



karmetal
SAWlutions






VORTEX 150

HIGH PERFORMANCE AUTONOMOUS CIRCULAR SAWING MACHINE

*Photo may feature machine with optional accessories.

CUTTING CAPACITY

	Ø 460	Ø 480
	20-150 mm	20-160 mm
	20-120 mm	20-130 mm

TECHNICAL SPECIFICATIONS

Main Motor	19 kW (25HP) / 1200 Nm
Hydraulic Motor	4 kW
Front Servo Motor	750 Watt, 3.000 rpm (Optional)
Rear Servo Motor	750 Watt, 3.000 rpm
Bow Servo Motor	3.500 Watt, 2.000 rpm, Braked
Conveyor Motor	0,37 kW
Chip Brush Motor	2.000 rpm, 4,6 Nm Step Motor
Front Feeding Stroke	20 mm (Multiple Indexing) (Optional)
Rear Feeding Stroke	1.200 mm (Multiple Indexing)
Blade Speed	20-220 rpm
Working Height	950 mm
Blade Dimensions	Ø460x2,7 mm - Ø460x3/5 mm(TCT Saw)
Weight	4.200 (5.600*) kg
Machine Dimensions	2.200 (8.070*) 3.000x2.035 mm

*Above dimensions are with loading table.

STANDARD ACCESSORIES AND EQUIPMENT



15,6" INDUSTRIAL PC

- Only intelligent sawing mode.
- Record of all cutting data and ability to export this data.
- User authorization definition.
- Cutting information screen.
- Ability to import worklist from Pc's or mobile devices.
- Communication via LAN or Wi-fi.
- Accessibility via mobile application.



INTELLIGENT SAWING (IPS)

- 13.000 different predefined material.
- Materials are listed in 6 different standards.
- 6 different sawing performance mode (Normal, Blade Saver, Extra Low Speed, High Performance, Ultra Performance, Customized)
- Heat treated material defining.



MINERAL CASTING

- The base of the machine is filled with specially developed mineral casting. Mineral casting is 80 times better vibration absorber with respect to steel.



19 KW HIGH TORQUE MAIN MOTOR

- No loss of torque in neither low nor high frequency.
- Closed loop operation (Thanks to the encoder on) provides full torque control.
- High efficiency Mitsubishi Inverter.
- External coolant fan.
- Capability to perform sawing between 20-260 RPM without any loss of torque.



SERVO CONTROLLED BOW MOTION

- Linear motion with ball screw and linear guides.
- Speed adjustment between 1~10.000 mm/min.
- Full control on the cutting pressure.



SERVO CONTROLLED REAR VISE

- Servo motor controlled, 1200 mm stroke rear vise.
- Both rear and front vises close to 20 mm.
- After the cut is finished, rear vise moves opposite direction of blade to avoid blade friction.



HYDRAULIC FRONT AND REAR VISES

- Both vises on the machine are hydraulic.
- Front vise has the pressure switch, Sawing cannot be executed if the front vise is open.
- While feeding the material, feeding system is hydraulically lifted to avoid scratch on the front vise.



ADJUSTMENT OF VISE PRESSURES

- Both rear and front vise pressures could be adjusted from the hydraulic control panel.



DIRECT DRIVE SYSTEM



ADAPTIVE CARBIDE ARM MECHANISM



PALLET TYPE CHIP CONVEYOR

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



BLADE CLEANING BRUSH SYSTEM

- There are two brushes on the machine. One is motorized and the other is run by the blade.
- Motorized brush rotates up to 2000 RPM.
- Brush speed is adjusted by inverter according to blade speed.



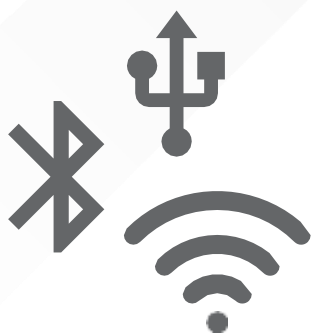
AUTOMATIC SCRAP SEPERATOR

- When a new material is loaded on the machine, the front and rear scraps are seperated by the seperator.



