

Especificaciones del Calefactor

ESPECIFICACIONES		Modelo
		AD250
Entrada Máxima (kW)		73,3
Entrada Mínima (kW)		46,9
Aire de Ventilación Requerido para Mantener la Combustión (m ³ /hr)		1,885
Presión del Múltiple del Quemador Relativa a la Categoría del Gas Para Unidades Reguladas (mbar)	GAS PROPANO	25 I _{3P}
	GAS BUTANO/GAS PROPANO	20 I _{3B/P}
	GAS NATURAL	10 I _{2H} , I _{2E} , y I _{2E(S)B} ,
		12 I _{2L}
		10/12 I _{2Er}
Características del Motor		Cojinete de Bola
		249 Vatios 1150 RPM
Corriente Eléctrica (Voltios/Hz/Fases)		220-240/50/1
Consumo de Amperios (Los amperios de encendido incluyen el encendedor)	ENCENDIDO	3,9
	FUNCIONAMIENTO CONTINUO	2,6
Dimensiones Largo x Ancho x Alto (cm)		78 x 46 x 72
Distancias seguras mínimas de los materiales combustibles más cercanos	PARTE SUPERIOR	0,3 m
	COSTADOS	0,3 m
	PARTE POSTERIOR	0,3 m
	SALIDA DEL VENTILADOR	3 m
	SUMINISTRO DE GAS	Suministro de Gas Licuado — 1,83 m Suministro de Gas Natural — N/A

INFORMACIÓN SOBRE COMBUSTIBLES PARA LOS PAÍSES DE DESTINO

Gas Licuado		
Paesis de Destino	Categoría de Gas y Presion (mbar)	Velocidad del Gas (kg/hora)
HU & NL	I _{3P} (30)	5.25
PL	I _{3P} (36)	
BE, CH, CZ, ES, GB, IE, PT, SI & SK	I _{3P} (37)	
BE, CH, DE, ES & NL	I _{3P} (50)	
CY, CZ, DK, EE, FI, GR, HU, IT, LT, LV, MT, NO & SE	I _{3B/P} (30)	(Butano) 5.36
		(Gas Licuado) 5.25

Metano		
Paesis de Destino	Categoría de Gas y Presion (mbar)	Velocidad del Gas (m³/hora)
AT, CH, CZ, DK, EE, ES, FI, GB, GR, IE, IT, LT, LV, NO, PT SE, SI, SK & TR	I _{2H} (20)	7.14
DE, LU & PL	I _{2E} (20)	
BE	I _{2E(S)B} (20)	
NL	I _{2L} (25)	8.28

Calentadores de aire para colgar

GA



La foto muestra el equipo completo del GA55.

Los calentadores de aire para colgar GA han sido diseñados para suministrar calor a un bajo coste y en una amplia variedad de aplicaciones: invernaderos, granjas, naves industriales...

Tecnología

Todos los modelos se basan en el principio de calentamiento de gas directo, en el cual se usa un potente ventilador que hace que el aire pase por una cámara de combustión en la que está el quemador. A medida que pasa el aire por el quemador, todo el calor que produce el proceso de combustión pasa a la corriente de aire. Esto hace que el calentador tenga una eficacia térmica del 100%. El grado de calor del calentador se puede ajustar manualmente con una válvula reguladora.

Diseño

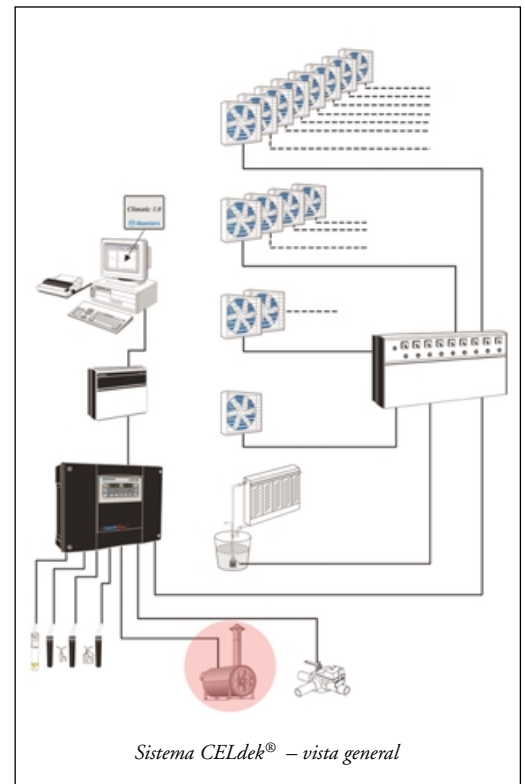
Los calentadores GA funcionan con Gas Licuado de Propano (GLP), que es un combustible muy limpio. Los productos de la combustión son principalmente vapor de agua y dióxido de carbono (CO₂).

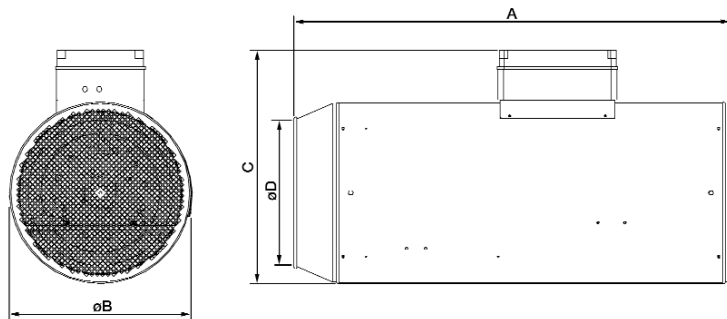
Para garantizar un funcionamiento prolongado en ambientes húmedos, los calentadores GA se fabrican en acero inoxidable y todos sus componentes eléctricos van en el interior de una caja de protección IP55.

Por razones de seguridad, los calentadores vienen equipados con una válvula solenoide doble para abrir y cerrar el paso del gas. Además, los calentadores tienen también un sensor de presión de seguridad que corta el paso del gas en cuanto detecta una obstrucción en el paso del aire.

Todos los modelos vienen equipados también con un cable eléctrico y un conducto de conexión del gas con regulador de presión listos para utilizar. El calentador también está disponible con termostato mecánico o electrónico opcionales. Los termostatos vienen con un cable de 10 m. capaz de medir la temperatura si así se desea.

- Eficacia térmica del 100%
- Ajuste manual del grado de calor
- Fácil de instalar
- Fácil de manejar
- Funciona con GLP
- Válvula solenoide doble para cortar el paso del gas
- Interruptor de seguridad para evitar el sobrecalentamiento
- Sensor de presión para detectar bloqueos en el paso del aire
- Protección exterior de acero inoxidable y cámara de combustión
- Equipo eléctrico alojado en caja de protección IP55





Medidas [mm]

Tamaño del calentador	A	B	C	D
GA55	700	416	523	351
GA95	990	416	523	351
GA95t	1.140	473	608	378

Especificaciones técnicas

	GA55	GA95	GA95t
Peso [kg]	25	28	32
Potencia calorífica en [kW] [kCal/h]	de 27,4 a 52 de 23.600 a 44.800	de 51,7 a 97 de 44.500 a 83.400	de 46 a 97 de 39.600 a 83.400
Consumo de gas [kg/h]	de 2,16 a 3,7	de 4,08 a 6,6	de 3,6 a 6,6
Presión de gas [bar]	2	2	2
Potencia eléctrica nominal [W]	200	300	600
Voltaje [V]	230	230	230
Flujo de aire [m³/h] [cfm]	1.500 2.550	3.300 5.610	6.000 10.140

Información sobre pedidos

GA-XXX-X p. ej., GA95-c

Código para especificar medidas

55
95
95t

Código para especificar termostato

- a Sin termostato
- b Termostato mecánico
- c Termostato digital

GA es un producto de Munters euroemme S.p.A., Italia.



Munters Europe AB, HumiCool Division, Kung Hans Väg 8, P O Box 434, SE-191 24 Sollentuna, Suecia. Teléfono +46/(0)8/626 63 00, Fax +46/(0)8/754 56 66.

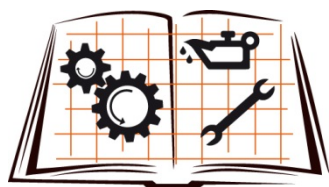
Munters euroemme S.p.A., Strada Piani 2, IT-18027 Chiusavecchia, Italia. Teléfono +39/0183/52 11, Fax +39/0183/521 333.

