karmetal
SAWlutions

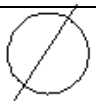
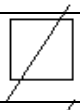
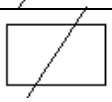
ULTRA 300x300

HIGH PERFORMANCE

AUTONOMOUS BAND SAW MACHINE

*Photo may feature machine with optional accessories

CUTTING CAPACITY

	**0 °**
	**300 mm**
	**300 mm**
	**300 x 330 mm**

TECHNICAL SPECIFICATIONS

Main Motor	: 16, 1 kW
Gearbox	: Bevel Helical PKD 4390 High Efficiency
Hydraulic Motor	: 1, 5 kW
Coolant Motor	: 1, 1 kW (High Pressure)
Conveyor Motor	: 0, 37 kW
Swarf Brush Motor	: 0, 25 kW
Back Feeding Stroke	: 480 mm (Multi Indexing)
Front Feeding Stroke	: 300 mm (Multi Indexing)
Back Servo Feeder Motor	: 750 Watt, 3000 rpm
Front Servo Feeder Motor	: 750 Watt, 3000 rpm
Bow Servo Motor	: 750 Watt, 3000 rpm
Blade Speed	: 20-400 m/min
Blade Dimensions	: 7.220x54x1, 6 mm
Machine Weight	: 5.000 kg
Machine Dimensions	: 1.800x4.150x2.200

STANDARD ACCESSORIES

15" Industrial PC

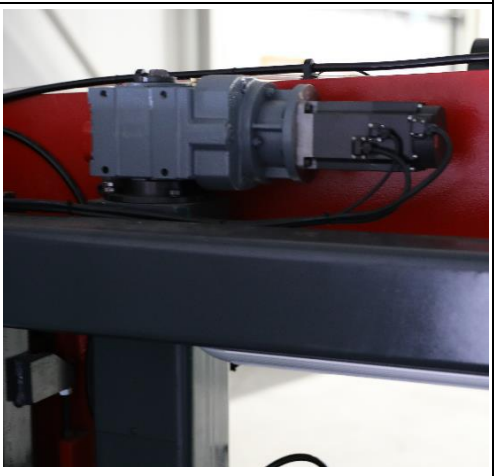
- Manual, automatic and intelligient cutting modes
- All cutting datas can be stored and transferred to outsource
- User authority definition
- Cutting information screen
- Work list transfer from PC and mobile devices
- Communication via LAN and Wi-fi
- Access to mobile devices via mobile application

Intelligent Sawing (IPS)

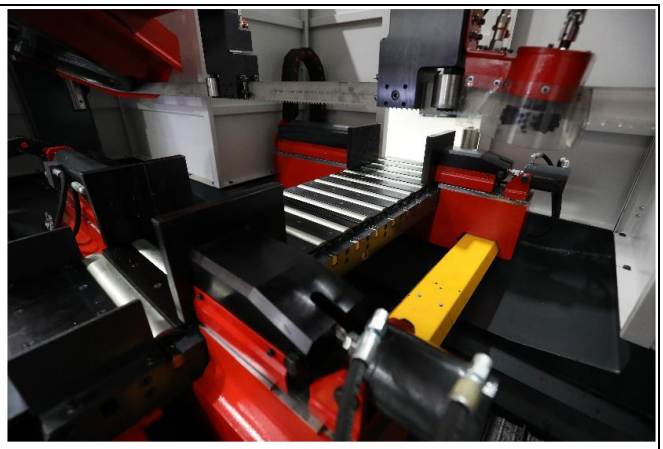
- 1300 different predefined material
- Materials are listed in 6 different standards
- 4 different sawing performance mode (Normal, Blade Saver, High Performance, Ultra Performance)
- Heat treated material defining
- Automatically selection of most appropriate cutting parameters depending on the cutting channel, material grade, heat treatment, sawing mode, blade type and blade TPI according to predefined parameters in the database. Parameters also vary during the operation

Servo Controlled Bow Motion

- Ability to adjust the feed to 1mm/min
- Reducing the load on the ball screw with the use of hydraulic cylinder
- Full control on the cutting pressure
- In case of a problem on the ball screw, hydraulic cylinder locks the system and avoids the bow drop



