


# Ecocab 05 GHIDINI

## *User's and Maintenance Manual*



**ENGLISH**



<i>Manufacturer</i>	GHIDINI BENVENUTO s.r.l.
<i>Product</i>	Ecological spotting cabinet ECOCAB-05
<i>Year</i>	2005
<i>Certification</i>	

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## 1 INTRODUCTION

The present user's and maintenance manual refer to the ecological spotting cabinet "ECOCAB-05". It is possible to receive the latest release from our Technical Commercial Department or by visiting our website [www.ghidini-gb.it](http://www.ghidini-gb.it).

The present user's and maintenance manual contains important information for the operator's health safeguard and safety.

This manual has to be read and kept carefully, in order to be always at the operator's disposal in case of need. Ghidini s.r.l. cannot be held liable for any damage to things or injury to persons caused by improper use of the machine in contrast with these instructions.

Any possible modifications effected on the components of the machine or its different use without prior written authorization by Ghidini s.r.l., relieve the latter of injury to persons and / or damages to things, voiding any warranty bindings, as well.

## 2 GENERAL DESCRIPTION

The ecological spotting cabinet "ECOCAB-05", represents an innovative equipment in terms of pre-spotting and spot removing of all those garments which can be cleaned with products or washed, respecting and safeguarding both environment and operator. For its operation, the machine has to be connected to an external power, compressed air and steam supply. This stainless-steel cabinet features an activated carbon filter and a waste soap collection tank. ECOCAB is an efficient and customer-friendly equipment, thanks to its two jointed vacuum boards, which are controlled by pedals, its pre-spotting gun with brush, to the air/steam gun and to the adjustable spotting guns.

## 3 MACHINE IDENTIFICATION

A tag placed on one side of the cabinet indicates the type, serial number, year of construction, voltage and the supply pressure.

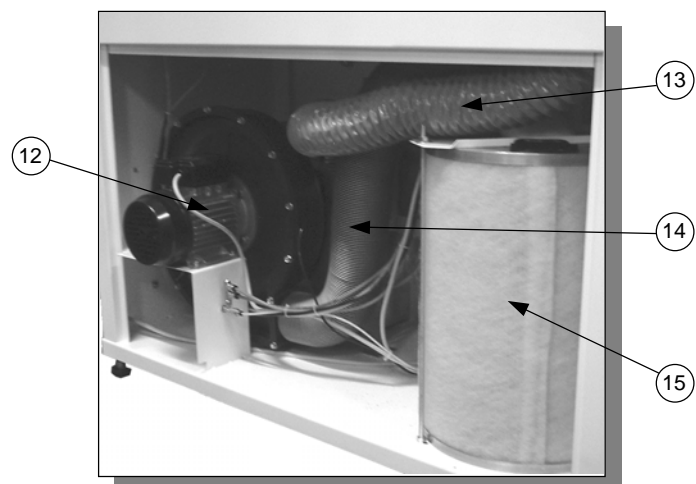
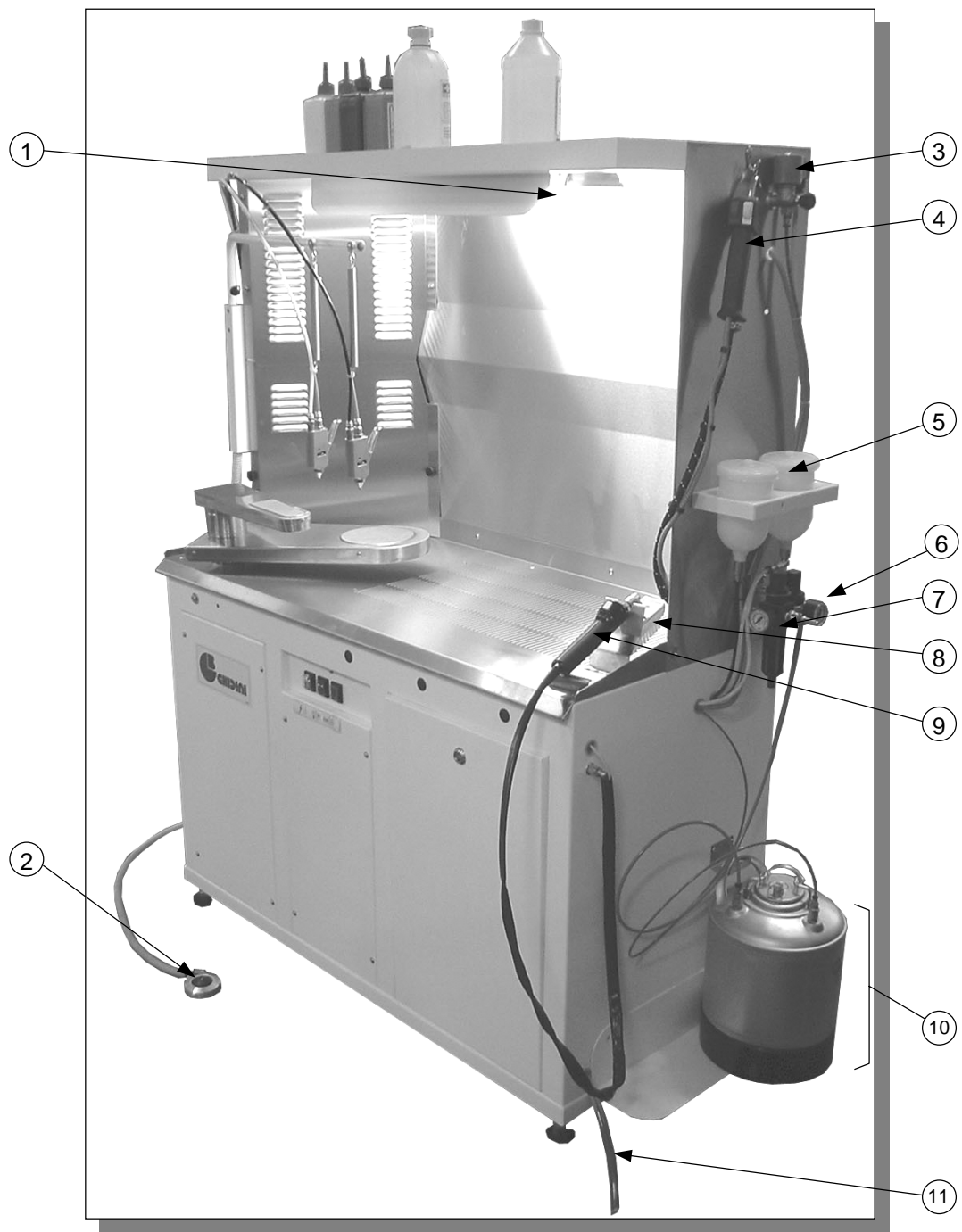
## 4 TECHNICAL FEATURES

