230x280 A-CNC-R

Technical data

- It is a highly efficient automatic hydraulically controlled band-saw with multiple material feed.
- The machine is designed for vertical and angular cuts.
- Angles setting (turning of the bow) manualy:
- **fluently between 0° and +45°right in automatic mode**
- **fluently between 0° and +60°right in semi-automatic mode**
- The machine is designed to saw steel materials, but also non-ferrous and light metals. However, we recommend consulting the manufacturer about this option.

Control system:

- Machine is equipped with the control, programmable PLC MITSUBISHI FX5U.
- Blade drive as well as the feeder movements are fully controlled by the frequency inverters MITSUBISHI.
- The coloured touch screen MITSUBISHI GT 2104 enables easy communication with an operator. It shows working conditions (blade speed, cutting parameters etc.)
- The lenght and quantity are set by the control panel. Machine will optimize all next calculations itself. It is possible to set 15 different programms for quick lenghts setting.
- Type of material feed: Normal or INCREMENTAL
- Machine enables semi-automatic and automatic mode (all movements are controlled automatically).
- Regulation of shaft speed (moving to cut) is manual and uses throttle valve placed beside control panel. Automatic (safety) regulation of shift speed PEGAS BRP. Principle: Machine will stop after exceeding set loading (defined in ampers).
- The ergonomical control panel is mounted on the movable console. The control panel is equiped with mechanical buttons and digital display of the machine control system. Mechanical buttons controls basic saw movements (arm, vice, feeder) and cutting cycle start. The safety button is present on the panel aswell. Buttons for controlling the movements of the machine are part of a high-quality foil keyboard.

Construction:

- The machine is constructionaly designed in that way, so that it corresponds to standard exertions in productive conditions.
- The arm of the machine is made of cust iron and it is designed to ensure the power and the precision of the cut. Arm is 25 grades sloped, it increases the lifetime of blade.
- The arm rotated by a shaft (joint) which is support by adjustableconical bearings
- Drive pulley and tighten pulley are both metal castings.
- Upper working arm position controled by automatic stopper (DPP)
- The down working position of the arm controlled by the miscroswitch. After reaching bottom working position the arm stops in the position set in the system.
- The vice is welded. Jaw ensures the safe clamping of the material.
- The hydraulically operating vice with long travel is placed in an adjustable dovetail groove.
- Moving jaw of the vice is handled by long stroke hydraulic cylinder.
- Very massive feeder moves using hydraulic cylinder and two sparpened bars and teflon cases.
- There is a floating seating of the feeding vice in the feeder, it means that the feeding vice moves in perpendicular sense regarding the feeding sense. The stationary jaw of the feeding vice copies the possible roughness of feeded material and the worning out of mechanical parts of the feeder is eliminated.
- The feeder moves the material to be cut to the main vice according to the set lenght that was adjusted by the operator in the controlling panel. The position of the feeder is indicated by electromagnetic sensor and measuring magnetic tape. For a perfect placing of a feeder , feeder moves to end positions by a slow velocity.
- Indication of material in the feeder: optic sensor - it notices that there is a material in the feeder. If there is no material in the feeder, the signal reflects on the glass that is situated on movable jaw and it goes back to the sensor. The machine stops feeding and waits for another bar.
- The vice is made from cast iron. Jaws ensure safe clamping of the material.
- Hydraulicaly controlled vise of the feeder. Jaw of the vice is moving in slide leading in whole range via long-stroke hydraulic cylinder.

- Turn table is cust iron.
- Manuall turning of the table for angle cuts, the position of the turntable is fixed by the lever with the excenter.
- Angles (degrees are shown at the touch screen MITSUBISHI. Angle indication using incremental sensor and a magnetic tape.