Servo Controlled Front-Rear Vises



- Servo motor driven rear vise with 480 mm stroke
- Servo motor driven front vise with 300 mm stroke
- Front vise can go beyond the blade to pull the remaining piece to reduce remnant to 10 mm
- Both front and rear vises are full stroke
- Both front and rear vises have their fixed vises with a small motion
- After the cut is finished, both vises move opposite direction of blade to avoid blade friction
- Front vise bring to cut piece to predefined position (inclined surface or flat surface)

Hydraulic Blade Tensioning

- The blade can be tensioned easily to 300N/mm2
- The blade tension is periodically controlled to avoid any loss of tension

Cover

- Elegant design
- Compatible with international safety regulations (2 contact safety relay etc.)
- Noise and steam isolation

7 Color LED Display

- Blue when standby
- Green while in operation
- Red while not suitable for operation
- Yellow while there is a warning during operation
- Flashing red while operation is interrupted because of an alarm during operation
- Flashing green when operation is finished

16,1 kW High Torque Main Motor

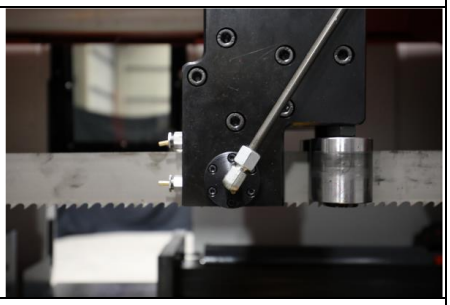
- ABB brand, 1100 Nm nominal output
- No loss of torque in neither low nor high frequency
- High efficiency Mitsubishi brand inverter

Scraper Type Chip Conveyor

- Speed control via frequency inverter
- External warning light for faults on conveyor
- Easy adjustment of operation frequency and duration

Hydraulic Blade Carbide Guides

- Adjustable guide pressure on the blade
- TiN coated carbide guides

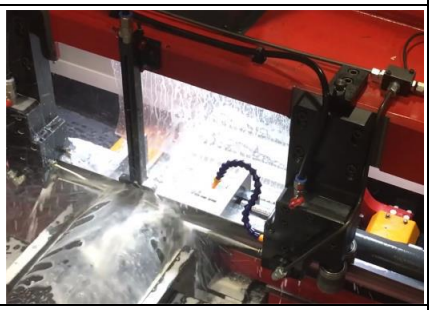


Proximity Switch

- In case of a jam of blade, stops the machine immediately and warns the operator

High Pressure Coolant

- 80 liters/min flow rate of coolant
- 12 points coolant output
- Augmented coolant in the cutting channel

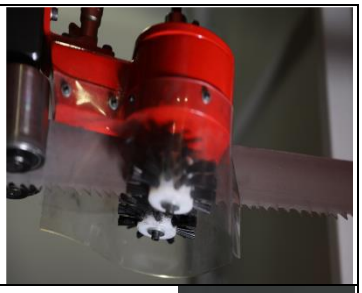


30° Blade Twist

- 3 times lower metal fatigue due to lower twist on the blade
- 1000 mm twisting distance from the wheel to the guide

Blade Cleaning Brush System

- System with two brushes in two sides of the blade
- 900 RPM rotating brushes
- High pressure coolant for cleaning



Adjustable Pressures on Vises, Blade Tension and Carbide Guides

2x2 mt Roller Table With Side and Bottom Sheet Cover

- Spaces between the rollers are filled with steel plates
- Barriers of steel in the sides of the roller table

Hydraulic Front and Rear Vises

- All four vise are mobile and hydraulic

OPTIONAL ACCESSORIES

Out of Square Cutting Detector

- Deviation limtis can be adjusted by the operator
- Instant deviation is monitored on the 15” screen

Mist Collector

Intelligent Cross-section Scanning (ICS)

- In case the workpiece is tangled, it is used to define the shape to the industrial PC
- There is a laser line and an industrial camera. By taking up to 25 photos for every mm while the bow moving down and combining them via a special software (image processing) the shape of the workpiece is taught to the machine.
- It is very beneficial especially for the bundle cutting operations.

Fully Autamated Material Feed System

- Additional to standard roller tables special material feeding systems can be supplied:
- Motorized roller feeders in required length
- Servo feed systems in required length
- Cross conveyors to shift the material between conveyors

Laser Line Indicator

Micro Molecular Coolant System