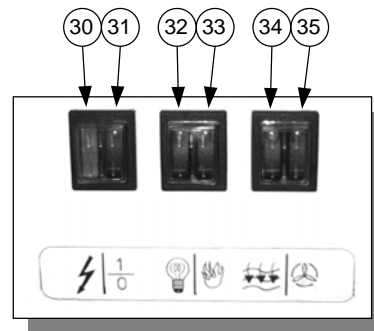
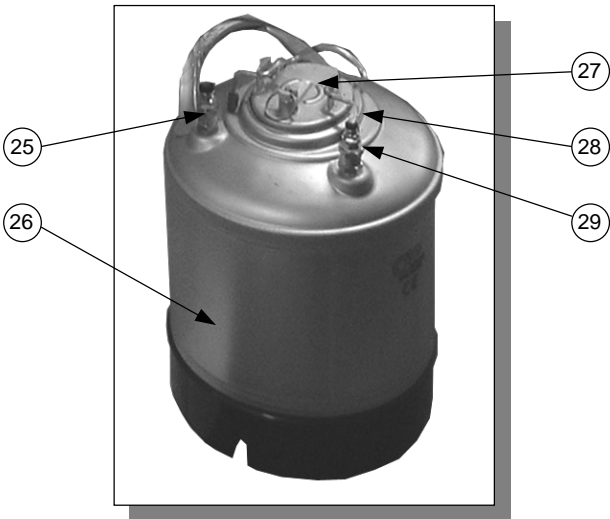
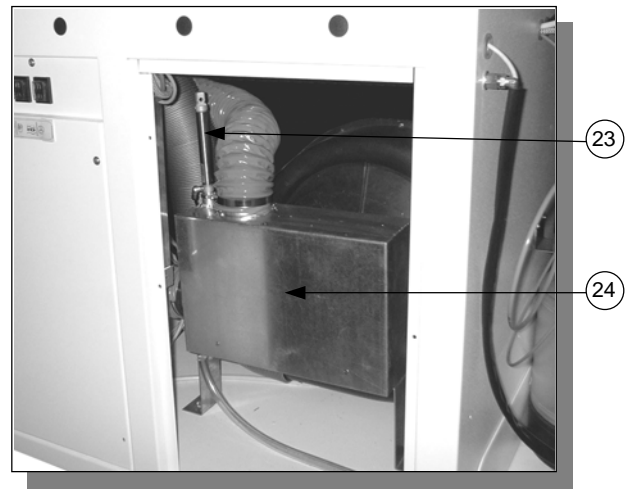
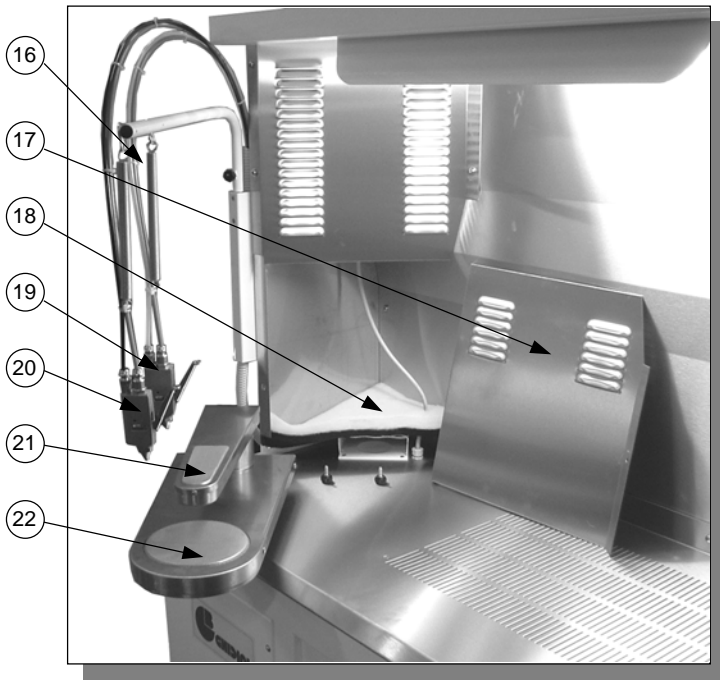
TECHNICAL FEATURES	
Power supply	230V - 1ph – 50/60 Hz
Power consumption	1 KW
Steam supply	min. 4 bar. – max. 5 bar
Compressed air supply	min. 4 bar – max. 8 bar
Steam working pressure	5 bar
Air working pressure	6 bar
Steam consumption	2÷3 Kg/h
Air consumption	40 NI/min
Vacuum motor power	0,75 HP
Sound intensity level	< 70 dB(A)
Working temperature	+ 5 ÷ + 80 °C
Working humidity	max. 90 %
Storing temperature	- 20 ÷ + 50 °C
Net dimension (width, height, length)	1420 x 1750 x 600 mm.
Net weight	165 Kg
Overall dimensions (packaging included)	1410 x 1920 x 680 mm
Gross weight (packaging included)	230 Kg

