

Precision creates value



HPL Machining
precise & effective



Tools for HPL Machining

HPL laminates have become indispensable in the production of surface profiles for interior and exterior applications.

JSO is an experienced tool manufacturer offering tools for plastics, aluminium and composite wood/ board materials as well as special solutions for the optimal machining of typical HPL panel profiles using customised tool geometries.

With HPL tools from JSO – a partner with years of experience and technical know-how who supports you even when you have unusual requirements offering individual solutions – you can optimise your production and depend on high-quality and precise application options.

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HPL Material

Definition:

HPL stands for High Pressure Laminate. HPL laminates, formed under high pressure, are made of paper, wood fibres and melamine resin or decorative paper. During production, layers of paper are pressed together with melamine resin at over 5 MPa pressure and 120°C.

Properties:

HPL laminated panels are non-deformable and highly resistant to temperature (up to 180°C). At the same time, the material is extremely weather resistant. Other advantages include fire safety and resistance to impacts and scratching.

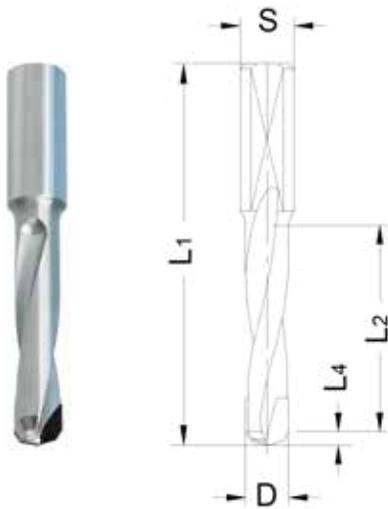
Intended uses:

HPL sheets are ideal both for outdoor and indoor use. Applications range from facade cladding and garden furniture to interior partition walls and shower panels.

Machining:

HPL panels are more difficult to machine than other materials. Thus it is extremely important to use the most appropriate tool for the particular machining application. With quality tools from JSO which have been specially developed for HPL machining, you can work precisely and effectively, thus ensuring consistently high quality.



**Technical details:**

- sturdy drill body, PCD tipped
- flat peak design with double bevel for tear-free blind holes
- shank with clamping flat and length adjusting screw

Application:

- for drilling blind - and through holes
- perfect machining on nesting machines
- especially applicable for abrasive workpiece materials
- for use on CNC machines and on throughfeed drilling-machines

Workpiece materials:

- cement bounded and fire resistant board materials
- fibre-reinforced synthetic materials (FVK)
- HPL (TRESPA®, laminate, RESOPAL®)
- multiplex
- laminated chipboard and MDF

PCD Dowel Drills

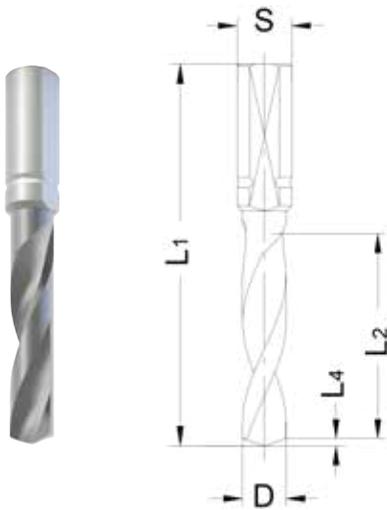
PCD Dowel Drills Z2

D [mm]	L ₂ [mm]	L ₄ [mm]	L ₁ [mm]	S [mm]	Part-No.	
8	27	2,6	57,5	10	30540-9-08025-L	●
8	27	2,6	57,5	10	30540-9-08025-R	●
8	35	2,6	70	10	30540-9-08035-L	●
8	35	2,6	70	10	30540-9-08035-R	●
10	35	3,2	70	10	30540-9-10035-L	●
10	35	3,2	70	10	30540-9-10035-R	●
12	35	3,9	70	10	30540-9-12035-L	●
12	35	3,9	70	10	30540-9-12035-R	●

