SPEED 25 MB
(Demonstration machine)

MACHINE STANDARD MODEL "SPEED 25 MB"

SPEED 25 is a work Numerical Control Work Center with three interpolated axes (X, Y, Z) suitable for the processing both slabs and blocks even **on high thickness** in marble, granite, natural stone, composite stone and glass as well. In standard configuration it can perform each type of raw and polished contouring, as well as milling, drilling, countersinking, bas relief and writing.

OPERATING UNIT

Electro-Spindle connection ISO40 - Power 13,5 kW (18 Hp) Ceramic Bearings - 12000 rpm

The operating unit consists of an electro-spindle asynchronous 3 phases - 2 poles, its main features are:

- Maximum power up to **13,5 KW (18 HP), torque 22,6 Nm at 6000 rpm;**
- Adjustable **rotation speed 0-12.000 rpm** with inverter;
- ISO 40 connection for conic tool holders;
- Steady power transmission while working;
- Collet for the tool-holder cones released automatically or manually through controlled oil piston;
- Air blower for the cleaning and to guarantee a perfect clutch of the conic tool holders;
- Ceramic bearings for reliability and long-term life even in case of very demanding uses.
- DEUBLIN attachment.

AXES MOVEMENT

The machine is managed by a Numerical Control and equipped with three principal axes, interpolated and brushless motors :

- **X (3800 mm) :** transversal car into which is installed the electrospindle movement, from right to left and vice versa, with rectified and tempered guides and 4 contact points recirculating ball bearings. It is actuated by highest precision rack and pinion system.

- **Y and V (2610 mm) :** longitudinal mobile bridge movement, ahead-back and vice versa, with rectified and tempered guides and 4 contact points recirculating ball bearings. The movement is made with two synchronised motors with Gantry system and connection with highest precision rack and pinion.
- **Z (520 mm) :** vertical operating unit movement, rise-descent and vice versa, with two rectified and tempered guides and ball bearings; movement achieved by highest precision rack and pinion.

AIR CONDITIONER

The cabinet is cooled by an air conditioner.

TOOL CRIB N.1

The tool crib is fixed to the structure on the back side. It can house a max. quantity of 26 tool holders and is completely protected by a stainless steel cover, automatically activated though pneumatic pistons at every tool change.

VACUUM CENTRALIZED SYSTEM N.1

A vacuum pump, lubricated with oil; flow rate: 160 m3 / h; power: 2.4 kW.

- Average clean water consumption: 4-8 l / min
- To facilitate the connection to the vacuum system of the suction cups, the reference as well as mechanical clamping stops, the connections are located the back of the access doors.

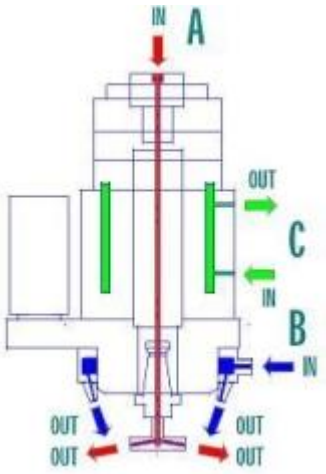
MANIFOLD FOR THE VACUUM AND AIR CIRCUITS N.2

Manifold fitted with quick connect coupling for handling of the compressed air and vacuum generation circuits. The manifold allows through the outputs of direct vacuum, controlled vacuum and compressed air, the connection of suction cups, reference stops, vices and other fastening systems for blocking in a quick and easy way the work pieces on the work surface.

COMPRESSED AIR CENTRALIZED SYSTEM

The plant has to be properly dimensioned to get air at 6 bar pressure and a capacity of 500 l/min. The compressed air is needed during the tool change, to produce an air cushion between the superior part of suction cups and the slabs to simplify loading/unloading operations, for the work of pneumatic reference stops and for cleaning operations.

The electrospindle is completely liquid cooled in order to always guarantee the best use conditions, and so the maximum performance and duration (see picture).



