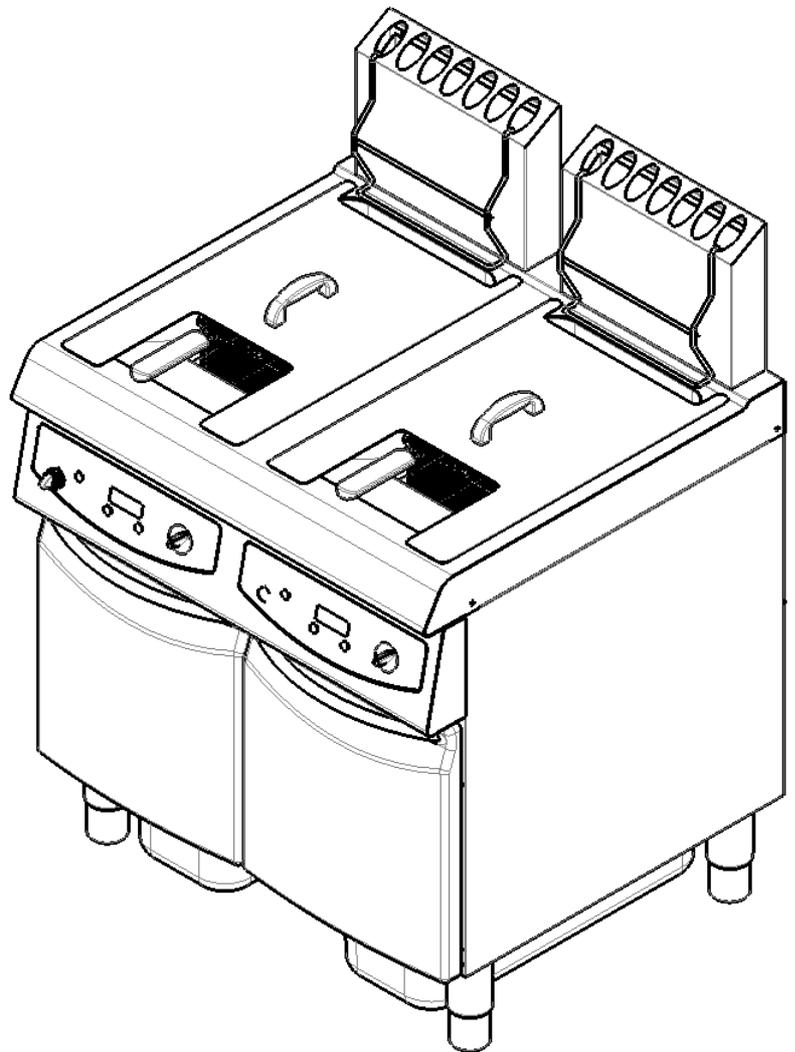
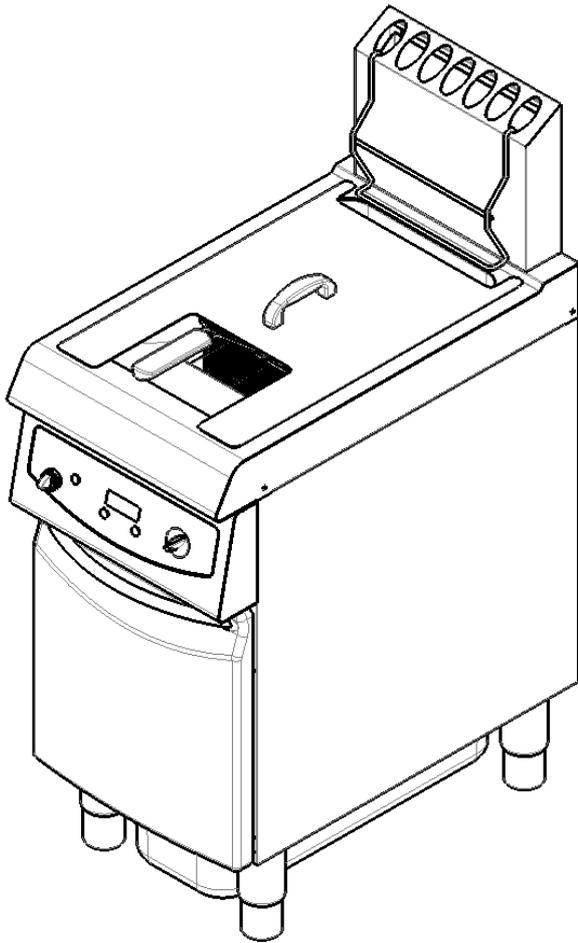
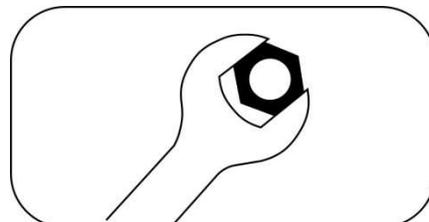
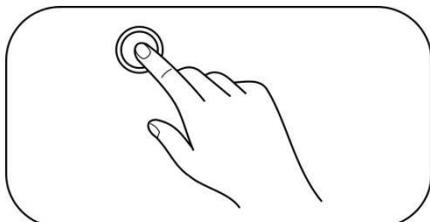