Accessories: Length adjusting screw

M 5 x 8	39075-0-05080-R	●
M 5 x 17 mm for quick change adaptor	39075-0-05017-R	●

● Popular size, ex stock ○ While stocks last

**Technical details:**

- solid TC spiral with 140° V-point
- shank with clamping flat and length adjusting screw

Application:

- for drilling through holes (on nesting machines) and blind holes in wooden - and plastic materials
- for use on CNC machines and on throughfeed drilling machines

Workpiece materials:

- HPL (TRESPA®, laminate, RESOPAL®)
- laminated chipboard and MDF
- multiplex
- solid wood

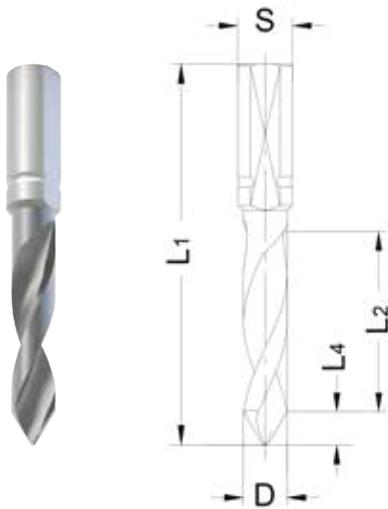
Accessories: Length adjusting screw	Part-No.	
M 5 x 8	39075-0-05080-R	●
M 5 x 17 mm for quick change adaptor	39075-0-05017-R	●

Dowel Drills - solid TC

Dowel Drills - solid TC Z2

D [mm]	L ₂ [mm]	L ₄ [mm]	L ₁ [mm]	S [mm]	Part-No.	
3	20	0,5	57,5	10	30559-6-03020-L	●
3	20	0,5	57,5	10	30559-6-03020-R	●
4	23	0,7	57,5	10	30559-6-04023-L	●
4	23	0,7	57,5	10	30559-6-04023-R	●
5	23	0,9	57,5	10	30559-6-05023-L	●
5	23	0,9	57,5	10	30559-6-05023-R	●
6	25	1,1	57,5	10	30559-6-06025-L	●
6	25	1,1	57,5	10	30559-6-06025-R	●
8	25	1,5	57,5	10	30559-6-08025-L	●
8	25	1,5	57,5	10	30559-6-08025-R	●
10	25	1,8	57,5	10	30559-6-10025-L	●
10	25	1,8	57,5	10	30559-6-10025-R	●
3	22	0,5	70	10	30559-6-03022-L	●
3	22	0,5	70	10	30559-6-03022-R	●
4	28	0,7	70	10	30559-6-04028-L	●
4	28	0,7	70	10	30559-6-04028-R	●
5	36	0,9	70	10	30559-6-05036-L	●
5	36	0,9	70	10	30559-6-05036-R	●
6	38	1,1	70	10	30559-6-06038-L	●
6	38	1,1	70	10	30559-6-06038-R	●
8	38	1,5	70	10	30559-6-08038-L	●
8	38	1,5	70	10	30559-6-08038-R	●
10	38	1,8	70	10	30559-6-10038-L	●
10	38	1,8	70	10	30559-6-10038-R	●

● Popular size, ex stock ○ While stocks last

**Technical details:**

- solid TC spiral with 60° V-point (D=3 mm; 120°)
- shank with clamping flat and length adjusting screw

Application:

- for drilling through holes in different kinds of wood composites and boards
- for use on CNC machines and on throughfeed drilling machines

Workpiece materials:

- HPL (TRESPA®, laminate, RESOPAL®)
- laminated chipboard and MDF
- multiplex
- solid wood