A. Internal water for tool cooling, require clean water

B. External water for tool cooling, can use recycled water with the installation of a tank (optional) for working water collecting

C. Electrospindle cooling system with heat exchanger through water and glycol or through dedicated chiller unit (optional).

If is required the connection to the company water treatment system for the tools cooling circuits (A and B) it is recommended a 25 µm water filter for internal and 300 µm for external cooling.

LUBRIFICATION PLANT

Forced-injection, centralized and automatic plant for lubricating of *X, Y* and *Z* axes, managed by the Numerical Control at foreseen intervals, without manual intervention and without stopping of the machine. Pressure control and tank minimum level signalling.

ELECTRICAL CABINET AND CONTROL PANEL N.1

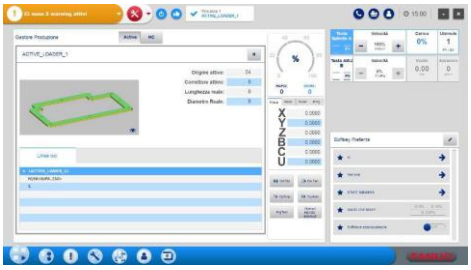
The widest control panel on the market has a **21.5" full touch screen** and has all the main controls for the machine working.

The machine is managed by a modern software interface called **CMS Active** that, in combination with the CMS Connect platform (optional), represents the innovative CMS Digital System framework, able to provide not only all hardware and software tools to interact directly or remotely with the machine, but above all, improve the user experience within the CMS product family.

CMS ACTIVE N. 1

CMS Active is the software interface that in combination with the 21.5 " Eye-M control panel with touch screen and the CMS Connect platform represents the innovative CMS Digital System framework, able to provide not only all hardware and software tools to interact directly or remotely with the machine, but above all, improve the user experience within the CMS product family.

Features of CMS Active:



- Production manager
- Maintenance manager
- Utilities
- Custom SCADA
- Alarms history
- Files manager
- User manager

The diagnostic package permits CMS operators to check and modify on-line machine configurations, parameters and programs, as well as to execute data backup operations, therefore making remote
assistance possible.

The link requires Internet access, which can be done through the local network.

ELECTRICAL ADJUSTMENT FOR CSA STANDARD N. 1

SPECIAL VOLTAGE 600 VOLTS N. 1

Electrical cabinet complete with air conditioning system to keep internal temperature below 35°C. Protection level IP54.

Voltage different from standard 400 V +10 / -15% – frequency 50+60 Hz ± 1%

All CMS machines adopt the neutral wire connection to avoid any electrocution risk for the operator.

FREQUENCY 60 HZ +/- 10%

PORTABLE KEYBOARD N.1

Remote control for moving the machine in two different ways:

- Manual, to move the axes in a continuous or increasing way;
- Automatic, to control the starting, the stopping and the axes speed.

TOP PC RANGE N. 1

Personal Computer integrated into the machine with hardware features and performance higher than the standard PC. Is recommended with the installation on the machine of CAD / CAM programming software (EASYSTONE, Easyglass, etc.).

NUMERICAL CONTROLER OSAI OPEN N.1

The control panel has all the main controls for the machine working. The control unit consists of a **Numerical Control OSAI series OPEN.**

With the following features :

- CPU Intel Celeron 1,5 GHz
- 2 GB of RAM memory
- Management of up to 32 axes

Remote diagnosis (teleassistance) software TeamViewer

Enables the complete visualization of the machine supervision PC and the removal of machine anomalies noticed in the moment of the connection.

The package allows CMS operator to check the signals, to verify and modify on-line the status of configurations, of parameters and of machine programmes. Also enables operation of data backup, making possible remote long-distance maintenance. The connection requests an internet access.

