.200.00	20	1,00	40	100	20

Description

- Three cutting edges
- Right handed / clockwise
- Positive axial angle
- With ballnose
- Bottom side cutting

Provide various coatings

Pure aluminium

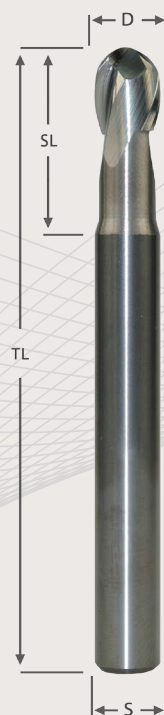
Aluminium with Si to 5%

Aluminium with Si top 5%

DLC (Aluspeed)

DLC (Aluspeed)

Diamond



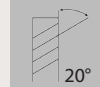
ALU
Aluminium

Solid
carbide

2
Cutting edges



DIN 6535
Form HA



Article Nr.	D	R	SL	TL	S
3220.060.00	6	3	8	80	6
3220.080.00	8	4	10	80	8
3220.100.00	10	5	10	80	10
3220.120.00	12	6	12	80	12
3220.140.00	14	7	14	90	12
3220.160.00	16	8	16	90	16
3220.180.00	18	9	18	100	18
3220.200.00	20	10	20	100	20

ALU
Aluminium

Solid
carbide

2
Cutting edges



DIN 6535
Form HA



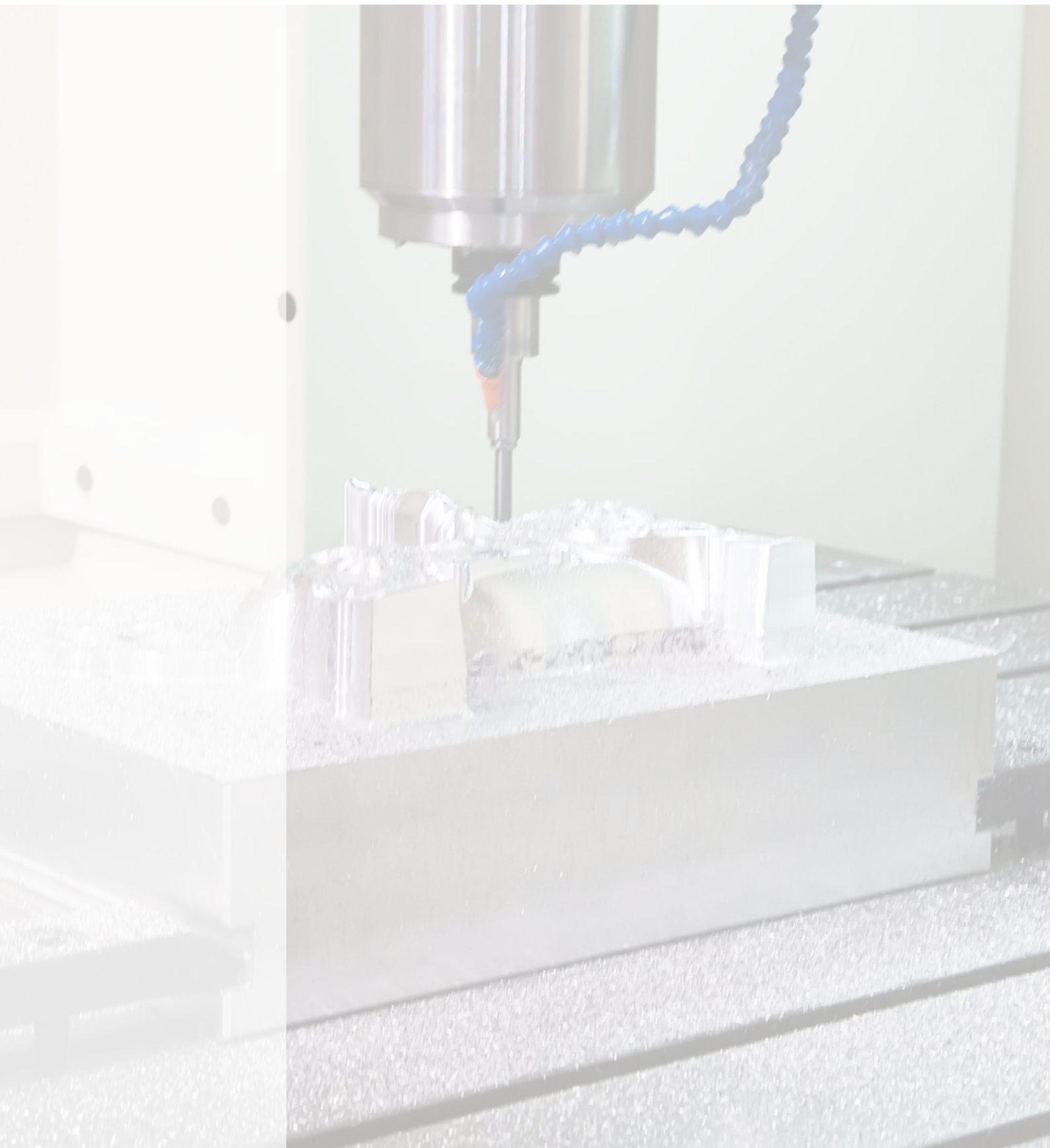
Description

- Two cutting edges
- Right handed / clockwise
- Positive axial angle
- With corner radius
- Bottom side cutting

Provide various coatings

Pure aluminium	DLC (Aluspeed)
Aluminium with Si to 5%	DLC (Aluspeed)
Aluminium with Si top 5%	Diamond

Article Nr.	D	HR	SL 1	VG	TL	S
3220.060.00	6	1,0	8	20	78	6
3220.080.00	8	1,0	10	20	78	8
3220.100.00	10	1,5	10	20	78	10
3220.120.00	12	1,5	12	35	78	12
3220.140.00	14	2,0	14	45	89	14
3220.160.00	16	2,0	16	45	89	16
3220.180.00	18	2,0	18	55	102	18
3220.200.00	20	2,0	20	55	102	20



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