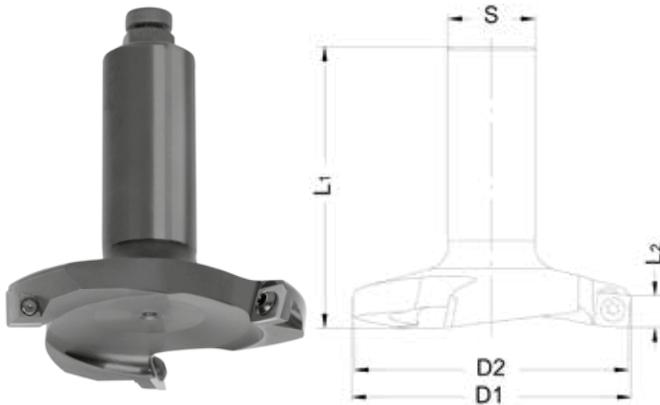
Accessories: Length adjusting screw	Part-No.	
M 5 x 8	39075-0-05080-R	●
M 5 x 17 for quick change adaptor	39075-0-05017-R	●

Dowel Drills - solid TC for through holes

Dowel Drills - solid TC Z2 for through holes

D [mm]	L ₂ [mm]	L ₄ [mm]	L ₁ [mm]	S [mm]	Part-No.	
3	27	2,6	57,5	10	30566-6-03027-L	●
3	27	2,6	57,5	10	30566-6-03027-R	●
4	20	3,5	57,5	10	30573-6-04020-L	●
4	20	3,5	57,5	10	30573-6-04020-R	●
5	20	4,3	57,5	10	30573-6-05020-L	●
5	20	4,3	57,5	10	30573-6-05020-R	●
6	20	5,2	57,5	10	30573-6-06020-L	●
6	20	5,2	57,5	10	30573-6-06020-R	●
8	20	6,9	57,5	10	30573-6-08020-L	●
8	20	6,9	57,5	10	30573-6-08020-R	●
10	20	8,7	57,5	10	30573-6-10020-L	●
10	20	8,7	57,5	10	30573-6-10020-R	●
3	27	2,6	70	10	30566-6-03070-L	●
3	27	2,6	70	10	30566-6-03070-R	●
4	25	3,5	70	10	30573-6-04025-L	●
4	25	3,5	70	10	30573-6-04025-R	●
5	33	4,3	70	10	30573-6-05033-L	●
5	33	4,3	70	10	30573-6-05033-R	●
6	33	5,2	70	10	30573-6-06033-L	●
6	33	5,2	70	10	30573-6-06033-R	●
8	33	6,9	70	10	30573-6-08033-L	●
8	33	6,9	70	10	30573-6-08033-R	●
10	33	8,7	70	10	30573-6-10033-L	●
10	33	8,7	70	10	30573-6-10033-R	●

● Popular size, ex stock ○ While stocks last



4Cut PCD Surfacing Cutter

4Cut PCD Surfacing Cutter Z3

D ₁ [mm]	D ₂ [mm]	L ₂ [mm]	L ₁ [mm]	S [mm]	Part-No.	
82	80	8	80	25	17525-9-80006-R	●

Accessories::

Reversible PCD tip, 9,8 x 9,8 x 2,0 mm 4-sided, convex design	72014-9-09800-0	●
Torx screw, M 4 x 7, T15, with centering collar, special design	39081-0-04070-R	●
Torx key, T15, with handle	39077-0-04015-2	●

● Popular size, ex stock ○ While stocks last

Technical details:

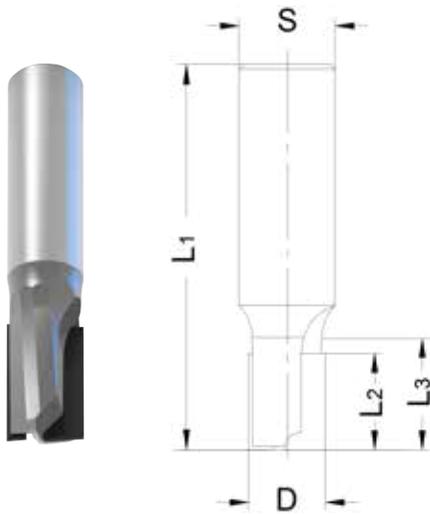
- tool body of high-quality steel with 3 rev. PCD tips, 4-sided in special 4Cut design
- positive shear angle

