ggmgastro
INTERNATIONAL

TECHNICAL INSTALLATION INSTRUCTIONS
USE AND MAINTENANCE INSTRUCTIONS

INDEX

1. TECHNICAL INSTALLATION INSTRUCTIONS

This manual contains all information needed to install and maintain this device appropiately. Keep this manual in a safe place for consultation in future, if necessary.

Installation and connection as well as conversion to another type of gas must be done by qualified staff following the warnings indicated on the labels sticked on the device and packing.

This equipment is made for professional use and for qualified personnel only.

In case of breakdown please contact an authorized technician and use only original spare parts.

2. MAIN DIMENSIONS

3. TECHNICAL DATA

Chart 1: Dimensions

MODEL	EXTERNAL DIMENSIONS			WEIGHT
	Lenght (mm)	Depth(mm)	Height (mm)	(Kg)
EON20	835	835	1410	85

Chart 2: Categories. Gases and pressures.

COUNTRIES	CATEGORY	GAS	PRESSURES
AT, CH, CZ, DK, EE, ES, FI, GB, GR, IE, IT, LT, LV, NO, PT, RO, SE, SI, SK	I2H	G20	20 mbar
DE, LU, PL, RO	I2E		
BE, FR	I2E+	G20	20 (25) mbar
NL	I2L	G25	25 mbar
CY, DK, EE, FR, HU, IT, LT, NL, RO, SE, SI	I3B/P	G30, G31	30 mbar
AT, CH, CY, CZ, DE, FR	I3B/P	G30, G31	50 mbar
BE, CH, CY, CZ, ES, FR, GB, GR, IE, IT, LT, PT, SI	I3+	G30, G31	28-30, 37 mbar
CY, DK, EE, FI, IT, LT, RO, SE, SI, SK	II2H3B/P	G20 / G30, G31	20 mbar / 30 mbar
AT, CH, CY, CZ, SK	II2H3B/P	G20/ G30, G31	20 mbar / 50 mbar
CH, CY, CZ, ES, GB, GR, IE, IT, LT, PT, SI, SK	II2H3+	G20 / G30, G31	20 mbar / 28-30, 37 mbar
NL, RO	II2L3B/P	G25 / G30, G31	25 mbar / 30 mbar
DE, RO	II2E3B/P	G20 / G30, G31	20 mbar / 50 mbar
FR	II2E+3B/P	G20 / G30, G31	20 (25) mbar / 30, 50 mbar
BE, FR	II2E+3+	G20 / G30, G31	20 25) mbar / 28-30, 37 mbar

(1) : Provided with a nozzle according to ISO 228-1

Chart 3: Injector's diameters (hundredths of mm) and consumptions.

MODEL	HQ-04 DIAMETER 1/100 mm			
Main Burner Liquid Gas GLP G30/G31 at 28-30/37 mbar	160			
Main Burner Liquid Gas GLP G30 at 50 mbar	130			
Main Burner Liquid Gas GLP G31 at 50 mbar	150			
Pilot burner Liquid Gas GLP G30/G31 (3ª Family)	020			
Main burner Methane Gas G20 at 20mbar	240			
Pilot burner Methane Gas G20/G25 (2ª Family)	035			
GAS CONSUMPTIONS (1) (2)	**Max**	**Min**		
	10.0 kW	**4.46 kW**	**5.5 kW**	**6.1 kW**
G 20 (Nm^3/h)	1.06	0.47	X	X
G 25 (Nm^3/h)	1.23	0.55	X	X
G 30 (kg/h) at 28-30 mbar	0.64	0.35	X	X
G 31 (kg/h) at 37 mbar	0.63	0.34	X	X
G 30 (kg/h) at 50 mbar	0.86	X	0.57	x
G 31 (kg/h) at 50 mbar	0.85	X	x	0.55

(1): All consumptions include the pilot burner

(2): Hi consumption.

Chart 4: Nominal pressure, maximum and minimum.

GAS TYPE	PRESSURE (mbar)		
	NOMINAL	MINIMUM	MAXIMUM
G 20	18 20	15 17	23 25
G 20 + G 25	20/25	15	23/30
G 30/G 31	30	25	35
G 30 + G 31	28-30/37	20/25	35/45

4. INSTALLATION

Installation must to be done by qualified persons following the installation norms that are in force locally and according to the instructions of the gas supplying company.

Install the device in a draughty place to avoid unacceptable concentrations of substances harmful to health.

Remove the protective stainless steel plate to have access to the control of the components.

Before proceeding with the installation and start-up of the device, read attentively the instructions of this manual and in particular the norms related to security.

