



COMBI**STAR** FX

INSTALLATION GUIDE

FX61G3

FX101G3

FX82G3

FX122G3

FX202G3

PROFESSIONALS REQUIRED:

ATTENTION : GAS FITTER

**GAS REGULATOR MUST BE
INSTALLED ON OVEN**

PLUMBING:

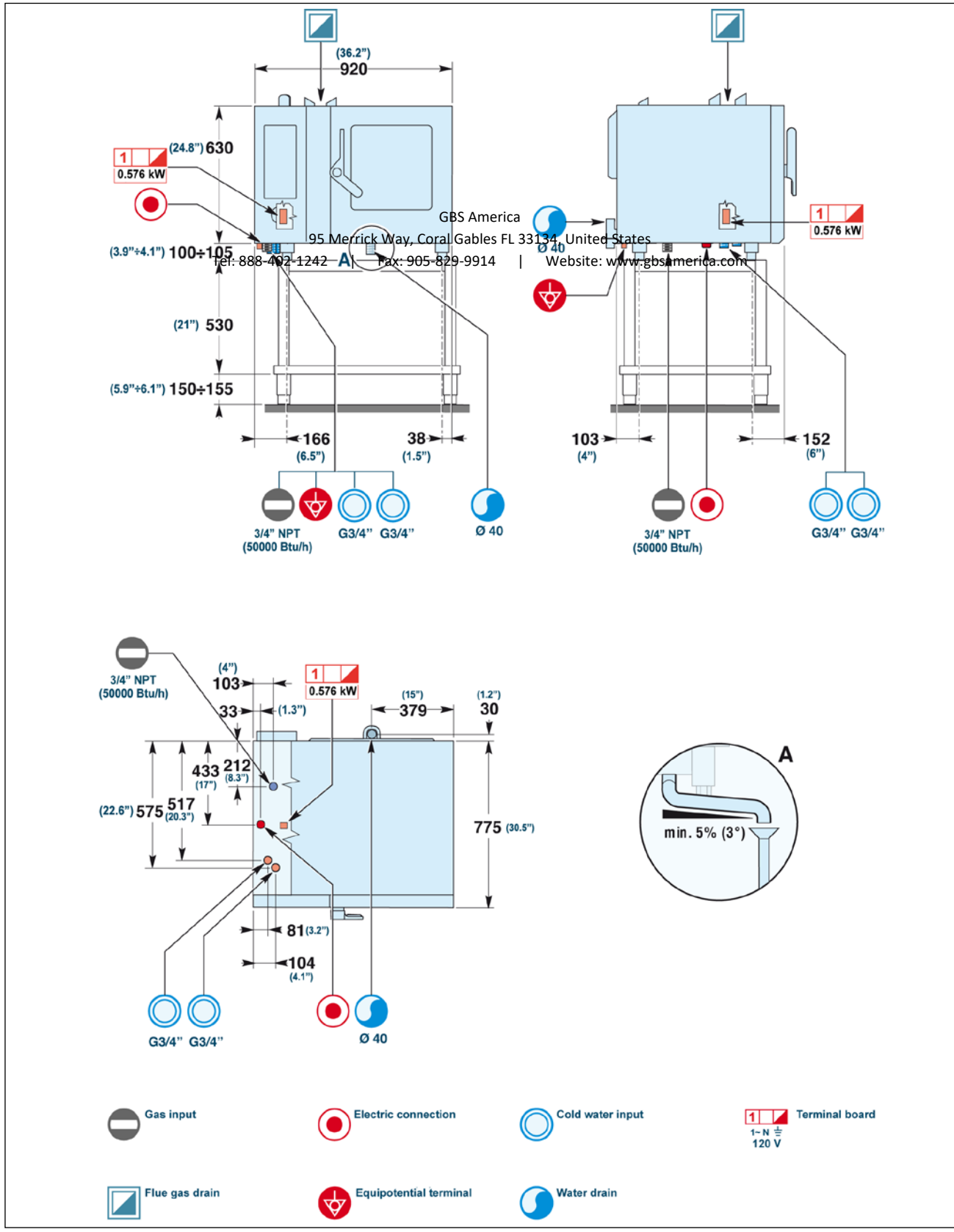
