Instructions manual

ADHESIVE AUTOMATIC FEEDER

melter Feeder

meler

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1. SAFETY GUIDELINES

General

The information contained in this section applies not only to every-day machine operation, but also to any procedure carried out on it, whether for preventive maintenance or in the case of repairs and the replacement of worn out parts.

It is very important to observe the safety warnings in this manual at all times. Failure to do so may result in personal injury and/or damage to the machine or the rest of the installation.

Before beginning work on the machine, read this manual carefully, and in case of any doubt, contact our Technical Service Center. We are available for any clarification that you might need.

Keep manuals in perfect condition and within reach of personnel that use the machine and perform maintenance on it.

Also provide necessary safety material: appropriate clothing, foot-wear, gloves and safety glasses.

In all cases, observe local regulations regarding risk prevention and safety.

Symbols

The symbols used on both the melter/applicator equipment and in this manual always represent the type of risk we are exposed to. Failure to abide by a warning signal may result in personal injury and/or damage to the machine or the rest of the installation.

WARNING: Risk of electrical shock. Carelessness may produce injury or death.

WARNING: Hot zone with high temperatures. Risk of burns. Use thermal protective equipment.

WARNING: System under pressure. Risk of burns or particle pro-jection. Use thermal protective equipment and glasses.

WARNING: Important information for the correct use of the system. May include one or several of the previous hazards, and therefore must be kept in mind to avoid damage and injury.

Mechanical components

The hot-melt installation, which is installed to this device, requires moving parts that can cause damage. Use the equipment correctly, and do not remove the safety guards while the equipment is in operation; prevent the risk of possible entrapment due to moving mechanical parts.

Do not use the machine if the safety devices are not in place or appear to be inadequately installed.

For maintenance or repair operations, stop the movement of moveable parts by turning off the main switch.

The device has no moving mechanical parts, so it does not pose risks to consider in this section.

Electrical components

The system operates with a single-phase current (230 V / 50 Hz) at a low power. Never handle the equipment with the power connected, as this may result in powerful electrical shocks.

The installation must be correctly grounded.

The installation's power cable conductors must match the required electric current and voltage.

Periodically inspect the cables to check for crushing, wear and tear, as well as to prevent tripping and falls as a result of their placement.

Although the system meets *EMC* requirements, it is inadvisable to use devices that transmit high levels of radiation, i.e., mobile phones or soldering equipment in their vecinity.

Hydraulic components

As this is a pressurized system, precautions related to this type of equipment must be observed.

The system uses compressed air to 6 bar pressure. Before any manipulation, please ensure that the circuit has lost fully air

pressure. The risk of projection of particles at high speed can cause injury to a certain severity.

Extreme precautions with the residual pressure that could be contained in the circuit, before disconnecting any pneumatic feeding tube.

Thermal components

The entire system operates with temperatures reaching up to 230 °C (446 °F). The equipment must be operated using adequate protection (clothing, footwear, gloves and protective glasses) that completely cover exposed parts of the body.

Keep in mind that, due to the high temperatures reached, the heat does not dissipate immediately, even when the power (in this case, electric) source is disconnected. Therefore, use caution, even with the adhesive itself. It may remain very hot, even in a solid state.

In case of burns, immediately cool the affected area with clean, cold water. Seek medical attention as soon as possible from the company's medical service or the nearest hospital. Do not try to remove the adhesive material from the skin.

Noise

The noise level of the system is well below allowable levels, and therefore does not present a specific risk to be taken into consideration.

Materials

'*meler*' systems are designed for use with hot-melt adhesives. They should not be used with any other type of material, and especially not with solvents, which may cause personal injury or damage to internal system components.

Always use original '*meler*' components and replacement parts, which guarantee the correct system operation and service.

When using adhesive, follow the corresponding guidelines found in the *Technical and Safety Sheets* provided by the manufacturer. Pay special attention to the advised work temperatures in order to prevent adhesive burning and degradation.

Ventilate the work area adequately in order to remove the vapors produced. Avoid the prolonged inhalation of these vapors.

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2. INTRODUCTION

Overview

The '*meler*' adhesive automatic feeder ensures a continuous level of adhesive inside the melting tanks, eliminating the task of manually refilling by the user.

Each time the tank sensor detects a low adhesive level it sends a signal to the suction system which, from the container adhesive (or directly from the adhesive bag), transferred a load of adhesive to the melting tank. The loading process is indicated by a light signal. When the sensor detects the correct level again, the transfer of adhesive stops (a disconnection delay can be programmed).

An alarm system, timed from the detection of low level, warns of possible flaws in the loading or completely emptying the container for its replenishment.

The system triggers a combined signal, noise and intermittent light. The acoustic signal can be cancelled by the available button.

Once corrected incidence signal light turns off the unit by ‘RESET’ button.

The system provides a level of security in the hot-melt cast within the fuser team, as well as the absence of charred material (the adhesive is melting and contributing as it needs), prevents external contamination of the adhesive (in a totally enclosed system) and facilitates the tasks of recharge

The unit can be installed in the range of ‘*meler*‘ hot-melt tanks, as well as other units on request.

It supplies the unit load (control, filter, sensors and aspiration mouth suction), together with some specific adaptation to the requested unit.

A 120 l capacity container for the adhesive is available as an accessory in order to give greater autonomy to the system.

Intended use

The adhesive feeder can be used exclusively for the functions described in this manual and under the constraints outlined in the same.

Do not modify the installation or use items not provided by ‘meler’. Any modification of an element or part of the facility must be consulted to manufacturer.

Do not us it to transfer liquids or materials others than those specified. Some adhesives can become sticky with moisture, causing a malfunction of the device.

Operation modes

The feeder has three service situations as described further on:

> **Loading mode_**The device operates normally, loading the tank of the hot-melt system as often as low level the detector of the loading system, installed on the tank, indicates it.

This corresponds to an automatic process where the operator should not act on any element of control.

Alarm mode_ The device stops the function of load, stopping the expulsion of air, in case the tube is obstructed or lack of adhesive in the adhesive container. In this situation a light and an acoustic signal is emitted, which can be overturned by the operator. After the intervention to replenish the system, the operator must push the reset button.

Stop mode_ The device in off stays without tension, It does not signal any load control. However, the system keeps the air pressure in the input circuit.

