



Tools for Furniture Industry
2017

Globus[®]
...ostre narzędzia

MANUFACTURE OF FURNITURE

Furniture industry is one of the most dynamically developing branches of the Polish industry. That is evidenced by hard sales data and status of the fourth biggest exporter of furniture in the world (after China, Germany and Italy) with a share of 4.9% in total world export of furniture and continuous consolidation of companies in the furniture industry influencing improvement of productivity. Continuous development of this industry in the world requires from the Polish manufacturers quick following the changing trends and continuous increase of resources for innovations of their products introducing into market not only new, very light and resistant materials but also using modern design of the products. New technologies and materials require the use of new, very efficient and precise tools ensuring continuity of operation and professional and quick service.

GLOBUS company, apart from highly specialized industrial tools, offers also comprehensive advisory services by its professional technical team and wide range of after-sales services for the produced tools. In our work, we take advantage of our long-standing industrial-construction and research experience, as well as the high qualifications and dedication of the company's employees and Technical Advisors. We are pleased to present our latest catalogue of professional tools, which are used on specialised production lines in furniture industry with mass production but also in smaller plants and joineries manufacturing custom cabinetry. Due to high operational parameters the industrial tools from GLOBUS may be also widely used in group of companies co-operating with furniture manufacturers e.g. within the scope of production of straight or profiled components of wood and wood based materials or aluminium or steel profiles and sections, which are half-products for furniture production plants.



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WHICH TOOLS PRODUCTION PROCESSES WE USE?

CUTTING PROCESS



Delivered metal sheets are inserted to special cutter and undergo laser cutting processes, where laser acts as a "knife".

HARDENING AND TEMPERING



Heat treatment of tool steel consists of three stages:
Stage 1 - steel heating;
Stage 2 - quick cooling of material;
Stage 3 - tempering.

DISCS GRINDING



Grinding of planes aims to obtain required thickness with maintaining minimum scattering and flatness of the disc. This part of process is implemented on automated grinding machine, which provides precise grinding with accuracy up to 0.0005 mm.

TENSIONING AND BALANCING OF DISCS



Due to a character of manufactured disc tools they have to maintain the specified rigidity and stability during working. Therefore, saw blade discs undergo tensioning and dynamic balancing.

SOLDERING OF SINTERED CARBIDES



Soldering of sintered carbides is executed on fully automated soldering units. Carbides are segregated in vibrating drums and set into soldering position.

SHARPENING OF SINTERED CARBIDES



Sharpening of sintered carbides is made in a modern, fully automated line of highly-efficient production grinders with numerically-controlled axes serviced by an arm of robot.

DISCS MARKING



Laser marking is one of the most advanced marking methods. This method is very quick and aesthetic.

QUALITY CONTROL - PACKAGING



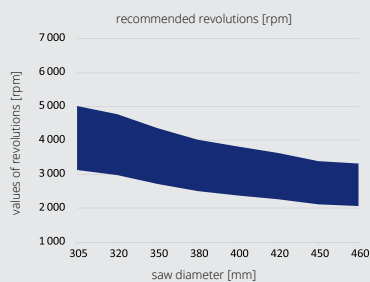
Marked tools go to control department where they undergo final acceptance by the experienced experts from quality department.





CUTTING IN FURNITURE PRODUCTION

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**EXPERT'S ADVICE:**

- ▶ Due to the use of SUPER HARD sintered carbide tips the saw blade has to be sharpened on CNC sharpening machines with the use of grinding wheel and parameters of its operation selected specially for this purpose.
- ▶ In case of cutting single boards on machines intended for cutting of several layers of furniture boards it is recommended to increase number of teeth (e.g. 84z) and change processing parameters.
- ▶ Triple chip – flat top teeth GA is a basic geometry, therefore in case of cutting of materials difficult to machine it is recommended to use the other geometries, such as: 1GA, 1GE, 1GB, GS.
- ▶ Saw blade should cooperate with pre-cutting saw (scoring saw blade) in order to obtain ideal edge when the blade exits the first layer of the board.



HM saw blades LL CUT VH GA15

for batch cutting of wood based materials on panel sizing machines

- ▶ SUPER HARD carbide tip (NANOGRAIN) with hardness of 2.250 HV, large vol. (3.5 mm) and very smooth surface ensures longer tool life time
- ▶ dynamically balanced disc eliminates vibrations during cutting - stable cutting process and better quality of surfaces cut
- ▶ precisely executed body with new silencing slots reduces noise and ensures long and stable tool operation
- ▶ for batch cutting of wood based materials such as MDF, HDF, LDF, OSB, chipboards, fibreboards and difficult to machine wood based materials, used on panel sizing machines

Index						Geo- metry		PRICELIST
	mm	mm	mm	mm			lxd _d /d _p	eur/pc.
PS312-0305-0001	305	30	4,4	3,0	60	GA15	2x7/42+2x8,5/46+2x10/60	71,25
PS312-0320-0002	320	65	4,4	3,2	60	GA15	2x9/110+2x9/100	82,25
PS312-0350-0004	350	75	4,4	3,2	72	GA15	2x14/100+2x11/115+2x9/100	80,75
PS312-0350-0005	350	80	4,4	3,0	72	GA15	2x14/110+2x9/130	80,75
PS312-0380-0001	380	60	4,4	3,5	72	GA15	2x14/100+2x11/115+2x9/100	88,75
PS312-0380-0002	380	60	4,8	3,2	72	GA15	2x14/100+2x11/115	93,75
PS312-0400-0002	400	30	4,4	3,2	72	GA15	2x10/60	91,25
PS312-0420-0001	420	80	4,4	3,2	72	GA15	4x19/120+2x9/130+2x14/110	95,00
PS312-0450-0003	450	60	4,8	3,2	72	GA15	4x11/85+2x10/80+2x14/125	96,75
PS312-0450-0005	450	30	4,4	3,2	72	GA15	2x10/60+2x14/94	102,00
PS312-0450-0009	450	60	4,8	3,5	72	GA15	4x11/85+2x10/80+2x14/125	102,50
PS312-0460-0001	460	30	4,4	3,2	72	GA15	2x13/94+2x13/95	98,75

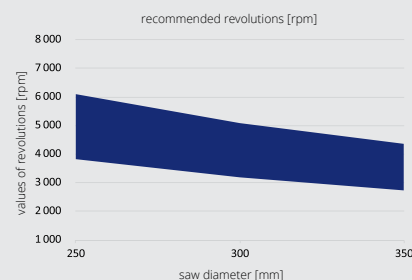
d_d - driving holes diameter
d_p - pitch diameter of holes

o - per order

* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Teeth geometry included in the table is used depending on the type of wood based material to be cut.
- ▶ Cutting of boards on vertical and horizontal sizing machines – single boards or in packet up to thickness 54 mm.
- ▶ Saw blade should cooperate with pre-cutting saw (scoring saw blade) in order to obtain ideal edge when the blade exits the first layer of the board.
- ▶ Due to the use of SUPER HARD sintered carbide tips the saw blade has to be sharpened on CNC sharpening machines with the use of grinding wheel and parameters of its operation selected specially for this purpose.



HM saw blades LL CUT / LL CUT VH line

for cutting of wood based materials on professional sizing machines (horizontal, vertical)

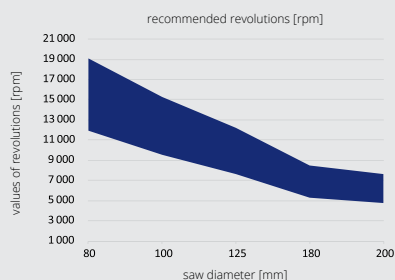
- ▶ SUPER HARD and VERY HARD carbide tip with hardness of 2.100 HV and 2.250HV, large volume and very smooth surface ensures longer tool life time
- ▶ dynamically balanced disc eliminates vibrations during cutting - stable cutting process and better quality of surfaces cut
- ▶ precisely executed body with new silencing slots reduces noise and ensures long and stable tool operation
- ▶ LL CUT and LL CUT VH series are dedicated for cutting of wood based materials like: chipboards, fibreboards, laminates, HDF, MDF, LDF, OSB, plywood etc.

Index						Geo- metry		PRICELIST
	mm	mm	mm	mm			ilxd/d _p	eur/pc.
LL CUT line: chipboard, laminate, MDF								
PS310-0250-0002	250	30	3,2	2,2	80	GA10	2x7/42+2x8,5/46+2x10/60	54,50
PS310-0300-0002	300	30	3,2	2,2	96	GA10	2x7/42+2x8,5/46+2x10/60	52,50
PS310-0350-0002	350	30	3,2	2,2	108	GA10	2x10/60	70,40
LL CUT VH line: chipboard, laminate, MDF and HDF not much contaminated								
PS312-0250-0002	250	30	3,2	2,2	80	GA10	2x7/42+2x8,5/46+2x10/60	57,75
PS312-0300-0003	300	30	3,2	2,2	96	GA5	2x7/42+2x8,5/46+2x10/60	55,00
PS312-0350-0002	350	30	3,2	2,2	108	GA10	2x10/60	79,25
LL CUT line: veneered wood based panels and plywood								
PS320-0250-0003	250	30	3,2	2,2	80	GS10	2x7/42+2x8,5/46+2x10/60	57,25
PS320-0300-0001	300	30	3,2	2,2	96	GS10	2x7/42+2x8,5/46+2x10/60	62,25
PS320-0350-0005	350	30	3,2	2,2	108	GS10	2x7/42+2x8,5/46+2x10/60	78,25

d₁ - driving holes diameter
d_p - pitch diameter of holes

* see the website for more products



**EXPERT'S ADVICE:**

- ▶ The lowest layer of material cut the better, it is important to match precisely the main saw blade with scoring saw blade.
- ▶ Teeth geometry 1GR8 should be used in machines with smooth control of scoring saw blade.
- ▶ The advantage of segmental scoring saw blade is obtaining uniform kerf thickness kerf, regardless of defects in board flatness or lack of pneumatic pressing of board to processing table.
- ▶ If you need scoring saw blade with bore Ø22 please make an enquiry because most of scoring saw blades with diameters Ø80-125 mm with such a bore are available on stock.



HM trapezoidal and segmental scoring saw for pre-cutting of veneer, laminate, lacquer, etc.

- ▶ SUPER HARD and VERY HARD carbide tip with hardness of 2.100 HV and 2.250HV, large volume and very smooth surface ensures longer tool life time
- ▶ due to the use of SUPER HARD sintered carbide tips the saw blade has to be sharpened on CNC sharpening machines with the use of grinding wheel and parameters of its operation selected specially for this purpose
- ▶ laser-cut disc made of high - quality heat-treated steel ensures high rigidity and stability of tool during cutting process
- ▶ pre-cutting of wood based material with veneered, laminated, varnished layer (chipboard, MDF, HDF, LDF, fibreboard, plywood, etc.)

