

# WOODWORKING MACHINERY



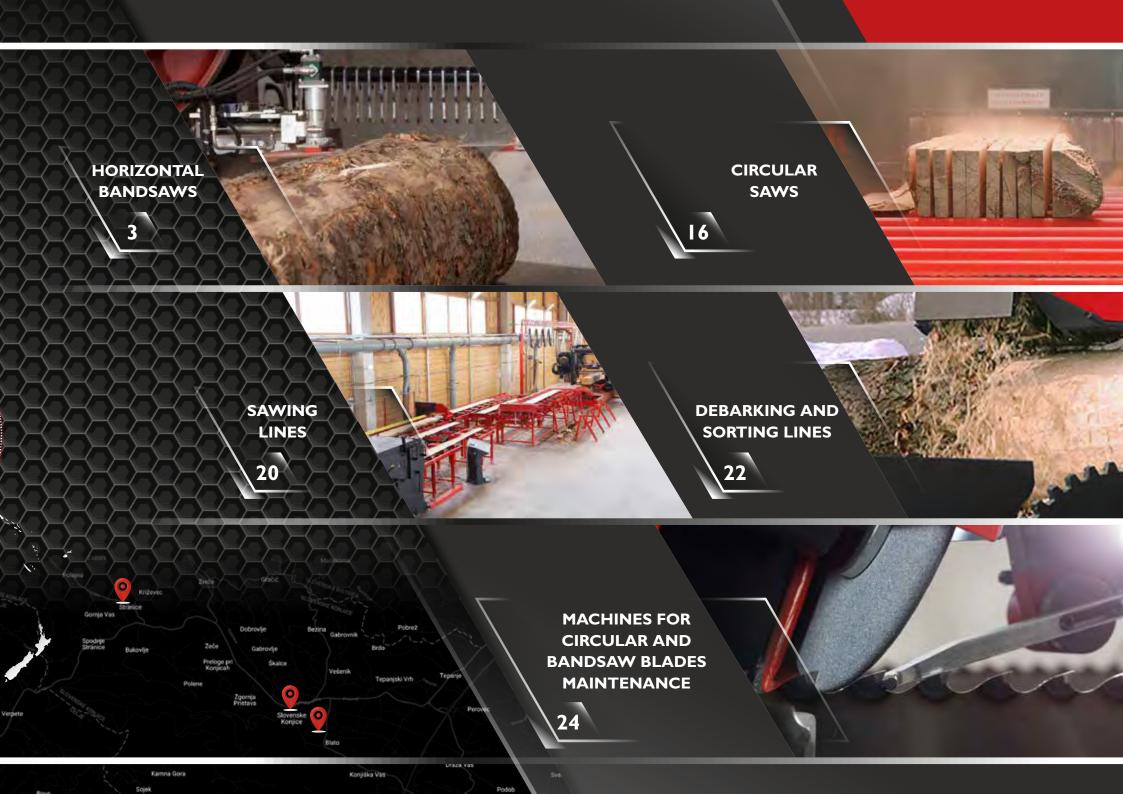
SAWING LINES

DEBARKING AND
SORTING LINES

MACHINES FOR CIRCULAR AND BANDSAW BLADES MAINTENANCE



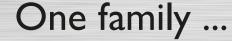




This company has its roots in experienced sawmilling family.

After years of producing bandsaws in the garage at his house, his desire to display innovative technologies led Vladimir Wravor to the establishment of the WRAVOR company.





WRAVOR was born and grew in the heart of the Pohorje forests where dealing with timber is in people's blood. Having started as a small company, with its roots in the love for wood and its processing, grew a successful company with a tradition and experience, known worldwide and with solid foundation for the future.

Company's main activity is to design and build machines

Principally horizontal logbandsaws which can be installed either independently or in connection with conveyors and multirips in sawing line, and resulting as a combination of high technology with a minimal cost of labour and premium cutting capacity.

We are proud to see our machines provide work and income to small and middle sized sawmills or they are integrated in big sawmills all around the world. WRAVOR machines are cutting huge amounts of diverse wood pending from domestic to exotic hardwood. What truly fills us with pride is that customers who run our machines, always come back to us for a next need.

Once Wravor, always Wravor.



### **QUALITY**

High - tech level of production and mounting high quality components from recognized suppliers.



### **FLEXIBILITY**

We do not offer standard machines, but all custom made according to requirements of the customer.