- **ALL DOCUMENTS / COMPONENTS INSIDE OVEN**
- **COPPER PLUMBING ONLY**

ELECTRICIAN

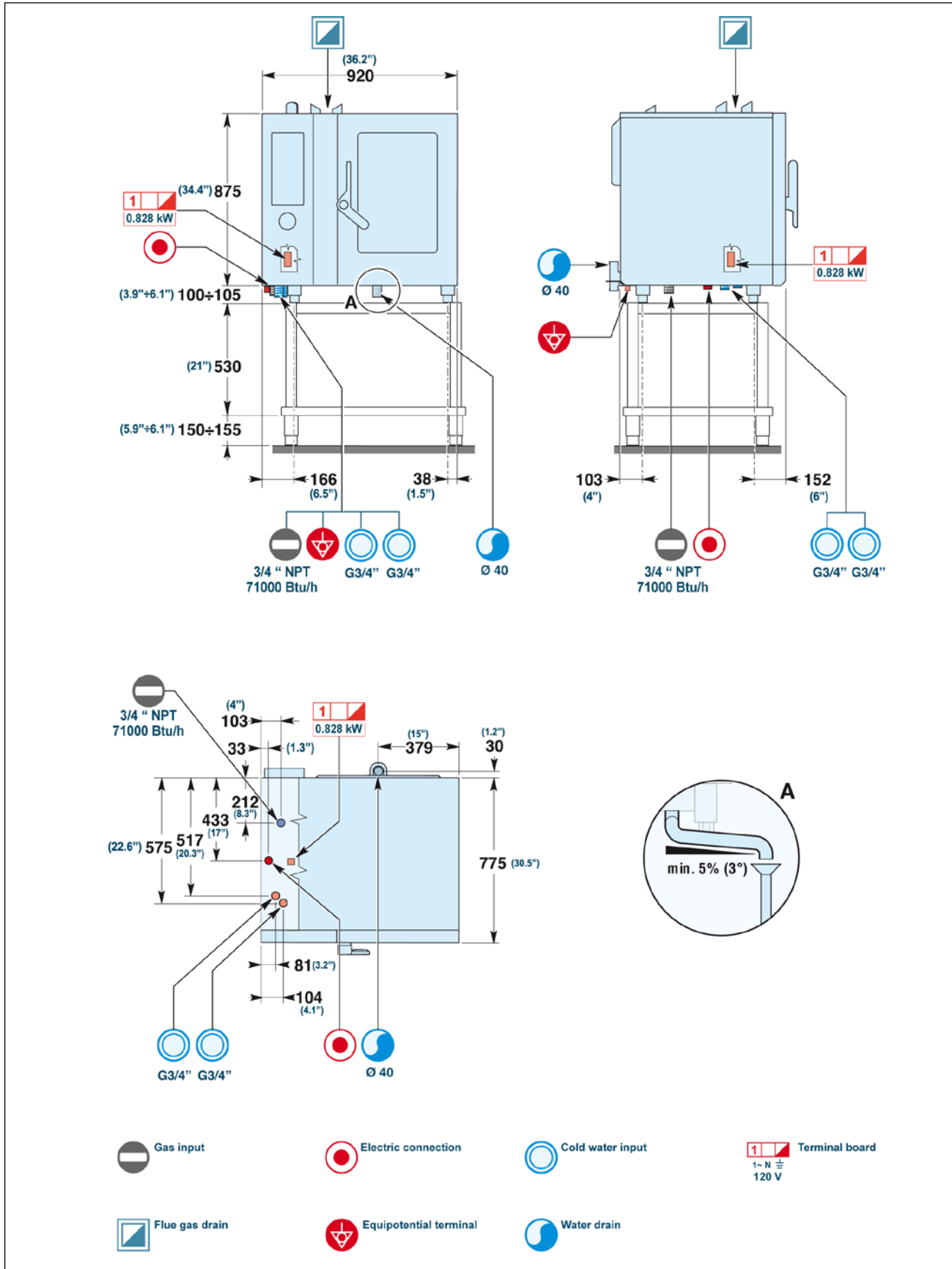
Revised August 2023

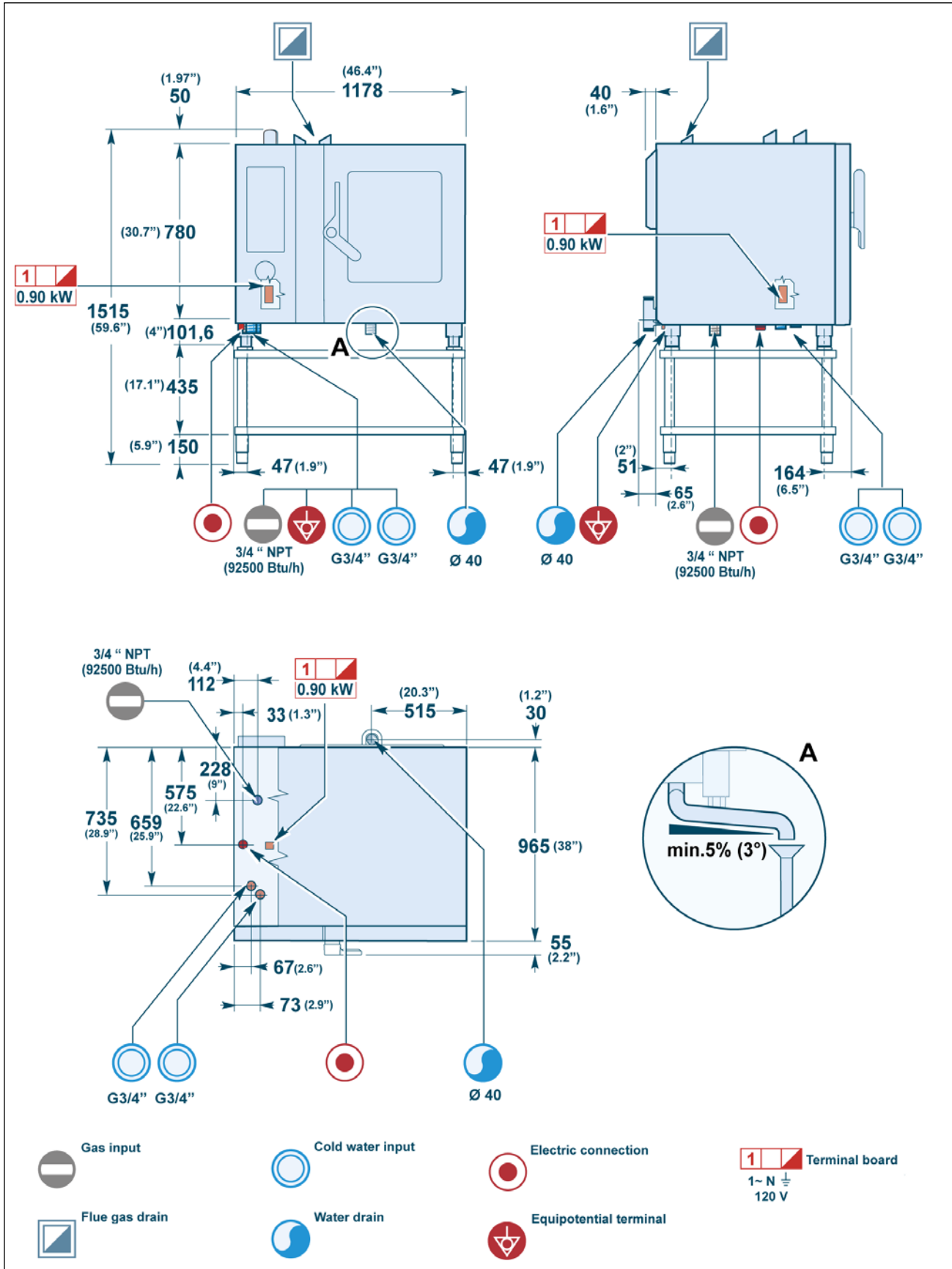
CONNECTION AND WIRING DIAGRAMS

OVEN CONNECTION DIAGRAM (MODEL FX 61 G3)

