



INSTRUCTIONS  
MANUAL

APPENDIX  
EXTERNAL  
DISPLAY  
**MICRON+**  
**SERIES**



Published by:

**Focke Meler Gluing Solutions, S. A.**

P.I. Los Agustinos, calle G, nave D-43  
E - 31160 Orkoien Navarra (España)  
Tel.: + 34 948 351 110  
Fax: + 34 948 351 130  
e-mail: [info@meler.eu](mailto:info@meler.eu)  
**[www.meler.eu](http://www.meler.eu)**

A Focke Group Company

---

Edition October 2019

© Copyright by Focke Meler

All rights reserved. Its reproduction, diffusion or use by electronic or other means of all or any part of this document without the express authorization of its owner is strictly prohibited.

The specifications and information contained in this manual may be modified without prior notice.

This manual is a translation of the original that was written by Focke Meler Gluing Solutions, S. A. in spanish language. If there is any discrepancy between the different versions of this manual, the original written in the spanish language shall prevail. Focke Meler Gluing Solutions, S. A. shall not be liable in any way for any damages and/or losses that may be directly or indirectly derived from discrepancies between the original version of the manual and this translation.

## TABLE OF CONTENTS

1. SAFETY GUIDELINES	1-1
<b>General</b>	1-1
<b>Symbols</b>	1-1
<b>Mechanical components</b>	1-2
<b>Electrical components</b>	1-2
<b>Hydraulic components</b>	1-2
<b>Pneumatic components</b>	1-2
<b>Thermal components</b>	1-3
<b>Materials</b>	1-3
<b>Noise emission declaration</b>	1-3
<b>Intended use</b>	1-4
<b>Limited use</b>	1-4
2. INTRODUCCION	2-1
<b>Description</b>	2-2
<b>Modes of operation</b>	2-2
<b>Hot-melt melter/applicator identification</b>	2-2
<b>Main components of the equipment</b>	2-3
<b>Control panel components</b>	2-4
<b>Optional equipment</b>	2-5
<b>Controller bracket</b>	2-5
3. INSTALLATION	3-1
<b>Introduction</b>	3-1
<b>Installation requirements</b>	3-1
<b>Electrical Consumption</b>	3-2
<b>Compressed air</b>	3-2
<b>Mounting the equipment</b>	3-2

<b>Other factors</b>	<b>3-3</b>
<b>Unpacking</b>	<b>3-3</b>
<b>Contents</b>	<b>3-3</b>
<b>Electrical power connection</b>	<b>3-4</b>
<b>Connection of the external display to the melter.</b>	<b>3-4</b>
<b>Parameter Programming</b>	<b>3-5</b>
<b>Pneumatic connection</b>	<b>3-5</b>
<b>4. TECHNICAL CHARACTERISTICS</b>	<b>4-1</b>
<b>Dimensions</b>	<b>4-1</b>
<b>5. ELECTRICAL DRAWINGS</b>	<b>5-1</b>
<b>6. SPARE PARTS LIST</b>	<b>6-1</b>
<b>A. ELECTRONIC ASSEMBLY</b>	<b>6-2</b>
<b>EC DECLARATION OF CONFORMITY</b>	<b>7-1</b>

# 1. SAFETY GUIDELINES

## General

The information contained in this section applies not only to everyday equipment 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 equipment or the rest of the installation.

Before beginning work on the equipment, 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 equipment and perform maintenance on it.

Also provide necessary safety material: appropriate clothing, footwear, gloves and safety glasses.

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



## Symbols

The symbols used on both the melter/appliator 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 equipment 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 projection. 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.



**Warning:** Dangerous area. Risk of entrapment. Carelessness may produce injury or death.



## 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 equipment 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 works with single-phase or three-phase current of a certain 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 vicinity.

## Hydraulic components



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

Before each operation, always make sure that the adhesive circuit is completely free of pressure. There is a high risk of hot particle projection, along with the corresponding danger of burns.

Use caution with the residual pressure that may remain in the hoses when the adhesive cools. When reheated, there is a risk of hot particle projection if the outputs are left open.

## Pneumatic components



Some equipment 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 works with temperatures that can exceed 200°C (392°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:

1. If the burn is the result of contact with melted adhesive, do not try to remove the adhesive material from the skin. Do not try to remove it once it has solidified either.
2. Cool the affected area down immediately with lots of cold and clean water.
3. Seek medical attention as soon as possible either from the company's medical service or the nearest hospital. Provide the medical staff with the Safety Information Sheet of the adhesive.



