



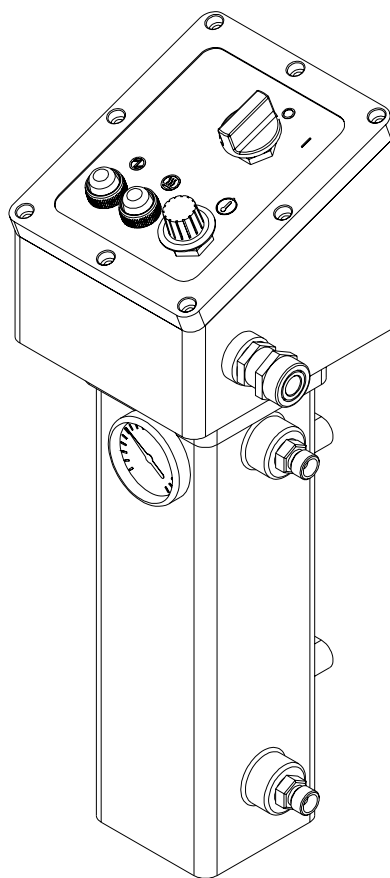
IMPORTANT: *This manual contains important warnings and information. Read and keep for reference*

PAINT HEATER mod. ARVS55

EEx - d - IIB - T4

Model 142855*

Basic heater 230 Volts 50 Hz
(without hose or gun)



This unit is equipped with certification for potentially explosive surroundings in accordance with european directive.

CESI n° EX-99.E.067

ASTURO ORIGINALI MAVES Spa

(Rev. 4 - 10/5/05)
GB - ARVS55 - 1.3

Via Cascina Venina 20 B/C
20090 Assago (MI) ITALY

**DICHIARAZIONE DI CONFORMITÀ / DECLARATION OF CONFORMITY
KONFORMITÄTERKLÄRUNG / DECLARATION DE CONFORMITÉ
DECLARACIÓN DE CONFORMIDAD**



ASTURO ORIGINALI MAVES Spa
Via Cascina Venina 20 B/C
ASSAGO - ITALIA
++39 0289305416 - FAX ++39 0289305497
P.IVA / VAT (registration number) 11164500156



MODELLO / MODEL:	ARVS55
N_ di MATRICOLA / SERIAL NUMBER	
ANNO DI COSTRUZIONE / YEAR OF MANUFACTURE	200
ACCESSORI IN DOTAZIONE / ACCESSORIES SUPPLIED	

A.O.M. spa DICHIARA sotto la sua esclusiva responsabilità che la macchina a cui la presente dichiarazione si riferisce è conforme alle prescrizioni delle seguenti direttive:

A.O.M. spa DECLARES on its own responsibility that the machine to which this declaration refers, conforms with the prescriptions in the following directives:

Direttiva 73/23/CEE modificata dalla direttiva 93/68/CEE (DIRETTIVA BASSA TENSIONE). Direttiva 89/336/CEE modificata dalla direttiva 92/31/CEE e dalla direttiva 93/68/CEE (DIRETTIVA COMPATIBILITÀ ELETTRROMAGNETICA). Directive 73/23/EEC AMENDED by Directive 93/68/EEC (LOW VOLTAGE DIRECTIVE) Directive 89/336/EEC amended by Directive 92/31/EEC and by Directive 93/68/EEC (ELECTROMAGNETIC COMPATIBILITY DIRECTIVE).

La macchina è inoltre conforme alle seguenti norme / The machine also conforms with following standards:

CEI EN 60204-1 (September 1993) Sicurezza del macchinario - Equipaggiamento elettrico delle macchine - parte 1 - regole generali / Safety of machinery and electrical machine components - part 1 - general regulation

CEI EN 50014 (December 1992) Costruzioni elettriche per atmosfere potenzialmente esplosive - Regole generali / Electrical construction for potentially explosive surroundings - General regulation

CEI 31-1 Norma europea per le costruzioni elettriche potenzialmente esplosive - Custodie a prova d'esplosione <d> / European regulation for electrical constructions for potentially explosive surroundings - Blastproof housing <d>.

