

400 PROFI A-CNC

Technical data



- It is a highly efficient automatic hydraulically controlled band-saw with multiple material feed.
- The machine has massive design, it is robust and has new conception of friendly control system.
- The blade is sloped 7 degrees to cutting table, which enables better performance during cutting of profiles as well as full materials and enables long lifetime of blade. These parameters together with powerfull drive and blade 34 mm heigh enable high productivity of machine.
- The machine is designed for vertical cuts.
- It is suitable for serial production in industrial premises.
- The machine is designed to saw steel materials, but also non-ferrous and light metals. However, we recommend consulting the manufacturer about this option.
- **No other materials may be sawn without approval from the manufacturer.**

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, moving to the cut, cutting parameters etc.)
- The length and quantity are set via the control panel. The machine will optimize all calculations by itself. The system can save up to 20 programmes. Each program has up to 15 lines (length+quantity)
- 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 amperes).
- The control panel is placed in the tightening pulley cover. The control panel is equipped 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 as well. Buttons for controlling the movements of the machine are part of a high-quality foil keyboard.

Construction:

- The machine is constructionally designed in that way, so that it corresponds to extreme exertions in productive conditions.
- 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.
- Arm moves on two columns by a help of a four row linear leading with a high loading capacity. Moving of arm using one hydraulic cylinder.
- Regulation of cutting pressure RTR, which enables more efficient of profile materials cutting, longer blade life included
- Drive pulley and tighten pulley are both metal castings.
- Upper position automatically using Pegas DPP system (touching lath placed closely below tooth of blade: T-bar, linear leading, microswitch, adjusting screw)
- 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.
- Main vice with divided jaw that clamps the material in front of as well as behind the cut. The jaws allow a safe grip. The optimization of the chip movement through the fixed jaw directly to the chip extractor.
- Jaws of the main vice move in steel leading using hydraulic cylinder. One jaw is longstroke (the movement by longstroke hydraulic cylinder), one is fixed.
- Regulation valves for setting a vice pressure in hydraulic system.
- Very massive feeder moves using hydraulic cylinder and two sharpened bars and teflon cases.

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- Placement of feeder movement is floating – it does mean feeder vice can move couple of mm from side to side and eliminate potential unevenness of material.
- Feeder moves cut material to cut zone follows adjusted value (operator set it with control panel). Feeder position is scanned using electromagnetic sensor and magnetic tape. Feeder moves to set positions using microfeeding (it enables accurate position of cut material.)
- 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 feeder clamping vice is a robust steel weldment. Jaws ensure safe clamping of the material. Jaws of the feeding vice move in steel leading using hydraulic cylinder. One jaw is longstroke (the movement by longstroke hydraulic cylinder), one is fixed.
- The blade leading in guides with hardmetal plates and leading bearings and along cast iron pulleys.
- The blade is 7 grades sloped regarding the level of the vice => higher performance when cutting, profiles, longer blade life, higher performance when cutting full materials.
- 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.
- The saw-band is equipped with a guard, which protects the operator from millings and cutting emulsion.
- Automatic indication of blade tension.
- Hydraulic tightening of band.
- Cleaning brush is driven by movement of pulley and enables high quality cleaning of blade. Driven cleaning brush is able as option 410-ECK (650 rev/min).
- 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 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 manipulation with machine by pallet truck and also by any high lift truck.
- Indication of blade tightening and opening of the cover.
- Controlling 24 V.
- Machine is equipped with hydraulic system which controls all functions of that machine. It pushes the arm to cut, pulls up the arm, opens and closes vices, moving of feeder.







Basic equipment of the machine:

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

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| Cutting parameters: | | |
|---|--|---|
|  |  0° |  |
|  | 400 | x |
|  | 250* | x |
|  | 400x400 | 400x220 |

° Cutting bundles without vertical clamp. HP = accessory at extra cost. When HP is used, the cutting parameters will be limited.

| Cutting parameters | | |
|--|----|-------|
| The shortest cutting | mm | 10 |
| The smallest divisible diameter | mm | 30 |
| The shortest rest during one cut | mm | 50 |
| The shortest rest during automatic cut | mm | 120 |
| Single step of material feed Min | mm | 3 |
| Single step of material feed Max | mm | 490 |
| Multiple feed | mm | 19999 |

| Performance parameters | | |
|-----------------------------------|-------|----------------------|
| Blade dimensions | mm | 4520x34x1,1 |
| Blade speed | m/min | 20-100 |
| Blade drive | kW | 3,0 |
| Pump of the cooling emulsion | kW | 0,09 |
| Motor of the chip extractor drive | kW | 0,12 |
| Total input (Ps) | kW | 6,5 |
| Electrical connection | | 3 x 400V, 50Hz, TN-S |

| Working movements | |
|-----------------------|------------------------------|
| Cutting feed | Hydraulically |
| Material feed | Hydraulically |
| Clamping of material | Hydraulically |
| Blade tension | Hydraulically |
| Cleaning of the blade | Brush driven by blade pulley |

| Saw dimensions | | | | | | |
|----------------|--------|--------|--------|--------|---------------------|--------|
| Lenght | Width | | Heigh | | Height of the table | Weight |
| L | [Bmin] | [Bmax] | [Hmin] | [Hmax] | [V] | (kg) |
| 2525 | 1530 | 2150 | 1867 | 2250 | 800 | 1300 |

Note: the dimensions are valid for the saw without optional accessories