



Tools for **Sawmills**  
**2017**

**Globus**<sup>®</sup>  
...ostre narzędzia



## SAWMILLING INDUSTRY

Wood is the most important construction material and the oldest material used by the human. Currently it is a very valuable construction and finishing material. It characterizes with lightness and strength allowing using it for many applications. Wood is used as a material for floors, wainscot, roof framing, hard landscaping or furniture. Wastes generated during processing are carefully selected and used for construction of e.g. fibreboard, chipboard or plywood.

Due to value of the material we cannot allow lack of precision during wood sawing process. Therefore, sawmill workers constantly and frequently are introducing modern solutions allowing achieving considerably better results during processing of wood (better than several years ago). Machinery manufacturers are adapting their processes to the specific operation conditions and constantly improve their equipment to meet the growing demands of their customers. Precise and durable tools are necessary for correct operation of the machinery.

In our folder we present the highest quality tools for sawmilling designed to satisfy the needs of the woodworking plants operating modern and automated wood sawing lines and for the companies increasing their business volume by increase of raw material processing quality.

The offer includes a wide range of machine cutting tools such as: MULTIX PRO saw blades for operation in multi rip saws arrangements, band saw blades for frame sawing machines, gang saw blades, saw blades for defects removing, saw blades for ripping and cross-cutting of wood, knives for planers, cutters for chippers and profile arbor tools for wood processing: cutterheads and cutters.



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## WHICH TOOLS PRODUCTION PROCESSES WE USE?

### CUTTING PROCESS



An adequate delivered metal sheet is inserted into a special cutter and subjected to laser cutting processing, where the laser beam fulfils the function of a "knife".

### HARDENING AND TEMPERING



Heat treatment of tool steel consists of three stages:  
Stage 1 – heating up the steel;  
Stage 2 – quick cooling down of the 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 provide precise grinding with accuracy up to 0.0005 mm.

### TENSIONING AND BALANCING OF DISKS



Due to the specific character of the manufactured disk tools, they are required to maintain a definite rigidity and stability during operation. Therefore the saw disks are subjected to tensioning and a dynamic balancing process.

### SOLDERING OF SINTERED CARBIDES



Soldering of sintered carbides is executed on fully automated soldering stations. Carbides are automatically segregated and arranged in soldering position in vibrating drums.

### 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. Marking using this method is very quick and aesthetic.

### QUALITY CONTROL – PACKAGING



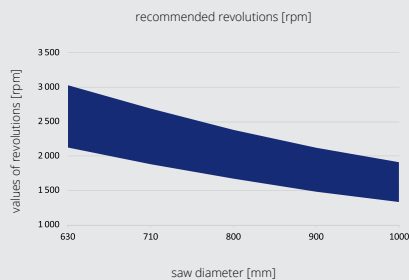
A marked tool is delivered to the inspection department, where it is subjected to final acceptance by experienced specialists from the quality department.



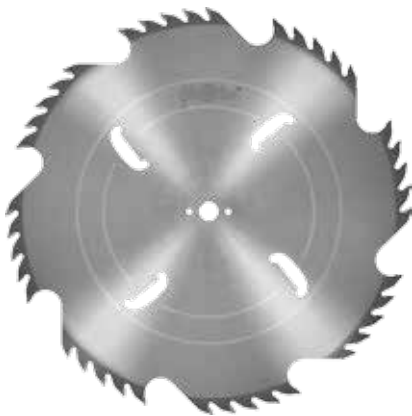


## CUTTING IN SAWMILLING INDUSTRY

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**EXPERT'S ADVICE:**

- ▶ PS050 saw blades are designed for preliminary ripping of soft and wet wood.
- ▶ Especially recommended for ripping (cutting wood along the grain) of logs with large cross-sections.
- ▶ Used in single and twin disc cut off machines, often used in machinery installed on trolleys.
- ▶ Teeth grouping 9x3z (left, straight, right) is used for major cross sections of processed material contrary to 8x5z teeth grouping.



## Saw blades with HM tips with teeth grouping for ripping of raw wood

- ▶ saw blades with teeth grouping ("HANIBAL") enable use of greater feed values with respect to ordinary LA teeth
- ▶ properly selected teeth geometry and number of teeth (teeth grouping 8x5z) enable optimal chip removal from cutting space
- ▶ special grooves (type F) compensate loads and negative impact of temperature increase during saw blades operation
- ▶ used in preliminary processing of wood flitch in sawmilling for cutting-off the offcuts

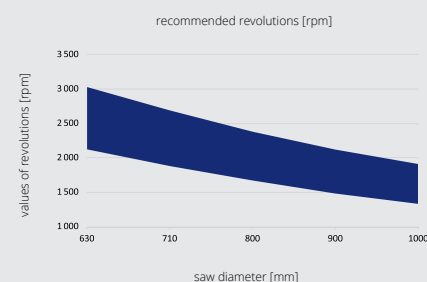
| Index             |  |  |  |  |  |  |  | CATALOGUE PRICE                                                                       |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                   | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                    |                                                                                       | ild <sub>o</sub> /d <sub>p</sub>                                                      |                                                                                       | eur/pc.                                                                               |
| PS050-0630-0001   | 630                                                                                 | 30                                                                                  | 6,0                                                                                 | 4,0                                                                                   | 8x5z                                                                                  | 2x10/60                                                                               | Type "F"                                                                              | 169,90                                                                                |
| PS050-0710-0001   | 710                                                                                 | 40                                                                                  | 7,0                                                                                 | 5,5                                                                                   | 9x3z                                                                                  | -                                                                                     | Type "F"                                                                              | 218,95                                                                                |
| PS050-0710-0003   | 710                                                                                 | 40                                                                                  | 7,0                                                                                 | 5,5                                                                                   | 8x5z                                                                                  | -                                                                                     | Type "F"                                                                              | 236,40                                                                                |
| PS050-0710-0002   | 710                                                                                 | 50                                                                                  | 7,0                                                                                 | 5,5                                                                                   | 9x3z                                                                                  | -                                                                                     | Type "F"                                                                              | 218,95                                                                                |
| PS050-0800-0001   | 800                                                                                 | 40                                                                                  | 6,0                                                                                 | 4,0                                                                                   | 8x5z                                                                                  | -                                                                                     | Type "F"                                                                              | 257,35                                                                                |
| PS050-0800-0022   | 800                                                                                 | 40                                                                                  | 8,0                                                                                 | 5,5                                                                                   | 9x3z                                                                                  | -                                                                                     | Type "F"                                                                              | 376,75                                                                                |
| PS050-0800-0023   | 800                                                                                 | 50                                                                                  | 8,0                                                                                 | 5,5                                                                                   | 9x3z                                                                                  | -                                                                                     | Type "F"                                                                              | 376,75                                                                                |
| o PS050-0900-0010 | 900                                                                                 | 50                                                                                  | 8,0                                                                                 | 5,5                                                                                   | 9x3z                                                                                  | -                                                                                     | Type "F"                                                                              |  |
| o PS050-1000-0007 | 1000                                                                                | 50                                                                                  | 8,0                                                                                 | 5,5                                                                                   | 9x3z                                                                                  | -                                                                                     | Type "F"                                                                              |  |

o - per order  
 d<sub>o</sub> - driving holes diameter  
 d<sub>p</sub> - pitch diameter of holes

\* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Properly selected teeth geometry and number of teeth (teeth grouping 8x5z) enable optimal chip removal from cutting space.
- ▶ Selection of saw blades diameter should depend on height of processed material (saw blades should protrude max. 50 mm over processed material).
- ▶ Special grooves (type F) increase disk rigidity ensuring efficient cooling of the saw blade during machine cutting.
- ▶ You should remember about appropriate maintenance of saw blades during operation: remember about correct teeth geometry, quality of re-sharpening and evenly set of the tooth



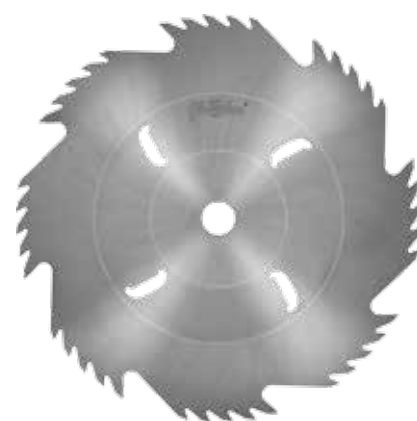
## Ordinary saw blades WA

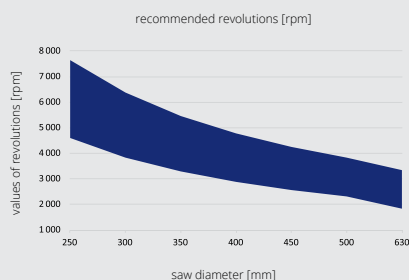
for ripping of wood

- ▶ disc cutting process is implemented using laser technology, what influences high accuracy of execution of the saw blade
- ▶ uniformity and symmetry of tooth set – as a standard saw blades are manufactured in sharpened and set version
- ▶ saw blades made of high-quality thermally improved tool steel -very often used on double sawmill saws
- ▶ saw blades with group toothing (HANIBAL type) designed for cutting of softwood along the fibres of the rings - preliminary processing of wood in sawmilling

| Index           |      |    |     |      |          | CATALOGUE PRICE |
|-----------------|------|----|-----|------|----------|-----------------|
|                 | mm   | mm | mm  |      |          | eur/pc.         |
| PT140-0630-0001 | 630  | 40 | 4,0 | 8x5z | -        | <b>89,90</b>    |
| PT140-0630-0002 | 630  | 40 | 4,0 | 8x5z | Type "F" | <b>95,00</b>    |
| PT140-0710-0002 | 710  | 40 | 4,5 | 8x5z | Type "F" | <b>125,70</b>   |
| PT140-0800-0001 | 800  | 40 | 4,5 | 8x5z | -        | <b>148,95</b>   |
| PT140-0800-0003 | 800  | 40 | 4,5 | 8x5z | Type "F" | <b>159,20</b>   |
| PT140-0800-0006 | 800  | 40 | 5,0 | 8x5z | Type "F" | <b>169,95</b>   |
| PT140-0900-0001 | 900  | 40 | 5,0 | 8x5z | -        | <b>212,25</b>   |
| PT140-0900-0002 | 900  | 65 | 5,0 | 8x5z | -        | <b>212,25</b>   |
| PT140-1000-0007 | 1000 | 40 | 5,5 | 8x5z | Type "F" | <b>323,80</b>   |

\* see the website for more products



**EXPERT'S ADVICE:**

- ▶ Saw blades designed for ripping of raw, soft and hard wood on single-spindle and double-spindle multi rip saws.
- ▶ Mainly for multi rip saws, with lower requirements regarding to quality of surface of processed material.
- ▶ Set of 4 keyways used allows arranging saw blades on a shaft with better weight distribution of the whole cutting unit.
- ▶ Please remember that correct chip removal is one of the conditions for correct operation of the saw blades.