LUOGO / PLACE:
ASSAGO
COGNOME - NOME / SURNAME - NAME:
BRANCHINI RIZIERI
POSIZIONE / POSITION:
AMMINISTRATORE UNICO / SOLE DIRECTOR
DATA / DATE:
/ / /

FIRMA:.....

Dear Customer,

Thank you for choosing one of **ASTURO ORIGINALI MAVES Spa** products.

ASTURO ORIGINALI MAVES Spa is a leading reference point in the field of painting systems and machinery.

The name **ASTURO ORIGINALI MAVES Spa** has always meant reliability and safety, a fact which has been supported by over 70 years of experience and by our Customer satisfaction.

All our components have been designed and manufactured to guarantee the best performance ever.

To maintain the high quality level and lengthy reliability of our products throughout the years, always use original spare parts.

All **ASTURO ORIGINALI MAVES Spa** units are equipped with the CERTIFICATION in accordance with EUROPEAN DIRECTIVE **89/392** (Machine Directive.)

We are certain we have met all safety requirements and we feel confident we have further improved working standards.

Our units, in fact, have the identification in accordance with  rulings. Furthermore, they are delivered with the instruction manual and the certificate with the Declaration of Conformity to European Directive 89/392 and to its various amendments.

The Management

A.O.M. SPA does not provide any guarantee as to the contents of this publication and, specifically disclaims any implicit guarantee of seleability or adaptability to any particular use.

A.O.M. SPA reserves the right to change those components, details and accessories it deems necessary to improve the machine or to meet manufacturing or commercial requirement at any time without updating this manual immediately.

ALL RIGHTS ARE RESERVED. The reproduction of any part of this manual in any given form, without prior written authorization from A.O.M. SPA is strictly forbidden. The content of this manual can be modified without prior notice.

The ASTURO ORIGINALI MAVES **ARVS 55 fluid heater** is explosion-proof and designed for pressures to 350 bar (5000 PSI). User friendly thanks to an extremely simple temperature control electronically operated. It has a temperature knob, thermometer, and is fitted with conveniently located "ON-OFF" ("I-O") switch, high pressure fluid relief and drain valves. Inlet and outlet fluid fittings are 3/8". An indicator light shows when heater is "ON" ("I" position). When present temperature is reached the light will switch off. The internal stainless steel, corrosion free coil, makes the ARVS 55 suitable for heating any type of paint, including water-base.



1 GENERAL SAFETY

The HEATER is an electrically operating equipment and it implies hot fluid costantly circulating inside its body (at a high pressure). Be very careful with eventual hot fluid leaks.

✓ THIS EQUIPMENT IS FOR PROFESSIONAL USE ONLY, DO NOT ALTER OR MODIFY THIS EQUIPMENT

✓ TURN MAIN SWITCH OFF BEFORE OPENING UPPER ELECTRICAL DEVICES CONTENT

✓ DEPRESSURE ALL THE HOSES BEFORE DISCONNECTING THEM

✓ DO NOT USE BARE HANDS TO STOP HOT FLUID LEAKS

✓ DO NOT REMOVE OR MODIFY ANY ELECTRICAL OR MECHANICAL PART TO AVOID ANY INJURY RISK

A.O.M. Paint heater is fitted with active and passive safety devices which are meant to prevent operators from danger and injury.

WARNING!

ORIGINAL MACHINE CONFIGURATION MUST NOT BE MODIFIED IN ANY WAY.



1.1 OPERATOR'S SAFETY

Heater improper use can cause serious damage.

Carefully read through all the technical instructions provided by this manual.

Never use the heater at higher pressures and different voltages than those described herein.

Do not remove or modify any machine components.

Use always A.O.M. SPA Original Spare Parts.

Never force the machine to an improper use.

Never repair or replace electrical components without A.O.M. SPA advice.