Index						Geo-metry		PRICELIST
	mm	mm	mm	mm			ixd _g /d _p	eur/pc.
conical / trapezoidal scoring saw blade in LL CUT VH line: pre-cutting of laminate, lacquer, veneer								
PS627-0080-0001	80	20	3,2÷4,2	2,2	16	1GR8	-	29,95
PS627-0100-0003	100	20	3,2÷4,2	2,2	20	1GR8	-	31,50
PS627-0125-0003	125	20	3,2÷4,2	2,2	24	1GR8	-	34,15
PS627-0125-0009	125	20	3,1÷4,1	2,2	24	1GR8	-	34,15
conical / trapezoidal scoring saw blades in LL CUT VH line for panel sizing machines: pre-cutting of laminate, lacquer, veneer								
PS627-0180-0003	180	45	4,4÷5,4	3,5	36	1GR8	-	57,75
PS627-0180-0004	180	45	4,8÷5,8	3,5	36	1GR8	-	59,10
PS627-0200-0003	200	65	4,8÷5,8	3,5	36	1GR8	2x9/110 + 2x9/100	61,70
segmental scoring saw blade LL CUT line: pre-cutting of laminate, lacquer, veneer								
PS646-0080-0001	80	20	2,8÷3,6	2	2x10	GS12	-	47,45
PS646-0100-0001	100	20	2,8÷3,6	2	2x12	GS12	-	47,75
PS646-0120-0001	120	20	2,8÷3,6	2	2x12	GS12	-	54,10
PS646-0125-0001	125	20	2,8÷3,6	2	2x12	GS12	-	54,40

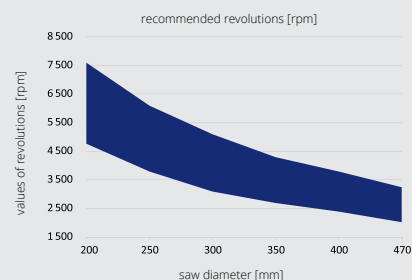
d_g - driving holes diameter
d_p - pitch diameter of holes

o- per order

* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Special tool executed on order, its design is adapted to the users individual needs (e.g. number of teeth, diameter and thickness of packet).
- ▶ Cutter head may be adapted for various types of machinery, depending on customer's needs and machine profile.
- ▶ Pre-cutting saw blade is available in GW and GT tooth geometry (left, right).



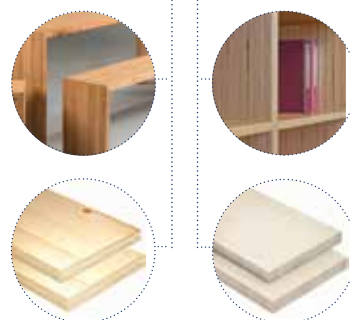
Cutter head fixed of HM saw blades - special tools

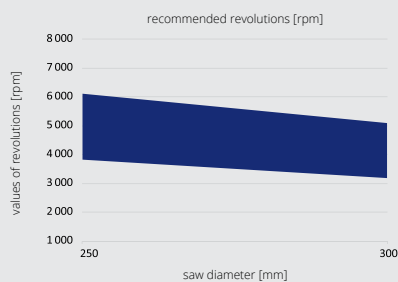
for disintegration of surplus material on industrial lines

- ▶ cutter head for high-performance processing lines, where wood based material excess is disintegrated - it may operate with cutting saw blade
- ▶ special design (spiral arrangement), ensures quiet and stable tool operation in machine and allows achieving high quality of processing
- ▶ cutter head design creating monolith after installation in the machine
- ▶ in furniture industry used for processing of boards made of wood based materials, including LVL boards

Index				Geometry	PRICELIST
	mm	mm	mm		eur/pc.
PS590-	200 - 470	80 - 150	10 - 60	right / left	

o- per order



**EXPERT'S ADVICE:**

- ▶ Due to the use of SUPER hard carbide tips the saw blade should be sharpened in special sharpening points where machines are equipped with continuous cooling systems - wet sharpening.
- ▶ Excellent surface after cutting and very good edge surface after blade exits the material.
- ▶ Used for cutting on vertical and horizontal sizing machines with mechanical and manual feed.



HM saw blades LL CUT VH line

for batch cutting of veneer and for strips and frames in single arrangement and V-type double blades arrangement

- ▶ SUPER HARD carbide tip (NANOGRAIN) with hardness of 2.250 HV, large volume (3.5 mm) and very smooth surface ensures longer tool life time
- ▶ dynamically balanced disc eliminates vibrations during cutting - stable cutting process and better quality of surfaces cut
- ▶ precisely executed body with new silencing slots reduces noise and ensures long and stable tool operation
- ▶ in furniture industry intended for cutting of natural veneers, veneers, strips and frames made of wood and wood based materials

Index						Geo- metry		PRICELIST
	mm	mm	mm	mm	mm		ilxd _g /d _p	eur/pc.
saw blades for veneer cutting								
◦ PS322-0250-0001	250	30	3,2	2,2	80	3GS-5	2x7/42+2x8,5/46+2x10/60	56,25
◦ PS322-0300-0003	300	30	3,2	2,2	96	3GS-5	2x7/42+2x8,5/46+2x10/60	61,25
saw blades (right / left) intended for cutting of strips and frames in V arrangement								
◦ PS392-0300-0009	300	30	3,6	3,0	96	GT15	-	
◦ PS392-0300-0010	300	30	3,6	3,0	96	GW15	-	

d_g - driving holes diameter
d_p - pitch diameter of holes
o - per order

* see the website for more products

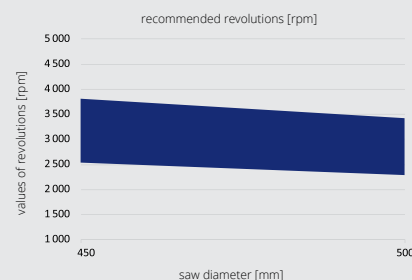




Tools in ACTION

**EXPERT'S ADVICE:**

- ▶ Cross-cutting of wood during removal of defects material (e.g. knots) using impact method on optimizing cross cut saws with large feed.
- ▶ During defect marking a special attention should be paid to ensure that defect area on both sides of the processed material does not exceed contour of marking.
- ▶ Sintered carbide tips sharpening process implemented on numerically controlled sharpeners ensures great potential for shaping of tooth geometry and high smoothness of sharpened surfaces.
- ▶ If you need saw blade with other technical parameters please make an inquiry. Special tools are executed basing on template, drawing of operation and maintenance manual of the machinery used.



HM saw blade LL CUT line

for defects removing from wood on optimizing crosscut saw

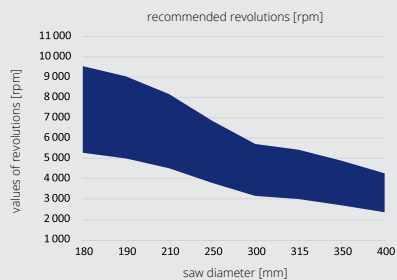
- ▶ SUPER HARD carbide tip (ULTRAFINE) with hardness of 2.100 HV and very smooth surface ensures longer tool life time
- ▶ special shape of HM tip 3GS and 3GE (alternate top bevel) allows maintaining very good quality of surfaces of processed materials
- ▶ laser-cut disc made of high-quality heat-treated steel ensures high rigidity and stability of tool during cutting process
- ▶ during furniture production used for cutting of glued components, wooden structural components, frames, trusses, table tops etc.

Index						Geo- metry		PRICELIST
	mm	mm	mm	mm			ilxd/d _p	eur/pc.
o PS320-0450-0007	450	30	4,8	3,5	136	3GS10	2x15/63	132,30
o PS320-0500-0008	500	30	4,8	3,5	144	3GS5	2x14,5/63	153,90
o PS390-0450-0008	450	30	4,8	3,5	136	3GE10	2x15/63	132,30
o PS390-0500-0003	500	30	4,8	3,5	144	3GE5	2x14,5/63	153,90

d₁ - driving holes diameter
d₂ - pitch diameter of holes
o - per order

*see the website for more products



**EXPERT'S ADVICE:**

- ▶ Saw blade with greater number of teeth within given diameter and appropriately selected tooth geometry and shape of HM tip GS10° (alternate top bevel) allow obtaining better side surface (edge) after cutting the material.
- ▶ Sharpening of sintered carbides (HM tips) should be carried out on blunting in the range from 0.10 to 0.20 m, measured on the edge between contact surface and tooth rake.
- ▶ Due to the use of SUPER HARD carbide tips (HM) the saw blades should be sharpened in special sharpening points where machines are equipped with continuous cooling systems - wet sharpening.



HM saw blade LL CUT line GS10

for cutting of hard, exotic wood and wood based materials

- ▶ SUPER HARD carbide tip (ULTRAFINE) with hardness of 2.100 HV and very smooth surface ensures longer tool life time
- ▶ very high smoothness (low roughness coefficient Ra 0.16) of hard sintered carbides equals more running metres of board cut and cutting process is more accurate
- ▶ dynamically balanced disc eliminates vibrations during cutting - stable cutting process and better quality of surfaces cut
- ▶ in furniture production used for cutting of hard deciduous wood, including exotic wood, plywood and other wood based materials

Index						Geo- metry		PRICELIST
	mm	mm	mm	mm			lx d ₁ /d ₂	eur/pc.
o PS320-0180-0003	180	30	2,4	1,6	56	GS10	-	44,00
PS320-0190-0001	190	30	2,5	1,6	56	GS10	-	44,65
PS320-0210-0007	210	30	2,5	1,6	60	GS10	-	47,55
o PS320-0250-0022	250	30	3,2	2,0	54	GS10	2x7/42+2x8,5/46+2x10/60	49,65
PS320-0300-0003	300	30	3,2	2,2	48	GS10	2x7/42+2x8,5/46+2x10/60	44,95
PS320-0300-0005	300	30	3,2	2,2	72	GS10	2x7/42+2x8,5/46+2x10/60	63,50
PS320-0315-0001	315	30	3,2	2,2	96	GS10	2x7/42+2x8,5/46+2x10/60	70,75
PS320-0350-0004	350	30	3,2	2,2	54	GS10	2x7/42+2x8,5/46+2x10/60	53,00
PS320-0350-0001	350	30	3,2	2,2	84	GS10	2x7/42+2x8,5/46+2x10/60	61,75
PS320-0400-0003	400	30	4,0	2,8	68	GS10	2x7/42+2x8,5/46+2x10/60	69,50
PS320-0400-0002	400	30	3,5	2,5	96	GS10	2x7/42+2x8,5/46+2x10/60	83,75
o PS320-0400-0010	400	30	4,0	2,8	120	GS10	-	110,00

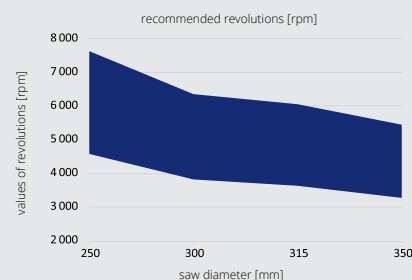
d₁ - driving holes diameter
d₂ - pitch diameter of holes

o - per order

* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Greater number of teeth in a given diameter has impact on obtaining smooth surfaces of the cut material particularly in case of dry wood.
- ▶ Bore should be adapted to spindle of machine tool - too loose bore results in increase of radial run-out and imbalance, too tight bore has adverse influence on disc tension.
- ▶ Sharpening of sintered carbides (HM tips) should be carried out on blunting in the range from 0.10 to 0.20 mm, measured on the edge between contact surface and tooth rake.
- ▶ It is forbidden to change approach and application angles while sharpening, it may result in incorrect operation of the tool.



