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

SETTORE
ROBOTICA RICERCA SPERIMENTALE
AUTOMAZIONE MACCHINE SPECIALI

TECHNICAL DESCRIPTION OF

STANDARD LENGTH (3100 mm / 10 feet) 3D-SHAPER-3

CNC MACHINE WITH 3 AXIS CNC CONTROL FOR FOAM SHAPING, OPTIMIZED FOR THE PRODUCTION OF SURFBOARDS, WINDSURFS, SHORT SUP, KITEBOARDS AND SIMILAR

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, as described as follows:

- number of working axis:	3	
- linear positioning precision:	0.5	mm/1000mm;
- linear direction precision:	0.5	mm/1000mm;
- repeatable position precision:	+/- 0.5	mm;
- X axis working length:	3100	mm;
- Y axis working length:	from 800 to1100	mm;
- Z axis working length:	from 330 to 500	mm;
- combined total linear precision:	0.5 +/- 0.5	mm;
- working speed:	0.01 – 30	cm/s;
- power supply:	230 / 380 / 440	Vac single or 3 phase, 50/60Hz
- Installed power:	from 4.5 to 10.0	kW

comprehensive of:

- n.1 main frame realized in carbon steel , with overall dimensions up to 4000(L) x 1500(W) x 2600(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 3100 mm. The power train is realized by means of motor-reducer, pinion gears and racks;

- n.1 couple of guides for movement along Y axis, realized by means of rectified rails with ball bearing cars with maximum from 800 to 1100 mm. The power train is realized by means of motor-reducer, pinion gear and rack;

- n.1 couple of guides for movement along Z axis, realized by means of rectified rails with ball bearing cars with maximum run from 330 to 500 mm. The power train is realized by means of motor-reducer, pinion gear and rack;

- n.1 shaping head constituted of a 3.0 to 5.0 kW spindle motor with speed from 12.000 to 18.000 rpm, 20 mm shaft tool support, eventual automatic tool-change for cutters and suction device for foam powders produced during shaping;

- 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;

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- 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 blanks to be shaped also available with pneumatic semi-automatic lifting and locking systems comprehensive of:

- n. 3 adjustable supports for the blank to be shaped, each equipped with 2 suckers made in silicon with 75 mm diameter to hold the blank by means of vacuum suction for middles and center blank;
- n. 2 adjustable supports for the blank to be shaped, each equipped with 1 suckers made in silicon with 75 mm diameter to hold the blank by means of vacuum suction for nose and tail of blank;
- n. 2 adjustable devices for positioning and centering the blank to be shaped, each equipped with symmetric auto-centering clamps along Y axis (extra stringer requested);
- n. 2 adjustable devices for positioning and centering the blank to be shaped, each equipped with symmetric auto-centering clamps along Y axis (extra stringer NOT requested);
- n. 1 dry type vacuum pumps, complete with manometer and pressure limit switch;
- n. 1 pneumatic plant for vacuum from pump to suckers;

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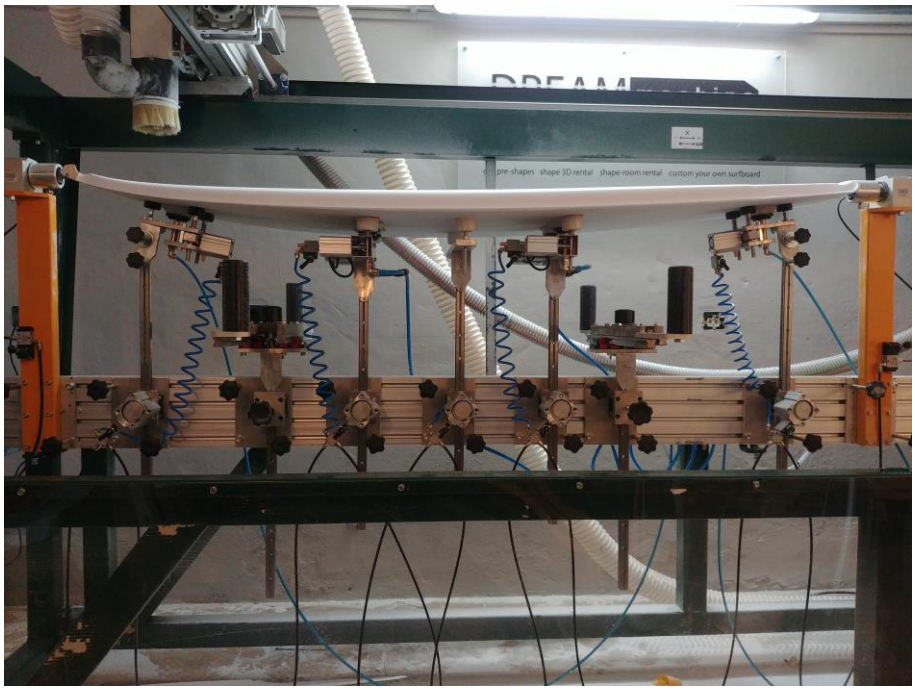
PHOTOS OF DETAILS