1.3 WARNING

- ✓ TIGHTEN ALL FLUID CONNECTIONS BEFORE OPERATING THE EQUIPMENT.
- ✓ FLUID INJECTED INTO THE SKIN IS A SERIOUS INJURY. GET IMMEDIATE MEDICAL ATTENTION.
- ✓ DO NOT TOUCH THE HEATER WHILE IT'S WORKING WITHOUT GLOVES.
- ✓ ALWAYS WEAR PROTECTIVE EYEWEAR, GLOVES, CLOTHING AND RESPIRATOR AS RECOMMENDED BY THE FLUID AND SOLVENT MANUFACTURER.

The high pressure fluid relief and drain valve will instantly relieve all pressure in the system when opened.

A temperature range from 54°C to 60°C (130°F to 140°F) is normally used for hot spray; however, the material manufacturer's recommendation should be followed for your particular applications. Always turn heater off ("O") when spray operations are shut down or when cleanup begins. Drain fluid from heater by opening pressure relief and drain valve. It is advisable to circulate solvent through system with heater off ("O") to thoroughly clean system.

The ARVS 55 complies with the following norms:

EC DIR. Nr. 93/68 and Nr. 89/336; CEI EN 60204 -1; CEI EN 50014; CEI 31 - 1.

CUSTOMER CARE TECHNICAL SERVICE

ASTURO ORIGINALI MAVES Spa

Via Cascina Venina 20 B/C

20090 Assago (MI) ITALY

TEL. ++39 0289305416 (6 lines R.A.)

FAX. ++39 0289305497

http://: www.asturooriginalimaves.com

email: aomspa@asturooriginali.com

3.1 ELECTRICAL SAFETY

The Paint heater must be connected to an electrical main source (1/n/PE/220v/50Hz) protected against overcurrent with automatic switches (magnetothermal) or fuses, fitted with a differential switch and an irreversible type plug such as that supplied with the machine (EEC type 16-6h/200-250V 2P+n). The cables must have a section of at least 2.5mm².

The electrical system has been designed and built to prevent operators from the risk of electrical shocks and the whole machine from overheating.

All the accessible metallic parts of the machine are connected to an unipotential protection circuit.

All the internal electrical devices are protected against accidental contact and all the external devices that the operators can come into contact with are protected from the fluids and steam that could cause short circuits or deterioration.

Overcurrent safety devices are fitted to prevent any faults from causing overheating or other dangerous conditions.

3.3 TECHNICAL SPECIFICATION

SWITCH: omnipolar selector with on/off function, cuts off voltage from the whole machine interrupting all the live cables. The machine remains live all the same. Do always remove the plug before touching electrical components.

PRODUCT CIRCULATION SPIRAL: made from stainless steel aisi 304L tubing (UNI Standards X2 Cr Ni 18-11).

CLIXOX SAFETY DEVICE (Mod. TY60 95 G°): cuts in whenever machine temperature exceeds maximum operating temperature. It cuts off voltage from the resistor. Voltage is automatically restored when the temperature returns below the cut in value.

1.4.1 TECHNICAL DATA

Power Requirements: 230 Volt - 50 Hz

Corrente nominale: 10 Amp

Max working pressure : 250 bar (3675 psi.)

Working temperature range: 0- 90 °C +5K (195°F)

Inlet/ Outlet fluid fitting : 3/8" gas AISI 303 (X10CrNi 1809)

Product circulation: AISI 304L (X2CrNi 18-11)

Heater material: Primary aluminium alloy UNI 3051(SgAlCu3)

Armoured resistor: F9629 j10AX461A (230V-2250W)

Weight: 15.2 kg (2 lb.)

Operating condition(*): EEx - d - IIB - T4

Ex Certificate: CESI N° EX-99.E.067

(*) The HEATER is meant to be working in dry areas (out/indoor). safe operating condition are: TEMPERATURE: 5-50°C +/- HUMIDITY: 30-95% without condensation. If operating conditions are particularly critical, they should be fitted with a suitable air-conditioning system to take humidity and temperature values to acceptable limits

1.5.1 SET UP

Connect the machine to the mains supply and the painting system, close the product circulation valve, activate the painting system and turn the main switch to < I >.

Check the mains lamp to be on.