HM saw blade

for cross cutting of wood on table cut-off machines

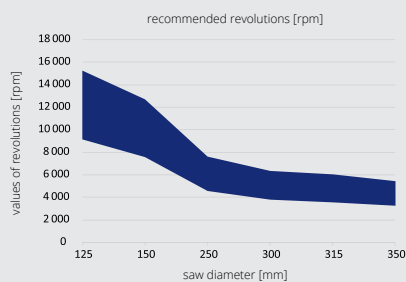
- ▶ Appropriately selected tooth shape and geometry GS 10° (alternate top bevel) enables obtaining optimal quality of cross cutting across the grain
- ▶ Additionally saw blades are equipped with grooves compensating temperature impact on fluctuation of disc tension
- ▶ For straight, angle or bevel cutting of furniture components to specified lengths, with option to cut material of wide range of thicknesses
- ▶ In furniture production plants intended for cutting of components and structures of furniture made of soft and hard wood (e.g. for beds, chairs, tables, chest of drawers)

Index						Geo- metry		PRICELIST
	mm	mm	mm	mm			ilxd/dp	eur/pc.
PS210-0250-0004	250	30	2,7	1,6	42	GS10	2x7/42+2x8,5/46+2x10/60	37,10
PS210-0250-0005	250	30	2,7	1,6	54	GS10	2x7/42+2x8,5/46+2x10/60	45,75
PS210-0250-0010	250	30	2,7	1,6	72	GS10	2x7/42+2x8,5/46+2x10/60	51,65
PS210-0300-0001	300	30	3,2	2,2	48	GS10	2x7/42+2x8,5/46+2x10/60	45,55
PS210-0300-0007	300	30	3,2	2,2	72	GS10	2x7/42+2x8,5/46+2x10/60	62,05
PS210-0300-0002	300	30	3,2	2,2	96	GS10	2x7/42+2x8,5/46+2x10/60	62,75
PS210-0315-0003	315	30	3,4	2,2	52	GS10	2x7/42+2x8,5/46+2x10/60	53,35
PS210-0315-0007	315	30	3,4	2,2	68	GS10	2x7/42+2x8,5/46+2x10/60	63,40
PS210-0315-0006	315	30	3,2	2,0	96	GS10	2x7/42+2x8,5/46+2x10/60	69,30
PS210-0350-0003	350	30	3,6	2,5	60	GS10	2x7/42+2x8,5/46+2x10/60	64,15
PS210-0350-0005	350	30	3,6	2,5	78	GS10	2x7/42+2x8,5/46+2x10/60	74,15
PS210-0350-0004	350	30	3,2	2,0	108	GS10	2x7/42+2x8,5/46+2x10/60	76,95

d₁ - driving holes diameter
d₂ - pitch diameter of holes

* see the website for more products





EXPERT'S ADVICE:

- ▶ Saw blade with diameters range from 125 to 150 mm and teeth geometry GM is dedicated for straight grooving in soft and hard wood and for edge rebating.
- ▶ Saw blade with GS tooth is recommended for cutting of dry wood and/or hard wood.
- ▶ Geometry of HM tip and number of teeth has been selected in a way ensuring optimum quality of materials processing during ripping.
- ▶ Please remember that width of grooving includes not only "kerf" of saw blade (width of tip HM) but also whipping transferred from the machinery (radial run out).



HM saw blade

for ripping of soft and hard wood along the rings

- ▶ hardened and stressed disc ensures high rigidity of disc during machining processes
- ▶ use of high-quality materials and modern technology assures high and repeatable quality of industrial tools
- ▶ disc design includes grooves compensating temperature impact on disc tension fluctuation
- ▶ in furniture industry intended for ripping of components and structures of furniture made of soft and hard wood (e.g. for beds, chairs, tables, chest of drawers etc.)

Index						Geo- metry		PRICELIST
	mm	mm	mm	mm			ixd _h /d _p	eur/pc.
ripping of wood								
PS010-0250-0009	250	30	3,0	2,0	30	GS20	2x7/42+2x8,5/46+2x10/60	33,95
PS010-0250-0002	250	30	3,2	2,0	18	GM20	2x7/42+2x8,5/46+2x10/60	28,35
PS010-0300-0011	300	30	3,2	2,2	30	GS20	2x7/42+2x8,5/46+2x10/60	42,00
PS010-0300-0002	300	30	3,4	2,2	18	GM20	2x7/42+2x8,5/46+2x10/60	32,90
PS010-0315-0013	315	30	3,2	2,5	36	GS20	-	45,95
PS010-0315-0004	315	30	3,4	2,2	28	GM20	2x7/42+2x8,5/46+2x10/60	40,60
PS010-0350-0010	350	30	3,2	2,5	32	GS20	2x7/42+2x8,5/46+2x10/60	46,20
PS010-0350-0002	350	30	3,6	2,5	24	GM20	2x7/42+2x8,5/46+2x10/60	42,00
wood grooving								
PS010-0125-0001	125	30	4,0	2,8	12	GM20	-	23,10
PS010-0125-0004	125	30	5,0	3,5	12	GM20	-	23,50
PS010-0125-0007	125	30	6,0	4,0	12	GM20	-	31,70
PS010-0150-0002	150	30	4,0	2,8	36	GM20	-	39,00

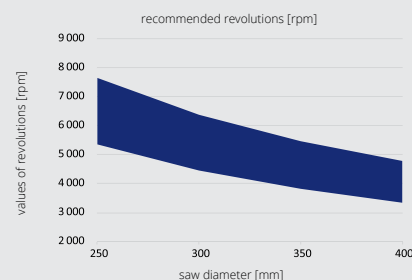
d_h - driving holes diameter
d_p - pitch diameter of holes

o - per order

* see the website for more products

**EXPERT'S ADVICE:**

- ▶ MULTIX PRO are saw blades operating in sets therefore the use of suitable chip removal system during cutting is the condition for correct operation.
- ▶ MULTIX PRO Standard is a type dedicated for processing of soft and hard raw wood as well as for dry wood (saw blades with more teeth - 24z).
- ▶ MULTIX PRO Twin are the most universal saw blades from the MULTIX PRO series, designed to sustain the most difficult working conditions.
- ▶ While sharpening tooth and wiper setting from saw blade discs should be maintained at level 0.2 - 0.3 mm - lower difference may cause overheating of saw blade disc.



HM saw blade MULTIX PRO Standard / Plus / Twin

for ripping of wood on multi-rip saws

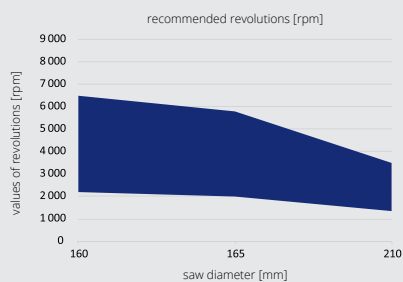
- ▶ the use of new disc stressing technology significantly increases saw blade rigidity during operation with high loads
- ▶ sintered carbide (HM) with improved impact resistance extends saw blade lifetime and its new geometry lowers cutting resistance and allows obtaining better quality of surface
- ▶ each line is designed for optimal selection of saw blades types depending on processing parameters and type of processed material
- ▶ intended for ripping of components and structures of furniture made of soft and hard wood (e.g. for beds, chairs, tables, chest of drawers etc.) in furniture manufacturing companies with multi rip saws

Index						Geo- metry		Type / series	PRICELIST
	mm	mm	mm	mm			il(axh)		eur/pc.
PS112-0250-0001	250	80	3,2	2,0	18+2	GM20	4(20x6)	PRO Standard	49,50
PS122-0300-0004	300	80	3,2	2,2	24+4	2GS20	4(20x6)	PRO Standard	57,00
PS122-0350-0004	350	80	3,6	2,5	24+4	2GS20	4(20x6)	PRO Standard	62,55
PS113-0250-0001	250	70	3,2	2,0	12+2	GM20	4(20x6)	PRO Plus	47,00
PS123-0300-0001	300	70	3,6	2,2	18+4	GM20	4(20x6)	PRO Plus	53,50
PS123-0350-0004	350	80	3,8	2,5	18+4	GM20	4(20x6)	PRO Plus	61,45
PS123-0400-0004	400	70	4,4	3,0	18+4	GM20	4(20x6)	PRO Plus	76,15
PS124-0300-0002	300	70	3,6	2,2	18+4	2GS20	4(20x6)	PRO Twin	56,00
PS124-0300-0003	300	80	3,6	2,2	18+4	2GS20	4(20x6)	PRO Twin	56,00
PS124-0350-0001	350	70	3,8	2,5	18+4	2GS20	4(20x6)	PRO Twin	63,75
PS124-0350-0002	350	80	3,8	2,5	18+4	2GS20	4(20x6)	PRO Twin	63,75
PS124-0400-0003	400	80	4,4	3,0	18+4	2GS20	4(20x6)	PRO Twin	77,50

a- groove width
h- groove height

* see the website for more products



**EXPERT'S ADVICE:**

- ▶ ZAG1 Chipboard type is dedicated for processing of wood based materials such as: chipboard, laminate, MDF, HDF, LDF, OSB, etc.
- ▶ ZAG2 Wood type is dedicated for processing of wood, including exotic wood based materials with natural veneer and plywood.
- ▶ ZAG3 Special GA-5 ensures precise processing of composite materials (corian, kerroc, staron) and wood-based stripes and AL profiles (up to 1.5 mm).
- ▶ Not only type of processed material should be taken into account before selecting the saw blades but also its dimensions, that is: thickness, cross-section or wall thickness (in case of cutting of profiled slats).