## HM saw blades MULTIX PRO Plus with /two/four/six knives

for ripping of raw wood on multi rip saws with high speed

- ▶ special design saw blades with PLUS teeth are recommended for operation with high cutting parameters - special shape of the notch allows using larger feeds
- ▶ new disc heat treatment technology significantly increases saw blade rigidity during operation with high loads
- ▶ the use of a new type of sintered carbide with high impact resistance allows efficient operation and effective exploit of saw
- ▶ cutting of raw wood, production of edged and un-edged timber and construction timber and other wooden components (beams, joists, laths, rafters, eaves soffit, square-sawn timber, boards, piling, etc.)

| Index           |     |    |     |     |      | Geometry |         | CATALOGUE PRICE |
|-----------------|-----|----|-----|-----|------|----------|---------|-----------------|
|                 | mm  | mm | mm  | mm  |      |          | il(axh) | eur/pc.         |
| PS113-0250-0003 | 250 | 70 | 3,2 | 2,0 | 16+2 | GM20     | 4(20x6) | <b>48,00</b>    |
| PS123-0300-0004 | 300 | 30 | 3,6 | 2,2 | 18+4 | GM20     | -       | <b>54,40</b>    |
| PS123-0350-0003 | 350 | 70 | 3,8 | 2,5 | 18+4 | GM20     | 4(20x6) | <b>61,45</b>    |
| PS123-0350-0004 | 350 | 80 | 3,8 | 2,5 | 18+4 | GM20     | 4(20x6) | <b>61,45</b>    |
| PS123-0350-0005 | 350 | 30 | 3,8 | 2,5 | 18+4 | GM20     | -       | <b>61,45</b>    |
| PS123-0400-0001 | 400 | 60 | 4,4 | 3,0 | 14+4 | GM20     | 4(20x6) | <b>73,75</b>    |
| PS123-0400-0003 | 400 | 60 | 4,4 | 3,0 | 18+4 | GM20     | 4(20x6) | <b>76,15</b>    |
| PS123-0400-0004 | 400 | 70 | 4,4 | 3,0 | 18+4 | GM20     | 4(20x6) | <b>76,15</b>    |
| PS123-0450-0002 | 450 | 70 | 4,6 | 3,2 | 14+4 | GM20     | 4(20x6) | <b>80,80</b>    |
| PS133-0450-0001 | 450 | 70 | 4,8 | 3,2 | 18+6 | GM20     | 4(20x6) | <b>90,65</b>    |
| PS133-0500-0001 | 500 | 60 | 5,0 | 3,4 | 18+6 | GM20     | 4(20x6) | <b>94,00</b>    |
| PS133-0630-0001 | 630 | 70 | 6,0 | 3,8 | 18+6 | GM20     | 4(20x6) | <b>159,90</b>   |

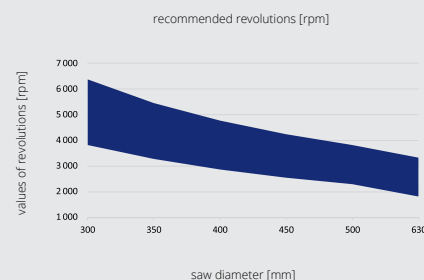
a- groove width

h- groove height

\* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Professional MULTIX PRO Twin saw blades dedicated to woodworking in hard conditions.
- ▶ Woodworking on multi rip saws in a set - single or twin shaft multi rip saws
- ▶ Wide range of applications: possibility of ripping of wood with more knots, not stripped, frozen, full of sand, and also with other different inclusions.
- ▶ Special design of teeth with so-called "inter-tooth" has a significant impact on improving cutting conditions and protects cutting tooth with carbide tip (HM) e.g. in case of presence of loose knots and inclusions in the processed wood.



## HM saw blades MULTIX PRO Twin with four/six knives

for ripping of raw wood on multi-rip saws and circular frame sawing machines

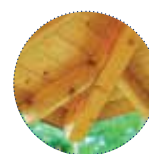
- ▶ new disc heat treatment technology significantly increases saw blade rigidity during operation with high loads
- ▶ the use of a new type of sintered carbide with high impact resistance allows to exploit saw blades both during summer and winter
- ▶ aggressive geometry of sintered carbide (2GS) makes the saw blades perfectly cope with soft and hard raw wood cutting, even in the toughest woodworking conditions
- ▶ cutting of raw soft and hard wood (coniferous and deciduous), production of timber and construction timber and other wooden components (beams, joists, laths, rafters, eaves soffit, square-sawn timber, boards, piling, etc.)

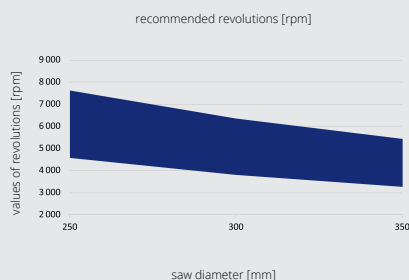
| Index           |     |    |     |     |             | Geometry |         | CATALOGUE PRICE |
|-----------------|-----|----|-----|-----|-------------|----------|---------|-----------------|
|                 | mm  | mm | mm  | mm  |             |          | ll(axh) | eur/pc.         |
| PS124-0300-0001 | 300 | 70 | 3,6 | 2,2 | 14HM+14z+4n | 2GS20    | 4(20x6) | 55,25           |
| PS124-0300-0003 | 300 | 80 | 3,6 | 2,2 | 18HM+18z+4n | 2GS20    | 4(20x6) | 56,00           |
| PS124-0350-0001 | 350 | 70 | 3,8 | 2,5 | 18HM+18z+4n | 2GS20    | 4(20x6) | 63,75           |
| PS124-0350-0002 | 350 | 80 | 3,8 | 2,5 | 18HM+18z+4n | 2GS20    | 4(20x6) | 63,75           |
| PS124-0400-0002 | 400 | 70 | 4,4 | 3,0 | 18HM+18z+4n | 2GS20    | 4(20x6) | 77,50           |
| PS124-0400-0003 | 400 | 80 | 4,4 | 3,0 | 18HM+18z+4n | 2GS20    | 4(20x6) | 77,50           |
| PS124-0450-0002 | 450 | 70 | 4,6 | 3,2 | 18HM+18z+4n | 2GS20    | 4(20x6) | 87,50           |
| PS134-0450-0001 | 450 | 70 | 4,8 | 3,2 | 18HM+18z+6n | 2GS20    | 4(20x6) | 92,50           |
| PS134-0500-0001 | 500 | 60 | 5,0 | 3,4 | 18HM+18z+6n | 2GS20    | 4(20x6) | 95,00           |
| PS134-0500-0002 | 500 | 70 | 5,0 | 3,4 | 18HM+18z+6n | 2GS20    | 4(20x6) | 95,00           |
| PS134-0500-0003 | 500 | 70 | 6,0 | 4,1 | 18HM+18z+6n | 2GS20    | 4(20x6) | 151,25          |
| PS134-0630-0001 | 630 | 70 | 6,0 | 3,8 | 18HM+18z+6n | 2GS20    | 4(20x6) | 165,00          |

a- groove width

h- groove height

\* see the website for more products



**EXPERT'S ADVICE:**

- ▶ Saw blades designed for ripping of raw, soft and hard wood on single-spindle and double-spindle multi rip saws.
- ▶ PRO Standard saw blades with 24 teeth may be used for ripping of dry and soft wood and for dry and hard wood.
- ▶ Especially recommended to use on high class multi saws, properly prepared wood - preferably fed from flitch.
- ▶ Please remember that correct chip removal is one of the conditions for correct operation of the saw blades.



## HM saw blades MULTIX PRO Standard with two knives/four knives for ripping of raw and dry wood on multi rip saws

- ▶ hard disk which ensures high rigidity in difficult wood-working conditions, which are characteristic for high performance multi rip saws
- ▶ wiper slots properly located on the disc allow quick chip removal from cut area
- ▶ the use of a new type of sintered carbide with high impact resistance allows to efficiently exploit saw blades
- ▶ for production of timber and construction timber and other wooden components (beams, joists, laths, rafters, eaves soffit, square-sawn timber, boards, piling, etc.)

| Index           |     |    |     |     |      | Geometry |         | CATALOGUE PRICE |
|-----------------|-----|----|-----|-----|------|----------|---------|-----------------|
|                 | mm  | mm | mm  | mm  |      |          | il(axh) | eur/pc.         |
| PS112-0250-0001 | 250 | 80 | 3,2 | 2,0 | 18+2 | GM20     | 4(20x6) | <b>49,50</b>    |
| PS112-0250-0002 | 250 | 70 | 3,2 | 2,0 | 24+2 | 2GS20    | 4(20x6) | <b>51,25</b>    |
| PS112-0250-0003 | 250 | 80 | 3,2 | 2,0 | 24+2 | 2GS20    | 4(20x6) | <b>51,25</b>    |
| PS112-0250-0004 | 250 | 70 | 3,2 | 2,0 | 18+2 | GM20     | 4(20x6) | <b>49,50</b>    |
| PS112-0300-0001 | 300 | 70 | 3,2 | 2,2 | 18+2 | GM20     | 4(20x6) | <b>48,85</b>    |
| PS112-0300-0004 | 300 | 80 | 3,2 | 2,2 | 24+2 | 2GS20    | 4(20x6) | <b>52,35</b>    |
| PS122-0300-0001 | 300 | 80 | 3,2 | 2,2 | 18+4 | GM20     | 4(20x6) | <b>53,50</b>    |
| PS122-0300-0003 | 300 | 70 | 3,6 | 2,5 | 18+4 | 2GS20    | 4(20x6) | <b>54,40</b>    |
| PS122-0315-0001 | 315 | 70 | 3,6 | 2,5 | 18+4 | GM20     | 4(20x6) | <b>59,75</b>    |
| PS122-0315-0002 | 315 | 80 | 3,6 | 2,5 | 24+4 | 2GS20    | 4(20x6) | <b>63,00</b>    |
| PS122-0350-0002 | 350 | 80 | 3,6 | 2,5 | 18+4 | GM20     | 4(20x6) | <b>60,55</b>    |
| PS122-0350-0003 | 350 | 70 | 3,6 | 2,5 | 24+4 | 2GS20    | 4(20x6) | <b>62,55</b>    |

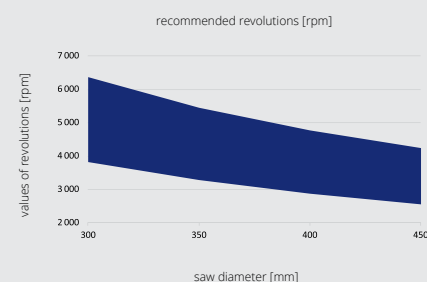
a- groove width

h- groove height

\* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Saw blades designed for ripping of raw wood on single-spindle and double-spindle multi rip saws with low processing parameters (feed lower than 10 m/min.).
- ▶ Especially designed for ripping of soft wood.
- ▶ Set of 4 keyways used allows arranging saw blades on a shaft with better weight distribution of the whole cutting unit.
- ▶ Please remember that correct chip removal is one of the conditions for correct operation of the saw blades.



