



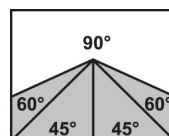
Pilous

Železná 9, 619 00 Brno, Czech Republic

Tel.: +420 543 25 20 10

e-mail: metal@pilous.cz, www.pilous.cz

ARG 640 DC CF-NC Automat



7340 x 54 x 1,6

	90°
●	550
■	550
■	700 x 550

Main motor	400 V, 50 Hz, 7.5 kW
Servo motor of the feed	400 V, 50 Hz, 4.5 kW
Pump motor	400 V, 50 Hz, 0.12 kW
Hydraulic motor unit	400 V, 50 Hz, 1 kW
Feed rate of material	1,6 / 2,5 / 3 m/min.
Saw blade speed	15-90 m/min.

DESCRIPTION

Massive double-column semi-automatic machine designed for versatile use in the industrial cutting of materials even in the most challenging and non-stop applications and also for cutting heavy workpieces of larger cross-sections. Exceptionally solid construction of the saw band arm and the massive dual-column arm support moving on linear lines ensure excellent stiffness of the whole system and accurate cut during industrial cutting of full materials. Industrial band 54 x 1.6 mm is manufactured in many versions and allows for cutting of wide range of materials, including stainless steel or tool steel.

The machine is equipped with a workpiece feed by industrial servomotor (servomotor with planetary gear) with a new control system. The servomotor and ball screw ensure high speed and maximum accuracy of workpiece feed, even in multiple feed when cutting long pieces. Options of setting three feed rates – 27, 42 or 50 mm/s according to weight and length of the workpiece to be cut. Maximum length of a single feed is 600 mm.

Central control panel with a big colour touch screen (7.5") ensures simple intuitive control of all features of the machine. The control unit allows for programming of up to 60 programmes for quick setting of the feed length in repetitive production. Each programme can be annotated, e.g. by the drawing number. Possibility of programming and cutting of different number of pieces of different sizes without the need for further operation of the machine. The machine can be controlled in fully automatic, semi-automatic or manual mode. In manual mode all functions of the machine are controlled separately.

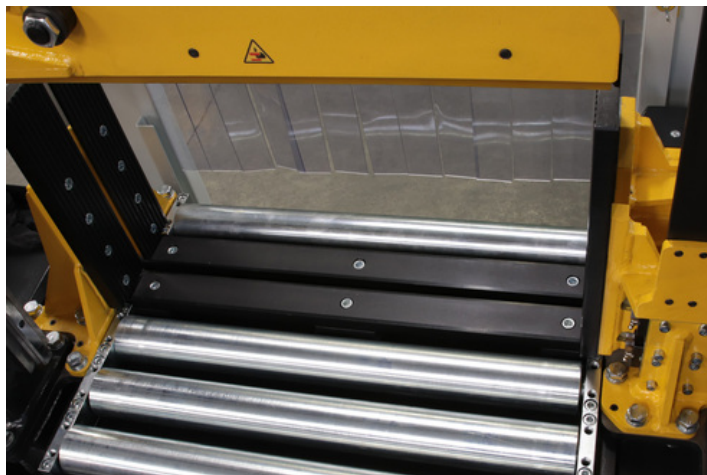
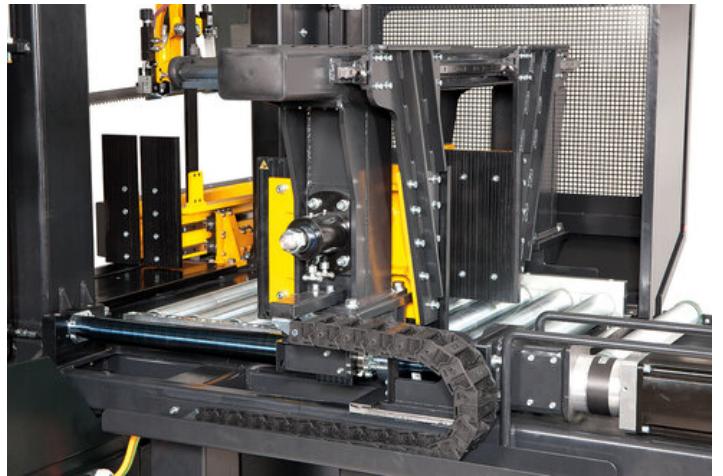
Due to very cutting of very heavy workpieces the loading floor is equipped with a robust rollers along its entire length, allowing easy motion of the material. Optimum clamping of the workpiece when cutting is facilitated by a full-stroke double-jaw vice which clamps the material both before and behind the cut. The vice moves along linear guides. The moving guide block is adjusted together with the vice jaw. That means that it is always automatically closest to the cut, which contributes to cutting accuracy and speed. Saw band guide block holder also moves along the linear guides. Extremely robust feeding full-lifting vice moves again along the linear guides. For maximum performance the servomotor with ball screw is additionally equipped with cutting-edge planetary gear, which guarantees easy motion of even the heaviest materials. For the expected cutting of very heavy and often uneven materials, e.g. forgings, the vice is equipped with a system gaping simultaneously both jaws. The fixed jaw pushes aside by 15 mm from the material, the movable jaw with full-lifting hydraulic cylinder pushes during the automatic operation also by 15 mm. Therefore there is not any conflict between the feed vice and material, and also the accuracy of the feed is ensured. The machine is equipped with a high-performance industrial hydraulic unit. Horizontal clamping of the material and motion of the sawblade arm to the cut and back into the required position according to the diameter of the material are also hydraulically operated. Hydraulic unit allows you to set the required pressure of the vice.