HM saw blade ZAG line

for plunge saws

- ▶ SUPER HARD carbide tip (ULTRAFINE) with hardness of 2.100 HV and very smooth surface ensures longer tool life time
- ▶ wide range of dimensions adapted for the most of plunge saws and possibility to use saw blades in stationary machines and hand saws
- ▶ precise cutting and execution of grooves in various types of wood based materials and in hard wood
- ▶ in furniture industry intended for cutting and execution of cut outs in worktops, installation of commercial cabinets and implementation of wide range of installation and assembly works, e.g. at the customer's site

Index						Geometry	Series	PRICELIST
	mm	mm	mm	mm				eur/pc.
PS662-0160-0001	160	20	2,2	1,6	56	GA5	ZAG1	41,50
PS662-0160-0002	160	20	2,2	1,6	48	GA8	ZAG1	37,70
PS662-0160-0003	160	30	2,2	1,6	60	GA5	ZAG1	43,30
PS662-0165-0001	165	20	1,8	1,4	48	GA8	ZAG1	39,65
PS662-0210-0001	210	30	2,2	1,6	52	GA5	ZAG1	41,00
PS664-0160-0001	160	20	2,2	1,6	48	GS8	ZAG2	37,70
PS664-0160-0002	160	20	2,2	1,6	56	GS5	ZAG2	41,50
PS664-0165-0001	165	20	1,8	1,4	48	GS8	ZAG2	39,65
PS664-0210-0001	210	30	2,2	1,6	52	GS5	ZAG2	41,00
PS666-0160-0001	160	20	2,2	1,6	48	GA-5	ZAG3	37,70
PS666-0160-0002	160	20	2,2	1,6	56	GA-5	ZAG3	41,50
PS666-0160-0003	160	30	2,2	1,6	56	GA-5	ZAG3	41,50

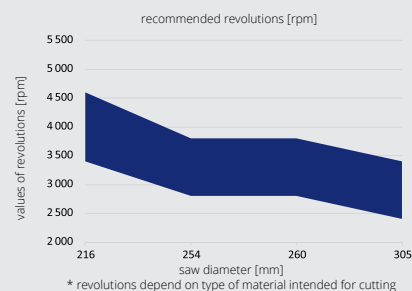
* see the website for more products



Tools in ACTION!

**EXPERT'S ADVICE:**

- ▶ MITER CRS1 for cutting of hard wood based materials like MDF and HDF, PVC and AL profiles (wall thickness up to 2 mm), chipboards covered with hard layers of laminate, conglomerates.
- ▶ MITER CRS2 for soft and hard wood cutting and for cutting of plywood and wood based materials with natural veneer.
- ▶ MITER CRS3 with aggressive tooth geometry (3GS) for fast cutting of soft and hard wood - required cutting quality should be adapted by selecting the feed.
- ▶ Due to the use of VERY HARD sintered carbide saw blades should be sharpened in special sharpening points on machines equipped with continuous cooling systems.



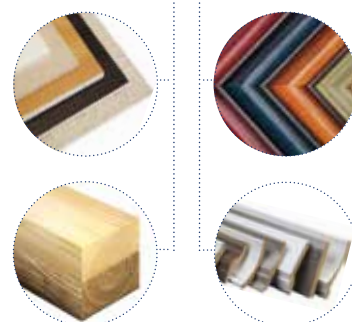
HM saw blade MITER line

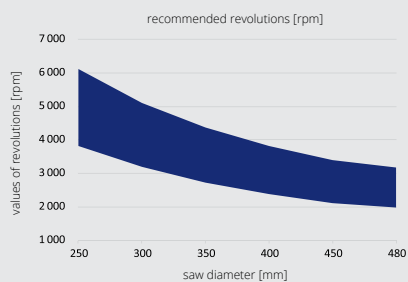
for mitre saws

- ▶ SUPER HARD carbide tip (ULTRAFINE) with hardness of 2.100 HV and very smooth surface ensures longer tool life time
- ▶ produced as industrial saw blades where the deviation from the nominal dimensions does not exceed hundredths of millimetre
- ▶ very smooth and precise cutting process and decreased cutting resistances due to use of thin kerf and disc of the saw blade
- ▶ implementation of wide range of installation and assembly works at customer's site: straight and bevel cutting, cutting of wood and wood based materials, plastics, PVC and AL to the specified dimensions

Index						Geometry	Series	PRICELIST
	mm	mm	mm	mm				eur/pc.
PS601-0216-0001	216	30	2,8	2,0	72	GA-5	CRS1	49,75
PS601-0254-0002	254	30	2,8	2,0	96	GA-5	CRS1	60,30
PS601-0260-0002	260	30	2,7	2,0	96	GA-5	CRS1	56,60
PS601-0305-0001	305	30	2,8	2,0	96	GA-5	CRS1	70,15
PS602-0216-0001	216	30	2,7	2,0	72	GS-5	CRS2	49,75
PS602-0254-0001	254	30	2,7	2,0	80	GS-5	CRS2	58,15
PS602-0260-0001	260	30	2,7	2,0	80	GS-5	CRS2	58,15
PS602-0305-0001	305	30	2,8	2,0	96	GS-5	CRS2	70,15
PS603-0216-0001	216	30	2,7	2,0	72	3GS5	CRS3	49,75
PS603-0254-0001	254	30	2,7	2,0	96	3GS5	CRS3	60,30
PS603-0260-0001	260	30	2,7	2,0	96	3GS5	CRS3	56,60
PS603-0305-0001	305	30	2,7	2,0	96	3GS5	CRS3	70,15

* see the website for more products



**EXPERT'S ADVICE:**

- ▶ As a standard we execute saw blades with GA tooth geometry (triple chip – flat top teeth).
- ▶ If you need to cut other materials we can execute saw blades with different teeth geometry: GS (alternate top bevel teeth), GM (flat top) on order.
- ▶ Saw blade DIA is a highly-efficient industrial tool equipped with synthetic diamond - material based on very hard diamond grains of micron size.
- ▶ Do you want to increase operation efficiency and lower costs of furniture production? DIA tools works from 80 to 100 times longer between the sharpening than HM tools.

**Saw blade DIA**

for highly efficient cutting of wood based materials on industrial lines

- ▶ PCD tip height 4.0 mm or 5.0 mm - 8-12 sharpenings, and for saw blades B=3.2 mm option to use lower PCD tip with 3.5 mm height
- ▶ laser-cut disc made of high-quality heat treated steel ensures high rigidity and stability of tool during cutting process
- ▶ for shaping of wood based plastics (laminated, veneered, raw chipboard, MDF, HDF, LDF, OSB, etc.)
- ▶ in furniture industry usually used for highly-efficient cutting of boards on vertical, horizontal sawing machines and panel sizing machines

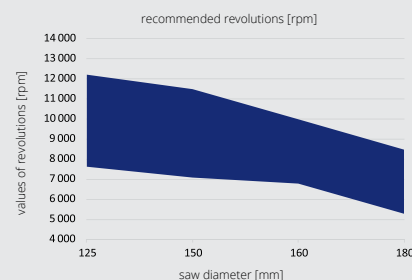
Index						Geometry	PRICELIST
	mm	mm	mm	mm			eur/pc.
DI300-0250-0002	250	30	3,2	3,5	80	GA	
DI300-0300-0002	300	30	3,2	3,5	96	GA	
DI300-0350-0002	350	30	3,5	3,5	108	GA	
DI300-0350-0004	350	30	4,4	4	72	GA	
DI300-0350-0005	350	30	4,4	4	96	GA	
DI300-0400-0002	400	30	4,4	4	72	GA	
DI300-0400-0003	400	30	4,4	4	96	GA	
DI300-0450-0003	450	30	4,4	4	72	GA	
DI300-0450-0004	450	30	4,4	4	96	GA	
DI300-0480-0001	480	30	4,4	4	60	GA	
DI300-0480-0002	480	30	4,8	4	72	GA	

o- per order

* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Scoring saw blade DI310 and DI311 is adapted for operation on horizontal and panel sizing machines with option to adjust size of cutting spindle.
- ▶ Scoring saw blade DI315 cooperates with the main saw blade on horizontal sizing machines with adjustment option by spacers.
- ▶ Saw blades DIA are highly-efficient industrial tools equipped with synthetic diamond - material based on very hard diamond grains of micron size.
- ▶ Do you want to increase operation efficiency and lower costs of furniture production? DIA tools works from 80 to 100 times longer between the sharpening than HM tools.



Conical and segmental scoring saw blades DIA

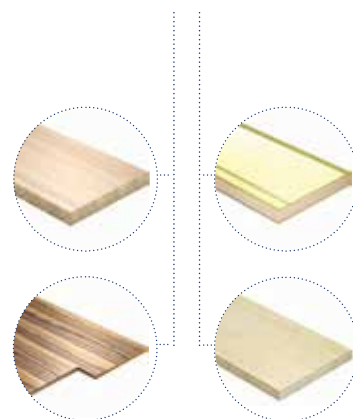
for highly efficient pre-cutting of veneered, laminated, lacquered materials, etc.

- ▶ basic PCD tip height 4.0 mm - 8-10 sharpenings, option to order scoring saw blade with higher PCD diamond = 6 mm
- ▶ option to execute scoring saw blades on an individual order with external diameters 80 mm and 100 mm
- ▶ for pre-cutting of top layers of the laminate, veneer in wood based plastics (laminated chipboard, raw, MDF, HDF, LDF etc.)
- ▶ in furniture industry used usually for processing on panel saw blades and sizing machines

Index						Geometry	PRICELIST
	mm	mm	mm	mm			eur/pc.
segmental scoring saw blades							
DI315-0125-0003	125	20	2,8÷3,6	4	2x12	GS	247,50
DI315-0125-0004	125	22	2,8÷3,6	4	2x12	GS	247,50
trapezoidal / segmental scoring saw blades							
o DI311-0125-0004	125	20	3,1÷4,0	4	24	GR	
o DI311-0125-0005	125	22	3,1÷4,0	4	24	GR	
o DI310-0125-0001	125	20	3,2÷4,1	4	24	GR	270,00
o DI310-0125-0002	125	22	3,2÷4,1	4	24	GR	
o DI310-0150-0001	150	30	3,2÷4,1	4	24	GR	
o DI310-0150-0002	150	30	3,2÷4,1	4	36	GR	
o DI310-0160-0001	160	30	4,4÷5,6	4	36	GR	
o DI310-0180-0001	180	30	4,4÷5,6	4	36	GR	

o- per order

* see the website for more products

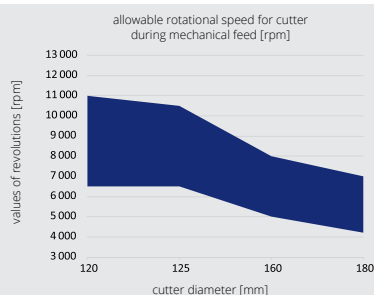






MILLING IN FURNITURE PRODUCTION

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**EXPERT'S ADVICE:**

- ▶ CL010 - milling of grooves and rebates with rectangular section and narrow planes.
- ▶ CL020 - use of cutters where it is necessary to achieve high quality of processing of side surfaces and socket edges.
- ▶ CL050 - very universal tool - one tool can be used for milling of various widths of the material.
- ▶ Option to execute cutters on individual order, based on sketch/drawing, template of processed component or delivered profile.