PIZZA AND CATERING EQUIPMENT PROFESSIONALS



GF20
Gas Fryer
User Manual





SAFETY PROVISIONS

- This type of appliance is intended to be used for commercial purposes, such as in restaurant kitchens, works canteens, hospitals, and by commercial businesses, such as bakers, butchers, etc. It is not intended for the mass production of food.
- Before proceeding with the installation and start-up of the fryer you must read the instruction manual and in particular the chapter concerning the security norms.
- The installation of this fryer must be carried out by qualified and expert personnel.
- This appliance must only be used for the purposes for which it is expressly designed, namely the deep-frying of food in oil, together with the basket containing the food. Any other use shall be deemed improper, hazardous and not recommended.
- This fryer **MUST NOT** be used for cooking with water, or for any other purpose other than that for which it has been specifically designed. The fryer can be turned on with the tank filled of water only for the cleaning function described in §5.6
- When cooking food, check that the oil level never drops below the minimum level stamped on the container as this could lead to the risk of fire.
- Never let the oil get too old - always replace completely with fresh oil. Old oil reduces the flash point and increases the tendency to boil suddenly.
- Take special care when cooking bulky or undrained food as the oil could boil suddenly when these are placed in the fryer.
- With regard to airborne noise emissions produced by the fryer, the weighted sound pressure level A is less than 70dB(A).
- Do not use direct high pressure jets of water or a steam cleaner to clean the appliance.
- Always place a warning sign with the words “wet floor”  whenever the immediate area cannot be cordoned off.

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In case of in observation of the norms hereby listed, by both final user and installer, the producer declines any eventual responsibility for accidents or faults caused by mentioned inobservances. The producer declines any responsibility for eventual wrong transcriptions or printing mistakes, and reserves to apply the necessary or useful modifications, without major changes of the basic features.

KEY TO SYMBOLS



Read the instructions



Caution: hazard for personal / machine safety



Equipotential terminal



Wet floor

1. General

This appliance is equipped with following technical documents:

- "INSTALLATION AND USE" manual including the wiring diagram;
- Declaration of Conformity to EC Directive.

The instructions contained in this manual provide important information regarding safety for installing, operating and maintaining the appliance. The manufacturer recommends that this manual be carefully stored in the work area where it can be consulted by technicians and operators. Installation must be carried out according to the manufacturer's instructions and by professionally qualified and expert persons.

This appliance must be connected to supply mains through a main switch only.



Never leave packaging (plastic bags, metal clips, etc.) within reach of children since it can be dangerous. Install the electrical lines in the operating area according to the instructions given in the ratings plate inside the door. Carefully read the instructions contained in this booklet: they provide important information regarding operating safety and cleaning. Store the booklet properly.



This appliance is designed only for the function for which it is specifically conceived: to fry food in oil as the basket that carries them. Any other use should be considered as improper and dangerous.



The appliance must only be used by persons that are properly trained to use it. A few basic rules must be observed when using the appliance:

- The unit must not be removed from its original location;



- Read the instructions before using the fryer.

- Never clean with corrosive products, acids, steel wool or steel brushes;



- Never wash the appliance with direct or high pressure jets of water;
- Every day, at the end of the work cycle, turn the appliance off using the main switch installed upstream from the appliance.

The machine complies with the following norms:

- about accidents prevention and fire prevention
- about the installation of gas machines
- about hygiene

2. Installation



The installation has to be made by qualified operators, provided by the producer or an authorized personnel, or by the technical staff of the gas company.

The authorized personnel taking care of the installation and electrical connection must adequately instruct the user about functioning, maintaining and safety.

The installer will also have to make practical demonstrations about the use and will have to provide the written instructions given along with the machine itself.

The installation and electrical connection may be made in compliance with the existing norms.



The instructions have to be fully read and understood, especially the ones referring to safety, before the machine start.



The machine is for professional purpose only and must be used by trained personnel.



Before any connection to make sure that:

- all the dismantlable elements are in a correct position and properly calibrated if during transportation any variation of the default setting may have occurred.
- Fryer must be perfectly balanced and leveled (the machine "legs" may be regulated according to the situation)

The machine dimensions and the connection points with the electrical and gas systems are shown in chapter 11 and 12.

2.1. Place of installation

The fryer is an apparel of type A and therefore the installation place has to comply with the local requisites regarding ventilation and airing.

2.2. Gas connection

Before any connection make sure that the gas feeding pressure is adequate to the fryer functioning and that the gas type selected corresponds to the provision of the machine (see the plate aside).

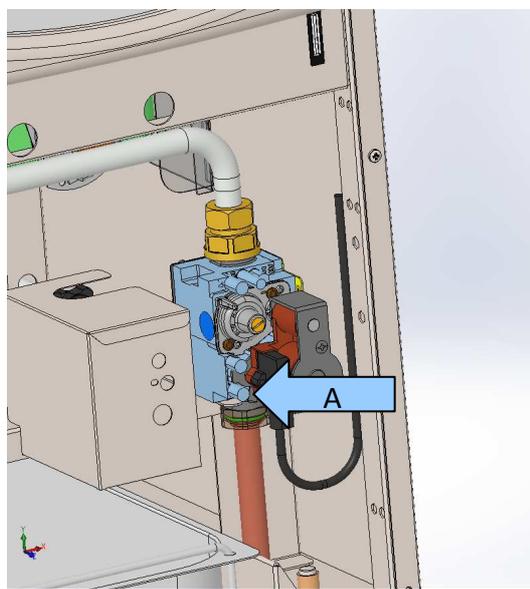
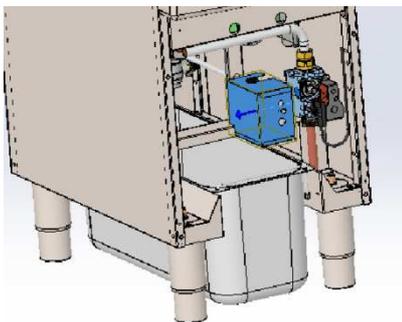
The fryer is equipped with a G ½ diameter connection and has one end prepared to insert a gasket seal. Check the pressure of the incoming gas, paying attention to the losses of the distribution network; possibly place a stabilizer or a gas pressure