www.munters.com

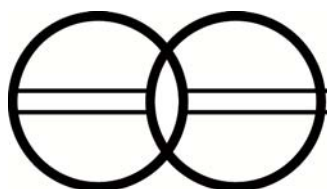
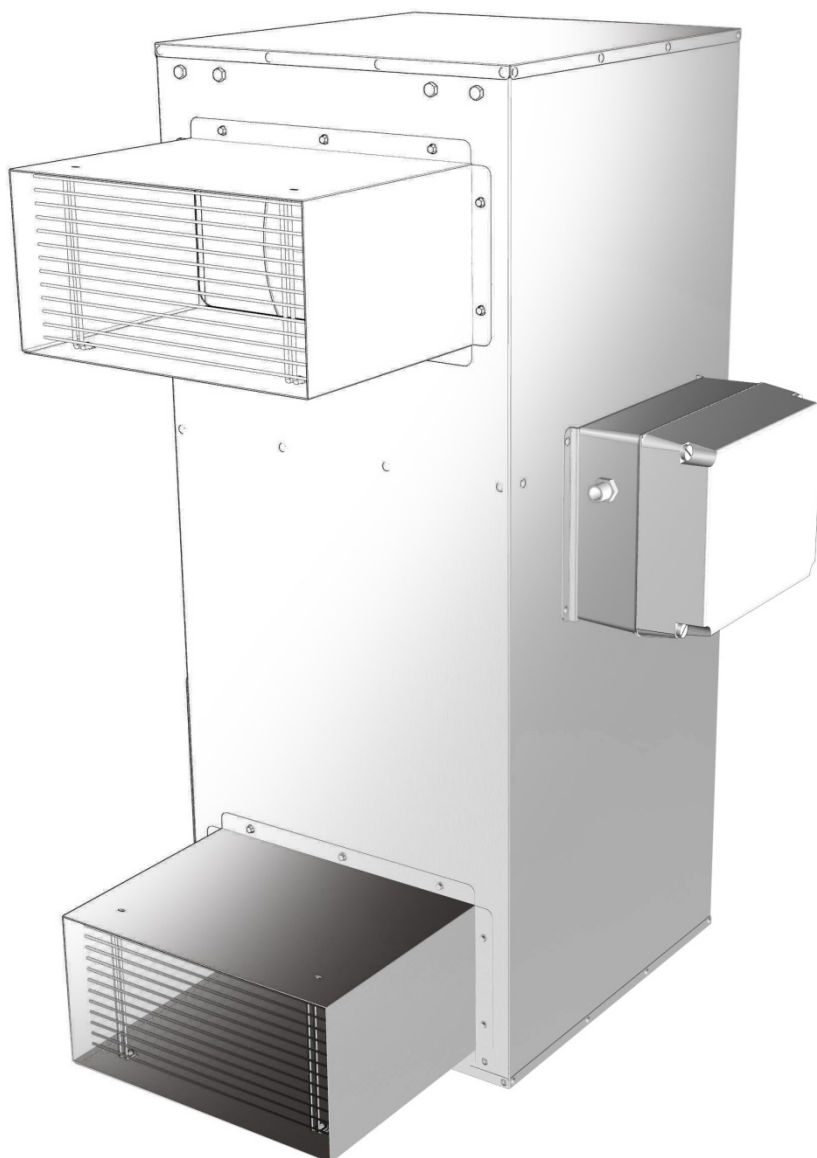
Alemania Munters Euroform GmbH, Tel +49 (0)241-89 000, Fax +49 (0)241-89 00 199, **Arabia Saudí y el Oriente Medio** Hawa Munters, c/o Hawa United Cooling Syst. Co. Ltd., Tel +966 (0)1-477 15 14, Fax +966 (0)1-476 09 36, **Austria** a través de la oficina comercial de Alemania, Munters Euroform GmbH, Tel +49 (0)241-89 000, Fax +49 (0)241-89 00 199, **Dinamarca** a través de la oficina comercial de Suecia, Munters Europe AB, Tel +46 (0)8-626 63 00, Fax +46 (0)8-754 56 66, **España** Munters Spain S.A., Tel +34/(0)91/640 09 02, Fax +34/(0)91/640 11 32, **Finlandia** Munters Oy, Tel +358 (0)9-83 86 030, Fax +358 (0)9-83 86 0336, **Francia** Munters France S.A., Tel +33 (0)1-34 11 57 50, Fax +33 (0)1-34 11 57 51, **Inglaterra** Munters Ltd, Tel +44 (0)845-644 3980, Fax +44 (0)845-644 3981, **Italia** Munters euroemme S.p.A., Tel +39 0183-52 11, Fax +39 0183-521 333, **Noruega** a través de la oficina comercial de Suecia, Munters Europe AB, Tel +46 (0)8-626 63 00, Fax +46 (0)8-754 56 66, **Sudáfrica y Sub-Sahara Countries** Munters (Pty) Ltd, Tel +27 (0)11-971 9700, Fax +27 (0)11-971 9701, **Suecia** Munters Europe AB, Tel +46 (0)8-626 63 00, Fax +46 (0)8-754 56 66, **Suiza** a través de la oficina comercial de Alemania, Munters Euroform GmbH, Tel +49 (0)241-89 000, Fax +49 (0)241-89 00 199, **Exportación y otros países** Munters Europe AB Tel +46 (0)8-626 63 00, Fax +46 (0)8-754 56 66, **Región de América** Munters Corporation, Tel +1 (0)978-241 1100, Fax +1 (0)978-241 1219, **Región de Asia** Munters K.K., Tel +81 (0)3-5970 0021, Fax +81 (0)3-5970 3197.

Su distribuidor más próximo

easyTERM



MANUALE D'USO
INSTRUCTION BOOKLET
BEDIENUNGSANLEITUNG
MANUEL INSTRUCTION



TERMOTECNICA®
PERICOLI

INDEX

INDEX	2
1 - INTRODUCTION.....	3
1.1 General warnings.....	3
1.2 Instructions for proper disposal of the product	3
1.3 Covenants used throughout this manual.....	4
1.4 Conservation of the instruction manual.....	4
1.5 Recipients	5
1.6 Glossary and pictographs	5
1.7 Applications	9
1.8 Versions.....	9
1.9 Identification and data label of the unit	9
1.10 Parts description	10
1.11 Transport and handling	11
1.12 Warranty	Errore. Il segnalibro non è definito.
1.13 Statements.....	Errore. Il segnalibro non è definito.
1.14 Declaration of conformity	12
2 - INSTALLATION.....	13
2.1 Before installing	13
2.2 Positioning	13
2.3 Electrical connection	15
2.4 Gas supply connection.....	16
3 - OPERATION.....	17
3.1 Getting started	17
3.2 First start.....	17
3.3 Start and stop	17
4 - MAINTENANCE.....	18
4.1 Cleaning.....	18
4.2 Replacement or cleaning of the nozzle	18
4.3 Accessories	18
5 - TECHNICAL SPECIFICATIONS	19
5.1 Technical data	19
5.2 Spare parts	19
5.3 Wiring.....	22
6 - PROBLEMS AND SOLUTIONS	23

1 - INTRODUCTION

1.1 General warnings

This device must be used only for the functions for which it was intended "Hot air generator". Any other use is to be considered improper and dangerous. TERMOTECNICA PERICOLI s.r.l. cannot be held liable for any damages caused by improper, incorrect or unreasonable use, or if the device is used in systems that do not comply with safety regulations.

- Check the integrity of the device at the opening of the package, paying particular attention to the presence of damages or deformations that can lead to breakage and / or malfunction during use. In such cases do not connect the machine to the mains. Carry out these checks before each use.

- Before connecting the unit, make sure that the data shown on the device's plate matches that of your electricity distribution network. The data label is located on the side of the device (par.1.9).

- Respect the safety standards set for the electrical equipment and in particular:

- Follow the installation and operation instructions concerning the use of the equipment.
- Do not place objects on the generator.
- Avoid children from using the device, and / or unable subjects without proper supervision.
- Do not touch the generator during operation or until it is completely cooled down.
- Never place water or any other liquids into the device. In the scenario of the device becoming wet, immediately turn off the electricity by lowering the switch on the electrical panel of your system and disconnect the power before touching the device.
- Do not insert objects inside the tank as the device may be damaged irreparably.
- Do not use accessories, spare parts and / or components that are not provided or supplied by the manufacturer.
- Avoid touching the appliance with wet and / or humid hands.
- Do not pull the power cord nor expose it to risk of severing.
- Do not expose the unit to weather (rain, sun, etc...).
- In case of failure or malfunction, switch off immediately and disconnect the power.
- Do not try to open or tamper the device: contact the technical service offered by Termotecnica Pericoli Srl.

1.2 Instructions for proper disposal of the product

Under the European Directive 2002/96/EC.

At the end of its useful life the product must not be disposed of as waste.

The device can be taken to special recycling centers provided by local authorities, or at retailers that provide this service. Disposing the product in separate parts avoids possible negative consequence to the environment and to human health, which would both be the result of an inappropriate disposal, and allows the retrieval of materials so that significant savings in energy and resources would be reached. As a reminder of the obligation to dispose electrical equipment separately, the product is marked with the crossed mobile waste container.



Fig. 1.1

1.3 Covenants used throughout this manual

The Manual is divided into autonomous chapters, each of which is addressed to a specific operator's figure (installer, operator and maintainer), for which the skills needed to operate the machine safely have been defined. The sequence of chapters follows the temporal logic life of the machine.

To facilitate the immediate comprehension of the text, throughout the manual are used terms, abbreviations and pictograms, whose meaning is shown below.

The Instruction Manual consists of a cover, an index and a series of chapters (sections).

The home page lists the identification data of the machine and model, the revision of the manual instructions, and finally, a picture of the machine described, drawn in order to facilitate the reader in identifying the machine and its use.

ABBREVIATIONS

Ch. = Chapter

Par. = Paragraph

P. = Page

Fig. = Figure

Tab. = Table

UNITS OF MEASURE

The units of measure used in this manual are those provided by the International System (SI).

1.4 Conservation of the instruction manual

The instruction manual must be carefully stored and must follow and match the device in all the cases of change of ownership incurred during the life span of the machine itself.

The conservation must be done by handling the manual with care, with clean hands and on clean surfaces. Parts must not be removed, torn or arbitrarily modified.

The manual must be stored in a secure environment, protected from moisture and heat, and near the referring device. The manufacturer, if requested by the User, may provide additional copies of the instruction manual of the machine.

METHODOLOGY FOR UPDATING THE MANUAL

The Manufacturer reserves the right to modify the design or specifications of the machine as part of its policy of improving and enabling them to comply with the statutory or other requirements or standards applicable in any territory in which goods are sold, without notifying the Customer and without updating the manuals given to the user. Moreover, in case of changes (previously agreed between the Customer and the manufacturer) to the machine installed, which signifies the modification of one or more chapters of the Handbook of Instructions, the manufacturer will be responsible for sending the modified chapters affected by the structural change (including the new model of revision) to the User.

The User is responsible, following the directions accompanying the updated documentation, for replacing all the copies owned, the old chapters with the new chapters, the home page, and the index with the copy updated to the new revision level.

The manufacturer shall be responsible for the descriptions included in this manual; in case of an inconsistency being detected in a translated version of the manual (English version), the reader must refer back to the original Italian version of the handbook and, eventually, contact the sales department, who will make necessary changes.

1.5 Recipients

The manual is addressed to: the installer, the operator, and the qualified personnel entitled to the maintenance of the device.

EXPOSED PERSON:	refers to any person exposed, wholly or partially, to a danger zone;
OPERATOR:	refers to those persons responsible for installing, operating, regulating, clearing, repairing and moving the machine, and also performing the maintenance of the device;
QUALIFIED PERSONNEL QUALIFIED OPERATOR:	refers to the persons who have completed courses of specialization and training, and that have acquired experience in: installing, starting, operating, maintaining, repairing and transporting the device, or similar ones.