Straight grooving cutter, with spurs or adjustable with soldered HM knives

- ▶ cutter with soldered knife made of high-quality sintered carbide with long lifetime.
- ▶ used on bottom-spindle milling machines, single- and double-sided sizing and tenoning machines and multi-head planers with mechanical feed
- ▶ wide series of types (diameter / width of carbide) allows selecting correct tool for the given processing and type of machine
- ▶ in furniture production plants used for milling of hardwood and wood based materials (chipboard, laminated, raw, MDF, HDF, LDF, etc.)

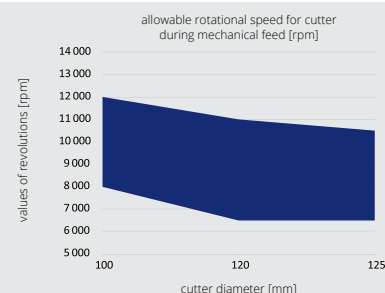


Index						PRICELIST
	mm	mm	mm			eur/pc.
CL020-0120-0002	120	30	6	2	2	52,15
CL020-0120-0004	120	30	10	2	2	58,20
CL010-0125-0001	125	30	3	6	-	33,05
CL010-0125-0002	125	30	4	6	-	33,75
CL010-0125-0003	125	30	6	6	-	35,15
CL010-0125-0004	125	30	8	6	-	41,45
CL010-0125-0005	125	30	10	6	-	45,00
CL010-0125-0006	125	30	12	6	-	48,80
CL010-0125-0007	125	30	20	6	-	58,80
CL050-0160-0001	160	30	7,5-28	4+4	2+2	211,00
CL050-0180-0001	180	30	9,5-36	4+4	2+2	244,00
CL020-0180-0003	180	30	10	2	2	69,00

* see the website for more products

**EXPERT'S ADVICE:**

- ▶ CL100 (concave) and CL110 (convex) cutters dedicated for rounding of edges, milling of decorative profile in hardwood and wood based materials.
- ▶ Do you need to repair the tool? We offer wide range of after-sales services including sharpening, processing of holes and repairs of cutters.
- ▶ We can execute cutters on an individual order with diameters from 100 to 250 mm depending on rounding radius - based on sketch/drawing, template of processed component or delivered profile.



Convex and concave half-round cutter

with soldered HM knives

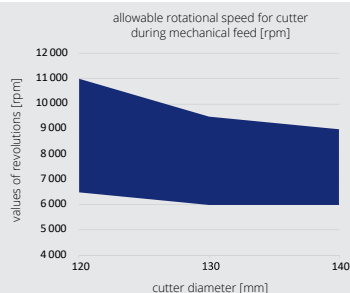
- ▶ cutter with soldered knife made of high-quality sintered carbide with long lifetime.
- ▶ wide series of types (diameter / width of carbide) allows selecting correct tool for the given processing and type of machine
- ▶ used on bottom-spindle milling machines, single- and double-sided sizing and tenoning machines and multi-head planers with mechanical feed
- ▶ in furniture production process (furniture fronts in particular) dedicated for milling, bevelling and rounding of hardwood and wood based materials



Index						PRICELIST
	mm	mm	mm			eur/pc.
CL100-0100-0001	100	30	20	4	5	92,10
CL100-0120-0001	120	30	26	4	8	103,40
CL100-0120-0002	120	30	30	4	10	110,40
CL100-0120-0003	120	30	35	4	12,5	122,45
CL100-0120-0103	120	40	35	4	12,5	122,45
CL100-0120-0004	120	30	40	4	15	138,55
CL110-0125-0001	125	30	8	4	4	60,05
CL110-0125-0002	125	30	10	4	5	64,60
CL110-0125-0003	125	30	12	4	6	69,95
CL110-0125-0004	125	30	14	4	7	79,15
CL110-0125-0005	125	30	16	4	8	93,15
CL110-0125-0006	125	30	18	4	9	93,45

* see the website for more products





EXPERT'S ADVICE:

- ▶ CL090 cutter dedicated for rounding of edges and milling of decorative profile in hardwood and wood based materials.
- ▶ Angle cutter CL120 is intended for milling of narrow plane at angle of 45°, as well as for bevelling of edges in hardwood or wood based materials.
- ▶ Do you need to repair the tool? We offer wide range of after-sales services including sharpening, processing of holes and repairs of cutters.
- ▶ On order we are able to execute atypical cutters - based on drawing of the cutter of milled component and according to profile supplied by the customer.



Profile, quarter round, concave and bevelling cutters with soldered HM knives

- ▶ cutter with soldered knife made of high-quality sintered carbide with long lifetime
- ▶ used on bottom-spindle milling machines, single- and double-sided sizing and tenoning machines and multi-head planers with mechanical feed
- ▶ wide series of types (diameter / width of carbide) allows selecting correct tool for the given processing and type of machine
- ▶ in furniture production plants used for milling of hardwood and wood based materials; in particular, for decorative board with milled side edges



Index							PRICELIST
	mm	mm	mm				eur/pc.
CL090-0120-0001	120	30	10	4	R	5	75,75
CL090-0120-0002	120	30	10	4	L	5	75,75
CL090-0120-0003	120	30	13	4	R	8	84,95
CL090-0120-0004	120	30	13	4	L	8	84,95
CL090-0120-0009	120	30	15	4	R	10	85,25
CL090-0120-0010	120	30	15	4	L	10	87,00
CL120-0120-0001	120	30	15	4	R	-	66,20
CL120-0120-0002	120	30	15	4	L	-	66,20
CL120-0130-0001	130	30	20	4	R	-	77,45
CL120-0130-0002	130	30	20	4	L	-	77,45
CL120-0140-0001	140	30	25	4	R	-	97,00
CL120-0140-0002	140	30	25	4	L	-	97,00

* see the website for more products

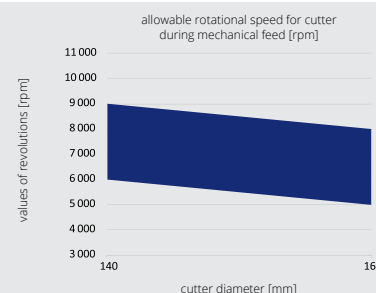


**mebel
marzen 2016**

IDEA: truth / courage / curiosity
HONORABLE MENTION
IN THE COMPETITION
PROJECT: Aleksandra Gajzler

EXPERT'S ADVICE:

- ▶ Longitudinal connection is used in order to obtain the highest-quality product after knots and defects removing and to manage wastes, executed connection is characterized by very high resistance and stiffness.
- ▶ CL230 is a cutter adapted for operation in sets - from a few to a few dozen simultaneously – dependent on width of processed material.
- ▶ One tool can be used for cutting of various widths of the material - by adding distance pieces between the cutters.
- ▶ Option to execute flange reducer sleeve for specified number of cutters.



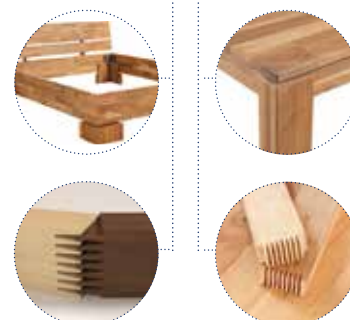
Sets of finger joint cutters and adjustable glue joint cutters

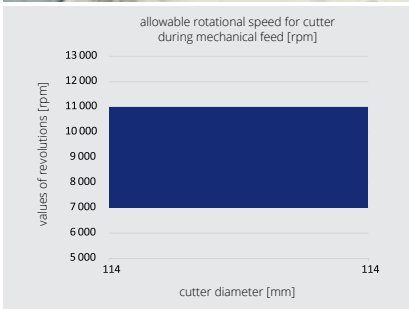
with soldered HM knives

- ▶ cutter with soldered knife made of high-quality sintered carbide with long lifetime.
- ▶ execution of multi-link on faces of joined components with a line contact - with a V-pattern contact on a wide plane
- ▶ processing of solid hardwood, including exotic wood and wood based materials
- ▶ used usually during production of wood furniture (legs, tops) and components of wooden structures (columns, stairs, railings)

Index						PRICELIST
	mm	mm	mm			eur/pc.
CL230-0160-0001	160	70	4	2	-	35,10
CL230-0160-0002	160	70	4	4	-	42,15
CL230-0160-0003	160	70	3,8	4	-	40,30
CL240-0140-0001	140	40	20-70	3	2-9	315,75
CL240-0140-0002	140	40	35-100	3	5-15	447,65

* see the website for more products





EXPERT'S ADVICE:

- ▶ One tool can be used for cutting of various widths of the material - by adding distance pieces between the cutters.
- ▶ Used for wide scope of works during production of furniture fronts, doors and frames.
- ▶ We can execute cutters on an individual order with diameters from 120 to 200 mm - based on sketch/drawing, template of processed component or delivered profile.
- ▶ We offer also a wide range of after-sales services: including sharpening, processing of holes and repairs of cutters.