regulator so that the inlet pressure to the fryer is not greater than that specified on the nameplate affixed to the same .
Upstream of the equipment shall be fitted a quick-closing shut-off valve placed in an easily accessible place.
The fryer can be installed using flexible or rigid pipes . If you use the flexible tube, this must be a regulat and approved type.
The connection must always be made with 3-piece-fittings, in order to facilitate disassembly. Piping should be of copper or galvanized metal, placed in plain view. Hoses can be used if they are of stainless steel.
After making the connections, check the tightness of the connection points using a spray foam.

2.3. Checking the gas pressure

The supply pressure can be measured with a U-shaped manometer tube or a electronic manometer with a minimum resolution of 0.1 mbar

- Open the front door
- Remove the valve cap gas
- Undo screw "A" (used to pressurize the gas valve)
- Connect the pressure gauge
- Turn on all gas appliances in the installation site
- Turn on the burners and check that the pressure specified is the one stated listed in chapter 11
- Turn off the equipment and all appliances turned on to perform the test
- Remove the manometer, tighten the screw "A" of the pressure measuring point and check that there are no gas leaks

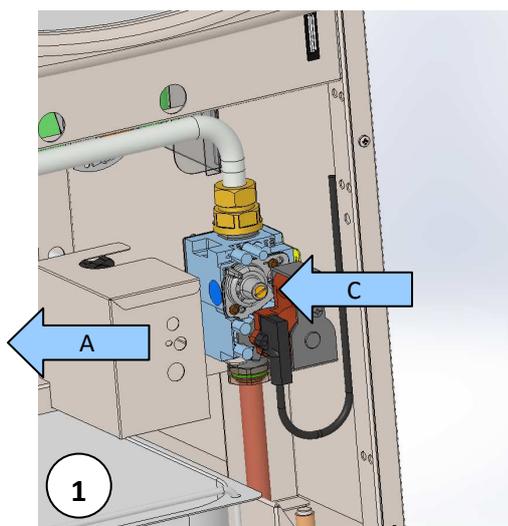


2.4. Instructions on how to convert the gas type

Original parts must always be used when converting the deep fryer to a different gas type and for any repairs. The machine should only be modified if converting from a '2nd family' gas to a '3rd family' gas and vice-versa (UNI EN203-1/2005).

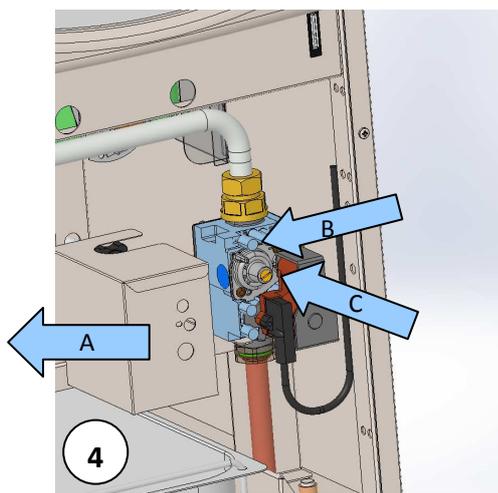
2.4.1. From G20 (natural gas) to G30/G31 (LPG):

- Open the door at the front
- Remove the gas valve protection "A"
- Unscrew the cap covering screw "C"
- Tighten screw "C" as far as it will go (without using excessive force)
- Return the cap covering screw "C"
- Unscrew the existing nozzles and replace them with those supplied in the kit for G30 / G31 (pic. 2)
- Screw on the air control square provided in the kit and adjust, leaving a 3mm gap between this and the burner (pic. 3)
- Return the gas valve protection
- Close the front door



2.4.2. From G30/G31 (LPG) to G20 (natural gas):

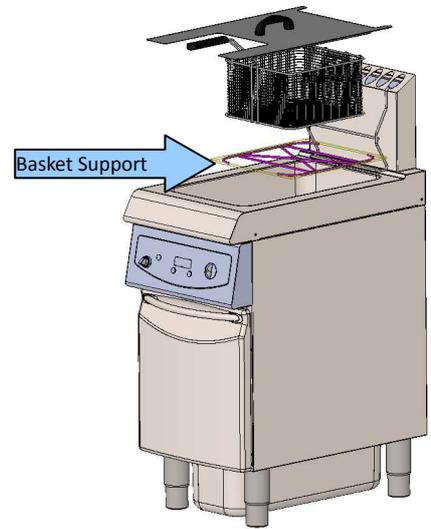
- Open the door at the front
- Remove the gas valve protection
- Remove the air control square
- Unscrew the existing nozzles and replace them with those supplied in the kit for G20
- Undo screw "B" (used to pressurise the gas valve)
- Connect the pressure gauge
- Switch on all the gas devices in the installation area
- Undo the cap covering screw "C" (used to pressurise the gas valve)
- Light the burners
- Open screw "C" gradually until the pressure indicated on the pressure gauge matches that indicated in Chapter 11
- Return the cap covering screw "C"
- Tighten the screw "B"
- Return the gas valve protection
- Close the front door



Warning: at different gas adjustments must be performed by authorized personnel Elframo S.p.A. and equipped with the appropriate equipment.
Once converted, the relevant gas conversion sticker (found in the spare-parts kit accompanying the machine) **MUST** be stuck in the relevant space on the serial number plate.