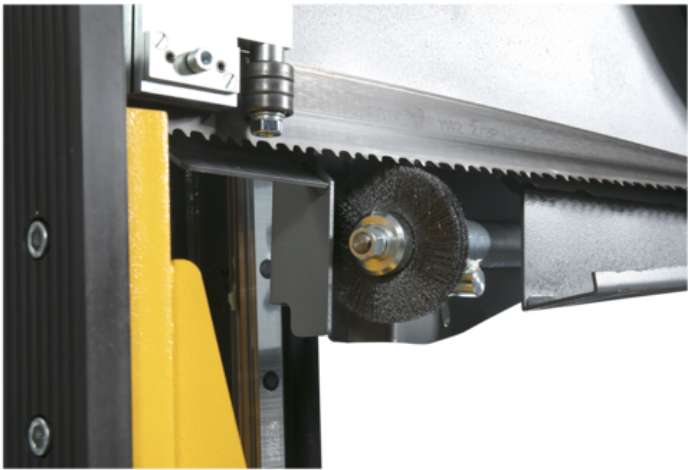
Both saw band guiding heads are fitted with automatic regulation of feed into cut, which significantly increases the rate and accuracy of cutting and service life of the saw band. Maximum cutting efficiency is maintained also thanks to the possibility of setting optimum saw band speed by a frequency converter in the range between 15 and 90 m/min., which significantly contributes to cutting accuracy and service life of saw bands. Large base and overall massive framework guarantee exceptional stability of the machine even when cutting heavy workpieces. By default the machine is equipped with a screw conveyor. Its location right below the cut ensures optimum removal of chips. Chips can be driven into a metal container with a removable drip tray (accessories). High-quality lighting of the work area by a line of powerful LEDs with a cover. Behind the cut the vice can be fitted with a supporting roller for cutting long pieces or a slide of material for short pieces (accessories).

- In order to achieve maximum accuracy and productivity the machine is designed only for perpendicular cutting.
- Very robust machine construction composed of massive weldments ensures vibration absorption.
- Large diameter running wheels and precise three-side hardmetal guiding ensure long service life of the band and cutting accuracy.
- Easy intuitive controls by ergonomically placed controls on the control panel.
- Overdesign of running wheel bearings, tensioning wheel system and all rotary parts ensures long service life of the machine.
- Noiseless and maintenance-free band drive is provided by an industrial electric motor with bevel gearbox.
- The machine is connected to a complete cooling system with a highperformance pump and possibility of regulating the flow on both guiding heads independently and on two additional adjustable outlets. Coolant tank with a high-performance pump is placed in the base of the machine.
- The machine checks correct tension or break of the saw band. If the saw band breaks the machine automatically switches off.

All pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

PHOTOGALLERY







FR*

Frequency converter - Standard equipment

Enables continuous blade speed regulation between 15–90 m/min. and thus setting the optimum cutting conditions for the given material.



KDE*

Electrical cleaning brush - Standard equipment

Steel circular brush powered by and industrial motor with worm gearbox. Used to remove chips from the saw band behind the cut.



AG*

Pressure regulation - Standard equipment

Hydraulically controlled double-side automatic regulation of saw band feed into cut according to the resistance of the material to be cut. Significantly reduces the cutting time and service life of the saw band.



OPL*

Rinse spray gun - Standard equipment

For cleaning working space of the machine.



LED*

LED Light - Standard equipment

High-quality lighting of the work area by a line of powerful LEDs with a cover. An invaluable tool especially when the lighting at the workplace is insufficient.



BG 640*

Bevel gearbox with 7,5 kW motor - Standard equipment

Bevel gearbox with motor 7,5 kW increases cutting power. Efficient for highly productive cutting of tough metal, e.g. stainless steel.



HD640*

Hydraulic tensioning - Standard equipment

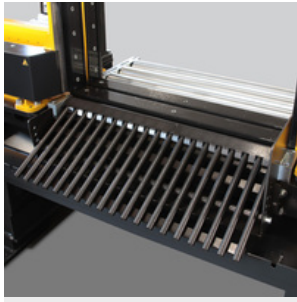
Ensures convenient tensioning of the saw band via the central control panel. Optimum tensioning of the saw band is essential for its service life and cutting accuracy.



HVP 520

Hydraulic pressure device HVP

The massive full-stroke pressure device ensures optimum vertical clamping when cutting workpieces in bundles. Hydraulics-controlled pressure plate with adjustable lifting height is guided through linear guidance and it clamps the workpiece along the full length of the vice. The lifting height according to the size of the workpiece is simply adjustable through a touchscreen and the clamping is synchronized with vertical vice.



KL 720

Material chute KL 640

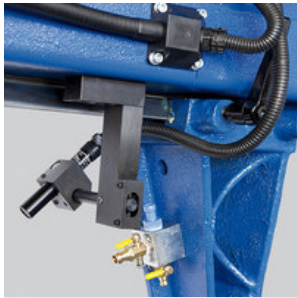
Continuously joins the vice behind the cut and allows for easy slide of cut pieces into a container when cutting larger series.



MM

Oil mist lubrication MM

Creates an oil mist that is sprayed onto the cutting edge. It replaces the use of a classic coolant, especially when cutting sections during which leakages may occur. Possibility of using organic oils.



LS

Laser alignment LS

High-quality industrial laser projects the cutting line on the material to be cut. Makes the setting of the required material length simpler, faster and more accurate.



M2

Signalling beacon M2

Signalling beacon is designed for a remote check of the working status of the machine. Dichromatic beacon is fitted with LED lights of a high luminosity and visibility from all directions, thanks to a unique shape of lenses.

Green light – indication of a working mode of the machine, sawblade is in the cut. After cutting operation and sawblade stopping the light switches off signalling that a next cut can be started.

Red light – indication of malfunction, e.g. broken sawblade, main motor overload, opened safety cover and other failures leading to the stop of the machine.



M3

Signalling beacon M3

Signalling beacon is designed for a remote check of the working status of the machine. Trichromatic beacon is fitted with LED lights of a high luminosity and visibility from all directions, thanks to a unique shape of lenses.

Green light – indication of a working mode of the machine, sawblade is in the cut. After cutting operation and sawblade stopping the light switches off signalling that a next cut can be started.