The machine is intended for industrial use (professional and not widespread) for which qualified operators are needed, in particular, workers that:

- Have reached the age of majority;
- Are physically and mentally appropriate to perform works that include technical difficulties;
- Have been properly educated on the use and maintenance of the machinery;
- Have been considered suitable to undertake the assigned job by their employer;
- Can understand and interpret the operator's manual and the safety requirements;
- Know the emergency procedures and their implementation;
- Possess the ability to operate the specific type of equipment;
- Are familiar with the specific applicable rules;
- Have understood the operating procedures defined by the manufacturer of the machine.

1.6 Glossary and pictographs

In this section we list the non common terms included in the manual. The following also explains the abbreviations used and the meaning of the pictograms in relation to the qualification of the operator and the state of the machine; their use can provide quick and unique information, necessary for the proper use of the machine under safety conditions.

GLOSSARY (Att. I p. 1.1.1 Dir. 2006/42/CE)

HAZARD	A potential source of injury or damage to personal health;
DANGER ZONE	All areas within and/or around the machinery in which the presence of a person constitutes a risk to the health and safety of himself/herself;
EXPOSED PERSON	Any person that finds himself/herself entirely or partially in a hazardous area;
OPERATOR	The person responsible for installing, operating, regulating, clearing, repairing and moving the machine, and also performing the maintenance of the machinery;
RISK	The combination of probability and severity of an injury or harm to health that can arise in a hazardous situation;
GUARD	The part of the machinery used specifically to provide protection by means of a physical barrier;
PROTECTION DEVICE	The device (other than a shelter) that reduces (alone or in conjunction with a shelter) the risk of an operation;
INTENDED USE	Use of the machinery according to the information provided in the instruction manual;
REASONABLY FORESEEABLE MISUSE	Use of the machinery in an indifferent manner from that stated in the instruction manual, which may result from a foreseeable human behavior.

OTHER DEFINITIONS:

HUMAN-MACHINE INTERACTION: Any situation in which an operator interacts with the machine in any of the operational phases at any time of the life of the machine itself;

OPERATOR'S QUALIFICATION: Minimum level of competence that an operator must have in order to perform the described operation;






NUMBER OF OPERATORS: The appropriate number of operators needed to optimally perform the described operation, it is derived from an accurate analysis made by the manufacture, and for which the use of a different number of operators may prevent the occurrence of the expected result or endanger the safety of the personnel involved;

STATE OF THE MACHINE: The state of the machine includes the operating mode, for example: running in automatic mode, maintained action control (jog), shutdown, etc... the safety conditions on the machine such as included protectors, excluded protectors, emergency shutdown, isolation from energy sources, etc...

RESIDUAL RISK: Risks that remain, despite of the protective measures incorporated in the design of the machine, the complementary protections, and the additional protective measures.



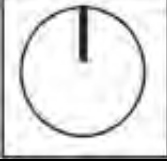
SAFETY COMPONENT: Component:
 - designed to fulfill a safety function;
 - the failure and/or malfunctioning of which endangers the safety of persons (such as a lifter; a fixed, moving or adjustable protector; an electrical, electronic, optical, pneumatic or hydraulic device that interlock a protector; etc...).

PICTOGRAPHS CONCERNING THE OPERATOR'S QUALIFICATION

Symbol	Description
	Generic laborer: operator lacking of specific competences, capable of performing only simple tasks under the control of qualified technicians.
	Lifting and handling vehicles driver: operator qualified for the use of vehicles used in lifting and handling materials and machines (carefully following the manufacturer's instructions), in accordance with the user's country's laws.
	Mechanic maintainer: qualified technician, able to operate the machine under normal conditions, to run it with the maintained action control (JOG) with disabled protections, and to intervene on the mechanical parts in order to make the necessary adjustments, maintenances and repairs. Typically this operator is not qualified to work on electrical systems while the device is connected to the mains.
	Electrical maintainer: qualified technician, able to operate the machine under normal conditions, to run it with the maintained action control (JOG) with disabled protections, and enabled to any kind of operation of electrical adjustment, maintenance and repair. This operator is qualified to work on electrical systems while the device is connected to the mains.
	Manufacturer's technician: qualified technician offered by the manufacturer to carry out complex or particular operations or, in any other case agreed with the user. The skills are, as contingently appropriated, mechanical and/or electrical and/or electronic and/or concerning software.

PICTOGRAPHS CONCERNING THE STATE OF THE DEVICE

The pictographs contained in a square/rectangle provide information.

Symbol	State of the device
	Device OFF: with electric and pneumatic power disconnected.
	Machine in motion: with automatic function, movable protections closed and relative interlocking devices activated, and fixed protections closed.
	Device ON: in standby and ready to start by functional consent activation (eg. switchboard consent), movable protections closed with relative safety device included, and fixed protections closed.

PICTOGRAPHS CONCERNING SAFETY

The pictographs contained in a triangle indicate DANGER.

The pictographs contained in a circle impose PROHIBITION / OBLIGATION.

Pictograph	Denomination
	Hazardous voltage.
	Entanglement.
	Dragging.
	General danger.
	Do not remove safety devices.
	Prohibition of cleaning, oiling, greasing, repairing or adjusting by hand when the device is in motion.
	Duty to remove power before starting works or repairs.
	Protective gloves required.
	Safety footwear required.
	Safety helmet required.

1.7 Applications

The **easyTERM** series hot air generators run on GPL (Liquid petroleum gas) and methane as the combustion fuel. The **easyTERM** generators are of direct combustion type. The air is heated by means of the thermal energy generated during combustion and is transferred to the environment to be heated with the combustion products, thereby rendering the thermal energy produced 100% available. The environment must be suitably ventilated in order to ensure sufficient air exchange.

Do not use the generator in basements or below ground level or in premises destined for domestic use.

There are a series of safety devices which come into effect in the event of faulty function. The electronic control device intervenes in the event of irregular flame or flame which tends to go out, stopping the burner and igniting the burner block button indicator.

EasyTERM stops if there is a fault in ventilation.

The materials used in building the machine ensure reliability and durability in time.



This device must be used only for the functions for which it was intended

- Hot air generator.

Any other use is to be considered improper and dangerous.





1.8 Versions

Hot air generators **easyTERM** are available in the following versions:

BE7.2C06020100000001 Hot air generator **easyTERM 80** 74kW 4.000m³/h 230V 50Hz 1~+N

1.9 Identification and data label of the unit

Each machine is identified by the CE plate on which, indelibly set, is reference data of the device itself. In any communication, either with the manufacturer or with the customer service, always cite these references.

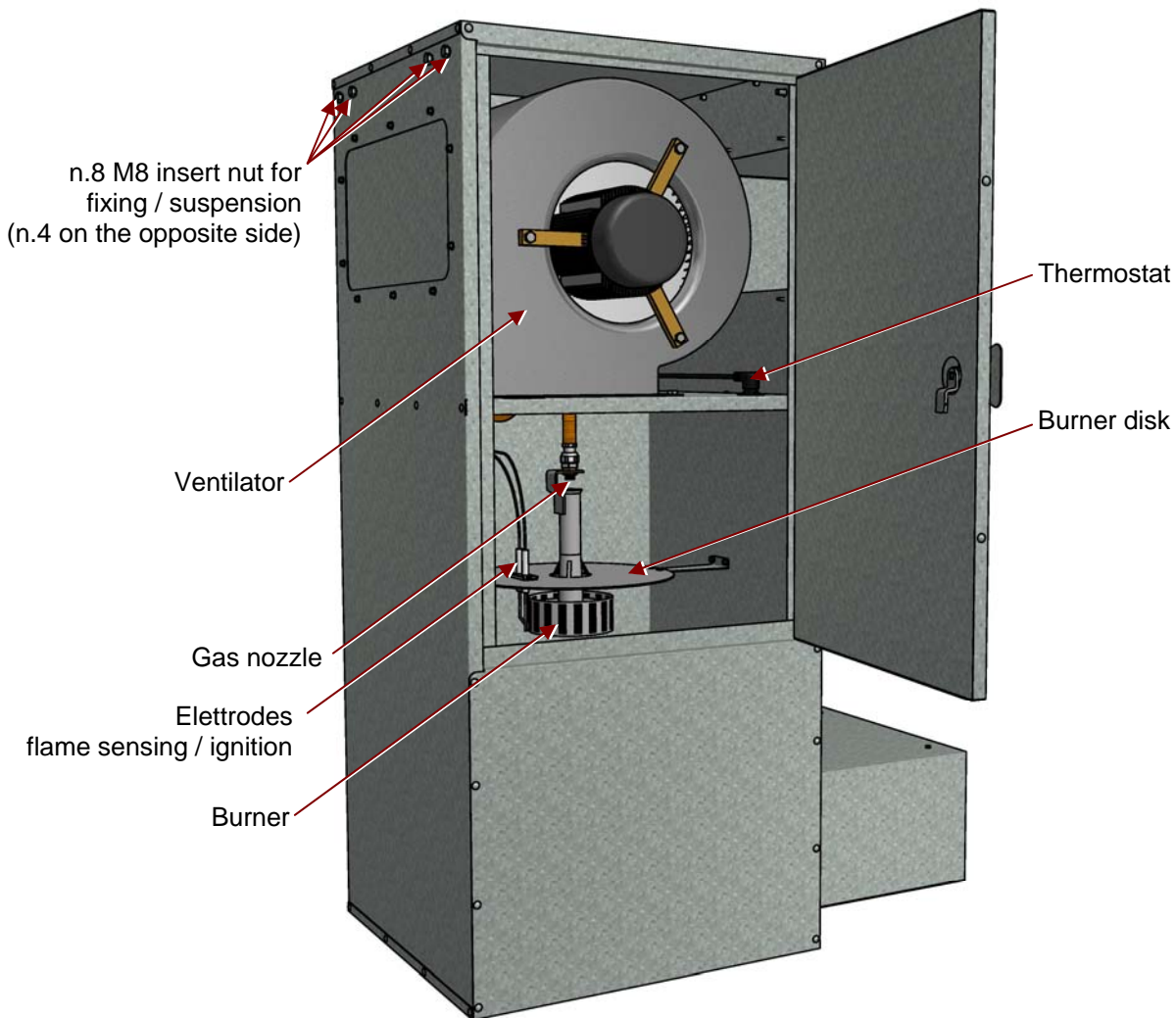
 TERMOTECNICA PERICOLI  0051-12	
MODELLO MODEL	easyTERM 80
Nr. di SERIE SERIAL N.	00001
TIPO TYPE	A 13
PAESE di DESTINAZIONE COUNTRY DESTINATION	IT
CATEGORIA CATEGORY	II2H3+
Nr. PIN PIN NR.	51BN2203
COMBUSTIBILE FUEL	GPL-LPG G20 Metano-Nat. Gas
PORTATA TERMICA HEATING POWER	74 kW
CONSUMO GAS GAS CONSUMPTION	GPL-LPG 5,07kg/h Metano-Nat. Gas 6,87m³/h
PORTATA ARIA AIR FLOW	4000 m³/h
ALIM. ELETTRICA ELECTRICAL SUPPLY	1~230V - 50Hz
CORRENTE ASSORBITA ABSORBED CURRENT	1,72 A
POTENZA ELETTRICA ELECTRICAL POWER	370 W
GRADO di PROTEZIONE PROTECTION LEVEL	IPX4D
PRESSIONE GAS GAS PRESSURE	GPL-LPG(G30-G31) 30-37mbar Metano-Nat. Gas(G20) 20mbar
TEMP. ARIA a 1,5m AIR TEMP. at 1,5m	50°C
CLASSE CLASS	Apparecchio per riscaldamento ambienti Space heating device

Prodotto per TERMOTECNICA PERICOLI srl da FRANCO srl - ITALY

Fig.1.2

1.10 Parts description

Constituent parts of the hot air generator.



