



roboqbo

INNOVATING FOOD TEK

NS40



Release R001 - June 2019

Translation of original instructions

USER'S HANDBOOK

1.3 SAFETY SYMBOLS USED



This symbol indicates information which must be followed.



This symbol indicates a critical or important aspect which requires special attention and that, if not followed, may endanger people or compromise the quality of the products obtained.

1.4 SUPPLEMENTS

The following documents supplement this Instruction Manual:

- wiring diagrams;
- hydraulic schematics;
- pneumatic diagrams.

1.5 DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY ANNEX II A Machinery Directive 2006/42/CE

MACHINE
SERIAL NUMBER
YEAR OF CONSTRUCTION

The undersigned Giuseppe Malavasi, as the Sole Director of the manufacturing company
ROBOQBO SRL - CO. WITH A SINGLE SHAREHOLDER - VIA MAZZINI, 7 - 40010 BENTIVOGLIO (BO)
TAX CODE-VAT 02296841204

DECLARES

under his sole responsibility that the machine in question complies to Machinery Directive 2006/42/EC, Council Directive on Electromagnetic Compatibility 2014/30/EC and Council Directive on Low Voltage Equipment 2014/35/EC, and subsequent addendums and national laws.

In addition, the following technical standards have been applied: ISO EN 13857, EN 60204-1, EN 60335, EN 13850, ISO EN 12100:2100. FOOD CONTACT MATERIALS: 1935/2004 OF 27/10/2004 (EEC 89/109).