Stile and rail furniture door shaper cutter sets with soldered HM knives

- ▶ cutter with soldered knife made of high-quality sintered carbide with long lifetime
- ▶ additional straight cutters with various width (B) of sintered carbide allow milling groove for a glass panel, plywood or various thickness of panels
- ▶ used in bottom-spindle milling machines with mechanical feed
- ▶ milling of inner longitudinal and lateral profile of furniture door stiles and rails made of hardwood and wood based materials

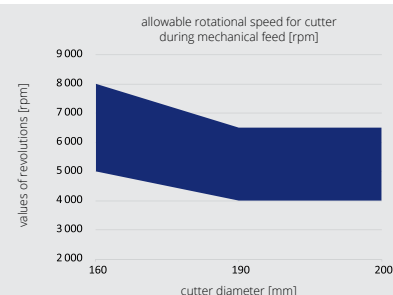
Index					PRICELIST
	mm	mm	mm		eur/pc.
CL290-0114-0001	114	40	22-27	4	447,65
CL290-0114-0002	114	40	22-27	4	447,65
CL290-0114-0003	114	40	22-27	4	447,65
CL291-0114-0001	114	40	22-27	4	412,95
CL291-0114-0002	114	40	22-27	4	412,95

* see the website for more products



**EXPERT'S ADVICE:**

- ▶ Do you need cutters with different parameters? We can execute cutters with diameters from 125 to 280 mm with various depth of panel profile.
- ▶ For this group we execute cutters on individual order, based on sketch/drawing or template of processed component.
- ▶ Cutter dedicated for processing of solid hardwood, including exotic wood and wood based materials (MDF, HDF, chipboard).
- ▶ Due to deep profile of cutter CL280 its profile is divided into 2 parts and arranged on 4 tooth.



Panel raising cutter

with soldered HM knives

- ▶ cutter with soldered knives made of high-quality sintered carbide - wide series of types (diameter/shape of panel raising) allows selecting correct tool for the given processing and type of machine
- ▶ design of cutter CL280 allows achieving better quality of processed surface and lowers cutting resistance
- ▶ used as a standard in bottom-spindle milling machines with mechanical feed
- ▶ during furniture production process for profile milling of door panels and furniture door panels (stylish furniture, doors, renovation of antiques)



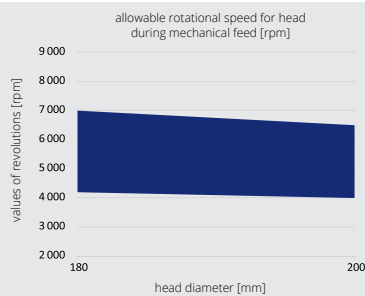
Index						PRICELIST
	mm	mm	mm			eur/pc.
CL270-0160-0001	160	40	15	4	R	109,30
CL270-0160-0002	160	40	15	4	R	109,30
CL270-0160-0003	160	40	15	4	L	109,30
CL270-0160-0004	160	40	15	4	L	109,30
CL270-0190-0003	190	40	12	4	R	174,70
CL270-0190-0004	190	40	12	4	L	176,35
CL270-0190-0005	190	40	12	4	R	181,20
CL270-0190-0001	190	40	18	4	R	155,45
CL270-0190-0002	190	40	18	4	R	155,45
CL270-0190-0007	190	40	18	4	L	155,45
CL280-0200-0001	200	40	25	2+2	R	190,85
CL281-0200-0001	200	40	25	2+2	L	190,85

* see the website for more products





Tools in ACTION

**EXPERT'S ADVICE:**

- ▶ Various profiles of HM knives allows quick disassembling and assembling and therefore maintaining continuity of production.
- ▶ Cutter head LJ100 may operate only with two knives: for softwood or for hardwood. The cutter head is characterized by two-sided HM knife allowing quick replacing of blunt tip by rotating it by 180 degrees.
- ▶ We offer wide range of HM insert knives for cutter heads, which are available on our website in subgroup LJ600 (for LJ100) and LJ610 (for LJ110 cutter head): universal HM knives for hardwood or wood based materials and boards.

Panel raising cutter head

with insert HM knives



- ▶ cutter head made of light aluminium alloy
- ▶ used in bottom-spindle milling machines with mechanical feed
- ▶ Cutter head LJ100 is equipped with a set of insert knives HM for hardwood and softwood - profile NR1, while LJ110 cutter head is equipped with a set of HM insert knives for hardwood -profile NR 2
- ▶ profile milling of door panels and furniture door panels (stylish furniture, doors, renovation of antiques) and processing of hardwood and softwood, depending on HM knife used

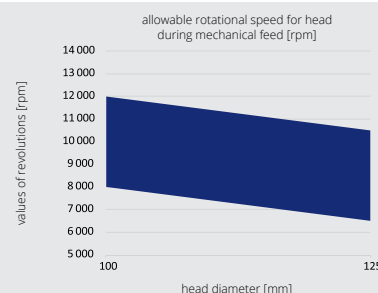
Index						PRICELIST
	mm	mm	mm			eur/pc.
LJ100-0200-0001	200	35	25	2+2	R	499,65
LJ100-0200-0002	200	35	25	2+2	L	499,65
LJ110-0180-0001	180	30	20	2	R	369,85
LJ110-0180-0002	180	30	20	2	L	369,85

*see the website for more products



**EXPERT'S ADVICE:**

- ▶ Cutter head LJ051 is used for applications where it is necessary to achieve high quality of processing of side surfaces and socket edges.
- ▶ LJ070 cutter head may be connected into sets what allows processing materials with higher thickness and height.
- ▶ Replaceable knives HM for processing of wood based materials (LJ555-1414-0003, LJ555-3012-0003, LJ555-4012-0003, LJ555-5012-0003), hard wood (LJ555-1414-0002, LJ555-3012-0002, LJ555-4012-0002, LJ555-5012-0002), universal knives (LJ555-1414-0001, LJ555-3012-0001, LJ555-4012-0001, LJ555-5012-0001, LJ555-5012-0006, LJ555-5012-0007).
- ▶ Cutter head LJ051 – knives are located with respect to the tool axis, it allows obtaining very good quality of surface, better removal of chip and it have impact on smoother operation of the tool.



Rebating cutter head with spurs

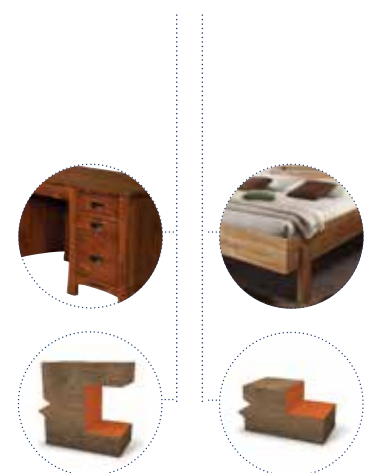
with insert HM knives

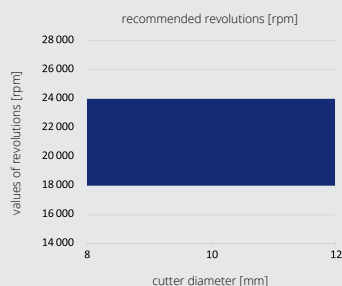
- ▶ light body made of aluminium alloy – the weight of the cutter head is about half the weight of the standard steel cutter head
- ▶ lighter cutter head improves lifetime of driving system, such important machinery components as shafts and bearings and therefore it lowers power consumption from the motor
- ▶ possibility to process specified materials by selection of type of knives made of sintered carbide (for wood, universal, wood based materials)
- ▶ during furniture production process for milling of rectangular keys and rebates, planing of flat and curved surfaces (e.g. tops, table legs, counters, side edges of wooden components)



Index						PRICELIST
	mm	mm	mm			eur/pc.
LJ050-0100-0001	100	30	40	2	2+2	103,40
LJ050-0125-0001	125	30	50	4	2+2	127,60
LJ051-0100-0001	100	30	50	4	2+2	133,05
LJ051-0125-0001	125	30	50	4	2+2	142,85
LJ060-0100-0001	100	30	50	4	-	92,35
LJ060-0100-0101	100	40	50	4	-	92,35
LJ070-0125-0001	125	40	30	4	-	97,50
LJ070-0125-0002	125	35	40	4	-	111,00

* see the website for more products



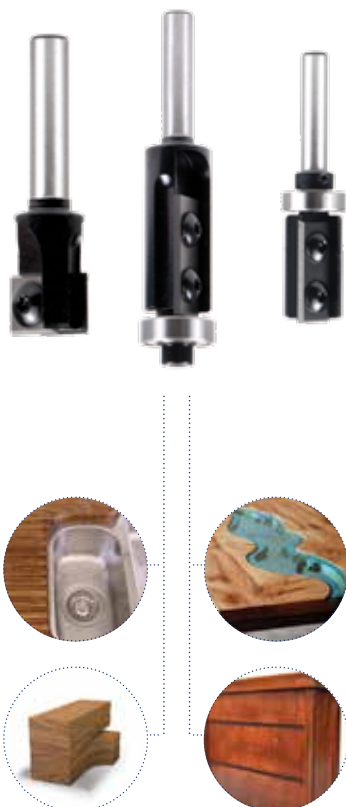
**EXPERT'S ADVICE:**

- ▶ HM knife with 2 or 4 tips allows using 2 or 4 cutting edges by rotating knife by 90 or 180 degrees - depending on type of cutter.
- ▶ No standstills during milling connected with necessity to sharpen blunt tip due to quick and simple replacement of HM knife.
- ▶ Hobbing and option to drill in material.
- ▶ If you need HM insert knives for processing of hardwood (LJ555-1212-0002, LJ555-3012-0002, LJ555-4012-0002, LJ555-5012-0002) or universal knives (LJ555-1212-0001, LJ555-3012-0001, LJ555-4012-0001, LJ555-5012-0001) you can order them!

Straight router bits

with insert HM knives

- ▶ quick and easy replacement of knife HM to maintain continuity of the production
- ▶ bearing cutter version allows leading tool on a template located over or below milled materials, depending on design and model of the cutter
- ▶ used in upper-spindle milling machines and CNC processing centres (cutter from subgroup FT401), as an additional equipment of the machinery
- ▶ in furniture industry used for processing of hardwood and wood based materials (cutting of shapes and templates, drilling of openings, curved shaping)



Index	Type				PRICELIST
		mm	mm	mm	eur/pc.
FT401-0008-0001	straight	16	8	12	36,00
FT401-0008-0002	straight	16	8	30	45,25
FT404-0008-0001	with bottom bearing*	19	8	30	46,15
FT404-0008-0002	with bottom bearing*	19	8	40	49,75
FT404-0012-0001	with bottom bearing*	19	12	50	53,90
FT405-0008-0001	with bottom bearing*	19	8	30	48,55
FT405-0008-0002	with bottom bearing*	19	8	40	52,15
FT405-0012-0001	with bottom bearing*	21	12	50	56,35

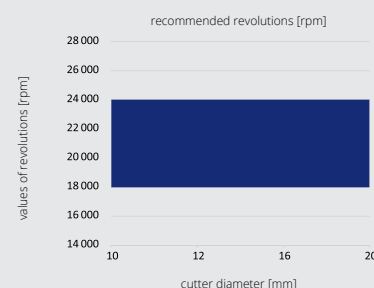
* straight with bottom bearing

Index				Number of knives	Application	PRICELIST
	mm	mm	mm			eur/pc.
LJ555-1212-0003	12	12	1,5	Z4	for wood based materials and boards	1,95
LJ555-3012-0003	30	12	1,5	Z2	for wood based materials and boards	2,50
LJ555-4012-0003	40	12	1,5	Z2	for wood based materials and boards	3,60
LJ555-5012-0003	50	12	1,5	Z2	for wood based materials and boards	3,70

* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Solid-carbide router bits are recommended for operation within the range of turnover from 18000 to 24000 depending on type of processed material.
- ▶ Feed values used should be within the range from 2 to 12 m/min. depending on diameter of the tool, number of tips, type and thickness of processed material.
- ▶ Straight and curved finishing milling of narrow, drilling of openings in wood and wood based materials.
- ▶ Option to execute cutters of sintered carbide with improved strength and impact resistance, covering of working part of the cutter with refining coatings.