# **CUSTOMER SERVICE**

We are open for any questions and help also after the warranty period has expired, with our service team all over the world we enable that our machinery never stop.



### **RESPONSIVENESS & SERVICE**

Quickly respond to all customer queries and in case of problems we solve them as soon as possible.





# ... many innovations.

### **CERTIFICATES & ACHIEVEMENTS**

Founder and general manager of the company Vladimir Wravor received the award for outstanding business achievements from Chamber of commerce and industry Slovenia.

WRAVOR became a famous and wellknown brand and standard of quality in its branch. it received awards as exhibitors for best technical achievements in the field of woodworking technology.

All products are certified according to CE quality norms and Russian GOST standard of quality.

# INNOVATION AND OWN DEVELOPMENT

We are always looking for new solutions how to improve machines and we constantly introduce new technologies which are followed by competing companies.

# **YISION**



HQ, INDUSTRIAL PRODUCTION & warehouse in more than 10000m<sup>2</sup> in three locations

With all qualities that we can offer to customers is our vision clear. **»BE THE BEST«**!

# Horizontal bandsaws for large sawmills



Horizontal bandsaws for cutting hard exotic wood with big diameter

Specialty of these bandsaws is a robust and wide construction with additional reinforcements. All manipulation and control components including electronics are adapted to harsh weather conditions. We have also perfected form for easy transportation and installation.

**WRC 1550 AC** 

### **TECHNICAL DATA**

(4)

שוב ושפס אכ

Controled in a separate

operator cabin.

Diameter of main wheels: 1350 mm Width of main wheels: 160 mm Max. log diameter: Ø 1550 mm ON DEMAND Cutting lenght: Bandsaw blade lenght/width: 9800 / 180 mm\* Main motor power [kW]: 55 Kw/75 Kw Cutting capacity: up to 80 m<sup>3</sup> / 8h \* \*doublesided blade is +20mm wider

\* Option / additional equipment (page 14)

Twin log turners – movable for big logs

# Horizontal bandsaws for high productivity sawmils



Diameter of main wheels: 1250 mm

Width of main wheels: 135 mm

Max. log diameter: Ø 1250 mm

Cutting lenght: ON DEMAND

Bandsaw blade lenght/width: 9045 / 160 mm\*

Main motor power [kW]: 45/55 Kw

Cutting capacity: up to 55 m³ / 8h \*

\*doublesided blade is +20mm wider

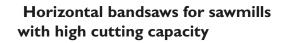
\* Option / additional equipment (page 14)

Pushing boards with guiding hand

Fast manipulating with log

Strong rails with extra weld hardened material, movable log turners, reinforced support, each roller movable (hight) + driven





WC IRRS AC

These saws in addition to its strong construction are distinguished by a high degree of automation, which contributes to high cutting capacity with minimum labour. They are upgraded with fully automated system with automatic setting of cut thickness and movements. In most cases are connected in production line with logdeck, outfeed conveyors and multirips.

**WRC 1225 AC** 

### TECHNICAL DATA

Diameter of main wheels: 1200 mm
Width of main wheels: 125 mm
Max. log diameter: Ø 1250 mm
Cutting lenght: ON DEMAND
Bandsaw blade lenght/width: 8685 / 150 mm\*
Main motor power [kW]: 30-45 Kw
Cutting capacity: up to 43 m³ / 8h \*

\*doublesided blade is +20mm wider

\* Option / additional equipment (page 14)

Side holders on rails

# Horizontal bandsaws for smaller sawmils





Automatical lubrication and cleaning

**WRC 1150 AC** 

### TECHNICAL DATA

Diameter of main wheels: 1150 mm Width of main wheels: 115 mm Max. log diameter: Ø 1150 mm ON DEMAND Cutting lenght: Bandsaw blade lenght/width: 8190 /140 mm\* Main motor power [kW]: 22-45 Kw

up to 20-40 m<sup>3</sup> / 8h \* Cutting capacity: \*doublesided blade is +20mm wider

\* Option / additional equipment (page 14)







Hydraulics covered under the deck in the rails with galvanized hydraulical pipes

Guiding hand





LUC IOSO AC

Air-conditioned cabin on

the sawmill.

Horizontal bandsaws are designed for individuals for which sawmilling is not main activity but only supplementary. This bandsaws are simple, but still sufficiently equipped with hydraulic components for simple and easy work. Saws are customized for easy installation and minimal use of labour.