## 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.

Some units are specifically designed to use polyurethane reactive (PUR) hot-melt adhesives. Using PUR on a unit that is not prepared for that purpose may cause severe damage to the unit.

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.

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



## Noise emission declaration

The A-weighted emission sound pressure level ( $L_{pA}$ ) of the unit in operation does not exceed 70 dB(A) under any circumstances.

The maximum C-weighted sound pressure level ( $L_{pCpeak}$ ) and the A-weighted sound power level ( $L_{WA}$ ) do not exceed values worthy of mention and thus do not represent a specific risk that must be taken into account.

## Intended use

The equipment are designed to be used in the following conditions:

- Hot-melt adhesive fusion and pumping at temperatures up to 200 °C (392 °F). Consult with Meler technical service to operate with higher working temperatures.
- Use of equipment with Meler accessories.
- Installation of equipment according to the security regulations currently in force and the instructions provided in this manual (anchoring, electrical connection, hydraulic connection, etc).
- Use of equipment in non-explosive, non-chemically aggressive environments.
- Use of equipment following the safety instructions indicated in this manual, as well as on the labels accompanying the equipment, using adequate means of protection during each mode of operation.

## Limited use

The equipment should never be used under the following conditions:

- Use with reactive polyurethane or any other material that might cause safety or health risks when heated.
- Use of equipment in environments where cleaning is necessary using water jets.
- Use of equipment to heat or melt food products.
- In potentially explosive atmospheres, aggressive chemical environments or outdoors.
- Use or operation without adequate safety protection.
- If the person in question does not have the necessary training to use the unit or to apply all of the necessary safety measures.



**Note:** Do not modify the equipment or use components that were not supplied by Meler. For any modification of a component of the equipment or part of the installation, you must firstly consult the After-Sales Service



## 2. INTRODUCCION

In this manual you will find information about the installation, use and maintenance of the hot-melt adhesive melter/appliator in meler's MICRON+ series.

The 'MICRON+' series includes the 5, 10, 20 and 35 liter range of hot-melt adhesive melters/appliators.

Most of the photographs and illustrations that appear in this manual refer to the 5-liter 'MICRON+' melter/appliator. This model has been used as a reference for writing this manual as its main characteristics, with the exception of the tank capacity and the connection outputs are the same as those in the rest of the 'MICRON+' series..

This model consists of an external control unit from which you can operate the equipment.



## Description

The 'MICRON+' are designed for use with 'meler' hoses and applicators in hot-melt adhesive applications. Their different variations – line, coating or swirl-spray – cover a wide range of applications, being very versatile in all markets where they are used.

## Modes of operation

The 'MICRON+' series hot-melt melters/applicators may be used in all of the following modes:

**Work mode**\_The hot-melt melter/applicator keeps materials hot at the pre-selected temperature indicated on the display. The pump is kept activated, waiting for the consumption command when one or more application applicators are activated.

**Standby mode**\_The hot-melt melter/applicator remains in a resting state, with the materials kept at (programmable) temperature values below the pre-selected value. The pump remains deactivated.

**Alarm mode**\_The hot-melt melter/applicator detects a malfunction and warns the operator of this event. The pump remains deactivated.

**OFF mode**\_The hot-melt melter/applicator remains off, without heating the materials and with the pump deactivated. The electrical and pneumatic supply remains activated between the network and the system, however.

## Hot-melt melter/applicator identification

When placing orders for replacement parts or requesting help from our service center, you should know the model and reference number of your hot



## Main components of the equipment

1. Front control card
2. Outdoor housing
3. Main switch
4. Connectors to external control device
5. External control board
6. Connection input
7. Characteristics plate



## Control panel components

1. Touch screen.
2. Status central leds (GREEN, YELLOW, RED).
3. RED led 'pumping OFF'.
4. STOP RED Button 'Start/Stop Pump'.
5. Touch screen ON/OFF button.
6. GREEN led 'power ON'.



## Optional equipment

To increase the functionality of the melter machines, the following optional elements can be incorporated:

- **Low level of melted adhesive detection system.** This can be fitted to all the machines in float switch or capacitive sensor options.
- **Adaptation plate for previous models.** For adapting ST machines, the previous 4, 8 and 16l machines and MICRON range 5, 10 20 and 35 liters.
- **4 casters:** Only for 20 and 35l machines

### Controller bracket

This programmer unit, which is external to the Micron equipment, can be installed on different brackets.