**WARNING:** The machine must not be supplied with different voltages and pressures than those indicated on the table.

## 5 MACHINE COMPONENTS

The following are the main components of the machine:





Pos.	ARTICLE	DESRPTION	Pos.	ARTICLE	DESCRIPTION
1	43C024	Neon light	19	Z07H01	Product gun
2	38A048	Vacuum pedal	20	Z07H01	Product gun
3	39B043	Solenoid valve	21	161064	Little spotting arm
4	Z07C01	Steam-air gun	22	161065	Big spotting arm
5	165033	Product tanks	23	35C007	Pneumatic cylinder on gate valve
6	35B003	Tank pressure regulator	24	381075	Waste soap tank
7	35B017	Air treatment device	25	36N003	Air inlet fitting
8	162026	Brush	26	165000	Tank
9	Z07B04	Pre-spotting gun	27	172336	Lid
10	165000	Complete pre-spotting tank	28	24D002	Lid gasket
11	07A005	Draining pipe for waste soaps mt	29	364013	Soap outlet fitting
12	42D006	Vacuum unit	30	43A011	Pilot lamp
13	06D031	Board vacuum pipe	31		'On'-switch
14	06D031	Extractor hood pipe	32	43A014	Internal lighting switch
15	880059	Cylindrical filter	33		Boiler switch
16	534264	Spring for product gun	34	43A014	Vacuum switch
17	174489	Filter cover	35		Ventilation switch
18	234030	Extractor hood filter			

## 6 MACHINE UNPACKING AND INSTALLATION

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**ATTENTION:** The unit must be installed, opened and repaired by fully qualified technicians only.

### 6.1 UNPACKING

Find the most suitable place where to put the machine, then remove the packaging. Make sure that the machine has not been damaged during the transport and the storage.

The packaging material does not require any special precautions for its disposal, for it is not dangerous or polluting at all. Please refer to the local regulations for its disposal.

### 6.2 MACHINE INSTALLATION

The machine has not to be anchored to the floor, except for installations on moving means.

For a correct use and operation, as well as for an easy maintenance, leave enough free space around the machine.

Put a tank at the bottom on the right of the machine to collect the spotting product used during the spotting operation.

Do not place the machine in dangerous and/or explosive/inflammable places.

### 6.3 ELECTRICAL WIRING

The electrical wiring must be carried out as indicated in the drawing. Check that the supply voltage and the frequency correspond to those indicated on the rating plate. The dimensions of the supply cable must suit the machine absorption and comply to the current regulations. It is advisable to install a switch with fuses or a magnetothermal one. Put the cable in the cable passage hole, then tighten. Connect the cable to the terminals of the feeder line on the control panel, as shown on the drawing of the present manual.

### 6.4 CONNECTION TO COMPRESSED AIR SUPPLY

The connection to the central compressed air supply must be carried out on the right side of the machine, by means of a G 1/4" threading. Use a pipe of internal Ø of at least 6 mm and a max pressure of 8 bar (otherwise use a pressure-reducer). Use an on-off valve, able to stop the feeding. The machine is provided with a pressure reducer, a filter and a condensation separator, with a discharge valve under the cup. The valve discharges the condensation automatically in case of lack of pressure, please be reminded therefore to close the air supply at the end of work. In case of high operating rate, check periodically the condensation level in the filter cup. If necessary, carry out the discharge manually, by opening the valve placed underneath the same.

### 6.5 STEAM SUPPLY CONNECTION

- In case of a connection to a central steam supply, carry out the following steps:

Connect a pipe of G 1/4" to the top part of the steam outlet of the central unit and put an on-off valve close to the machine. Connect a pipe (threading G 1/4") with an internal diameter of at least 10 mm to the steam inlet of the machine. For the condensation return, provide a pipe with exactly the same features of the steam pipe, and install an on-off valve close to the machine, followed by a non-return valve. For the connection to the check valve use a pipe with an internal diameter of at least 10 mm. The steam network pressure must be of max. 6 bar.