3. Warnings

This equipment should only be used for professional use by trained personnel. It is a deep fryer and should only be used as such, filling the tank with oil / fat suitable for frying foods placed in the baskets .
The fryer **MUST NOT** be used for cooking with water, or for any purpose other than that for which it is designed .
The placement of the fryer and possible adaptation to a different type of gas must be carried out only by authorized installers .
Before using the deep fryer is necessary to clean the tank and the baskets from industrial protective . After cleaning, make sure that the basket support is in its correct position.



3.1. Maximum load product

The recommended maximum load of product (referring to frozen potatoes) is:
NG-M 200
For models with half baskets **500 g**
for models with full basket **1.000 g**

The values quoted are per single basket

4. Preparation of the fryer

Fill the tank with oil to the max level mark shown on the rear inside wall of the tank.
Never exceed the maximum limit, add oil if the level is below the minimum limit.
Never start the fryer without first filling the tank .

Nominal capacity:
NG-M 200 20 litri

Notes:

- During cooking, check that the oil level never falls below the minimum level as this may cause a fire hazard.
- Do not let the oil get too old, replace it entirely with fresh oil. The old oil reduces the flame temperature limit and increases the tendency to suddenly boil. In this regard, we recommend to transfer the oil from the tank into the collection bin at the end of the day, located in the lower cabinet, and transfer it back in the morning (see point 6). This operation allows the cleaning of the tank at the end of each day, and deposit of food particles on the bottom of the oil collecting bin thus maintaining a cleaner cooking oil.
- Pay particular attention to the cooking of bulky or not drained food because their immersion in hot oil causes a sudden boiling .



Never attempt to move the deep fryer when its tank is filled with oil.



Empty the tanks of deep fryers installed on vehicles before moving these; alternatively, use the optional lids to cover these.

4.1. Display

The display on the deep fryer has a selector switch (O – I), a knob for adjusting the temperature and three LED indicators.



ON/OFF selector switch (O – I)



Temperature control

5. Operation

5.1. Ignition

To turn the machine on, simply turn the ON/OFF selector switch  to **position I**: the power indicator (LED 1) lights up, indicating that the machine is connected to the electricity line and that there are no active alarms. Turn the temperature control

knob  to the required temperature: the operating indicators (LED 2 and LED 3) light up, indicating that the burners are heating the oil.

5.2. Changing the set point temperature

You can change the temperature for each stage in the cycle by turning the temperature control knob  to the required temperature. If using fat instead of oil, we recommend heating this up gradually.

5.3. Cooking

Once the oil/fat has reached the required working temperature, the two operating indicators (LED 2 and LED 3) go off. You can now start cooking your products. Make sure you do not exceed the maximum loads, as set out in paragraph 3.1 above.



CAUTION: Once the food is cooked, do not knock the basket against the flue, but gently place it on the draining board.

5.4. Shutdown

After using the fryer, switch the burners off by returning the temperature control knob  to the position marked “°C” and then turn the ON/OFF selector anti-clockwise to position O.



CAUTION: The control circuit board will not give the consent needed to switch the machine on if the temperature control knob is not in the “°C” position when you attempt to turn the machine on.

6. Emptying the tank

This must always be done while the fryer is off and the oil is cold.

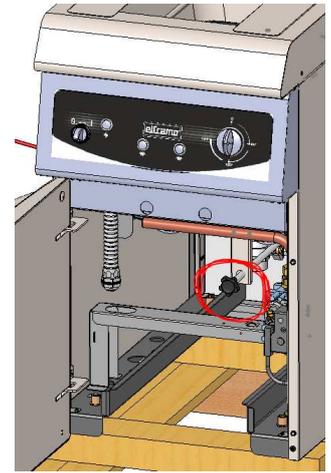
Open the machine door.

Check that the bin used to collect the oil or the water used to clean the tank is positioned correctly in the bottom section.

Pull the draining tap lever towards you so that the oil/water flows into the container below.

Once the tank has drained completely, close the drain tap by pushing its lever back inside the machine.

Then make sure that the tap closes properly and that there are no leaks during operation.



7. Cleaning the appliance

The stainless steel parts should be cleaned daily with a damp cloth with warm soapy water or mild detergent and then rinsed thoroughly. Never use acid or aggressive detergents.

Never use direct jets of water to prevent harmful infiltrations into the equipment.

Do not clean the stainless steel with mops, rags or wire brushes, since they may deposit iron particles and cause spots of oxidation.

7.1. Routine maintenance

We recommend cleaning both the cooking tank and the bodywork every day.

Check that the intake filter on the electrical box is free (not clogged up); if this is not the case, clean the grille by brushing this from the outside and remove any dust with a damp cloth.



7.2. Periodic maintenance (every 2/3 months)

If the fryer is left idle for a long time, pass on the entire steel surface a dampened cloth with vaseline oil in order to apply a protective veil.

7.3. Rinse Cycle

We recommend regularly running a "wash cycle" to degrease the tank thoroughly.

After draining the oil tank and removing any residual scraps, fill the tank with water and add some non foaming dishwasher detergent.