Red light – indication of malfunction, e.g. broken sawblade, main motor overload, opened safety cover and other failures leading to the stop of the machine.

Blue light - indication of material ending etc.



PV

Additional roller PV

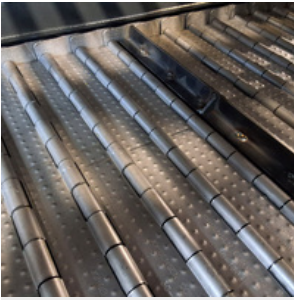
To be installed instead of the slide behind the cut. Facilitates the feed of the material when cutting long workpieces.



SDA

Scraper chip conveyor SDA

Ensures smooth removal of chips from the machine. Reduces the time needed for the cleaning of the machine especially when cutting series of full materials producing large amount of chips. Ideal for small brittle chips and cast iron chips.



SDC

Plate Chip Conveyor SDC

The plate chip conveyor is equipped with a steel plate conveyor belt on which the chips fall and are carried by transverse scrapers into a prepared collection container. This full plate belt with protrusions prevents chips from sticking to the belt. The solid plates of the belt, on the other hand, prevent small chips from flowing through the belt. This type is also suitable for aluminum chips.



- Original bandsaw blades produced using the latest technology with top-quality German materials, while strictly complying with all stated production and control procedures.
- High productivity and precision of cut with the maximum service life of the blade is ensured.
- Wide range of produced types of sawblades and toothings enables the professional cutting of almost all available materials.



Bi-metal blade

Consists of bearing band from special steel on which a layer of HSS material is welded into where the teeth are milled.



Constant toothings

The distance of the teeth are always the same.



Variable toothings

The distance of teeth vary and is periodically repeated. This results in a greater cutting range, ability to further eliminate vibrations caused by the impact of the tooth blade on material, longer service life of the blade.

M42

Universal blade recommended for a wide palette of material, including tool steels and stainless steel up to hardness 45 HRC. Teeth are made from steel HSS-M42 containing cobalt.

M51

Blade for tool and stainless steel with hardness up to 50 HRC. Tooth tips are made from steel HSS-M42 containing cobalt and wolfram

Carbide

Consists of bearing band from special steel into which the teeth are milled on which especially grinded carbide plates are welded. The carbide mounted blade is recommended for cutting surface hardened materials, chrome parts, forged pieces and materials with external tenacity and hardness up to 62 HRC.

Cutting range

For optimal output of the blade, the correct selection of the size of the blade tooth is important depending on the size of the divided material.



Variable toothings		Constant toothings		Variable toothings		Constant toothings	
a(D) [mm]		a(D) [mm]		t [mm]		t [mm]	
0-25	10/14	0-10	18	0-4	10/14	0-1	18
20-40	8/12 (8/11)	5-20	14	3-6	8/12 (8/11)	0-3	14
30-60	6/10	20-40	10	6-9	6/10	4-7	10
40-70	5/8 (5/7)	40-80	6	9-13	5/8 (5/7)	8-11	6
60-110	4/6	80-120	4	12-16	4/6	12-15	4
80-140	3/4	120-200	3	16-22	3/4	16-20	3
120-350	2/3	200-400	2	20-35	2/3	21-30	2
250-550	1,4-2	300-800	1,25	30-85	1,4-2	31-90	1,25
380-750	1/1,5			40-85	1/1,5		
550-3000	0,75/1,25			80-200	0,75-1,25		

When selecting the number of teeth for the blade, the general principle applies of a minimum of 4 teeth, but no more than 30 teeth are in contact with the work piece.



Be careful when unpacking welded saw blades. They are in a shipping container in tensioned condition. Remove the saw blade cover only after fitting it onto the machine.

EMULSION



COOLcut Standard

COOLcut Standard – universal coolant and lubricant.

Recommended concentration 5–10 %. 5 litres pack. Dilution 1:20.