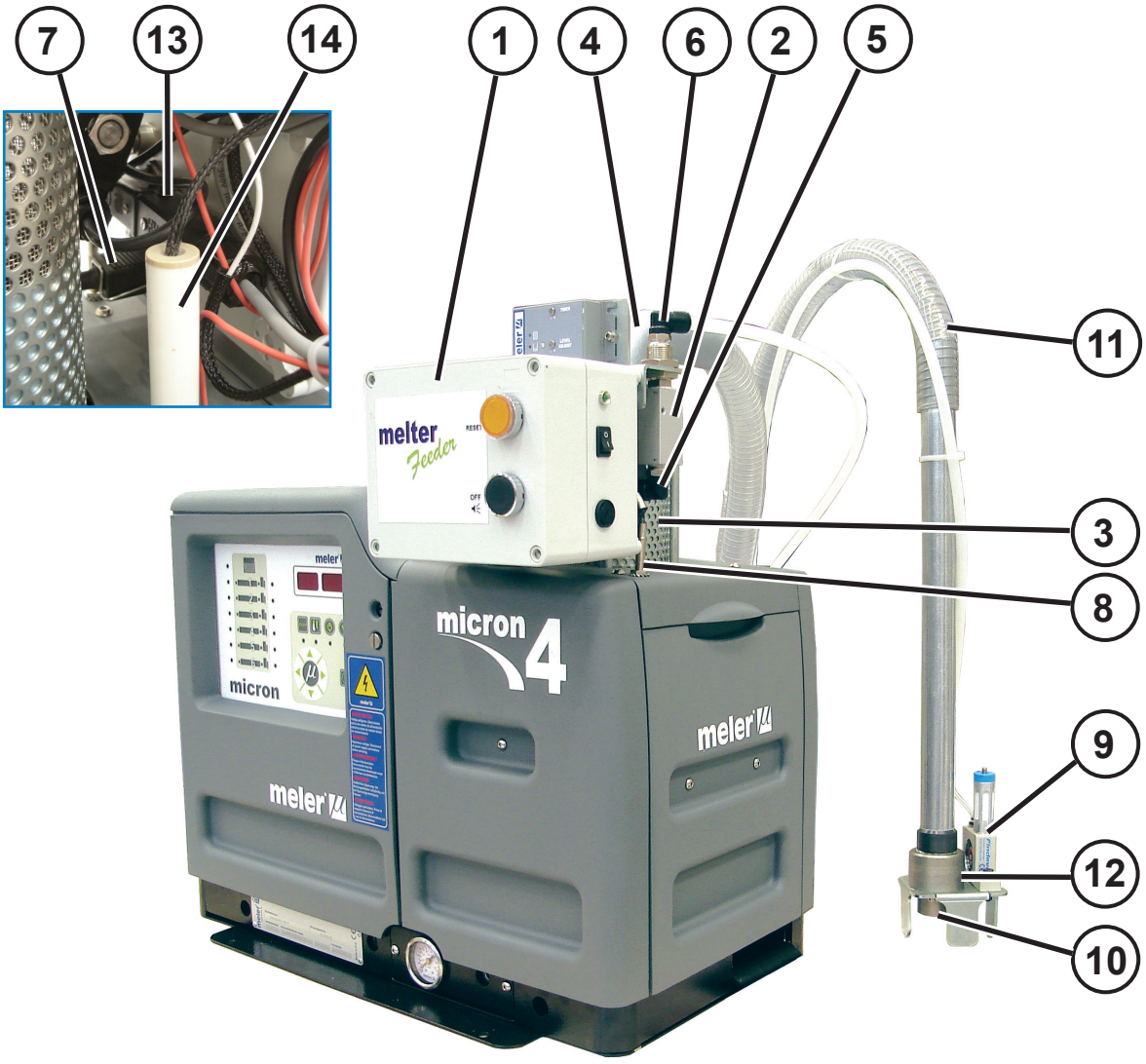
Identification of the hot melt system

When you want to place orders for parts or materials or if you request support from our technical service you should indicate the reference and serial number of your granulate feeder.

These data and other information of a technical nature can be located on the identification plate on the electrical control box.

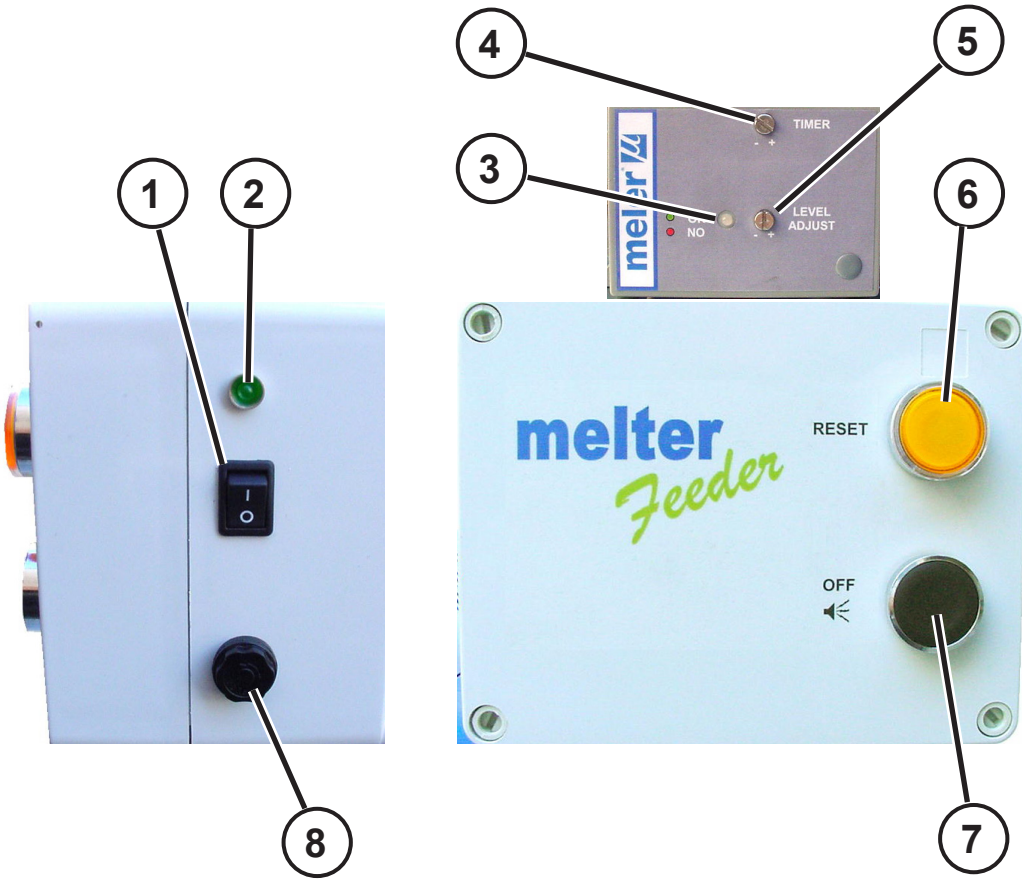
Main components

General



1. Control Board
2. Electric load valve
3. Unload Filter
4. Rotary fitting
5. Input air supply (from the grid)
6. Output air supply to the suction area
7. Connector power supply
8. Sensor closed lid
9. Pneumatic vibrator
10. Suction area
11. Flexible Load Tube
12. Air feeding tube
13. Sensor Connectors
14. Load Sensor

Control panel



1. Main switch
2. Power supply monitoring system
3. Led for activation of load sensing
4. Adjustment timer (not used)
5. Sensitivity adjustment of load sensor
6. Illuminated rearmament button
7. Reset button for acoustic signal
8. General protection fuse

Optional Equipment

120L Container

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3. INSTALLATION

Warning: The vacuum feeders are installed in equipment with updated technology with foreseeable risks.
Therefore, you should allow only the access to skilled people, with sufficient training and experience in handling, installation or repair of such equipment.

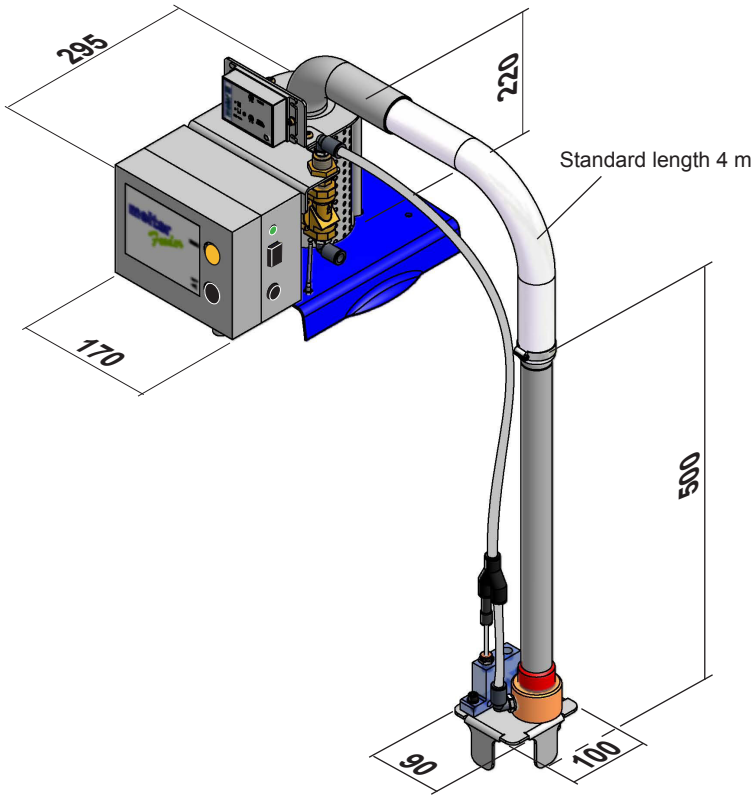
Preliminaries

The feeder is normally supplied together with the melter unit, with the elements necessary for installation and use. However, some components must be supplied by the user depending on the location and connections of each facility including:

- Power cable for power supply
- Tube for compressed air and connector
- Appropriate and closed container for the adhesive

Installation requirements

Before installing or using a vacuum feeder we must ensure that the space for it allows the location, connection and use of the entire system. We must also ensure that the electrical and pneumatic supplies meet the requirements demanded by the used device.



Electrical Consumption

Before connecting the vacuum feeder we must take into account the total consumption of the system and provide an appropriate power supply.

Check nameplate of the feeder before the connection, in order to connect device to the appropriate voltage.

Connect and ensure a correct grounding of the device.

Warning: Risk of electrocution. Even when the equipment is turned off, voltage remains in the intake terminals, which may be dangerous during internal equipment manipulations.

The control panel of the feeder incorporates a general OFF switch that insulates the unit of its power supply. This protects against short circuits through a fuse with external access to it, but you must protect the entire installation from the power supply against overloads. Install a power switch for disconnecting the melter/ applicator equipment from the electrical network.

The power associated with this protection is indicated on the nameplate of the feeder.

Compressed air

To install '*meler*' vacuum feeder, it is necessary to have a dry, non-lubricated compressed air system with a maximum pressure of 6 bars.

The air inlet pipe is installed to 10 mm outer diameter.