Start the wash cycle by turning the ON/OFF selector  clockwise to **position I** and then turning the temperature control

knob  to get a temperature of roughly 100 °C.

Wait until the water starts boiling and then allow it to boil for at least 10 minutes.

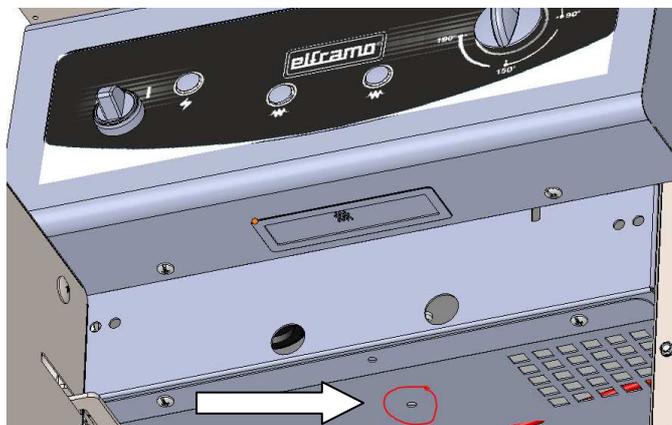
After 10 minutes, return the temperature control knob to the "°C" **position** and then turn the ON/OFF selector  anti-clockwise to **position O**. Wait until the water in the tank has cooled down and then drain the tank thoroughly. Rinse the tank with clean water.

8. Troubleshooting

Below is a list of the problems that might arise, together with their respective causes and remedies.

If, after following the instructions below, the problem still persists, **we recommend you contact your reseller, a qualified fitter or the manufacturer and explain your problem.**

Description	Cause	Remedies
No power supply	The electrical power cable is not connected.	Plug the machine into the electrical socket.
	ON/OFF selector in position O	Turn the ON/OFF selector to position I and set the required temperature.
The oil does not heat up	The temperature control knob is in position "°C".	Turn the temperature control knob to "190 °C".
LED 2 and LED 3 will start flashing at a frequency of 2 Hz	The temperature control knob was not in the "°C" position when you attempted to switch the machine on	Turn the ON/OFF selector to position O. Turn the temperature control knob to the "°C" position. Turn the ON/OFF selector to position I. Turn the temperature control knob to the required position.
	The machine is not connected to the gas circuit	Connect the machine to the gas circuit, open the check valve and then repeat the switching-on procedure.
	The machine is fitted with the wrong nozzle type	Replace these with the correct nozzles (see paragraph Instr).
	The gas pressure is too low	Check that the gas pressure is high enough (see paragraph Checking the gas). If using a gas cylinder, make sure that it is not empty.
	Blocked nozzles	Remove the nozzles, clean them or replace them and then return to the machine.
The burners do not ignite	Incorrect circuit board/burner connection	Check all the electrical connections are correct. Check for any electrical discharge.
The oil does not heat up Safety thermostat activation (LED 1 does not light up when the ON/OFF selector is in position I)	The oil temperature is higher than 205 °C	Wait for the oil temperature to drop to 170 °C and then reset the safety thermostat (at the bottom of the electrical box) by pressing this firmly (see image under this table).
	The oil level in the tank has dropped below the min level	Top up with enough oil or fat to reach the min or max level indicated on the tank. Reset the safety thermostat at the bottom of the electrical box (see the image under this table).
The oil temperature does not correspond to the set value.	There is a problem with the thermostat	Check the electrical connections for the control thermostat; replace the thermostat if necessary
	Thermostat probe not connected correctly	Check the electrical wires connecting the probe to the thermostat. Make sure the probe is sitting correctly in its seat.



9. Key to LED 2 and LED 3

LED Action/Warning	Status
LED on and stable	Burner ignited
LED flashing at a frequency of 2 Hz	Problems in igniting the burner
LED flashing at a frequency of 2 Hz	Flame persists for more than 6 seconds without disappearing; burner is faulty.
LED flashes on for 3 sec / off for 1 sec	Fryer has been working non-stop for more than 6 hours
LED flashes on for 3 sec / off for 1 sec	The circuit board has detected that the room temperature is too high (T> 80 °C) (reset the warning to T<70 °C)

10. Approximate time and temperature for industrial frying

The following table shows the temperatures and frying times, considered optimal for cooking some of the foods used in our kitchens.

PRODUCTS	TEMP. °C	TIME (min)
Fresh potatoes	175-180	5-6
Frozen potatoes (pre-cooked)	180	3-4
Frozen breaded mushrooms	175-180	2-3
Fresh eggplant breaded	175-180	3-4
Fresh shrimp breaded	180-185	3-4
Frozen shrimp breaded	180-185	3-4
Frozen cuttlefish breaded	175-180	1,5-2
Fresh fish fillet breaded	175-180	3-4
Frozen fish fillet breaded	175-180	4-5
Pork cutlets breaded	175-180	4-5
Veal cutlets breaded	175-180	3-4
Fresh chicken breaded	180-185	10-15
Frozen chicken breaded	175-180	6-8
Frozen chicken breasts breaded	175-180	3-4

The table below shows the critical temperatures of the various oils used for frying and fats (smoke point)

PRODUCT	TEMP. °C
Groundnut oil	198
Cottonseed oil	230
Sunflower oil	170
Corn oil	163
Coconut Oil	138
Olive oil	175
Soybean oil	130
Margarine	140
Butter	161
Lard	196

It was not possible to obtain data on various seed oils , it will probably have characteristics equal to or less oils described above .

