3EMMEGI S.A.S.
DI MASSIMO MORINI E C.

SETTORE
ROBOTICA RICERCA SPERIMENTALE
AUTOMAZIONE MACCHINE SPECIALI

TECHNICAL DESCRIPTION OF

3D-SHAPER-3 - MODELS

MILLING MACHINE WITH 3 AXIS CNC CONTROL FOR FOAM, WOOD, PLASTIC, G10 AND SOFT METAL SHAPING, OPTIMIZED FOR THE PRODUCTION OF MODELS AND SUITABLE FOR KITEBOARD, FINS, HYDROFOILS AND SIMILAR SHAPING

VIA DELLE GROTTE N. 997E , 00067 MORLUPO (RM) - ITALY C.F. / P. IVA 05676741001
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1. DESCRIPTION OF MACHINE

1.1. N.1 vertical milling machine with 3 interpolated axis with CNC control, Cartesian type, along the 3 axis X, Y, Z and One rotation around Horizontal X axis, as described as follows:

- linear positioning precision:	0.1	mm/1000mm;
- linear direction precision:	0.2	mm/1000mm;
- repeatable position precision:	+/- 0.2	mm;
- X axis working length:	up to 2000	mm;
- Y axis working length:	up to1500	mm;
- Z axis working length:	up to 250	mm;
- combined total linear precision:	+/- 0.2	mm;
- working speed:	0.01 – 20	cm/s;
- power supply:	230 / 380 / 440	Vac single or 3 phase, 50/60Hz
- Installed power:	from 3 to 7	kW

comprehensive of:

- n.1 main frame realized in carbon steel / aluminum, with overall dimensions up to 3500(L) x 2000(W) x 2000(H) mm, provided with n. 4 anti-vibrating and adjustable feet;

- n.1 couple of guides for movement along X axis, realized by means of rectified rails with ball bearing cars with maximum run up to 2100 mm. The power train is realized by means of motor-reducer working on ball bearings rectified worm-screw;

- n.1 couple of guides for movement along Y axis, realized by means of rectified rails with ball bearing cars with maximum run up to 1600 mm. The power train is realized by means of motor-reducer working on ball bearings rectified worm-screw;

- n.1 couple of guides for movement along Z axis, realized by means of rectified rails with ball bearing cars with maximum run up to 250 mm. The power train is realized by means of motor-reducer working on ball bearings rectified worm-screw;

- n.1 shaping head constituted of a 1.0 to 4.0 kW spindle motor with speed from 12.000 to 24.000 rpm, 20 mm shaft tool support, eventual automatic tool-change for cutters and suction device for foam powders produced during shaping;

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- n.3 servo-controlled step motors, complete of drivers, special cables, closed loop control and mounted on motor-reducers;

- n.3 cables chains for X, Y e Z axis;

- n. 1 electrical board comprehensive of complete electrical equipment installed on the machine;

- n.1 3 axis CNC control, predisposed for the execution of external programs in ISO language (G-CODE) and creation of proper own working sequences independently from external programs;

- n.1 vacuum and filtering device for foam powders from 1500 to 2200 W power, complete with 10 m of flexible hose, 100 to 160 mm diameter and bag for powder;

- n.1 Standard PC, complete with monitor, keyboard, I/O devices, hardware and software necessary for complete functioning;

1.2. N.1 complete system for positioning and holding the cores to be shaped also available with pneumatic semi-automatic locking systems comprehensive of:

- n. 1 table realized by means of Aluminum profiles to easy support and block cores with dimensions up to 2100 x 1600 mm;
- n.1 optional stainless steel tank to collect cutting fluid used for metal and G10 shaping;
- n.1 optional liquid Pump to circulate cutting fluid from Tank to Cutter;
- n.1 optional liquid circuit from Tank to Pump and from Pump to Cutter;
- n.1 optional kit of panels to protect ambient from water splashes due to shaping action;
- n.1 optional full cover for machine working space made in transparent polycarbonate with pneumatic cylinders for opening and closing for big dimensions machines. Cover reduces Dust and Cooling Liquid dispersion in surrounding ambient;

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PHOTOS OF DETAILS

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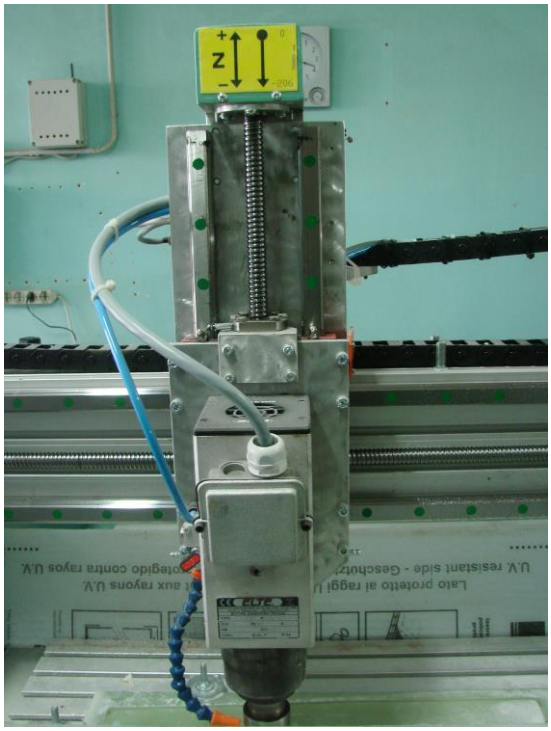