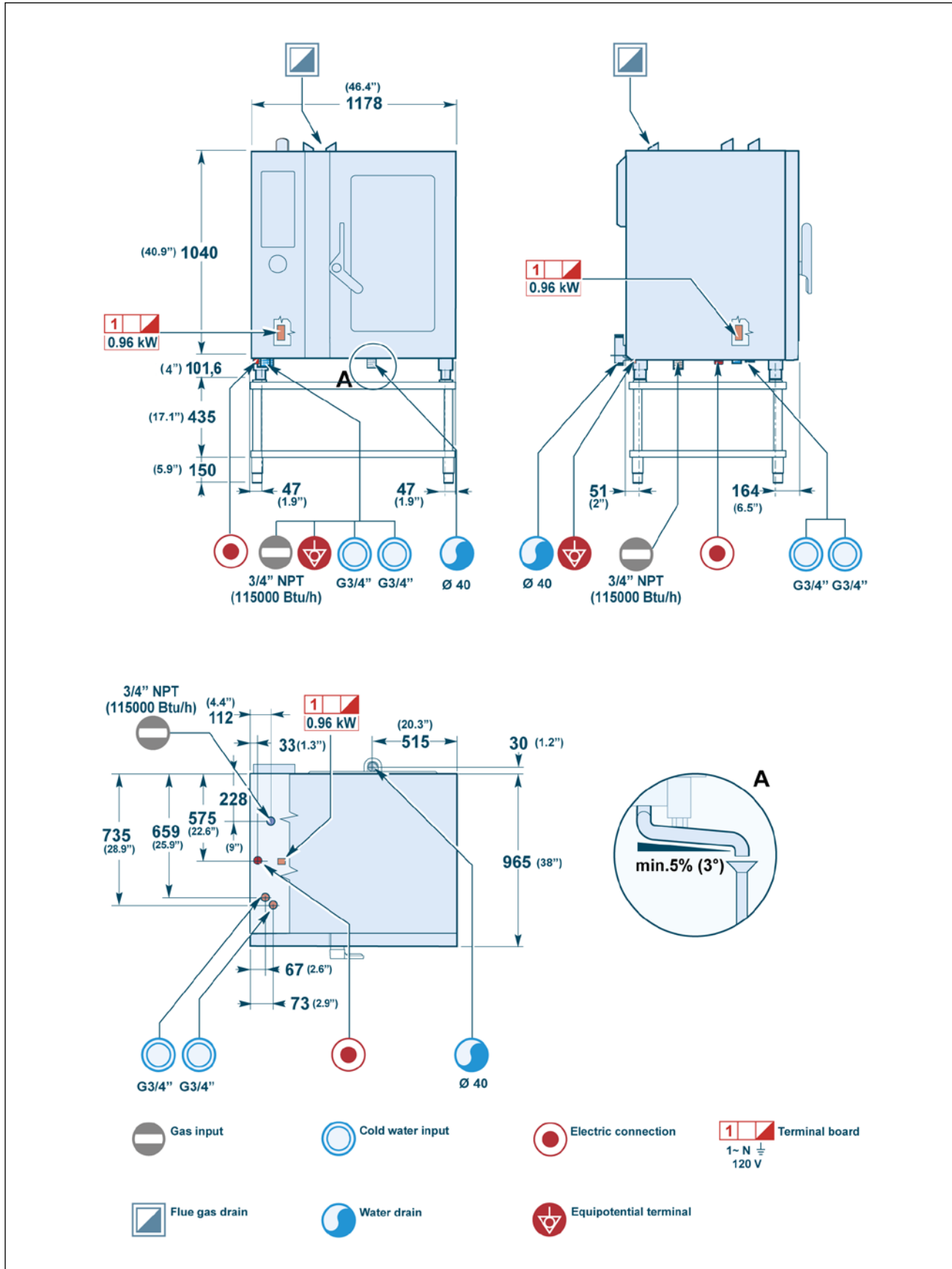


oveN coNnectIoN DIAGRAM (FX101 g3)