Place and date of issue
Bentivoglio,

Roboqbo s.r.l.
Director
Giuseppe Malavasi

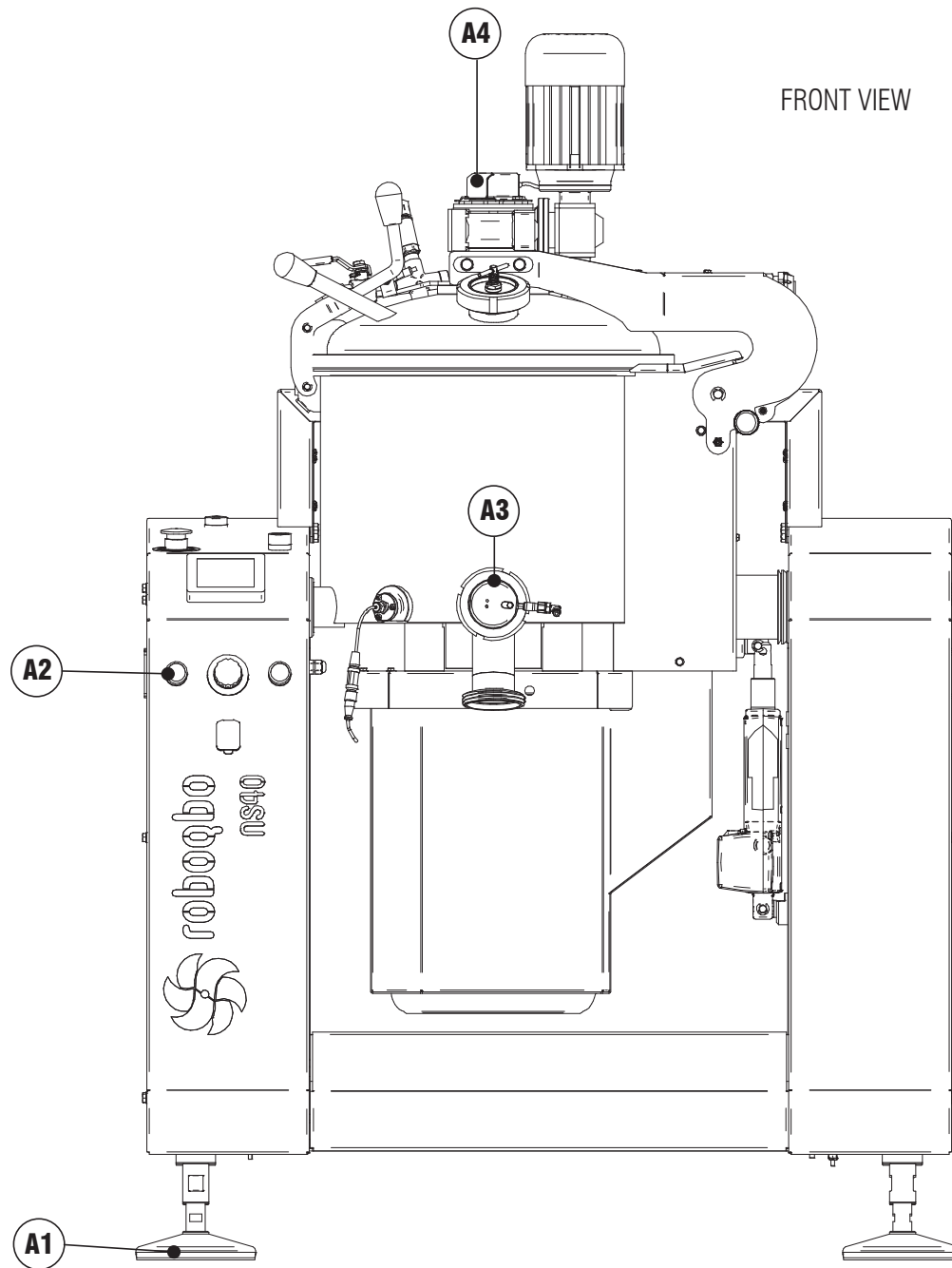
ENGLISH

TECHNICAL FILE PREPARED BY:

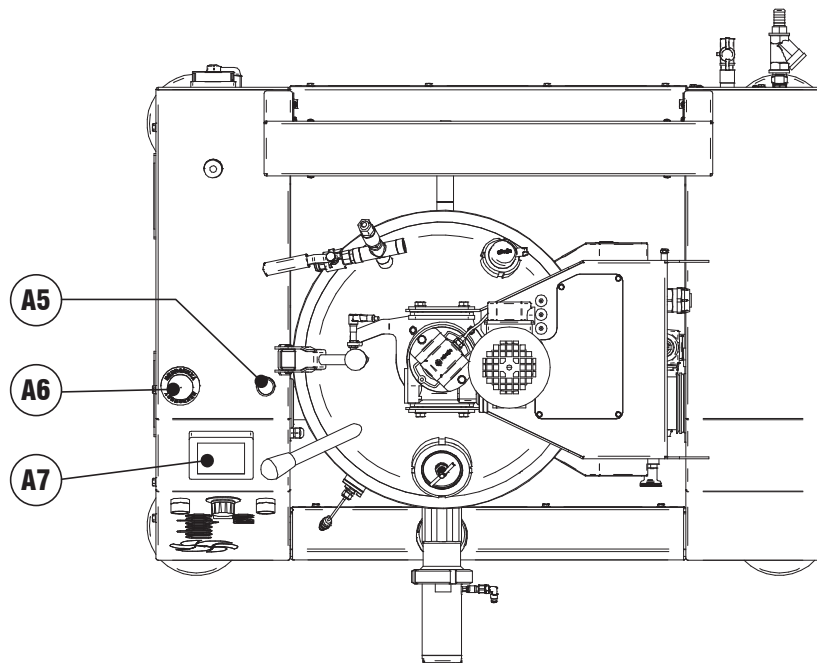
GIUSEPPE MALAVASI
RESIDENT IN SAN MARINO DI BENTIVOGLIO (BO) VIA SAN MARINA, 5

2 DESCRIPTION OF MACHINE

2.1 EXTERNAL COMPONENTS

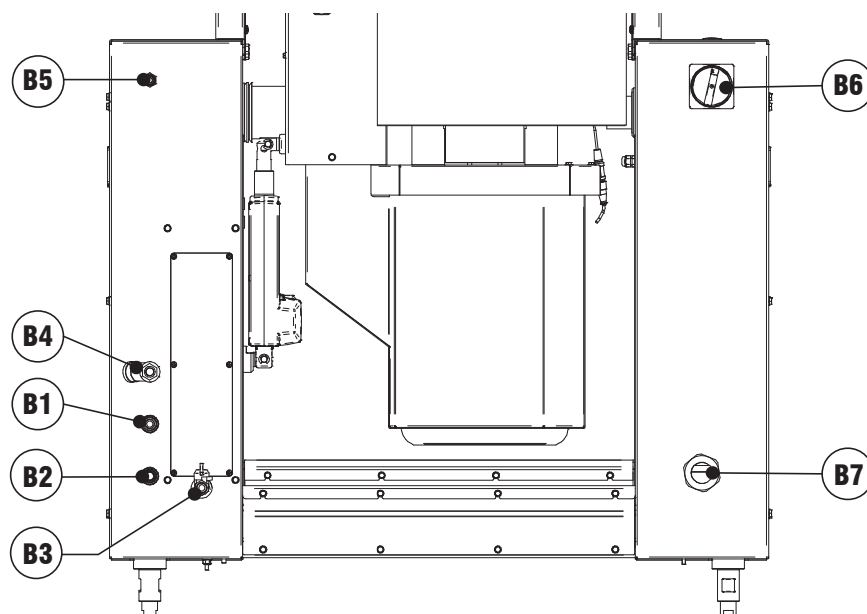


Component	Description
A1	Adjustable foot
A2	Commands activation button
A3	Product extruder
A4	Spatula rotation indicator



TOP VIEW

Component	Description
A5	Tank pressure light
A6	Emergency button
A7	Control panel

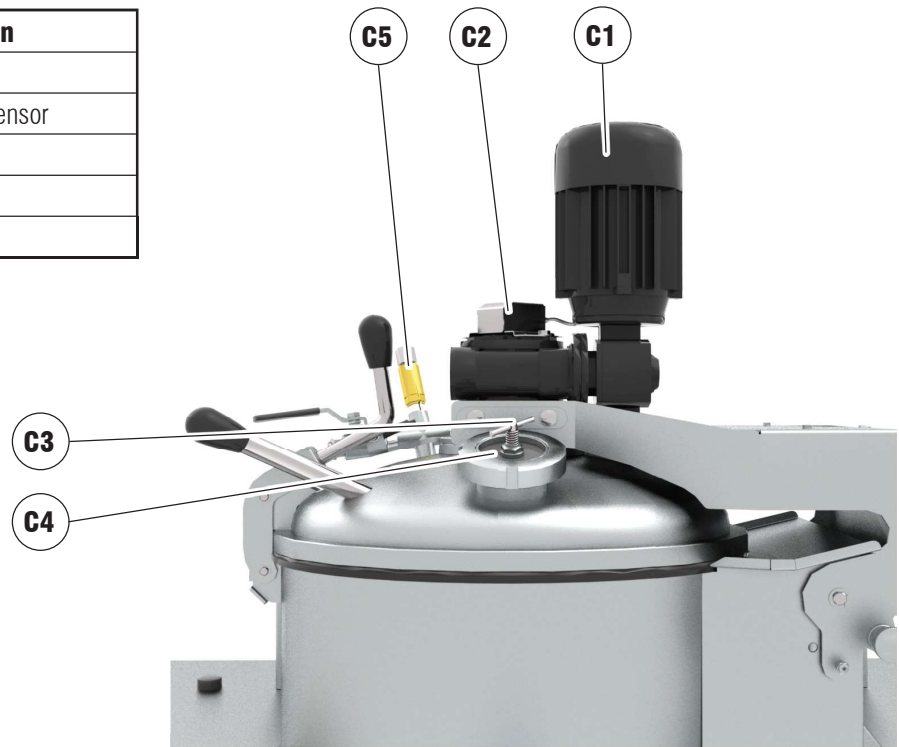


BACK VIEW

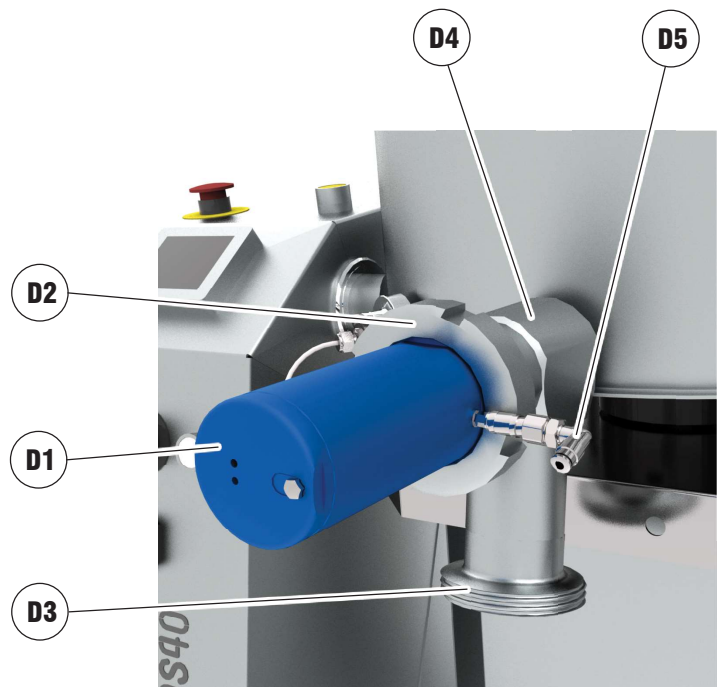
Component	Description
B1	Hot water input
B2	General drainage
B3	Boiler drainage
B4	Cold water input
B5	Air connection (models without compressor)
B6	General switch
B7	Electrical energy connection