Unpacking

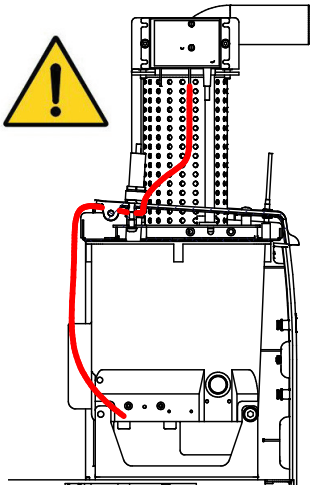
Before proceeding with the installation of the vacuum feeder, it should be removed from its location on a pallet and examined in order to detect any possible breakage or deterioration.

Communicate any defect, even to the outer packing materials, to your '*meler*' Representative or to the Main Office.

Content

If the feeder has been issued installed on a hot-melt system, all elements of the system are mounted on it, except the suction tube which should be connected to the swivel connector.

If the feeder has been issued as an accessory to an existing system the packaging contains the tank lid for the hot-melt tank completely mounted where you should connect the suction tube and the swivel elbow connector.



Feeder assembly

If the vacuum feeder installed on an existing melter please follow the correspondent instructions for each model of meler unit.

Warning: Ensure that the earth cable of the sensor has been connected to the ground connection of the melter.

Electrical power supply connections

The vacuum feeder is supplied to be connected to the power supply of single phase 230 VAC, depending on their power consumption.

It is always imperative to install a good ground connection.
The maximum and minimum values are listed on the nameplate of the system.

Warning: Risk of electrical shock. Carelessness may produce injury or death.

Connect and fix the power cable (3x0.75mm2) to the supplied plug.

Connect the plug to the control box fixing it with the metal clamp.

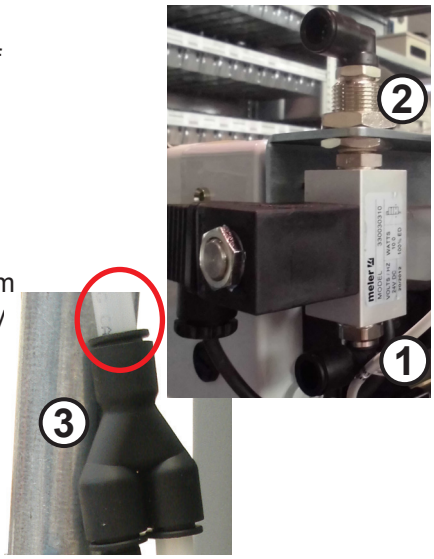
Connect the other end of the power cable to the power socket.

Pneumatic connection

Before connecting the pneumatic power to the vacuum feeder, make sure the pressure regulator on the system and the main air supply is completely closed.

Connect the vacuum feeder through a flexible tube with outside diameter of 10 mm to the general air supply (6 bar max.) (1). The unit has a quick coupling for this connection.

The air outlet grid (2) is connected by a flexible hose outside diameter 10 mm to the Y quick connector (3) located in the area of the suction adhesive.

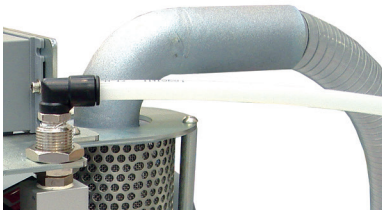


To be sure about the connection of the tubes in the inlet and the outlet, the valve is marked with the numbers 1 and 2 respectively. See the pictures.

Once connected, open the air supply verify that you have maximum 6 bar pressure. Pressures higher than that causes an unnecessary expense and the possibility to produce turbulences in the hot melt tank with consequent malfunction of the unit.

Connection of the suction tube

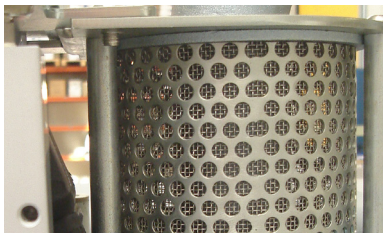
The suction tube should be connected to the swievel elbow of the vacuum feeder, inserting it into the inside of the metallic mouth down to its bottom. To facilitate its introduction, you can previously heat slightly the extreme of the plastic tube.



Place the swievel elbow to the most convenient position for installation, depending on the location of the hot melt container.

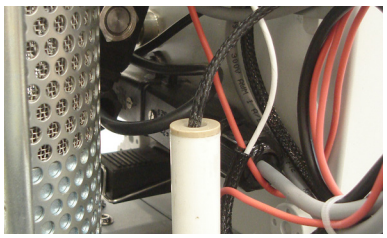
Therefore:

- Loose slightly the three fixing screws for the lid of the filter and set the swievel elbow.
- Place the swievel elbow to the desired position, twisting it in the required sense.
- Tight the three fixing screws to the position of the elbow and prevent their movement.



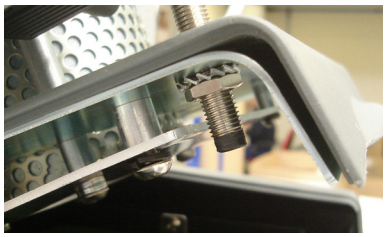
Connecting sensors control

The vacuum feeder has two control sensors for the control of the operation of the system.



The low level sensor detects a low level of adhesive in the tank, in order to activate the filling of adhesive and when it has reached the right level to stop this filling.

The "*lid closed*" sensor allows the stop the filling procedure when the lid is opened, preventing the projection of adhesive to the outside.



Both sensors are wired in a single connector at the control box. This connection allows the installation of the control box away from the hot melt tank using an appropriate interconnection cable.

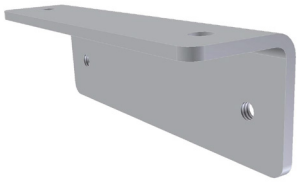
Installation of external control box

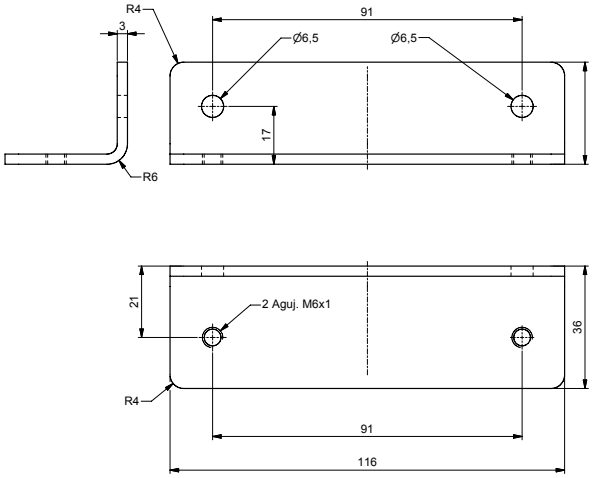
In some situations, it will be necessary to place the control box away from the hot melt equipment. It should be taken into account, that the longer the air and the vacuum tubes are, the suction force will be reduced.

In order to bring the control box and the air supply closer to the adhesive container, you can install the control box away from the hot melt equipment and closer to the mouth of the suction tube.

Therefore take into account the following factors:

- Location and setting of the control box
- Electric connections of the sensors





The control box, with the solenoid valve incorporated, is fixed with two screws to the provided squadron, following the attached drawing. On demand '*meler*' will supply this squadron.

For the electrical connection, an interconnection extension cable between the electrical box and the plug of the installed sensors on the hot melt system is required.

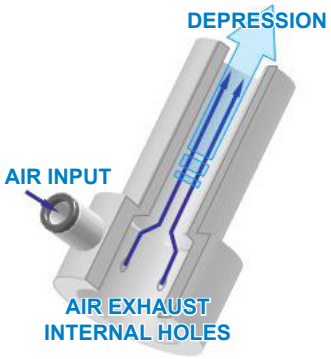
Placing the suction tube

To transfer the adhesive from the adhesive container to the hot melt equipment, the suction tube should be inserted to the bottom of the container.

The four flaps that protects the entrance of the suction tube are designed to keep the suction mouth open and without obstructions. It maintains a free way for the suctioned adhesive.

The vibratory element (pneumatic) keeps the adhesive loose around the entrance to facilitate its suction.

The aspiration element uses compressed air. By the help of the venturi effect, a depression is created in it, that absorbs pearled and pallet adhesive and drives it to the shell of the hot-melt system.



The Venturi effect, applied to the vacuum feeder, consists in a decrease of the air pressure by an air flow inside the closed circuit while increasing the air speed when passing through the narrowing of the entry mouth.

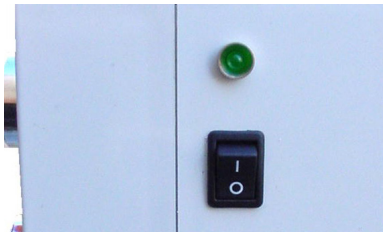
As the entry of aspiration is connected to this point, the aspired adhesive stays in it and is transported to the hot-melt tank through the flexible communication hose.