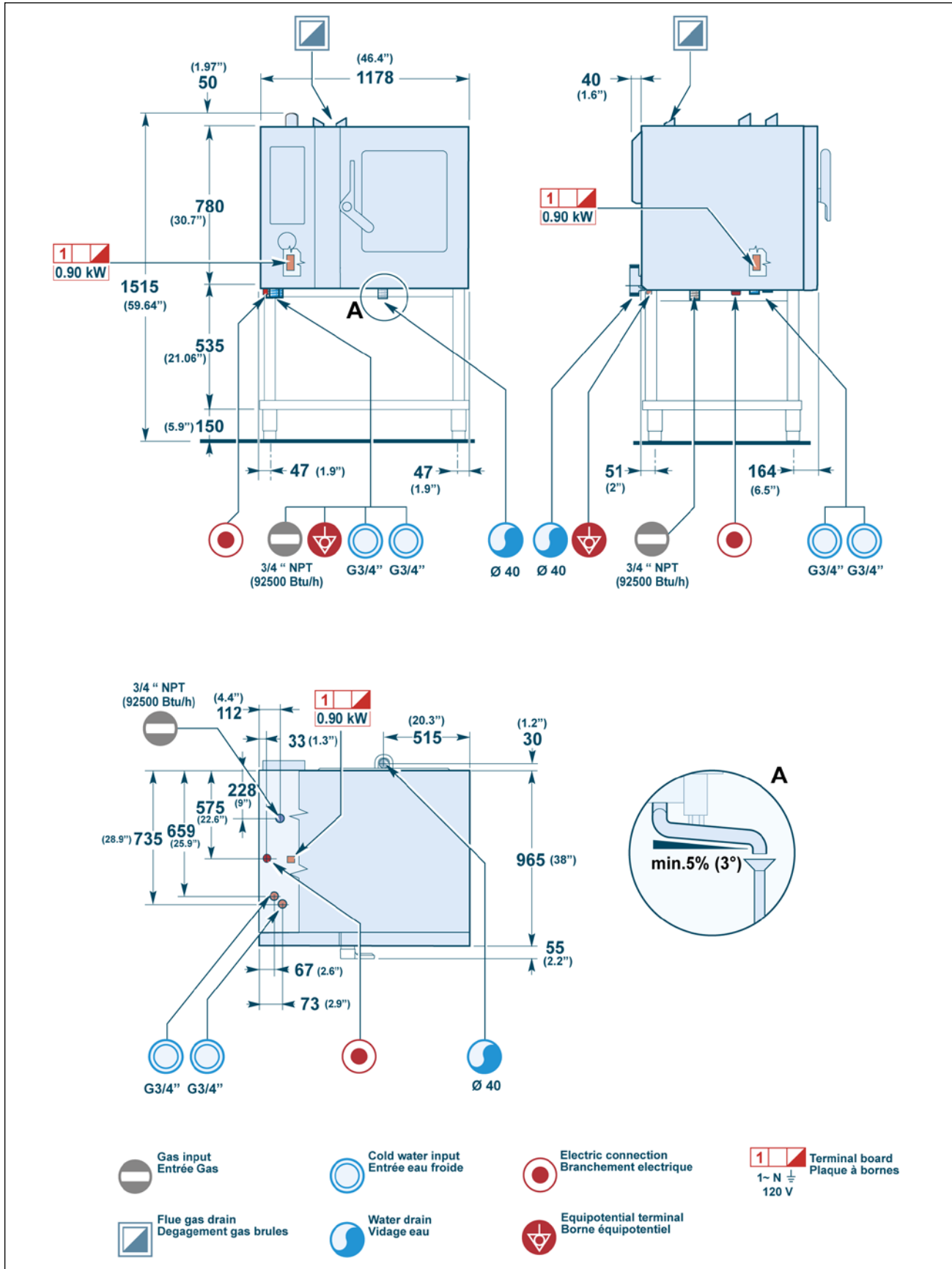


OVEN CONNECTION DIAGRAM (MODEL GBFX82 G3T)