**WRC 1050 AC** 

### TECHNICAL DATA

Diameter of main wheels: 1050 mm

Width of main wheels: 100 mm

Max. log diameter: Ø 1050 mm

Cutting lenght: ON DEMAND

Bandsaw blade lenght/width: 7470 / 120 mm\*

Main motor power [kW]: 18.5-45 Kw

Cutting capacity: up to 30 m³ / 8h \*

\*doublesided blade is +20mm wider

\* Option / additional equipment (page 14)

Wide range of log manipulating equipment

# Special horizontal bandsaws

# Autmatical bandsaws for cutting veneer

This type of bandsaws are designed and manufactured with years of engineering and testing on field directly with customers. A lot of patents distinguishes a fully automatic bandsaw, 2 side cutting veneer with accuracy of 0.01mm!, automatical setting of thickness, movement and removal of lamellas.

# WRC 1050 VENEER

It can be equipped with prism loading ramp ...

### TECHNICAL DATA

Diameter of main wheels: 1050 mm
Width of main wheels: 115 mm
Dimension of prisms: 850/750 mm
Cutting lenght: ON DEMAND

Bandsaw blade lenght/width: 7470 / 140 mm\* Main motor power [kW]: 30-55 Kw

Main motor power [kW]: 30-55 Kw
Cutting capacity: up to 850 lamels/8h \*

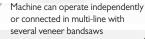
\* Option / additional equipment (page 14)



Adjustable hand for boards

Additional sawdust exhauster system with ventilator on machine.

... or automatical logdeck ...



... and outfeed conveyor with

robot manipulator.



# **Cutting glass wool and glulam**

This machine has special holders that can be set with pressure and high level of automation and manipulation of cut material.





# **Cutting plastics**

This machine is equipped with vacuum holders or with robotic arm for handling workpieces.



# **Bandsaw with edgers**

We can add circular saws on every machine for edging boards at the same time.



# Options/additional euipment

Options / equipment on the rails





mounted in concrete





grip with one cylinder

LOG TURNER



standard

LIFTING + MOVEMENT



mechanical holder





angle



bandsaw for big logs



grip with two cylinders



+ mechanical grip lift



movable logturner



lifting



double movable logturner



Elevated rails with automatical system for waste cleaning.



grip with two cylinders + hydraulical lifting of grip pins



double logturner



lifting + movement of roller

# **Additional**



multifunctional joystick

rearview mirror



laser

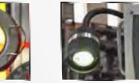


display



camera





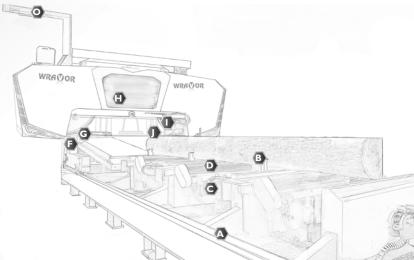
magnifying glass





automatical blade cooling and greasing







Options / equipment on the headrig

### MOVEMENT UP/DOWN



with spindles



manual

BANDSAW BLADE



BANDSAW BLADE

manual – hydraulic



WHEELS

welded



**PRECUTTER** 

electrical



with chains



hydraulical



automatical-hydraulical tensioning +accumulator



cast steel



hydraulical



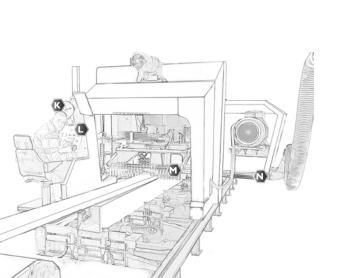
fast spindels - servo controled



pressure with oil mist



double hydraulical or electrical



SETTING OF CUT THICKNESS



manual on the scale



on the machine

COMMAND PANEL



mechanical



mechanical opening



CABLE CARRIER

steel rope



with computer



command panel - self standing



hydraulical



preparation for ventilation with hose



C profile + cable wheels



with computer, automatical setting



air-conditioned command panel separate or on machine



additional guiding hand



ventilator



plastic cable carrier – chain

# Circular saws for cuting boards by width

# Circular sidesaw type 500/ 500S



TECHNICAL DATA

Main motor

500

manual setting of cutwidth 7,5 kW / 9,5 kW 100 mm

max. cutting height circular saw max cutting lenght

500 S

digital setting of cutwidth 7,5 kW / 9,5 kW 100 mm

Ø 350 / 30 Ø 350 / 30 6,2 m 6,2 m Circular crossaw typ 700A









### **TECHNICAL DATA**

Main motor 3/5,5 kW
max. cutting height 100 mm
circular saw Ø 400 / 40 mm
max. cutting width (it depends from height) 900 mm