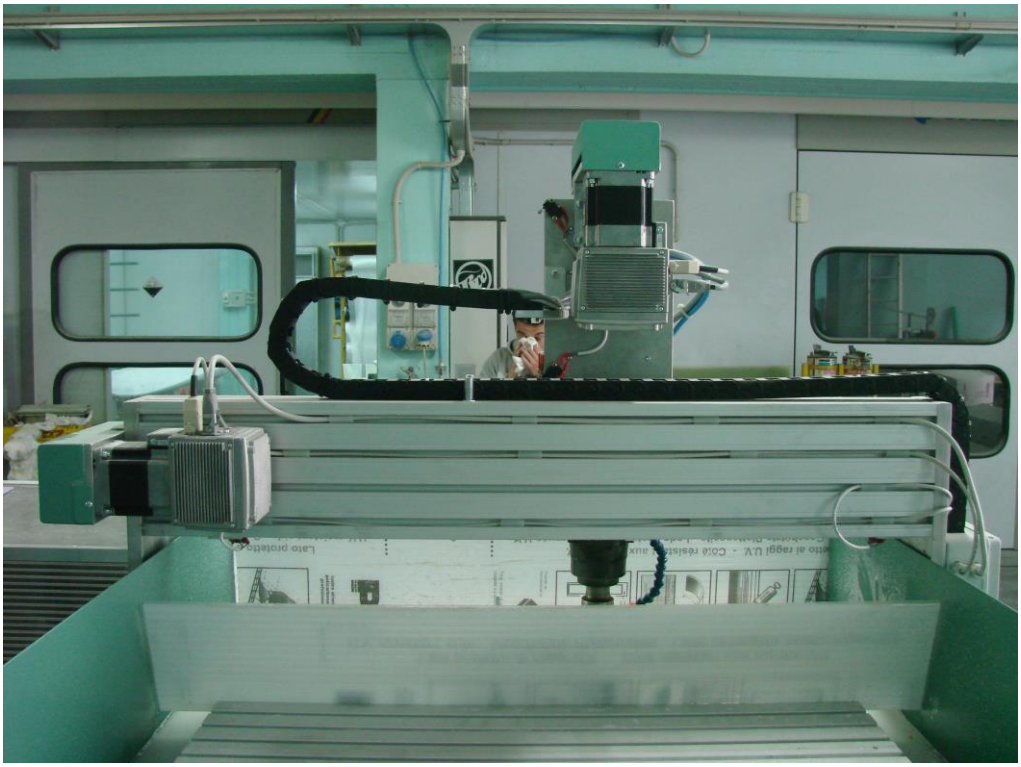

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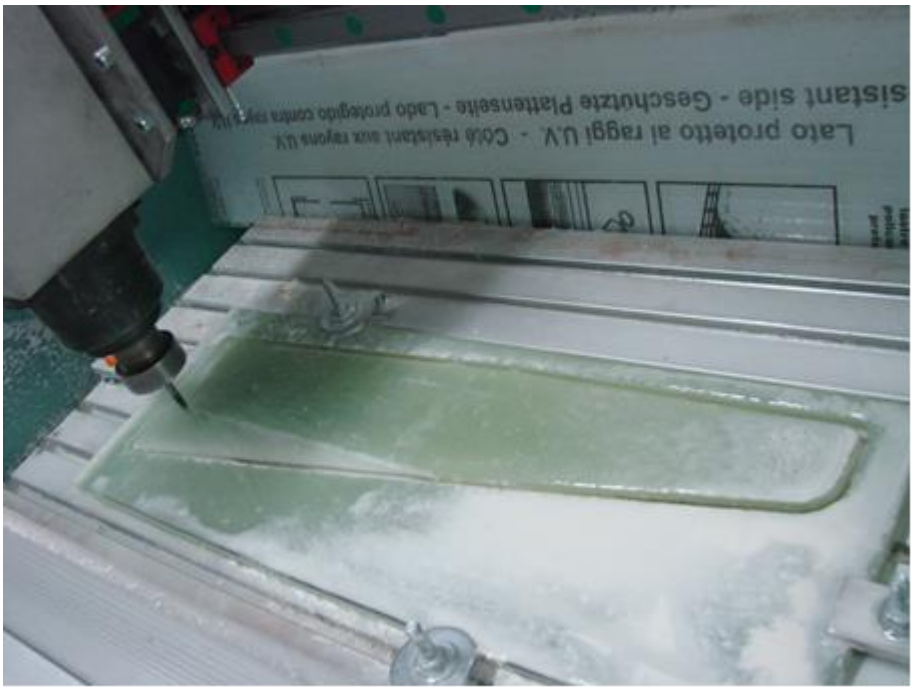

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