Electrical connections box

(The gas valve and all the components for the flame control and ignition are contained inside)

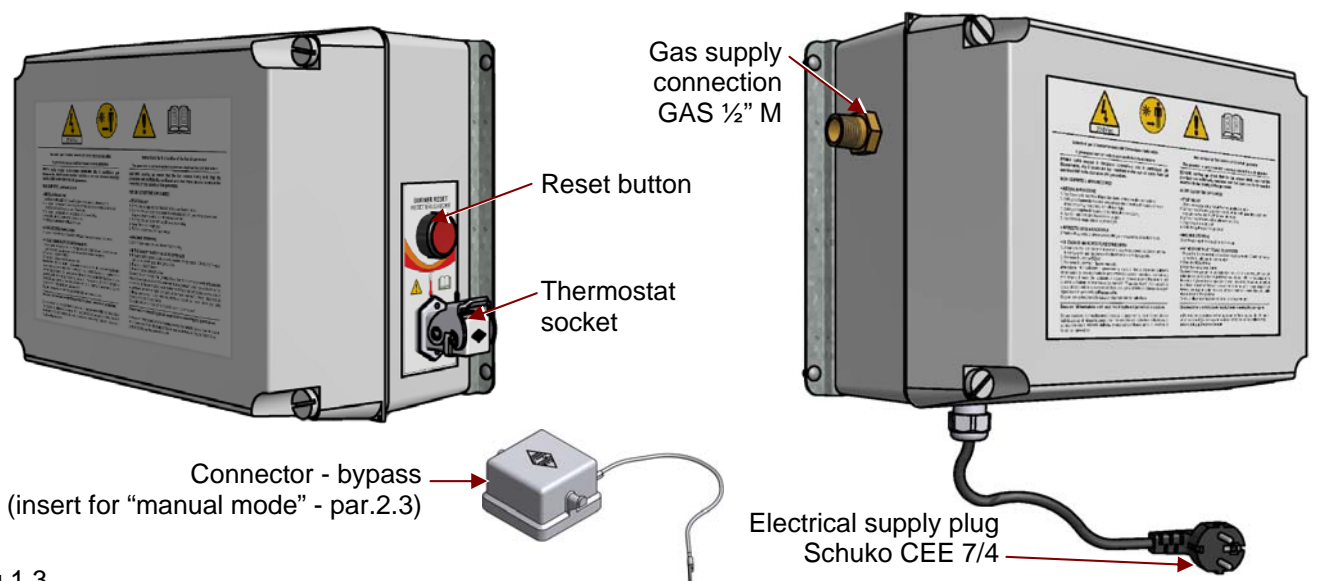


Fig.1.3

1.11 Transport and handling



The machine has been properly packaged before being put into strong carton boxes. Prevent damages to the components of the device by taking care when opening the package. Verify the integrity of the machine by controlling that there are no visible damaged parts. Do not dispose the packaging elements in the environment; they must be placed in proper collection points.

EasyTERM generator can be lifted and hung by using the proper brackets.

WARNING!

Before handling the device:



- a. stop the machine,
- b. disconnect the electricity supply,
- c. interrupt the water supply.
- d. Wait for the exchanger to cool down

To lift the machine, use a suitable lifting device (consult the weights table).

Lift the machine slowly, being careful not to drop it and move the straps depending on the centre of mass.



SALES TO BUSINESSES HAVING THEIR SEAT OUTSIDE ITALY

TERMOTECNICA PERICOLI S.r.l. undertakes to remedy any non-conformity (defect) of the products for which he is liable, occurring within 12 Months from invoicing date of the products to the purchaser, provided he has been notified timely about such defect in compliance with the terms and conditions hereinafter set out.

In addition, the present warranty is conditional on both the following conditions:

- A) the compliance with the instructions guide supplied by TERMOTECNICA PERICOLI S.r.l. and
- B) payment in full at due date of the sale price agreed for the products.

In such case TERMOTECNICA PERICOLI S.r.l. will, at his choice, either replace or repair the products (or parts of the products) which result to be defective. This warranty (i.e. the obligation to replace or repair the products) replaces any other legal guarantee or liability provided by law. It is consequently agreed that, except in case of fraud or gross negligence of TERMOTECNICA PERICOLI S.r.l., any other TERMOTECNICA PERICOLI S.r.l. 's liability (both contractual or extra-contractual) which may arise from the products supplied and/or their resale (e.g. compensation of damages, loss of profit, etc.) is expressly excluded.

Any complaints concerning the conditions of packing, quantity or outward features of the products (apparent defects) must be notified to the Supplier in writing within 8 days from receipt of the products; failing such notification the purchaser's right to claim the above defects will be forfeited. Any complaints relating to defects which cannot be discovered on the basis of a careful inspection upon receipt (hidden defects) must be notified to TERMOTECNICA PERICOLI S.r.l. in writing within 8 days from discovery of the defect; failing such notification the Purchaser's right to claim the above defects will be forfeited. The notice must indicate precisely the defect and the products to which it refers. TERMOTECNICA PERICOLI S.r.l. does not accept return of products lacking its express written authorization. Where TERMOTECNICA PERICOLI S.r.l. accepts such return of the products the purchaser shall deliver the products to TERMOTECNICA PERICOLI S.r.l. at purchaser's risks and costs.

Notwithstanding the above the present warranty does not cover the normal wear and tear of the products and the defects deriving from modifications made by the purchaser without TERMOTECNICA PERICOLI S.r.l.'s consent.

With respect to possible consumer claims involving the application of domestic rules implementing the European directive 1999/44/CE of 25 May 1999 on certain aspects of the sale of consumer goods and associated guarantees, the purchaser accepts to bear the exclusive responsibility for any obligation arising within such context. Consequently the parties expressly agree to exclude any right of redress by the purchaser against TERMOTECNICA PERICOLI S.r.l. based on the above Directive and the purchaser undertakes to hold TERMOTECNICA PERICOLI S.r.l. harmless against any such action of redress made by subsequent sellers of the distribution chain.

1.13 Statements

The machine is built in accordance with the EC directives that are relevant and applicable at the time of the market entry of the machine itself.

The machine is not among those mentioned in the Att. IV of the Directive 2006/42/CE.

1.14 Declaration of conformity

(All. IIa DIR. 2006/42/CE)

TERMOTECNICA PERICOLI S.r.l.

Company

Reg. Rapalline 44 - P.O. BOX 262

Address

17031

Postal code

SV

Province

Campochiesa d'Albenga

City

Italia

Country

DECLARE THAT THE MACHINE

Hot air generators

Description

easyTERM 80

Model

BE7.2C06020100000001

Series/Registration number

2012

Year of construction

easyTERM - hot air generator

Commercial denomination

Heating device

Intended use

Meets the following essential requirements:

DIRETTIVA MACCHINE 2006/42/CEE
DIRETTIVA GAS 2009/142/CEE (ex 90/396/CEE)
DIRETTIVA BASSA TENSIONE 2006/95/CEE
CERTIFICATO DI ESAME CE 51BN2203/ED

Complies with the EU directives

EN 437:2003 + A1:2009
EN 1596:1998
EN 1596:1998/A1:2004

AND AUTHORIZES

PERICOLI ROBERTO

Nominative

Reg. Rapalline 44 - P.O. BOX 262

Address

17031

Postal code

SV

Province


Campochiesa d'Albenga

City

Italia

Country

TO COMPILE THE TECHNICAL FILE ON HIS BEHALF

Place and date of the document	
Albenga, 15 th October 2012	
	Function Administrator

D.C.: DC N-008/000001

2 - INSTALLATION

2.1 Before installing

In order to start the hot air generator **easyTERM**, the following conditions are required:

- connection to the electric power supply with voltage and frequency suitable for the machine and with grounding and safety devices;
- the machine **is preset and is sold to work with natural gas (methane)**. In case of use with LPG, you must refer to cap. 4.2 for instructions. Connection to the suitable gas supply (see technical details);



The installation must meet the safety requirements provided by local regulation in force.



Make sure that all the connections necessary to operate the equipment have been properly prepared.

2.2 Positioning

The hot air generator **easyTERM** must be installed **vertically**, as shown in fig. 2.2.

Assemble the inlet and outlet ducts (with supplied screws), as shown in fig. 2.1.

Use the supplied special supports to hang or to anchor the appliance. Use an adequate anchoring system to keep the machine in the working position.



Positioning of the **easyTERM** must be done according to the minimum recommended distances that allow a proper machine operation and to perform maintenance when needed.

Choose, depending on the type of installation, the most suitable position within the room.



In case of long periods of unuse, close the air inlet and the air outlet with insulating material!