This device is intended for professional use and it has to be used by trained persons.

Before connecting the device, check first:

a) That all removable parts are in the correct position. If some part moved during transport, first readjust it.

b) That the support bench is levelled correctly.

4.1. PLACE OF INSTALLATION

Install the device in a location where adequate combustion and ventilation air are available. Respect the norms that are in force concerning this matter locally.

A minimum of 150mm should be maintained between the fryer and any combustible material.

Install this device individually or integrated in other Gas kitchen furniture.

4.2. ELIMINATION OF COMBUSTION PRODUCTS

This is a **Type A_1** device. The device should not necessarily be connected directly to an exhaust duct outwards.

Considering this device's working characteristics, consumption and working temperature, it's necessary to install the device near to a ventilation hood to assure a perfect elimination of combustion gases. Combustion residues should be eliminated directly or indirectly by a hood to prevent unacceptable concentrations of residues harmful to health.

This device needs an AIRFLOW of 100m3/h for a correct combustion and elimination of combustion residues.

4.3. CONNECTION TO THE GAS INSTALLATION

Before connecting the device, first consult the gas supplying company to check whether your gas network supplies the necessary pressure and flow in order to ensure a proper operation of the device.

Connection of the device to the general gas installation must always be done **by an authorized technician.**

The general installation should be provided with a stopcock. Each device should have its own stopcock in order that the rest of the installation does not remain disabled in case of failure of any of the other devices installed jointly.

This appliance is equipped with a stainless steel front panel that protects the gas valves and the elements that regulate the inlet of combustion air. Do not cover this part either entirely or partially in order to ensure a proper combustion and not to alter the combustion air inlet. Leave the upper part uncovered so as to allow a correct elimination of combustion residues.

The device is connected with a male input piece, ½" diameter, according to ISO 7-1, see fig. 1.

The gas type for which this device is configured is indicated on the front panel, next to the gas connection.

Check the gas pressure at the inlet, since pressure loss by the gas network is possible. If necessary**,** install a pressure regulator or stabilizer to prevent the inlet pressure to the fryer to exceed the pressure indicated on the plate or on chart 4 of these instructions.

Both rigid and flexible pipes can be used. If rigid pipes are used, the gas valve must be installed as close as possible to the connection of the device. In case of flexible tubes, only approved and standardized tubes may be used. (We recommend to use flexible stainless steel tubes (AISI 316) manufactured according to norm UNE 60713.)

Connect the device as follows:

a) Make sure that there is no flame around.

b) Connect the device to the gas network according to the norms in force and check with a manometer or soapy water that the connection is leakproof. Never use a flame to verify if there are leaks. Should there be a gas escape anywhere, close the gas valve and repair. Test again until the connection is leakproof.

4.4. OPERATION CONTROL

- **Control of the nominal caloric consumption.**

When the installation is new, or when the machine is converted to a different type of gas than that for which the device was prepared for initially and after each maintenance operation, an authorized installer of the gas supplying company should check the nominal caloric consumption of the device.

The nominal caloric consumption for each burner is indicated on chart 3.

Install a meter to measure the gas flow according to the values indicated on chart 3.

- **Control of the input pressure**

Check whether the device is regulated for the type of gas to be used. Verify the information on the characteristics plate of the device or on chart 2 of these instructions. In case the gas type is different, make the conversion following the indications of chapter 7.

Measure the pressure of the device with a “U” manometer with a minimum resolution of 0,1 mbar at the gas input connection. If the pressure is not between the values indicated on chart 5, do not start the device. Report your gas supplying company on this.

- **Primary air control.**

Charachteristics of the burner flame.

The flame has to be stable, dark blue and should hardly have yellow extremities. If you observe that the flame has yellow extremities, this means that primary air is failing. Regulate the primary air flow by moving the air regulation tube towards the burner. Otherwise, if the flame comes off the burner or the flame base is not stable, move the air regulation tube in the opposite direction.

- **Operation control.**

Start up the machine according to the instructions.

- Check the tightness of the gas circuit.
- Check the ignition and quality of the flame.

5. TECHNICAL MAINTENANCE.

The maintenance of this device has to be done by an authorized installer, by the manufacturer or by the gas company.

It’s advisable to do a general control of the device at least once a year. Check:

a) The tightness of the gas circuit. Replace joints if necessary.

b) The ignition system or pilot burner and thermocouple.

c) Do not grease the gas valves, as mentioned under point 6.4.

d) If flexible tubes are used, check the expiry date and replace if necessary.