4. USE OF THE UNIT

This section presents how to use the vacuum feeder. Even if its operation is very simple, it should not be used by non-trained personnel.

Warning: An improper use can cause damage to the equipment itself or to the operator.

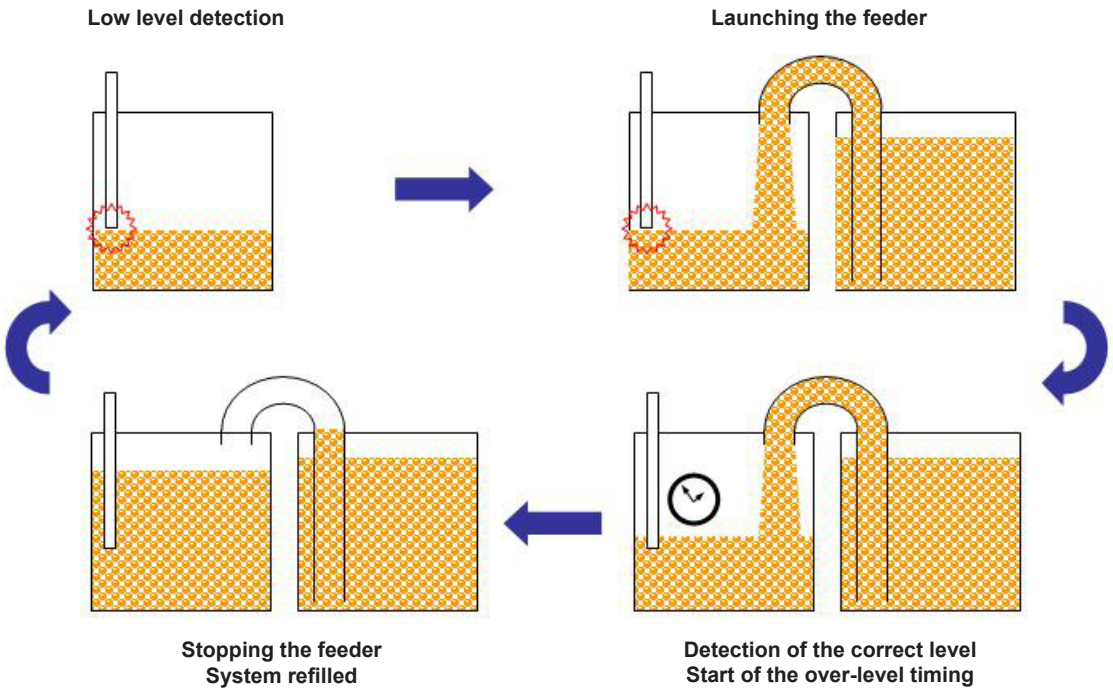
Start up and automatic process



The operation of the vacuum feeder is absolutely automatic and only needs to switch it on, to begin the automatic feeding when the low level sensor requests it.

Connect the switch on the side of the control panel. The green led flashes warning that the system is connected with voltage.

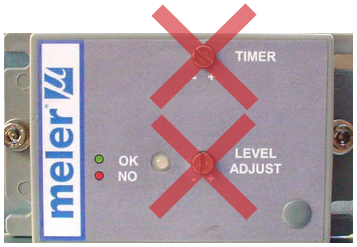
The automatic loading process is developed according to the following pattern:



Sensor adjustments

Sensitivity adjustment

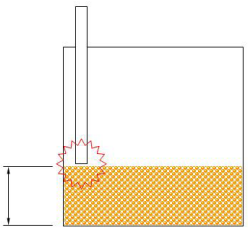
The adjustable sensitivity of the sensor, depending on the material used and the hysteresis admitted to the operation of the vacuum feeder is factory pre-setted and therefore it is NOT necessary to change. In most cases the factory setting is perfectly valid to use the vacuum feeder.



If it is necessary to correct the adjustment contact the Technical Services '*meler*' or Area Representative.

Low level adjustment

The placement of the sensor with respect to the feeding bottom of the hot melt system tank determines the minimum quantity of molten adhesive that we are going to allow before the automatic refilling starts.



This position is regulated by sliding up or down the sensor from its fixation on the lid. To do this, loosen the nut who fixes the sensor, before moving it to the desired position. Once positioned, re-tighten the nut to fix it.

The sensor must be fixed so that at least 70 mm of the sensor is left beneath the lid.

Setting high level in tank

The maximum level achieved in the hot-melt system tank depends on the timer located within the control box.

Open the lid of the box with the four screws. Inside there is a programmable timer-relay for the adjustment of the times.

With the control on (LED of tension green ON), the following message is displayed.

		E	.	V	.			0	0	1	0
		A	L	A	R	M		0	0	9	0

By pressing the up or down arrow key (No. 2 or 5) select the value you want to change. This value is identified by an asterisk that appears on the left side of the selected parameter. If the is no asterisk, no parameter is selected.

	*	E	.	V	.			0	0	1	0
		A	L	A	R	M		0	0	9	0

	*	E	.	V	.		0	0	2	0	
		A	L	A	R	M	0	0	9	0	

With the arrows left or right (No. 3 or 4) increase or decrease the value. In this case the value to be changed is change is for ‘EV’.

Alarms

Load failure alarm

Each time the load sensor detects low adhesive a safety timer is connected (Default 90 seconds). That controls of time lap the device is charging. This timer is resetted when the sensor detects correct adhesive level.

In case that within the scheduled time (90 seg) the level sensor has not detected the correct level, the system assumes the existence of a failure in the loading circuit and connects the warning signs:

- Amber light intermittent signal in the control panel
- Beep buzzer

Both signals remain activated while they are not resetted.

Pressing the black button the acoustic signal can be overridden.

Pressing the amber light button the system will be resetted. The security time will begin to count again.

You just have to press the reset button after having corrected the existing failures:

- Obstruction of aspiration tube or mouth
- Mismatch of the sensitivity of the level sensor
- Empty adhesive container

Adjusting alarm time value

The delay of 90 seg. for the alarm can be adjusted, depending on the system requirements. The timer is located within the control box.

Open the lid of the box with the four screws.

Inside you can see the programmable timer-relay for the adjustment of the delays.

When the control box is switched on (green power LED ON), the following message is displayed.

		E	.	V	.			0	0	1	0
		A	L	A	R	M		0	0	9	0

By pressing the up or down arrow key (No. 2 or 5) select the value you want to change. This value is identified by an asterisk that appears on the left side of the selected parameter. If there is no asterisk, no parameter is selected.

	*	E	.	V	.			0	0	1	0
		A	L	A	R	M		0	0	9	0

With arrows left or right (No. 3 or 4) increase or decrease the value. In this case the value to change is for ‘ALARM’.

		E	.	V	.			0	0	1	0
	*	A	L	A	R	M		0	0	8	0

Alarm for open lid

When you open the lid of the hot-melt tank, the inductive sensor gives the signal to the programmable relay to interrupt the loading procedure. Closing the lid, after 10 sec. the loading procedure restarts.

If keep the lid open longer than the time programmed into the parameter ‘ALARM’, the alarm is triggered and connects the warning signs:

- Amber light intermittent signal in the control panel
- Beep buzzer

Both signals remain activated while you do not act on them.

Pressing the black button you can stop the acoustic signal.

Pressing the amber light reset button the system restarts except if the lid is still open.

5. MAINTENANCE

Warning: The vacuum feeder is a device with updated technologies but with certain risks. Therefore, you should allow only the right people, with sufficiently enough training and experience, handling, installation or repair of these devices.

The following table summarizes briefly the indications for proper maintenance of the vacuum feeder. Read carefully, in each case, the corresponding section.

If the device does not work or works incorrectly contact the Technical Services '*meler*' or Area Representative.

Operation	Frecuency	Refer to
External cleaning	Daily	*Cleaning of the unit*
Pneumatic system	- Daily: pressure control - Weekly: leakage inspection	*Pneumatic circuit*
Load sensor	- Daily: load control - Weekly: cleaning	*Control of load sensor*
Suction tube	Weekly	*Inspection aspiration tube*
Air exhaust filter	Weekly	*Filter maintenance*
Pneumatic vibrator	Weekly	*Control of pneumatic vibrator*

Cleaning of the unit

To maintain the performance of the vacuum feeder in perfect functioning, all of its components must be maintained clean and especially the exits in the air suction tube.

Eliminate waste that can clog the air outlets.

Keep clean and without obstructions the tube for the adhesive.

Clean items with a soft tissue and aspire the dust that can be accumulated.