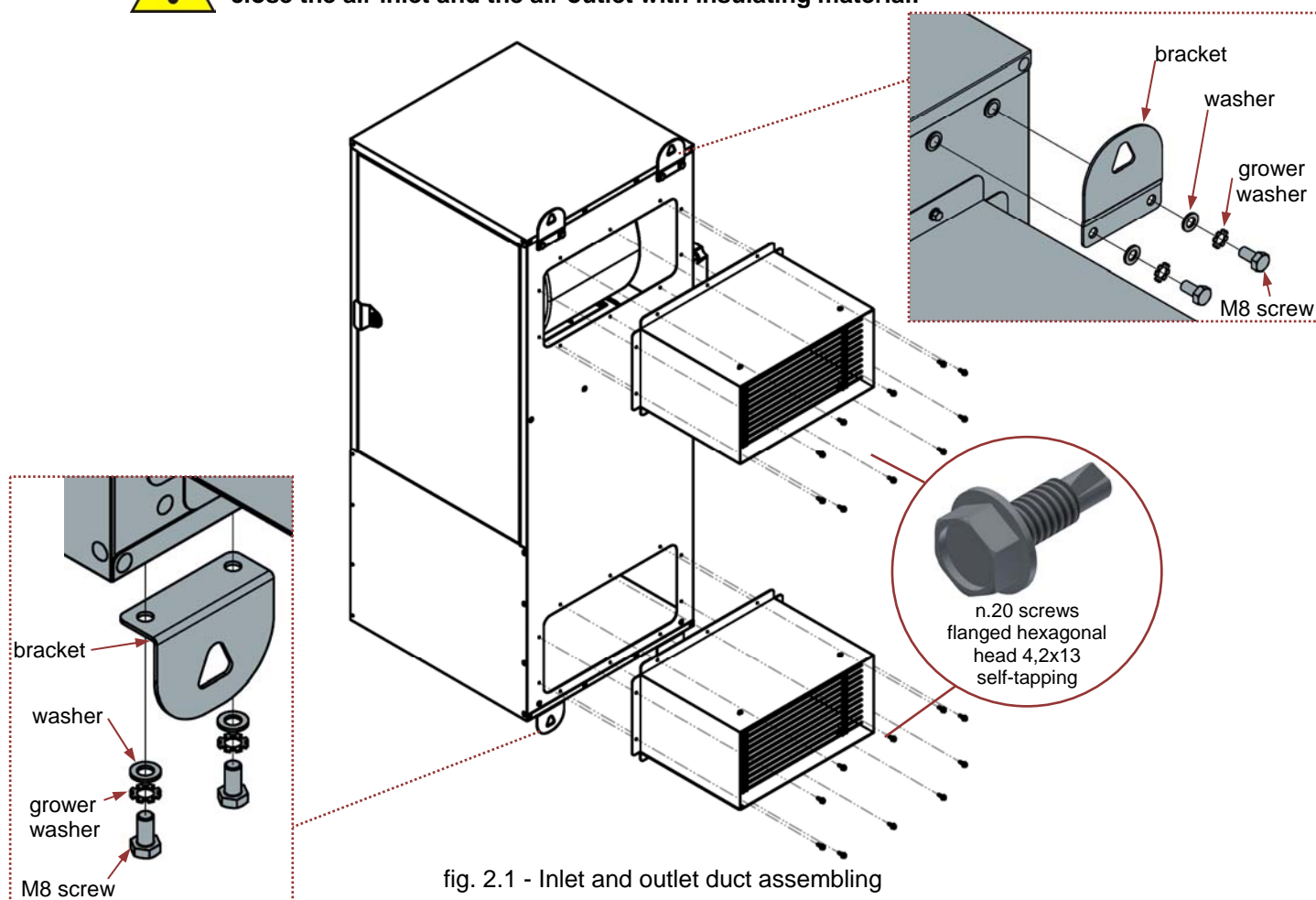
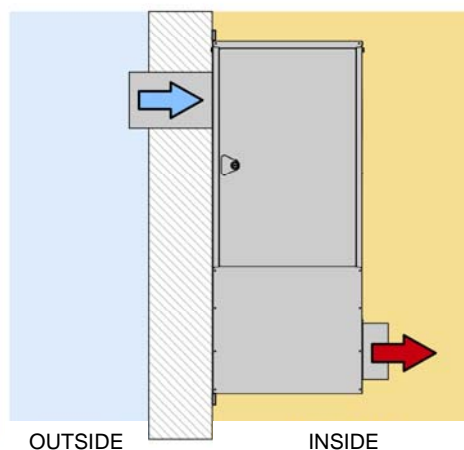
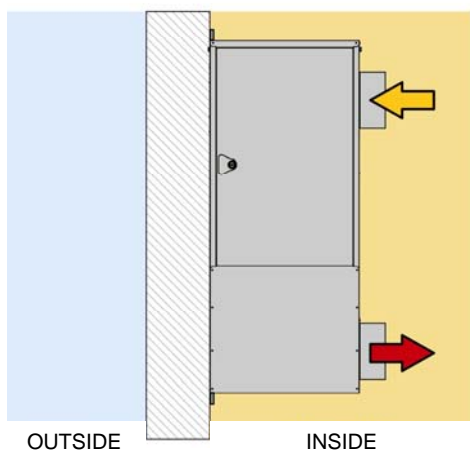
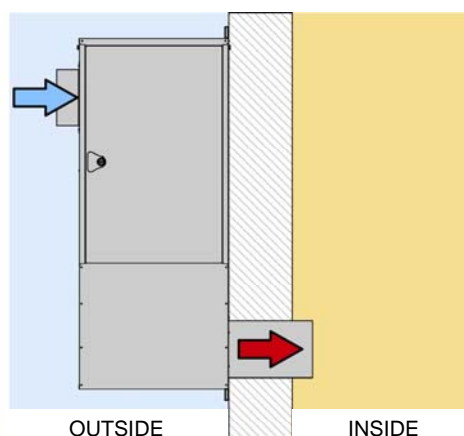
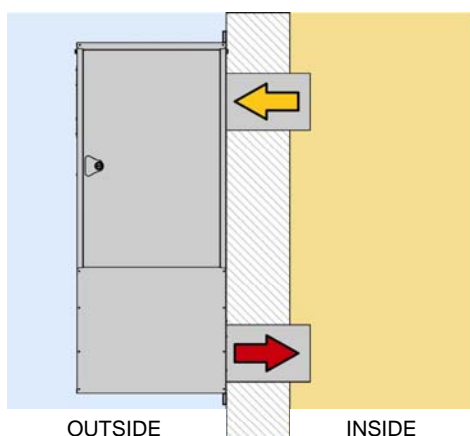


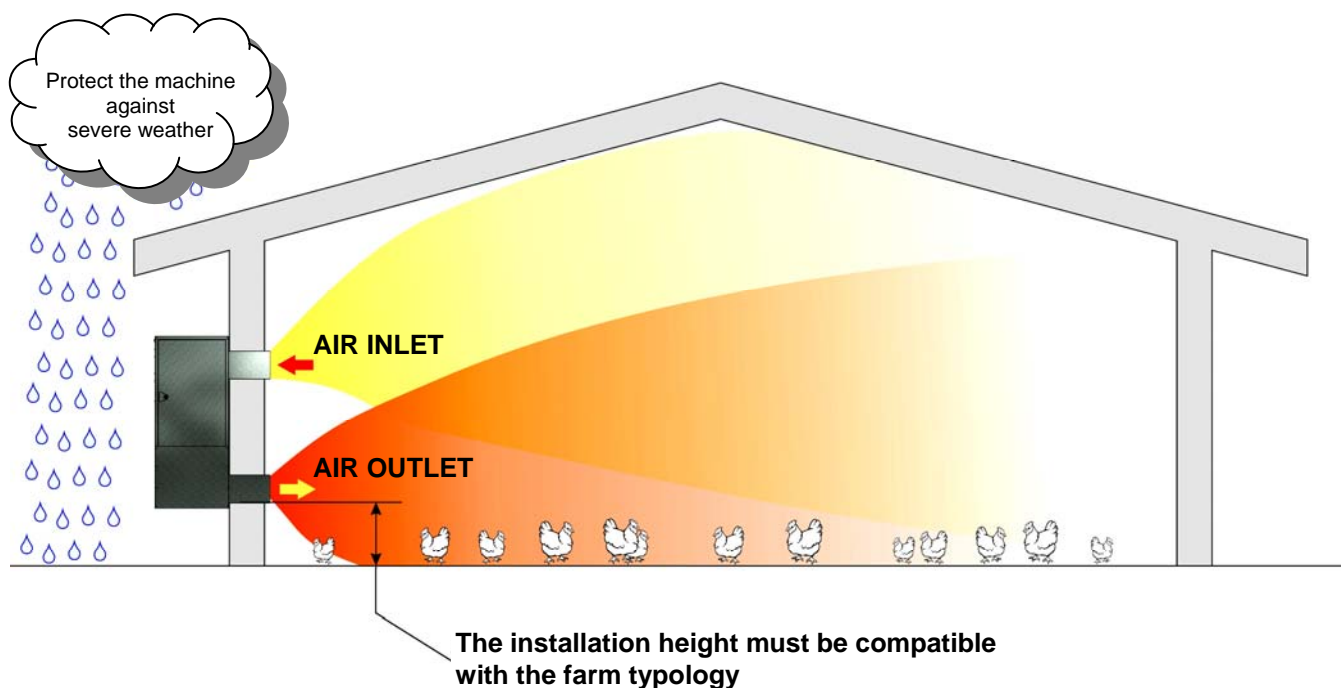
fig. 2.1 - Inlet and outlet duct assembling



Installation of the machine must be done complying the safety distances
(law DIN EN 13857 – 4, 4.1, 4.2)



INSTALLATION EXAMPLE IN A ZOOTECHNICAL BUILDING



2.3 Electrical connection

The installation involves the use of a humidistat or a thermostat ON/OFF controlling the power of the machine; it is still possible to use, alternatively, a switch ON/OFF, in this case the start and stop of the machine must be done manually.

The choice, however, does not affect the installation procedure described below.