Use the graded handwheel (0 to 10) to set up the required temperature for the meant job. (each notch of the handwheel corresponds to 10°C, e.g. 5 = 50°C).

When the mains lamp switches off, the product inside the heater has reached the required temperature.

Product temperature can be controlled with the thermometer located on the heating body.

Consult the relative painting system instruction manual for routine and extraordinary maintenance operations, cleaning and depressurization before using the heating machine or before operating the entire system.

The machine should always be kept clean, especially the product circulation spiral. Before starting cleaning operations, the temperature of the heater should be lower than 20°C.

1.5.1 TROUBLESHOOTING

All repair operations must be carried out by competent personnel, trained to operate correctly and in complete safety on the machine. To remove the fault correctly and rapidly, do inform A.O.M. Service centre about machine type, series number and a full fault description.

Before contacting A.O.M. SPA because of a technical problem please make sure that:

- a) mains supply is switched on and it suits the machine requirement*
- b) fuses are not blown*
- c) all the internal connection terminals are firmly fixed*
- d) temperature adjusting handwheel is screwed onto the body of the handwheel*
- e) the switch is not damaged*

THE PLUG IS CONNECTED BUT THE MACHINE DOES NOT START (the machine is not live and the mains lamp is off)

REASONS:

Fuses are blown

Mains cable, plug or socket are damaged

Probe is damaged

Contact A.O.M. Service Centre for assistance

WARNING!

If the probe or the clixox safety device are not connected to the electrical circuit the machine will not start, do not switch the machine on without connecting the armoured resistor. do not switch the machine on by the armoured resistance connected while not fixed in its housing inside the heater body.

TEMPERATURE ADJUSTMENT IS IRREGULAR (the machine works normally but the temperature adjustment cannot be calibrated)

REASONS:

Thermoregulator is damaged

The handwheel slides on the pin of the potentiometer

The potentiometer body has become loose

Check that the screw inside the black body of the temperature adjusting handwheel is well tightened. Tighten the red body by rotating it to the right.

TEMPERATURE CANNOT BE ADJUSTED (the machine works regularly but it is not possible to adjust the temperature; fluid heat reaches up to 130° (visible from the external thermometer) and the system stops automatically. The clixox safety device has cut in, interrupting the heating circuit. When the temperature returns to less than 120°, the machine starts working again)

REASONS:

Thermoregulation unit is damaged

Probe is damaged

When this kind of fault is found out please switch the heater off immediately and contact A.O.M. Service centre to avoid further damages to other parts.

THE MACHINE SWITCHES OFF WHILE WORKING (It is impossible for the operator to switch the machine on once again though mins supply and all the connections are properly plugged in)

REASONS:

Triac is damaged

Clixox safety device is damaged

Contact A.O.M. Service Centre for assistance

THE MACHINE DOES NOT HEAT THE PRODUCT (The machine does function regularly, voltage is regular but at any temperature setting heating body keeps cold)

REASONS:

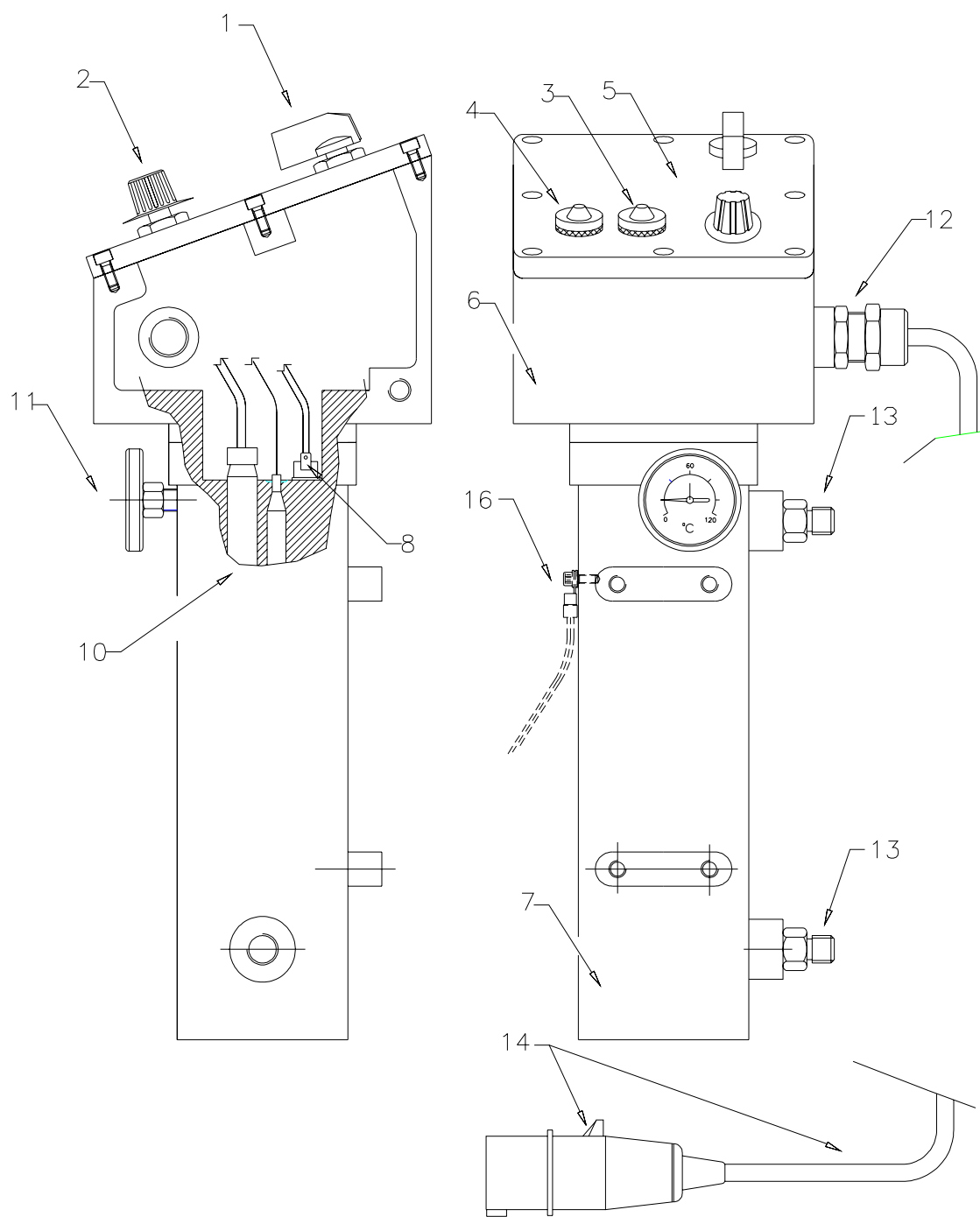
Armoured resistor is damaged

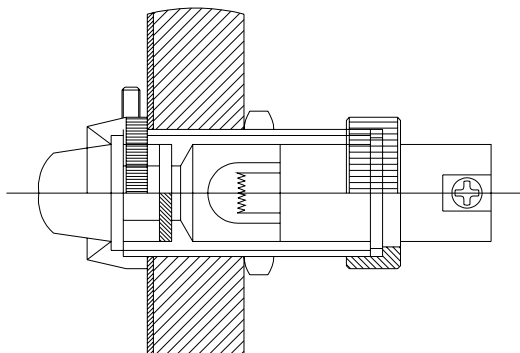
Thermoregulator is damaged

Probe is damaged

Contact A.O.M. Service Centre for assistance

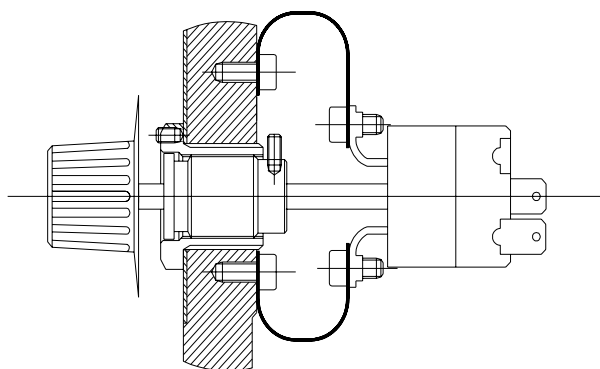
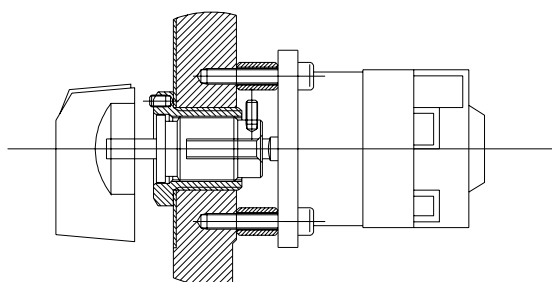
DO ALWAYS CONSULT AOM SERVICE CENTRE WHENEVER A MACHINE FAULT SHOULD ARISE AND BEFORE REPAIRING THE MACHINE EVEN IN CASE THE FAULT IS CLEARLY LOCALISED AND REMOVING MAINTENANCE METHOD COULD APPEAR EASY TO BE APPLIED.





- H2** 142868R Temperature lamp
(green) complete 1
H1 142867R Mains lamp (red)
complete 1

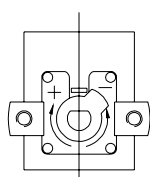
B1 142863R On/Off switch
(complete)



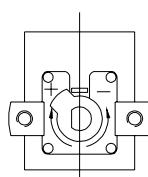
TERM D1 142861R Capillar
thermoregulator with snap-action
contac (complete)

TERM D1 (regulation)