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Component	Description
C1	Gear motor
C2	Scraper-bowl spatula sensor
C3	Wipers
C4	Peep holes
C5	Safety valve



Component	Description
D1	Pneumatic extrusion cylinder
D2	Ring nut
D3	Wash discharge outlet connector
D4	Outlet neck
D5	Closed cylinder shut-off valve



2.1.1 PNEUMATIC EXTRUSION CYLINDER ASSEMBLY



Insert cylinder **D1** in outlet neck **D4**.

Tighten ring nut **D2** in a clockwise direction using the wrench supplied.

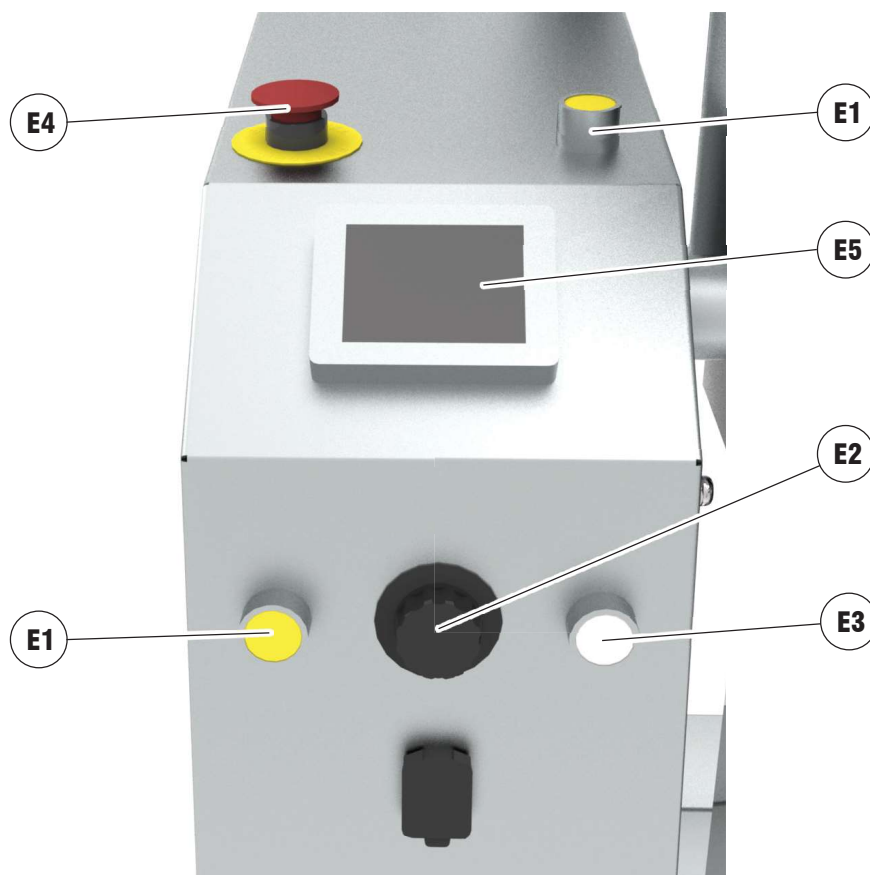
Connect the closed cylinder shut-off valve **D5**.

To dismantle pneumatic extrusion cylinder **D1** proceed in the opposite direction to the assembly instructions.

Check the seal of the extrusion cylinder regularly.

