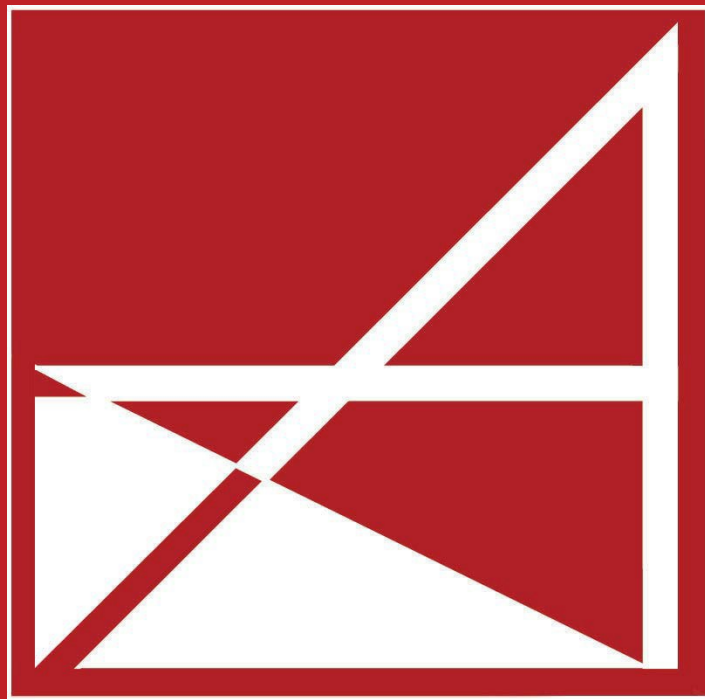


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# Tape power-saw bench of Avangard-LP-50



The Avangard-LP-50 bandsaw sawmill is designed for sawing logs with a diameter of up to 500 mm from any wood species (including hardwood) into a beam, an edged, one-side edged and unedged board, as well as a rail using bandsaw sawmills. Technical specification of sawmills allows for radial and tangential sawing of logs, as well as split sawing or breakdown of logs. Sawing is done in the horizontal plane by moving the band saw along the guideway with the

stationary position of the log being processed.

## Specifications of Avangard-LP-50 bandsav sawmill

Parameter	Value
Maximum log diameter, mm	500
Log length, m	1 ... 6,5
Maximum sawing height (timber thickness), mm	330
Saw pulley diameter, mm	520
Saw blade width, mm	32, 38
Bandsaw sawmill support type	rollers
Saw carriage motion drive	hand-operated
Cross piece lifting/lowering drive	hand-operated
Sawmill drive motor: type, power, kW	electric motor, 5.5
Overall dimensions L x W x H, m	8 x 2,2 x 2,05
Weight with guides, kg	1000

Watch the video of the machine [on the website](#) .

In the summary table, you can compare the [technical characteristics of band saws](#) .

# Tape power-saw bench of Avangard-LP-60



The first sawmills of that name were released by Avangard LLC in November 1996. Since then, the total number of our sawmills of this and other modifications has exceeded 10,000 copies. They work in almost all regions of Russia from Yuzhno-Sakhalinsk to Murmansk. Sawmills are sold both directly and through our dealer network.

One of the main advantages of our sawmills (including this model) is the design of the saw cross piece which provides two-support saw wheel shafts mount (and not single-sided support like most manufacturers can offer), which significantly reduces the load on them. The cross piece has a telescopic design with high rigidity and provides the convenience of hydraulic tension of band saws. The saw wheels are made of high quality castings and are well balanced.

At the moment, several modifications of this model are produced, the distinguishing characteristics of which are given in the table.

**Specifications of Avangard-LP-60 bandsaw sawmill**

Parameter	Value
Maximum log diameter, mm	650
Log length, m	1 ... 6,5
Maximum sawing height (timber thickness), mm	330
Saw pulley diameter, mm	560
Saw blade width, mm	32, 38
Bandsaw sawmill support type	rollers
Saw carriage motion drive	hand-operated
Cross piece lifting/lowering drive	Electric drive
Sawmill drive motor: type, power, kW	electric motor, 11
Gross installed power capacity, kW	11
Saw carriage motion guide type	standard
Overall dimensions L × W × H, m	8 × 2,2 × 2,05
Weight with guides, kg	1000

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of band saws](#).



# Tape power-saw bench with the petrol engine

## Avangard-LP-60-A



The Avangard-LP-60-A bandsaw sawmill is designed for sawing logs with a diameter of up to 650 mm from any wood species (including hardwoods) into a beam, an edged, one-side edged and unedged board, as well as a rail using band saw blades, corresponding to different types and diameters of wood. Technical specifications of sawmills allow for radial and tangential sawing of logs, as well as split sawing or breakdown of logs. Sawing is done in the

horizontal plane by moving the band saw blade along the guideway with the stationary position of the log being processed.

One of the main advantages of the sawmill is the design of the saw cross piece which provides two-support saw pulley shafts mount (and not single-sided support like most manufacturers can offer), which significantly reduces the load on them. The cross piece has a telescopic design with high rigidity and provides the convenience of hydraulic tension of band saw blades. The saw pulleys are made of high quality castings and are well balanced.

### Specifications of Avangard-LP-60-A bandsav sawmill

Parameter	Value
Maximum log diameter, mm	650
Log length, m	1 ... 6,5
Maximum sawing height (timber thickness), mm	330
Saw pulley diameter, mm	560
Saw blade width, mm	32, 38
Bandsaw sawmill support type	rollers
Saw carriage motion drive	hand-operated
Cross piece lifting/lowering drive	hand-operated
Sawmill drive motor: type, power	Lifan gasoline-powered engine 22 HP Honda Petrol gasoline-powered engine 20 HP
Gross installed power capacity, kW	11
Overall dimensions L × W × H, m	8 × 2,2 × 2,05
Weight with guides, kg	1000

In the summary table, you can compare the [technical characteristics of band saws](#).

Tape power-saw bench of Avangard-LP-80



The Avangard-LP-80 sawmill is equipped with enlarged saw pulleys with a diameter of 660 mm and an electromechanical drive of the saw carriage; it is designed for sawing logs with a diameter of up to 800 mm from any wood species (including hardwoods) into a beam, an edged, one-side edged and unedged board, as well as a rail using band saw blades, corresponding to different types and diameters of wood. Technical specifications of sawmills allow for radial and

tangential sawing of logs, as well as split sawing or breakdown of logs. Sawing is done in the horizontal plane by moving the band saw blade along the guideway with the stationary position of the log being processed.

One of the main advantages of our sawmill is the design of the saw cross piece which provides two-support saw pulley shafts mount (and not single-sided support like most manufacturers can offer), which significantly reduces the load on them. The cross piece has a telescopic design with high rigidity and provides the convenience of hydraulic tension of band saw blades. The saw pulleys are made of high-quality castings and are well balanced.

Specifications of Avangard-LP-60 bandsav sawmill

Parameter	Value
Maximum log diameter, mm	800
Log length, m	1 ... 6,5
Maximum sawing height (timber thickness), mm	380
Saw pulley diameter, mm	660
Saw blade width, mm	32, 38, 51
Bandsaw sawmill support type	rollers
Saw carriage motion drive	hand-operated and electric drive
Cross piece lifting/lowering drive	Electric drive
Sawmill drive motor: type, power, kW	electric motor, 11
Gross installed power capacity, kW	11
Saw carriage motion guide type	standard
Overall dimensions L × W × H, m	8 × 2,2 × 2,05
Weight with guides, kg	1000

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of band saws](#).

# **Tape power-saw bench Avangard-LP-80 S.E.N. with standard guides**



The band sawmill "Avangard LP-80 S. E. N." has a different design compared to other sawmills of our production. With the creation of this sawmill, a domestic band sawmill with a saw belt width of up to 50 mm appeared, able to compete in its class with the best Western models produced by SERRA (Germany), WOOD-MIZER (USA), PEZZOLATO (Italy), etc.

The device of a sawmill. The movable carriage of the portal type sawmill is welded from powerful thick-walled profile pipes, which gives it rigidity and weight, preventing vibrations during the sawing process. A telescopic saw traverse with a two-support system for attaching saw pulleys with a diameter of 660 mm and a band saw hydraulic tensioner moves along precision cylindrical guides. The band saw is supported during the sawing process by slotted gaps equipped with plates made of a special self-lubricating anti-friction material (oxafen), which ensures its precise positioning and significantly reduces the noise level during the sawmill operation.

The sawmill is controlled from a remote control panel. The panel is equipped with an electronic ruler that programs the thickness of the removed layers of wood, as well as a regular ruler for visual control. The speed of movement of the movable carriage along the sawmill guides is regulated by a frequency Converter, and the smoothness of its course is provided by a chain drive. All the above-mentioned design advantages of the new sawmill ensure high sawing accuracy and quality of the lumber surface.

Since the main factor determining the performance of a band sawmill is the speed of the log positioning operation on the guides during the sawing process, when developing a new sawmill, the task was to "put" it on the guides equipped with the necessary devices for turning and clamping logs weighing up to 3 tons. An additional condition was the unification of these guides in order to be able to use them for all types of sawmills serially produced by Avangard LLC. This task was successfully completed.

Specifications of Avangard-LP-80 S.E.N. bandsav sawmill with standard guides

Parameter	Value
Maximum log diameter, mm	800
Log length, m	1 ... 6,5
Maximum sawing height (timber thickness), mm	400
Saw pulley diameter, mm	660
Saw blade width, mm	51
Bandsaw sawmill support type	slit or combo
Saw carriage motion drive	Electric drive
Cross piece lifting/lowering drive	Electric drive
Sawmill drive motor: type, power, kW	electric motor, 18
Gross installed power capacity, kW	18,7
Saw carriage motion guide type	standard and mechanization
Overall dimensions L × W × H, m	8 × 2,6 × 2,2
Weight with guides, kg	1260

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of band saws](#).



# Tape power-saw bench Avangard-LP-80 S.E.N. with the mechanized guides



The horizontal band sawmill AVANGARD-LP-80 S. E. N. in full equipment belongs to the class of professional equipment for sawing round wood with a diameter of up to 600 mm for uncut and edged lumber. The structures of the movable saw carriage and guides for its movement are assembled from thick-walled profile pipes, which ensures their rigidity and lack of vibration.

Mechanized guides are equipped with hydraulic devices for loading, turning and fixing

raw materials during the sawing process, a hydroelectric station is included. AVANGARD LP-80 S. E. N. band sawmill with mechanized guides is not inferior to the best Western models produced by SERRA (Germany), WOOD-MIZER (USA), PEZZOLATO (Italy), etc.

All the mechanisms of the sawmill are controlled by one operator using 2 control panels.

## The electric control panel controls all the mechanisms of the saw carriage:

1. The main drive of saw pulleys with a power of 18.5 kW, equipped with a soft start device.
2. Drive for lifting and lowering the traverse with setting to the size of the electronic ruler.
3. Drive for longitudinal movement of the saw carriage with stepless speed adjustment depending on the load.
4. Drive debarker (input – output and rotation of the circular saw).
5. The drive for moving the combined support unit of the band saw, consisting of a pressure roller and a slot block mounted on a polished sliding rod.



## Options can be added to the basic configuration of the saw carriage:

1. Claw device for removing lumber during the reverse course of the saw carriage.
2. A container for collecting sawdust with an electrically controlled flap for automatic unloading at a specified location.
3. Laser cutting pointer complete with stand.



The hydraulic mechanisms of the sawmill guides are controlled from the second panel.



- The basic package includes:
- log loading mechanism;
  - chain tilters;
  - three pairs of side clips;
  - the equalizer log on the horizon.

- Mechanisms can be installed as additional option:
- axial movement of the log;
  - end clamps for forcibly pressing the sawn raw material ( in case of its deformation due to internal stress relief) to the support surfaces of the guides.



Specifications of Avangard-LP-80 S.E.N. bandsav sawmill with standard guides

Parameter	Value
Maximum log diameter, mm	800
Log length, m	1 ... 6,5
Maximum sawing height (timber thickness), mm	400
Saw pulley diameter, mm	660
Saw blade width, mm	51
Bandsaw sawmill support type	slit or combo
Saw carriage motion drive	Electric drive
Cross piece lifting/lowering drive	Electric drive
Sawmill drive motor: type, power, kW	electric motor, 18
Gross installed power capacity, kW	18,7
Saw carriage motion guide type	standard and mechanization
Overall dimensions L x W x H, m	8 x 2,6 x 2,2
Weight with guides, kg	1260

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of band saws](#).



# Comparative characteristics of tape power-saw benches

Parameter	LP-50	LP-60	LP-60-A	LP-80	LP-80 SEN
Maximum log diameter, mm	500	650		800	800
Log length, m	1...6,5				
Maximum sawing height (timber thickness), mm	330			380	400
Wheel diameter, mm	520	560		660	
Sawmill width, mm	32,38			32,38,51	51
Bandsaw sawmill support type	rollers				slit
Saw carriage motion drive	hand-operated			hand-operated and electric drive	Electric drive
Cross piece lifting/lowering drive	hand-operated	Electric drive	hand-operated	Electric drive	
Sawmill drive motor: type, power, kW	electric motor, 5.5	electric motor, 11	Lifan gasoline-powered engine 22 HP or Honda Petrol gasoline-powered engine 20 HP	electric motor, 11	electric motor, 15
Gross installed power capacity	5,5 kW	11 kW	22 or 20 HP	11,7 kW	15,7 kW
Saw carriage motion guide type	standard				standard and mechanization
Overall dimensions L × W × H, m	8 × 2,2 × 2,05			8 × 2,45 × 2,05	8 × 2,6 × 2,2
Weight with guides, kg	1000			1140	1260

# Disk power-saw bench of Avangard-KS-50-PK



The Avangard-KS-50-PK circular sawmill is a mill designed for sawing round raw materials with a diameter of up to 500 mm and a length of up to 6.2 m with two circular saw blades.

The sawmill is available only in a stationary version and consists of a movable saw carriage with circular saw blades and a dismountable frame with high-precision guides. The frame is equipped with hydraulics, including a device for loading logs, a turner and a device for fixing logs during sawing. The saw carriage includes a saw block consisting of two horizontal circular saws with a diameter of 400 mm, electromechanical drives for lifting and lowering the saw cross piece and

longitudinal movement, which have a smooth speed adjustment, as well as an additional option – an edge-trimming device (see below).

Hydraulic mechanisms installed on the frame allow to perform all operations with the log in the central "tray" formed by side clamps that provide automatic alignment of the raw material to be cut, which allows you to implement the following sawing scheme:

Sawing into half-timber and unedged boards



Sawing half-timber into edged boards



Cutting of edges of an unedged board



## Edge-trimming device

The saw carriage is equipped with an edge-trimming device. It consists of the vertically mounted saw blades that cut off the edges of the unedged board obtained as a result of sawing with the main horizontal saw blades. You can install up to four vertical saw blades working simultaneously, two of which are adjusted to the size by a special screw. The edge-trimming device can be switched on during the sawing process and switched off by lowering-lifting the saw shaft of the vertical circular saw blades by means of a lever.

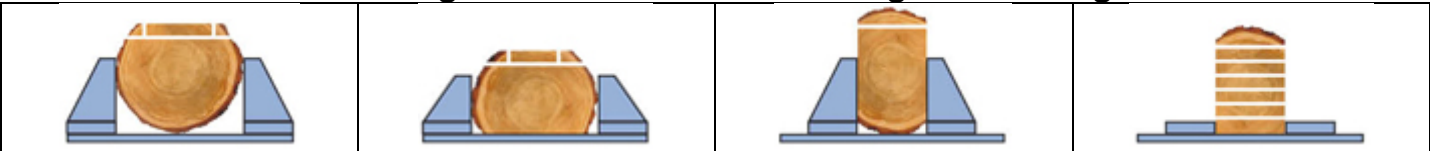


The edge-cutting device can be turned on during sawing and turned off by lowering and lifting the saw shaft of vertical circular saws by means of a lever mechanism.

Brief technical specifications:

Parameter	Value
Maximum thickness of a board to be trimmed	32 mm
Width of a board to be trimmed	100 - 200 mm
Diameter of saw blades	200 mm
Power	3 - 4 kW
Voltage	400 V, 50 Hz, 3-phase

The scheme of sawing with the use of the edge-trimming device:



All the mechanisms of the sawmill are controlled by one operator using 2 control panels.