- In case of connection to a small steam boiler, proceed as follows:

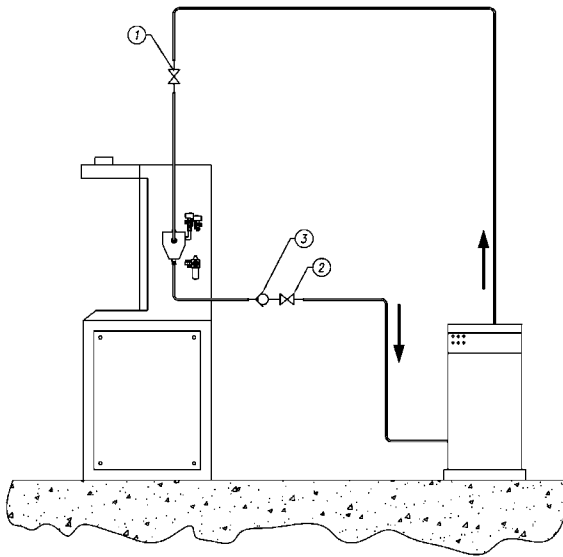
The inlet of the steam supply, featuring a G 1/4" threading, is placed on the right side of the machine. The steam pressure must be of max. 6 bar. It is advisable to use a pipe with an internal diameter of at least 10 mm.

Install an on-off valve on the pipe, in order to exclude the machine from the steam unit. Connect a condensation return to the machine (G 1/4" threading), by using also in this case a pipe with an internal diameter of at least 10 mm. Install on this pipe both a check and an on-off valve, in order to exclude the machine from the steam unit, eventually carry out the connection to the small steam boiler. Do not bend the pipes at right angles, but at least with a 50 mm radius. Make sure that the pipes have an even incline, especially the one for the condensation return.

Do not use traps, fittings or gate valves with a smaller diameter than the pipe, itself. The piping must not exceed 2.5 meters. The hole of the condensation return has to be at least 150 mm higher than the water level inside the boiler.

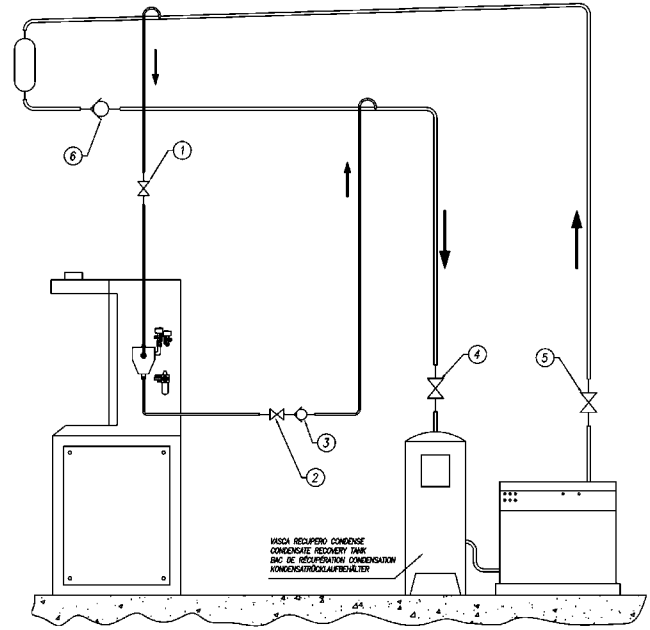
**ATTENTION:** After having carried out all the electrical connections, make sure that pipes and cables are protected against any possible hits and are suitably fixed and isolated.

COLLEGAMENTO VAPORE A PICCOLO GENERATORE  
 STEAM CONNECTION TO A SMALL STEAM BOILER  
 BRANCHEMENT VAPEUR SUR UN PETIT GÉNÉRATEUR DE VAPEUR  
 DAMPFANSCHLUß AN EINEN KLEINEN KESSEL



3	VALVOLA DI RITEGNO / CHECK VALVE / CLAPET DE RETENUE / RÜCKSCHLAGVENTIL
2	SARACINESCA / GATE VALVE / VANNE / ABSPERRVENTIL
1	SARACINESCA / GATE VALVE / VANNE / ABSPERRVENTIL

COLLEGAMENTO VAPORE AD IMPIANTO CENTRALIZZATO  
 STEAM CONNECTION TO CENTRAL SUPPLY  
 BRANCHEMENT VAPEUR SUR SYSTÈME CENTRALISÉ  
 ZENTRALDAMPFANSCHLUß



WASSA RECUPERO CONDENSE  
 CONDENSATE RECOVERY PAUK  
 BAC DE RECOVERATION CONDENSATION  
 NIMCONDENSATWASSERFILTIER

6	VALVOLA DI RITEGNO / CHECK VALVE / CLAPET DE RETENUE / RÜCKSCHLAGVENTIL
5	SARACINESCA / GATE VALVE / VANNE / ABSPERRVENTIL
4	SARACINESCA / GATE VALVE / VANNE / ABSPERRVENTIL
3	VALVOLA DI RITEGNO / CHECK VALVE / CLAPET DE RETENUE / RÜCKSCHLAGVENTIL
2	SARACINESCA / GATE VALVE / VANNE / ABSPERRVENTIL
1	SARACINESCA / GATE VALVE / VANNE / ABSPERRVENTIL

## 7 INSTRUCTIONS FOR USE

### 7.1 PUTTING INTO OPERATION

- The whole unit can be used, opened and repaired by qualified technicians only.
- It is forbidden to use the machine if flooded by liquids or in particularly aggressive or explosive/inflammable places.
- Do not ignore the dangers for the operator's health and follow the hygienic and safety regulations.
- Use always suitable pipes for the working pressure.
- Check that the electrical wiring is carried out correctly according to the current regulations, and that the fuse blocks are closed and complete of fuses.