NB . : From the tables described above oils capable of withstanding temperatures of baking fried foods are few. It is recommended to inquire at the time of purchase on the thermal characteristics of the oil to be used.

11. Technical data

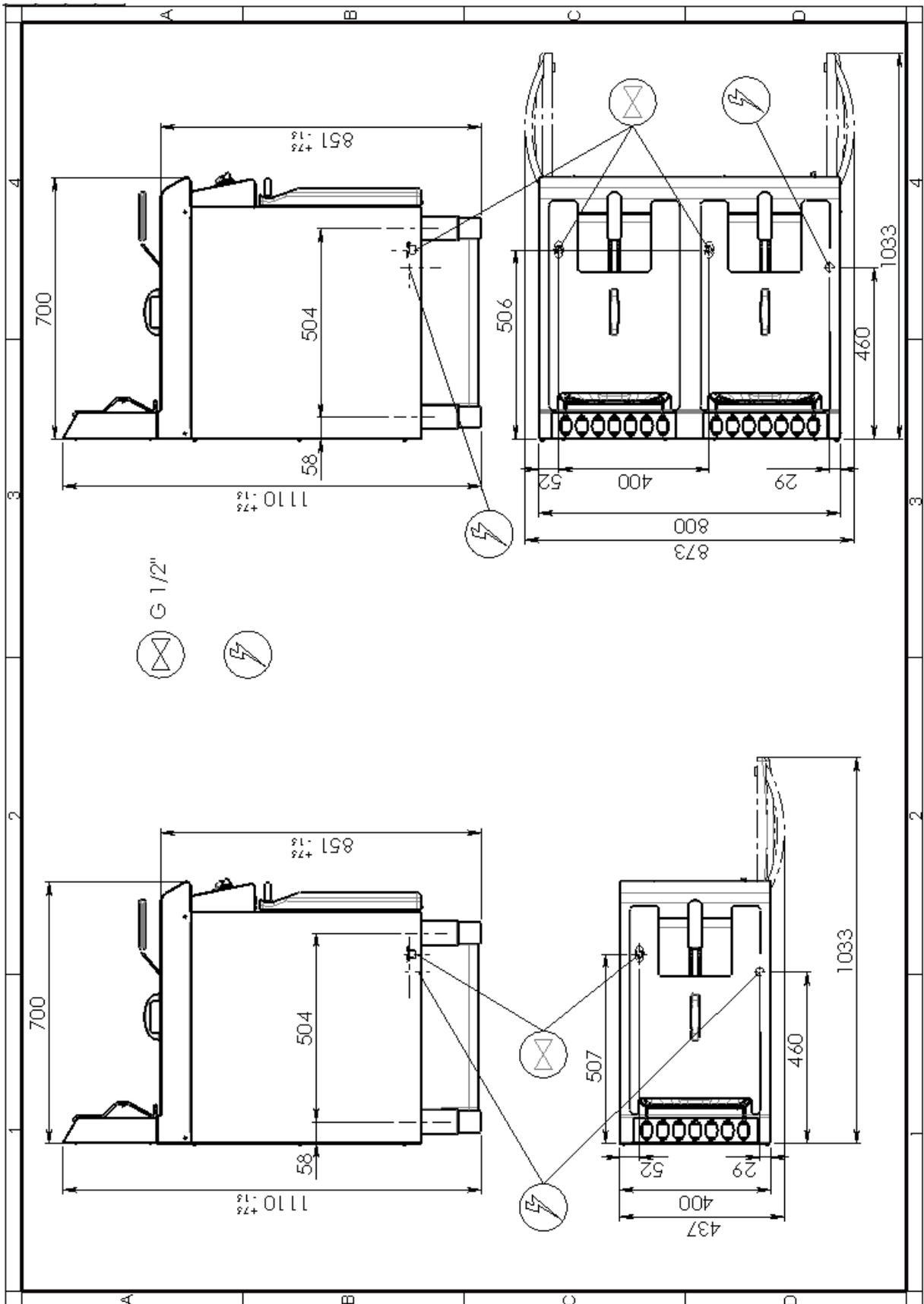
Modelli - Models - Modelle - Modelos			NG-M 200	NG-M 200+200
Tipo - Type - Bauart			A1	
Potenza nominale - Nominal thermal power - Nominal Wärmeleistung - Potencia tèrmica nominal (kW)			15	2x15
Consumo gas	G30	kg/h	1,182	2x1,182
Gas consumption	G31	kg/h	1,165	2x1,165
Gasverbrauch	G20	m ³ /h	1,586	2x1,586
Consumo de gas	G25	m ³ /h	1,845	2x1,845
Livello nominale della vasca - Nominal tank level - Nennstand des Beckens - Nivel nominal de la cuba (l)			20	2x20
Capacità bacinella scarico olio - Oil drain capacity Fassungsvermögen Öl-Ablass-Behälter - Capacidad cubeta de descarga aceitea (l)			23	2x23
Bruciatore principale - Main burner - Brûleur principal Hauptbrenner - Quemador principal G20 11 mbar			2x230	4x230
Bruciatore principale - Main burner - Brûleur principal Hauptbrenner - Quemador principal G20 20 mbar			-	-
Bruciatore principale - Main burner - Brûleur principal Hauptbrenner - Quemador principal G30/G31 28-30/37 mbar			2x130	4x130

