

1000 CAMEL X (version 3)

Semiautomatic, hydraulically manipulated two column band saw machine.

An unique construction of the band saw machine with three pulleys for leading of the blade. With the blade that is 8 grades sloped against the level guarantee high-efficiency of cutting.

The machine is designed for vertical cuts.

Highly efficient machine for cutting of construction steel of profile type. Secondary can be used for hardened material cutting.

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.
- 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.
 - 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 optimization 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.
- 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.
- The control panel is equipped with mechanical buttons and digital display of the machine control system. Mechanical buttons controls basic saw movements (arm, vice) 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.
- Safety module with autodiagnosics.

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.
- The arm moves along two columns using a four row linear leading with a high loading capacity. Arm movement using two hydraulic cylinders.
- 3 pulleys from cast iron are used.
- 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.
- Main vice is massive steel weldment. Its jaws are iron casting.
- Hydraulic, long stroke main vice. Jaws enable well clamping of material.
- 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.
- Regulation valves for setting a vice pressure in hydraulic system.

Basic equipment of machine:

- The blade leading in guides with hardmetal plates and leading bearings and along cast iron pulleys.
- The blade is 8 grades sloped regarding the level of the vice => higher performance when cutting, profiles, longer bladeflife, 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 moving band guide is adjustable in whole working range. Manual adjustment and fixing of the guide beams.
- 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. Base is designed for manipulation manipulation with machine by crane.
- Indication of blade tightening and opening of the cover.
- Controlling 24 V.
- Maschine is equipped with hydraulic system which controles all functions of that maschine. It pushes the arm to cut,

pulls up the arm and opens and closes vices.

Basic accessories of machine:

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

Operating cycle:

After starting the machine, vices are clamped automatically, cut is made by selected cutting speed, in the end position microswitch is on, arm goes to selected upper position and vices open automatically. The operator only handles material.

cutting parameters

	D [mm]	1000	x
	D [mm]	550*	x
	axb [mm]	1000x960	1000x650

* 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	7,5
drive of the hydraulic aggregate	kW	4,0
pump of the cooling emulsion	kW	0,155
electroengine of the cleaning of the blade	kW	0,12
Cooling	kW	0,06
Control circuit	kW	0,5
total input (Ps)	kW	12,4
cutting speed – fluently set	m/min	20-100
diameter of the blade	mm	8920x54x1,6
electric connection		3x400V, 50 Hz, TN-S

control

feed of the Frame to the cut	Hydraulically
feed of the material	Manually
clamping of material	Hydraulically
bend tension	Hydraulically
cleaning of the blade	A cleaning brush is driven by an electroengine

Parameters

length	width	Height		height of the table	weight
[L]	[B]	[Hmax]	[Hmin]	[V]	(kg)
4750	2020	3700	2960	815	6040