### **INCLUDED IN THE LINE**

MACHINES CAN BE INDEPENDED OR INCLUDED IN LINE WITH MEH/AUTO. TRANSPORTERS







# Circular crossaw typ 700B - pneumatical



### **TECHNICAL DATA**

Main motor6kWCutting thickness150 mmCutting width1000 mmCircular blade- diameter500 mm

# Circular crossaw typ 800A -pneumatical



### **TECHNICAL DATA**

Main motor6kWCutting thickness100 mmCutting width700 mmCircular blade- diameter400 mmAutomatical movement of crossaw cut





# Circular crossaw typ 800B -pneumatical



### **TECHNICAL DATA**

Main motor 9,2kW / 11 kW max. cutting height 800/50 mm circular saw ∅ 550 / 40mm







# Crossaws for cutting boards by lenght – circular saws

# 750 20-100 (single axis - edger)







### **TECHNICAL DATA**

Main motor: 22kW
Min/max cutthickness 20/100mm
Max cutting width: 600mm
Diameter of circular blade: 350/80mm
Max number of circular blades: 4 pieces
Number of movable blades: 1 piece

Option: computer setting of cuttwidth / brushes / additional laser / sawdust colector with automatical belt

# 750 20-120 (single axis ) / (2 x) / (3 x ) / (4 x ) / B – brushes







### **TECHNICAL DATA**

main motor: 22/30/37 kW
min/max cutthickness 20/120mm
max cutting width: 900-1000 mm
diameter of circular blade: 400/90mm
max number of circular blades: 8 pieces

number of movable blades: I piece  $/ 2 \times -2$  pieces  $/ 3 \times -3$  pieces  $/ 4 \times -4$  pieces

computer setting of cuttwidth

**Option**: brushes / additional laser / sawdust colector with automatical belt

# 750 20-160 (single axis ) / (2 x) / (3 x) / (4 x) / b - brushes





Ø 200

1600 mm

15 mW

### **TECHNICAL DATA**

Main motor

Min/max. Cutthickness

Max cutting width

Max. diameter of circular blades

Number of movable blades

Max. number of circular blades

Number of movable blades

Number of movable blades

Max. number of circular blades

Number of movable blades

Number of movable blades

opening for exhauster automatical conveyor for s awdust length

laser (number depends from movable blades)

**Option**: computer setting of cutthickness V 130 / V280, automatical infeed conveyor with centrator, automatical outfeed conveyor with sorting

### 750 40-200



### **TECHNICAL DATA**

Main motor 37 /45 /55 kW
Min/max. Cutthickness 40mm / 200 mm
Max cutting width 800 - 900
Max. diameter of circular blade 2 400 mm /90 mm

Max. diameter of circular blade Ø 400 mm /90 mm
Max. number of circular blades 10 + 10 pieces
opening for exhauster Ø 250

automatical conveyor for sawdust length 2200 mm laser 15 mW

**Option**: automatical outfeed conveyor with sorting



### 750 40-250



### **TECHNICAL DATA**

Main motor 45 /55 / 75 kW
Min/max. Cutthickness 40 mm / 250 mm
Max cutting width 600 - 700 mm
Max. diameter of circular blade Ø 450 mm / 90mm

Max. number of circular blades 10 + 10 pieces

opening for exhauster Ø 250

automatical conveyor for sawdust length

sawdust length 2200 mm laser 15 mW

**Option**: automatical outfeed conveyor with sorting

# INCLUDED IN THE LINE



























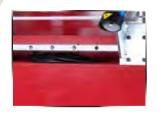


























# Sawing lines

### **SAWING LINE PROFI**



Combination of selected bandsaw and circular saws provide maximum output of finish products in small area.