## HM saw blades MULTIX PRO Slowrun

for ripping of raw wood in multi rip saws

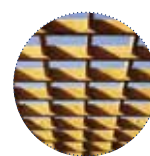
- ▶ specially designed "inter-tooth" protects the HM tips
- ▶ group of saw blades designed for machinery with small feed
- ▶ slots in saw blade disk, except supporting role in removal of chips, ensure very good saw blade cooling, what ensures long and stable operation
- ▶ in sawmilling used for production of timber and construction timber and other wooden components (beams, joists, laths, rafters, eaves soffit, square-sawn timber, boards, paling, etc.)

| Index           |  |  |  |  |  | Geometry |  | CATALOGUE PRICE |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|-----------------|
|                 | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     |          | il(axh)                                                                             | eur/pc.         |
| PS195-0300-0011 | 300                                                                                 | 70                                                                                  | 3,6                                                                                 | 2,2                                                                                 | 10+4                                                                                | GM20     | 4(20x6)                                                                             | 52,50           |
| PS195-0300-0012 | 300                                                                                 | 80                                                                                  | 3,6                                                                                 | 2,2                                                                                 | 10+4                                                                                | GM20     | 4(20x6)                                                                             | 52,50           |
| PS195-0350-0009 | 350                                                                                 | 70                                                                                  | 3,8                                                                                 | 2,5                                                                                 | 10+4                                                                                | GM20     | 4(20x6)                                                                             | 55,00           |
| PS195-0350-0010 | 350                                                                                 | 80                                                                                  | 3,8                                                                                 | 2,5                                                                                 | 10+4                                                                                | GM20     | 4(20x6)                                                                             | 55,00           |
| PS195-0400-0002 | 400                                                                                 | 70                                                                                  | 4,4                                                                                 | 3,0                                                                                 | 12+4                                                                                | GM20     | 4(20x6)                                                                             | 68,75           |
| PS195-0400-0003 | 400                                                                                 | 80                                                                                  | 4,4                                                                                 | 3,0                                                                                 | 12+4                                                                                | GM20     | 4(20x6)                                                                             | 68,75           |
| PS195-0450-0002 | 450                                                                                 | 70                                                                                  | 4,6                                                                                 | 3,2                                                                                 | 14+4                                                                                | GM20     | 4(20x6)                                                                             | 80,00           |

a- groove width

h- groove height

\* see the website for more products





EXPERT'S ADVICE:

- ▶ W teeth (reinforced) recommended for processing of hard wood (deciduous), while T teeth (triangle) for processing of soft wood (coniferous).
- ▶ Selection of rake angle depends on the dimensions of sawn wood, its hardness and density.
- ▶ Thickness and width of saw blade should conform the Operation and Maintenance Manual of the machine.
- ▶ You need different gang saw? On request we execute gang saw blades made of UDDEHOLM material and special leafage.

Gang saw blades  
for ripping of raw wood



- ▶ produced based on high-quality German tool steel proved in sawmiling of soft and hard wood
- ▶ body is subject to tensioning process, which ensures good saw blade rigidity during operation
- ▶ blade is cut with laser, what ensure high accuracy of pitch between the teeth and significantly facilitates sharpening from slat
- ▶ is used on the first stages of raw wood processing for production of such components as: beams, boards, boards etc.



| Index             | <br>mm | <br>mm | <br>mm |  | Toothing type | Unit  | CATALOGUE PRICE                                                                       |
|-------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------|-------|---------------------------------------------------------------------------------------|
|                   |                                                                                           |                                                                                           |                                                                                            |                                                                                       |               |       | eur/pc.                                                                               |
| PR110-1250-0002   | 1250                                                                                      | 160                                                                                       | 2,2                                                                                        | 25                                                                                    | W             | pcs.  | 30,50                                                                                 |
| PR110-1250-0009   | 1250                                                                                      | 140                                                                                       | 2,2                                                                                        | 25                                                                                    | W             | pcs.  | 27,85                                                                                 |
| PR110-1340-0003   | 1340                                                                                      | 160                                                                                       | 2,2                                                                                        | 25                                                                                    | W             | pcs.. | 31,80                                                                                 |
| PR110-1340-0008   | 1340                                                                                      | 140                                                                                       | 2,2                                                                                        | 25                                                                                    | W             | pcs.  | 29,70                                                                                 |
| ◦ PR110-1250-0003 | 1250                                                                                      | 160                                                                                       | 2,2                                                                                        | 25                                                                                    | T             | pcs.  |  |
| ◦ PR110-1250-0001 | 1250                                                                                      | 140                                                                                       | 2,2                                                                                        | 25                                                                                    | T             | pcs.  |  |
| ◦ PR110-1340-0002 | 1340                                                                                      | 160                                                                                       | 2,2                                                                                        | 25                                                                                    | T             | pcs.  |  |
| ◦ PR110-1340-0001 | 1340                                                                                      | 140                                                                                       | 2,2                                                                                        | 25                                                                                    | T             | pcs.  |  |

◦- per order

\* see the website for more products

**EXPERT'S ADVICE:**

- ▶ In case of tapping of wood outside barking zone it is necessary to adjust thickness of the HM carbide to kerf of the band saw.
- ▶ Use of HM saw blades for debarking significantly extends durability of the band saw blades.
- ▶ Due to type of tools operation you should often check condition of the HM carbides and degree of contamination of the saw blade.
- ▶ Please remember to sharpen teeth both on rake area and on application area.

## HM saw blades

for debarking of raw wood

- ▶ saw blades with special teeth geometry reducing crushing of sintered carbide
- ▶ recommended for operation on machines equipped with disk spur
- ▶ presented dimensions are only informational - it is possible to order the other types adapted to the given needs
- ▶ saw blade is responsible for debarking and cleaning of raw wood allowing primary saw blade to execute clean entry and exit

| Index                  |  |  |  |  |  |  | ll(axh) | CATALOGUE PRICE |
|------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|-----------------|
|                        | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     |                                                                                     |         | eur/pc.         |
| <b>PS900-0180-0006</b> | 180                                                                                 | 25                                                                                  | 8,0                                                                                 | 4,0                                                                                 | 9z                                                                                  | 1(6x4)                                                                              |         | <b>60,50</b>    |

a- groove width

h- groove height

\* see the website for more products





Tools in ACTION!

**EXPERT'S ADVICE:**

- ▶ Prior to operation please check condition of the saw, select correct teeth geometry and saw set, adjust correct tensioning of the band and select correct feed speed for the saw blade: within the range 25-35 m/s (the hardest materials the lower feed speed).
- ▶ You should remember about appropriate maintenance of band saw blades during operation: remember about correct geometry of the blades, quality of sharpening and uniform saw set on whole length of the band.
- ▶ Manufactured in hardened, sharpened, set, grinded (HORS) version - BARAKUDA Q or hardened, sharpened and set (HOR) - BARAKUDA PREMIUM.

## Band saw blades BARAKUDA

for raw wood cutting on band saws



- ▶ grinded tooth along with calibrated, set blade in BARAKUDA Q saw blades is a warranty of quiet and stable operation of the saw blade
- ▶ quality tool steel with increased content of molybdenum and vanadium - blade hardness of 44-46 HRC
- ▶ special heat treatment of BARAKUDA Premium band saw blades considerably increase the flexibility and resistance of band - series designed also for cutting of frozen wood
- ▶ in sawmilling used during the one of the first stages of raw wood processing/cutting, for production of sawn timber, construction components, bales, boards etc.

| Index             | Series           |  |  |  |  | Toothing type | CATALOGUE PRICE |
|-------------------|------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------|-----------------|
|                   |                  | mm                                                                                  | mm                                                                                   | mm                                                                                    |                                                                                       |               | eur/pc.         |
| PA510-4005-0003   | BARAKUDA Q       | 4005                                                                                | 35                                                                                   | 1,1                                                                                   | 22                                                                                    | HORS          | 17,40           |
| PA510-4005-0005   | BARAKUDA Q       | 4005                                                                                | 40                                                                                   | 1,1                                                                                   | 22                                                                                    | HORS          | 19,90           |
| PA510-4005-0013   | BARAKUDA PREMIUM | 4005                                                                                | 35                                                                                   | 1,1                                                                                   | 22                                                                                    | HOR           | 18,25           |
| PA510-4005-0015   | BARAKUDA PREMIUM | 4005                                                                                | 40                                                                                   | 1,1                                                                                   | 22                                                                                    | HOR           | 21,40           |
| o PA510-0000-0013 | BARAKUDA PREMIUM | lin.m.                                                                              | 35                                                                                   | 1,1                                                                                   | 22                                                                                    | HOR           | 4,75            |
| o PA510-0000-0015 | BARAKUDA PREMIUM | lin.m.                                                                              | 40                                                                                   | 1,1                                                                                   | 22                                                                                    | HOR           | 5,55            |
| o PA510-0100-0013 | BARAKUDA PREMIUM | lin.m.                                                                              | 35                                                                                   | 1,1                                                                                   | 22                                                                                    | HOR           | 4,65            |
| o PA510-0100-0015 | BARAKUDA PREMIUM | lin.m.                                                                              | 40                                                                                   | 1,1                                                                                   | 22                                                                                    | HOR           | 5,00            |

o- per order

\* see the website for more products



**EXPERT'S ADVICE:**

- ▶ Manufactured in hardened, sharpened, set, grinded (HORS), hardened, sharpened and set (HOR) and sharpened and set (OR).
- ▶ PIRANIA saw blades have increased resistance to cracking due to alloy additives.
- ▶ Grinded tooth along with calibrated, set blade in PIRANIA Q saw blades is a warranty of quiet and stable operation of the saw blade.
- ▶ For sharpening of PIRANIA, ORKA and BARAKUDA band saw blades we recommend using borazon grinding wheel (from OP201 subgroup), with metallic binder or ceramic grinding wheel maintaining shape of the tooth during sharpening.

## Band saw blades PIRANIA / ORKA

for raw wood cutting on band saws

▶ ORKA - chromium-vanadium tool steel, hardness 42-44 HRC

▶ PIRANIA - high quality chromium-nickel tool steel with molybdenum and vanadium additives, hardness 44-46 HRC

▶ process of welding of band saw blades is carried out on professional welding machines ensuring high quality and repeatability of executed weld.

▶ in sawmilling used during the one of the first stages of raw wood processing/cutting, for production of sawn timber, construction components, bales, boards etc.