The electric control panel controls all the mechanisms of the saw carriage:

- 1. All disk saw drives.
- 2. Drive for lifting and lowering the traverse with setting to the size of the electronic ruler.
- 3. Drive for longitudinal movement of the saw carriage with stepless speed adjustment depending on the load.



The hydraulic mechanisms of the sawmill guides are controlled from the second panel.

The basic package includes:

- log loading mechanism;
- chain tilters;
- three pairs of side clips;
- horizontal alignment of the log.



The mechanisms can be set as additional options:

- axial movement of the log;
- end clamps for forcibly pressing the sawn raw material (in case of its deformation due to internal stress relief) to the support surfaces of the guides.



## Specifications of Avangard-KS-50-PK circular sawmill

Parameter	Value
Maximum log diameter:	
- diameter	500 mm with edging, 300 mm in camber
- length	from 2 to 6.2 meters
The saw carriage:	
- diameter and amount of saw blades	2 × 400 mm, 2 × 250 mm
- power and amount of electric motors	2 × 11 kW, 1 × 4-5,5 kW
- the use of reverse	reset of sawn material
- lifting / lowering	electric drive
- horizontal travel drive / speed	Electromechanical / up to 40 m / min
Saw carriage guides	Mechanized
Setting the thickness of the board	by electronic ruler
Method for loading and positioning raw materials to be cut	hydraulic mechanism
Overall dimensions:	
- length with guides	10,0 m
- width	1,4 m
- height	2,0 m
Weight of the machine	2050 kg
<i>Completeness of delivery:</i> the machine (saw blade + guides), as well as:	
saw blade	-
electronic ruler	+
laser position indicator for horizontal saws	+

The machines can be equipped with 7.5 kW electric motors.

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of circular saws](#).

# Disk power-saw bench of Avangard-KS-50-EK



The sawmill is designed for sawing circular raw materials with circular saws with a diameter from 100 to 320 mm (sawing large diameters is performed with an additional intermediate edging of the log, with the condition that the cutting width is 300 mm). Raw material length up to 6.2 m.

The frame of the spatial saw carriage is welded from light profile pipes. The saw Assembly includes two horizontal circular saws with a diameter of 400 mm. Electromechanical drives

for lifting and lowering the saw traverse and longitudinal movement are mounted on the movable carriage. Mechanisms for clamping sawn raw materials are screw. The clamp-release is performed by rotating the screw, which has the right and left threads, by means of a handle or a battery wrench. Edging is carried out manually, using a hook-edger in the "tray" formed by side clips, the height of which is changed by their tilt using the handle.

## Specifications of Avangard-KS-50-EK circular sawmill

Parameter	Value
Maximum log diameter:	
- diameter	500 mm with edging, 300 mm in camber
- length	from 2 to 6.2 meters
The saw carriage:	
- diameter and amount of saw blades	2 × 400 mm, 2 × 250 mm
- power and amount of electric motors	2 × 11 kW, 1 × 4-5,5 kW
- the use of reverse	reset of sawn material
- lifting / lowering	electric drive
- horizontal travel drive / speed	Electromechanical / up to 40 m / min
Saw carriage guides	Non-mechanized
Setting the thickness of the board	by electronic ruler
Method for loading and positioning raw materials to be cut	manual using self-centering screw clips
Overall dimensions:	
- length with guides	10,0 m
- width	1,4 m
- height	2,0 m
Weight of the machine	1540 kg
<i>Completeness of delivery:</i> the machine (saw blade + guides), as well as:	
saw blade	-
electronic ruler	+
laser position indicator for horizontal saws	-

The machines can be equipped with 7.5 kW electric motors.

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of circular saws](#).

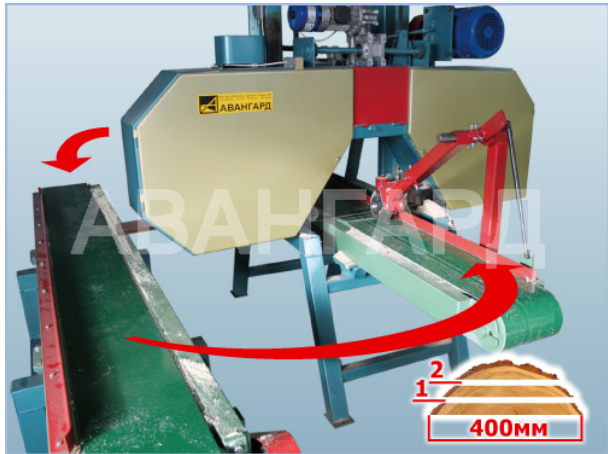


# Comparative characteristics of disk power-saw benches

Parameter	KS-50 EK	KS-50 PK
Maximum log diameter:		
- diameter	500 mm with edging, 300 mm in camber	
- length	from 2 to 6.2 meters	
The saw carriage:		
- diameter and amount of saw blades	2 × 400 mm, 2 × 250 mm	
- power and amount of electric motors	2 × 11 kW, 1 × 4-5,5 kW	
- the use of reverse	reset of sawn material	
- lifting / lowering	electric drive	
- horizontal travel drive / speed	Electromechanical / up to 40 m/min	
Saw carriage guides	Non-mechanized	Mechanized
Setting the thickness of the board	by electronic ruler	
Method for loading and positioning raw materials to be cut	manual using self-centering screw clips	hydraulic mechanism
Overall dimensions:		
- length with guides	10,0 m	
- width	1,4 m	
- height	2,0 m	
Weight of the machine	1540 kg	2050 kg
<i>Completeness of delivery:</i> the machine (saw blade + guides), as well as:		
saw blade	+	+
electronic ruler	+	+
laser position indicator for horizontal saws	-	+



# Band-dividing machine Avangard-LP-80-D



The band re-saw machine is a bandsaw sawmill mounted on a common under frame with an infeed belt conveyor equipped with a pneumatic clamp. It is designed for cutting logging slab, three- and four-edged cant by thickness. One board is cut off per one cutting. The raw material sawn is returned to the infeed conveyor for re-sawing, either manually or via a push-back conveyor that is optional.

The band re-saw machine can be used both as a separate unit and also as part of a line for sawing shortwood.

## Specifications of Avangard-LP-80-D band re-saw machine

Parameter	Value
<b>Maximum size of the material to be cut:</b>	
- width	300 mm
- length	Not limited
<b>Sawbox:</b>	
- amount of heads	1
- power and amount of electric motors	11 kW 1 pc.
<b>Infeed conveyor:</b>	
- amount	1
- power and amount of electric motors	0,75 kW
Lifting and lowering of the saw traverse	electromechanical
Setting the size	by visual ruler
<b>Overall dimensions:</b>	
- length	3,05 m
- width	2,18 m
- height	2,15 m

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of band re-saw machine](#).

# Band-dividing machine Avangard-LP-80-2D



The band re-saw machine of this model has two saw heads mounted on a common under frame with two infeed conveyors that allow to process two logging slabs simultaneously. In one cutting, two unedged boards are cut off from each logging slab, so it is advisable to use the machine as part of a line for sawing longwood. The logging slabs obtained on the headrig are loaded on the receiving roll table of the re-saw machine by belt conveyors of the

headrig. Sawn logging slabs go to the intermediate roll table, from which they are fed to the edge-trimming machine SDK-6.

## Specifications of Avangard-LP-80-D band re-saw machine

Parameter	Value
<b>Maximum size of the material to be cut:</b>	
- width	300 mm
- length	Not limited
<b>Sawbox:</b>	
- amount of heads	2
- power and amount of electric motors	11 kW 1 pc.
<b>Infeed conveyor:</b>	
- amount	1
- power and amount of electric motors	1,5 kW 2pc.
- lifting and lowering of the saw traverse	electromechanical
- setting the size	by visual ruler
<b>Overall dimensions:</b>	
- length	4,05 m
- width	2,18 m
- height	2,15 m

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of band re-saw machine](#).

# Band-dividing machine Avangard-LP-80 (3 ... 6) D



The machine is designed for cutting logging slab and three- and four-edged cant by thickness. The machine includes from 3 to 6 horizontal band saw units mounted on a common under frame with an infeed belt conveyor equipped with pneumatic clamps.

## Specifications of Avangard-LP-80(3...6) D band re-saw machine

Parameter	Value	
	LP-80-4D	LP-80-6D
Maximum size of the material to be cut:		
- width	300 mm	
- length	Not limited	
Sawbox:		
- amount of heads	4	6
- power and amount of electric motors	11 кВт × 4 pc.	11 кВт × 6 pc.
Infeed conveyor:		
- length, mm	5700	7700
- tape width, mm	300	
- conveyor drive power	2,2 kW	
- feed speed (stepless adjustment)	0 ... 20 m / min	
- lifting and lowering of the saw traverse	electromechanical	
setting the size	by visual ruler	
Overall dimensions:		
- length	5,7 m	7,7 m
- width	2,18 m	
- height	2,15 m	

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of band re-saw machine](#).

# Band-dividing machine

## Avangard-LP-80 S.E.N.-D-Sh



The band re-saw machine is designed for layer-by-layer sawing (cutting by thickness) of large material (furniture boards, etc.).

The Avangard-LP-80 S.E.N.-D-Sh band re-saw machine is equipped with a belt conveyor for feeding raw material into the cutting zone. Sawing is performed with a band saw blade in a horizontal plane when raw material moves towards immovably installed band saw head.

The band re-saw machine is equipped with a push-back conveyor for raw material re-sawing. Pressing of the sawn raw material is performed by rollers with a pneumatic clamp at the inlet and at the outlet of the sawing area.

### Specifications of Avangard-LP-80 S.E.N.-D-SH band re-saw machine

Parameter	Value
Width of the material to be cut (width x height), mm	800 × 250
Distance from the saw to the conveyor, mm	15-250
Main drive power (with soft start device), kW	11 - 18,5
Conveyor drive power, kW	2,2
Return conveyor drive power, kW	1,1
Feed rate, m/min	0-20
The diameter of the saw pulleys, mm	660
Overall dimensions (L × W × H), mm	3250 × 2600 × 2050

Watch the video of the machine [on the website](#).

# Band-dividing machine

## Avangard-LP-80 S.E.N.-2D-Sh



The belt dividing machine "Avangard-LP-80 S.E.N.-2D-Sh" is equipped with a belt conveyor for feeding the workpiece into the cutting zone. Sawing is performed by a band saw in a horizontal plane when passing the workpiece relative to a fixed band saw head.

An additional saw assembly allows you to increase productivity by reducing the number of repeated passes (cuts).

Depending on the material being processed, it is possible to dispense with the use of a return conveyor.

### Technical specifications

Width of the sawn material (width × height)	mm	800 × 250
Distance from the saw to the conveyor	mm	15-250
Main drive power (with soft start device)	kW	от 11 до 18,5
Conveyor drive power	kW	2,2
Return conveyor drive power	kW	1,1
Feed rate	m/min	0-20
Diameter of saw pulleys	mm	660
Overall dimensions (L × W × H)	mm	6000 × 2600 × 2050

Watch the video of the machine on the website.



## Comparative characteristics

Parameter	LP-80-D	LP-80-2D	LP-80-4D	LP-80-6D
Maximum size of the material to be cut:				
- width	300 mm			
- length	Not limited			
Sawbox:				
- amount of heads	1	2	4	6
- power and amount of electric motors	11 kW 1 pc.	11 kW 2 pc.	11 kW 4 pc.	11 kW 6 pc.
Infeed conveyor:				
- amount	1			
- power and amount of electric motors	0,75 kW	1,5 kW	2,2 kW	
- lifting and lowering of the saw traverse	electromechanical			
- setting the size	by visual ruler			
Overall dimensions:				
- length	3,05 m	4,5 m	5,7 m	7,7 m
- width	2,18 m	2,6 m	2,18 m	
- height	2,15 m	2,05 m	2,15 m	



# Frame multisawing machine

## Avangard-RM-50-M2-P



All machines of the Avangard-RM-50-M2 line belong to a series of light multi blade saws of the frame (gutter) type designed for cutting wood. They are economical both in terms of waste wood and in terms of energy consumption per unit of volume of processed wood. The machine allows you to achieve high accuracy of geometric parameters and excellent quality of the processed surface of the resulting sawn wood products. Successful machine balancing

adjustment minimizes vibration and noise during operation. Our company produces several models whose design features and functionality are determined by the functional use and requirements of consumers.

Avangard-RM-50-M2-P multi blade frame saw is the baseline model.

It is designed for sawing two-edged cant up to 240 mm in height and up to 450 mm in width, or unedged boards collected in an assembled pack on edged timber. The machine consists of a saw head and roll tables: feed and receiving. The saw head includes a feed mechanism for the raw material to be cut and a movable frame equipped with short gutter saw blades with stellite-tipped teeth. The maximum number of saw blades in the frame is 19, which provides a minimum board thickness - 16 mm. Positioning of saw blades is performed using special separating plates (packing pieces), the configuration of which is determined by the customer. Sawing is performed with vertical reciprocating movement of the frame with saw blades and horizontal feed of the material to be cut.

The productive capacity of the machine is determined by the cross-section size of the raw material being cut and the speed of its longitudinal movement, which is smoothly adjusted depending on the load and is 1 m per minute on average. The saw head of the Avangard RM 50-M2-P multi blade saw is mounted on its own foundation plate, so it is necessary to secure a level ground with hard surface for its installation. Otherwise, grout application shall be necessary. The design of the machine presumes connection of aspiration devices.

The basic configuration includes:

- Saw head.
- Roll tables.
- Set of saw blades – 20 pcs.

The Avangard-RM-50-M2-P multiple saw can be adjusted so to produce box boards with a thickness of 6 mm and a width of up to 120 mm. For this purpose, the machine is equipped with the following (two additional options): a). container cassette installed in

the standard frame of the machine; b). additional roller holders installed on the receiving and feed roll tables, which allows to cut shortwood with a length of 1 meter. In the container cassette, the distance between the saw blades is set not by the packing pieces as in a standard frame, but by collars of the right size.

### Technical specifications of the Avangard-RM-50-M2-P multi blade frame saw

Parameter	Value
Type of raw material to be cut	wooden bar
<b>Maximum cross-section dimensions of a bar, mm</b>	
- width, mm	450
- height, mm	240 (120 - when using in the case of a container cassette)
Length of the feedstock, m	min. 1 (with additional clip) max. 6,2
Minimum Board thickness, mm	16 (min. 6 - when using the container of the cassette)
Maximum amount of saws per delivery, pc.	19
Raw material feed drive	Electromechanical with smooth speed control
Amount of drive ripples, pc.	3
Amount of pressure cylinders, pc.	2
The number of double strokes of the saw frame in a minute	410
Installation of saws in a saw frame	piece
Main drive motor	15 kW × 1000 rpm
Dimensions of the machine without roller conveyors, L×W×H, m	2,42×1,2×2,02
Roller conveyors length, m	4 + 4
Weight of the machine without roller conveyors, kg	1900

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of multi blade saws](#).

# Frame multisawing machine

## Avangard-RM-50-M2-K



The Avangard-RM-50-M2-K multi blade saw includes the function common for all multi blade saws in relation to sawing half-timber into edged boards, and the additional ability of sawing round timber with a diameter of up to 300 mm. For this purpose, the feed and receiving roll tables are extended and equipped with carriages that provide clamping of raw materials during the sawing process to prevent turning. In addition, in this modification,

the upper clamps are made in the form of spiked feed rollers.

### Technical specifications of the Avangard-RM-50-M2-P multi blade frame saw

Parameter	Value
Type of raw material to be cut	round wood 300 mm
<b>Maximum cross-section dimensions of a bar, mm</b>	
- width, mm	450
- height, mm	240
Length of the feedstock, m	min. 3, max. 6,2
Minimum Board thickness, mm	16 (min. 6 - when using the container of the cassette)
Maximum amount of saws per delivery, pc.	19
Raw material feed drive	Electromechanical with smooth speed control
Amount of drive ripples, pc.	3
Amount of pressure cylinders, pc.	2
The number of double strokes of the saw frame in a minute	410
Installation of saws in a saw frame	piece
Main drive motor	15 kW × 1000 rpm
Dimensions of the machine without roller conveyors, L×W×H, m	2,42×1,2×2,02
Roller conveyors length, m	4 + 4
Weight of the machine without roller conveyors, kg	1900

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of multi blade saws](#).