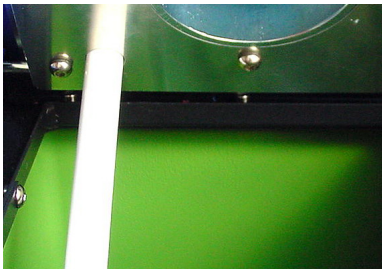
Pneumatic system

Control regularily the pressure feeding circuit. Very low pressures do not allow proper loading of the adhesive. Very high pressures can produce splash of molten adhesive in the tank of the melting unit and even cooling of the hot melt.

Monitor periodically if there is any leak in the pneumatic circuit. In

addition to being a useless expense resulting in loss of pressure and thus malfunction of the system load.

Control of the load sensor



It is necessary to control if the load sensor is working properly and that it allows you to maintain the desired levels.

A low load will cause a decline in the level and the possibility of not having the amount of necessary hot-melt adhesive. By contrast, an overload can cause the overfilling of the tank with subsequent sealing of the loading mouth.

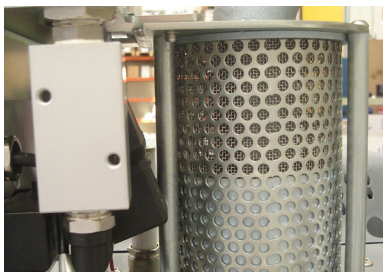
The load sensor should remain clean of charred adhesive that may affect the proper level detection.

Inspection of the aspiration tube

Monitor that the aspiration tube is not obtured with sticked glue pallets or perls. This tube should be perfectly free of any glue plugs that impedes the smooth transfer of the adhesive from container to the tank of the melting unit.

The tube is mostly transparent to facilitate visual inspection of the same.

Filter maintenance

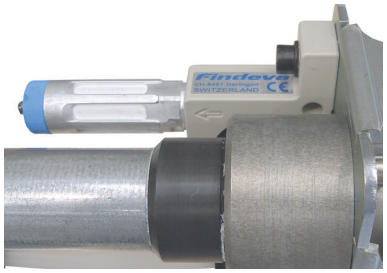


Periodically review the state of the filter located inside the discharge zone. Blow compressed air impurities that may have acceded to.

This filter avoids dust particles or glue pallets itself being spilled outside with the exhaust air. If it arrived to be plugged the system might not work properly.

To clean, unscrew the three screws of the rotary elbow lid and extract the filter.

Control of pneumatic vibrator



Reviewing the correct operation of the pneumatic vibrator located in the suction mouth. Ensures that it vibrates and its vibration is adequate.

Clean up the exhaust silencer of impurities and adhesive dust.

6. TECHNICAL SPECIFICATIONS

Generals

Adhesive type	pads or pearls up to 12 mm
Max. transfer length	25 m (*)
Max. transfer height	8 m (*)
Max. refilling speed	400 kg/h (*)
Tube standard dimensions	Ø30 mm x 4 m
Recommended air presssure	6 bar (dry air, non lubricated)
Consumption at 6 bar	360 l/min (loading)
Power supply	230V 1~ 50/60 Hz + N + PE
Container capacity	120 l
Melter units	for the full range '*meler*'
Dimensions	
Control box + loading input	190 x 290 x 210
Suction tube	556 x 100 x 90
Filter	20 mesh (< 1mm)

(*) Depending on the type and form of the adhesive

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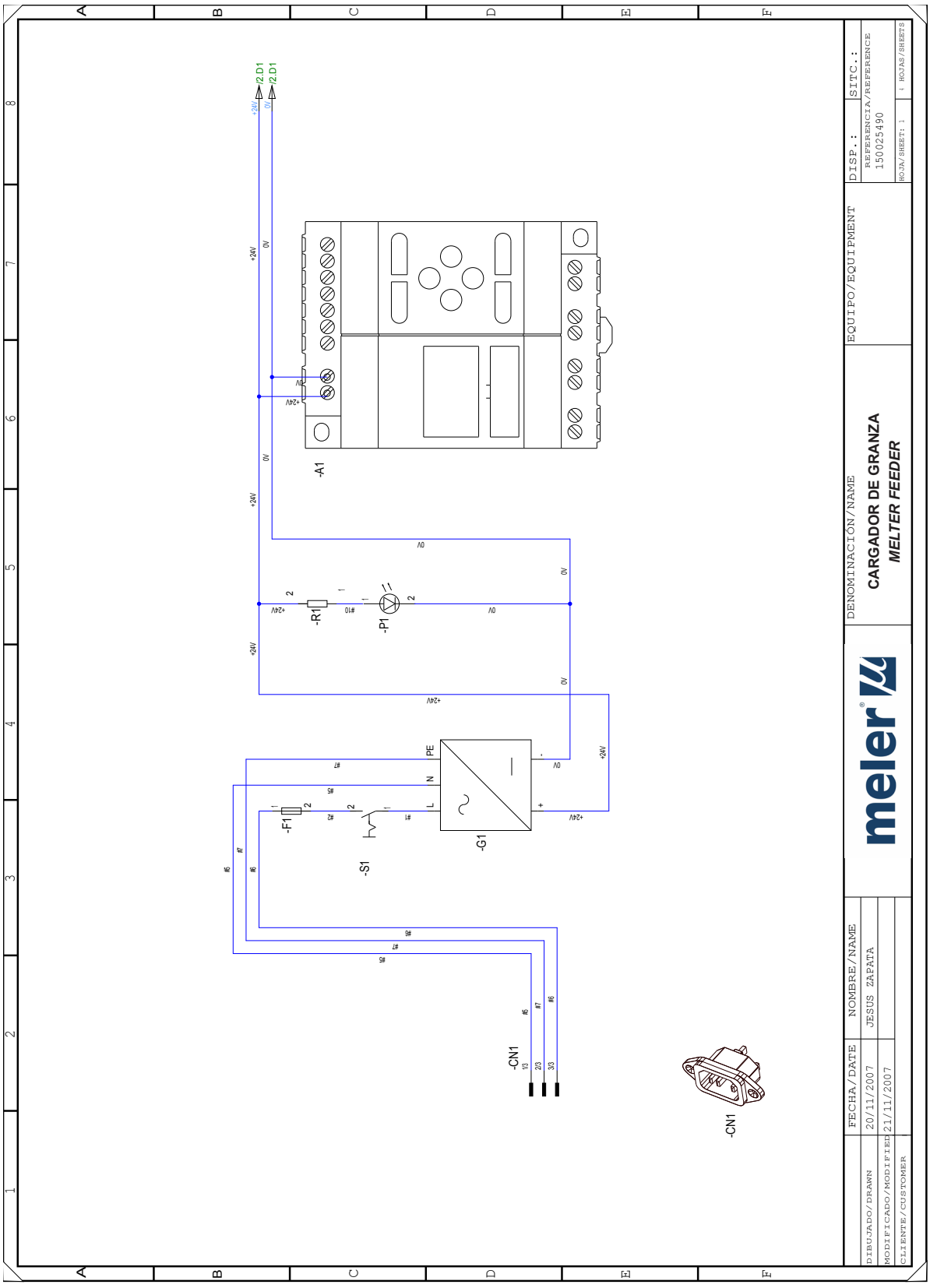
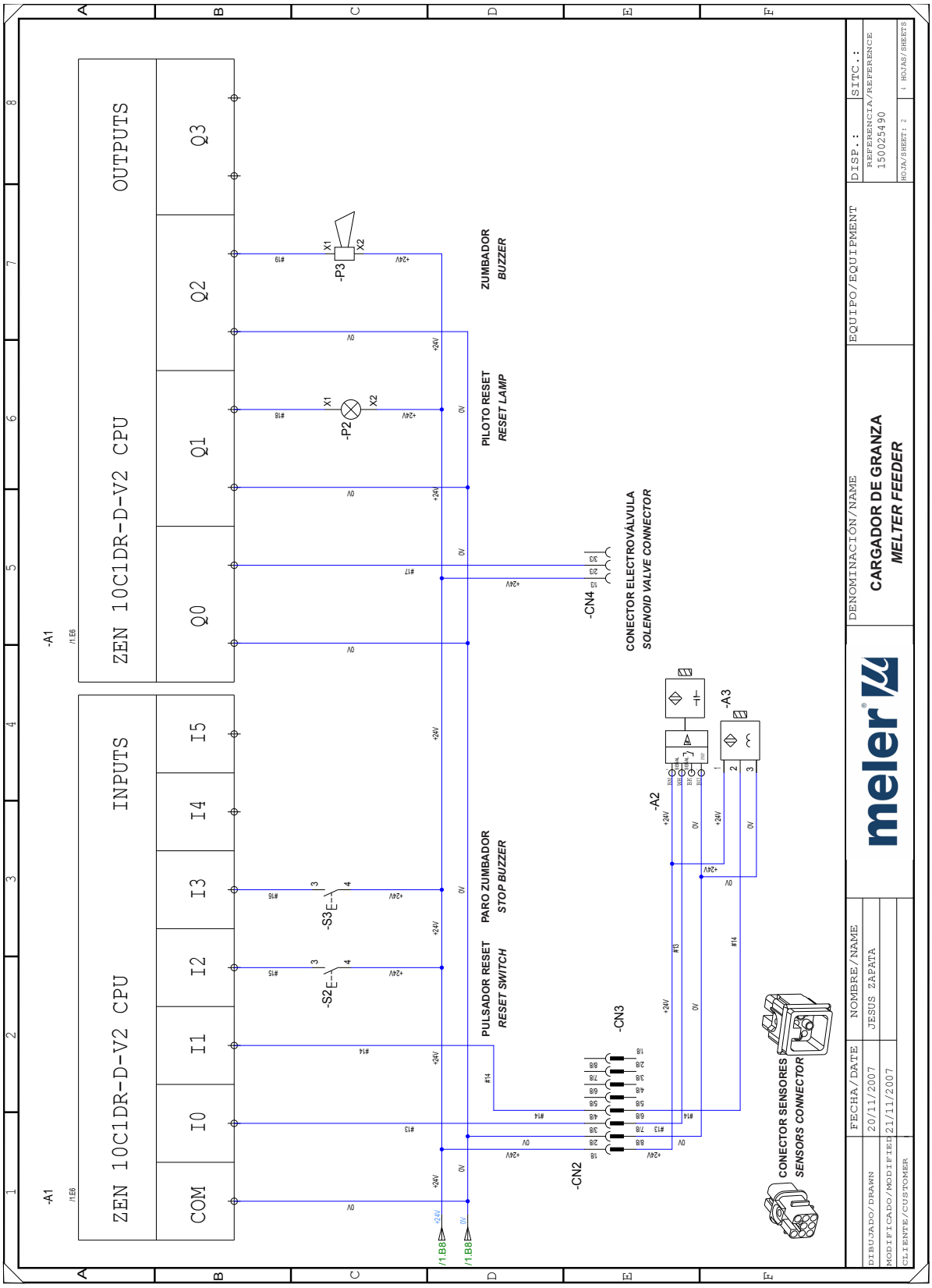
7. ELECTRIC DRAWINGS