The bracket must be requested separately and comes in two types: a vertical bracket (1) and an articulated wall bracket (2)



1. Vertical bracket



2. Articulated wall bracket

This page is intentionally left blank.

## 3. INSTALLATION

**Warning:** The melters/applicators are equipment with current technology and with certain foreseeable risks. Therefore, only allow qualified personnel with sufficient training and experience to use, install or repair this equipment.



### Introduction

The 'MICRON+' series melters/applicators are delivered with all the materials necessary for their installation. However, some components must be provided by the user himself, according to the location and connections in each particular installation:

- Anchoring screws for the melter/applicator equipment
- Power cord and plug for electrical power
- Pneumatic pipe and connection to the compressed air system
- Multicore cable for external electrical control
- Optionally, a gas ventilation system
- Another option is fixing systems from the external operator (brackets)

### Installation requirements

Before installing 'MICRON+' series melter/applicator equipment, we must make sure that the space assigned to it permits installing, connecting and using the entire system. Similarly, we must check to see that the electrical and pneumatic supplies meet the necessary requirements of the melter/applicator equipment being installed.

Bear in mind that the equipment consists of a controller that is external to this one, which allows it to be adjusted from different positions and distances.. This device can be installed according to the customer's wishes.

It can be installed from a fixed or mobile position. Vertical bracket or articulated wall bracket (the brackets must be requested separately).



### Electrical Consumption

In order to install a 'MICRON+' series melter/appliator, we should take into consideration the total consumption of the installation, including the consumption of the installed hoses and applicators.



Before connecting, make sure that the voltage that is being connected to the melter/appliator is the correct one appearing on the equipment's characteristics plate.

Connect the machine and check to see if it is well grounded.



**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.

Install a power switch for disconnecting the melter/appliator equipment from the electrical network. It must be protected against overload and short circuits by circuit breaker and install appropriate personal protection leads to mass by differential switch.

Consumption figures, according to melter/appliator and output configuration, are included in the table in the section 'Electrical power connection'.

### Compressed air

To install 'MICRON+' series melters/appliators, it is necessary to have a dry, non-lubricated compressed air system with a maximum pressure of 6 bar.

The applicator's internal pneumatic equipment is able to work with a minimum of 0.5 bar, however, pressure lower than this will cause intermittent operational anomalies.

The air consumption is according to the number of stroke made by the pump cylinder, which in turn depends on the adhesive consumption during the application. It is therefore necessary to estimate this consumption in all cases.

Generally speaking, we can provide as a maximum consumption value 40-50 l/min for a pressure of 6 bar at maximum pump speed.



### Mounting the equipment

For mounting the 'MICRON+' series set the base in the desired location using the indicated holes M8 screws.

The 'MICRON+' series equipments have an optional adaptation plate for fixing 'MICRON+' 5, 10, 20, 35 and previous 'MICRON' range 4, 8, 16, 32 and ST machines. To mount the base plate, place it on the machine bench and adjust its position. Mark and drill the four holes for the base plate's M8 fastening screws. The holes may be threaded or non-threaded, depending on the bench to which they are being attached.



**Warning:** Make sure that the bench where the base plate is fastened is level, free from vibrations and is able to support the weight of the equipment in addition to the full tank load. Once the base plate is fastened in place on the bench, the melter/appliator should be mounted on top of it.



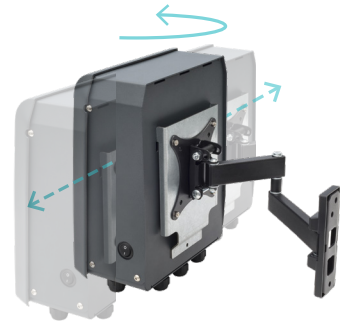
To fix the external device, it is possible to acquire two bracket models that allow it to be adjusted according to the operator's needs.

Two types of bracket, a model that allows the controller to be fitted vertically with a standing bracket. Another wall bracket that allows the angle and distance to be adjusted via an articulated system.