# Frame multisawing machine

## Avangard-RM-50-M2-K2



For sawing round timber of a larger diameter, up to 400 mm, the **Avangard-RM-50-M2-K2 multi blade frame saw was created**. The design presumes a frame increased in height and gutter saw blades increased in length. Apart from this, the design is similar to the RM-50-M2-K model.

For roundwood sawing, it is used only as a barring machine, the maximum number of

saws is 7 PCs..



### Technical specifications of the Avangard-RM-50-M2-K2 multi blade frame saw

Parameter	Value
Type of raw material to be cut	round wood 400 mm
Maximum cross-section dimensions of a bar, mm	
- width, mm	450
- height, mm	240
Length of the feedstock, m	min. 3, max. 6,2
Minimum Board thickness, mm	16
Maximum amount of saws per delivery, pc.	round wood - 7 wooden bar - 19
Raw material feed drive	Electromechanical with smooth speed control
Amount of drive ripples, pc.	5
Amount of pressure cylinders, pc.	2
The number of double strokes of the saw frame in a minute	410
Installation of saws in a saw frame	piece
Main drive motor	15 kW × 1000 rpm
Dimensions of the machine without roller conveyors, L×W×H, m	2,42×1,2×2,1
Roller conveyors length, m	7,2 + 7,2
Weight of the machine without roller conveyors, kg	2350

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of multi blade saws](#).



# Frame multisawing machine

## Avangard-RM-50-M3



The Avangard-RM-50-M3 multi blade saw is the baseline model of the new RM-50 series of multi blade frame saws. It was created as a further development of the well-known RM-50-M2 machines which have the following design changes:

- the saw frame of the machine, in which the saw blades are inserted using a special mechanism with a cassette, and not piece by piece, is changed;
- the lower and upper spiked feed rollers, the number of upper clamping spiked rollers and the clamping force are increased, and the upper spiked rollers are lifted and lowered automatically;
- a device that prevents initiation of frayed edges on the lower sawn face of half-timber.

### Technical specifications of the Avangard -RM-50-M3 multi blade frame saw

Parameter	Value
Type of raw material to be cut	wooden bar
Maximum cross-section dimensions of a bar, mm	
- width, mm	450
- height, mm	240
Length of the feedstock, m	min. 1, max. 6,2
Minimum Board thickness, mm	16 (min. 6 - when using the container of the cassette)
Maximum amount of saws per delivery, pc.	19
Raw material feed drive	Electromechanical with smooth speed control
Amount of drive ripples, pc.	8
Amount of pressure cylinders, pc.	4
The number of double strokes of the saw frame in a minute	410
Installation of saws in a saw frame	cassette
Main drive motor	15 kW × 1000 rpm
Dimensions of the machine without roller conveyors, L×W×H, m	2,42×1,2×2,02
Roller conveyors length, m	4 + 4
Weight of the machine without roller conveyors, kg	2200

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of multi blade saws](#).

# Frame multisawing machine

## Avangard-RM-50-M3-K



The Avangard-RM-50-M3-K multi blade frame saw is a modification of the Avangard RM 50-M3 multi blade saw with advanced functional specifications. In the design of roll tables, movable carriages are used for pneumatic clamping of round timber, which prevents it from turning during sawing. Rollers, which make it possible to cut half-timber previously obtained on the machine, can be installed on the guides of the clamping carriages.

The following sawing schemes can be implemented on the Avangard-RM-50-M3-K machine:



### Technical specifications of the Avangard-RM-50-M3-K multi blade frame saw

Parameter	Value
Type of raw material to be cut	round wood 320 mm
Maximum cross-section dimensions of a bar, mm	
- width, mm	450
- height, mm	240
Length of the feedstock, m	round wood - min. 3, max. 6,2 wooden bar - min. 1, max. 6,2
Minimum Board thickness, mm	16
Maximum amount of saws per delivery, pc.	19
Raw material feed drive	Electromechanical with smooth speed control
Amount of drive ripples, pc.	8
Amount of pressure cylinders, pc.	4
The number of double strokes of the saw frame in a minute	410
Installation of saws in a saw frame	cassette
Main drive motor	15 kW × 1000 rpm
Dimensions of the machine without roller conveyors, L×W×H, m	2,42×1,2×2,02
Roller conveyors length, m	4 + 4
Weight of the machine without roller conveyors, kg	2200

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of multi blade saws](#).



# Characteristics of all multisawing machines in one table

Parameter	PM-50-M2-P	RM-50-M2-K	RM-50-M2-K2	RM-50 M3	RM-50 M3-K
Type of raw material to be cut	wooden bar	round wood 300 mm	round wood 420 mm	wooden bar	round wood 320 mm
Maximum cross-section dimensions of a bar, mm					
- width, mm	450				
- height, mm	240 (120 - wooden bar)	240			
Length of the feedstock, m	min. 1 (with additional clip) max. 6,2	min. 3, max. 6,2		min. 1, max. 6,2	round wood - от 3 до 6,2 wooden bar - от 1 до 6,2
Minimum Board thickness, mm	16 (min. 6 - when using the container of the cassette)	16		16 (min. 6 - when using the container of the cassette)	16
Maximum amount of saws per delivery, pc.	19		round wood - 7, wooden bar - 19	19	
Raw material feed drive	Electromechanical with smooth speed control				
Amount of drive ripples, pc.	3	5		7	
Amount of pressure cylinders, pc.	2			4	
The number of double strokes of the saw frame in a minute	410				
Installation of saws in a saw frame	piece			cassette	
Main drive motor	15 kW × 1000 rpm				
Dimensions of the machine without roller conveyors, L×W×H, m	2,42×1,2×2,02		2,42×1,2×2,1	2,42×1,2×2,02	
Roller conveyors length, m	4 + 4	7,2 + 7,2		4 + 4	7,2 + 7,2
Weight of the machine without roller conveyors, kg	1900	2000	2350	2200	

# Disk multisawing machine Avangard-MD-16



The Avangard-MD-16 multi blade circular saw multi blade circular saw is designed for sawing two-edged cant up to 550 mm in width from any kind of wood, including hardwoods, species of wood into boards using circular saw blades according to different species of wood. When installing laser pointers, it is possible to use the Avangard-MD-16 multi blade circular

saw machine as an edge-trimming device (Avangard MD 16-K).

Sawing is performed in a vertical plane by moving the beam with rollers relative to vertically positioned saw blades fixed on the common shaft.

The machine does not require a special foundation and, if you have certain equipment installation skills, it is installed on a rigid flat base in a short period of time.

## Technical specifications of the Avangard-MD-16 multi blade circular saw multi blade circular saw

Name of indicators	Unit of	Values (nominal)
<b>The size of the processed wooden beam:</b>		
- width	mm	50...550
- height	mm	25...160
- length	mm	900...6500
Width of the resulting board	mm	20...400
<b>Saw blade drive:</b>		
- drive		electromotor
- power	kW	45
- speed of the saw shaft	rpm	2940
<b>Wood beam feed drive:</b>		
- drive		gear motor
- drive power	kW	1,5
- travel speed	m/min	0...20
<b>Circular saw:</b>		
- maximum diameter	mm	450
- maximum amount	pc.	10
Total installed capacity	kW	46,5
Supply voltage	V	380
Machine dimensions, LxWxH, no more	m	9,6x1,3x2,0
Weight of the machine	kg	2103

Watch the video of the machine [on the website](#).

# Disk two-shaft multisawing machine

## Avangard-MDV.2-16



Disk multi blade rip saw machine is the vanguard of MDV.2-16 are intended for sawing up of carriages on the edged boards and may be aggregated with any browser machine. The carriages are sawn in a vertical position, passing through a saw Assembly with two vertical shafts. The feed drive is independent of the brushing machine and consists of 8 vertically mounted drive ripples.

### Technical characteristics of the disk multi-saw machine Avangard MDV.2-16

Parameterp	Value
The thickness of sawn gun carriage, mm	70...160
Width of the sawn carriage, mm	до 300
Diameter of the saw blades used, mm	250
Distance between extreme saws, mm	240
The number of saws on the same shaft, pc.	6...8
The power of the main drive	2 × 22 kW
The feed drive of the workpiece	gear motor 4 × 0,75 kW
Feed rate (smoothly adjustable), m/min	4...10
Machine dimensions, LxWxH, m	1,6x1,95x1,5
Weight of machine, not more kg	1000

Watch the video of the machine [on the website](#).

## Disk two-shaft multisawing machine Avangard-MD2-22



The Avangard-MD2-22 multi blade circular saw is designed for sawing double-edged cant up to 600 mm in width from any wood species, including hardwoods, into boards using circular saw blades corresponding to various wood species. Sawing is performed in a vertical plane by moving the beam by track conveyors relative to vertically positioned saw blades fixed on the common shaft.

The main design features of the machine are as follows:

- A method of feeding timber to the sawing area by means of a track chain.
- The drive of the saw shafts is coaxial through self-centering couplings.
- The machine is equipped with automatic pneumatic clamps of the sawn material to the track chains at the inlet and outlet of the machine.
- Removal of wood dust from the sawing area is carried out by a belt conveyor that feeds wood dust to the aspiration mouth.

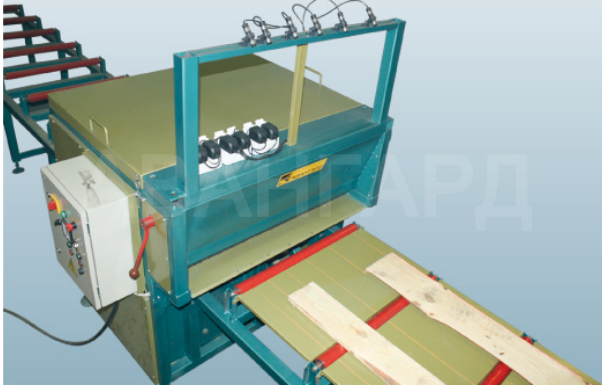
The machine does not require a special foundation and, if you have certain equipment installation skills, it is installed on a rigid flat base in a short period of time.

### Technical specifications of the Avangard-MD2-22 multi blade circular saw multi blade circular saw

Name of indicators	Unit of	Values
Thickness of the processed wooden bar, max	mm	220
Width of the processed wooden beam, max	mm	600
Amount of disk saws installed	pc.	2×12
The diameter of the circular saws	mm	350×70
The maximum distance between extreme saws	mm	500
Power of the electric motor of the upper shaft drive (with a soft start device)	kW	37 (30)
Power of the electric motor of the lower shaft drive (with a soft start device)	kW	45 (37)
Feed speed (adjustable)	m/min	max 25
Power of the feed drive motor	kW	3

Watch the video of the machine [on the website](#).

# Edge trimming machine Avangard-SDK-6



The edge-trimming machine is designed for cutting edges of an unedged board. Up to ten circular saw blades can be installed on the machine shaft, so you can simultaneously cut edges of several boards of the same thickness. A laser pointer is mounted on the bracket in the section line of each saw blade, which allows the operator to position each unedged board to obtain an edged board of the specified size. The distance between the circular saw blades is set by spacers. Installation of

the saw doctor is carried out at the open end of the saw shaft through an open door in the machine frame. The lower support spiked rollers and upper press gummed rollers are power-driven, which ensures a good capture of a board and its precise positioning during the sawing process.

## Technical specifications of the Avangard-SDK-6 edge-trimming machine

Parameter	Unit of	Values
Thickness of the processed board	mm	16...60
Width of the processed board	mm	до 900*
Length of the processed board	m	0,9...6
Width of the resulting edged board	mm	50...650*
Amount of disk saws to install	pc.	до 10*
Diameter of the disc saws used	mm	350
Speed of rotation of circular saws	rpm	2910
Cut width	mm	3,5**
Feed speed (adjustable)	m/min	до 20***
Main motor power	kW	15
Power of the feed drive motor	kW	1,5
Voltage	V	380
Dimensions of the machine without the feed and receiving tables, W×H×D, not more	m	1,43×1,4×1,2
The feed and receiving conveyors****:		
- length of one section	m	2,0
- width	m	0,87
- weight of one section, no more than	kg	120
Machine weight without roller, no more than	kg	1200

\* The nominal sizes of the resulting edged boards and the number of installed circular saw blades shall be specified at order.

\*\* The width of the saw kerf depends on the size of the installed circular saw blades.

\*\*\* The feed speed depends on many factors (wood species, humidity, etc., as well as the condition of the tool) and is limited by the load on the main electric motor. It is not allowed to operate the machine with a load of more than 30A on the main electric motor.

\*\*\*\* Not included in the standard supply package.

Watch the video of the machine [on the website](#).



## Log sawing machine Avangard LP-80-2B-K



The Avangard-LP-80-2B band headrigs are designed for sawing logs with a diameter of up to 450 mm from any wood species, including hardwoods, into two- and four-edged cant using band saw blades corresponding to different wood species and diameters. Sawing is performed in a vertical plane by moving the log along the chain conveyor relative to two vertical stationary band saw heads. The headrig does not require a special foundation and, if you have certain equipment

installation skills, it is installed on a rigid flat base in a short period of time. In terms of design, the headrig consists of two vertical band saw heads assembled on a common frame with the ability to adjust the distance between the band saw blades in the range of 80-450 mm. By changing the length of the conveyor and using various options, the machine can be adjusted to cut wood of any length.

Vertical band headrig adjusted for sawing shortwood - Avangard LP-80-2B-K.

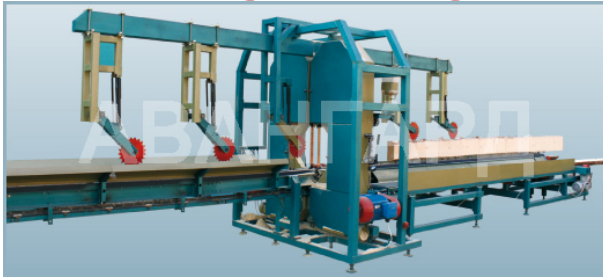
The optimal length of the raw material to be cut on this modification of the headrig is in the range of 1.2-2.5 m. The feed chain conveyor of the machine has a length of 6 m. Pressing the sawn log to the chain conveyor is carried out by two pneumatic clamps installed at the inlet and outlet of the sawing area. Raw materials are loaded from the machine ramp, where they are fed manually or (in the case of large diameters) by the Compact lift. Logging slabs, obtained in the process of squaring, go to the attached roller-type roll tables, from which they are manually fed to the re saw machine. The resulting half-timber for re-sawing into two- and three-edged cant is loaded on the feed conveyor manually. Elements of the sawn half-timber are also manually fed to the roll table of the re-saw machine.

### Technical specifications of the Avangard LP-80-2B-K log sawing machine

Parameter	Values
Length of raw material to be cut, no more than, m	3
Diameter of the raw material to be cut, no more than, mm	450
Diameter of saw pulleys, mm	660
Minimum distance between saws, mm	95
Maximum distance between saws, mm	450
Width of the saw band, mm	38-51
Saw belt speed, m/sec	30
The speed of the feeding conveyor (stepless), m/min	1-20
Engine power, kW	2 × 11
Machine dimensions, no more W × H × D	2,8 × 2,7 × 6,3
Machine weight, not more than, kg	2000

Watch the video of the machine [on the website](#).

## Log sawing machine Avangard LP-80-2B-D



The Avangard-LP-80-2B vertical band headrigs are designed for sawing logs with a diameter of up to 450 mm from any wood species, including hardwoods, into two- and four-edged cant using band saw blades corresponding to different wood species and diameters. Sawing is performed in a vertical plane by moving the log along the chain conveyor relative to

two vertical stationary band saw heads.

The headrig does not require a special foundation and, if you have certain equipment installation skills, it is installed on a rigid flat base in a short period of time. In terms of design, the machine consists of two vertical band saw heads assembled on a common frame with the ability to adjust the distance between the band saw blades in the range of 80-450 mm. By changing the length of the conveyor and using various options, the machine can be adjusted to saw wood of any length.

Vertical band headrig adjusted for sawing longwood - Avangard LP-80-2B-D.