Components list

A1	Programmable relay ZEN10C3DRDV2
A2	Capacitive level sensor 200mm
A3	Inductive detector M8x1 PNP NO
CN1	Power supply female connector
CN2	Female connector 8 poles
CN3	Male connector 8 poles
CN4	Solenoid valve connector
F1	Holders PF6 + Fuse 2A 6.35X32
G1	DC power supply
P1	LED holder Ø5 PLD51 + 5mm green LED Diode
P2	Yellow LED (pushbutton S2)
P3	Buzzer KB26 24 V
R1	Resistance 1K2 2% 1 / 4 W
S1	ON / OFF 1 pole switch
S2, S3	Button contact NO


DENOMINACIÓN/NAME
CARGADOR DE GRANZA
MELTER FEEDER
EQUIPO/EQUIPMENT
DISP.:
SITC.:
REFERENCIA/REFERENCE
15002490
HOJA/SHEET: 1
1 HOJAS/SHEETS
meler
DIBUJADO/DRAWN
FECHA/DATE
NOMBRE/NAME
20/11/2007
JESUS ZAPATA
MODIFICADO/MODIFIED
21/11/2007
CLIENTE/CUSTOMER
-A1
-R1
-P1
-F1
-S1
-G1
-CN1
-CN1
/2.D1
/2.D1
+24V
0V
PE
N
L
+
-


ZEN 10C1DR-D-V2 CPU
INPUTS
COM
I0
I1
I2
I3
I4
I5
OUTPUTS
Q0
Q1
Q2
Q3
-A1
-A2
-A3
-P2
-P3
-S2
-S3
-CN2
-CN3
-CN4
PULSADOR RESET
RESET SWITCH
PARO ZUMBADOR
STOP BUZZER
PILOTO RESET
RESET LAMP
ZUMBADOR
BUZZER
CONECTOR ELECTROVÁLVULA
SOLENOID VALVE CONNECTOR
CONECTOR SENSORES
SENSORS CONNECTOR
meler
DENOMINACIÓN/NAME
CARGADOR DE GRANZA
MELTER FEEDER
EQUIPO/EQUIPMENT
DISP.:
STTC.:
REFERENCIA/REFERENCE
150025490
HOJA/SHEET: 2
1 HOJAS/SHEETS
FECHA/DATE
NOMBRE/NAME
DIBUJADO/DRAWN
20/11/2007
JESUS ZAPATA
MODIFICADO/MODIFIED
21/11/2007
CLIENTE/CUSTOMER

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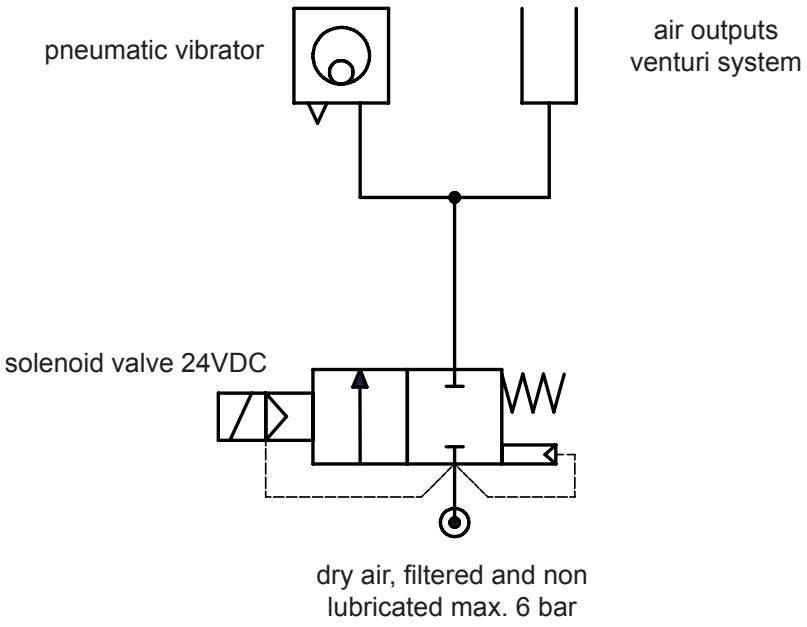
8. PNEUMATIC DRAWINGS



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9. SPARE PARTS

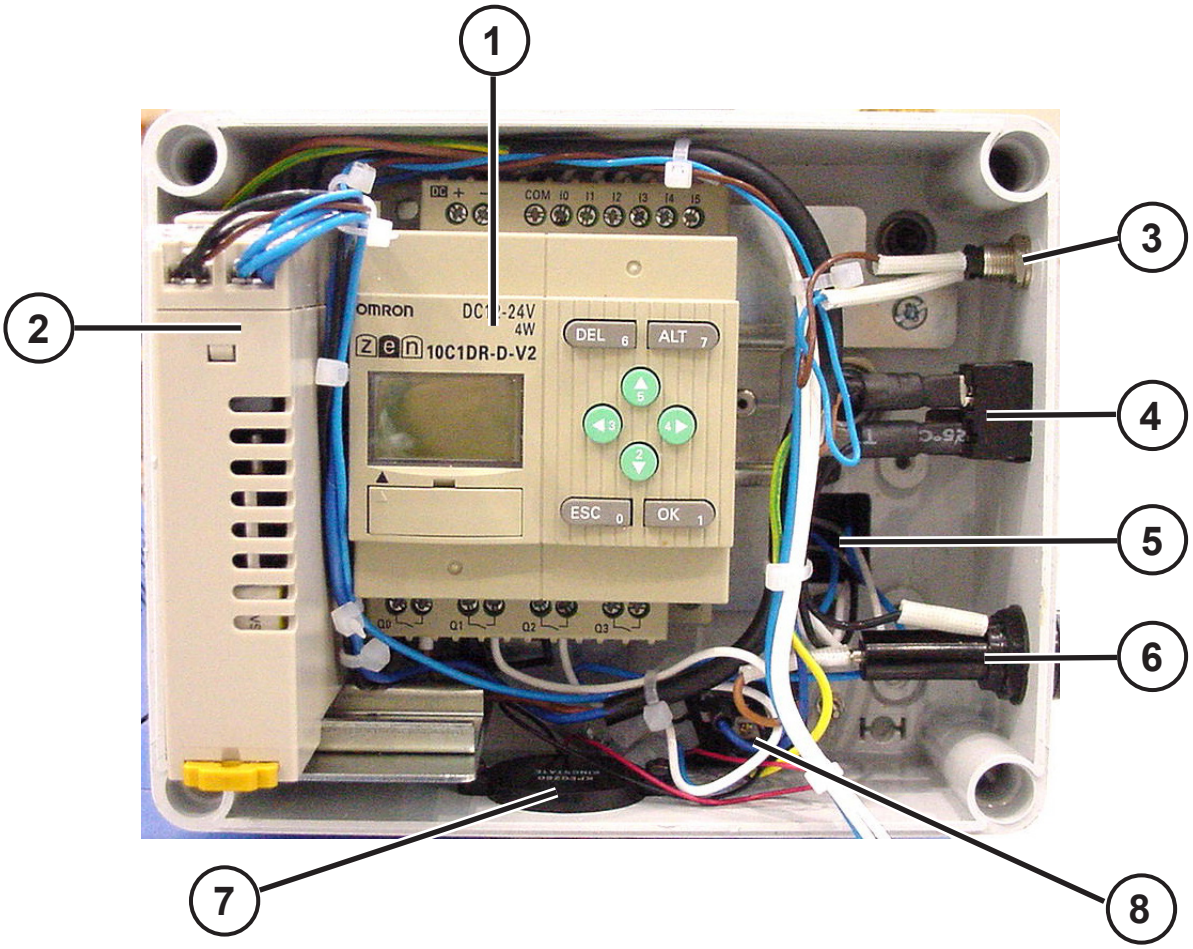
The list of the most common spare parts of the vacuum feeder appears in this chapter in order to provide you with quick and safe information.