Application:

- for surfacing of working tables and panel raising on all common board - and plastic materials

Workpiece materials:

- HPL (TRESPA®, laminate, RESOPAL®)
- laminated chipboard and MDF
- multiplex



Diatec-DUO Finishing Cutters

Diatec-DUO Finishing Cutters Z2

D [mm]	L ₂ [mm]	L ₃ [mm]	L ₁ [mm]	S [mm]	Part-No.	
5	10	12	50	6	14250-9-05100-R	●
6	15	20	65	6	14250-9-06150-R	●
8	15	20	65	8	14250-9-08150-R	●
8	20	25	70	8	14250-9-08200-R	○
10	10	15	75	10	14250-9-10100-R	●
10	15	20	75	10	14250-9-10150-R	●
10	20	25	80	10	14250-9-10200-R	●
12	15	20	70	12	14250-9-12152-R	○
12	20	25	75	12	14250-9-12202-R	●
12	25	29	75	12	14250-9-12252-R	○
12	30	35	80	12	14250-9-12302-R	●
16	10	20	80	16	14250-9-16103-R	○
16	15	25	80	16	14250-9-16153-R	○
16	20	25	80	20	14250-9-16205-R	●
16	25	30	85	16	14250-9-16253-R	●
18	15	25	80	18	14250-9-18155-R	○
18	20	25	80	18	14250-9-18205-R	○
20	20	30	85	20	14250-9-20205-R	○

● Popular size, ex stock ○ While stocks last

Technical details:

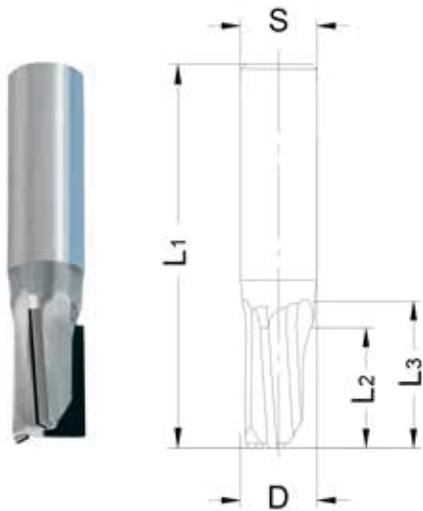
- sturdy tool body for high requirements of steel or solid TC
- two continuous cutting edges with alternative shear cut and PCD centre tip for plunge cutting
- several times regrindable

Application:

- for finishing, grooving, sizing and rebating of particularly abrasive workpiece materials
- especially applicable for axial and ramp plunge cutting

Workpiece materials:

- board materials (chipboard, MDF, multiplex)
- thermoplastics (CFK, GFK, epoxy resin)
- HPL (TRESPA®, laminate, RESOPAL®)
- solid surface (Corian®)
- gypsum fibreboards
- solid- and glued wood
- limited usable in Aluminum



Diatec-TRIO Finishing Cutters

Diatec-TRIO Finishing Cutters Z3

D [mm]	L ₂ [mm]	L ₃ [mm]	L ₁ [mm]	S [mm]	Part-No.	
12	10	19	70	12	14253-9-12102-R	●
12	15	24	70	12	14253-9-12152-R	○
12	20	29	75	12	14253-9-12202-R	●
12	25	34	80	12	14253-9-12252-R	○
14	15	23	70	14	14253-9-14151-R	○
14	20	28	75	14	14253-9-14201-R	●
14	25	33	80	14	14253-9-14251-R	○
16	10	25	80	16	14253-9-16103-R	●
16	15	30	80	16	14253-9-16153-R	○
16	20	30	80	16	14253-9-16203-R	○
16	25	30	80	16	14253-9-16253-R	●
16	30	35	85	16	14253-9-16303-R	○
16	35	40	90	16	14253-9-16353-R	●
20	10	15	85	16	14253-9-20105-R	○
20	15	20	85	16	14253-9-20155-R	○
20	20	25	85	20	14253-9-20205-R	●
20	25	30	90	20	14253-9-20255-R	○
20	30	35	95	20	14253-9-20305-R	●