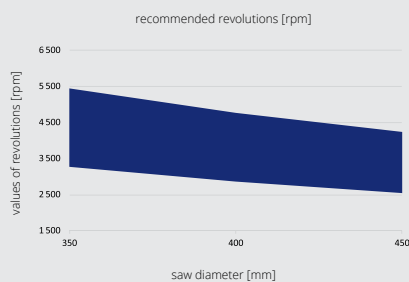


| Index             | Series       |  |  |  |  | Tooth type | CATALOGUE PRICE |
|-------------------|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------|-----------------|
|                   |              | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     |            | eur/pc.         |
| PA410-4005-0013   | PIRANIA Q    | 4005                                                                                | 35                                                                                  | 1,1                                                                                 | 22                                                                                  | HORS       | 17,75           |
| PA410-4005-0015   | PIRANIA Q    | 4005                                                                                | 40                                                                                  | 1,1                                                                                 | 22                                                                                  | HORS       | 20,50           |
| PA410-4005-0002   | PIRANIA PLUS | 4005                                                                                | 35                                                                                  | 1,0                                                                                 | 22                                                                                  | HOR        | 16,90           |
| PA410-4005-0003   | PIRANIA PLUS | 4005                                                                                | 35                                                                                  | 1,1                                                                                 | 22                                                                                  | HOR        | 16,90           |
| o PA410-4005-0005 | PIRANIA PLUS | 4005                                                                                | 40                                                                                  | 1,1                                                                                 | 22                                                                                  | HOR        | 19,90           |
| o PA410-0000-0003 | PIRANIA PLUS | acc. to the order                                                                   | 35                                                                                  | 1,1                                                                                 | 22                                                                                  | HOR        | 4,25            |
| o PA410-0000-0005 | PIRANIA PLUS | acc. to the order                                                                   | 40                                                                                  | 1,1                                                                                 | 22                                                                                  | HOR        | 5,00            |
| PA310-4005-0001   | ORKA PLUS    | 4005                                                                                | 35                                                                                  | 1,0                                                                                 | 22                                                                                  | HOR        | 12,50           |
| PA310-4005-0002   | ORKA PLUS    | 4005                                                                                | 35                                                                                  | 1,1                                                                                 | 22                                                                                  | HOR        | 13,40           |
| PA310-4005-0004   | ORKA PLUS    | 4005                                                                                | 40                                                                                  | 1,1                                                                                 | 22                                                                                  | HOR        | 16,05           |
| o PA310-0000-0002 | ORKA PLUS    | acc. to the order                                                                   | 35                                                                                  | 1,1                                                                                 | 22                                                                                  | HOR        | 3,35            |
| o PA310-0000-0004 | ORKA PLUS    | acc. to the order                                                                   | 40                                                                                  | 1,1                                                                                 | 22                                                                                  | HOR        | 4,05            |

o- per order

\* see the website for more products



**EXPERT'S ADVICE:**

- ▶ PS210 saw blades, with lower number of teeth, can be used for ripping of wood, it applies to hardwood in particular.
- ▶ GS10 teeth geometry used in the PS210 subgroup allows obtaining optimum quality of processing during cutting of wood along its rings.
- ▶ Special teeth geometry GM20 (soft wood) and GS20 (hard wood) used in the PS010 subgroup allows adapting disk to the given type of processed material.
- ▶ Bore in a saw blade should be adapted to spindle of machine tool - too loose hole results in increase of radial run-out and non-balancing, too tight opening has adverse influence on disc tension fluctuation.

**HM saw blades**

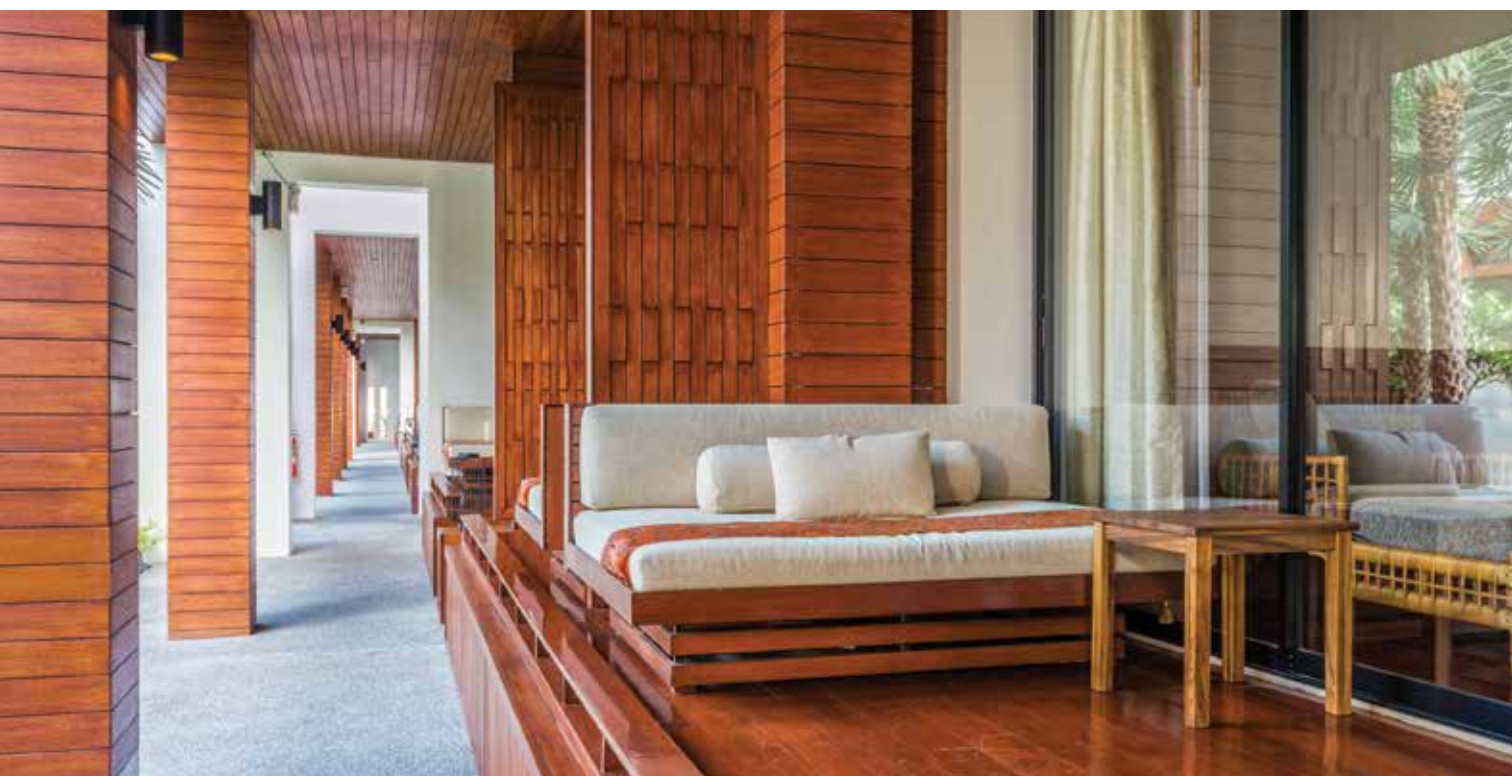
for ripping / cross-cutting of solid wood

- ▶ tempered and stressed disc ensures high rigidity of disc during machining processes
- ▶ disc design includes grooves compensating temperature impact on disc tension fluctuation
- ▶ during cross-cutting of dry wood increase of teeth number influences obtaining smoother surfaces of the cut materials
- ▶ main cut of wooden semi-products, construction components, roof cradle, rafters, beams etc. on table cut-off machines

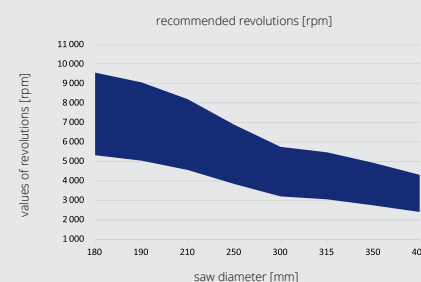
| Index                |  |  |  |  |  | Geometry |  | CATALOGUE PRICE |
|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|-----------------|
|                      | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                    |                                                                                       |          | ilxd, d <sub>p</sub>                                                                  | eur/pc.         |
| <b>Ripping</b>       |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |          |                                                                                       |                 |
| PS010-0350-0002      | 350                                                                                 | 30                                                                                  | 3,6                                                                                 | 2,5                                                                                   | 24                                                                                    | GM20     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>42,00</b>    |
| PS010-0350-0003      | 350                                                                                 | 30                                                                                  | 3,6                                                                                 | 2,5                                                                                   | 32                                                                                    | GM20     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>46,55</b>    |
| PS010-0400-0002      | 400                                                                                 | 30                                                                                  | 4,0                                                                                 | 2,8                                                                                   | 28                                                                                    | GM20     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>50,05</b>    |
| PS010-0400-0003      | 400                                                                                 | 30                                                                                  | 4,0                                                                                 | 2,8                                                                                   | 36                                                                                    | GM20     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>57,00</b>    |
| PS010-0450-0002      | 450                                                                                 | 30                                                                                  | 4,2                                                                                 | 2,8                                                                                   | 32                                                                                    | GM20     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>62,30</b>    |
| <b>Cross-cutting</b> |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |          |                                                                                       |                 |
| PS210-0350-0002      | 350                                                                                 | 30                                                                                  | 3,6                                                                                 | 2,5                                                                                   | 42                                                                                    | GS10     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>49,95</b>    |
| PS210-0350-0003      | 350                                                                                 | 30                                                                                  | 3,6                                                                                 | 2,5                                                                                   | 60                                                                                    | GS10     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>64,15</b>    |
| PS210-0400-0002      | 400                                                                                 | 30                                                                                  | 4,0                                                                                 | 2,8                                                                                   | 48                                                                                    | GS10     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>64,15</b>    |
| PS210-0400-0003      | 400                                                                                 | 30                                                                                  | 4,0                                                                                 | 2,8                                                                                   | 68                                                                                    | GS10     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>72,75</b>    |
| PS210-0450-0001      | 450                                                                                 | 30                                                                                  | 4,2                                                                                 | 2,8                                                                                   | 54                                                                                    | GS10     | 2x7/42+2x8,5/46+2x10/60                                                               | <b>79,70</b>    |

d<sub>p</sub> - driving holes diameterd<sub>p</sub> - pitch diameter of holes

\* see the website for more products

**EXPERT'S ADVICE:**

- ▶ Saw blade with greater number of teeth in a given diameter and correctly selected teeth geometry and shape of tip GS10° (alternate top bevel) allow obtaining better side surface (edge) after cutting the material.
- ▶ Sharpening of tooth made of sintered carbide (HM) should be carried out on blunting in the range from 0.10 to 0.20 m, measured on the edge between clearance and rake angle.
- ▶ SUPER HARD sintered tip (HM) used requires to sharp saw blades in special points dealing with sharpening of tools on machinery which are equipped with continuous and intensive cooling systems (so called - wet sharpening).



## HM saw blades LL CUT line GS

for cutting of hard and dry wood

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

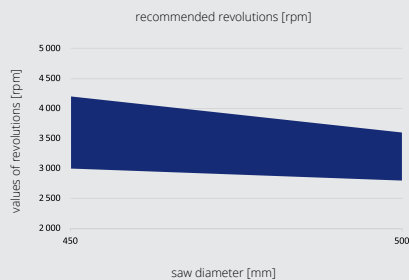
| Index             |  |  |  |  |  | Geometry |  | CATALOGUE PRICE                                                                           |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
|                   | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     |          | ilxd/d <sub>p</sub>                                                                 | 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                                                             |  44,95 |
| 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                                                                                    |

o- per order

d<sub>p</sub> - driving holes diameterd<sub>p</sub> - pitch diameter of holes

\* see the website for more products



**EXPERT'S ADVICE:**

- ▶ Saw blade for defects removing, adapted for operation on special machinery for impact cutting (cutting in milliseconds).
- ▶ Special profiled shape of HM tip 3GS or 3GE (sharp - alternate top bevel) allows maintaining very good quality of surfaces of processed materials.
- ▶ SUPER HARD sintered tip (HM) used requires to sharp saw blades in special points dealing with sharpening of tools on machinery which are equipped with continuous and intensive cooling systems (so called - wet sharpening).
- ▶ During marking special attention should be paid to ensure that defect area on both sides of the processed material does not collide with kerf of the saw blade, what may cause damage of the tool.