This modification of the headrig (Pic. 1) is completed with a conveyor 12 m long. At the inlet of the sawing area and at the outlet, three pneumatic clamps are mounted on a special bar; they are made in the form of cutout disks, which, in combination with the tooth elements of the chain conveyor, provide precise positioning of the log during the sawing process. Logging slabs, obtained in the process of squaring of 6-meter raw materials, have a significant weight, so for their transportation to the re-saw machine, on both sides of the chain conveyor on a common under frame there shall be mounted two belt conveyors (Pic. 2) feeding the logging slabs to the roller-type roll tables of the re-saw machine. On the same under frame, there shall be mounted the feeding ramp mechanisms with a half-timber pusher, with the help of which half-timber is loaded to multi blade saw machines.

**Note!.** Using this modification of the headrig, you can also cut shortwood but for its sawing there is a simplified modification of the machine.

### Technical specifications of the Avangard LP-80-2B-K log sawing machine

Parameter	Values
Length of raw material to be cut, no more than, m	6,5
Diameter of the raw material to be cut, no more than, mm	450
Diameter of saw pulleys, mm	660
Minimum distance between saws, mm	95
Maximum distance between saws, mm	450
Width of the saw band, mm	38-51
Saw belt speed, m/sec	30
The speed of the feeding conveyor (stepless), m/min	1-20
Engine power, kW	2 × 11
Machine dimensions, no more W × H × D	2,8 × 2,7 × 12,3
Machine weight, not more than, kg	2300

Watch the video of the machine [on the website](#).

# Disc machine for sawing logs

## Avangard-SDB-260



The circular headrig is designed for longitudinal sawing of round wood for the purpose of receiving two-edged cant.

The headrig has four spindles with a direct drive. One circular saw blade is installed on each spindle. The distance between the saw blades is set manually by means of a screw drive, which allows you to quickly set the size of the resulting lumber cant. The distance between the saw

blades is controlled by a digital indicator.

The raw stock is fed using pushers mounted on the chain and has infinitely variable speed control.

For safety, a claw protection is installed on the circular headrig.

### Technical specifications of the Avangard-SDB-260 disc machine for sawing logs

Parameter	Values
Cutting height, mm, no more	
- attachment of saws with faceplates	260
- fixing saws with screws	300
Length of the processed material, m	1,2...6
Saw diameter, mm	400
Setting the distance between saws	screw on the digital indicator (80...180)
Material feed rate, m/min	0...20
Total installed capacity, kW	47,5
Dimensions WxHxD, not more than, m	2,1x1,9x9
Weight, not more than, kg	2000

Watch the video of the machine [on the website](#).

# Chipper canter Avangard FBM-250



Milling and canting machine Avangard FBM-250 designed for processing small-sized wood into edged boards in one pass.

Milling and canting unit consists of two electric motors of 18 kW each, mounted on linear guides. Milling cutters are installed on the motor shafts, the design of which allows them to be fixed on the motor shaft in a given position, which ensures the initially symmetrical position of the cutters relative to the conveyor axis.

The installation of the cutters to the given size of the timber (carriage) is carried out by the operator manually by rotating the handwheel of the screw mechanism in a few seconds. The actual distance between the cutters is displayed on a digital indicator with an accuracy of 0.1 mm in the range from 60 to 220 mm. (In the basic configuration from 60 to 160 mm).

Two-shaft multi-rip block with vertical shafts. 6-8 saws can be installed on each shaft, depending on the thickness of the carriage. At the exit from the block, riving knives are installed, the lower one of which separates the slab and provides the supply of the sawn material to the receiving table with the flat surface of the sub-saddle board. In the basic configuration, two electric motors with a power of 22.5 kW each and saws with a diameter of 250 mm are installed in the multi-saw unit, which allows sawing a carriage with a thickness of up to 160 mm. The design features of the multi-saw unit allow you to install motors of higher power – up to 37.5 kW and saws with a diameter of up to 350 mm, which allows sawing carriages up to 220 mm thick.

Composite feeding conveyor of the machine. A loading conveyor element up to 6.25 m long is docked to the main conveyor located inside the bed. Raw materials are fed by a traction chain with hooks welded to it.

The block of drive hazelnuts provides a forced supply of the sawn material to the receiving table of the machine.

## Basic delivery set:

1. Feeding conveyor, length 3,0 m. – 1 pc.  
(the length of the feeding conveyor can be increased at the request of the Customer );
2. Complete machine (Milling and canting unit, multi rip block) – 1 pc.;
3. Receiving table – 1pc.;
4. Control panel – 1 pc.;
5. Cutters – 1 set;
6. Saw blades Ø 250 mm – 20 pc.;
7. Technical passport and operation manual – 1 copy.

## Technical characteristics of the Avangard FBM-250 milling and canting machine

Diameter of the sawn logs	80 – 250 mm
Workpiece length	1 – 6,2 m
The width of the resulting edged board (timber)	60 – 160 mm (220 mm)*
Working length of vertical saw shafts	240 mm
Maximum milling layer with one cutter	70 mm
Cutting capacity with circular saws	3,2 mm
Circular saws diameter	250 mm
Workpiece feed speed (continuously variable)	0...10 m/min
Workpiece productivity	до 6 m <sup>3</sup> /hour
Electric motor parameters : - Milling unit - Multi rip block - Feeding conveyor - Drive unit	2 × 15 kWt (3000 rpm ) 2 × 15 кВт (3000 rpm ) 2,2 kWt 2 × 0,37 kWt
Overall dimensions: - Machine without conveyor feed LxHxW - Loading length - Pick-up table length (optional) - Machine weight - Transport dimensions LxHxW	2,8 × 2 × 1,7 m to 6,25 m 2 – 5 m 2000 kg 6,25 × 2,5 × 1,7

\* when installing saws and motors of the appropriate diameter and power.

Watch the video of the machine [on the website](#).



## Slab-re saw Avangard-KS-50RG



The KS-50RG slab re-saw is a modification of the KS-50 machines and is designed for sawing logging slab into an edged board in one pass. The machine can also perform the functions of re-saw and edge-trimming machines.

The machine includes a saw unit of the KS-50PK machine, mounted fixedly on the under frame. A chain conveyor with flat bearing elements is located under the saw unit. The conveyor is equipped with eight independent

pneumatic clamps for raw materials to be sawn.

This design of the saw unit and conveyor allows you to cut raw materials both with a flat mounting surface (logging slab, board, timber), and also of circular cross-section (pulpwood, lumber log).

Horizontal sawing is performed with two circular saw blades with a diameter of 400 mm, and vertical sawing is performed with circular saw blades with a diameter of 250 mm. When performing sawing simultaneously with horizontal and vertical saw blades, at first, sawing is carried out with the help of horizontal saw blades and then with vertical ones, which allows you to remove wood scraps from the sawing area.

The distance between the vertical saw blades is continuously adjusted by means of a screw mechanism using a digital indicator that shows the actual distance between the saw blades.

The edge-trimming block with vertical saw blades can be brought into and out of operation by means of a lever.

## Technical specifications of the Avangard-KS-50RG slab-re saw

Parameter	Values
Maximum cutting width of horizontal saws, mm	300
The maximum height of a vertical cut of saws, mm	55
Maximum width of the processed hump, mm	340
The maximum thickness of the slab by the simultaneous operation of all saws, mm	75
Dimensions of the resulting edged boards: - width, mm - thickness, mm - length, m	100...300 10...50 1,2...6,4
Additional functions of the machine-sawing 3-and 4-edged bars, cross-section: - width, mm: - height, no more, mm:	100...300 250
Horizontal saws: - drive - power, kW - rotation speed, rpm - saws: quantity (pc.) x diameter (mm)	electromotor 2x7,5 3000 2x400
Vertical (edging) saws: - drive - power, kW - rotation speed, rpm - saws: quantity (pc) x diameter (mm)	electromotor 5,5 3000 2x250
Installation of horizontal saws on the size: - drive - drive power, kW - travel speed, mm/s	electromotor 0,55 25
Installation of vertical saws on the size: - drive - positioning	manual digital indicator
Conveyor for feeding the workpiece to the saw: - drive - drive power, kW - feed speed, m/min	electromotor 1,5 0...20
Machine dimensions, WxHxD, no more, m	1,5x2,3x4,3
Machine weight, not more than, kg	1900

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [comparative characteristics for logging slab and pulpwood processing](#).

# Machine for logging slab and pulpwood processing Avangard-KS-50RG-M-1



The Avangard KS-50 RG-M1 machine is designed for receiving edged boards from logging slab, by means of cutting boards by thickness; and it can be also operated as an edge-trimming machine. The machine is equipped with a block of horizontal saw blades - cutting by thickness and edge-trimming block. Up to three saw blades can be installed on the edge-trimming block – the central saw blade is fixed in the center of the conveyor, and the side saw blades can move independently by means of a screw drive. The lifting height of the edging saw blades above the conveyor is manually adjusted by a screw. If

necessary, the central saw blade can be removed.

## Technical specifications of the Avangard- KS-50RG slab-re saw

Parameter	Values
Maximum cutting width of horizontal saws, mm	400
The maximum height of a vertical cut of saws, mm	90
Maximum width of the processed hump, mm	400
The maximum thickness of the slab by the simultaneous operation of all saws, mm	200
Dimensions of the resulting edged boards:	
- width, mm	2×75...150 (1×150...390)*
- thickness, mm	10...90
- length, m	1,2...6,4
Additional functions of the machine-sawing 3-and 4-edged bars, cross-section:	
- width, mm:	120...400
- height, no more, mm:	200
Horizontal saws:	
- drive	electromotor
- power, kW	2×15
- rotation speed, rpm	3000
- saws: quantity (pc.) x diameter (mm)	2×550
Vertical (edging) saws:	
- drive	electromotor
- power, kW	7,5
- rotation speed, rpm	3000
- saws: quantity (pc) x diameter (mm)	2×350
Installation of horizontal saws on the size:	
- drive	electromotor
- drive power, kW	0,75
- travel speed, mm/s	25
Installation of vertical saws on the size:	
- drive	manual
- positioning	digital indicator
Conveyor for feeding the workpiece to the saw:	
- drive	electromotor
- drive power, kW	2,2
- feed speed, m/min	0...20
Machine dimensions, W×H×D, no more, m	1,8×1,6×4,6
Machine weight, not more than, kg	1900

Watch the video of the machine [on the website](#).

In the summary table, you can compare [the comparative characteristics for logging slab and pulpwood processing](#).

# Comparative characteristics of machines for logging slab and pulpwood processing

Parameter	KS-50RG	KS-50RG-M-1
Maximum cutting width of horizontal saws, mm	300	400
The maximum height of a vertical cut of saws, mm	55	90
Maximum width of the processed hump, mm	340	400
The maximum thickness of the slab by the simultaneous operation of all saws, mm	75	200
Dimensions of the resulting edged boards: - width, mm - thickness, mm - length, m	100...300 10...50 1,2...6,4	2x75...150 (1x150...390) * 10...90 1,2...6,4
Additional functions of the machine-sawing 3-and 4-edged bars, cross-section: - width, mm: - height, no more, mm:	100...300 250	120...400 200
Horizontal saws: - drive - power, kW - rotation speed, rpm - saws: quantity (pc.) × diameter (mm)	electromotor 2x7,5 3000 2x400	electromotor 2x15 3000 2x550
Vertical (edging) saws: - drive - power, kW - rotation speed, rpm - saws: quantity (pc) × diameter (mm)	electromotor 5,5 3000 2x250	electromotor 7,5 3000 2x350
Installation of horizontal saws on the size: - drive - drive power, kW - travel speed, mm/s	electromotor 0,55 25	electromotor 0,75 25
Installation of vertical saws on the size: - drive - positioning	manual digital indicator	manual digital indicator
Conveyor for feeding the workpiece to the saw: - drive - drive power, kW - feed speed, m/min	electromotor 1,5 0...20	electromotor 2,2 0...20
Machine dimensions, WxHxD, no more, m	1,5x2,3x4,3	1,8x1,6x4,6
Machine weight, not more than, kg	1900	1900

\* without central saw.

# Cutting machine for boards Avangard-TP-1200



The machine is designed for facing stacks (packages) of boards and cutting them to a certain size in length. It can also be used for cutting polyethylene pipes, paper, as well as some stone materials, such as foam concrete, when installing special saw chains. The cut is made when the tire with the saw chain is moved vertically. The two-support tire mounting system ensures high accuracy and cut quality.

## Principle of operation.

The cut is made when the tire with the saw chain is moved vertically. The two-support tire mounting system ensures high accuracy and cut quality. The vertical movement drive is electromechanical with the possibility of smooth speed adjustment. Horizontal movement of the machine portal is also carried out by means of an electric drive with an electromagnetic brake.

Depending on the customer's wishes, the Avangard – TP-1200 machine can be equipped with a **STIHL** saw tire or a **PRINZ** tire. At the same time, all the technical characteristics of the machine remain the same. The differences are in the tire designs and the way they are installed on the machine.

In the **STIHL** tire, the driven sprocket is made at the same time as the tire (like a chainsaw), the chain tension is produced by moving the tire relative to the driving sprocket. Chain length 3575 mm.

The **PRINZ** tire has a large width and is equipped with an independent driven sprocket, which is used to tighten the chain. The chain length is 4580 mm.

## Technical specifications

Parameter	Values
Maximum stack width, mm	1200
Maximum stack height, mm	1500
Maximum stack length, mm	6200
Total power of electric motors, kW	8,5
Dimensions W x H x D, no more, m	2,5 x 2,7 x 8,0
Weight, no more, kg	2000

Watch the video of the machine on the website.



# Cutting machine for boards Avangard-TP-1500



The machine is designed for facing stacks (packages) of boards and cutting them to a certain size in length. It can also be used for cutting polyethylene pipes, paper, as well as some stone materials, such as foam concrete, when installing special saw chains. The cut is made when the tire with the saw chain is moved vertically. The two-support tire mounting system ensures high accuracy and cut quality.

## Principle of operation.

The cut is made when the tire with the saw chain is moved vertically. The two-support tire mounting system ensures high accuracy and cut quality. The vertical movement drive is electromechanical with the possibility of smooth speed adjustment. Horizontal movement of the machine portal is also carried out by means of an electric drive with an electromagnetic brake.

The Avangard - TP-1500 machine is equipped with a PRINZ saw bar.

The **PRINZ** tire has a large width and is equipped with an independent driven sprocket, which is used to tighten the chain. The chain length is 4580 mm.

## Technical specifications

Parameter	Values
Maximum stack width, mm	1500
Maximum stack height, mm	1500
Maximum stack length, mm	6200
Total power of electric motors, kW	8,5
Dimensions W × H × D, no more, m	2,72 × 2,7 × 8,0
Weight, no more, kg	2000

Watch the video of the machine on the website.

# Vertical Band Saw



Universal vertical band sawing machines of the AVANGARD LS-50 series are designed for rectilinear and curly sawing of wood materials in carpentry, and also, with the appropriate selection of a band saw, a wide range of materials can be sawed on these machines: various plastics, rubber, rolled materials, cellular concrete and other materials, including non-ferrous and ferrous metals.

## Technical specifications

Parameter	LS-50-500	LS-50-600
The diameter of the pulleys, mm	560	660
The distance from the saw to the column, mm	500	600
The width of the saw blade, mm	6-51	6-51
The maximum height of the cut, mm	by order 200 – 600	
Band saw speed, m/sec	smoothly adjustable 10 – 28	
Desktop dimensions, mm	by order	
Table tilt angle, deg	0 – 45	
Engine power, kW	2,2 – 3	2,2 – 4
Dimensions, L x W x In, mm*	1200 x 1200 x 1900	1200 x 1200 x 2300
Weight, kg*	360	480

\* values may vary depending on the height of the cut and the dimensions of the table

# Sawmill line for the production of pallet blanks



Liniya is designed for processing wood with a diameter of up to 300 mm, the length of the raw material is up to 4.0 meters.