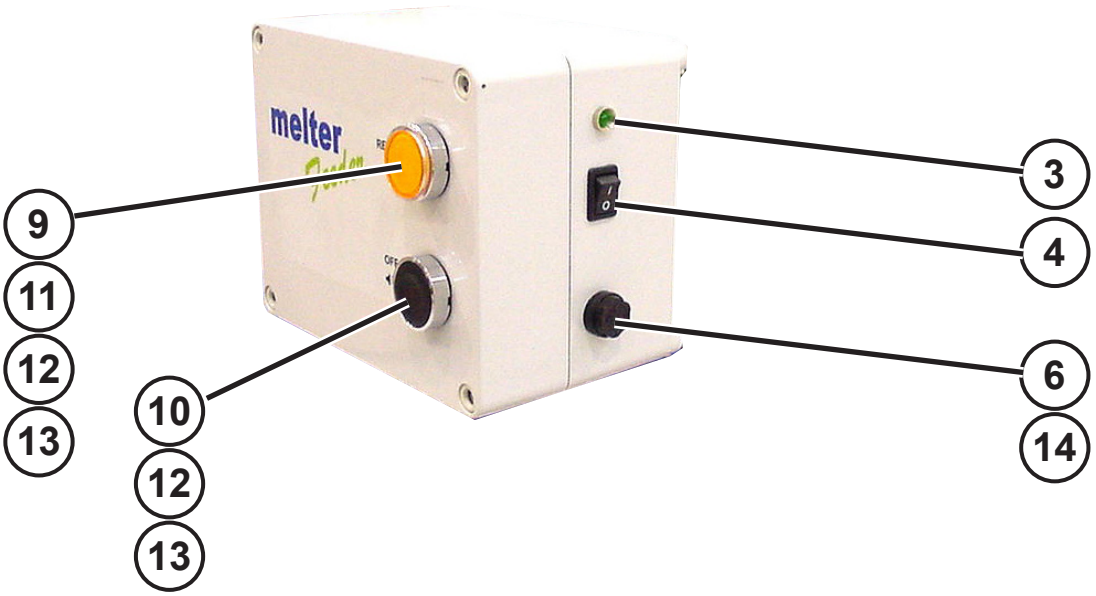
The spare parts are naturally assembled in several groups, located in the equipment.

As a visual aid it includes general images of the pieces, numbered to facilitate location within the drawing.

The lists provide the name of the reference and parts.

A. ELECTRICAL COMPONENTS OF THE CONTROL BOARD

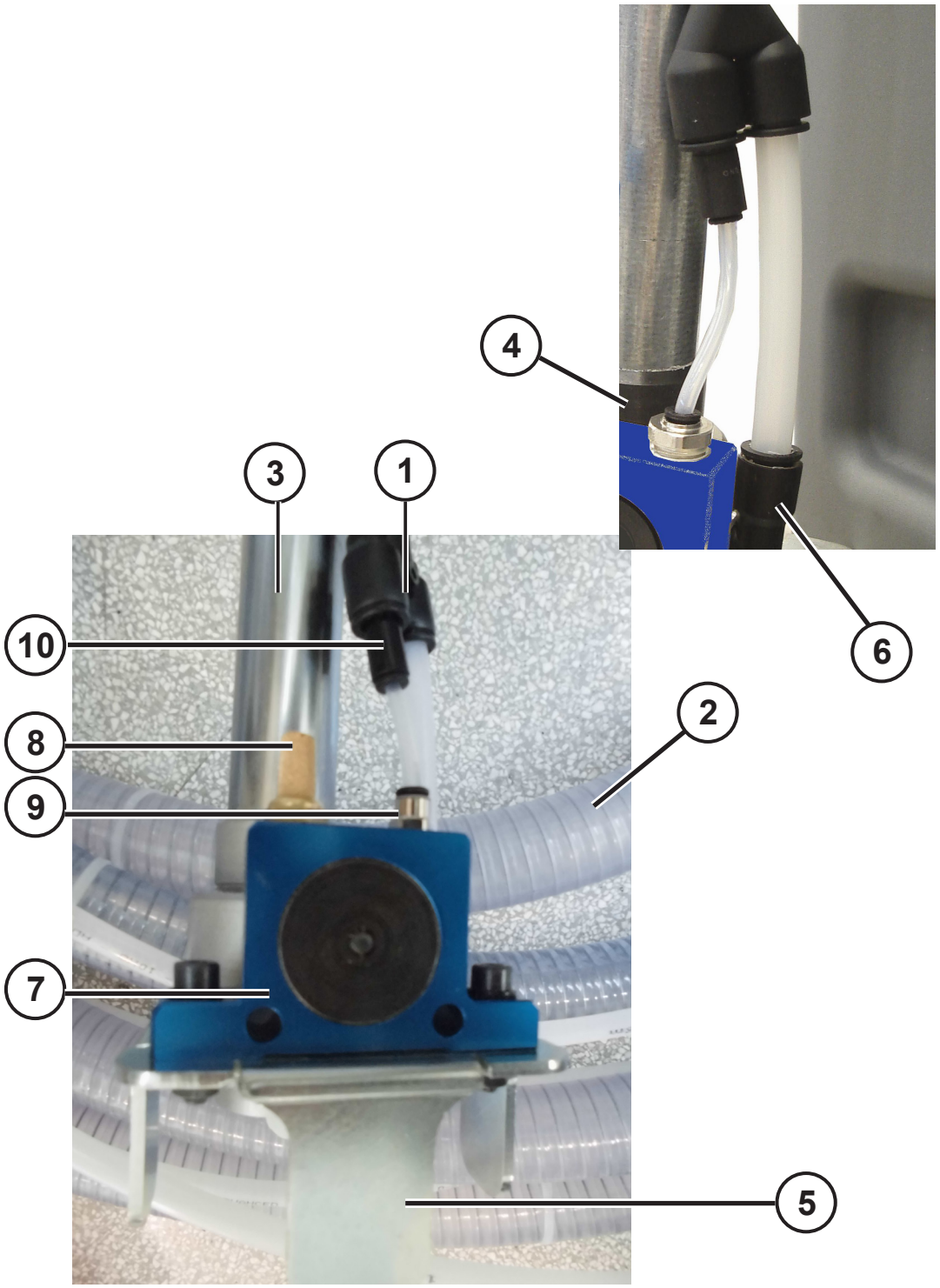




A. ELECTRICAL COMPONENTS OF THE CONTROL BOARD

Nº	Ref.	Description
1	150025600	Programmable relay OMRON ZEN
2	10110070	DC power supply 230VAC/24VDC
3	150025610	Green LED with holder
4	150021600	Main switch
5	150023760	Elbow connector socket
6	150025620	Fuse holder PF6
7	150025630	Buzzer 24VDC
8	16020000	Power supply assembly
9	150022480	Yellow button with light
10	150022510	Black button
11	150022490	Yellow LED
12	150022520	Contact holder
13	150022530	Contact N/O
14	150025640	Fuse 2A 6.35x32
	16020001	Complete power supply plug