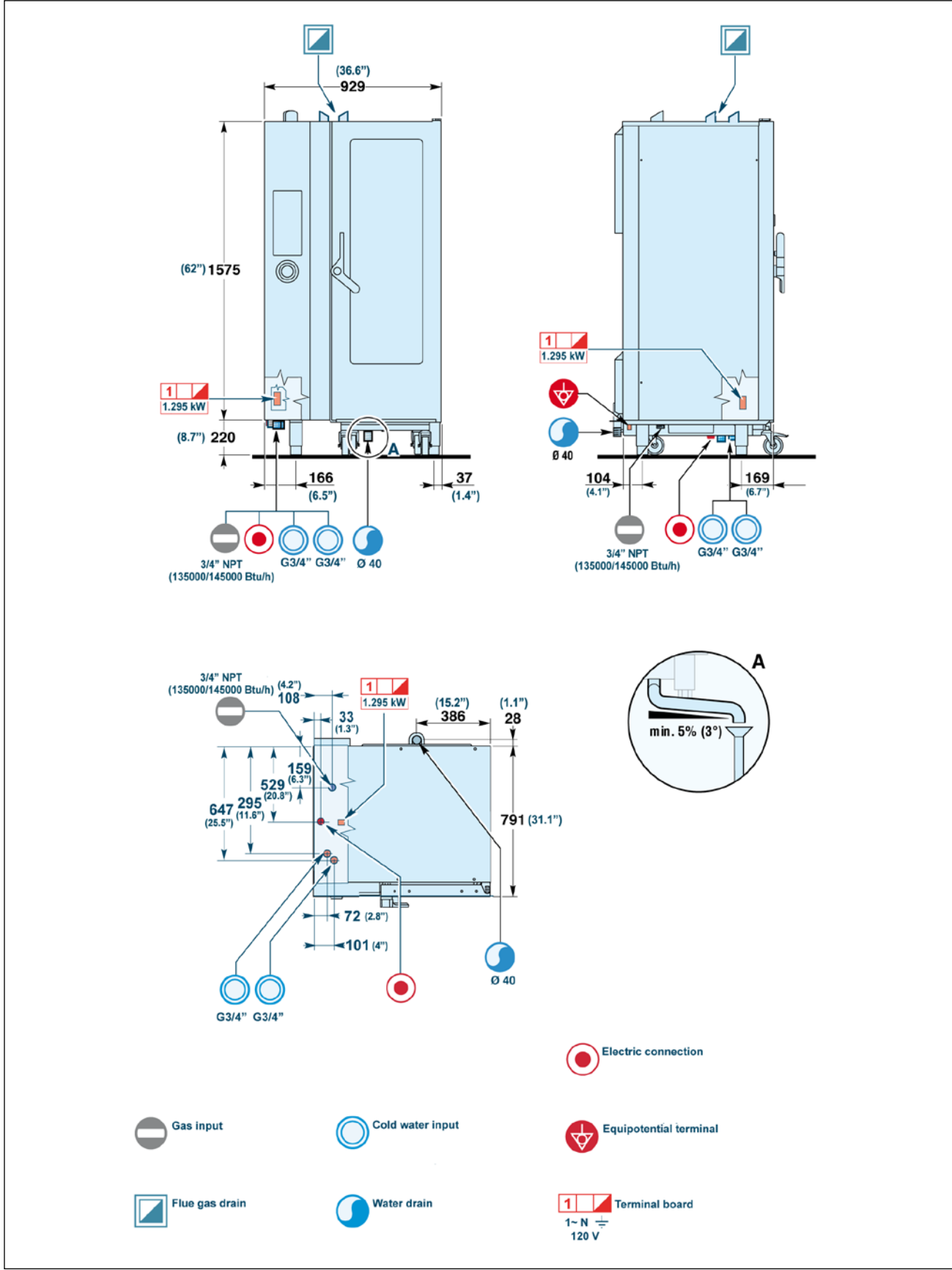
ove N co NNect Io N DIAg RAM (mo Del GBS FX122 g 3t)