## The line consists of:

1. Transverse chain conveyor for logs, 9 m (volume of logs moved up to 24 m<sup>3</sup>):
  - the length of the logs being moved is 3-4 m;
  - the number of guide branches – 3 pcs.;
  - gear motor - 5.5 kW.
2. **Log disconnecter:**
  - load capacity - up to 5.0 tons;
  - diameter of logs - up to 400 mm;
  - the length of the logs being moved is 3-4 m;
  - number of guide branches – 3 pcs.;
  - gear motor - 5.5 kW.
3. Transverse inclined conveyor for humpbacks with a storage table:
  - length - 4 m.
4. **Disc machine for sawing logs Avangard-SDB-260:**
  - machine assembly - 1 pc.;
  - feed conveyor for raw materials with a length of 3.0 m - 1 pc.;
  - drive receiving roller - 1 pc.;
  - saw blades Ø400 with undercut knives - 4 pcs.
5. **Chipper canter Avangard FBM-250:**
  - multi-saw block assembly - 1 шт.;
  - Saw blades Ø 250 mm – 20 pc.

**Compact, convenient, it is possible to change the composition of the line.**

# Sawmill line for fine-grained wood with a raskryazhovki node



The line is designed for processing wood with a diameter of up to 300 mm, the length of the feedstock is up to 6.0 meters.

## The line consists of:

1. Metal trestle for logs up to 6 meters long.
2. Gear conveyor, 7 m.
3. Toothed conveyor with movable stop and collider, 7 m.
4. TB-24 miter with pneumatic clamp.
5. Disc machine for sawing logs Avangard-SDB-260.  
*For a full description, technical hacking and videos, [see the website](#).*
6. Disk multisawing machine Avangard-MD-16.  
*For a full description, technical hacking and videos, [see the website](#).*
7. Multitortsovochny machine with 3 saw nodes.
8. Slab-re saw Avangard-KS-50RG.  
*For a full description, technical hacking and videos, [see the website](#).*

**The composition of the line can be changed according to individual goals and wishes of the customer.**

# Chipping machine of Avangard-MR-500



The Avangard-MR-500 double-blade wood chipper is designed for chipping large wood wastes into industrial chips of a fixed length. The wood chipper is driven by an electric motor through a V-belt transmission, and has a manual feed hopper. The maximum diameter of the processed material is 160 mm. The wood chipper is designed for agricultural and municipal needs (chipping crown, twigs, branches, young trees, Christmas trees, etc.).

## Technical specifications of the Avangard-MR-500 wood chipper

Parameter	Values
Chip length, mm	13
Number of knives, pc	2
Chip capacity, m <sup>3</sup> /h	5-20
Recommended speed	750-1000
Window size, mm	180×190
Power consumption, kW	10-15

Watch the video of the machine [on the website](#).



# Chipping machine of Avangard-MR-500M



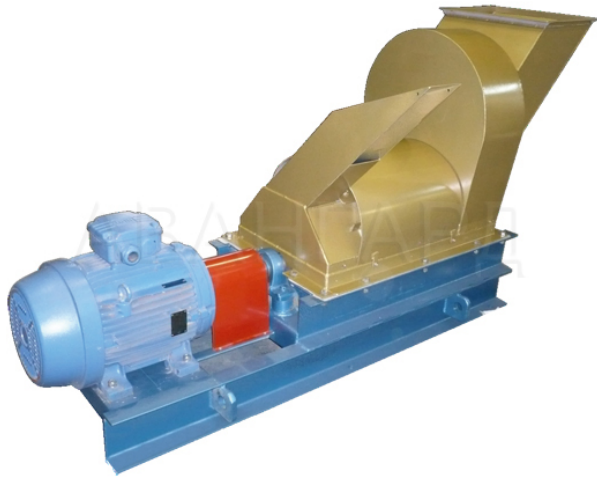
The Avangard-MR-500M two-blade wood chipper is designed for chipping large wood wastes into industrial chips of a fixed length. The Avangard-MR-500M wood chipper (movable model) is equipped with a three-point hitch and an adjustable cardan shaft, which makes it possible to connect the wood chipper to any type of tractor of 1.4 drawbar category through the PTO shaft (power take-off shaft).

## Technical specifications of the Avangard-MR-500-M wood chipper

Parameter	Values
Chip length, mm	13
Number of knives, pc	2
Chip capacity, m <sup>3</sup> /h	5-20
Recommended speed	750-1000
Window size, mm	180×190
Power consumption, kW	10-15

Watch the video of the machine [on the website](#).

## Inertial hammer crusher IM-45



The hammer crusher is designed for crushing wood chips obtained from a wood chipper, as well as lumber waste with a cross-section size of not more than 50x50 mm.

The design of the crusher allows for crushing both dry raw materials and those of natural humidity. In the first case, the crushed raw material is sucked out of the crusher through a screen that determines the desired size of the fraction and can be immediately fed to the briquette press

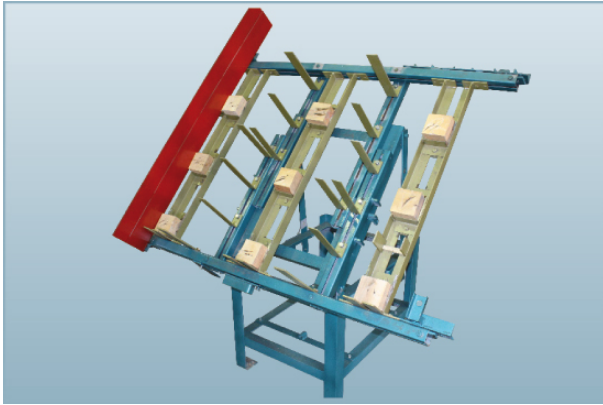
hopper. In the second case, wet crushed products are forcibly ejected through the pipe into a container, from which they are fed to the drying equipment available to the consumer, afterwards they are briquetted.

### Technical specifications of the inertial hammer crusher IM-45

Parameter	Values
Humidity of the loaded raw material	any
Size of the loaded raw material, mm, no more	50x50x1000
Size of the crushed fraction in cross-section, mm, no more	2
Capacity, kg / hour	2000
Power consumption, kW	30

Watch the video of the machine [on the website](#).

## Pallet assembly table



The mounting table is a rigid metal structure with dimensions (L × W × H) — 1570 × 950 × 1700 mm.

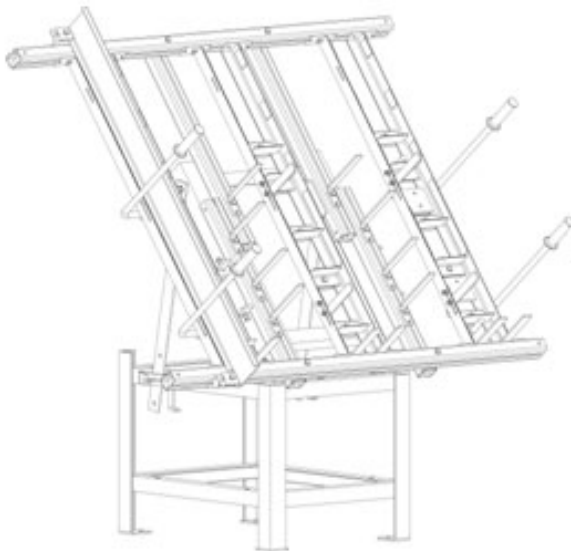
**Designed for assembling flat wooden pallets according to GOST 9078-84 of the following sizes:**

- single-face two-way entry pallet;
- single-face four-way entry pallet;
- double-face four-way entry pallet.

The basic dimension is 800 × 1200 и 1000 × 1200 mm.

Watch the video of the machine [on the website](#).

## Pallet assembly jigs



The set consists of three universal jigs, each of which is used to perform the simplest technological operation.

1. Jig for assembling pallet feet. You can assemble six feet simultaneously (a set of two pallets).

2. Jig for assembling a pallet pad.

3. Jig for general assembly of pallets (nailing the pallet feet with the pad).

For the convenience of the operator, the design allows you to change the slope

angle of the jig (0°, 43°, 51°, 60°).

This allows you to optimize the process of pallet assembly, to get high productivity of the site when using a pneumatic tool. The jig is a rigid metal structure with a set of elements that allow you to reconfigure the line for assembly of each type of pallet.

### Nomenclature and dimensions of standard assembled pallets

europallet L×W×H, mm	144×800×1200
the finpalleta L×W×H, mm	144×1000×1200
the finpalleta L×W×H, mm	144×1200×1200

To manufacture a conductor for other dimensions, you must provide a drawing of the pallet.

## Technical characteristics of the mounting table for the production of pallets

### Overall dimensions (one of the conductor)

Parameter	Values	
width	mm	1570
length with conductor lowered	mm	1400
maximum length when the conductor is raised	mm	1080
height when the lowered conductor	mm	905
maximum height when the conductor is raised	mm	1820
The angle of elevation of the conductor (4 positions)	degree	0; 43; 51; 60
Nomenclature and dimensions of pallets to be assembled (L×W×H)		
europallet	mm	144×800×1200
the finpalleta	mm	144×1000×1200
the finpalleta	mm	144×1200×1200
P2 or 2PV2 GOST 9078-84		
minimum size	mm	72×680×690
maximum size	mm	144×1200×1450
Weight	kg	155

Watch the video of the machine [on the website](#).

# The machine for disassembly of pallets

## Avangard-SRP-1200-R



The machine is designed for disassembly of wooden pallets with a maximum size of 1200 × 1200 mm.

Dismantling is carried out by layer-by-layer sawing with a band saw blade in the area of the joint of the adjoining pallet elements.

### Technical specifications of the Avangard-SRP-1200-R pallet dismantling machine

Parameter	Values	
Dimensions of processed pallets maximum	mm	1200 × 1200
Vertical movement of the saw head relative to the table up to	mm	300
Height of the last cut above the table	mm	10
Table length	mm	2000
Table width	mm	1250
Table height from floor level	mm	800
The vertical movement drive		electromechanical
Main drive power	kW	7,5
Diameter of saw pulleys (rubberized)	mm	660
Saw belt tension (manual hydraulic pump, pressure gauge tension control)		hydraulic

Watch the video of the machine [on the website](#).



# The machine for disassembly of pallets

## Avangard-SRP-1600-R



The machine is designed for disassembly of wooden pallets with a maximum saw kerf width of 1600 mm

Dismantling is carried out by layer-by-layer sawing with a band saw blade in the area of the joint of the adjoining pallet elements.

### Technical specifications of the Avangard-SRP-1600-R pallet dismantling machine

Parameter	Values	
Dimensions of processed pallets maximum	mm	1600
Vertical movement of the saw head relative to the table up to	mm	300
Height of the last cut above the table	mm	10
Table length	mm	2500
Table width	mm	1650
Table height from floor level	mm	850
The vertical movement drive	electromechanical	
Main drive power	kW	11
Diameter of saw pulleys (rubberized)	mm	660
Saw belt tension (manual hydraulic pump, pressure gauge tension control)	hydraulic	

Watch the video of the machine [on the website](#).

## Mineral wool-cutting machine Avangard-LP-80-TP



Avangard-LP-80-TP bandsaw machines are designed for sawing mineral wool blanket by thickness (20-250 mm).

The machine is installed into the existing mineral wool production line.

Sawing is performed in a horizontal plane by moving the blanket by a conveyor, when the saw head is fixed, with band saw blades corresponding to different brands and densities of mineral wool. The band saw head is installed in the "perimeter" of the existing conveyor. Several saw heads can be installed sequentially. The width of a mineral wool blanket is from 1200 mm.

Watch the video of the machine [on the website](#).

## Mineral wool-cutting machine Avangard-LP-80-TP-1



The unit for layer-by-layer cutting of mineral wool slabs is designed for sawing mineral slabs by thickness of 12 to 300 mm with dimensions of 350x1000x3600 mm. Sawing is performed in a horizontal plane by moving the band saw blade along the guide track while the slab workpiece is stationary with the possible rotation of the working table in 2 planes: from 0 to 5 degrees longitudinally and from 0 to 12 degrees transversally using band saw blades corresponding to different brands and density

of plates.

The machine belongs to a series of light machines; it provides the required standard accuracy of cutting mineral wool slabs, energy efficiency and waste management efficiency.

Watch the video of the machine [on the website](#).

# Mineral wool-cutting machine

## Avangard-LP-80-TP-2



The Avangard-LP-80-TP-2 band saw machine is designed for sawing mineral wool slabs measuring between 10-250 mm in thickness.

Sawing is performed in a horizontal plane by moving slabs with a belt conveyor while the band saw head is stationary. Slabs placement on the belt conveyor is carried out manually.

The machine does not require a special foundation and, if you have certain equipment installation skills, it is installed on a rigid flat base within 0.5 ...1 hour.

### Technical specifications of the Avangard-lp-80-tp-2 machine for sawing mineral wool slabs

Parameter	Value
Maximum width of the workpiece to be cut	1200 mm
Conveyor length	4000 mm
Minimum position of the band saw above the conveyor	10 mm
Setting the cut height using the visual ruler	electronic ruler – option
The diameter of the saw pulleys	660 mm
Saw blade drive power	7,5 kW
Saw blade width	27; 34 mm
The saw belt tension mechanism is hydraulic	manual hydraulic pump with pressure gauge control
Speed of the saw unit motion	23 m/sec
Speed of the saw unit motion (smoothly adjustable)	23 m/min

Watch the video of the machine [on the website](#).

# Mineral wool-cutting machine

## Avangard-LP-80-3D-1200



The machine is designed for cutting various materials by thickness, including mineral wool slabs. The machine includes 3 horizontal band saw units mounted on a common under frame with an infeed belt conveyor equipped with clamps.

One of the 3 band saw units has a mechanism for adjusting the slope angle of the band saw blade to the conveyor plane from 0 to 15 degrees.

### The machine can perform the following functions:

1. Cutting by thickness in the horizontal plane with 3 saw units
2. Slabs sawing at the desired angle with one saw unit that has a slope angle adjustment mechanism (the other two saw units are removed from the sawing area at the time of curve sawing).

### Technical specifications of the Avangard-lp-80-3d-1200 machine for sawing mineral wool slabs

Parameter	Value
<b>Maximum size of the sawn material</b>	
width	1200 mm
thickness	250 mm
length	2400 mm
<b>Sawbox</b>	
the amount of blade nodes	3 pc.
power and amount of electric motors	7,5 kW × 3 pc.
minimum position of the band saw above the conveyor	10 mm
Diameter of the saw pulleys	660 mm
cut thickness	1,5 mm
Saw blade width	27; 34 mm
the mechanism of a tension of the sawing tape	hydraulic (manual hydraulic pump with pressure gauge control)
the speed of the saw tape	23 m/sec
<b>Feed conveyor with clamps</b>	
amount	1 pc.
length	6000 mm
conveyor drive power	2,2 kW
<b>The feed rate of the material</b>	smoothly adjustable from 0 to 25 m/min
Lifting and lowering of the saw traverse	electromechanical drive
Setting the size	by visual ruler

Watch the video of the machine [on the website](#).



## Vertical band saw Avangard LS-50-600



To perform the function of longitudinal cutting of workpieces of mineral wool slabs, the LP-80-3D-1200 machine can be additionally equipped with a vertical band saw unit based on the LS-50-600 machine, which is installed in front of the belt conveyor of the LP-80-3D-1200 machine on calibrated guide rails.

Moving along these guide rails by means of a ball screw, the machine is positioned to the specified size from the edge of the mineral wool slab that is cut in the range from 0 to 600 mm..

If there is no need for longitudinal cutting, the LS-50-600 machine is removed from the conveyor area of the LP-80-3D-1200 machine, which allows only for the operation of cutting workpieces by thickness.

For all types of cutting, the procedure is the same: the slabs to be cut are placed on a table with a movable cover (which is necessary to replace the saw blade on the LS 50-600 machine) and are fed by a manual pusher to the cutting area on the conveyor of the LP-80-3D-1200 machine to the upper clamp, afterwards the workpiece is moved by the conveyor belt.

### Supply package:

1. Band saw unit – 1pc..
2. Table with a movable cover – 1 pc..
3. Remote control panel – 1 pc..
4. Band saw blade – 1 pc..
5. Technical specification – 1 copy.

The machine is an optional equipment to the Avangard-LP-80-3D-1200 mineral wool cutting machine.

Watch the video of the machine [on the website](#).



# Mineral wool-cutting machine

## Avangard-LS-50-PL



The machine is designed for sawing a wide range of materials (depending on the type of saw blade installed): various plastics, rubber, rolled materials, cellular concrete, mineral wool and other materials. The material is placed on a movable table, the movement of which is sawing the material.