### 7.2 OPERATIONS TO CARRY OUT BEFORE EACH STARTING

- Check that the machine is intact.
- Check that the compressed air and steam supplies connections are correctly carried out.
- After having connected and switched on the machine, the tanks have only to be filled with the relevant products, suitable for the spotting operations. To open the pre-spotting tanks, close the air inlet tap, pull the safety valve lever, wait until the air has completely been discharged and eventually open the lid. Before starting, always check that air and steam taps of the machine are open.
- Check, if the steam circuit is running regularly, by pressing and releasing several times the steam button placed on the gun (red button).

Especially in case of machines connected to small steam boilers, some condensation may come out at the beginning. By pressing the steam button continuously, it will be easier to start the regular running of the steam circuit.

**Pay attention to the danger of burns during the operations.**

### 7.3 USE

- According to the required operations, switch on the relevant buttons placed on the control panel of the machine.
- Place the spotting arm to be used into the most comfortable position for the operation. Put the part of the garment to be treated on the reticular area and push the relevant vacuum pedal. The garment will be fixed to the arm, thanks to the suction pressure of the vacuum unit.

- Bring the pre-spotting gun close to the part of the garment to be treated. Press the lever and soften the spot with the brush.
- Draw the spotting gun of the product to be used (marked by a coloured label, corresponding to that one put on the relevant tank) up to 5 mm from the garment to be treated and press the lever completely down. At that distance, the air-product mixture is able to remove any kind of particle from the fabric. The spotting gun can also be used for drying: by pressing the lever just halfway down, only air will come out.
- Bring the air/steam gun close to the part of the garment to be treated, press the red button (steam) and point the steam jet on the spot, rotating the gun from the external part of the spot to its centre. After having dissolved the spot, the treated area has to be dried, by pressing the white button (compressed air) on the gun.

The a.m. sequence is not binding, at all. The best results are obtained only through experience and practice.

## 8 TROUBLESHOOTING AND SOLVING

The following diagnostic table indicates the main irregularities which can occur, the probable causes and their possible solutions

In case of doubts and/or of problems which can't be solved, do not attempt to disassemble parts of the machine for the troubleshooting, but contact our Technical Department or the Ghidini-reseller, instead.

DIAGNOSTIC TABLE		
PROBLEMS	POSSIBLE CAUSES	SOLUTIONS
<b>Lack of compressed air:</b>	Lack of air supply	<i>Check the presence of air on the pressure gauge placed on the reducer.</i>
<b>Lack of vacuum on the arm and the machine does not turn on:</b>	Main power failure	<i>Check if the main power switch is turned on .</i>
	Fuses are blown	<i>Check fuses</i>
<b>Lack of steam supply:</b>	The steam inlet tap is closed	<i>Open steam inlet tap</i>

## 9 PRECAUTIONS

Read carefully the instructions and the risks related to the use of a spotting machine. The operator has to know its working functions and must clearly understand its dangers with the help of the manual.

### **Main electrical supply**

Prior to carrying out any inspection or service on the spotting cabinet, it is necessary to disconnect it from the main electrical supply. Make sure, that nobody can reconnect it during the technical service.

Every installed electrical or electronic equipment must be earthed.

### **Inflammability**

Adopt all the necessary precautions to avoid any direct contact of the machine with hot materials or flames. Put fire extinguishers near the machine for an immediate intervention in event of fire.

### **Pressure / Steam**

Before each intervention, switch off the boiler first and check that there are no residual pressures in any branch of the pneumatic/hydraulic circuit, as they could cause steam or product spurts, in case of disassembly of fittings or other components.

### **Noise**

The machine's noise level is not very high, as it remains under 70dB (A).

## 10 HAZARDOUS USE

The conformity verification according to the essential safety rules and to the provisions of the machine directive has already been carried out by filling out the specially provided checking lists, included in the technical file.

The checking lists are of two kinds:

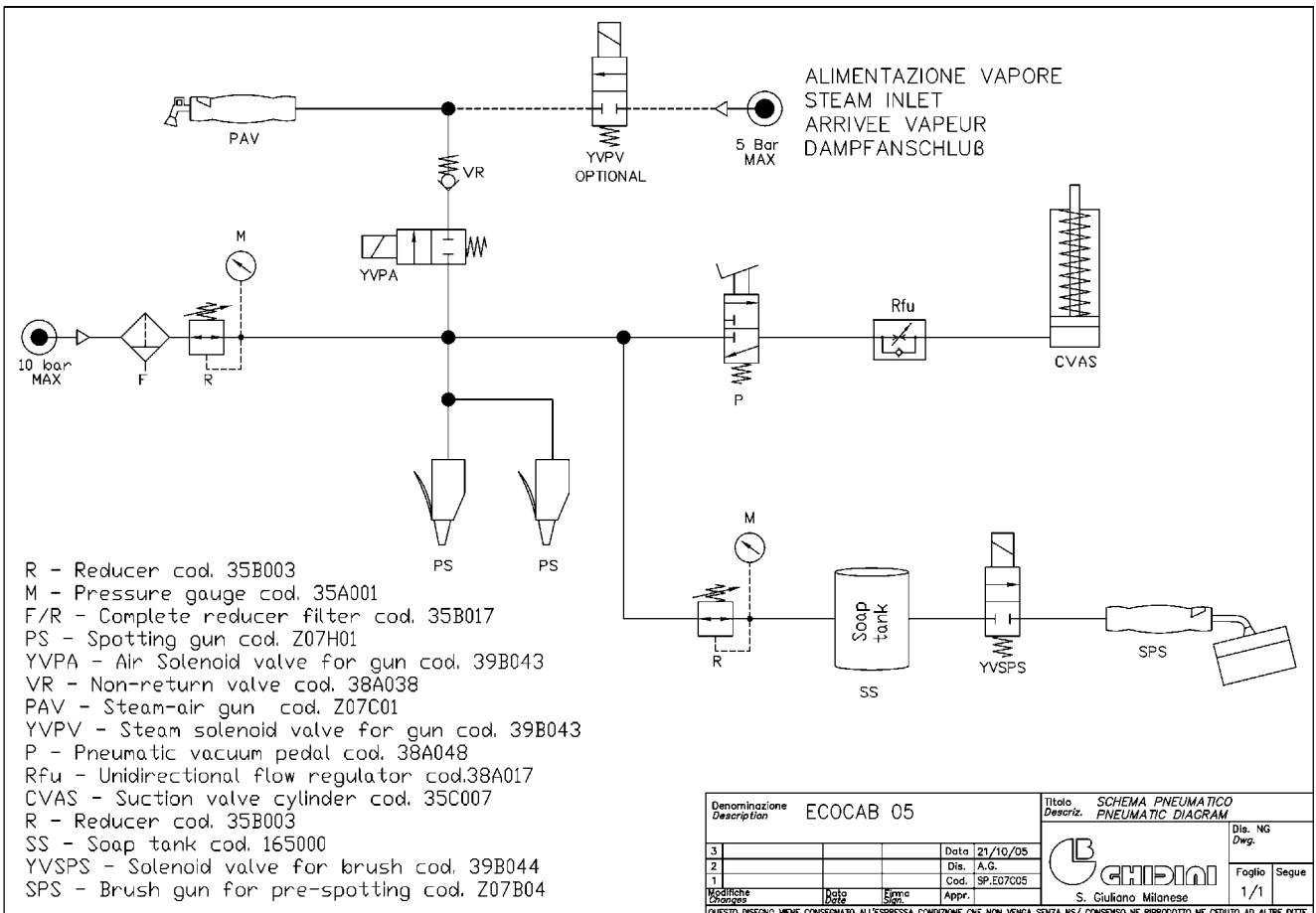
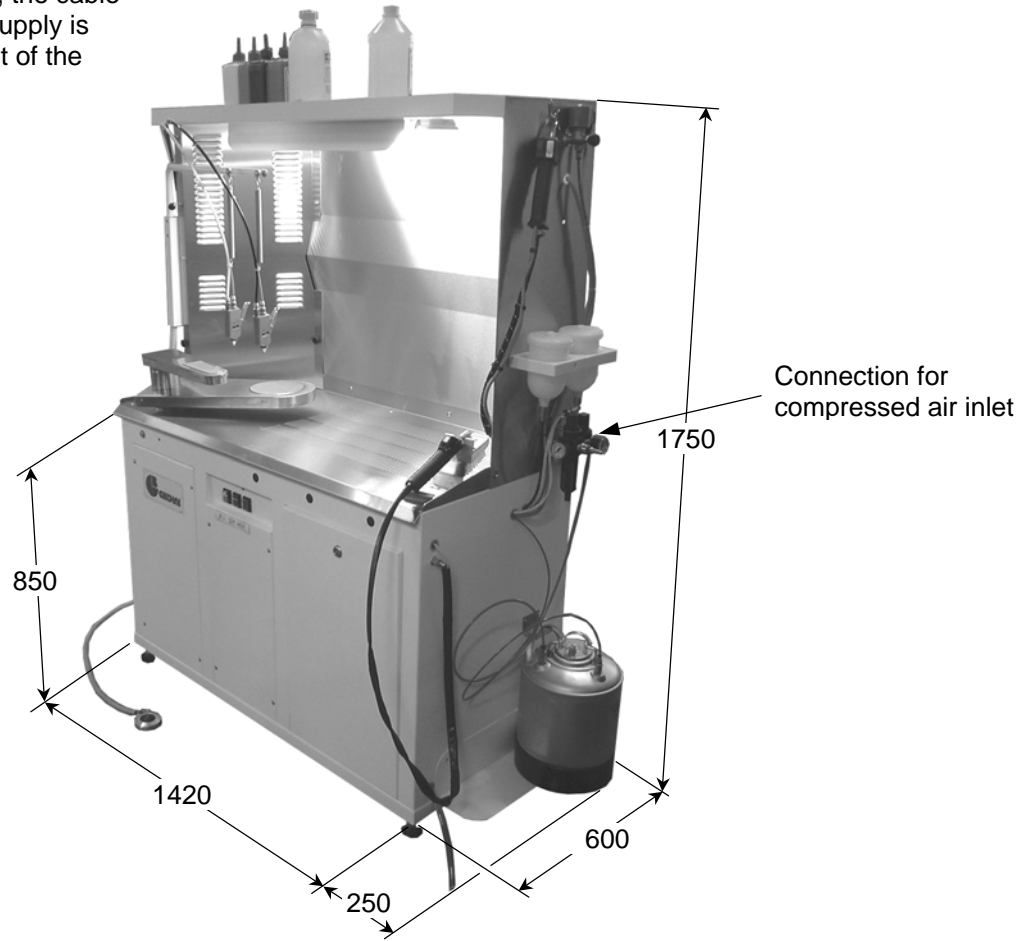
- List of dangers (drawn from EN 1050 referring to EN 292)
- Application of the main safety features (Machine Directive– appendix. 1, part 1)