Categoria di appartenenza - Category - Kategorie - Categoria

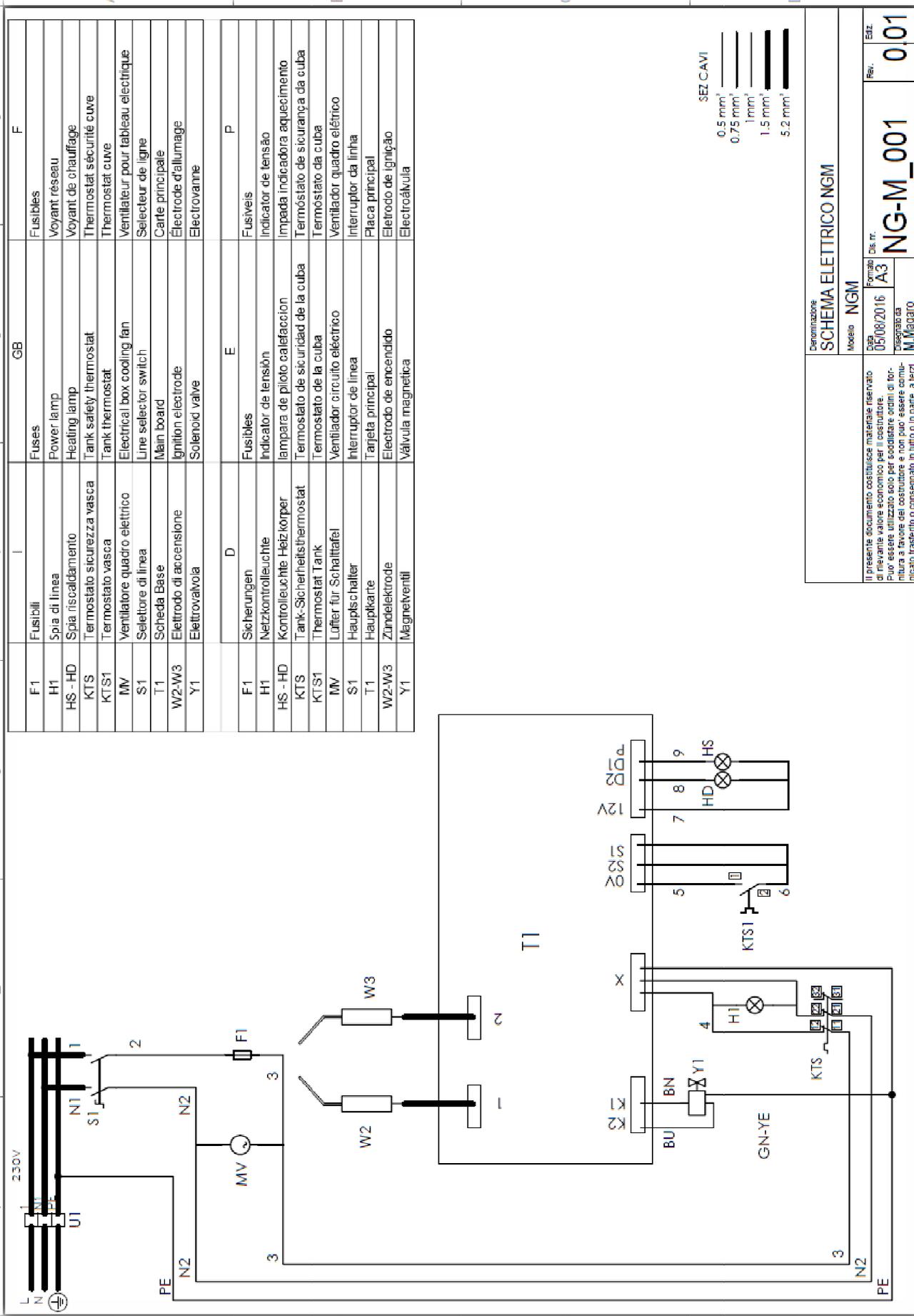
CAT/KAT	GAS/GAZ	G30	G31	G20	G25	Country
II _{2h3+}	p(mbar)	28-30	37	20	-	IT - PT IE - GR GB - ES CY