**HM saw blades LL CUT line**

for defects removing in wood on optimizing cross cut saw

- ▶ VERY HARD sintered carbide (ULTRAFINE) ensures even longer life-time and allows multiple sharpenings
- ▶ laser-cut and dynamically balanced disc made of high-quality steel after heat treatment ensures high rigidity and stability of tool during cutting process
- ▶ for cross-cutting of wood during material defects removal using impact method on optimizing cross cut saw with large feed
- ▶ in sawmilling used for production of glued and supporting components, e.g. for structures of beams, joists etc.

| Index             |  |  |  |  |  | Geometry |  | CATALOGUE PRICE |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|-----------------|
|                   | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                    |                                                                                       |          | ilxd/d <sub>p</sub>                                                                   | eur/pc.         |
| o PS320-0450-0007 | 450                                                                                 | 30                                                                                  | 4,8                                                                                 | 3,5                                                                                   | 136                                                                                   | 3GS10°   | 2x15/63                                                                               | <b>132,30</b>   |
| o PS320-0500-0008 | 500                                                                                 | 30                                                                                  | 4,8                                                                                 | 3,5                                                                                   | 144                                                                                   | 3GS5°    | 2x14,5/63                                                                             | <b>153,90</b>   |
| o PS390-0450-0008 | 450                                                                                 | 30                                                                                  | 4,8                                                                                 | 3,5                                                                                   | 136                                                                                   | 3GE10°   | 2x15/63                                                                               | <b>132,30</b>   |
| o PS390-0500-0003 | 500                                                                                 | 30                                                                                  | 4,8                                                                                 | 3,5                                                                                   | 144                                                                                   | 3GE5°    | 2x14,5/63                                                                             | <b>153,90</b>   |

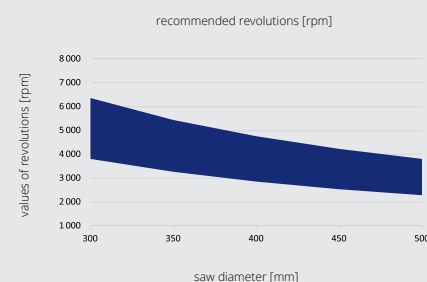
o - per order  
 d<sub>p</sub> - driving holes diameter  
 d<sub>p</sub> - pitch diameter of holes

\* see the website for more products



**EXPERT'S ADVICE:**

- ▶ For harsh and changing conditions of tool operation it is possible to order the saw blade in version with compensation slots and special grooves.
- ▶ KB teeth in PT150 group - cross-cutting of soft and hard (cutting wood across the grain) the saw blades are produced in sharpened and set version as a standard.
- ▶ LA teeth in PT110 group - ripping of soft wood (cutting wood along the grain) the saw blades are produced in sharpened and set version as a standard.
- ▶ Uniformity, symmetry and special sharpening are primary conditions for correct operation of the saw blade.



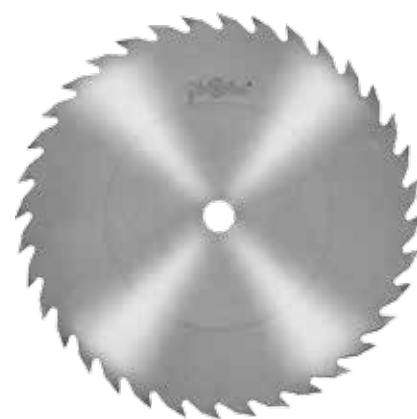
## Ordinary circular saw blades LA / KB

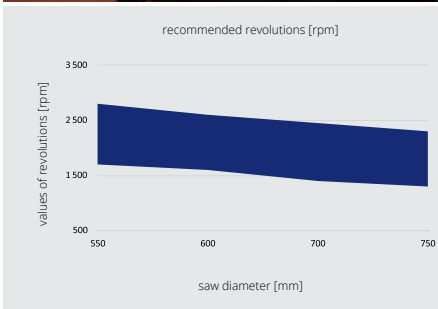
for ripping / cross-cutting of wood

- ▶ saw blades most often used on popular table sawing machines and other stationary machinery.
- ▶ saw blades made of high-quality thermally improved tool steel
- ▶ disc cutting process is implemented using laser technology, what influences high accuracy of execution of the saw blade
- ▶ due to versatility of application and non-demanding machining conditions they are most often used by the individual customer (also for ripping of firewood)

| Index                |  |  |  |  | Tooth type | CATALOGUE PRICE |
|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------|-----------------|
|                      | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     |            | eur/pc.         |
| <b>Ripping</b>       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |            |                 |
| PT110-0300-0002      | 350                                                                                 | 30                                                                                  | 3,2                                                                                 | 30                                                                                  | LA         | <b>23,30</b>    |
| PT110-0350-0003      | 400                                                                                 | 30                                                                                  | 3,2                                                                                 | 36                                                                                  | LA         | <b>30,75</b>    |
| PT110-0400-0003      | 450                                                                                 | 30                                                                                  | 3,2                                                                                 | 36                                                                                  | LA         | <b>37,00</b>    |
| PT110-0450-0003      | 350                                                                                 | 30                                                                                  | 3,2                                                                                 | 36                                                                                  | LA         | <b>42,00</b>    |
| PT110-0500-0004      | 400                                                                                 | 30                                                                                  | 3,2                                                                                 | 36                                                                                  | LA         | <b>51,15</b>    |
| <b>Cross-cutting</b> |                                                                                     |                                                                                     |                                                                                     |                                                                                     |            |                 |
| PT150-0300-0002      | 450                                                                                 | 30                                                                                  | 2,5                                                                                 | 60                                                                                  | KB         | <b>24,50</b>    |
| PT150-0400-0002      | 400                                                                                 | 30                                                                                  | 2,5                                                                                 | 60                                                                                  | KB         | <b>34,55</b>    |
| PT150-0400-0003      | 350                                                                                 | 30                                                                                  | 3,2                                                                                 | 60                                                                                  | KB         | <b>37,45</b>    |
| PT150-0450-0002      | 350                                                                                 | 30                                                                                  | 3,2                                                                                 | 60                                                                                  | KB         | <b>42,10</b>    |
| PT150-0500-0001      | 400                                                                                 | 30                                                                                  | 3,2                                                                                 | 60                                                                                  | KB         | <b>51,65</b>    |

\* see the website for more products





EXPERT'S ADVICE:

- ▶ Use on crosswise cut-off - pendulum machines, for soft and hard wood, in accordance with the operation and maintenance manual of the machinery.
- ▶ Saw blades used both in households and in companies trading the firewood.
- ▶ Dimension of saw blades diameter should be selected in compliance with application of the machinery (operation and maintenance manual) and dimension of processed material.
- ▶ Disk of the saw blade has a system of laser cut-outs - sound proofing of idle running (W).

HM saw blades  
for cutting of firewood on pendulum saws

- ▶ saw blades are equipped with chip thickness limiter
- ▶ shape of tooth used prevents overloading of the saw blade during working with manual feed
- ▶ grooves/slots compensate temperature impact on disc tension fluctuation
- ▶ series of the saw blades intended for cutting of firewood with larger cross-section

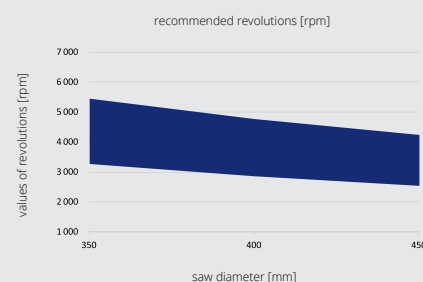


| Index           |  |  |  |  |  | Geometry |  | CATALOGUE PRICE |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|-----------------|
|                 | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                    |                                                                                       |          |                                                                                       | eur/pc.         |
| PS015-0550-0001 | 550                                                                                 | 30                                                                                  | 4,2                                                                                 | 3,0                                                                                   | 32                                                                                    | 2GS15    | W                                                                                     | 114,30          |
| PS015-0600-0001 | 600                                                                                 | 30                                                                                  | 4,2                                                                                 | 3,2                                                                                   | 36                                                                                    | 2GS15    | W                                                                                     | 129,30          |
| PS015-0700-0002 | 700                                                                                 | 30                                                                                  | 4,2                                                                                 | 3,2                                                                                   | 42                                                                                    | 2GS15    | W                                                                                     | 185,00          |
| PS015-0750-0001 | 750                                                                                 | 30                                                                                  | 4,5                                                                                 | 3,5                                                                                   | 46                                                                                    | 2GS15    | W                                                                                     | 220,00          |

\* see the website for more products

**EXPERT'S ADVICE:**

- ▶ PS016 saw blades for versatile applications, used mainly in table cut-off machines for cutting of materials with wide range of cross sections.
- ▶ Saw blades with chip removal system (PS016) are the most versatile tools - they are designed for ripping and cross-cutting.
- ▶ Used also for cutting of dry and wet wood as well as for cutting of hard and soft wood.
- ▶ PS015 saw blades, despite visual similarities with PS016 group, does not have chip removal system but only feed limiter, which is used to unload saw blade during ripping.



## HM saw blades with chip removal system or feed limiter

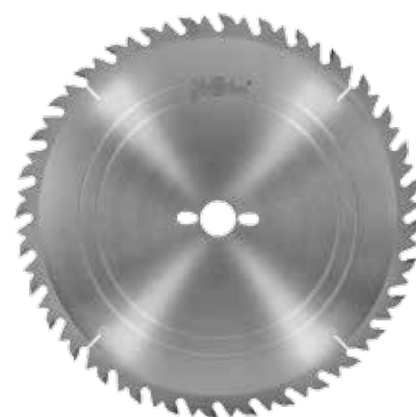
for cutting of solid wood

- ▶ PS016 saw blade is equipped with chip removal system, while PS015 saw blade has feed limiter
- ▶ chip removal system is also used as a protection for tooth against inclusions, e.g. loose knots
- ▶ design of the saw blade disc includes grooves compensating temperature impact on disc tension fluctuation
- ▶ they are used in sawmilling plants for processing supplementing primary production of sawn timber or for cutting of the other wooden components

| Index                              |  |  |  |  |  | Geometry |  | CATALOGUE PRICE |
|------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|-----------------|
|                                    | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     |          | ilxd/d <sub>p</sub>                                                                 | eur/pc.         |
| Saw blade with chip removal system |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |          |                                                                                     |                 |
| PS016-0300-0001                    | 300                                                                                 | 30                                                                                  | 3,4                                                                                 | 2,2                                                                                 | 28                                                                                  | GS20     | 2x7/42+2x8,5/46+2x10/60                                                             | 40,00           |
| PS016-0350-0001                    | 350                                                                                 | 30                                                                                  | 3,6                                                                                 | 2,5                                                                                 | 32                                                                                  | GS20     | 2x7/42+2x8,5/46+2x10/60                                                             | 48,75           |
| PS016-0400-0001                    | 400                                                                                 | 30                                                                                  | 4,0                                                                                 | 2,8                                                                                 | 36                                                                                  | GS20     | 2x7/42+2x8,5/46+2x10/60                                                             | 60,25           |
| Saw blade with feed limiter        |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |          |                                                                                     |                 |
| PS015-0300-0002                    | 300                                                                                 | 30                                                                                  | 3,4                                                                                 | 2,2                                                                                 | 14                                                                                  | GM20     | -                                                                                   | 27,05           |
| PS015-0350-0002                    | 350                                                                                 | 30                                                                                  | 3,6                                                                                 | 2,5                                                                                 | 16                                                                                  | GM20     | -                                                                                   | 31,40           |
| PS015-0400-0002                    | 400                                                                                 | 30                                                                                  | 3,8                                                                                 | 2,5                                                                                 | 18                                                                                  | GM20     | -                                                                                   | 37,45           |
| PS015-0450-0003                    | 450                                                                                 | 30                                                                                  | 4,2                                                                                 | 2,8                                                                                 | 20                                                                                  | GM20     | -                                                                                   | 47,80           |