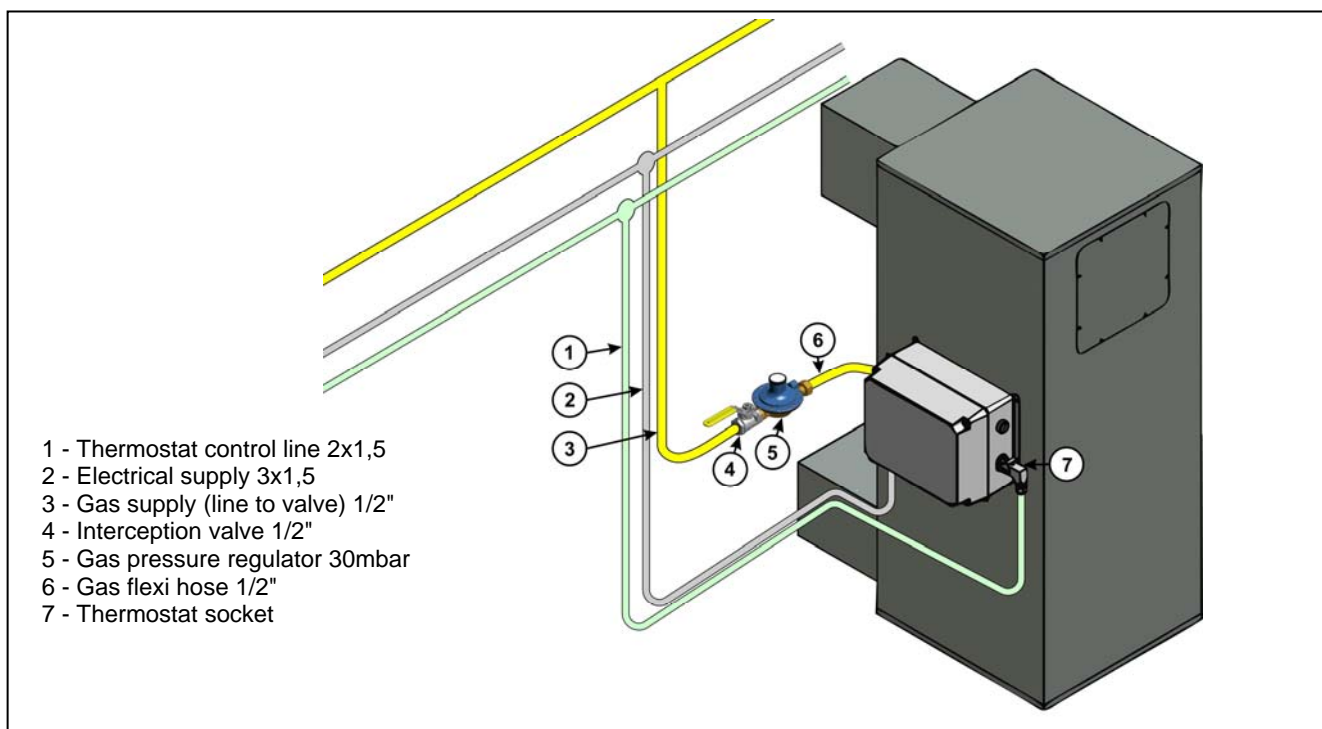
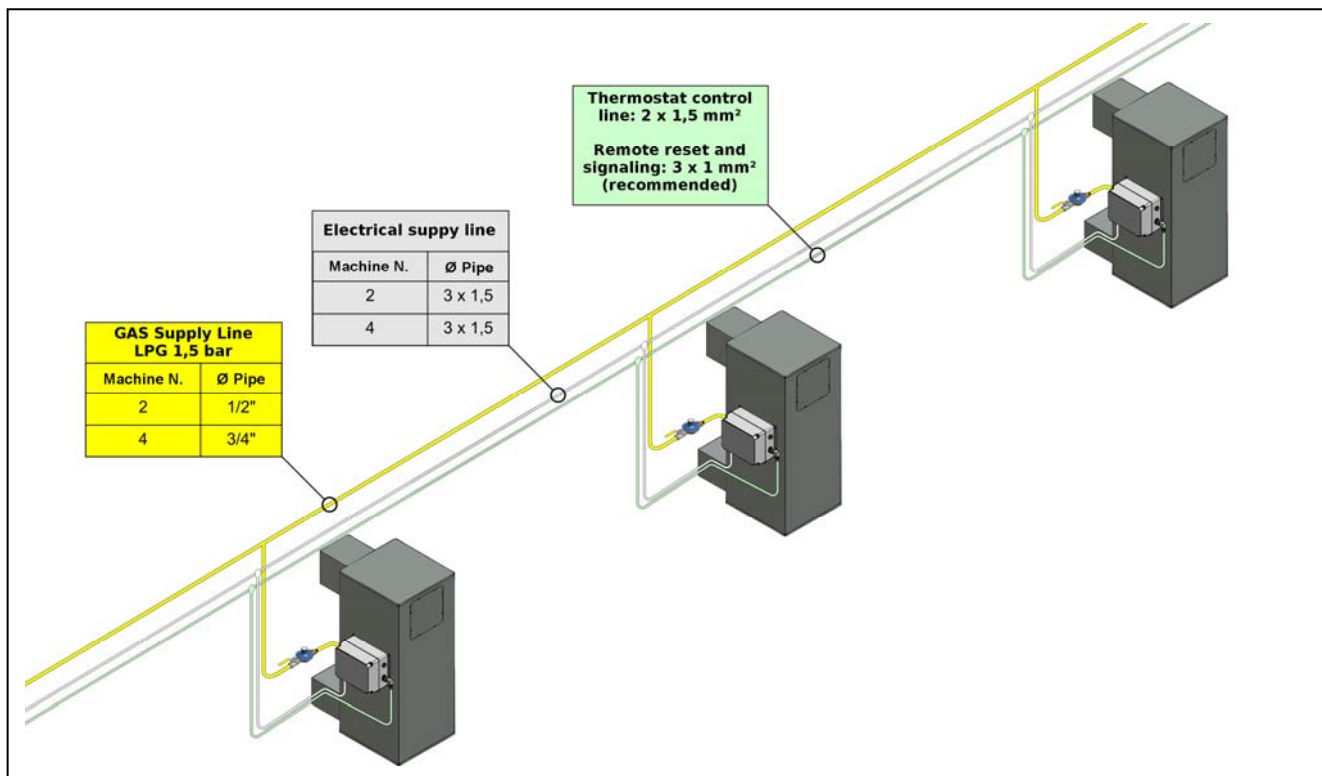
- Electrical connections must be undertaken by specialized, experienced and trained technicians, in accordance with the current legislation.
- Ensure that the electricity supply specifications correspond to those indicated in the in this manual.
- It is obligatory that the device is grounded using an efficient ground line.

The installation must foresee a device enabled to disconnect the machine from the electric supply.

2.4 Gas supply connection

The **easyTERM** generator comes complete with gas valve inside the machine's electrical box.

- The plug for the line connection is 1/2".
- The gas supply line's pressure must be in compliance with the data indicated in the following table;
- Connect the supply tube to the pressure reducer, and the latter to the cylinder of LPG or the CNG line;
- Use a flexible tube with a maximum length of 2m and make sure that there are no bottlenecks;
- The system must be adapted to the characteristics of the equipment in use and comply with the current regulations.



3 - OPERATION

3.1 Getting started

Before operating the generator, verify that:

1. All connections, both electrical and hydraulic, are made according to the instructions contained in this manual;
2. The generator is free and clean;
3. The gas supply tap is open.

3.2 First start

- Check that the air inlet and the air outlet are not closed or obstructed;
- Make sure all wires are regularly placed and not caught or pulled by any object;
- Ensure that the gas connections are correct;
- Open the methane supply tap while making sure that there are no leaks along the load circuit and that the pressure is in compliance with the technical specifications indicated in the tables.



WARNING!
During operation, some parts of the machine may reach high temperature!

3.3 Start and stop

The machine starts when the consent is given on the thermostatic socket contacts (see diagram sez.5.3) or, if the thermostat was not used, when the electrical supply is connected to the fan and to the generator.

The flame control-board starts the burner with a spark.

During operation, the board constantly monitors the flame, otherwise the gas valve is closed and after an attempt to restart, the heating is stopped, so is the ventilation.

In the event of an abnormal overheating, the safety thermostat switches off the burner.

In this case, find and eliminate the cause of overheating before using the device another time! If necessary, contact a qualified technician.

In order to reset the thermostat is needed to open the inspection panel and, once the machine cools down, push with a screwdriver the thermostat reset button (fig. 3.1).

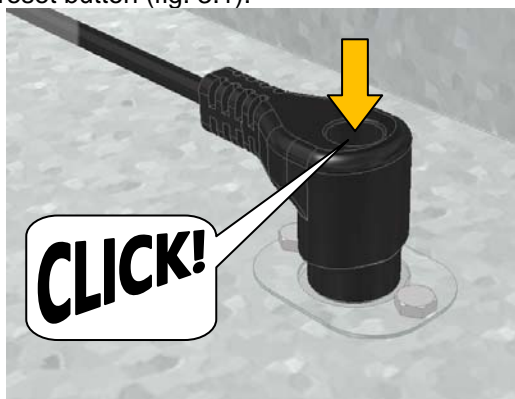


fig.3.1 - Push to reset the thermostat

Furthermore, ventilation functioning is also monitored: if the fan stops, or if there are obstructions on the inlet of the generator, the device switches off.

To stop the generator interrupt the power supply directly from the switch, or by adjusting the thermostat, if present.

Close the valve tank or the gas supply in case of prolonged unuse of the machine.

4 - MAINTENANCE



**Before undertaking any maintenance,
disconnect the device from the electricity and water supply!**

Periodically check the efficiency of the heating system and the correct functioning of the fan. Keep the machine clean and prevent the accumulation of dirt. Periodically clean the internal grill and the generators' body.

4.1 Cleaning

Periodically perform the following operations by ensuring that the machine is disconnected from the mains and the gas supply is interrupted. Make sure the device is cold before cleaning.

Keep the body of the device and engine clean, by regularly using a soft mild cloth and a non-toxic and solvent-free detergent. Do not rub too tightly and do not spill water on the components.

Do not use solvents.

In the presence of unusual noises and vibrations, check the tightness of screws and bolts.

Use only original spare parts by Termotecnica Pericoli s.r.l.

4.2 Replacement or cleaning of the nozzle

After making sure that the machine is stopped and cold, disconnect the electrical and gas supplies. Remove with a hex wrench #7, the 4 screws holding the safety net on the generator's aspiration inlet.

With a 13mm hex wrench, unscrew the nozzle (fig.4.1), being careful not to drop it into the burner or the machine (eventually, cover the hole temporarily).

Replace the old nozzle with a new one.

Verify the gas pressure before restarting the device.

Check that the flame is stable and with a blue coloring.

If the flame burns yellow (or the flame is not stable), calibrate the valve.