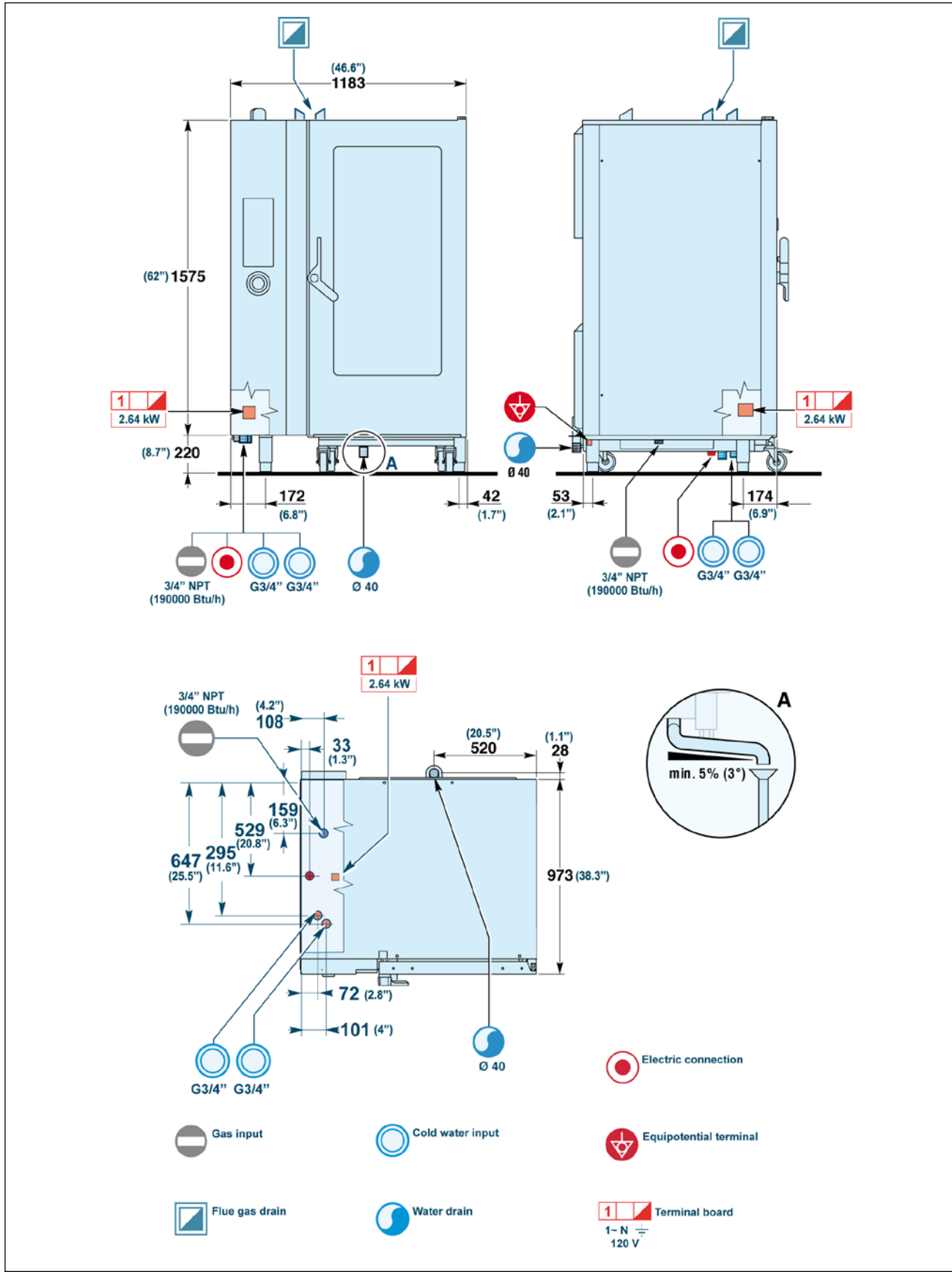
ove N co NNect Io N DIAG RAM (mo Del GBS FX82 g 3)



ove N co N Nect Io N DIAg RAM (mo Del GBS FX201 g 3)