d<sub>p</sub> - driving holes diameterd<sub>p</sub> - pitch diameter of holes

\* see the website for more products

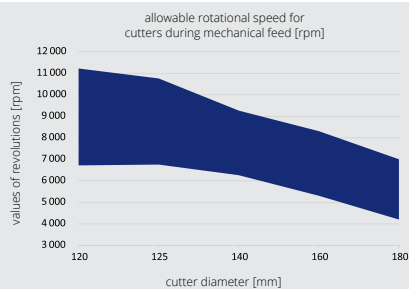






## MILLING IN SAWMILLING INDUSTRY

|           |                                                                                                  |    |
|-----------|--------------------------------------------------------------------------------------------------|----|
| CL011-072 | Straight grooving and planing cutters<br>with soldered HSS knives                                | 24 |
| CL101-111 | Convex and concave semi-circular cutters<br>with soldered HSS knives                             | 25 |
| CL091-121 | Profile cutters, quarter round, concave and 45 bevelling<br>with soldered HSS knives             | 26 |
| LJ180     | Cutterheads for rounding and bevelling<br>with soldered HSS knives                               | 27 |
| LJ150-160 | Planing cutterheads<br>with four/six knives                                                      | 28 |
| NS110-135 | Knives for planers<br>for planing of wood on planing machines                                    | 29 |
| CL530-540 | Set of cutters /ZFF/ for rounding and bevelling<br>with soldered HSS knives                      | 30 |
| CL530-580 | Set of cutters /ZFP/ for floor boards and /ZFB/ for wainscot<br>with soldered HSS knives         | 31 |
| CL600-602 | Cutters with soldered HSS knives for glue joints (mini-dovetails)<br>longitudinal connection     | 32 |
| LJ700     | Blades and counter blades for chippers and log rounding machines<br>made of high-speed steel HSS | 33 |
| TO100     | GO Cleaner liquid<br>for cleaning and washing of tools and machinery                             | 34 |



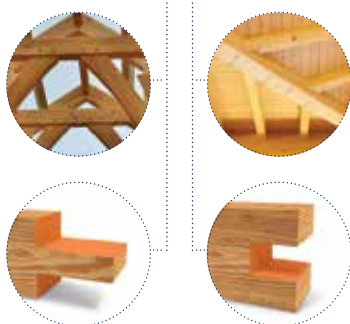
#### EXPERT'S ADVICE:

- ▶ CL011 - milling of grooves and rebates with rectangular section and narrow planes in solid wood.
- ▶ CL021 - milling of keys, rebates, tenons and bridle joints with rectangular cross section in solid wood, where it is necessary to achieve high quality of processing of side surfaces and socket edges.
- ▶ CL072 - milling of grooves and rebates with rectangular section and planes in solid wood.
- ▶ On request we are able to execute atypical cutters - based on drawing of the cutter of milled component and according to profile supplied by the customer.



## Straight grooving and planing cutter with soldered HSS knives

- ▶ cutter with soldered knives HSS made of high-quality high-speed steel - wide series of types allows selecting correct tool for the given processing and type of machine
- ▶ do you need to repair the tool? we offer wide range of after-sales services including sharpening, processing of holes and repairs of cutters
- ▶ for milling of soft wet, raw or medium-hard wood on bottom-spindle milling machines, single- and double-sided sizing and tenoning machines and multi-head planers with mechanical feed
- ▶ most often used to execute rebates and keys during production of wooden fences and for levelling of flat surfaces in structural beams and floors

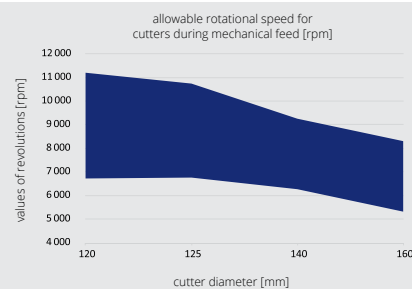


| Index           |  |  |  |  |  | CATALOGUE PRICE |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------|
|                 | mm                                                                                  | mm                                                                                  | mm                                                                                    |                                                                                       |                                                                                       | eur/pc.         |
| CL011-0125-0007 | 125                                                                                 | 30                                                                                  | 18                                                                                    | 4                                                                                     | -                                                                                     | 35,60           |
| CL011-0125-0008 | 125                                                                                 | 30                                                                                  | 20                                                                                    | 4                                                                                     | -                                                                                     | 37,75           |
| CL011-0140-0001 | 125                                                                                 | 30                                                                                  | 6                                                                                     | 4                                                                                     | -                                                                                     | 28,40           |
| CL011-0140-0002 | 140                                                                                 | 30                                                                                  | 8                                                                                     | 4                                                                                     | -                                                                                     | 28,90           |
| CL011-0160-0003 | 160                                                                                 | 30                                                                                  | 10                                                                                    | 4                                                                                     | -                                                                                     | 35,35           |
| CL011-0160-0004 | 180                                                                                 | 30                                                                                  | 12                                                                                    | 4                                                                                     | -                                                                                     | 39,10           |
| CL021-0120-0003 | 120                                                                                 | 30                                                                                  | 8                                                                                     | 2                                                                                     | 2                                                                                     | 35,05           |
| CL021-0140-0003 | 140                                                                                 | 30                                                                                  | 10                                                                                    | 2                                                                                     | 2                                                                                     | 40,40           |
| CL021-0160-0004 | 160                                                                                 | 30                                                                                  | 12                                                                                    | 2                                                                                     | 2                                                                                     | 45,50           |
| CL021-0180-0002 | 180                                                                                 | 30                                                                                  | 8                                                                                     | 2                                                                                     | 2                                                                                     | 41,50           |
| CL072-0120-0001 | 120                                                                                 | 30                                                                                  | 60                                                                                    | 4                                                                                     | -                                                                                     | 87,50           |
| CL072-0120-0002 | 120                                                                                 | 30                                                                                  | 80                                                                                    | 4                                                                                     | -                                                                                     | 108,35          |

\* see the website for more products

**EXPERT'S ADVICE:**

- ▶ CL101 (concave) and CL111 (convex) cutters dedicated for rounding of edges, milling of decorative profile in solid wood.
- ▶ 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 request we are able to execute atypical cutters - based on drawing of the cutter of milled component and according to profile supplied by the customer.



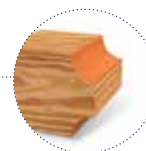
## Convex and concave semi-circular cutter

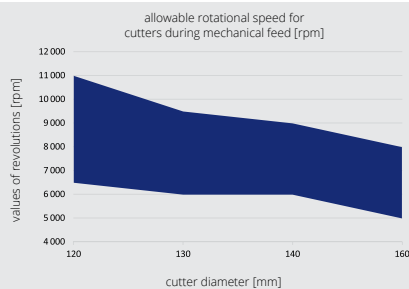
with soldered HSS knives

- ▶ cutters with soldered HSS knives made of high-quality high-speed steel
- ▶ wide series of types (diameter / width of carbide) allows selecting correct tool for the given processing and type of machine
- ▶ for milling of soft wet, raw or medium-hard wood on bottom-spindle milling machines, single- and double-sided sizing and tenoning machines and multi-head planers with mechanical feed
- ▶ in sawmilling plants most often used for external or internal rounding of side surfaces of the wood

| Index           |  |  |  |  |  | CATALOGUE PRICE |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|
|                 | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     |                                                                                     | eur/pc.         |
| CL101-0120-0001 | 120                                                                                 | 30                                                                                  | 26                                                                                  | 4                                                                                   | 8                                                                                   | 67,95           |
| CL101-0120-0002 | 120                                                                                 | 30                                                                                  | 30                                                                                  | 4                                                                                   | 10                                                                                  | 72,25           |
| CL101-0120-0004 | 120                                                                                 | 40                                                                                  | 35                                                                                  | 4                                                                                   | 12,5                                                                                | 90,70           |
| CL101-0160-0001 | 160                                                                                 | 30                                                                                  | 46                                                                                  | 4                                                                                   | 18                                                                                  | 111,05          |
| CL101-0160-0003 | 160                                                                                 | 30                                                                                  | 60                                                                                  | 4                                                                                   | 25                                                                                  | 148,50          |
| CL111-0125-0001 | 125                                                                                 | 30                                                                                  | 8                                                                                   | 4                                                                                   | 4                                                                                   | 40,40           |
| CL111-0125-0004 | 125                                                                                 | 30                                                                                  | 14                                                                                  | 4                                                                                   | 7                                                                                   | 53,00           |
| CL111-0125-0007 | 125                                                                                 | 30                                                                                  | 20                                                                                  | 4                                                                                   | 10                                                                                  | 65,30           |
| CL111-0160-0001 | 160                                                                                 | 30                                                                                  | 16                                                                                  | 4                                                                                   | 8                                                                                   | 63,95           |
| CL111-0160-0002 | 160                                                                                 | 30                                                                                  | 20                                                                                  | 4                                                                                   | 10                                                                                  | 66,10           |

\* see the website for more products





#### EXPERT'S ADVICE:

- ▶ CL091 cutters are dedicated for rounding of edges and milling of decorative profile in solid wood.
- ▶ CL121 bevelling cutters may be used for milling at an angle of 45 degrees of narrow plane and for bevelling edges in solid wood.
- ▶ 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 request 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 cutter, quarter round, concave and 45 bevelling with soldered HSS knives

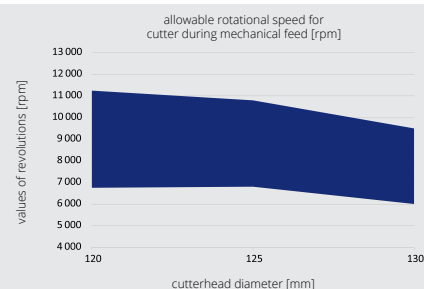
- ▶ cutters with soldered HSS knives made of high-quality high-speed steel
- ▶ wide series of types (diameter / width of carbide) allows selecting correct tool for the given processing and type of machine
- ▶ for milling of soft wet, raw or medium-hard wood on bottom-spindle milling machines, single- and double-sided sizing and tenoning machines and multi-head planers with mechanical feed
- ▶ in sawmilling most often used for bevelling or rounding of edges in structural beams, pales for fences and other wooden components

| Index           |  |  |  |  |  |  | CATALOGUE PRICE |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------|
|                 | mm                                                                                  | mm                                                                                  | mm                                                                                   |                                                                                       |                                                                                       |                                                                                       | eur/pc.         |
| CL091-0120-0003 | 120                                                                                 | 30                                                                                  | 13                                                                                   | 4                                                                                     | R                                                                                     | 8                                                                                     | 57,00           |
| CL091-0120-0004 | 120                                                                                 | 30                                                                                  | 13                                                                                   | 4                                                                                     | L                                                                                     | 8                                                                                     | 57,00           |
| CL091-0120-0005 | 120                                                                                 | 30                                                                                  | 17,5                                                                                 | 4                                                                                     | R                                                                                     | 12,5                                                                                  | 57,55           |
| CL091-0120-0006 | 120                                                                                 | 30                                                                                  | 17,5                                                                                 | 4                                                                                     | L                                                                                     | 12,5                                                                                  | 57,55           |
| CL091-0160-0001 | 160                                                                                 | 30                                                                                  | 23                                                                                   | 4                                                                                     | R                                                                                     | 18                                                                                    | 77,85           |
| CL091-0160-0002 | 160                                                                                 | 30                                                                                  | 23                                                                                   | 4                                                                                     | L                                                                                     | 18                                                                                    | 77,85           |
| CL121-0120-0002 | 120                                                                                 | 30                                                                                  | 15                                                                                   | 4                                                                                     | L                                                                                     | -                                                                                     | 44,15           |
| CL121-0130-0002 | 130                                                                                 | 30                                                                                  | 20                                                                                   | 4                                                                                     | L                                                                                     | -                                                                                     | 51,40           |
| CL121-0140-0002 | 140                                                                                 | 30                                                                                  | 25                                                                                   | 4                                                                                     | L                                                                                     | -                                                                                     | 63,15           |
| CL121-0160-0002 | 160                                                                                 | 40                                                                                  | 35                                                                                   | 4                                                                                     | L                                                                                     | -                                                                                     | 92,05           |

\* see the website for more products

**EXPERT'S ADVICE:**

- Profiles of depth up to 9 mm may be executed by main knives of the cutterhead (e.g. profile of deck board). Using such solution and a pitch located along the slots it is easy to process any width of the board.
- You need to execute profile for a deck board on straight knives? We can execute such profile, but its depth should not exceed 3-times thickness of the knife.
- Versatility of the tool - one tool may be used to execute various rounds or chamfers by quick exchange of the knives.