### Other factors

While installing 'MICRON+' series melters/applicators, other practical considerations should be kept in mind:

- Keep the load opening accessible for comfortable melter/applicator filling.
- Position the melter/applicator equipment in such a way that you can easily see the front panel display where temperatures and possible alarm signals are shown.
- As much as possible, try to avoid unnecessarily long hoses that result in elevated electrical energy consumption levels and pressure drops.
- Do not install the melter/applicator equipment beside powerful heat or cooling sources that may have distortional effects upon its operation.
- Avoid melter/applicator vibrations.
- Make sure that the melter/applicator maintenance areas (filter, purging valve, tank interior, etc.) are easily accessible.



## Unpacking

Before proceeding with the installation of the melter/applicator, 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.

### Contents

The 'MICRON+' series packing materials may contain accessories that form part of the same order. If this is not the case, the following are the standard components that accompany the melter/applicator:

- Instruction manual.
- Guarantee card.
- Hose couplings.
- Set connectors for Inputs / Outputs.
- Bracket for external programmer

## Electrical power connection

'MICRON+' series melters/applifiers are designed to be connected to the electrical power supply in three possible ways, depending on the power of different elements connected:

- 1-phase 230 VAC with neutral
- 3-phases 400 VAC with neutral
- 3-phases 240 VAC without neutral

A good ground connection is required in all cases.

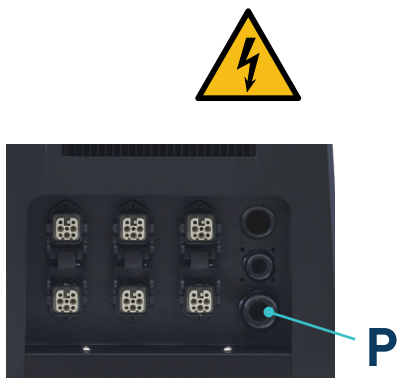
Consumption figures, according to melter/applifier and output configuration, are included in the table. Due to high power connected 'melter' recommends 3-phases 400 VAC with neutral connection.

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

Open the electric cabinet door as far as possible. Thread the power cord (max. Ø18mm) through the electrical wall bushing (P) and fasten it to the inside anchor, making sure that the cord reaches the power card connector at the position where it will be installed.

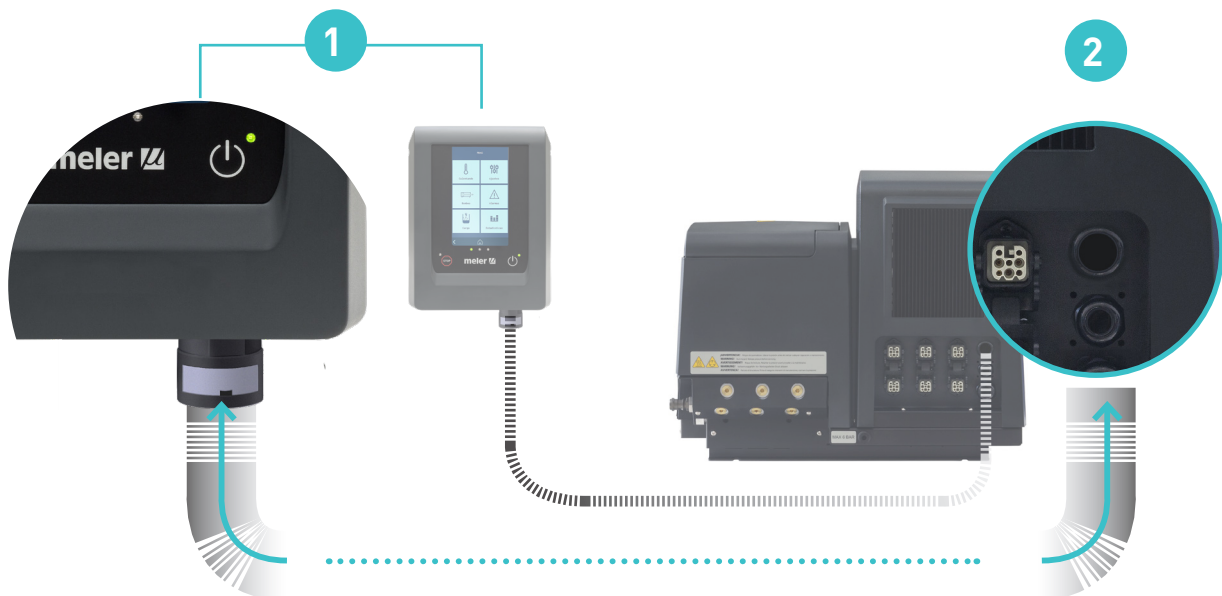
Connect each wire in the power cord to its corresponding place on the power intake connector on the power card.

