

1200x1400 HERKULES X (version 5)

Highly productive semi-automatic, hydraulically manipulated two column band saw machine.

The machine is designed for vertical cuts.

It is suitable for serial production and thanks to its robust construction enables to cut wide range of materials including stainless steels and tool steels both profiles and full materials.

Control system:

- Machine is equipped with programmable PLC SIEMENS SIMATIC S7-1200. Drive of band blade and movement of arm are completely controlled and drive by SIEMENS technology.
- The coloured touch screen HMI SIEMENS TP 700 COMFORT enables easy communication with an operator. It shows working conditions (blade speed, moving to the cut, cutting parameters etc.)
- SEMIAUTOMATIC CYCLE: The machine cuts the material immediately in a semiautomatic mode. The operator uses the feeder of the machine for the manipulation with the material and for the exact feed of the material into the cutting zone. The movement of the feeder is realized by manual buttons or by GTO function. After starting GTO function the operator sets the position of the feeder, presses START GTO button and feeder goes to the set position.
- Regulation of cutting feed is realized by controlled system by the servo-motor and throttle valve of hydraulic. Then is reached very precise cutting feed. Operator will input into program required cutting feed (mm/min) and bandsaw this cutting feed precisely set.
- Two basic regimes of automatic system regulation (ASR): ARP a RZP.
 - RZP = Zone regulation. System enable to cut material in 5 zones, because of setting optional cutting feed and blade speed according on blade position. Operator can choose from 2 strategy settings: DEFENSIVE setting is appropriate for cutting very hard materials with use of carbide band blade. Cutting feed is in beginning and in the end reduced. OFENSIVE settings supports executive cutting logs. Cutting feed and band speed are in the beginning and in the end of cut increased. It's about similar principle as ARP mode. Advantage is regulation of blade speed.
 - ARP = System of the automatic regulation of the cutting feed rate depending on the cutting resistance of the material or blunting the blade. System offers two basic modes of ARP: BIMETAL and CARBIDE.
 - BIMETAL mode is suitable for optimalization of the cutting feed when cutting profiles by bimetal blades. The cutting feed is higher if the blade cuts sides of the profile. As the blade reaches the full material, the system reduces the cutting feed automatically so that teeth gap of the blade would not be filled.
 - CARBIDE mode is suitable for cutting of full bars. If the blade is old (blunt), loaded is the cutting feed reduced Reaction time is slower than in mode BIMETAL.
- Safety module with autodiagnosics.

Construction:

- The machine is constructionally designed in that way, so that it corresponds to extreme exertions in productive conditions. Massive construction enables using of carbid blades comfortably.
- The arm of machine with columns situated as near the clamping vice as possible minimizes vibrations and enables max. cutting performance.
- The arm of the machine is robust, heavy weldment and it is designed so that a toughness and a precision of cut was ensured.
- The arm moves along two columns using a four row linear leading with a high loading capacity. Arm movement using two hydraulic cylinders.
- The robust steel pulleys sloped of 25 degrees regarding the level of the cut. Thanks to sloped arm the twist of the blade is eliminated and these is possibility 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.
- The arm uses incremental sensor for evaluation of current position above material. Upper working position of the arm is possible to set in control system.
- Down working position is set with adjustable mechanical stop and microswitch. Down working position of the arm is also possible to set in the saw control system. After reaching bottom working position the arm stops in the position set in the system.
- Jaws of the main vice move on two rails of linear leading using hydraulic cylinder. One jaw is longstroke (the movement by longstroke hydraulic cylinder), one is fixed.
- There is a roller conveyer which supports material in whole feeded length. Conveyor contains driven rollers.

Basic equipment of machine:







- The blade leading in guides with hardmetal plates and leading bearings and along cast iron pulleys.
- There is a guide situated on the firm beam on the drive side. On the tightening side there is the guide situated on the moving beam.
- The guide beams of the blade are adjustable in the whole working range. A guide moving is connected with a vice-jaw movement so that to achieve the minimum distance of the guide and material. That is why it is not necessary to set the position manually.
- Hydraulic tightening of band.
- Automatic indication of blade tension.
- A cleaning brush is driven by an electroengine and ensures perfect cleaning of a blade.
- There is a planet gear box drive and a three-phase electroengine, a fluent regulation of a blade speed by a frequency converter for a fluent change of blade speed.
- The cooling system for emulsion, leaded to the guides of the blade and by LocLine system directly to the cut groove.

- Massive base with a tank for chips and with chip extractors. Base is designed for manipulation with machine by crane.
- Indication of blade tightening and opening of the cover.
- Controlling 24 V.
- Maschine is equipped with hydraulic system which controls all functions of that machine. It pushes the arm to cut, pulls up the arm and opens and closes vices.

- Chip extractor
- Lighting of work space.
- Band saw blade.
- Set of spanners for common service.
- Manual instructions in electronic form (CD).

The saw clamps the material and do the cut with set speed after starting the cycle with START buttons. In bottom position, which is set by software or microswitch the cut is ended and the arm with the blade moves according the settings. Operator only manipulates with the material.

cutting parameters

		 0°	 b
	D [mm]	1200	x
	D [mm]	1200*	x
	axb [mm]	1200x1400	1200x680

* Recommended values. Recommendations of band blade producers are to be followed when choosing to cut full material, their dimensions are limited by available size of the teeth for the specific type of the band.

° Cutting of the bundle without upper vice HP. HP = accessory for additional price. The cutting parameters are limited when using.

performance parameters

drive of the blade	kW	11,0
cutting speed – fluently set	m/min	15-80
diameter of the blade	mm	11650x80x1,6
electric connection		3x400V, 50 Hz, TN-S

Parameters

length	width	Height	Height	height of the table	weight
[L]	[B]	[Hmax]	[Hmin]	[V]	(kg)
5200	2700	4100	2850	760	25000