6. INSTRUCTIONS FOR REPLACEMENT OF COMPONENTS.

This operation may only be done by an authorized installer or by the manufacturer's staff.

6.1. PARTS LIST.

Most important parts to assure a correct working of the device are:

-PILOT BURNER
-THERMOCOUPLE
-THERMOELECTRIC SECURITY VALVE

Before you replace any component, always make sure that the general gas valve is closed. Also make sure there is no flame around.

6.2. REPLACEMENT OF THERMOCOUPLE

Proceed as follows:

a) Unscrew the hexagonal screw and loosen the control to remove the stainless steel front panel.

b) Loosen the nut that fixes the thermocouple to the thermoelectric security valve.

c) Loosen the clamp that attaches the thermocouple to the gas mixing tube.

d) Assemble the new thermocouple and tighten, but not more than 0,4 kp.m.

6.3. REPLACEMENT OF PILOT BURNER

Proceed as follows:

a) Unscrew the hexagonal screw and loosen the control to remove the stainless steel front panel.

b) Remove the clamp that attaches the pilot burner to the gas conducting tube.

c) Loosen the fitting of the pilot burner tube.

d) Replace the pilot burner. Torque should not exceed 0,8 kp.m.

e) Make sure that the circuit is gastight before starting the device again.

6.4. REPLACEMENT OF THERMOELECTRIC SECURITY VALVE

VERY IMPORTANT: DO NOT MANIPULATE OR GREASE THE GAS TAP. IN CASE OF BREAKDOWN OR JAMMING OF THE AXIS, THE ENTIRE VALVE MUST BE REPLACED BY AN AUTHORIZED TECHNICIAN.

Proceed as follows:

a) Unscrew the two hexagonal screws and loosen the controls to remove the stainless steel front panel.

b) Loosen the nut that fixes the thermocouple to the valve.

c) Loosen the nut that fixes the pilot burner to the valve.

d) Unscrew the four flat headed screws that fix the elbow injector union.

e) Unscrew the screws that fix the valve to the clamp of the main gas connection and loosen.

f) Assemble the new valve and replace the Klingerit joint. Tighten the main connection's flange. Torque should not exceed 2,5 kp.m.

g) Assemble the thermocouple and the pilot burner on the valve.

h) Make sure the device is completely gastight before starting it again.

7. GAS CONVERSION.

Gas conversion to another type of gas must always be done by a qualified installer, by the manufacturer's staff or by the gas supplying company.

Always use manufacturer's original spare parts for gas conversions and repairs. Follow the instructions given hereunder.

7.1. REPLACEMENT OF BURNER INJECTOR.

The device is normally regulated and prepared to operate with G30+G31 gas at pressure of 28-30/37 mbar. A conversion kit for G20 + G25 or G20 gas is included in this device.

a) Unscrew the two hexagonal screws and loosen the controls to remove the stainless steel front panel.

b) Displace the primary air regulating tube towards the ring of the burner.

c) Unscrew the injector counterclockwise, according to fig. 2

d) Replace the injector according to chart 3.

e) The injector diameter is indicated in hundreths of mm on the injector.

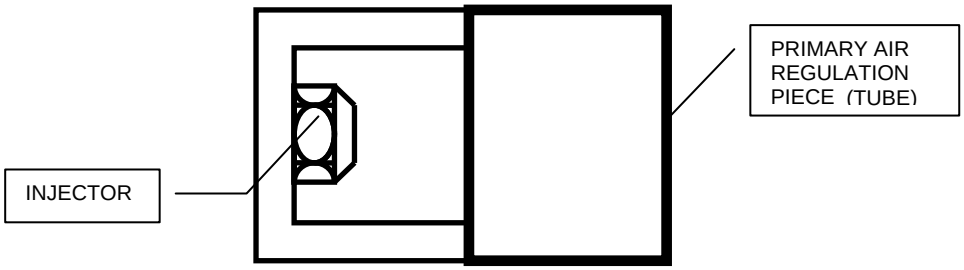

Figure 2

f) **IMPORTANT: IMMEDIATELY ATTACH THE PLATE WITH INFORMATION ON THE NEW GAS TYPE. Replacement injectors are supplied together with the corresponding informative plates.**

7.2. ADJUSTMENT OF PILOT BURNER TO NEW GAS TYPE.

a) Loosen the lower nut of the pilot burner (with a fitting spanner of 11mm).

b) Turn the internal screw with a flat tip screwdriver to the right (for a smaller flame) or to the left (for a bigger flame).

c) Screw on the lower nut of the pilot burner.