Note the change on the label (near the gas supply connection)

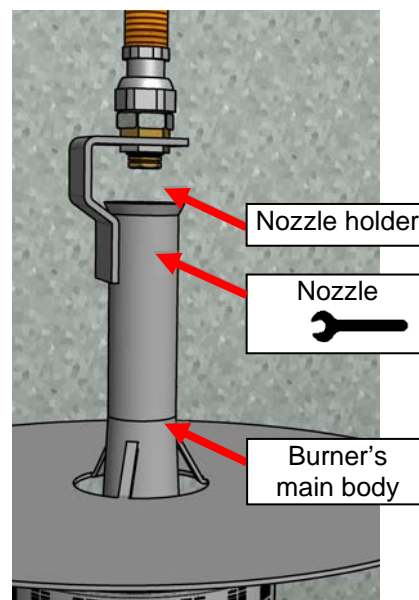


Fig.4.1

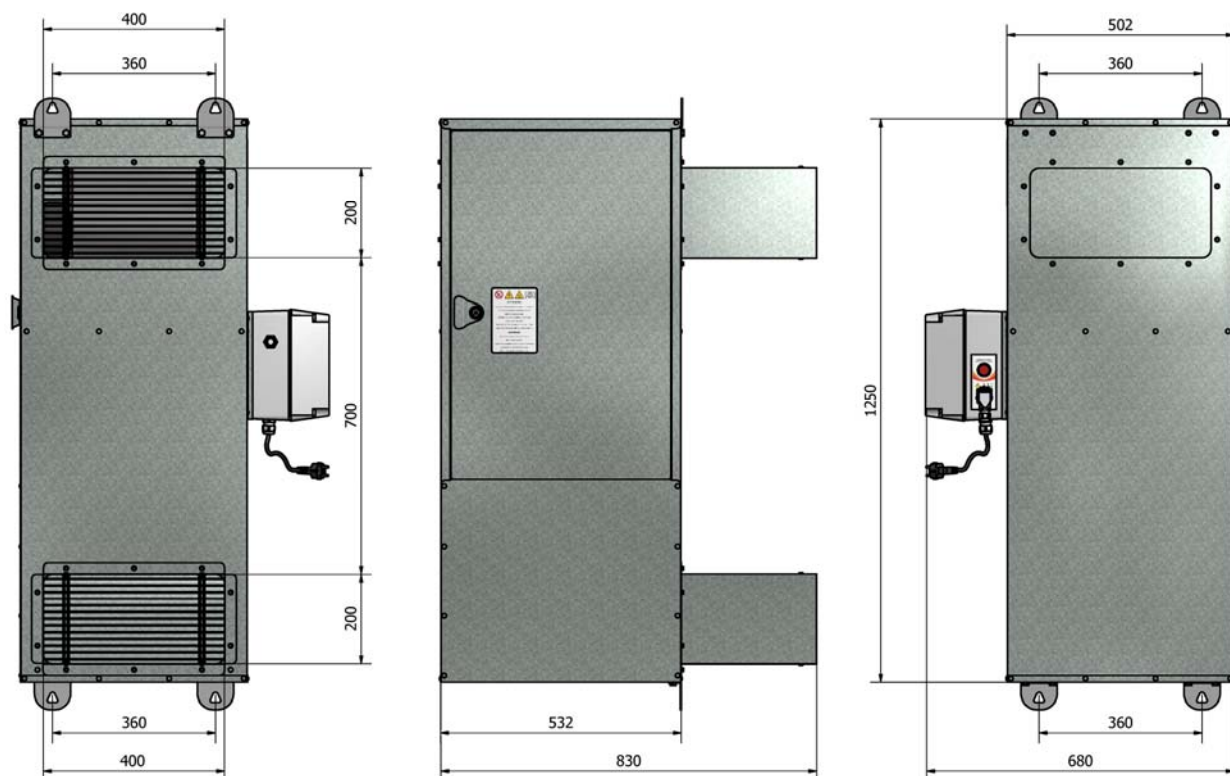
NOZZLES		
easyTERM-80	LPG	Nat.GAS
Code	0F.8101502 (L410)	0F.8101552 (L650)
Ø mm	4,1	6,5

4.3 Accessories

A complete range of accessories for **easyTERM** is available; ask your local dealer about the accessories catalogue.

5 - TECHNICAL SPECIFICATIONS

5.1 Technical data



GENERAL DATA easyTERM 80			
HEATING POWER		kW	74
		kCal/h	63640
AIR FLOW		m³/h	4.000*
		cfm	1.770
GAS CONSUMPTION @ 1013 mbar/15°C	LPG	kg/h	5,07
	Nat. Gas	m³/h	6,67
GAS PRESSURE	LPG G30	mbar	30
	LPG G31	mbar	37
	Nat. Gas G20	mbar	20
EMISSIONS	NOx (min-max)	ppm	4-6
	CO (min-max)	ppm	2-8
POWER SUPPLY			Single phase 230V 50Hz
ELECTRICAL POWER		W	370
WEIGHT		kg	64
NOZZLE	LPG	Ømm	4,1
	Nat. Gas	Ømm	6,5

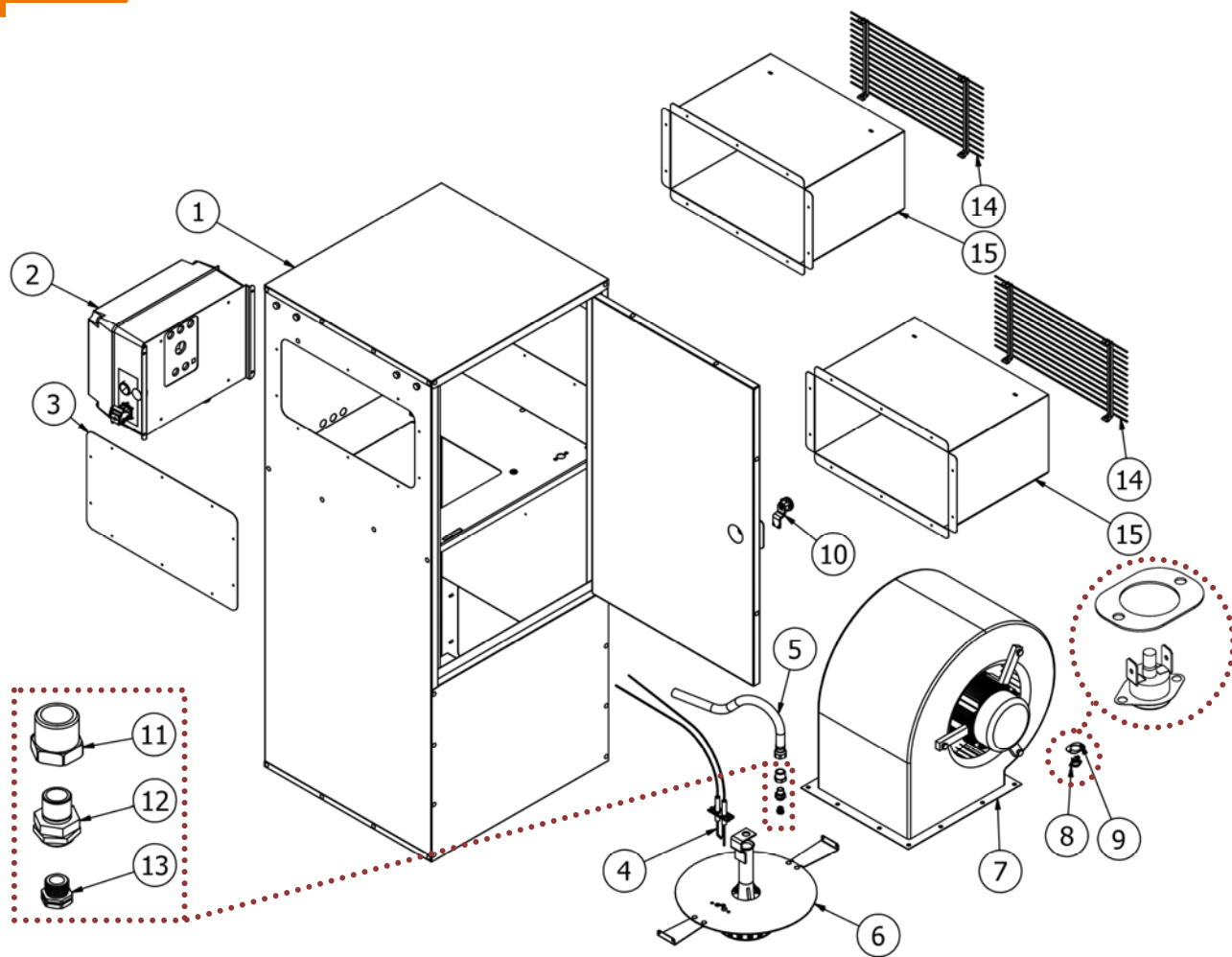
*in aspirazione

5.2 Spare parts



It is highly recommended to use only original spare parts.
Orders must be made by specifying what follows:

- Device model
- Reference of the piece (as indicated as follows)
- Quantity of items to be ordered
- Address of the client