- fluid allows achievement of optimal lubricating and cooling properties during the machining process
- low aromatic, highly refined paraffinic oil
- effective corrosion inhibitors provide permanent protection of the workpiece and the machine from corrosion
- bio stability and excellent wettability ensure excellent cooling and lubricating effect even in very hard water
- minimum tendency to foaming ensures effective lubrication
- high efficiency and profitability of use

Except use on log band saws the product is designed for machining operations carried out both on conventional machines and NC and CNC machining centres.



COOLcut Opti

COOLcut Opti – universal coolant and lubricant. Such machining fluid allows achievement of unique lubricating and cooling properties during the machining process.

Recommended concentration 4–7 %. 1 and 5 litres pack. Dilution 1:20.

- low aromatic, highly refined mineral oil
- effective corrosion inhibitors provide permanent protection of the workpiece and the machine from corrosion
- above average stability and excellent wettability ensure excellent cooling and lubricating effect even in very hard water
- minimum tendency to foaming ensures effective lubrication
- high efficiency and profitability of use
- long-term biostability

In addition to use in saw bands the product is designed for machining operations carried out both on conventional machines and NC and CNC machining centres.



COOLcut Eco 65

COOLcut Eco 65 – universal cooling and lubricating emulsifying oil, well biodegradable according to OECD 301-D test. Biodegradability of 65 % in 21 days.

Recommended concentration 4–7 %. 5 litres pack. Dilution 1:20.

- Such machining fluid allows achievement of unique lubricating and cooling properties during the machining process
- highly refined synthetic ester oil
- effective corrosion inhibitors provide permanent protection of the workpiece and the machine from corrosion
- above average stability and excellent wettability ensure excellent cooling and lubricating effect even in very hard water
- minimum tendency to foaming ensures effective lubrication
- high efficiency and profitability of use
- long-term biostability

In addition to use in saw bands the product is designed for machining operations carried out both on conventional machines and NC and CNC machining centres.



COOLcut Bio 90

COOLcut Bio 90 – universal cooling and lubricating emulsifying oil, well biodegradable according to OECD 301-D test. Biodegradability of 90 % in 21 days. Due to its biodegradability it can be used in any outdoor environment without environmental damage.

Recommended concentration 4–7 %. 5 litres pack. Dilution 1:20.

- Such machining fluid allows achievement of unique lubricating and cooling properties during the machining process
- highly refined synthetic ester oil
- effective corrosion inhibitors provide permanent protection of the workpiece and the machine from corrosion
- above average stability and excellent wettability ensure excellent cooling and lubricating effect even in very hard water
- minimum tendency to foaming ensures effective lubrication
- high efficiency and profitability of use
- long-term biostability

In addition to use in saw bands the product is designed for machining operations carried out both on conventional machines and NC and CNC machining centres.



COOLcut Micro

COOLcut Micro – an easily biodegradable semi-synthetic cooling and lubricating micro-emulsion. Due to its biodegradability it can be used in any outdoor environment without environmental damage. Such machining fluid allows achievement of unique lubricating and cooling properties during the machining process.

Pack of 5 litres. Use undiluted.

- highly refined synthetic ester oil
- effective corrosion inhibitors provide permanent protection of the workpiece and the machine from corrosion
- above average stability and excellent wettability ensure excellent cooling and lubricating effect even in very hard water
- minimum tendency to foaming ensures effective lubrication
- high efficiency and profitability of use
- long-term biostability

In addition to use in saw bands the product is designed for machining operations carried out both on conventional machines and NC and CNC machining centres. 5 litres pack.



COOLcut Antifreeze

COOLcut Antifreeze – low-freezing ingredient for water miscible coolants used in winter in outdoors environment, up to minus 20 °C, depending on the dosage.

5 litres pack. Dilution 1:20.

- effectively lowers the freezing point of the fluid
- very good resistance to oxidation guarantees long service life
- does not act aggressively on the sealing elements (elastomers), to which it comes into contact.

Optima Antifreeze	(%)	10	20	30	40	50
Flowability temperature	(°C)	-5	-10	-17	-26	-40