7.3. PRIMARY AIR REGULATION.

7.3.1. BURNER RING

Primary air is regulated by approaching or moving away the regulating tube. Proceed as follows:

a) Loosen screw (fig. 2).

b) Move the burner tube-like regulator with some gentle strokes until a stable flame is achieved according to the gas type installed (fig. 2 and chart 5)

c) Fix the primary air regulator with the screw.

Chart 5: Opening Primary Air Regulation

BURNER	Opening D for G 20 GAS	Opening D for G 30 + G 31 GAS (37 mbar)	Opening D for G 31 (50 mbar) GAS	Opening D for G 30 (50 mbar) GAS
BIG RING	**Maximally Open (approx. 24 mm)**	**Maximally Open (approx. 24 mm)**	**9 mm**	**Maximally Open (approx. 24 mm)**

Primary air of the pilot burner is regulated by turning the intermediate part in such a way that more or less air flows through the injector's orifice. Regulation is obtained by turning in one way or the other.

Observe the flame. An excess of primary air produces a short flame that tends to come off the pilot burner. This could hinder the ignition of the pilot injector.

The lack of primary air produces smooth and weak flames with yellow extremities due to an incomplete combustion.

7.4. BURNER REGULATION

Light the burner and keep it burning during a few minutes maximum. Then all at once change from maximum to minimum and to maximum again several times. When doing these tests, if the burner extinguishes at the minimum position or the flames are too big, then proceed to regulate the minimum by turning the thermoelectric security valve to the left to obtain a bigger flame or to the right to obtain a smaller flame.

8. PROBLEMS AND SOLUTIONS.

During normal operation of the device, problems can arise. These problems, as well as the possible causes and solutions are listed below.

- The pilot burner and the main burner do not ignite.

Verify the following:

a) Make sure the stopcock is open.

b) Check if there is gas in the network.

c) Dismantle the pressure regulator that supplies gas to the device (in case it exists) and clean the input filter. There could be an obstruction due to gas impurities.

- The pilot burner extinguishes easily.

Check if the injector is obstructed.

Clean the injectors with high air pressure only. Never use wires or sharp objects that could vary the diameter of the injectors.

If the pilot burner does not retain the flame once these tests are completed, this means that the thermocouple is too separated from the flame or the connection to the valve is loose. In this case, tighten, but not excessively to avoid damaging the thermocouple head.

- The flame is yellow.

Possible causes are:

a) The burner is dirty. In this case, clean the burner.

b) Bad primary air regulation. Follow the instruction given under point 7.3. for regulation of primary air input.

c) Obstruction in the burner injector. Clean the obstructed injector by blowing air.

For any other type of breakdown, contact our nearest After-sales Technical Service.

9. USE AND MAINTENANCE INSTRUCTIONS

9.1. START-UP.

9.1.1. SWITCHING ON THE BURNER

a) Open the stopcock located outside the device.

b) Put the selector in position pilot burner “*”. To do this, press and simultaneously turn the selector 90º to the left and light the pilot burner maintaining the selector pushed about 20 sec.

NOTE: It is possible that the first ignation takes more time when the pilot burner gas pipe is filled with air.

c) To ignite the burner, turn the selector another 90º more to the left until the maximum position. If you continue turning the selector until the minimum position power will be reduced progressively.

9.1.2. SWITCHING OFF THE BURNER.

Turn the selector from position “maximum” or “minimum” to position “*” (pilot burner). The burner will be switch off and the flame of the pilot burner will keep on burning, facilitating thus a future ignition.

If you want to switch off the burner completely, turn the selector to position “O”. At the end of the day, it’s advisable to close the gas valve of the device.

10. MAINTENANCE AND CLEANING

To assure a long duration of your burner, follow attentively the maintenance and cleaning instructions.

Clean the stainless steel surface daily with soapy temperate water. Rinse thoroughly with water and dry. Do not use abrasive products, sandy detergents, scourers or steel brushes that could scratch the surface.

Clean the burner (ring) daily with a steel brush to eliminate spilled food.

Have you technical service make regular checks, minimum once a year and preferably when finishing the main season.

Do not clean the device with direct water jets and especially the interior parts as the functional elements could be damaged.

Do not use chlorine or corrosive substances to clean the device.

Clean the orifices of the burner and pilot burner.

If the device is not going to be used for a long period of time, protect the stainless steel surface by lubricating it with vaseline oil

To ensure optimum use and safety, check the device periodically, at least once a year.

All controls must be performed by qualified staff or a technician authorized by the manufacturer.

Instructions for maintenance are indicated in chapter 5 - Technical Maintenance.