**The dangers described in the following have not been completely removed, but they have been deemed to be acceptable:**

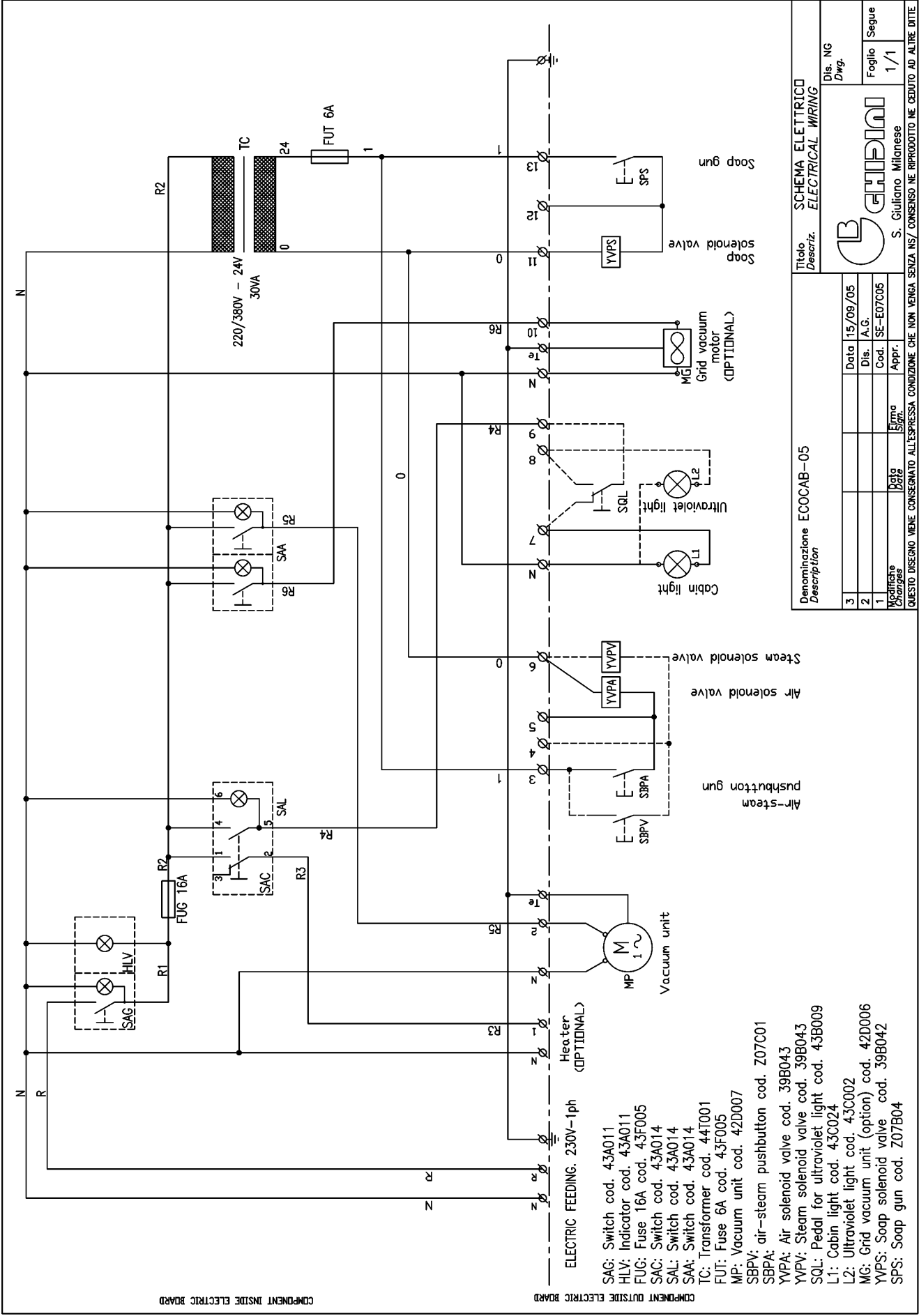
- During the maintenance operation there could be some steam or spotting product jets at low pressure, (maintenance operation must therefore be carried out by using suitable protection devices)
- A protection against direct and indirect contacts must be provided for by the user.

# 11 OVERALL DIMENSIONS AND DRAWINGS

At the back of the machine, the cable passage for the electrical supply is placed, as well as the outlet of the sucked in air







COMPONENT INSIDE ELECTRIC BOARD

COMPONENT OUTSIDE ELECTRIC BOARD

- ELECTRIC FEEDING. 230V-1ph  
Heater (OPTIONAL)
- SAG: Switch cod. 43A011
  - HLV: Indicator cod. 43A011
  - FUG: Fuse 16A cod. 43F005
  - SAC: Switch cod. 43A014
  - SAL: Switch cod. 43A014
  - SAA: Switch cod. 43A014
  - TC: Transformer cod. 44T001
  - FUT: Fuse 6A cod. 43F005
  - MP: Vacuum unit cod. 42D007
  - SBPV: air-steam pushbutton cod. Z07C01
  - SBPA: Air solenoid valve cod. 39B043
  - YVPA: Steam solenoid valve cod. 39B043
  - YVPV: Pedal for ultraviolet light cod. 43B009
  - SOL: Cabin light cod. 43C024
  - L1: Ultraviolet light cod. 43C002
  - L2: Grid vacuum unit (option) cod. 42D006
  - MG: Soap solenoid valve cod. 39B042
  - YVPS: Soap gun cod. Z07B04

Denominazione ECOCAB-05  
Descriz.