2.2 CONTROL PANEL

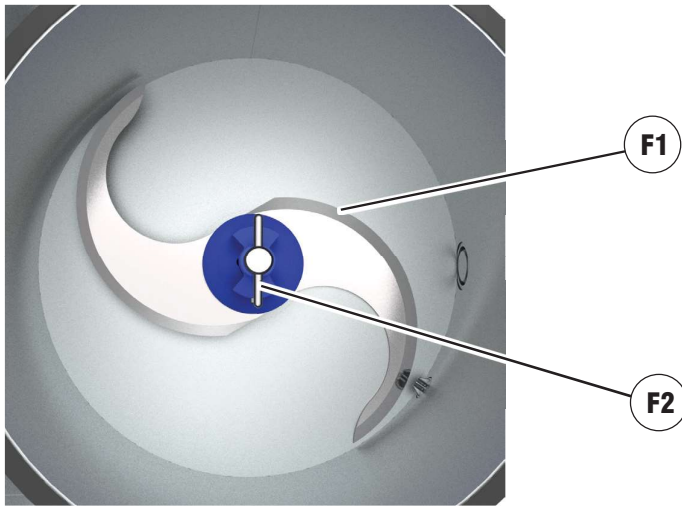
Component	Description
E1	Lid opening/closing
E2	Knife speed potentiometer
E3	Commands activation button
E4	Emergency button
E5	Touch screen



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2.3 INTERNAL COMPONENTS

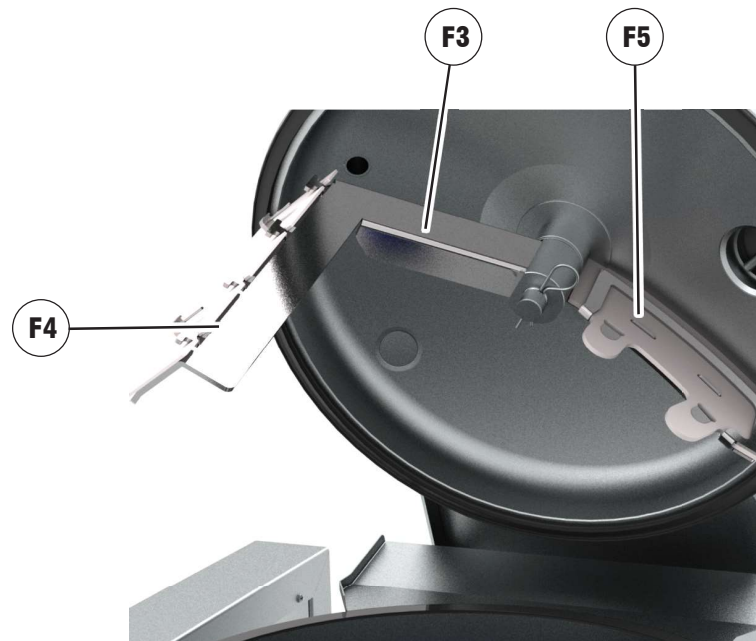
Component	Description
F1	Blade
F2	Small steel lever
F3	Scraper
F4	Scraper-bowl spatula
F5	Scraper-lid spatula



The knife should be inserted on the motor shaft by pressing until the base of the bowl is reached. It must be blocked by screwing in the small steel lever.



Be careful, when inserting or removing the knife, not to knock against the temperature probe.



The components of scraper-bowl spatula **F4** and scraper-lid spatula **F5** are pressure fitted into their compartment. To dismantle these components, refer to chapter 10 - MAINTENANCE.

3 SOFTWARE MANAGEMENT FEATURES

The **Roboqbo** software installed in the PLC and Touch Screen is **not** sold as an “open source”. In other words, the user or any other person that does not work for or collaborate with **Roboqbo** srl cannot modify the software. This is done to protect the machine from tampering/altering, as this could change its performance levels, operating rate or safety.

The software is protected by a password that is not managed by **Roboqbo** srl, as the company holds the source file, which is subject to updates and allows the company to restore proper operation at any time if failure is not due to anything else.

Roboqbo srl holds the control/command software to guarantee the Customer precise functioning and performance levels when the machine is completely set up.

Once the After-Sales Service Department verifies that the failure is not due to another reason, it will replace the PLC or Touch Screen, connecting the new operational device or simply restoring the program.

The company reserves the RIGHT to allow only the customer use of the machine.

In any case, be advised that if the customer who “owns” the machine requests changes for new/changed performance/functions, the manufacturer, **Roboqbo** srl, is capable of evaluating a new supply and, if possible, producing a new/changed software managed similarly to the previous one.

On the other hand, the Customer can assume the responsibility of removing the PLC and Touch Screen supplied by the manufacturing Company that holds the burden of machine conformity to the applied Directives, and of introducing its own programmable controller. In this manner, the Customer also acquires the burdens of complying to the applied Directives: **Roboqbo** srl products are professional. Therefore, the construction/project features refer to special know-how that cannot be subjected to (through software access) intrusions.