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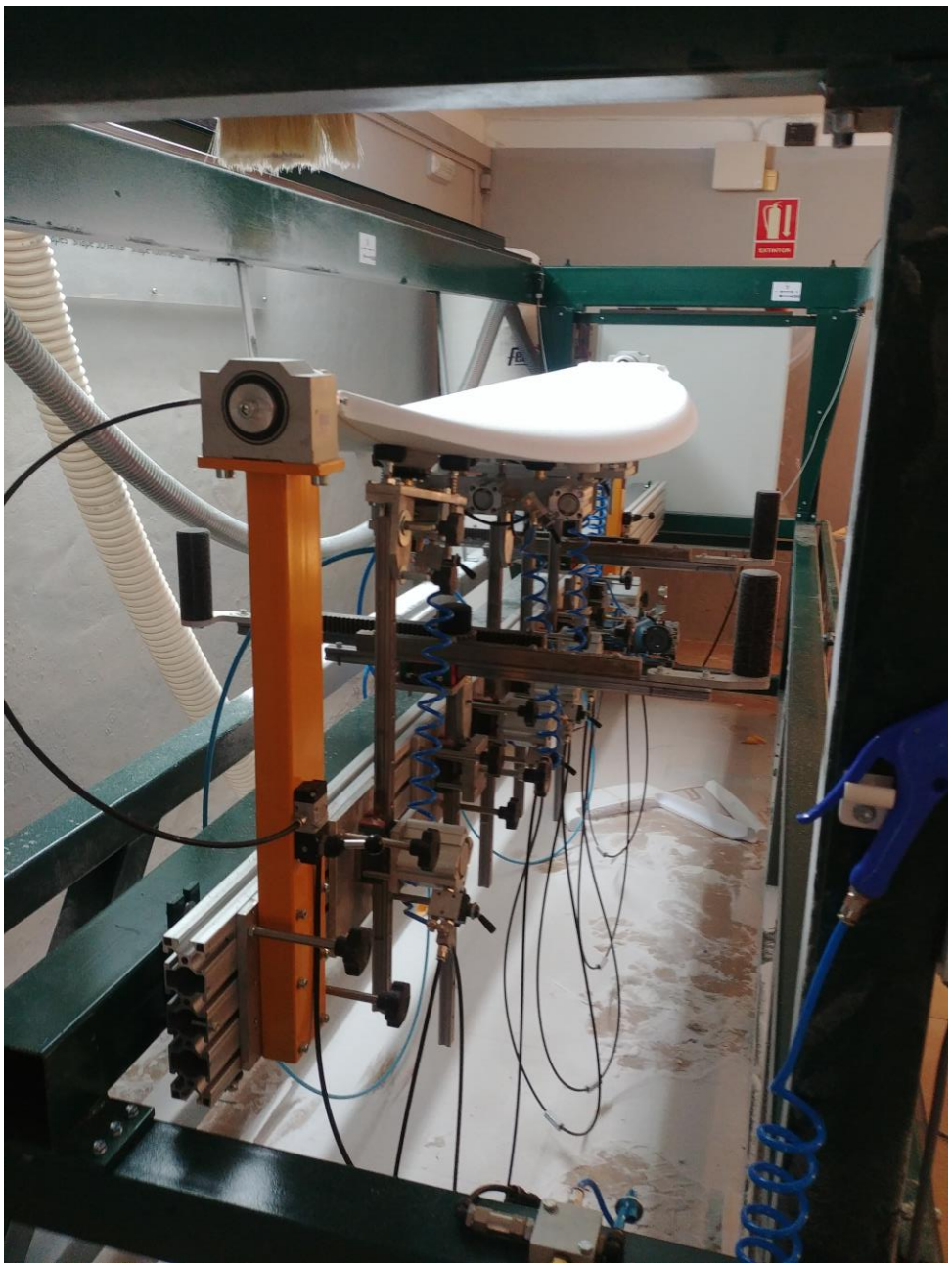