Titolo SCHEMA ELETTRICO  
Descriz. ELECTRICAL WIRING

3	Data	15/09/05
2	Dis. A.G.	
1	Cod.	SE-E07C05
Modifiche		
Change	Descr.	
Appr.		

Dis. NG Dwg.	
<b>GHIPINI</b>	
S. Giuliano Milanese	
Foglio	Segue
1/1	

QUESTO DISERNO VIENE CONSEGNATO ALL'ESPRESSIONE CONDIZIONE CHE NON VENGA SENZA NS/ CONSENSO NE RIPRODOTTO NE CREDITO AD ALTRE DITTE

## 12 MAINTENANCE PROCEDURES

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In case of irregularities or malfunctioning, please contact the service technician for the relevant checks.

**Periodically, it is necessary to carry out the following operations:**

OPERATION	Working hours
Clean the grid of the vacuum arms by means of a brush	150
Replace the air/steam gun tube	1500
Replace the filter of the extractor hood	2000
Replace lower filter	5000

Check that the drainage, collecting the spotting product after its use, is not obstructed, otherwise it has to be cleaned by pouring 1lt of hot water into the pipe of the vacuum arm.

This machine does not require special equipment for check and/or maintenance operations. It is however advisable to use suitable tools and personal protections in compliance with the Italian law by decree 626/94, which have to be in good conditions (Presidential Decree 547/55), in order to avoid any damages to persons or machine components.

**Make sure that the power, pneumatic and hydraulic supply are disconnected prior to any maintenance service.**

## 13 DISPOSAL

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During the maintenance on the machine, or in case of its scrapping, please dispose carefully and correctly of any polluting components, according to the local regulations. In case of scrapping, the identification rating plate and any other document have to be destroyed.

## 14 HOW TO ORDER SPARE PARTS

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Upon the spare parts request, please quote always:

Machine type, serial number, quantity of the requested spare parts, article number (these data can be read on the rating plate or supplied by the technical information of the machine and by the user's and maintenance manual).

For electrical components with a different voltage and frequency than V 230 50/60Hz (data available on the rating plate of the faulty component), specify the right voltage and frequency after having mentioned the article number.

The technical data, the descriptions and pictures included in this manual are not binding.

The manufacturer reserves the right to make any necessary modification without notice or having to up-date the present manual.

## 15 HANDLING AND TRANSPORT

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Before its shipment, the machine is carefully packed in a wooden cage or carton box. During the shipment and storing of the machine, pay particular attention to the upside indication on the packaging (wooden cage or carton box). Upon receipt, please check that the packing is intact and store the machine in a dry place.

## 16 WARRANTY

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All Ghidini products are guaranteed for a maximum period of 12 months from delivery date as far as material and construction defects are concerned.

The warranty is extended as follows:

In case of malfunction of the equipment, please contact your Ghidini reseller, specifying the noticed defect, type, serial number and furthermore the operating conditions of the machine. After having received the equipment or component and after an accurate analysis, Ghidini reserve the right, whether to repair or to replace the product. If the machine is still under guarantee, the Ghidini reseller will carry out the service or replacement at Ghidini's charge. In case the returned goods are not defective, Ghidini reserve the right to charge the customer with the met expenses (shipment, etc.). The present warranty will be declared void, if the machine has been damaged due to improper use, negligence, normal wear, chemical corrosion, installation not according to the provided instructions and to the manufacturer's warnings.

Any modification, tampering and alteration on the machine or its components, carried out without prior written authorization by Ghidini, relieve the latter of any responsibility and annuls any warranty obligation. The components subject to normal wear and the perishable ones are not under warranty, as well as everything which has not been previously explicitly indicated, or damages or expenses arising from defects of the same product.

The validity conditions of the guarantee provided by Ghidini are considered implicitly accepted upon purchase of the machine. Any possible changes to or derogations from the present guarantee are only valid prior written authorization by Ghidini.

## 17 CONFORMITY DECLARATION

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**Manufacturer :**

GHIDINI  
Company

Via Tolstoj, 24 – 20098 S. Giuliano Milanese (MI)  
Address

+39 -02 -98.24.06.00  
Phone number

**Declares that:**

**The machine:**

Ecological spotting cabinet ECO CAB-05

- \* has been designed in compliance with the DIRETTIVE DIRECTIVES OF THE EUROPEAN COMMUNITY COUNCIL referring to machines (98/37/EC) and to low voltage (BT 73/23/CEE).
- \* has been designed, as far as enforceable, in compliance with the following harmonized regulations and technical specifications:  
EN 292-1/2, EN 1050, EN 982, EN 11200, EN 60947, EN 894-1/2.

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**Managing director**  
**Product manager**

Roland Fleischmann  
**Name**

GHIDINI S.R.L.  
**Company**



September 2005  
**Date**

**Signature**



**Web site:** <http://www.ghidini-gb.it> - **E-mail:** [ghidini.commerciale@tin.it](mailto:ghidini.commerciale@tin.it)