### Technical specifications of the Avangard-LS-50-PL machine for sawing mineral wool slabs

Parameter	Value
Cut height	650 mm
Width of the sawed-off part (distance from the band saw to the frame)	605 mm
Cutting length (travel of table)	1200 mm
The diameter of the saw pulleys	660 mm
Band saws used	Bimetal M42 width 27; 34 tooth pitch per inch 3/4
Saw band length	5290 mm
The tension of the saw tape	Hydraulic with pressure gauge control
Electric motor power	3 kW
Power supply voltage	380 V
length	2500 mm
width	2000 mm
height	2450 mm
Weight	580 kg

Watch the video of the machine [on the website](#).

# Mineral wool-cutting machine

## Avangard-LS-50-PL-A



The machine is designed for sawing a pile of mineral wool slabs into lamellas.

### Supply package:

1. Band saw unit – 1 pc..
2. Automated feeding table – 1 pc. .
3. Remote control panel – 1 pc..
4. Band saw blade – 1 pc. .
5. Technical specification – 1 copy.

### Mode of operation:

The pile of mineral wool slabs is placed on an automated feeding table. The pile of slabs is fed to the cutting area by a programmable pusher. Sawing is performed by moving the table relative to the band saw unit along the calibrated guides. The lamellas separated from the pile remain on the stationary machine table.

### Technical specifications of the Avangard-LS-50-PL-A machine for sawing mineral wool slabs

Parameter	Value
Thickness of workpieces to be processed (in a pile), not more than	600 mm
Width of workpieces to be processed (in a pile), not more than	600* mm
Length of workpieces to be processed (saw kerf length)	1200* mm
Thickness of a part to be cut	20 - 600 mm
Density of mineral wool to be cut	30 - 220 kg/m <sup>3</sup>
Workpiece feeding to the size of the part to be cut	automatic
Speed of the saw unit motion (smoothly adjustable)	0 - 20 m/min
Saw blade drive power	5,5 kW
Diameter of the saw pulleys	660 mm
Saw blade width	27; 34 mm

**\* Subject to customer approval.**

Watch the video of the machine [on the website](#).

# Mineral wool cutting machine

## Avangard LS-50-PL-A-2



The machine is designed for sawing a package of mineral-cotton plates on lamellas. The principle of operation: A package of mineral-cotton plates is placed on an automated feeding table. The supply of a package of plates to the cutting zone is carried out by a programmable pusher. Sawing is performed by moving the vertical band saw assembly along calibrated guides. The lamellae separated from the package remain on the stationary machine table, from where they are removed from the cutting zone by the reverse stroke of the saw assembly.

### Technical specifications

Parameter	Value
Maximum size of the sawn material	
The thickness of the processed workpieces (in a package), no more	600 mm
The width of the workpieces to be processed (in a package), no more than	1200 mm
The length of the processed workpieces (the length of the cut)	2400 mm
Thickness of the cut part	20-600 mm
Density of cut mineral wool	30-220 kg/m <sup>3</sup>
Feeding the workpiece to the size of the cut part	automatic
The speed of movement of the saw assembly (smoothly adjustable)	0 - 20 m/min
Saw drive power	5,5 kW
Diameter of saw pulleys	660 mm
Saw width	27; 34 mm

# Panel cutting machine Avangard-RPM-2400



The machine is designed for cutting or trimming along four sides of the slab materials with the maximum dimensions of the slabs to be cut – 2400×1200 mm.

The size of the obtained fragments is divisible by 600 mm (600×600, 600×1200, 1200×1200 etc.).

The maximum saw kerf height is 60 mm.

Cutting is performed with circular saw blades.

Compressed air must be connected to operate the machine.

## Technical specifications of the Avangard-RPM-2400

Parameter	Value
Maximum dimensions of cut plates, D×W×H, mm	2400×1200×60
The size of the obtained fragments is divisible by, 600 mm	(600×600, 600×1200, 1200×1200 etc.)
The number of nodes of the saw, pc.	8 (3 – longitudinal, 5 – cross)
Drive power, kW	1,5 – 2,2×8 pc.
Cutting plate feed drive	Electromechanical with stepless speed control
Machine dimensions, L×W×H, no more, mm	6200×4250×1650

Watch the video of the machine [on the website](#).



# Pipe cutting machine Avangard LS-50-450

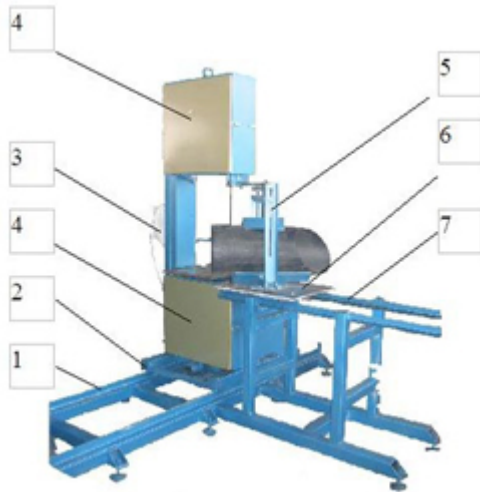


The feed of the material to be processed is carried out manually. The LS-50-450 machine is a modification of the mass-produced LS-50 machine designed for cutting plastic pipes up to 400 mm in diameter at an angle from 0 to 67.5 degrees.

## The supply package includes:

- assembled LS-50-450 machine — 1 pc.;
- guide track of a load carrier — 1 pc.;
- load carrier with a swiveling block;
- pipe fixing — 1 pc.;
- instruction manual and product certificate — 1 pc..

## The machine consists of the following main components and parts:



- frame foundation 2 with track 1;
- drive consisting of an electric motor and a V-belt transmission in a protective casing;
- guide track of a load carrier 7;
- load carrier 6;
- pipe fixing swiveling block 5;
- control panel 3;
- upper and lower saw wheels (power-driven) closed with protective casings 4;
- adjustment unit with a hydraulic saw blade tension mechanism 2;
- guide devices 6, 7.

## Technical specifications of the Avangard LS-50-450 band saw pipe cutting machine

Diameters of the pipe to be cut	mm	100...450
Pipe length		... 3000
Angle of cutting relative to the end of the pipe	degree	0...67,5
Power of the electric motor of the saw blade drive	kW	5,5
Power of the electric motor of the feed drive	kW	0,25
Power supply voltage	V	380



# Pipe cutting machine Avangard LS-50-850



Avangard-LS-50-850 bandsaw machine is designed for sawing plastic pipes and covers with a diameter of up to 850 mm at angles from 0 to 67.5 degrees to the end of the pipe.

The band saw head of the machine, mounted on a rotary platform, moves at a given angle to the pipe to be cut along the high-precision guides. The pipe to be cut is fixed on the frames which can be completed

(optional) with a dolly for pipes with the length of more than 6 meters.

**The machine can be manufactured without a saw block u-turn unit.**

Cost of the machine without the saw block u-turn unit.

Cost of a rolling trolley for pipes up to 12 m long.

## Technical specifications of the Avangard LS-50-850 band saw pipe cutting machine

Diameters of the pipe to be cut	mm	100...850
Pipe length		not limited
Angle of cutting relative to the end of the pipe	degree	0...67,5
Power of the electric motor of the saw blade drive	kW	5,5
Power of the electric motor of the feed drive	kW	0,25
Power supply voltage	V	380

Watch the video of the machine [on the website](#).

# Pipe cutting machine Avangard LS-50-1200



The LS-50-1200 bandsaw machine is designed for sawing plastic pipes and covers up to 1200 mm in diameter at angles from 0 to 45 degrees to the longitudinal axis of the workpiece.

The band saw head of the machine, mounted on a rotary platform, moves at a given angle to the cut pipe along high-precision guides.

The cut pipe is fixed on the supports, which can be completed (optional) with a rolling trolley

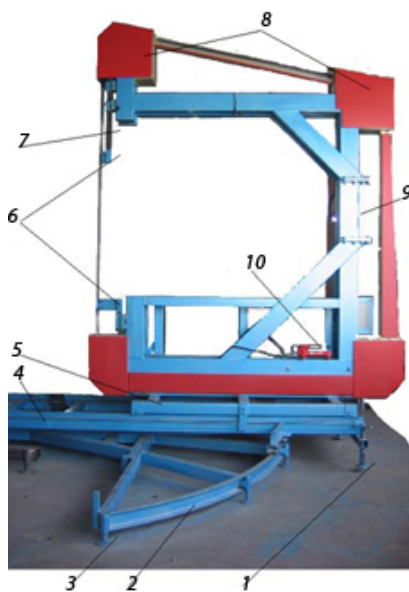
for pipes longer than 6 meters.

**The machine can be manufactured without a saw block u-turn unit.**

Cost of the machine without the saw block u-turn unit.

Cost of a rolling trolley for pipes up to 12 m long.

**The machine consists of the following main components:**



- frames 9;
- four saw wheels protected by casings 8;
- the rotary platform 5 with a rail guide (by) 4;
- the base frame of the machine 2;
- nodes (upper and lower) of the saw belt u-turn 6;
- tension mechanism of the saw belt with hydraulic tension 10.

The frame of the machine 9 is a welded structure mounted on a movable trolley 5, which can be moved along the rail guides 4 in the direction of the workpiece and back.

The rail guides, in turn, can be deployed along the segment base 2 to the desired sawing angle. Four guide support wheels of the saw belt are mounted on the machine frame on adjustable supports. The lower wheels are mounted on a sliding frame consisting of movable and fixed forks. The saw belt is tensioned by extending the forks with the hydraulic tensioning mechanism 10. In this case, the force on the movable fork is transmitted through a special damper, and the belt tension force is controlled by the hydraulic pressure gauge. The recommended tension force is 11 MPa.

## To install the machine at the desired cutting angle of the workpiece, you must:



- lift the support screws (from the floor);
- turn the machine to the desired angle on the limb;
- fix the machine position with the support screws.

Two u-turn nodes are used to turn the tape 90 degrees. The upper u-turn unit is mounted on an adjustable rod that allows you to change the length of the u-turn section of the tape depending on the size of the workpiece to be sawed.

## Technical specifications of the Avangard LS-50-1200 band saw pipe cutting machine

Diameters of the pipe to be cut	mm	1200
Pipe length		not limited
Angle of cutting relative to the end of the pipe	degree	$0 \pm 45$
Saw band:		
- length	mm	12370
- width	mm	34
- thickness	mm	1,1
The speed of the saw tape	m / sec	9,3
Power of the electric motor of the saw blade drive	kW	7,5
Power of the electric motor of the feed drive	kW	0,25
Power supply voltage	V	380
Overall dimensions:		
- width	mm	6700
- height	mm	4300
- length	mm	6000
Weight	kg	4000

Watch the video of the machine [on the website](#).

# Pipe cutting machine Avangard LS-50-1700



The Avangard-LS-50-1700 bandsaw machine is designed for sawing plastic pipes and covers with a diameter of up to 1700 mm at angles from 0 to 45 degrees to the end of the pipe.

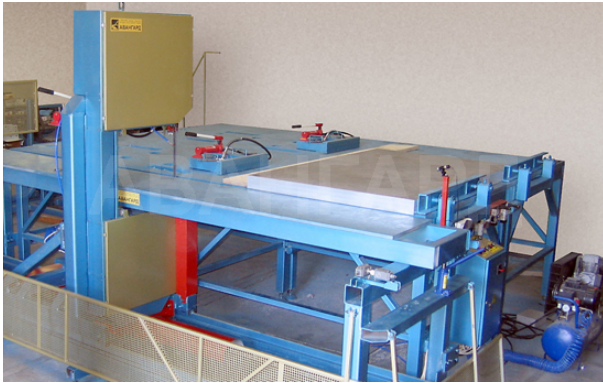
The band saw head of the machine, mounted on a rotary platform, moves at a given angle to the pipe to be cut along the high-precision guides. The pipe to be cut is fixed on the frames which can be completed (optional) with a dolly for pipes with the length of more than 6 meters.

## Technical specifications of the Avangard LS-50-1700 band saw pipe cutting machine

Diameters of the pipe to be cut	mm	1700
Pipe length		not limited
Angle of cutting relative to the end of the pipe	degree	0 ± 45
Power of the electric motor of the saw blade drive	kW	7,5
Power of the electric motor of the feed drive	kW	0,25
Power supply voltage	V	380
Overall dimensions:		
- width	mm	6700
- height	mm	5200
- length	mm	6000
Weight	kg	4000

Watch the video of the machine [on the website](#).

# Avangard LS-50-AL bandsaw machine for cutting aluminum plates



The Avangard LS-50-AL bandsaw machine is designed for trimming (sawing) aluminum sheets and plates with dimensions of up to 3600 × 3600 × 300 mm and the maximum width of the sawn strip from the edge of 600 mm.

**The machines are available in two versions:**

Avangard LS-50-AL-1500 - with cut length 1500 mm.  
Avangard LS-50-AL-3000 - with cut length 3000 mm

## Completeness of delivery:

- band saw head – 1 pc.;
- the main buffet – 1 pc.;
- guides the way – 1 pc.;
- laser cutting pointer – 1 pc.;
- control panel – 2 pc..

## Technical specifications of the Avangard LS-50-AL bandsaw machine for cutting aluminum plates

Dimensions of workpieces (max), mm	3600 × 1600 × 300
Width of the workpiece to be cut off from the edge (max), mm	600
Power supply voltage, V	380
Type of current	Variable 3-phase
Current frequency, Hz	50
Pressure in the pneumatic system, atm.	10
Installed capacity, kW	14
The positioning of the workpiece	Manual by means of a hydraulic press on a marking and a laser pointer
Tape length, mm	4750
Feed rate	Adjustable (variator or inverter)
Weight, kg	6000
Overall dimensions (l × w × h), mm	5400 × 4100 × 250

Watch the video of the machine [on the website](#).



# Cellular concrete cutting line LRP-1200-5-LD



The design of the line includes a table 20 m long with guide rails, on which 14 monoblock units are simultaneously displayed. On the rail guides of the table, two saw blocks are placed for longitudinal and transverse sawing of the monoblock. The drives for moving saw blocks on the guide rails are independent.

The saw block is a frame on which two lifting beams are mounted. A horizontal band saw head is mounted on the first beam, and a saw head with 4 circular saw blades is installed on the second beam. In the process of moving along the guide rails of the block for rip-sawing,

its head carries out layer-by-layer cutting of all the installed blocks at a predetermined thickness (100-200 mm), and the block circular head produces longitudinal vertical cutting to a depth of a layer cut with a band saw head, forming in this case the width of the blocks — 300 mm.

The saw block for crosscutting is a frame with a lifting beam, on which the saw head is located with three circular saw blades moving along the guides of the beam in the transverse direction. Moving along the guide rails of the table, the block is positioned according to the signs opposite each monoblock, and with cross motion of the circular saw blades, it cuts the monoblock forming the length of the sawn blocks equal to 600 mm. Thus, after sawing, on each monoblock there can be found six sawn off blocks with dimensions of 200×300×600 mm. After removing the blocks and placing them on pallets, the sawing process is repeated.

## Technical specifications of the Avangard-LRP-1200-5-LD cellular concrete cutting line

<b>1. Saw block B1</b>		
1.1 Installed power of electric motors	kW	9,6
1.2 Overall dimensions	mm	2500×2150×1670
<b>2 Saw block B2</b>		
2.1 Installed power of electric motors	kW	7,75
2.2 Overall dimensions	mm	2590×2460×1610
<b>3. Assembled table with guide rails</b>		
3.1 Overall dimensions	mm	1250×515×20000
<b>4. Line footprint</b>	m	24×4,5
<b>5. Size of the monoblocks to be cut</b>		
5.1 width height length	mm	930×1050×930
5.2 Number of blocks placed on the table	pc	14
<b>6. Line capacity</b>	m <sup>3</sup> /hour	6700

Watch the video of the machine [on the website](#).

## Bandsaw machine LS-50-PL



The machine is equipped with a movable table, on which the block is cut. The table is hand-driven.

### Technical specifications of the LS-50-PL bandsaw machine

Cut height	mm	650
Width of the sawn part	mm	600
Cutting length (travel of table)	mm	650
The diameter of the saw pulleys	mm	660
The tension of the saw tape		hydraulic
Saw band length	mm	5290
Tension control		by pressure gauge
Electric motor power	kW	3
Power supply voltage	V	380
length	mm	1700
width	mm	1250
height	mm	2450
Weight	kg	580

Watch the video of the machine [on the website](#).

