

A highly productive two column, portal type band saw machine.

X version in the basic solution offers 64 bit control system with possibilities of automatic regulation of the arm movement towards the cut depending on cut resistance of the material, electronic setting of upper and down position of the arm, on display is showed the cutting speed. The control system is operating the movement of portal and is prepared for communication with other external accessories.

Machine is constructed for vertical cuts. As an option is available horizontal cutting function. This option is available for order only before production of machine hasn't been started, can not be added later.

Band saw machine is made for heavy industry, especially where it is difficult to manipulate with material due to it's size and weight.

Construction:

- The construction of machine is made in a way to fulfill extreme conditions of heavy industry cutting.
- Tough frame of machine minimizes vibrations and enables max. cutting performance.
- An arm is a rugged weldment and it is designed so that a toughness and a precision of cut was secured. Arm moves on two columns by four row linear leading with a high loading capacity. Arm movement provided by two hydraulic cylinders.
- The robust steel pulleys sloped by 25 degrees regarding the level of the cut. Thanks to sloped arm the twist of the blade is eliminated and is possible to bring the blade closer to the minimal distance from the linear leading on columns. This arrangement eliminates vibrations and enables the max. cutting performance of the machine.
- Movement system of the blade guiding is independent for each side. It is possible to move the guiding at any time as close as possible.
- Incremental sensor is used for frame position evaluation above the material and end switch for lower position set up. Top cutting position of frame is evaluated automatically by control system after the size parameters of cutted material are put in.
- The machine has no vice device.
- Hydraulic band tensioning as a standard accessories of machine.
- The band goes through adjustable guiding arms with carbide plates on sides and with hardened needle bearing ring on top.
- Electroengine driven cleaning brush is used for perfect band cleaning.
- Planetary gear box with three-phase motor and frequency convertor for fluent band speed regulation.
- The movement of the portal which carries the arm can move at same level by four linear leading bearing mechanism with high load capacity. The movement is carried by rack rails and wheels. Each of those carriers has its own engine and gear bevel transmission (servopack). Each engine has independent magnetic measuring system with an absolute measuring. One axis of movement is used for reference, the second axis controls and restricts theoretical deviation from absolute position – altogether guarantees smooth movement and precision. As controllers are used two PLCs Omron.
- Movement into the cut is provided by actuator (servoengine).
- Emulsion cooling system leaded into the guiding arm of the band.
- Microswitch for band tension and cover opening.
- Control 24 V.
- Control system MAHLER is used along with servoengine system PEGAS ARP, which has the ability to automatically regulate and control the feeding speed of the arm into the cut depending on resistance of the material. System is very useful for cutting of profile materials with bimetal bands. The control system follows and displays cutting conditions like band speed, frame downspeed and situation of other working positions and accessories. System has input and output connection ability for different accessories to be mounted.
- Hydraulic station controls working movements of the frame.
- As an option is available two position cutting – horizontal and vertical. It is achieved by unique solution of band guiding mechanism and axis of portal and frame movement. The frame is fixed in position for horizontal cutting and the movement of the band into material is provided by portal itself against fixed work table position. For vertical cut the position of portal is being fixed and cut is made by the downmovement of the frame. The position of the frame and portal is set and controlled by the measuring system and the control system of machine. This option for 2 position cutting is not included in a basic version of machine and has to be ordered before machine has been added to production queue.
- Working table for material clamping is not included in the basic version of machine. An individual solution is offered according to customer's needs.

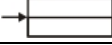
In a basic version of machine is included:

- Light for working zone
- Frequency convertor
- Band saw blade
- Set of maintenance tools
- Manual instructions in a compact disc (CD)

Working cycle:

The operator controls the movement of portal into vertical cutting position. After the start of the cycle, the machine will make the cut by set up speed, in a down (low) position will switch on the microswitch and the frame will go up to the upper working position and open the vice. The operator moves and manipulates with cutted material before and after the cut.

cutting parameters

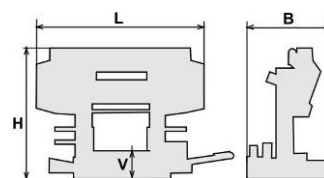
				
D [mm]	1250	1600x1250	1600x.....	

performance parameters

	drive of the blade	kW	12,5
	cutting speed – fluently set	m/min	15-80
	diameter of the blade	mm	11650x80x1,6
	electric connection		3x400V, 50 Hz

Parameters

length	width	Height	Height	height of the table	weight
[L]	[B]	[Hmax]	[Hmin]	[V]	(kg)
5200	3500	4100	3460	800	20 000 - 40 000*



*The weight depends on the diameter of the working table. The basic weight of the portal machine without the table is 20 000 kg.