4 WARNINGS

IMPORTANT!! To reduce the number and seriousness of accidents (short circuits, personal injuries), as well as civil responsibility regarding equipment use, read the instructions shown in the manual carefully and accurately. The information in this manual is useful to anyone that uses the equipment even occasionally. It is highly recommended to read the manual and make any possible users read it.

4.1 CORRECT TRANSPORT

The machine is transported on a pallet, covered with a carton; upon arrival at customer premises, remove the carton and remove the parts box. Cut the strap, then use a forklift to lift the pallet (the forks of the forklift must be inserted in the points shown in the drawing) and put the NS40 in the operating position.

The operators must keep a distance when transporting the equipment in case the machine overturns due to a maneuvering error.

Place the NS40 on the floor very carefully.

4.2 UNPACKING



Remove packaging very carefully. Remove the tools and bowl packages before anything else.



Some tools are very sharp! Some tools are very sharp. Handle very carefully and use cut-resistant gloves!

4.3 POSITIONING



Position the machine in the preset spot making sure that it is flat (2% max. inclination). Adjust the feet to obtain perfect stability.



The machine must not be installed in areas classified as areas at risk of explosions (ATEX 99/92/CE).

Make sure the cabinet door opens completely and that there is enough space for working comfortably and safely in the water, vapor, compressed air and electricity fitting position.

5 INSTALLATION



IMPORTANT!! To use the machine in optimal conditions and keep it away from possible danger, the system and supplies must be sized strictly according to the table shown below. **Roboqbo** srl declines all responsibility and the warranty is automatically cancelled if the minimum parameters indicated below are not followed.

5.1 FEATURES

Material	Steel AISI 304 - Parts that come into contact Steel AISI 316
Bowl capacity (l)	40
Power (kW) (integrated boiler)	16 - 19
Blade speed (rpm)	30 - 3000
Slot pressure (bar)	1 bar safety valve
Max. vacuum (mbar)	-980
Max. pressure in bowl (bar)	0,4 bar safety valve
Max. temperature (°C)	95
Dimensions (lxdxh) (cm)	101 x 101 x 149
Weight (kg)	195

5.2 TECHNICAL FEATURES AND PERFORMANCE

Power circuit	380 VAC - 50 Hz
Pneumatic energy	7 - 8,5 bar
Oil hydraulic energy	not available
Hydraulic energy	1 bar
Vacuum	-1 bar

Products used and material processed:	
Vapor	yes
Flammable products	no
Others	ACETAL RESIN - SILICON - AISI 316 - AISI 304 - VITON

5.3 SUPPLIES

Water characteristics	normal drinkable
External boiler (power)	20 kg/h
Internal boiler (power)	21 - 25 kg/h
Boiler supply	380 V
Boiler resistor	3300 W 220 Vac , 3900 W 240 Vac
Max. boiler pressure	2,5 bar
Vacuum pump motor	0,3 kW
Scraper motor	0,19 kW
Blade motor	7,5 kW 4 pins

5.4 CONNECTION FEATURES



ATTENTION!! Before installation, check the features of the supply mains correspond to the values reported on the serial number or the tables below. All the energy supplies must be equipped with a sectioning device or a shut-off valve.

HYDRAULIC AND PNEUMATIC CONNECTIONS											
Function	ø	DN	Connection type	Dimensions	Maximum pressure	Minimum pressure	Output pressure	Height from ground	Input temperature	Output temperature	Requirement
Load hot water	8*	8*	GAS threading	1/2 inch	4 bar	2,5 bar		±34 cm	max +152°C		5,4 kg/h
Water input	13	12	GAS threading	1/2 inch	2 bar	0,5 bar	0,5-2 bar	±42 cm	max +20°C		8,6 l/min
Drainage	30	25	GAS threading	1/2 inch			0,8 bar	±26 cm		max +100°C	
Compressed air	8	6	Rapid	ø8	8,5 bar	7 bar					50 l/min (10 l/min*)

* Version without generator

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ELECTRICAL CONNECTIONS					
Function	Voltage	kW/h	Protection type	Type	Poles
Power supply	400 V	24 (8*)	Circuit breaker	D	3+N+E
Power supply	230 V	24 (8*)	Circuit breaker	D	3+E
Power supply	200 V	18,5 (8*)	Circuit breaker	D	3+E

* Version without generator



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