● Popular size, ex stock ○ While stocks last

Technical details:

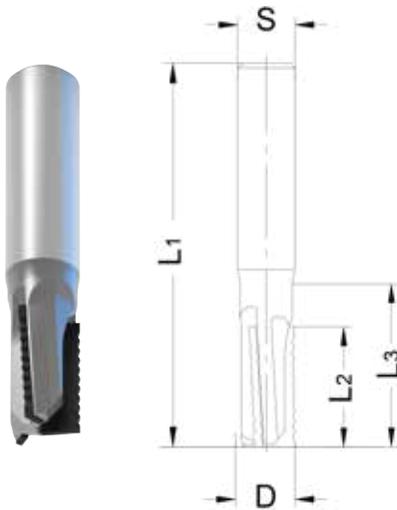
- tool body made of solid tungsten carbide for high requirements
- three continuous cutting edges with alternative shear cut and PCD centre tip for plunge cutting
- several times regrindable

Application:

- for finishing, grooving, sizing and rebating of particularly abrasive workpiece materials
- especially applicable for axial and ramp plunge cutting
- improved feed rate up to 25% compared to Diatec-DUO Z2

Workpiece materials:

- board materials (chipboard, MDF, multiplex)
- thermoplastics (CFK, GFK, epoxy resin)
- HPL (TRESPA®, laminate, RESOPAL®)
- solid surface (Corian®)
- gypsum fibreboards
- solid- and glued wood

**Technical details:**

- tool body made of solid tungsten carbide for high requirements
- three continuous cutting edges with alternative shear cut and PCD centre tip for plunge cutting
- cutting edges with roughing geometry
- several times regrindable

Application:

- for roughing, grooving, sizing (nesting) and rebating of particularly abrasive workpiece materials
- especially applicable for axial and ramp plunge cutting

Workpiece materials:

- board materials (chipboard, MDF, multiplex)
- thermoplastics (CFK, GFK, epoxy resin)
- HPL (TRESPA®, laminate, RESOPAL®)
- solid surface (Corian®)
- gypsum fibreboards
- solid- and glued wood