TOP VIEW

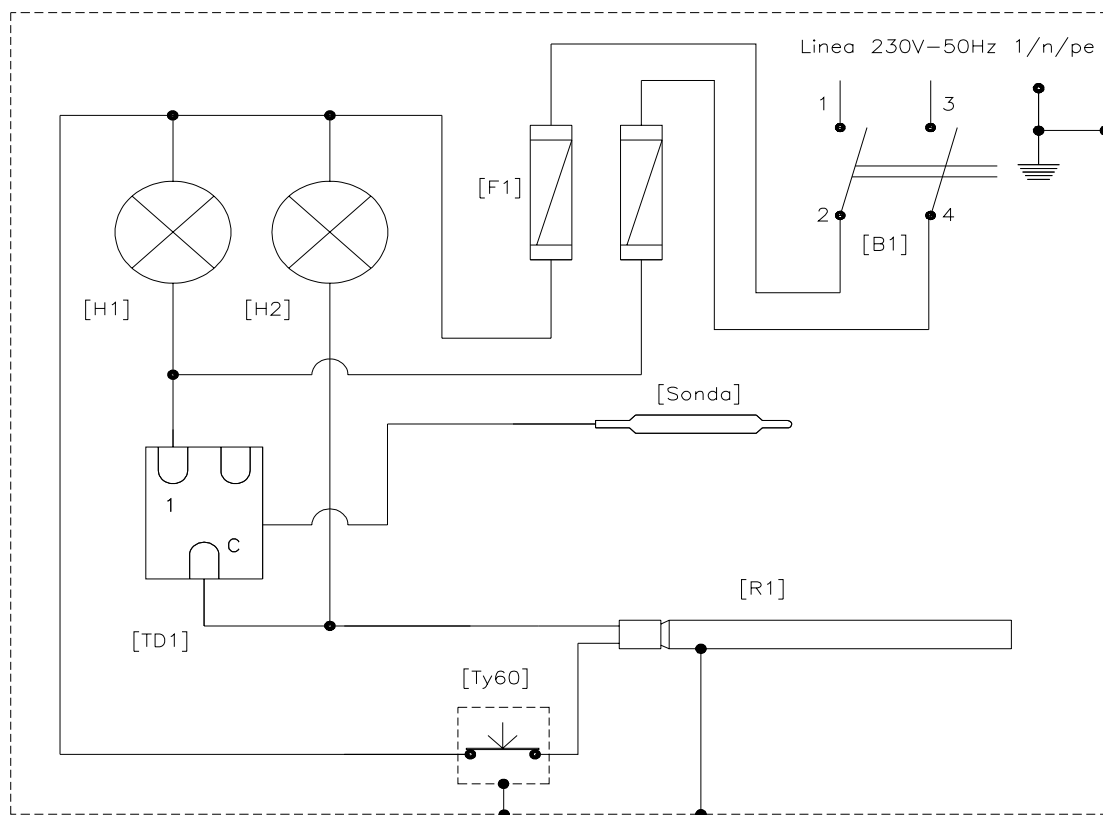


MIN



MAX

Wiring Diagram :



Pos	CODE	DESCRIPTION	Q.TÀ
F1	142802R	Fuse	2
(F1)	142803R	Fuse box	1
B1	142863R	On/Off switch (complete)	1
TERM D1	142861R	Capillar thermoregulator with snap-action contac (complete)	1
H2	142868R	Temperature lamp (green) complete	1
H1	142867R	Mains lamp (red) complete	1
TY60	142876R	Clixox safety device	1
R1	142903R	Complete Armoured resistor	1

HEATER COMPONENTS

1)	142863R ON/OFF SWITCH (COMPLETE) (B1)	1
2)	142861R CAPILLAR THERMOREGULATOR WITH SNAP-ACTION CONTAT (COMPLETE OF GRADED HANDWHEEL)	1
3)	142868R TEMPERATURE LAMP	1
4)	142867R MAINS LAMP	1
5)	142881R UPPER PLATE	1
6)	142882R CENTRAL BODY	1
7)	142883R HEATING BODY (WITH PRODUCT CIRCULATION)	1
8)	142826R CLIXOX SAFETY DEVICE (MANUAL) TY60-R	1
10)	142903R COMPL. ARMOURED RESISTOR 240V-2250W	1
11)	142879R ISPESL STANDARD THERMOMETER	1
12)	142840R FLAMEPROOF CABLE CLAMP	1
13)	153838I 3/8" STAINLESS STEEL CONNECTORS	2
14)	142844R 5MT ELECTRICAL CABLE WITH PLUG	1
16)	142830R EARTHING CABLE	1

WARRANTY

All **ASTURO ORIGINALI MAVES Spa** appliances are guaranteed for a period of 12 months from the date written on the invoice, unless otherwise stated in writing. The warranty covers all manufacturing faults and material defect. Replacements and repair operations are covered only if carried out by our company and at our servicing shops. The faulty parts must be sent CARRIAGE FREE.

Once the components have been repaired they will be sent CARRIAGE PAID to the customer. The warranty does not cover our company personnel aid during installation or dismantling operations. If for practical purposes one of our employee is sent to the premises, a charge will be made for the time plus extra for travelling and expenses. Our warranty does not cover direct or indirect damage, to people or property, caused by our appliances and it does not cover repair operations carried out by the owner or by a third party.

The following are not covered by our warranty:

- + failure caused by incorrect use or assembly.
- + failure caused by external agents.
- + failure caused by lack of maintenance or negligence.

WARRANTY FORFEITURE:

If the form attached below is not completed and returned. In case of delayed payment or other contract defaults. All repair operations carried out under warranty do not interrupt its duration.

Whenever changes or repairs are carried out on our machinery without prior authorization Whenever the unit seems tampered with, dismantled or previously repaired in unauthorized workshops.

Whenever the serial number is damaged or removed.

When the damage is caused by improper use or functioning, or if the machine falls, is bumped or by other causes of malfunctioning not due to normal working conditions



All disputes will be settled in the court of justice of Milan (Italy).

NAME : _____
COMPANY : _____
ADDRESS : _____
V.A.T. NUMBER _____
UNIT MODEL : _____
SERIAL NUMBER : _____
DATE : _____
STAMP AND SIGNATURE : _____

Send this form fully completed (capital letters) to:

ASTURO ORIGINALI MAVES Spa

Via Cascina Venina 20 B/C

20090 Assago ITALY