Consumption values concerning each equipment can be found in the characteristics plate.



### Connection of the external display to the melter.

The equipment is factory installed. Connect the hose to the back of the equipment.



## Parameter Programming

Once the melter/appliator and its components are installed, you will need to program the operational parameters appropriate for the specific application that will be performed.

Among the various parameters, it is necessary to program the set point temperature values for each component connected and the value for overheating warnings. There are two other parameters (weekly start-up and shut-down programming and the standby temperature value) left to program in advanced systems, although the factory default values are perfectly valid for operational purposes.

Chapter “4. MELTER OPERATION” details the operating modes of the machine and its configuration (MA-5162)



## Pneumatic connection

Before connecting the pneumatic power to the melter/appliator, make sure the pressure regulator is completely closed. To do this, turn the regulator located on the front of the equipment next to the pressure gauge counterclockwise as far as it will go.

Connect the plant air supply (max. 6 bar) to the melter/appliator intake using flexible tubing with an outside diameter of 8 mm. The equipment is provided with a quick coupling for this purpose.

Activate the air supply to pass and turn the pressure regulator clockwise. Adjusting to 1 bar of pressure is enough for checking the pump operation.

The pump will not operate and the pressure gauge will show 0 bar until the melter/appliator and the hoses-applicators connected to it reach the correct temperature.

Once the pump operation has been checked, you may adjust the pressure to the operational value you wish.

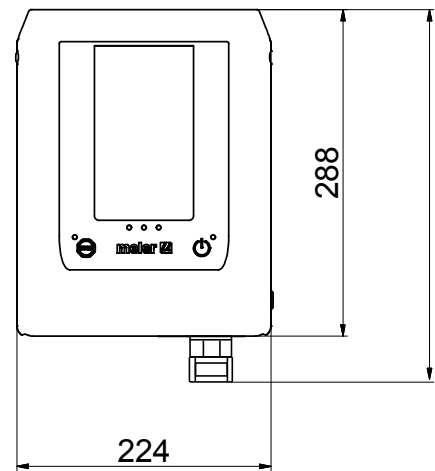
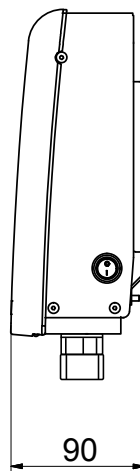
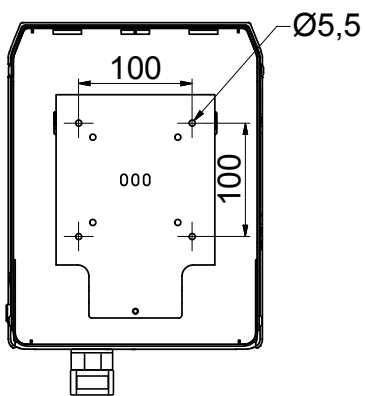
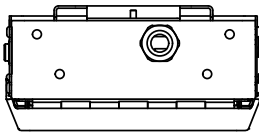
In the pressure gauge can be found pneumatic and hydraulic pressure values, the relation between both are 1:13,6.



This page is intentionally left blank.

## 4. TECHNICAL CHARACTERISTICS

### Dimensions



This page is intentionally left blank.

## 5. ELECTRICAL DRAWINGS

This page is intentionally left blank.



## 6. SPARE PARTS LIST

The list of the most common spare parts for MICRON+ series machines appears in this section, providing a quick and reliable guide to choosing them.

The spare parts are grouped together naturally, in the same way as they are located in the melters.