## Cutterhead for rounding and bevelling

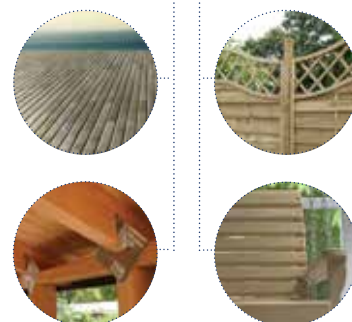
with insert HSS knives

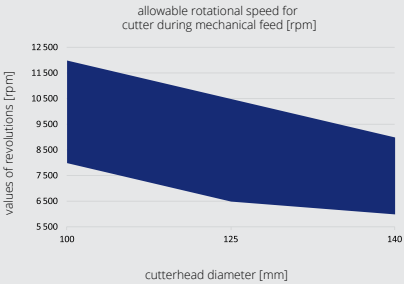
- cutterhead made of light aluminium alloy and equipped with knives for planers HSS - standard equipment of the cutterhead includes set of knives with various radii and chamfers lengths
- adjustable rounding or chamfering tips depending on width of processed material - large adjustments of the processed material (cutterheads available in widths from 130 to 240 mm)
- operating of cutterhead make it possible to obtain very good surfaces of processed materials and wide range of dimensions allows selecting suitable tool for the given processing and type of the machinery
- in woodworking plants most often used for bevelling or rounding of edges of various wooden components: structural beams, pales for fences etc.

| Index           |  |  |  |  | CATALOGUE PRICE |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|
|                 | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     | eur/pc.         |
| LJ180-0125-0001 | 125                                                                                 | 40                                                                                  | 130                                                                                 | 2/2+2                                                                               | 326,45          |
| LJ180-0125-0002 | 125                                                                                 | 40                                                                                  | 140                                                                                 | 2/2+2                                                                               | 343,15          |
| LJ180-0125-0003 | 125                                                                                 | 40                                                                                  | 190                                                                                 | 2/2+2                                                                               | 421,80          |
| LJ180-0125-0004 | 125                                                                                 | 40                                                                                  | 230                                                                                 | 2/2+2                                                                               | 486,15          |
| LJ180-0125-0005 | 125                                                                                 | 40                                                                                  | 240                                                                                 | 2/2+2                                                                               | 500,40          |

| Index           |  |  |  |  |  | CATALOGUE PRICE |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|
|                 | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     | eur/pc.         |
| LJ180-0000-0001 | 25                                                                                  | 28                                                                                  | 5                                                                                   | R 8                                                                                 | 2L+2R                                                                               | 39,00           |
| LJ180-0000-0002 | 25                                                                                  | 28                                                                                  | 5                                                                                   | R 5                                                                                 | 2L+2R                                                                               | 39,00           |
| LJ180-0000-0003 | 25                                                                                  | 26                                                                                  | 5                                                                                   | R 3                                                                                 | 2L+2R                                                                               | 39,00           |
| LJ180-0000-0004 | 25                                                                                  | 28                                                                                  | 5                                                                                   | bevel 45°-length 8                                                                  | 2L+2R                                                                               | 39,00           |
| LJ180-0000-0005 | 25                                                                                  | 25                                                                                  | 5                                                                                   | bevel 45°-length 8                                                                  | 2L+2R                                                                               | 39,00           |

\* see the website for more products





**EXPERT'S ADVICE:**

- ▶ Light body made of aluminium alloy is very important part of this cutterhead.
- ▶ Light body extends life time of the driving system components, such as shafts or bearings, and reduces power consumption from the motor - weight of this cutterhead is 50% lower than in standard version with body made of steel.
- ▶ Knives made of high-speed steel (HSS) are also available as an additional equipment for this cutterhead.



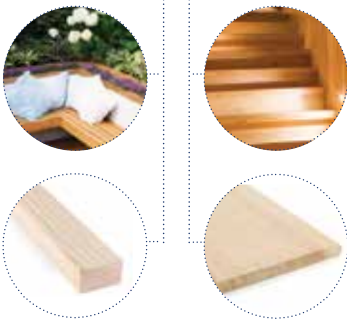
## Planing cutterhead

with four/six knives

- ▶ cutterhead made of light aluminium alloy
- ▶ option to execute profiles on knives with depth up to 3-times thickness of the knife (e.g. pattern of a deck board)
- ▶ option to install knives for planers with insert HM + option to execute cutterhead with the other diameter and width and number of teeth
- ▶ in sawmilling used on multi-head planers with mechanical feed for planing of wood after cutting process

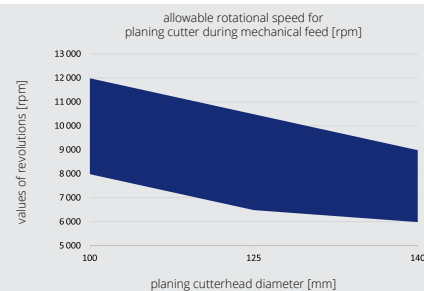
| Index           |     |    |     |   | CATALOGUE PRICE |
|-----------------|-----|----|-----|---|-----------------|
|                 | mm  | mm | mm  |   | eur/pc.         |
| LJ150-0125-0006 | 125 | 40 | 200 | 4 | 278,65          |
| LJ150-0125-0007 | 125 | 40 | 230 | 4 | 323,80          |
| LJ160-0140-0001 | 140 | 40 | 230 | 6 | 394,40          |

\* see the website for more products



**EXPERT'S ADVICE:**

- Quality of processed surface depends not only on quality of knives in the cutterhead but also on correct setting of knives with respect to each other.
- Please remember that selection of the given type of knife depend on density and hardness of processed material.
- Knife should not protrude outside the cutterhead by more than twice its thickness (e.g. knife of thickness 3 mm should not protrude by more than 6 mm).



## Knife for planers

for planing of wood on planing machines

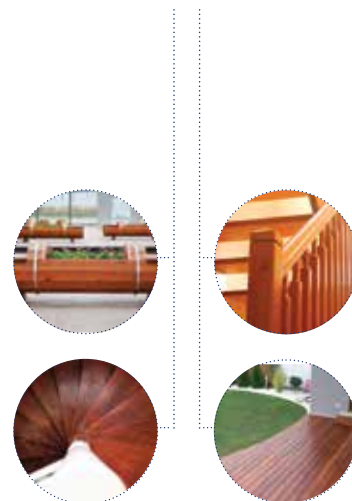
- for planing of structural components of wooden posts, hand-rails, stair treads before profiling
- HSS PREMIUM and STANDARD knives differs by execution; HSS PREMIUM knife is executed in I accuracy class while HSS STANDARD in II accuracy class
- HSS STANDARD knife is recommended for processing of soft wood while HSS PREMIUM for processing of hard wood (deciduous)
- in sawmilling very often used in planing cutterheads on multi-head machine tools - four-sided for planing of wood planes



| Index                    |  |  |  |  | Knife material | Processed material | CATALOGUE PRICE |
|--------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------|--------------------|-----------------|
|                          | mm                                                                                  | mm                                                                                  | mm                                                                                  |                                                                                     |                |                    | eur/pc.         |
| <b>NS135-0200-0002</b>   | 200                                                                                 | 30                                                                                  | 3,0                                                                                 | 43°                                                                                 | HSS STANDARD   | Soft wood          | <b>7,95</b>     |
| ◦ <b>NS135-0200-0001</b> | 200                                                                                 | 35                                                                                  | 3,0                                                                                 | 43°                                                                                 | HSS STANDARD   | Soft wood          | <b>8,00</b>     |
| <b>NS135-0230-0001</b>   | 230                                                                                 | 30                                                                                  | 3,0                                                                                 | 43°                                                                                 | HSS STANDARD   | Soft wood          | <b>8,60</b>     |
| ◦ <b>NS135-0230-0002</b> | 230                                                                                 | 35                                                                                  | 3,0                                                                                 | 43°                                                                                 | HSS STANDARD   | Soft wood          | <b>9,35</b>     |
| <b>NS130-0200-0002</b>   | 200                                                                                 | 30                                                                                  | 3,0                                                                                 | 43°                                                                                 | HSS PREMIUM    | Hardwood           | <b>10,30</b>    |
| <b>NS130-0200-0001</b>   | 200                                                                                 | 35                                                                                  | 3,0                                                                                 | 43°                                                                                 | HSS PREMIUM    | Hardwood           | <b>10,40</b>    |
| <b>NS130-0230-0001</b>   | 230                                                                                 | 30                                                                                  | 3,0                                                                                 | 43°                                                                                 | HSS PREMIUM    | Hardwood           | <b>11,20</b>    |
| <b>NS130-0230-0002</b>   | 230                                                                                 | 35                                                                                  | 3,0                                                                                 | 43°                                                                                 | HSS PREMIUM    | Hardwood           | <b>12,15</b>    |

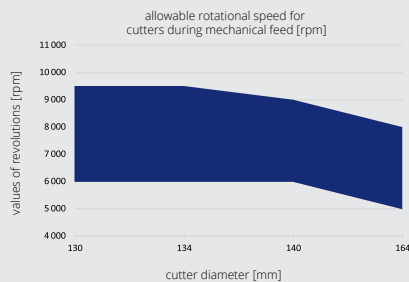
o- per order

\* see the website for more products





Tools in ACTION!

**EXPERT'S ADVICE:**

- ▶ These cutters can be used for milling of components with various thickness using adjustment of cutters height with spacers.
- ▶ It is also possible to round edge of processing component or chamfer (by rotation of cutter by 180°) the profile using bottom and top cutter.
- ▶ The sets should be sharpened as a set from one fixture to maintain all diameter dimensions - it has a significant impact on correct operation of the set after sharpening.
- ▶ On request we are able to execute atypical cutters - based on drawing of the cutter of milled component and according to profile supplied by the customer.