## Bandsaw machine LS-50-PLP



The machine is designed for sawing cellular concrete. The machine is equipped with a roller table on which the sawn material is laid. A movable stop is installed on the table, which sets the width of the sawn part. By moving the saw head along the rail guides, the material is cut.

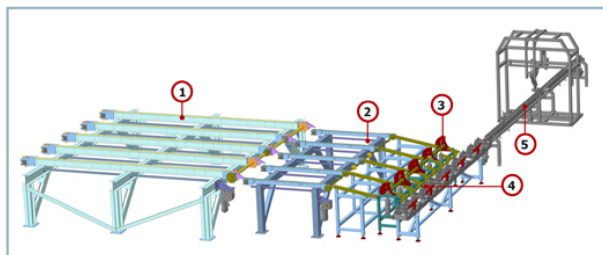
As an option, the machine can be equipped with a workpiece feed drive and a saw head movement drive.

### Technical specifications of the LS-50-PLP bandsaw machine

Cutting height	mm	650
Width of the sawn part	mm	up to 600
Cutting length (travel of table)	mm	800
Feeding the workpiece		manual
Feeding of the saw head		manual
Electric motor power	kW	3
Power supply voltage	V	380

Watch the video of the machine [on the website](#).

## Power-driven storage deck with a mechanism for piecewise delivery of logs



The ramp is designed for storing raw materials and feeding them to the sawing area. The deck consists of four elements:

1. Cross chain conveyor – turner of a bundle of logs.
2. Cross chain conveyor that rolls out logs in a single layer to feed them to the piecewise delivery mechanism.
3. Piecewise delivery mechanism that separates logs and feeds them one by one to an intermediate conveyor.
4. Intermediate conveyor with toothed disks, which performs longitudinal feed of logs to the chain conveyor of the headrig.
5. Chain conveyor of the headrig.

## Log sorting line



Avangard, LLC has developed and started serial production of two modifications of log disconnectors and their sorting lines.

One of the modifications of mechanical equipment for sorting small-diameter (up to 300 mm) wood was developed for pallet production in which the Termit milling machine is used as the main cutting

equipment.

The cutting tool block of this machine is adjusted to handle a certain range of diameters of raw material. Therefore, the round wood sorting line has a built-in unit for cutting logs along their length that is divisible by the dimensions of the pallet elements, with distribution of the obtained round wood segments in accordance with their diameter into the pockets.

The sorted raw material with a length of 2.4 to 3.6 m is loaded into the storage pocket of the log disconnector, by means of which it is fed to a conveyor that moves it to the processing zone of the Termit machine, where it is cut into edge-surfaced lumber.

Watch the video of the machine [on the website](#).

# Log disconnector



Avangard, LLC has developed and started serial production of a log disconnector in two modifications and their sorting lines.

Moving the log to the debarking machine, and at the exit from it and along the sorting line, is carried out by a conveyor using driving toothed disks. On the sorting line, logs are dropped in both directions into six pockets. The

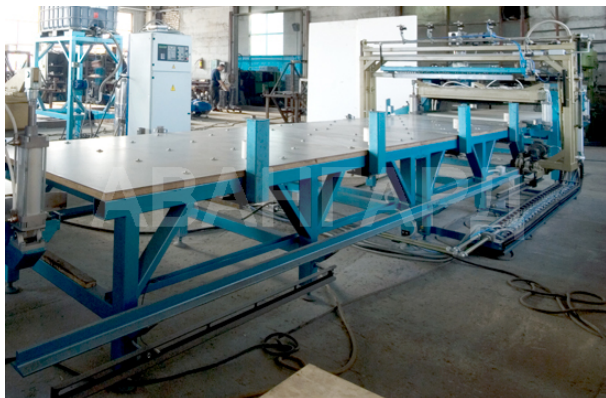
length of the line and the number of pockets can vary according to the customer's request.

Watch the video of the machine [on the website](#).



# Structural insulating panel production line

## Avangard-LSP-4



The Avangard - LSP line for production of structural insulating panels (SIP) is designed for production of sandwich panels based on OSB and expanded polystyrene. SIP sandwich panel is a monolithic structure obtained by gluing two OSB 3 plates and expanded polystyrene, used as heat and sound insulation material, by pressure.

The line is equipped with an automatic glue-bearing head with software control.

The line is manufactured in three modifications: Avangard-LSP-4, Avangard-LSP-2 and Avangard-LSP-1.

### THE LINE OPERATION

Two oriented strand boards (OSB) are put on the assembly table, placed according to the limit stops and fixed with eccentric clamps.

A command to apply the glue is generated from a stationary or remote control panel. At the same time, a container with sealing liquid is put down on the glue application head, and the head moves along the guide rails to the beginning of the glue application area. The glue feed is activated, and the head, while moving along the guides, applies thin strips of glue on the OSB surface with a step of 12.5 mm. At the end of the glue application area, the head automatically stops, the container with sealing liquid rises and closes the outlets of the glue distribution bar from contact with air. The head begins to move in the opposite direction; the water supply is turned on, water is sprayed on the surface of the plates through the nozzles, being a hardener for the glue.

After placing the EPS foam on the plates, the processes of glue application and water supply are repeated. Then the OSB plate is placed on the foam and the assembled sandwich panels are moved to the pressing area by a conveyor.

Each press is equipped with six air bags which provide a force of 17 tons at an air pressure of 5 atm, and evenly distribute it over the entire surface of the sandwich panel. After leaving it under the press for about 10 minutes, the finished panel is fed by a conveyor to the receiving table, from which it is put manually or by means of lifting mechanisms with pneumatic pumps into storage in the workshop.

Further on, the assembly, pressing and unloading processes are carried out simultaneously.

## Technical specifications of the Avangard-LSP-4 line for production of sip panels

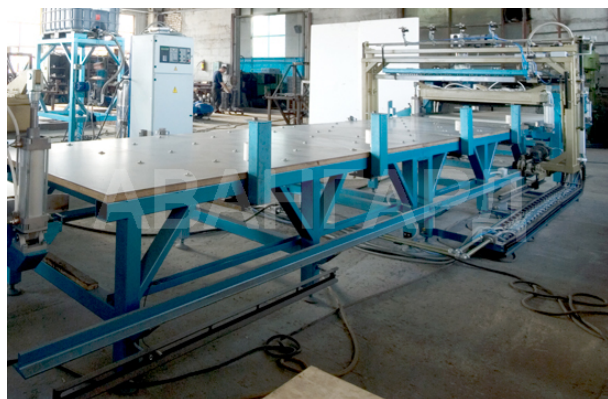
Parameter	Value
Automatic glue application unit	1
Assembly table, pcs	2
Pneumatic press	4
Table for the finished products output	2
Stand for container with glue	1
Productive capacity, pcs per shift	up to 320
Overall dimensions of the line:	
width, m	2,30
length, m	26,10
height, m	1,95
Overall dimensions of the manufactured panels:	
width, mm	1250
length, mm	2500-3000
height, mm	100-230
Weight, kg	5500
Electric motor power, kW	8
Power supply voltage, V	380
Type of current	three-phase alternating
Current frequency, Hz	50

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of SIP panel production lines](#).

# Line for production of sip panels

## Avangard-LSP-2



The Avangard – LSP line for production of structural insulating panels (SIP panels) is designed for production of sandwich panels based on OSB and expanded polystyrene. SIP sandwich panel is a monolithic structure obtained by gluing two OSB 3 plates and expanded polystyrene, used as heat and sound insulation material, by pressure. The line is manufactured in accordance with the requirements of GOST 25223 in the climatic

version UHL4 according to GOST 15150.

The line is equipped with an automatic glue-bearing head with software control.

The line is manufactured in three modifications: Avangard-LSP-4, Avangard-LSP-2 and Avangard-LSP-1.

### The line operation

Two oriented strand boards (OSB) are put on the assembly table, placed according to the limit stops and fixed with eccentric clamps.

A command to apply the glue is generated from a stationary or remote control panel. At the same time, a container with sealing liquid is put down on the glue application head, and the head moves along the guide rails to the beginning of the glue application area. The glue feed is activated, and the head, while moving along the guides, applies thin strips of glue on the OSB surface with a step of 12.5 mm. At the end of the glue application area, the head automatically stops, the container with sealing liquid rises and closes the outlets of the glue distribution bar from contact with air. The head begins to move in the opposite direction; the water supply is turned on, water is sprayed on the surface of the plates through the nozzles, being a hardener for the glue.

After placing the EPS foam on the plates, the processes of glue application and water supply are repeated. Then the OSB plate is placed on the foam and the assembled sandwich panels are moved to the pressing area by a conveyor.

Each press is equipped with six air bags which provide a force of 17 tons at an air pressure of 5 atm, and evenly distribute it over the entire surface of the sandwich panel. After leaving it under the press for about 10 minutes, the finished panel is fed by a conveyor to the receiving table, from which it is put manually or by means of lifting mechanisms with pneumatic pumps into storage in the workshop.

Further on, the assembly, pressing and unloading processes are carried out simultaneously.

## Technical specifications of the Avangard-LSP-2 line for production of sip panels

Parameter	Value
Automatic glue application unit	1
Assembly table, pcs	2
Pneumatic press	2
Table for the finished products output	1
Stand for container with glue	1
Productive capacity, pcs per shift	up to 160
Overall dimensions of the line:	
width, m	2,30
length, m	17,00
height, m	1,95
Overall dimensions of the manufactured panels:	
width, mm	1250
length, mm	2500-3000
height, mm	100-230
Weight, kg	3500
Electric motor power, kW	7,5
Power supply voltage, V	380
Type of current	three-phase alternating
Current frequency, Hz	50

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of SIP panel production lines](#).

# Line for production of sip panels

## Avangard-LSP-1



insulation material, by pressure.

The Avangard – LSP-1 line for production of structural insulating panels (SIP panels) is designed for production of sandwich panels based on OSB and expanded polystyrene. SIP sandwich panel is a monolithic structure obtained by gluing two OSB 3 plates and expanded polystyrene, used as heat and sound

### The Avangard-LSP-1 line consists of:

- glue application unit KU-1,
- guide (rail) track,
- mounting table,
- press,
- receiving table,
- control panel of the glue application unit KU-1.

### The line operation

The oriented strand board (OSB) is put on the assembly table, placed according to the limit stops and fixed with eccentric clamps. The command to apply glue is generated from the control panel. At the same time, the glue application unit moves along the guide rails to the beginning of the glue application area. The glue supply is turned on, and thin strips of the glue is applied on the OSB surface with a constant step while moving along the guides. At the end of the glue application area, the glue application unit automatically stops and starts moving in the opposite direction. The water supply is turned on, water is sprayed on the surface of the plates through the nozzles, being a hardener for the glue. After placing the EPS foam on the plate, the processes of glue application and water supply are repeated. Then the OSB plate is placed on the foam, and the assembled sandwich panel is transported to the pressing area by a conveyor. After holding it under the press for about 10 minutes, the finished panel is transported to the receiving table, from which it is put manually or by means of lifting mechanisms with pneumatic pumps into storage in the workshop. Further on, the assembly, pressing and unloading processes are carried out simultaneously.



## Technical specifications of the Avangard-LSP-1 line for production of sip panels

Overall dimensions of the manufactured panels: width length height	mm mm mm	1250 2500...3000 100...230
Productive capacity, pcs per shift	pcs per shift	up to 70
Overall dimensions of the line: width length height	m m m	2,55 11,75 1,72
Installed capacity	kW	2,5
electric pump unit (glue supply)	kW	1,1
movement mechanism of the KU-1 glue-bearing unit	kW	0,55
belt conveyor press	kW	0,75
water supply circulation pump	kW	0,1
Air pressure required for operation	kgf / cm <sup>2</sup>	5,0

Watch the video of the machine [on the website](#).

In the summary table, you can compare the [technical characteristics of SIP panel production lines](#).

# Single parts of the Avangard-LSP line for production of sip panels



## Automatic glue application unit KU-1

The automatic glue application unit KU-1 is designed for uniform application of glue and moistening of the connected surface. It consists of a movable carriage equipped with equipment for applying glue and water, a moving mechanism, containers for glue and water, and a guide track. The KU-1 unit is controlled from console. The unit is used in the modification of the LSP-1 line, and can

also be adapted to any technological lines.

## Assembly table for the Avangard-LSP line

Designed for orientation and fixing plates before their assembly and assembly of components before their feeding to the press. It consists of a frame, limit stops and a plate with ball bearings installed on it.

## Pneumatic press for the Avangard-LSP lines

The pneumatic press is designed to complete the SIP panel manufacturing process. The press is a welded construction consisting of two parts: the upper plate and the board, on which a power belt conveyor, pneumatic equipment and control panel are installed. It is used for all modifications of the LSP lines and can be integrated into any production line.

## Table for the finished products output for the Avangard-LSP line

After the pressing process, the finished panel is loaded to the receiving table, the design of which is similar to the assembly table (without limit stops and clamps). Then the panel is transported manually or by means of lifting mechanisms to the storage place.

## Bandsaw machine Avangard LS-50-4



It is possible to cut from 1 to 5 pieces of panels simultaneously in the longitudinal and transverse direction both at right angles and at any angle set by the laser pointer.

For sawing at an angle to the horizontal plane up to 45 degrees, you must use the rotary table unit.

### Technical specifications of the Avangard LS-50-4 bandsaw machine

Maximum kerf length in one pass	mm	3400
Taper angle of the table	degree	0-45
Saw kerf thickness	mm	1,5
Saw blade: length x width x height	mm	8720 x 32 x 1.1
Dimensions of the processed parts	mm	1250 x 3200
Sawing speed	mm/sec	200
Cutting feed rate	mm/sec	10-200
Installed capacity	kW	4,5
Power supply voltage	V	380
Overall dimensions of the working surface of the table: length x width	mm	3560 x 2100
Overall dimensions of the machine: length x width x height	mm	5000 x 3800 x 3100
Weight	kg	1980

Watch the video of the machine [on the website](#).

# Sip panel grooving machine

## Avangard SVP-10/20



The machine is designed for notching grooves on SIP panel plastic foam in the process of their cutting. The machine does not require a special foundation; and it is installed on a rigid flat base within 1 hour.

### Technical characteristics of the slot sampling machine Avangard SVP-10/20

Dimensions of the resulting groove, mm, - depth - height	0 ... 60 100 ... 200
working element	Package of brushes of the twisted disk 150 × 22
Setting the slot size: - depth - height	Using bump blocks Set of brushes package
Material feed	hand
Installed capacity, kW	2,2
Overall dimensions width × height × length, m	1,2 × 1,65 × 3,95
Weight, kg	320

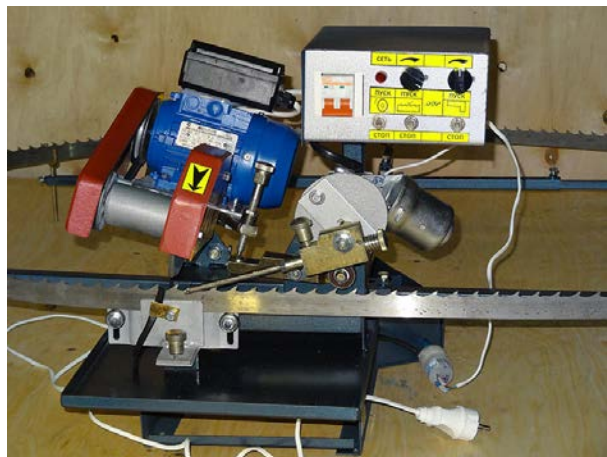
Watch the video of the machine [on the website](#).

# Comparative characteristics of SIP panel production lines

Parameter	Value		
	LSP-4	LSP-2	LSP-1
Automatic glue application unit	1		
Assembly table, pcs	2		1
Pneumatic press	4	2	1
Table for the finished products output	2	1	
Stand for container with glue	1		
Productive capacity, pcs per shift	up to 320	up to 160	up to 70
Overall dimensions of the line:			
width, m	2,30		
length, m	26,10	17,00	11,00
height, m	1,95		
Overall dimensions of the manufactured panels:			
width, mm	1250		
length, mm	2500-3000		
height, mm	100-230		
Weight, kg	5500	3500	2200
Electric motor power, kW	8	7,5	5
Power supply voltage, V	380		
Type of current	three-phase alternating		
Current frequency, Hz	50		



# Wrapping system for sharpening of teeth of band saws of AZU-05



Automatic device band saw blade teeth sharpener AZU-05 is designed for automatic sharpening of band saw blades with a standard abrasive or diamond wheel using coolant.