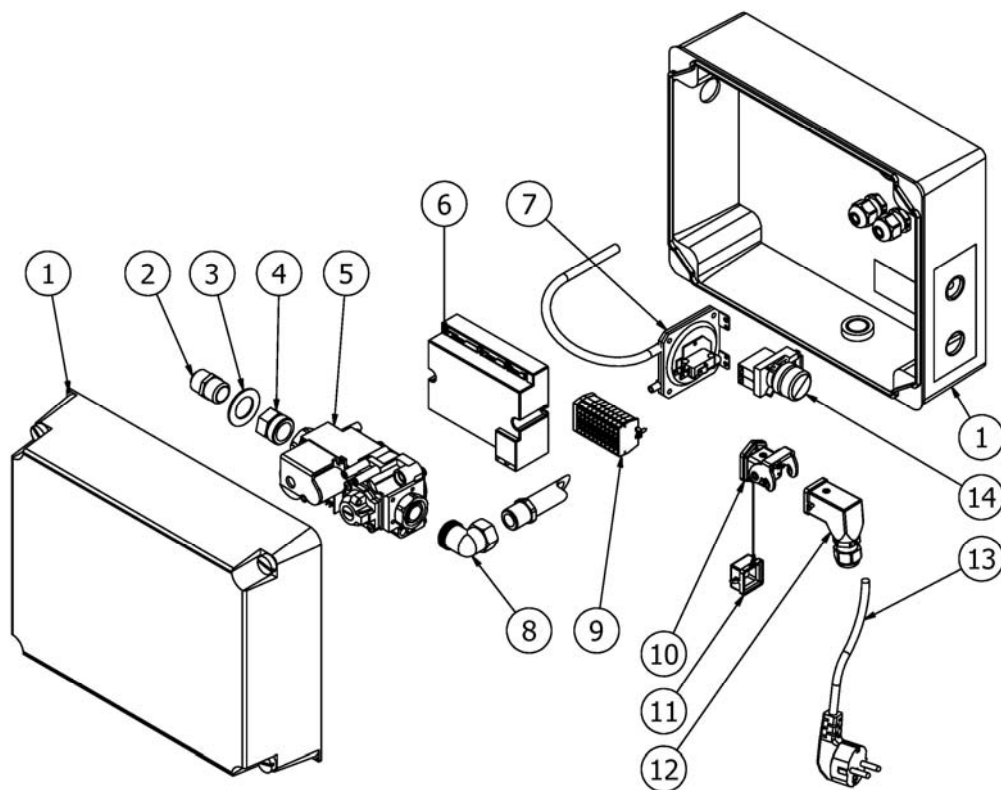


Pos.	Art.	Description
1	0F.4202050	GENERATOR BODY (Magnetis)
2	0F.4202051	ELECTRIC BOX (see the exploded view)
3	0F.4201011	AIR INLET COVER
3a	0F.4202060	AIR INLET COVER FIXING KIT
4	0F.7202003	ELECTRODES
4a	0F.4202061	ELECTRODES FIXING KIT
5	0F.8102000	GAS SUPPLY FLEXI HOSE
6	0F.4202050	BURNER WITH DISK
6a	0F.4202062	BURNER WITH DISK FIXING KIT
7	0F.4202053	VENTILATOR
7a	0F.4202063	VENTILATOR FIXING KIT
8	0F.7303010	THERMOSTAT
9	0F.4202064	THERMOSTAT FIXING KIT
10	0F.7205050	LOCK
11	0F.8101002	NOZZLE HOLDER REDUCTION
12	0F.1404000	NOZZLE HOLDER with FLAT NUT
13	0F.8101502	NOZZLE LPG Ø 4,1 mm (L410)
	0F.8101552	NOZZLE NATURAL GAS Ø 6,5 mm (L650)

FOLLOWS IN THE NEXT PAGE

14	0F.4202020	PROTECTION GRILL INLET / OUTLET
14a	0F.4202065	PROTECTION GRILL INLET / OUTLET FIXING KIT
15	0F.4201006	INLET / OUTLET DUCT
15a	0F.4202066	INLET / OUTLET DUCT FIXING KIT

ELECRIC BOX EXPLODED VIEW



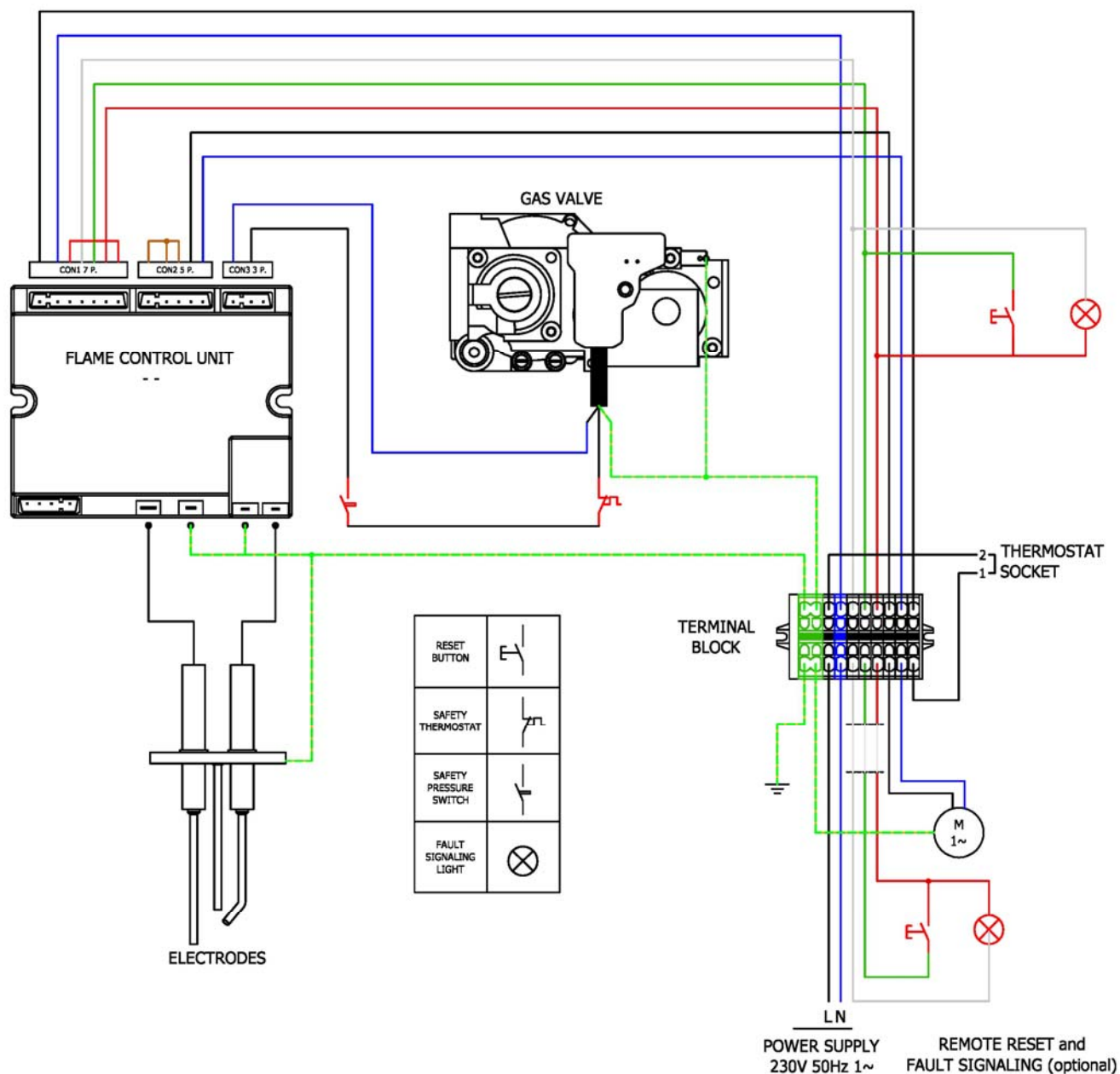
Pos.	easyTERM 70	Description
1	0F.4202054	ELECTRIC BOX
2	0F.8101005	STRAIGHT FITTING ½"
3	0F.1201020	GAS SUPPLY WASHER
4	0F.8101006	STRAIGHT GAS CONNECTION
5	0F.4202055	GAS VALVE
6	0F.7302002	FLAME CONTROL UNIT
7	0F.1402012	SECURITY PRESSURE SWITCH
7a	0F.1401020	SECURITY PRESSURE SWITCH PIPE
8	0F.8101001	90° FITTING
9	0F.4202056	TERMINAL BLOCK
9a	0F.4205000	CABLING KIT
10	0F.1254501	THERMOSTAT SOCKET
11	0F.7505503	THERMOSTAT SOCKET CUP
12	0F.1254502	THERMOSTAT PLUG
13	0F.7004000	POWER SUPPLY CABLE
14	0F.1202064	LIGHT BUTTON

5.3 Wiring

All the wires used must be suitable to carry the current intensity (A) of the motor (par. 5.1).
Terminal's screws must be accurately tightened.
Make sure that the electricity supply characteristics are exactly as shown in the table (par. 5.1).
Install a differential magnetic switch upstream of the device.
Protect with a suitable motor overload protection (par 5.1).



Make sure all connections are stuck on the box, the box cover is secured and that the screws are tightened to ensure the necessary level of protection.



6 - PROBLEMS AND SOLUTIONS



**Before undertaking any maintenance,
disconnect the device from the electricity and gas supply!**

Problem	Cause	Solution
The generator does not start.	The power supply is not plugged.	Verify the electrical connection, or the functioning of the mains itself.
	Overheated engine (the fan is not working correctly or is blocked)	Verify the electrical connection, or the functioning of the mains itself.
	Faulty switch.	Interrupt the gas supply, remove the electrical outlet and substitute the switch.
	Faulty flame control-board.	Replace the machine.
	The ignition electrode does not spark.	Verify that the electrode is clean and not touching any metal parts. Verify the functioning of the flame control-board.
The generator stops / is blocked.	The gas does not reach the solenoid.	Verify that the gas supply is open. Verify that the gas supply is constant. Restart the machine.
	The solenoid does not open.	Check the solenoids. Check the electrical supply. Verify the functioning of the flame control-board.
	The flame detection electrode does not detect properly.	Verify that the electrode is clean. Check the electrical supply.
	Side grids and outlet clogged with dirt or external objects.	Remove the external object and clean the grids.
	Safety thermostat intervention.	Check that the intake grills and outlet are not obstructed. Verify that the environment is well ventilated. Verify that hot air can flow freely.
	Faulty safety thermostat.	Check the thermostat and, if necessary, replace it.
	Faulty flame control-board.	Replace the board.
The generator consumes too much gas.	Gas leaks.	Locate the leak with soapy water and replace the defective part.
	The nozzle is not correctly plugged.	Plug it more firmly.
The generator does not stop.	Faulty switch.	Interrupt the gas supply, remove the electrical outlet and substitute the switch.
	Faulty flame control-board.	Replace the machine.
	The solenoid cannot be closed.	Interrupt the gas supply, let the generator burn all the gas in the tube, unplug electricity supply, disassemble the solenoids, clean them and re-assemble them (or replace them). Check the functioning of the flame control-board.

TERMOTECNICA PERICOLI S.r.l.

17031 ALBENGA (SV) - ITALIA Regione Rapalline, 44
P.O. Box 262 17031 ALBENGA
Tel. +39 0182 589006 - Fax +39 0182 589005
www.pericoli.com - termotecnica@pericoli.com