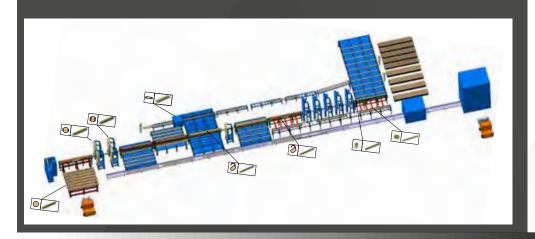
Min/ max diameter of log: depend of type of machine 120- 1500mm Min/max length of log: depend of type of machine 1-16m



- sawdust extraction
- circular crossaw for cutting boards by lenght
- loading ramp
- bandsaw
- exit & transversal auto transporters
- multiblade circular saw for cutting boards by width

# Sawing line WMH (Wravor multi head)

Sawing line is designed for sawmills which cut mainly small diameter logs and need automatic manipulation and operation.



### **MULTI CUT**

SAWING LINE IS COMBINED WITH 2 different types of bandsaws, for optimum efficiency of different log diameters.

On separated lines we can cut small to big diameter and each line is optimized for their orders. Crossaws and circulars saws are computer- controled for fast changing of different measures. Automatic conveyors collect final products on sorting and stacking lines.







### **SAWING LINE CS** with circular saws



Automatic sawing line with multirip enables high productivity of cutted boards. It can be installed as parts of bandsaw cutting line or separately.







### **DEBARKERS**

Debarkers for diameters from 200-1500mm with milling edges of log ends. We also offer sorting for debarked logs by lenght and diameter.





# Loading and sorting

# Self loading arms

Self loading arms are recomended for middle to small sized bandsaws, with lower capacity of manipulated logs.

### Conveyors for boards and prisms





Robust outfeed conveyor  $\,$  for boards works in automatical mode with sorting left/ right or straight.

### Loading ramp i200 / i240 / i270 / i300







Optimum cutting capacity depends also from fast log feeding. We can offer wide range of logdecks for smal/big, short / long logs with automatical logloading.

### Transversal conveyor





Transversal conveyors round line with multirip and edger into fully automatical line.

# Outfeed conveyors + brushes







Cutted boards are removed from bandsaw by mechanical or automatical conveyor.

Boards can be cleaned with brushes.

# Conveyor for prisms



Is located infront of the band saw, where prisms move automaticaly to side transversal conveyor.

## Mechanical roller conveyor



## Automatical cleaning conveyor for waste



# Machines for circular and bandsaw blades maintenance

# Machine for manual sharpening circular blades type WCM TECHNICAL DATA Motor I - 0.37 kw 2800 rpm Tension 380 V Diameter of sharpening 90 - 180 mm 180 - 500 mm Distance between teeth 0 - 50 - 100 mm

# Automatical machine for sharpening circular blades type WCA TECHNICAL DATA Motor Tension Diameter of sharpening 90 - 180 mm 180 - 500 mm

Distance between teeth 0 - 50 - 100 mm

# Sharpening machine for bandsaw blades type 200 PROFI





## We offer wide range of machines for circular and bandsaw blades maintenance

# Machine for rolling bandsaw blades type WR with straighting table



# Machine for automatic pressing and egalizing bandsaw blades type WAE







### **TECHNICAL DATA**

Motor I,I kW I400 rpm

Tension 380 V
Thickness of blade 0,9 mm till 1,4 mm

Tooth height from 10 mm
Distance between teeth from 25 - 60 mm
Width of blade 70 - 250 mm
Pressing speed 30 t/min

**Options**: Machine for manual egalizing bandsaw blades type WE, Machine for manual pressing bandsaw blades type WP

# Automatic stellite tipping machine type Wravor WWS



# Automatical machine for side grinding stelite tipped blades type WCS





### **TECHNICAL DATA**

Bandsawblade thickness 0 - 9 mm
Tooth shape: all types
Tooth step 5 - 50 mm
Tooth side angle from 0° - 8°
Bandsawblade lenght from 5500 mm
Bandsawblade width 70 - 280 (300-350) mm



# performance by black series



Combination of high – tech equipment with frequency contolled motors and movements.

Soft start & stop starting



Robust and raised rails with automatical waste cleaners



Boards pushing hand with adjustable hight & additional side holders





Pressurized blade guidances with oil mist cooling
Automatical oil and grease lubricating
Tracking forecuter



All possible equipment for manipulating with log; movable logturners, patented fast log & prism turners, 2 levels of log grippers



Separated self standing control panel with seat and 2 joystick controling.