OVEN CONNECTION DIAGRAM (MODEL GBS FX202 G3)



TECHNICAL SPECIFICATIONS

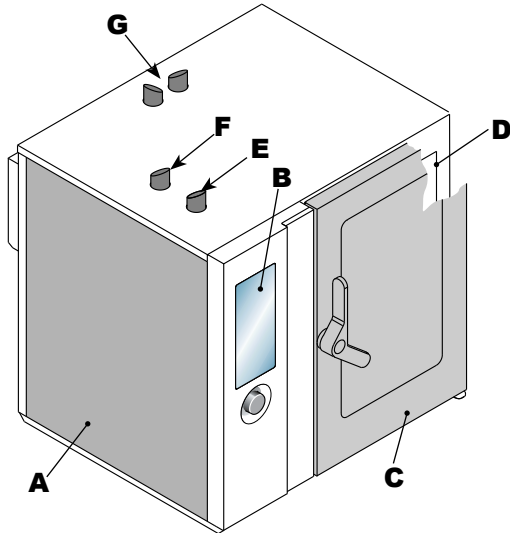
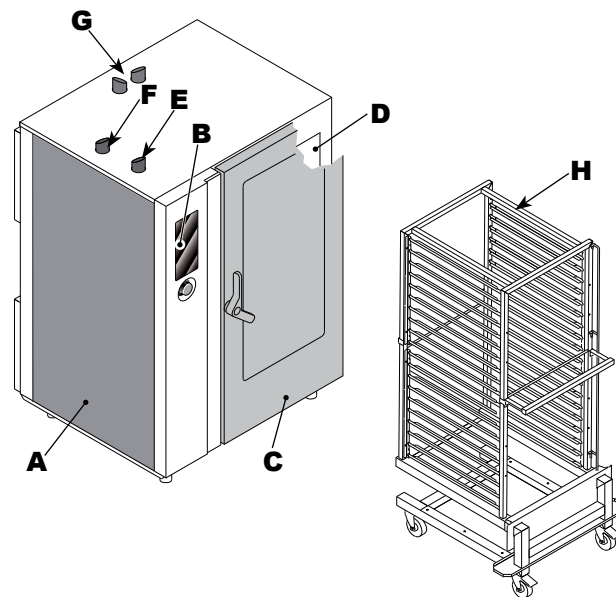
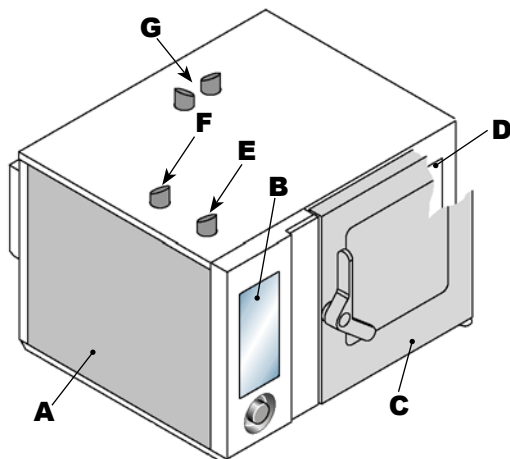
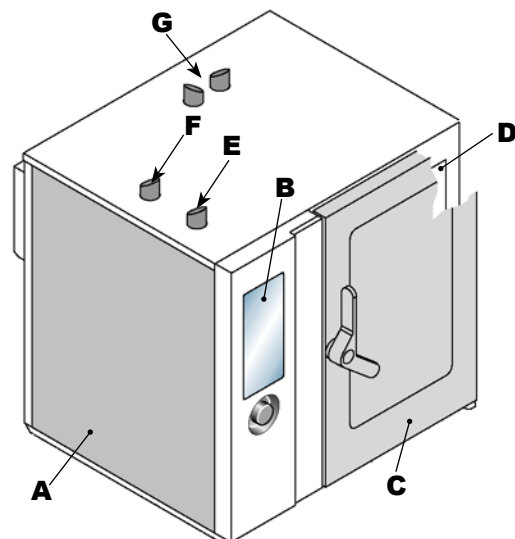
GENERAL DESCRIPTION

The oven (referred to below as the appliance), is designed and manufactured to cook foods in a professional catering / commercial restaurant environment.