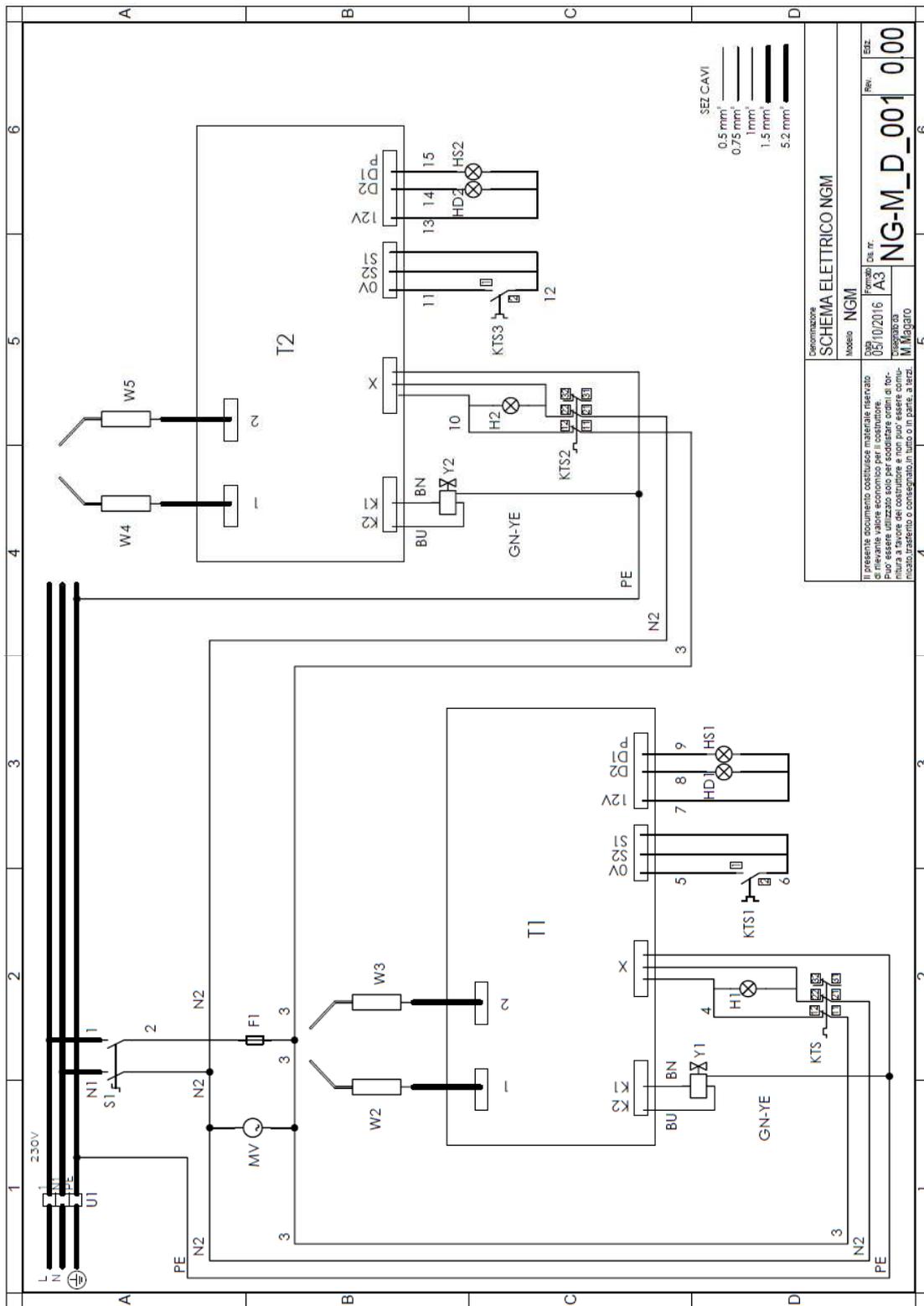
I diametri degli ugelli sono espressi in 1/100mm - The diameter of the nozzles are indicated in 1/100mm
Diameter der Düsen ist in 1/100 mm angegeben - Los diámetros de las boquillas se indican en 1/100mm

12. Dimensions



13. Electric diagram





Schema SCHEMA ELETRICO NGM	
Il presente documento costituisce materiale riservato al rilevante valore economico per il costruttore. Può essere utilizzato solo per soddisfare ordini di fornitura a favore del costruttore e non può essere comunque trasferito o consegnato in tutto o in parte, a terzi.	Data 05/10/2016
Modello NGM	Foglio di n.° AS
Rev. 0100	

	I	GB	F	D	E	P
F1	Fusibili	Fuses	Fusibles	Sicherungen	Fusibles	Fusveis
H	Spia di linea	Power lamp	Voyant réseau	Netzkontrolleuchte	Indicador de tensión	Indicador de tensão
HS - HD	Spia riscaldamento	Heating lamp	Voyant de chauffage	Kontrolleuchte Heizkörper	Lampara de piloto calefacción	Impada indicadora aquecimento
KTS / KTS2	Termostato sicurezza vasca	Tank safety thermostat	Thermostat sécurité cuve	Tank-Sicherheitsthermostat	Termostato de seguridad de la cuba	Termostato de segurança da cuba
KTS1 / KTS3	Termostato vasca	Tank thermostat	Thermostat cuve	Thermostat Tank	Termostato de la cuba	Termostato da cuba
MV	Ventilatore quadro elettrico	Electrical box cooling fan	Ventilateur pour tableau électrique	Lüfter für Schalttafel	Ventilador circuito eléctrico	Ventilador quadro eléctrico
S1	Selettore di linea	Line selector switch	Selecteur de ligne	Hauptschalter	Interruptor de línea	Interruptor da linha
T	Scheda Base	Main board	Carte principale	Hauptkarte	Tarjeta principal	Placa principal
W	Elettrodo di accensione	Ignition electrode	Electrode d'allumage	Zündelektrode	Electrodo de encendido	Elettrodo de ignição
Y	Elettrovalvola	Solenoid valve	Electrovanne	Magnetventil	Válvula magnética	Elettroavulva



RAEE-INFORMATION FOR USERS

under the terms of art. 13 of legal decree 25/07/2005, n. 151 " Application of directives 2002/95/CE, 2002/96/CE and 2003/108/CE, regarding the reduction of usage of hazardous substances in electric and electronic equipment and the waste disposal"

The illustrated symbol attached to the appliance indicates that the device has to be disposed separately from other waste at the end of the life cycle.

The separate collection of the present appliance is organized and managed by the manufacturer. The user that wants to dispose of the appliance may contact the manufacturer for information on the disposal system introduced by the manufacturer to allow the separate collection of the appliance.

Illegal disposal of the appliance by user will lead to application of the fines provided for in the national transposition of the valid directive



ELFRAMO SPA

via Verga, 24 / 26 / 28

24127 Bergamo Italy