Finishing router bits, roughing and for nesting solid carbide

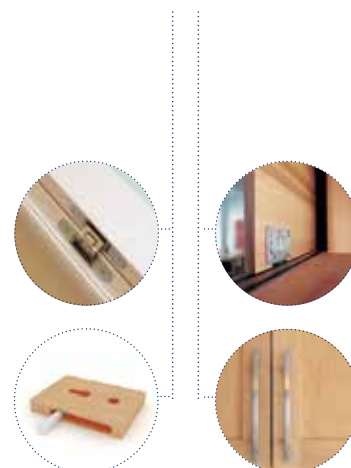
- ▶ solid carbide cutters are tools in which body and working part is made of high-quality sintered carbide
- ▶ special geometry of tip and spiral arrangement allows easy chip removal and obtaining smooth surface of processed material
- ▶ used in highly-efficient CNC processing centres with mechanical feed and on upper-spindle milling machines
- ▶ in furniture industry dedicated for processing of wood, plywood, MDF, chip-board for hinges, locks and door handles (cupboards, furniture doors etc.)

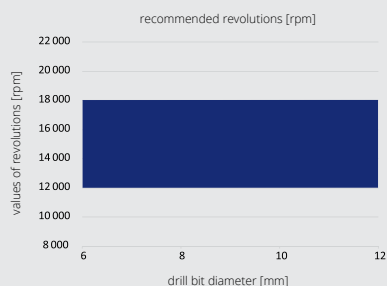


Index							PRICELIST
	mm	mm	mm	mm			eur/pc.
LS010-0010-0001	10	42	90	10	3 positive	R	41,80
LS010-0012-0001	12	42	90	12	3 positive	R	52,55
LS010-0016-0001	16	55	110	16	3 positive	R	101,50
LS010-0020-0001	20	60	120	20	3 positive	R	145,35
LS040-0010-0001	10	42	90	10	3 roughing*	R	50,50
LS040-0012-0001	12	42	90	12	3 roughing*	R	62,75
LS040-0016-0002	16	35	90	16	3 roughing*	R	86,20
LS040-0016-0001	16	55	110	16	3 roughing*	R	110,70
LS060-0016-0001	16	95	140	16	3 roughing*	R	117,30
LS060-0016-0002	16	100	170	16	3 roughing*	R	126,75

* 3 roughing positive

* see the website for more products





EXPERT'S ADVICE:

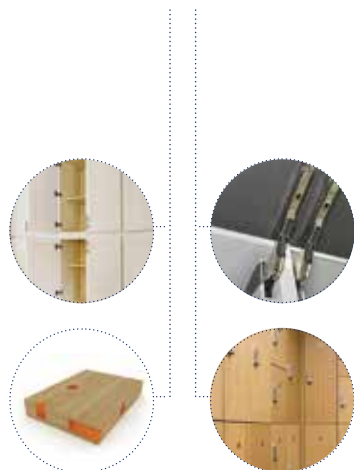
- ▶ Drill bits with knife HM are tools where cap made of sintered carbide (HM) may be serviced - HM knife may be sharpened on special grinders without change of the tools diameter.
- ▶ Design and production technology used for drill bits ensures improved tool life time even by 20%.
- ▶ If you need a drill bit with special design of spiral and atypical parameters please make an inquiry, send drawing and describe intended use of the drill bit.



Drill bit with HM knife

for processing centres and multi-spindle drills

- ▶ tip of the drill bit is made of sintered carbide, while body is made of special tool steel, which is characterized by strength and resistance to cracking
- ▶ cylindrical shank with flattening for easier assembling and disassembling in the holder
- ▶ intended for processing on processing centres and multi-spindle drilling machines - openings for hinges, door handles, shelves etc.
- ▶ drilling of through and blind holes in furniture made of wood and wood based materials (e.g. production of recessed wardrobe, doors, components and structures of the furniture etc.)

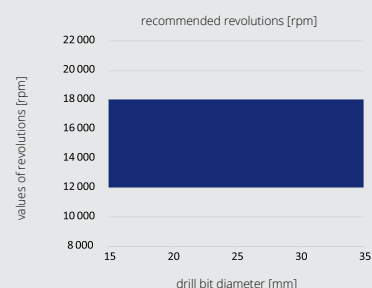


Index						PRICELIST
	mm	mm	mm	mm		eur/pc.
LS501-0810-0002	8	10	20	70	R	8,20
LS501-1010-0002	10	10	20	70	R	8,95
LS501-1210-0002	12	10	20	70	R	13,25
LS502-0810-0002	8	10	20	70	L	8,20
LS502-1010-0002	10	10	20	70	L	8,95
LS502-1210-0002	12	10	20	70	L	13,25
LS503-0810-0002	8	10	20	70	R	8,55
LS503-1010-0001	10	10	20	70	R	10,95
LS503-1210-0001	12	10	20	70	R	12,30
LS504-0810-0002	8	10	20	70	L	8,55
LS504-1010-0001	10	10	20	70	L	10,95
LS504-1210-0001	12	10	20	70	L	12,30

* see the website for more products

**EXPERT'S ADVICE:**

- Option to execute various types of drill bits (working length) and diameters (working or fixture).
- It is excellent during processing of various types of wood and wood based materials.
- Option to produce drill bits with various total lengths: 90, 105, 110 and 120 mm.
- Precise and pointwise drilling of opening diameter due to leading/centring tip design used.



HM cylinder boring bit

for processing centres and multi-spindle drills

- cylindrical shank with flattening for easier assembling and disassembling in the holder
- intended for processing (drilling) on processing centres and multi-spindle drilling machines
- tip of the drill bit is made of sintered carbide, while body is made of special tool steel, which is characterized by strength and resistance to cracking
- drilling of blind holes for concealed hinges in doors made of wood and wood based materials and furniture doors or cupboards

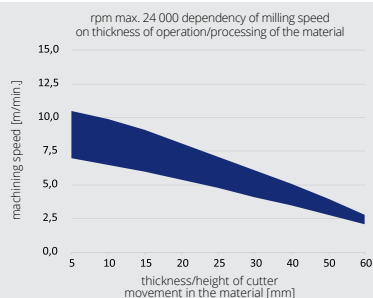


Index						PRICELIST
	mm	mm	mm	mm		eur/pc.
◦ LS550-1510-0003	15	15	57	10	R	10,35
◦ LS550-1510-0004	15	15	70	10	R	10,95
◦ LS550-1510-0005	15	15	57	10	L	10,35
◦ LS550-1510-0006	15	15	70	10	L	10,95
◦ LS550-2010-0001	20	15	57	10	R	11,40
◦ LS550-2010-0002	20	15	70	10	R	11,80
◦ LS550-2010-0006	20	15	57	10	L	11,40
◦ LS550-2010-0003	20	15	70	10	L	11,80
◦ LS550-2510-0001	25	15	57	10	R	11,70
◦ LS550-2510-0002	25	15	70	10	R	12,20
◦ LS550-3010-0006	30	15	70	10	R	14,45
◦ LS550-3510-0002	35	15	70	10	R	16,00

o- per order

* see the website for more products



**EXPERT'S ADVICE:**

- ▶ Shape of blades ensures the best results during processing of uniform and coated materials (permanently bonded).
- ▶ If you need higher PCD tip it is possible to execute cutters in version with PCD tip 4 mm with diameters from 18 to 22 mm.
- ▶ Optimum feed depends on the individual processing conditions on the machine that is on type of processed materials, rotational speed, processing type (circumferential or cutting).
- ▶ Ideal for drilling, formatting and contour milling of various wood based materials.

Router bit DIA UNO TOP 3 eco

for drilling and formatting of hard wood based materials on CNC



- ▶ one solid knife DIA (arranged in triple spiral)
- ▶ PCD tip height 2.7 mm is sufficient for approx. 4-5 sharpenings of the tool
- ▶ cutter DIA is characterized by significantly improved lifetime with respect to solid carbide cutters - even few dozen times in case of correct operation and servicing of the tool
- ▶ in furniture industry used on industrial lines (CNC) for processing of the following materials: chipboards, MDF, HDF, LDF, OSB, hard national and exotic wood (e.g. cutting of furniture template, milling for hinges, curved cutting etc.)

Index						Number of knives	PRICELIST
	mm	mm	mm	mm	mm		eur/pc.
DI010-1012-0001	10	25	75	12	3	1+1	51,75
DI010-1212-0001	12	25	80	12	3	1+1	51,75
DI010-1212-0002	12	35	85	12	4	1+1	69,00
DI010-1212-0003	12	43	85	12	5	1+1	85,90
DI010-1616-0001	16	25	80	16	3	1+1	51,75
DI010-1616-0002	16	35	85	16	4	1+1	69,00
DI010-1616-0003	16	43	90	16	5	1+1	85,90
DI010-1820-0001	18	25	85	20	3	1+1	51,75
DI010-1820-0002	18	35	95	20	4	1+1	85,90
DI010-1820-0003	18	43	100	20	5	1+1	85,90
DI010-2020-0003	20	43	100	20	5	1+1	69,00
DI010-2020-0004	20	52	105	20	6	1+1	116,25

o- per order

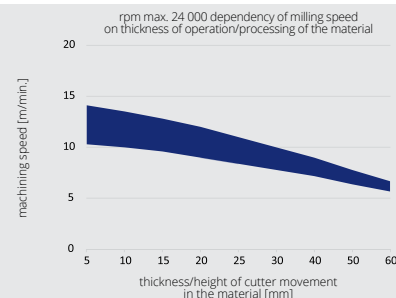
* see the website for more products



Tools in ACTION!