The device is equipped with a saw teeth cooling system when sharpening. Cooling of the tooth is necessary if you use diamond grinding wheels and, especially, simple abrasive ones. When sharpening, the tooth is heated, and in the absence of cooling, the heat-treated part can be released. To avoid this, always use cooling.

This model has a number of advantages over other devices:

- More reliable and accurate kinematics.
- Improved, quick-release saw locking mechanism.
- High flexibility in setting up, allowing you to set up different brands of saws with one Cam.
- Improved, more reliable electrical circuit.
- The cooling system of the tooth.

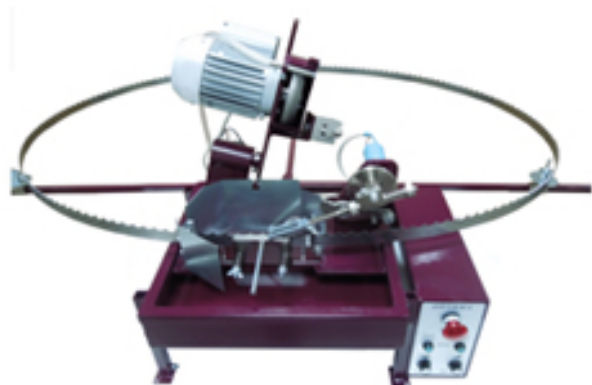
For more than five years, we have been using diamond or special carborundum wheels to sharpen band saws. Diamond wheels are simply indispensable for sharpening bimetal bandsaw blades for sawing very hard wood. The service life of the stone is about six months. It is also recommended to use diamond stones for finishing saws after sharpening them with simple stones. To fill the profile of simple circles, we offer diamond pencils.

## Specifications of automatic band saw blade teeth sharpener AZU-05

Parameter	Value
Length band saw blades, mm	2200-5200
Width band saw blades, mm	15-60
Band saw tooth pitch, mm	max 30
The tooth height band saw blades, mm	max 10
The length of the frame saw, mm	664
Width of the frame saw blade, mm	81
The tooth pitch of the saw frame, mm	max 27
The tooth height of the saw frame, mm	max 18
Type of grinding wheels	abrasive or diamond
Diameter of grinding wheels, mm	110-130
Bore diameter of the wheels, mm	32
Speed of rotation of the circle, rpm	6000
The feed rate of the saw, spminute	max 60
Power of the single-phase electric motor of the abrasive wheel drive, W	250
Speed, rpm	2750
Voltage, V	220
Power of the saw feed motor, W	max 24
Rotational speed, rpm	max 60
Voltage, V	max 12
Constant	current
Pump motor power, W	24
Voltage, V	12
Constant	current
Weight, kg	34

Watch the video of the device [on the website](#).

## Full-height sharpening apparatus of PZSL 30/60 OPTIMA



PZSL 30/60 OPTIMA is a borazon machine for automatic sharpening of band saw blades with profiled CBN (borazon) wheels.

PZSL 30/60 OPTIMA has the same functionality, it is as reliable and easy-to-use as its predecessor PZSL 30/60.

Fast and precise sharpening of the saw blade teeth is always guaranteed.

The main characteristics.

The resource of one wheel is enough to sharpen at least 10 km of the saw blade or for a year of

operation of one sawmill.

The saw blade along its entire length is obtained with a completely threaded and absolutely identical profile of each tooth without burns, fine irregularities and sanding marks, that is, without stress points.

The resource of saw blades sharpened by a profiled wheel increases by 2-3 times. The saw blade teeth grinding is done together with oil cooling.

Training on how to operate the machine takes no more than 20 minutes.

The machine body is made on the basis of a frame with a detachable tray for oil.

Serial production is for 220 V network. Machines for 380 V are made to order. The machine components are designed for long-term and high-quality sharpening of 20-30 saw blades per day. 3 beams are installed in the machine, respectively, the maximum length of the sharpened saw blade is 6 m.

Friction bearings are installed in the mating units.

### Specifications of PZSL 30/60 OPTIMA automatic full profile sharpener

Parameter	Value
Width of the band saw blade, mm	30-60
The length of the saw, m	до 6
Step of a saw, mm	19, 22, 25
Size alborough profile grinding wheel	127 × 12,7 x step (19, 22, 25)
Tooth profile	any
The oil container	4 l
Sharpening time of the saw length 4026 mm	7 min
Electrical outlets	220 V 50 Hz, 250 W
Overall dimensions (without beams), mm	600 × 400 × 500
Max beam length, m	1
Weight, kg	35

Watch the video of the device [on the website](#).

## Device for distributing teeth RU-5 band saws



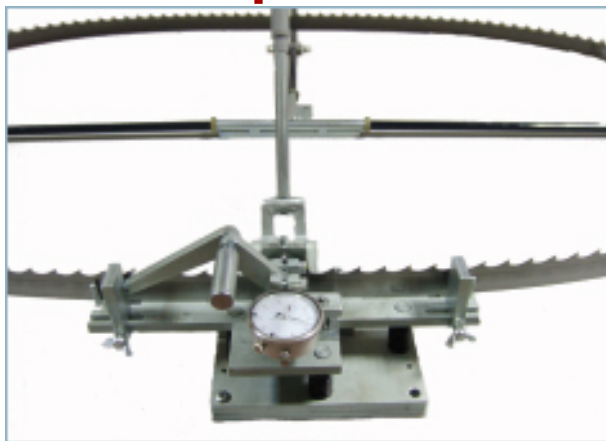
It is intended for distributing teeth of band saws with a width of 32-51 mm.

Distinctive advantages over others: high strength and reliability of the structure. User-friendly design, greatly facilitating the work. Tooth pusher made of hard alloy. Precise adjustment of the wiring value, controlled by the indicator clock with an accuracy of 0.005 mm. Fast reconfiguration to any saw size.

### Technical specifications

Parameter	Value
Band saw length, mm	2200 - 5200
Width of the web, mm	15 - 60
Tooth pitch, mm	до 30
Tooth height, mm	до 10
Frame saw length, mm	664
Blade width, mm	81
Tooth pitch, mm	до 27
Tooth height, mm	до 18
Type of grinding wheels	conventional abrasive or diamond
Diameter of grinding wheels, mm	110 - 130
Landing diameter of circles, mm	32
Rotation speed of the circle, rpm	6000
Saw feed speed, steps/min	до 60
Power of the single-phase electric motor of the abrasive wheel drive, W	250
Rotation speed, rpm	2750
Voltage, V	220
Power of the electric saw feed motor, W	до 24
Rotation speed, rpm	до 60
Voltage, V	до 12
Current	constant
Pump electric motor Power, W	24
Voltage, V	12
Current	constant
Device weight, kg	34

## Tooth Separation Machine band saws RS 30/60



The machine is designed for wiring narrow (30 - 60 mm wide) band saws used on band sawmills.

**Main technical characteristics of the machine:**

- The wiring time of the saw with a length of 4026 mm is approximately 10 minutes.
- Saw width - 30-60mm.
- Saw length - up to 10 m.

- Dimensions (without beams) - 400 × 200 × 400 mm.
- Weight - 10 kg.

## Standard guides to tape power-saw benches

Standard guides consist of four sections with a length of 2 m, with joint units. Setting the guides in the horizontal plane is made by screw supports.

The length of the guides can be increased by using additional sections.



## The unified mechanized guides to tape power-saw benches



The guides are equipped with mechanisms for log loading, its turning, longitudinal movement and fixation. All these mechanisms have a hydraulic drive and are controlled by the operator from a single control panel.

The ability to easily handle raw materials increases the productive capacity of the sawing process.

**These universal guides can be used for mounting saw heads of LP-80 S.E.N. sawmills.**



## Debarker



The bark-stripping cutter (debarker) is designed for preliminary cleaning of the bark of logs on the side of the saw blade start from sand, resin, clay and other solid inclusions. Cleaning is performed by cutting the log surface with a disk cutter with carbide plates to a controlled depth. The cutter is used as part of the Avangard-LP-80 bandsaw sawmills. The use of a bark-stripping cutter allows you to significantly increase the service life of the band saw blade.

### Specifications of debarker

Parameter	Value
Minimum diameter of the processed log, mm	250
The minimum depth of sawcut, mm	$8 \pm 1$
Maximum cutting depth, mm	$30 \pm 1$
Cut thickness, mm	4, 0
Working diameter of the cutter, mm	250
The diameter of the cutter, mm	32
Electric motor of the cutter drive - power, kW - speed, rpm	1, 1 2800
The power of the motor-reducer kW	0, 12
Power supply voltage, V	380
Weight, kg	28, 5

Watch the video of the sawmill with a debarker [on the website](#).



## Electronic range Master-3000



The Master-3000 electronic scale stick is used as a separate electronic block on horizontal bandsaw sawmills. It is designed to determine the distance of vertical movement of the saw blade when setting the size (thickness) of boards to be cut.

The practicability of its application is due to the fact that by setting the thickness of boards, the operator no longer needs to use visual control tools (rulers, forms, etc.), the operator does not

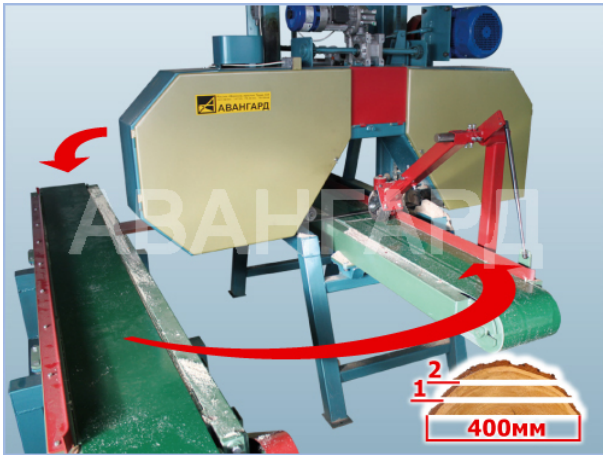
have to carry out arithmetic operations and calculations. The electronic scale stick allows the operator to significantly save time needed to set necessary dimensions, which, as a result, increases labor productivity, reduces the number of defective products and wood overspending.

The electronic scale stick can be installed both on a new bandsaw machine and also on the existing one.

### Specifications of Master-3000 electronic scale stick

Parameter	Value
Distance measurement accuracy, not less than	$\pm 0,1$ mm
Maximum size	1000 mm
Temperature range	$- 30^{\circ}\text{C} \dots + 35^{\circ}\text{C}$
Sensor type	Autonics incremental encoder or equivalent

# Return conveyor to belt dividing machines



A power belt conveyor designed for return transportation of the material sawn to the infeed conveyor of the re-saw machine for the purpose of its repeated multiple sawing.

The re-saw machine is a bandsaw sawmill mounted on a common under frame with an infeed belt conveyor equipped with a pneumatic clamp. It is designed for cutting logging slab, three- and four-edged cant by thickness. One board is cut off per one

cutting. The raw material sawn is returned to the infeed conveyor for re-sawing, either manually or via a push-back conveyor that is optional.

This machine can be used both as a separate unit and also as part of a line for sawing shortwood.

Video of the return conveyor [on the website](#).

# Automatic device for sharpening of teeth of frame saws of AZU-06



The automatic frame saw teeth sharpener AZU-06 is designed for automatic sharpening of frame saw blades with a standard abrasive or diamond wheel. In serial supply, the device is configured to sharpen frame saw blades manufactured by Avangard company with a length of 608, 731 mm and a width of 73 mm. At the request of the customer, the device can be supplied with additional cams for sharpening saw blades of other brands.

This model has a number of advantages over other devices:

- More reliable and precise kinematics.
- Improved, saw blade quick fix mechanism.
- High flexibility in setting, which allows to adjust saw blades of different brands with just one cam.
- Improved, more reliable electrical diagram.

We have been using diamond or special carborundum wheels for sharpening saw blades for more than five years already. Diamond wheels are simply irreplaceable in sharpening saw blades for sawing hardwoods. The service life of the stone is about six months. It is also recommended to use diamond stones for finishing saw blades after their sharpening with simple stones. To sharpen the profile of simple wheels, we offer diamond dressers.

## Technical specifications of the automatic frame saw teeth sharpener AZU-06

Parameter	Value
Frame saw length, mm	608/731
Width of the frame saw blade, mm	73
Tooth pitch, mm	to 18
Tooth height, mm	to 10
Type of grinding wheels	abrasive or diamond
Diameter of grinding wheels, mm	110-130
The diameter of the wheels, mm	32
Circle rotation speed, rpm	6000
The feed rate of the saw, steps/min	до 60
Power of the single-phase electric motor of the abrasive wheel drive, W	250
Rotation frequency, rpm	2750
Voltage, V	220
Power of the saw feed motor, W	to 24
Rotation frequency, rpm	to 60
Voltage, V	to 12
Current	Constant
Power of the pump's electric motor, W	24
Voltage, V	12
Current	Constant

## Lift «Compact»



The Avangard-Compact lift is an incidental equipment designed for lifting timber into the loading zone of AVANGARD-RM-50 multi blade saws and modifications. The lift does not require a special foundation and, if you have certain equipment installation skills, it is installed on a rigid flat base for 1 ... 1.5 hours. It is aggregated with feed roll tables. The feeding is carried out vertically, which allows to vary the size of the storage bunker at the request of the customer.

Video of the lift «Compact» [on the website](#).

## Lift «Universal»

Designed for piece-by-piece feeding of both round timber and half-timber to the feed roll tables of the multi blade saw. It is an incidental equipment that does not require mechanical attachment to the feed roll table.

Watch the video of the lift [on the website](#).



## Timber pull off device



The Avangard timber pull-off device is an incidental equipment to the Avangard-RM-50 M2-K and Avangard-RM-50 M3-K multi blade frame saws. Designed to facilitate unloading of half timber from roll tables or transfer of half-timber to the Avangard-RM-50 M2-P and Avangard-RM-50 M3 multi blade frame saws, provided that the machines are paired with the Avangard-RM-50 M2-K and Avangard-RM-50 M3-K circular saw blades.

cylinder.

The pull-off device is driven by a pneumatic

The timber pull-off device is also available separately and can be independently installed on the equipment in operation.

Watch the video of the dumper [on the website](#).



## Half timber centralizer



Avangard half-timber centralizers are additional equipment to the Avangard-RM-50 M2-P, Avangard-RM-50 M3 multi blade frame saws and Avangard MD-16 multi blade circular saw.

Half-timber centralizers are installed at the inlet section of the roll tables for positioning of the sawn material along the axis of the machine, which allows you to get the maximum

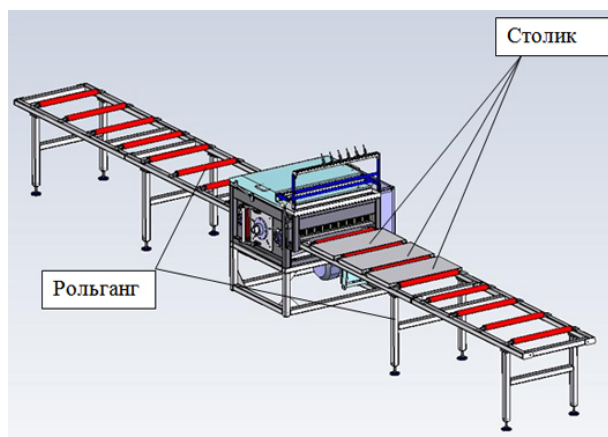
output of timber.

Half-timber centralizers are also available separately and can be installed independently on equipment in operation. Device installation on the Avangard MD-16 multi blade circular saw is performed after agreement with the manufacturer.

Watch the video of the centralizer [on the website](#).



# The roller conveyer for the edge trimming machine Avangard-SDK-6



The roll table is used to feed timber into the machine.

The roll table of the Avangard-SDK-6 edge-trimming machine consists of 4 sections 2 meters long. The rollers of the roll tables are rotated on the ball bearings. The height of the roll table is regulated by the screw bearings.

On the section of the roll table closest to the saw head of the machine, there are tables installed for a better display of the cutting lines by laser emitters.