COVER

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



DATA TRANSFER

- Ability to transfer worklist from PC.
- Access to mobile devices via mobile application.
- Transferring data to MES solutions.
- Data tracking with cloud integration.
- ERP integration.



MICROMOLECULAR COOLING SYSTEM

- Vegetable oil in the cutting area with air cooling is provided by spraying.
- With the additional oil cooling system juicy cuts can be made if desired.



AUTOMATIC SLIDE LUBRICATION UNIT

- Body movement slides in the machine and vise motion slides automatic slide lubrication lubricated periodically by means of an automatic lubrication unit.



Ø460 AND Ø480 BLADES SUITABILITY

- Where deemed necessary, the cost of the blade the Ø360 mm blade in order to reduce the possibility of attachment.



6 METERS AUTOMATIC MATERIAL LOADING MAGAZINE

- 6 meters long, 120 cm. stocking area automatic loading magazine.

OPTIONAL ACCESSORIES AND EQUIPMENT



MIST COLLECTOR



3rd VISE

- When installed on the front of the machine, reduces remnant to 20 mm.



BUNDLE LOADING MAGAZINE

- A special magazine which can be loaded more material with respect to standard magazine.



TABLE FOR UNLOADING THE CUT PIECE

- Instead of free fall of the cut materials, a removed from the machine by conveyor and It is a system that allows it to be dropped onto the ropes. Generally for materials with long cut lengths used.



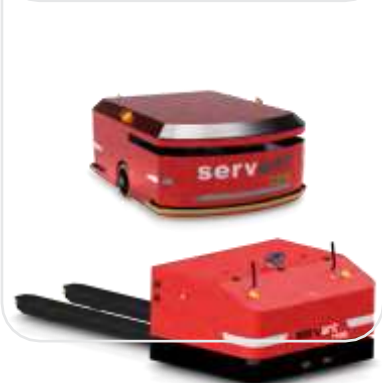
MATERIAL LOADING TOWER – ARX (ASRS)

- Materials with different properties and dimensions stockpiled separately from each other and the the material is fed into the machine one by one, one by one, untouched by human hands. is a system that allows loading.
 - It can have the desired number of cassettes.
- The tower, which can be designed, is specially designed according to customer needs.



CUT PART STACKING ROBOT – ORDINA (IRA)

- Instead of the cut materials falling freely, held with the help of a magnet and introduced to the machine on the pallet/platform is the system.



STACKED PARTS HANDLING ROBOT – SERVANT (AMR)

- In factory internal logistics with natural navigation, with natural navigation offering customizable transport structure is an autonomous mobile robot.



STANDARD PACKAGING



OPTIONAL PACKAGING



TERMS

Delivery (After Receipt of written PO) :
Type of Delivery : **Exworks**

WARRANTY CONDITIONS

The machine is under the warranty of KARMETAL LTD. ŞTİ. For a period of 2 years for mechanical parts, 1 year for electric and electronic parts from the date of purchase. This warranty is subject to all of the terms and conditions listed below:

1. This warranty is valid only if the Warranty Registration Form is filled in and returned to the manufacturer or its authorized dealer within **two months after the** date of purchase.
2. The obligation of the manufacturer under this warranty shall be limited to repairing or replacing components which proves defective and which our examination shall disclose to our satisfaction to be defective.
3. Defects due to improper operation, misuse, neglect, alteration, irregular voltage conditions, inadequate wiring, improper installation (**all electrical and electronic components, all electrical motors etc.**) and due to accidents or any damage caused by transportation, flood, fire, natural disasters, theft are not included in this warranty and are strictly the responsibility of the purchaser.
4. Any part returned to KARMETAL or its authorized dealer under the terms of this warranty shall be on the basis of transportation charges prepaid by the customer and must be accompanied by a record of the machine model code and serial number.
5. This warranty does not apply to the following components; band saw blade, blade pressure pads or brackets and blade guide bearings **because of being consumables**.
6. Manufacturer and authorized dealer cannot be blamed within maximum repair period for the material or moral damage. Apart from that act the period as Warranty Conditions and there will not be done any retroactive requirement



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