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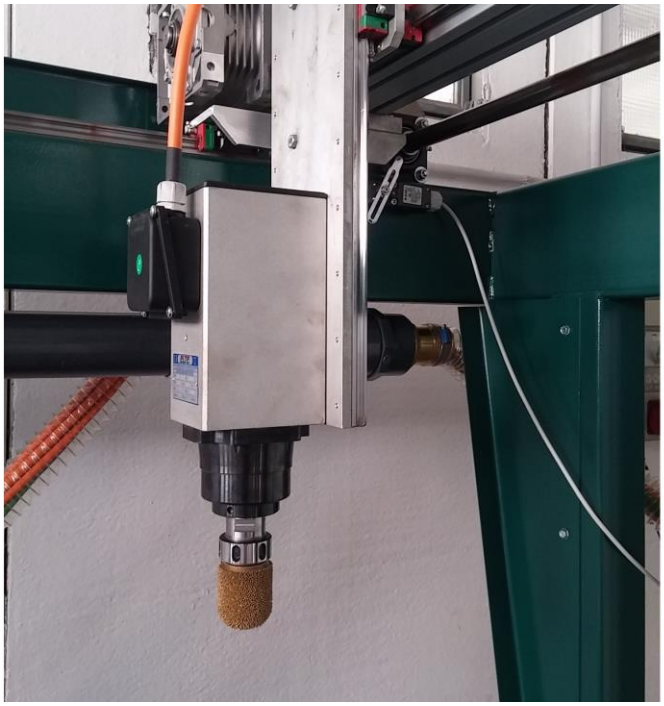

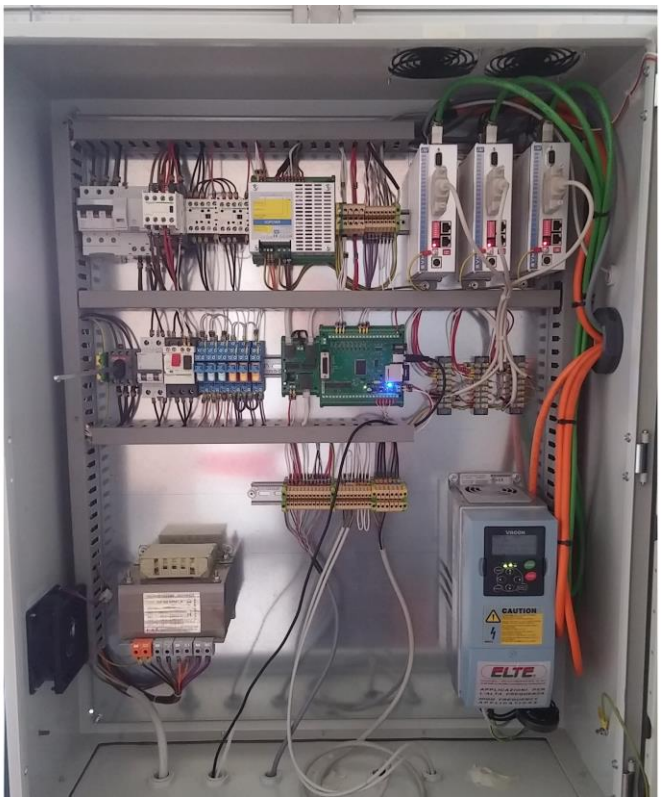

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