Basic equipment of the 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 moving band guide is adjustable. Manual adjustment and fixing of the guide beams.
- The beam of the guide is moving in sliding leading.
- The saw-band is equipped with a guard, which protects the operator from millings and cutting emulsion.
- Mechanic tightening of the blade.
- Automatic indication of blade tension.
- Drive of machine is solved by worm gear box with maintenanceless oil filling. Three-phases electromotor with double winding, with a frequency converter for a fluent regulation of the blade speed from 20 to 100 m/min. Sturdy flange with shaft. Termoprotection of engine.
- The cooling system distributes cutting emulsion to the band guides.
- Massive base with a tank for chips. Base is designed for manipulation manipulation with machine by pallet truck and also by any hight lift truck.
- Indication of blade tightening and opening of the cover.
- Controlling 24 V.
- Machine is equipped with hydraulic system which controles all functions of that maschine. It pushes the arm to cut, pulls up the arm, opens and closes vices, moving of feeder.

Basic accessories of machine:

- Slide of cut pieces.
- Band saw blade.
- Set of spanners for common service.
- Manual instructions in eletronic form (CD).

Operating cycle:

The machine automatically grips the material in the main vice and the feeder moves into a position determined by the processor (i.e. the required length of the cut and a constant added length); the feeder-vice's jaw stays open. The arm moves into the cut; after cutting the material, it moves into the upper position. The feeder moves by the constant added length (exactly to a position determined by the processor) and the feeder jaw grips the material. The vice is released; the feeder moves the material into the zero position (by the required length). The main vice grips, the feeder-vice is released and the entire cycle is repeated.The operator only removes the sawn material.

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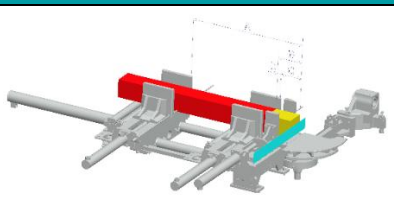
Technical data

Cutting parameters						
	0°	45°	60°	45°	60°	b / a
○	230	180	110	X	X	X
●	150*	110*	80*	X	X	X
b / a	280x200	180x170	100x70	X	X	280x120

* 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 withnout upper vice HP. HP = accesory for additional prie. The cutting parameters are limited when using.

Cutting parameters		
A: One feed step of the material max	500	mm
A: One feed step of the material Min	3	mm
A: Multiple feed	999	mm
B: The shortest rest in automatic cycle (c+d)	120	mm
The smallest divisible diameter	5	mm
The smallest divisible diameter in automatic cycle	15	Mm

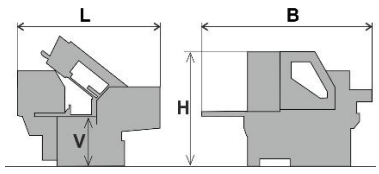


* d = recommended value. The customer may change the value depending the weight or grade of the material.

Performance parameters		
drive of the blade	kW	1,5
drive of the hydraulic agregate	kW	0,44
pump of the cooling emulsion	kW	0,09
electroengine of the drive of the worm chip extractor-accesories	kW	0,07
installed power of the machine Pi	kW	2,35
electric input of the machine Ps	kW	5,47
cutting speed – fluently set	m/min	20-100
diameter of the blade	mm	2720x27x0,9
electric connection		3x400V, 50 Hz, TN-S

Working movements	
Feed of the Frame to the cut	Hydraulically
Feed of the material	Hydraulically
Clamping of material	Hydraulically
Angle turning	Manually
Angle turning fixation	Manually
Bend tension	Manually
Cleaning of the blade	Pasive cleaning brush

Saw dimensions					
Lenght	Width	Height		Height of the table	Weight
[L]	[B]	[Hmin]	[Hmax]	[V]	(kg)
2305	2260	1405	1780	800	780



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Filling volumes	
Cooling emulsion	12 l
Hydraulic oil	16 l
Gear oil	0,35 l

Movement speeds		
Main vice	mm/min	4800
Vice of feeder	mm/min	3200
Feeder forward movement	mm/min	3300
Feeder backward movement	mm/min	3000