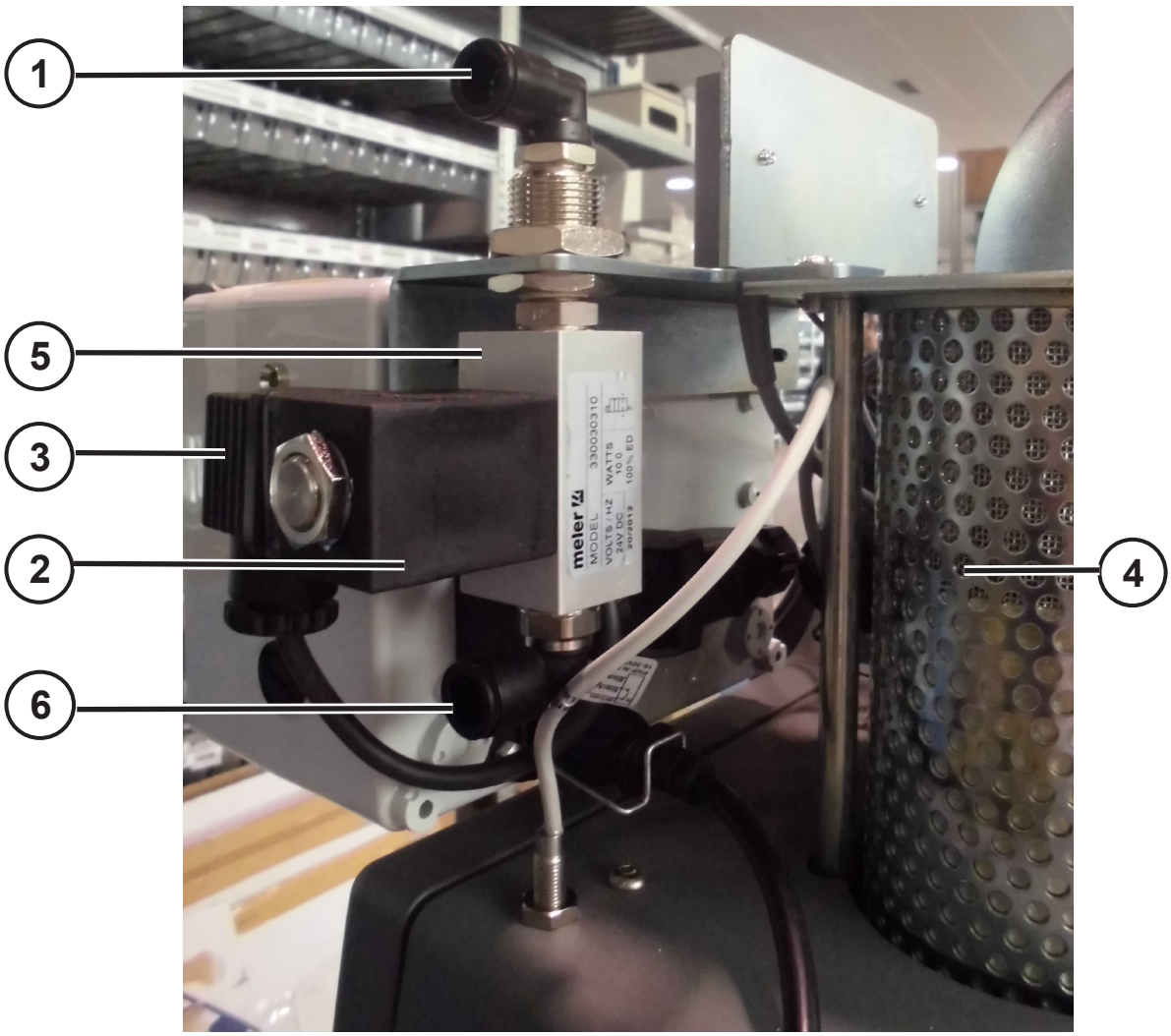
B. SUCTION TUBE



B. SUCTION TUBE

Nº	Ref.	Description
1	150025650	Fitting Y Ø10 quick plug
2	150025660	Hose vacuum feeder Ø30 (meter)
3	150025670	Metallic suction tube
4	150025680	Venturi suction tube
5	150025690	Holding legs for suction tube
6	150025700	Fitting 90° 3/8 Ø10 quick plug
7	150025710	Pneumatic vibrator vacuum feeder
8	21300000	Silencer
9	150110180	Straight fitting 1/8 Ø4 quick plug
10	150025740	Reduction Ø10-Ø4 quick plug
	150025810	Complete suction tube vacuum feeder

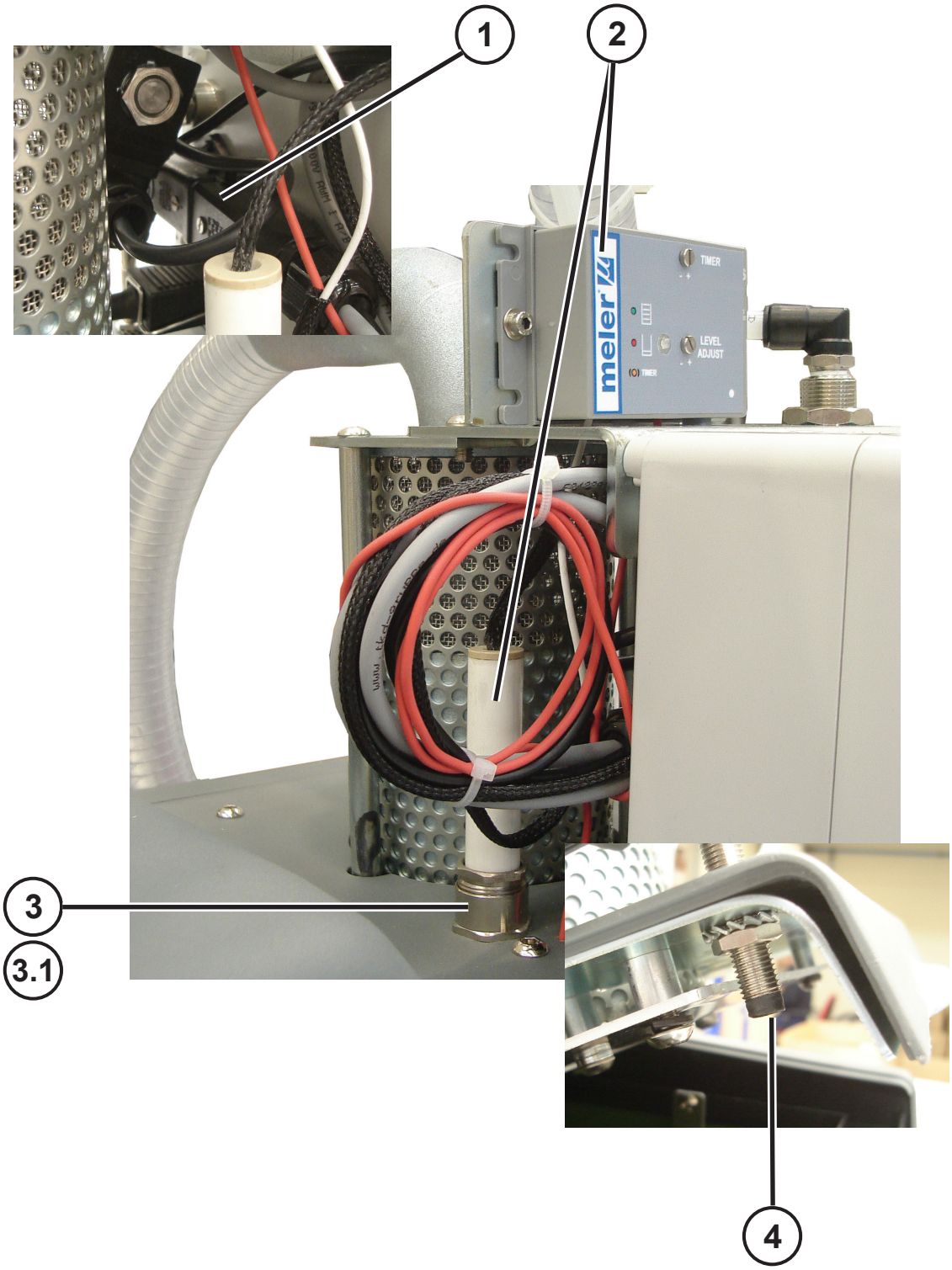
C. FILTER-VALVE ASSEMBLY



C. FILTER-VALVE ASSEMBLY

Nº	Ref.	Description
1	150025750	Fitting 90° 1/4 Ø10
2	150060080	Coil for solenoid valve 24 VDC (10W)
3	150060050	Solenoid valve connector
4	150025770	Filter mesh 20 mesh
5	150060070	Complete solenoid valve 2/2 24VDC 10W
6	150025790	Fitting 90° 3/8 Ø10 quick plug

D. SENSORS



D. SENSORS

Nº	Ref.	Description
1	16000003	Complete straight male connector Pt100
2	150025800	Capacitive level sensor (amplifier and probe)
3	150025820	Cable gland PG13.5
3.1	150025870	Capacitive level sensor o-rings
4	150110170	Inductive detector M8x1

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