**EXPERT'S ADVICE:**

- ▶ Shape of blades ensures the best results during processing of uniform and coated materials (permanently bonded).
- ▶ Ideal for drilling, formatting and contour milling of various wood based materials.
- ▶ If you need higher PCD tip it is possible to execute cutters in version with PCD tip 4 mm with diameters from 20 to 25 mm with option to execute 8-10 sharpenings.
- ▶ Please remember that optimum feed depends on the individual processing conditions on the machine that is on type of processed materials, rotational speed, processing type (circumferential or cutting).



Router bit DIA DUO TOP 4 eco

for drilling and formatting of hard wood based materials on CNC

- ▶ two solid blades DIA (arranged in four spirals) and PCD tip height 2.7 mm are sufficient for approx. 4-5 sharpenings of the tool
- ▶ skew arrangement (top/bottom) ensures obtaining the best processing surfaces with optimum processing parameters
- ▶ use of double solid tips PCD allows improving efficiency even by 200% with respect to traditional straight cutters and by 150% with respect to UNO TOP 3 eco cutters with single diamond line
- ▶ used on industrial lines (CNC) for processing of the following materials: chipboards, MDF, HDF, LDF, OSB, hard exotic wood (e.g. cutting of furniture template, milling for hinges, curved cutting etc.)

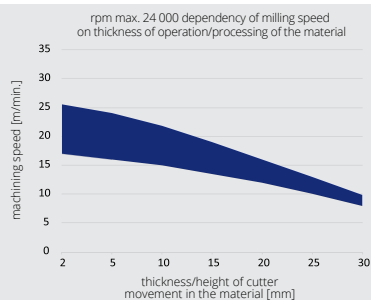


INDEX						Number of knives	PRICELIST
	mm	mm	mm	mm			eur/pc.
DI030-1212-0001	12	25	80	12	6	2+1	103,15
DI030-1212-0002	12	34	85	12	8	2+1	138,00
DI030-1616-0001	16	25	80	16	6	2+1	103,15
DI030-1616-0002	16	34	85	16	8	2+1	138,00
DI030-1620-0001	16	34	100	20	8	2+1	138,00
DI030-1616-0003	16	42	90	16	10	2+1	172,50
DI030-1820-0001	18	25	85	20	6	2+1	103,15
DI030-1820-0002	18	34	95	20	8	2+1	138,00
DI030-1820-0003	18	42	100	20	10	2+1	172,50
DI030-2020-0002	20	34	95	20	8	2+1	138,00
DI030-2020-0003	20	42	100	20	10	2+1	172,50
DI030-2020-0004	20	51	105	20	12	2+1	232,50

0- per order

* see the website for more products





EXPERT'S ADVICE:

- ▶ Special design and arrangement of PCD tips in cutter uses non-uniformity of chipboard allowing great processing quality on both sides of the board at high processing parameters.
- ▶ If you are not sure of quality of the processed material (chipboard, OSB) we execute also cutters for nesting made of solid-carbide materials (LS012 subgroup), characterized by better impact resistance.
- ▶ Cutters are made with small diameters to minimize materials losses during cutting of templates - Ø 12 mm.
- ▶ Special arrangement of knives decreases cutting resistances and improves efficiency - these cutters are adapted for high loads and operation with larger feeds.

Router bit DIA NEST TOP 3 eco

for formatting of hard wood based materials on CNC using nesting technology



- ▶ cutter for nesting is made of HM body and based on materials made of high performance tool steel
- ▶ three solid tips DIA (arranged in three spirals with two cutting lines and additional inter-spirals) – PCD tip height 2.5 mm
- ▶ excellent quality of bottom and upper edge of the board during processing of hard materials like: laminated and non-laminated chipboards, MDF, HDF, OSB, wood based materials etc.
- ▶ in furniture industry used for highly efficient drilling in material and further shaping of chipboards, furniture boards and various grades of wood based materials

Index					Number of knives	PRICELIST
	mm	mm	mm	mm		eur/pc.
o DI035-1212-0001	12	19	80	12	3+3+1	145,15
o DI035-1212-0002	12	24	75	12	3+3+1	177,40
o DI035-1212-0003	12	28	80	12	3+3+1	209,65
o DI035-1212-0004	12	30	85	14	3+3+1	241,90

o- per order

* see the website for more products

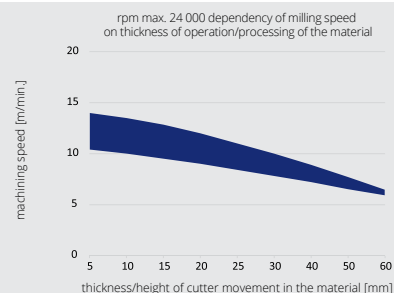




Tools in ACTION!

**EXPERT'S ADVICE:**

- Use of double solid PCD tips allows improving efficiency even by 200% with respect to traditional straight cutters and by 150% with respect to UNO TOP 3 eco cutters with single diamond line.
- It is possible to execute cutters: - in version with higher PKD tip 4mm, with diameters from 20 to 25 mm, with option to execute 8-10 sharpenings; - with top removal of chips; - with 25 mm fixture on HM body, which improves its resistance to breaking and lifetime.
- Please remember that optimum feed depends on the individual processing conditions on the machine that is on type of processed materials, rotational speed, processing type (circumferential or cutting).



Router bit DIA DUO TOP 3 eco

for drilling and formatting of hard wood based materials on CNC

- two solid blades DIA (arranged in four spirals) and PCD tip height 2.7 mm are sufficient for approx. 4-5 sharpenings of the tool
- skew arrangement (top /bottom) ensures obtaining the best processing surfaces with optimum processing parameters
- shape of blades ensures the best results during processing of uniform and coated materials (permanently bonded)
- in furniture industry used for drilling, shaping and contour milling: chipboards, MDF, LDF, OSB, hard exotic wood (e.g. cutting of furniture template, milling for hinges, curved cutting etc.)

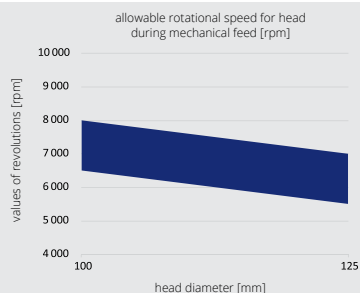


Index						Number of knives	PRICELIST
	mm	mm	mm	mm			eur/pc.
DI050-1212-0001	12	27	78	12	5+1	2+1	78,75
DI050-1212-0002	12	34	95	12	7+1	2+1	109,50
o DI050-1620-0001	16	26	80	20	7+1	2+1	141,00
DI050-1616-0001	16	26	80	16	7+1	2+1	109,50
DI050-1616-0002	16	43	105	16	12+1	2+1	188,25
DI050-1616-0003	16	34	95	16	9+1	2+1	141,00
o DI050-1620-0002	16	34	95	20	9+1	2+1	141,00
o DI050-1820-0001	18	26	80	20	7+1	2+1	109,50
o DI050-1820-0002	18	34	95	20	9+1	2+1	141,00
o DI050-1820-0003	18	45	105	20	12+1	2+1	188,25
o DI050-2020-0001	20	26	95	20	7+1	2+1	109,50
o DI050-2020-0002	20	34	100	20	9+1	2+1	141,00

o- per order

* see the website for more products



**EXPERT'S ADVICE:**

- ▶ Option to execute cutter heads with PCD tip height 4 mm (8-10 sharpenings).
- ▶ Cutter head adapted for operation on special single spindle and double spindle edge banders.
- ▶ Do you need tools with different parameters? On request we can execute sectional cutter heads allowing adjustment of working height of the cutter head and better use of surface of PCD tip with respect to edge to processed material.



Head DIA TOP-CUT 1 eco

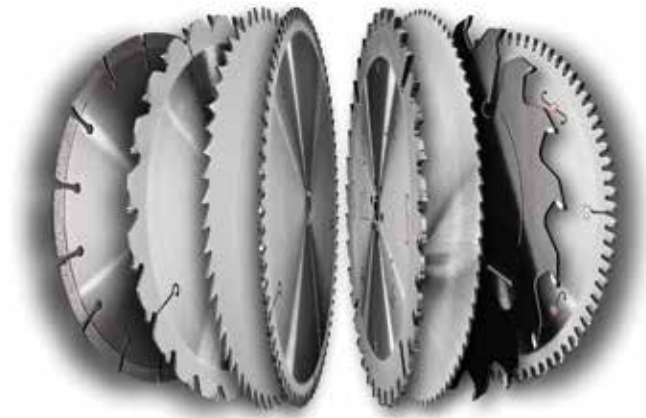
for edge banders

- ▶ three solid tips DIA (arranged in six spirals), solid body made of special grade of steel, PCD tip height 2.5 mm
- ▶ precise balancing ensures quiet and stable operation and decreases load on the machine
- ▶ cutter heads are executed are right or left-sided depending on operation type of the machine
- ▶ in furniture industry intended for milling of side planes and edges, most often for materials such as: laminated, raw chip-board, MDF, HDF, LDF etc. for aesthetic finishing of the template

Index					Right / left	PRICELIST
	mm	mm	mm			eur/pc.
◦ DI210-0080-0004	80	30	32	3+3	R	293,25
◦ DI210-0080-0001	80	30	40	3+3	R	365,25
◦ DI210-0080-0002	80	30	48	3+3	R	437,00
◦ DI210-0080-0003	80	30	56	3+3	R	508,50
◦ DI210-0100-0001	100	30	40	3+3	R	365,25
◦ DI210-0100-0006	100	30	48	3+3	R	437,00
◦ DI210-0100-0003	100	30	56	3+3	R	508,50
◦ DI210-0100-0004	100	30	63	3+3	R	584,25
◦ DI210-0125-0001	125	30	40	3+3	R	365,25
◦ DI210-0125-0002	125	30	48	3+3	R	437,00
◦ DI210-0125-0003	125	30	56	3+3	R	508,50
◦ DI210-0125-0004	125	30	63	3+3	R	584,25

0 - per order

* see the website for more products



TOOLS UPON REQUEST

On individual orders we can also execute tools with other technical parameters, depending on application and needs of the customer.

DO YOU NEED NON-TYPICAL TOOL FROM THE GROUP OF THE FOLLOWING PRODUCTS?

- ▶ circular saw blades with HM or DIA knives
- ▶ knives for planers HSS, HM or commercial
- ▶ straight or profile arbor cutters with HSS, HM or DIA knives
- ▶ straight or profile cutter heads with insert HSS, HM or DIA knives
- ▶ Router bits HSS, HM or DIA
- ▶ drill bits HSS, HM or DIA

Make an enquiry! Price offer for execution of the mentioned tools is prepared based on received profile drawing with dimensions or based on finished component processed with the given tool.



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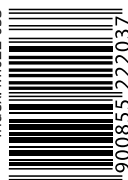
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