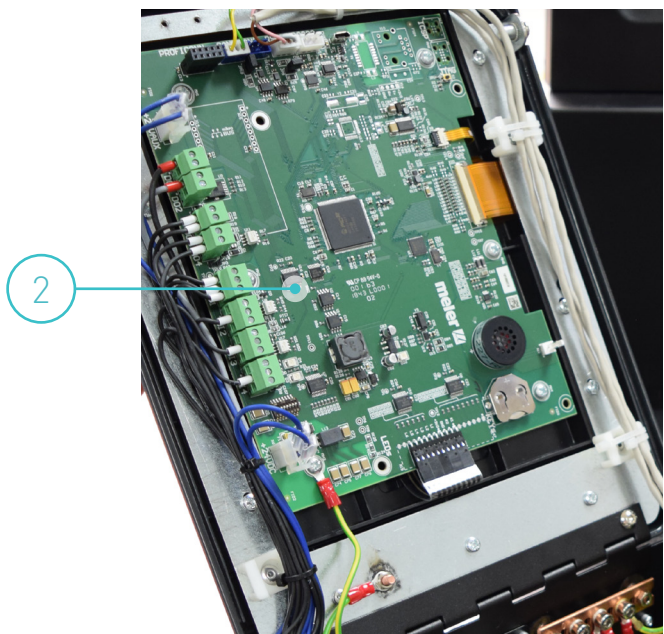
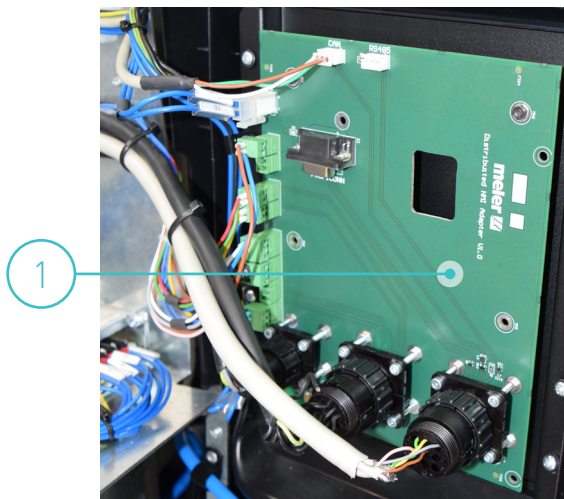
As a visual aid, drawings of the parts are included and are numbered to help identify them in the list. For further information about the content of the spare parts, click on the number of the spare part.

The lists provide the reference and name of the spare part, indicating, when necessary, whether the reference corresponds to the 5-, 10-, 20- or 35-litre model.



### A. ELECTRONIC ASSEMBLY

Nº	Ref.	Denominación
1	150124340	HMI gateway card without TFT
2	150122970	HMI micron+ control board
3	150114470	Main switch
(*) optional		



# EC DECLARATION OF CONFORMITY

*Original Declaration*

The manufacturer,

**Focke Meler Gluing Solutions, S.A.**  
Pol. Los Agustinos, c/G, nave D-43  
E-31160 Orkoien, Navarra - Spain  
— A Focke Group Company —

declaring that the machinery, Type:

Model:

Serial Number:

fulfils all the relevant provisions of the Directive 2006/42/EC on machinery,

and the object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

- Directiva 2014/30/EU on the harmonisation of the laws of the Member States relating to electromagnetic compatibility .
- Directiva 2011/65/EU and its amendments on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

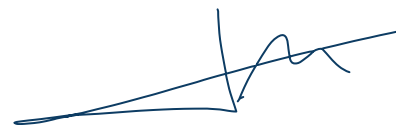
In reference to the harmonised standards:

- EN ISO 12100:2010. Safety of machinery - General principles for design - Risk assessment and risk reduction.
- EN ISO 13732-1:2008. Ergonomics of the thermal environment - Methods for the assessment of human responses to contact with surfaces - Part 1: Hot surfaces.
- EN ISO 13849-1:2015. Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design.
- EN ISO 14120:2015. Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards.
- EN 60204-1:2006, +/A1:2009, +/AC:2010. Safety of machinery - Electrical equipment of machines - Part 1: General requirements.
- EN 61000-6-2:2005, +/AC:2005. Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments.
- EN 61000-6-4:2007, +/A1:2011. Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments.
- EN 50581:2012. Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The person authorised to compile the technical file is the manufacturer established at the above address in this declaration.

Signed in Orkoien, to date:



**Javier Aranguren**  
Managing Director

---

For more information speak with your Focke Meler representative:



**Focke Meler Gluing Solutions, S. A.**

Pol. Los Agustinos, c/G, nave D-43

E-31160 Orkoien - Navarra - Spain

Phone: +34 948 351 110

Fax: +34 948 351 130

info@meler.eu - [www.meler.eu](http://www.meler.eu)

*A Focke Group Company*



Management  
System  
ISO 9001:2008

[www.tuv.com](http://www.tuv.com)  
ID 9105030748