Metric in MM **N. 1**

SETTING SAFETY MODE N.1

Electronic system for controlling the access into the machine when safety devices are disabled, in accordance with the leislation harmonized marble

machines UNI-EN16564. **Access can take place with the machine axes holds in any position or with maximum speed of the linear axes reduced to 5 m/min and rotary to 500 °/min and remote control active.** The operator has the opportunity to remain inside the machine, with the doors open, during the steps of positioning of reference stops, suction cups, etc. on the work top.

SAFETY AND PROTECTIONS

The machine is equipped with all safety devices necessary to give the operator maximum protection during the normal running.

- The electric cables and the water pipes are supported by a cable rack chain.
- The safety pressure switch stops the machine should the compressed air be in short supply.
- A vacuum device stops the machine in case of insufficient value of vacuum.
- A servo-valve stops the water flow when the machine is not working.
- Axes load limiting device prevent from working beyond the established threshold limits.
- The coverings in stainless steel and the bellows protect all moving parts against water and dust.
- The integral cabin, with manual frontal sliding doors prevents access to the working area and reduces the sound level.

The machine conforms with the fundamental safety requirements provided for the issue of the EC Conformance Statement (standards 2006/42/CE, 2004/108/CE directives and related amendments).

TECHNICAL DATAS STANDARD		
Axe X (*)	*mm.(inch)*	*3800 (150)*
Axe Y (*)	*mm.(inch)*	*2610 (83)*
Axe Z	*mm.(inch)*	*520*
Clearance (**)	*mm (inch)*	*594 (23)*
Speed axe X	*m/min.(ft/min.)*	*72 (236))*
Speed axe Y	*m/min.(ft/min.)*	*72 (236)*
Speed axe Z	*m/min.(ft/min.)*	*17 (56)*
Working envelop	*mm.(inch)*	*3600x2000 (149x79)*
Dimensions	*mm*	*6320 (***) x 4400 x 2540*
Water needs (external tool cooling)	*Lt/min.*	*85 @ 3 bar*
Clean water needs (****)		*15 @ 3 bar*
Air pressure min.	*Bar(PSI)*	*6 bar 90 (80 Lt/min)*
Voltage & Frequency	*V – Hz.*	*400 – 50 (600 Volts via transformer)*
Pounds	*Kg.*	*6900*

OPTIONS INCLUDED IN THE SUPPLY

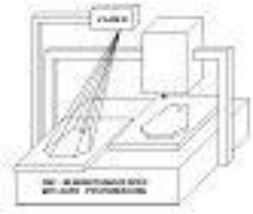
GREEN LASER PROJECTOR FOR CUPS POSITIONING N.1

Laser projector for positioning of suction cups with laser beam enabling the visualization of shapes of finished piece on the machine work top. It avoids lost production time.

Technical data

The positions-accuracy depends on the distance (height) of the projector from the worktop:

up to 1 mt.	± 1.2 mm.	-	up to 3 mt.	± 1.4 mm.
up to 4 mt.	± 1.6 mm.	-	up to 5 mt.	± 1.8 mm.
up to 9 mt.	± 3.2 mm.			



Max projection angle:	80°x80°.
Weight:	21.5 Kg.
Dimensions:	800x300x150 mm.
Temperature:	da 0° a 40° C.
Voltage:	220 V.
Beam colour:	Green

FRAME FOR LASER PROJECTOR H.3800 mm N.1

Structure colour white, RAL 7035, fixed to the floor for the support of the laser projector. Height : 3800mm from the floor. Suitable for single table models.

TANK FOR THE RECYCLE RING OF WATER FROM THE VACUUM PUMP N.1

Recycling tank in galvanized steel for the recycle ring of water from the vacuum pump of dimensions 3900x700xh470 mm. Can be positioned in the rear inside the basement of the machine on MB models. Capacity of 1000l.

INTEGRATED RECYCLING TANL FOR WORKING WATER N.1
CAPACITY OF 900 L

Galvanized steel tank integrated in the front of the machine, for recovery and recycling of working water. To be used for the external cooling line electro-spindle. Capacity 900l.