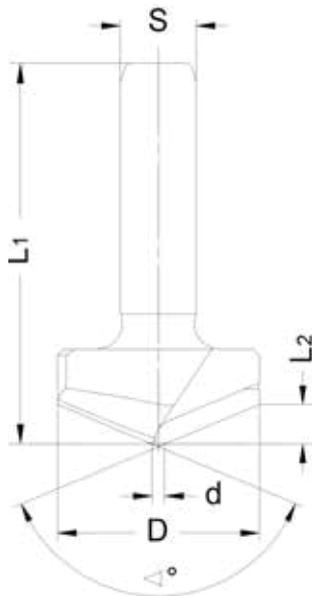
Diatec-TRIO Roughing Cutters

Diatec-TRIO Roughing Cutters Z3

D [mm]	L ₂ [mm]	L ₃ [mm]	L ₁ [mm]	S [mm]	Part-No.	
12	10	19	70	12	14256-9-12102-R	●
12	15	24	70	12	14256-9-12152-R	○
12	20	29	75	12	14256-9-12202-R	●
12	25	34	80	12	14256-9-12252-R	○
14	15	23	70	14	14256-9-14151-R	○
14	20	28	75	14	14256-9-14201-R	○
14	25	33	80	14	14256-9-14251-R	●
16	10	25	80	16	14256-9-16103-R	○
16	15	30	80	16	14256-9-16153-R	●
16	20	30	80	16	14256-9-16203-R	○
16	25	30	80	16	14256-9-16253-R	●
16	30	35	85	16	14256-9-16303-R	○
16	35	40	90	16	14256-9-16353-R	●
20	10	15	85	16	14256-9-20105-R	○
20	15	20	85	16	14256-9-20155-R	○
20	20	25	85	20	14256-9-20205-R	○
20	25	30	90	20	14256-9-20255-R	○
20	30	35	95	20	14256-9-20305-R	○

● Popular size, ex stock ○ While stocks last

PCD V-Groove / Bevelling Cutters



Technical details:

- sturdy tool body, PCD tipped in Z1 and Z2

Application:

- for bevelling of V-grooves and decorative grooving
- applicable for machining Alucobond boards (excepton: 16010-9-14453-R)

Workpiece materials:

PCD V-grooving and bevelling cutter:

- board materials (chipboard, MDF, multiplex)
- thermoplastics (CFK, GFK, epoxy resin)
- HPL (TRESPA®, laminate, RESOPAL®)
- solid surface (Corian®)
- gypsum fibreboards
- solid- and glued wood
- ALUCOBOND®
- ALUCORE®

PCD decorative grooving cutter 16010-9-14453-R:

- board materials (chipboard, MDF, multiplex)
- HPL (TRESPA®, laminate, RESOPAL®)
- solid surface (Corian®)
- gypsum fibreboards

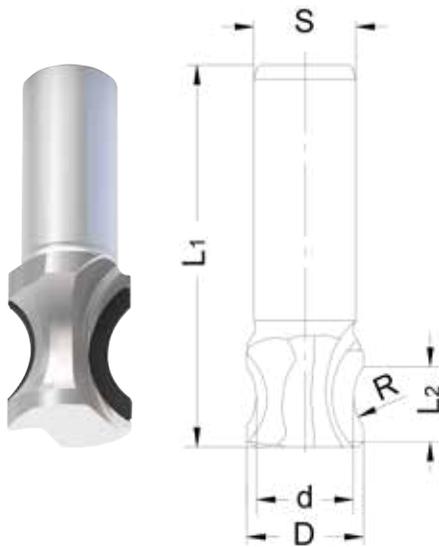
PCD V-Groove / Bevelling Cutters Z2

D [mm]	d [mm]	L ₂ [mm]	L ₁ [mm]	S [mm]	∠°	Part-No.	
18	3	7,5	60	12	90	16010-9-18452-R	●
32	2	6,2	60	12	135	16010-9-32222-R	●
63	3	30	95	25	90	16010-9-63456-R	●

PCD Decorative Groove Cutter Z1

14	0,5	7	80	16	90	16010-9-14453-R	●
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● Popular size, ex stock ○ While stocks last

**Technical details:**

- sturdy tool body, PCD tipped in Z1 and Z2

Application:

- for convex edge rounding

Workpiece materials:

- board materials (chipboard, MDF, multiplex)
- thermoplastics (CFK, GFK, epoxy resin)
- HPL (TRESPA®, laminate, RESOPAL®)
- solid surface (Corian®)
- gypsum fibreboards
- solid- and glued wood

PCD Edge Rounding Cutters

PCD Edge Rounding Cutters Z2

d	D	L ₂	L ₁	R	S	Part-No.	
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		
18,0	31,6	24,0	95	16	20	16030-9-32165-R	●
19,1	23,0	11,9	75	10	20	16030-9-23105-R	●
20,0	26,0	17,0	87	16	20	16030-9-26165-R	●
29,2	34,8	22,2	95	25	20	16030-9-35255-R	●

PCD Edge Rounding Cutter Z2+2

40,0	52,4	33,0	117	25	20	16030-9-52255-R	●
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● Popular size, ex stock ○ While stocks last

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