## Set of cutters /ZFF/ for rounding and bevelling with soldered HSS knives

- ▶ cutter with soldered knife HSS made of high-quality high-speed steel - wide series of types allows selecting correct tool for the given processing and type of machine
- ▶ recommended for milling of soft wet, raw or medium-hard wood (pine, spruce, fir, birch)
- ▶ used in multi-head planers with mechanical feed and bottom-spindle milling machines
- ▶ in sawmilling most often used for bevelling or rounding of edges in structural beams, pales for fences, components for benches and tables, etc.

| Index           | Type   |  mm |  mm |  mm |  | CATALOGUE PRICE<br>eur/pc. |
|-----------------|--------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------|
| CL540-0134-0001 | ZZF.01 | 134                                                                                    | 40                                                                                       | 16-35                                                                                    | 4                                                                                     | 202,15                     |
| CL530-0134-0002 | ZZF.01 | 134                                                                                    | 40                                                                                       | 16-35                                                                                    | 4                                                                                     | 202,15                     |
| CL540-0134-0002 | ZZF.02 | 134                                                                                    | 40                                                                                       | 26-60                                                                                    | 4                                                                                     | 220,00                     |
| CL530-0134-0001 | ZZF.02 | 134                                                                                    | 40                                                                                       | 26-60                                                                                    | 4                                                                                     | 220,00                     |
| CL540-0134-0003 | ZZF.03 | 134                                                                                    | 40                                                                                       | 36-85                                                                                    | 4                                                                                     | 311,85                     |
| CL540-0134-0004 | ZZF.03 | 134                                                                                    | 40                                                                                       | 46-105                                                                                   | 4                                                                                     | 324,20                     |

\* see the website for more products

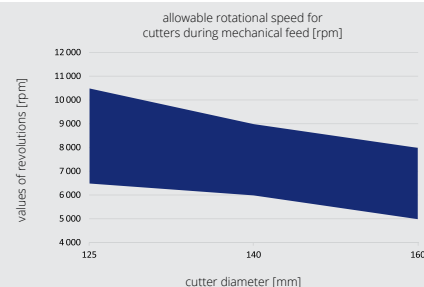




Tools in ACTION!

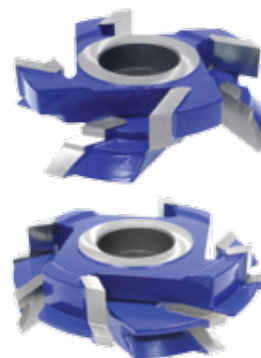
**EXPERT'S ADVICE:**

- By using these tools it is possible to machine components with various thickness - even to 45 mm using spacers.
- CL530 tools (sets of cutters for deck board) are adapted for operation at the same time together with CL560 cutters - for logs imitation.
- The sets should be sharpened as a set from one fixture to maintain all diameter dimensions - it has a significant impact on correct operation of the set after sharpening.
- On request we are able to execute atypical cutters - based on drawing of the cutter of milled component and according to profile supplied by the customer.



## Set of cutters /ZFP/ for floor boards and /ZFB/ for wainscot with soldered HSS knives

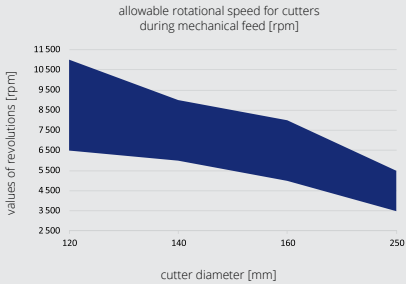
- cutter with soldered knife HSS made of high-quality high-speed steel - wide series of types allows selecting correct tool for the given processing and type of machine
- recommended for milling of soft wet, raw or medium-hard wood (pine, spruce, fir, birch)
- ZFP cutters - usually used for deck boards for terraces, patio or garden houses
- ZFB cutters - designed for wainscot, soffit lining, lining board and façade board



| Index               | Type   |  mm |  mm |  |  | CATALOGUE PRICE<br>eur/pc. |
|---------------------|--------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|
| ZFP for floor board |        |                                                                                        |                                                                                        |                                                                                     |                                                                                     |                            |
| CL530-0140-0019     | ZFP.01 | 140                                                                                    | 40                                                                                     | 16-29                                                                               | 4                                                                                   | 232,35                     |
| CL530-0140-0020     | ZFP.02 | 140                                                                                    | 40                                                                                     | 28-45                                                                               | 4                                                                                   | 260,70                     |
| ZFB for wainscot    |        |                                                                                        |                                                                                        |                                                                                     |                                                                                     |                            |
| CL580-0140-0001     | ZFB.01 | 140                                                                                    | 40                                                                                     | 16-30                                                                               | 4                                                                                   | 307,60                     |

\* see the website for more products





EXPERT'S ADVICE:

- ▶ Longitudinal connection of wood from short or longer material sections is used to: - obtain long items using shorter boards or slats made of lower-quality raw material; - to obtain higher quality product after removal of knots and defects; - manage the wastes.
- ▶ Longitudinal connection is used for production of: - construction timber (beams, square-sawn timber, barks, boards, laths); - bend structures (rafter framing with various shapes); - wooden door and window joinery (posts, balustrades); - components of stairs structure; - wooden (posts, balustrades); - and in model-making.

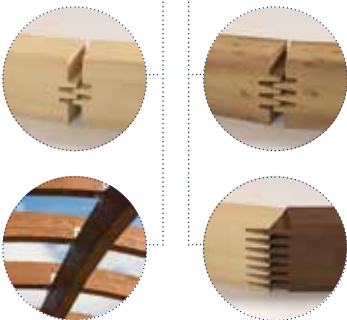


## Cutter with soldered HSS knives for glue joints (mini-dovetails) longitudinal connection

- ▶ cutters with soldered HSS knives made of high-quality high-speed steel
- ▶ option to process various widths of materials and to connect CL602 cutters in sets - executed connection distinguishes with very high strength and rigidity
- ▶ used on bottom-spindle milling machines, single- and double-sided sizing and tenoning machines with mechanical feed
- ▶ milling of wedged joints on fronts of components with longitudinal connection with linear contact on a plane - herringbone or straight (CL602)

| Index           |  |  |  |  |  |  |  | CATALOGUE PRICE |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------|
|                 | mm                                                                                  | mm                                                                                  | mm                                                                                  | mm                                                                                    | mm                                                                                    |                                                                                       |                                                                                       | eur/pc.         |
| CL600-0140-0001 | 140                                                                                 | 40                                                                                  | 20 - 50                                                                             | 10                                                                                    | 13                                                                                    | 2                                                                                     | 4                                                                                     | 293,50          |
| CL600-0140-0002 | 140                                                                                 | 40                                                                                  | 20 - 60                                                                             | 10                                                                                    | 13                                                                                    | 2                                                                                     | 4                                                                                     | 305,00          |
| CL601-0140-0001 | 140                                                                                 | 40                                                                                  | 25 - 40                                                                             | 12                                                                                    | 21                                                                                    | 3                                                                                     | 4                                                                                     | 281,50          |
| CL601-0140-0002 | 140                                                                                 | 40                                                                                  | 25 - 50                                                                             | 12                                                                                    | 21                                                                                    | 3                                                                                     | 4                                                                                     | 310,00          |
| CL601-0140-0003 | 140                                                                                 | 40                                                                                  | 25 - 60                                                                             | 12                                                                                    | 21                                                                                    | 3                                                                                     | 4                                                                                     | 344,75          |
| CL602-0250-0001 | 250                                                                                 | 50                                                                                  | 28,6                                                                                | 10                                                                                    | 3,8                                                                                   | 7                                                                                     | 6                                                                                     | 331,25          |

\* see the website for more products



**EXPERT'S ADVICE:**

- Possibility to execute counterblades.
- Blades and counterblades made also to order according to technical drawing or model piece, taking into consideration above mentioned sizes.
- Material from chipper is used for production of paper and may be used as litter or fuel.
- Effective use of wastes: pellet, briquette, fuel chips - woodchips are ecological and economical and cost effective biomass fuel produced from wood wastes.

## Blades and counterblades for chippers and log rounding machines

made of high-speed steel HSS

- made of high quality tool steel, characterized by high impact strength and ductility
- high hardness of the blades from 55 ÷ 60 HRC
- blade angle  $30^\circ \div 40^\circ$ , depending on the application and type of processing on the machine
- ideal for crushing of wooden components, branches, fuel crop and reeling wooden log to the required diameter

| Index / Subgroup |  |  |  | CATALOGUE PRICE                                                                     |
|------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                  | mm                                                                                  | mm                                                                                  | mm                                                                                  | eur/pc.                                                                             |
| <b>LJ700-</b>    | 10 - 1000                                                                           | 10 - 500                                                                            | 2 - 30                                                                              |  |

o- per order

\* see the website for more products





**EXPERT'S ADVICE:**

- ▶ Especially recommended for cleaning of tools that cut raw, wet wood and strongly contaminated with resin.
- ▶ It is perfect for cleaning of dirty machine parts - it should be sprayed directly on the cleaned surface and left for 5-15 minutes to dissolve the dirt. After that time please wipe the surface with a cloth to remove the dirt.
- ▶ The best results are achieved by immersion: immerse cleaned object in the liquid GO Cleaner for 15 - 30 minutes, then pull it out and wipe with a cloth – concerns only tools like saw blades, cutters, cutterheads, drill bits.
- ▶ In case of light soiling you may dilute GO Cleaner with water in proportion 1:1, max. 1:2, but its time of reaction decreases so the manufacturer recommends using it in an undiluted form.



**GO Cleaner liquid**  
for cleaning and washing of tools and machinery

- ▶ as one of the few on the market, is not subjected to the requirements of ADR, what significantly reduces transport costs (substance is not combustible)
- ▶ it is safe for human use, does not contain potassium hydroxide which is strongly corrosive substance - GO Cleaner may be neutralised with water, it does not destroy cloths
- ▶ it is produced on the basis of alkaline compounds containing surfactants and is a highly moisturizing, penetrating and removing dirt
- ▶ two-task cleaner: to separate dirt from the surface being cleaned and to protect the cleaned surface against external factors

| Index           | Capacity | Unit | CATALOGUE PRICE |
|-----------------|----------|------|-----------------|
|                 |          | pcs. | eur/pc.         |
| TO100-0000-0500 | 500ml    | 1    | 4,50            |
| TO100-0005-0000 | 5L       | 1    | 32,50           |
| TO100-0010-0000 | 10L      | 1    | 60,00           |
| TO100-0020-0000 | 20L      | 1    | 110,00          |

\* see the website for more products





## TOOLS UPON REQUEST

On request we execute custom tools with different technical parameters depending on the application and needs of the customer.

## DO YOU NEED A TYPICAL TOOL FROM THE GROUP OF THE FOLLOWING PRODUCTS?

- ▶ circular saw blades with knives HM or DIA
- ▶ knives for planers HSS, HM or commercial
- ▶ straight or profile arbor cutters with HSS, HM or DIA knives
- ▶ straight or profile cutterheads with 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.



Fabryka Pił i Narzędzi

WAPIENICA Sp. z o.o.

T. Regera 30 st.

43-382, Bielsko-Biała, Poland

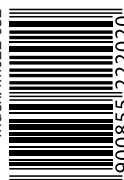
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