Functions are controlled by an electronic control board allowing setting of cooking modes (convection, steam, combination) and functions provided to allow more uniform cooking.

Main Parts

- A) Electrical component compartment panel
- B) Control board
- C) Oven door
- D) Cooking chamber
- E) Air intake and steam exhaust pipe
- F) Steam exhaust pipe
- G) Flue pipe
- H) Container trolley
 - i) (For version FX201-FX202 only)

MODEL FX61 - 101 G3

MODEL FX201 - 202 G3

MODEL FX82 G3 - G3T

MODEL FX122 G3 - G3T


MODEL FX61-101 TECHNICAL SPECIFICATIONS

Description	FX 61 G3	FX 101 G3
Oven dimensions	36.2" × 30.5" × (24.8" + 4")	36.2" × 30.5" × (34.5" + 4")
Electrical supply	120V 1Ph 60 Hz	120V 1Ph 60 Hz
Rated power	50000 Btu/h	71000 Btu/h
Electricity power consumption	576 W	828 W
Power supply wire gauge	12 AWG	12 AWG
Chamber opening dimensions	17.34" × 17.73"	17.34" × 27.38"
Chamber dimensions	25.4" × 25.6" × 20.1"	25.4" × 25.6" × 29.7"
Number of containers	6	10
Container dimensions	12.8" × 20.9" × 2.5"	12.8" × 20.9" × 2.5"
Current rating	4.8 A	6.9 A

Maximum sound output is no higher than 65 dB (A).

MODEL FX82-122 TECHNICAL SPECIFICATIONS

Description	FX 82 G2T	FX 122 G2T
Oven dimensions	46.4" × 38" × (30.7" + 4")	46.4" × 38" × (40.9" + 4")
Electrical supply	120V 1Ph 60 Hz	120V 1Ph 60 Hz
Rated power	92500 Btu/h	115000 Btu/h
Electricity power consumption	900 W	960 W
Power supply wire gauge	12 AWG	12 AWG
Chamber opening dimensions	25.2" × 23.6"	25.2" × 33.9"
Chamber dimensions	35.0" × 32.5" × 26.2"	35.0" × 32.5" × 36.4"
Number of containers	8	12
Container spacing	2.77"	2.6"
Container dimensions	20.88" × 25.61" × 2.56"	20.9" × 25.6" × 2.6"
Current rating	7.8 A	11.5 A

Maximum sound output is no higher than 65 dB (A).

MODEL FX82-122 TECHNICAL SPECIFICATIONS

Description	FX 82 G3	FX 122 G3
Oven dimensions	46.4" × 38.0" × (51.8" + 5.9")	46.4" × 38.0" × (62.0" + 5.9")
Electrical supply	120V 1Ph 60 Hz	120V 1Ph 60 Hz
Rated power	92500 Btu/h	115000 Btu/h
Electricity power consumption	900 W	960 W
Power supply wire gauge	12 AWG	12 AWG
Chamber opening dimensions	25.2" × 23.6"	25.2" × 33.9"
Chamber dimensions	35.0" × 32.5" × 26.2"	35.0" × 32.5" × 36.4"
Number of containers	8	12
Container dimensions	20.9" × 25.6" × 2.6"	20.9" × 25.6" × 2.6"
Current rating	7.8 A	11.5 A

Maximum sound output is no higher than 65 dB (A).

MODEL FX201-202 TECHNICAL SPECIFICATIONS

Description	FX 201 G3	FX 202 G3
Oven dimensions	36.6" × 31.1" × 62.0"	46.6" × 38.3" × 62.0"
Electrical supply	120V 1Ø 60Hz	120V 1Ø 60Hz
Rated power	145000 Btu/h	190000 Btu/h
	135000 Btu/h	
Electricity power consumption	1295 W	2640 W
Power supply wire gauge	12 AWG	12 AWG
Chamber opening dimensions	17.3" × 54.9"	25.2" × 54.9"
Chamber dimensions	25.4" × 25.6" × 57.2"	35.0" × 32.5" × 57.5"
Number of containers	20	20
Container spacing	2.6"	2.6"
Container dimensions	12.8" × 20.9" × 1.6"	20.9" × 25.6" × 1.6"
Current rating	15.1 A	22 A

Maximum sound output is no higher than 65 dB (A).

HANDLING AND INSTALLATION

RECOMMENDATIONS FOR HANDLING AND INSTALLATION

i IMPORTANT

When handling and installing the appliance comply with the information provided by the manufacturer directly on the packaging, on the appliance and in the instructions for use.

If necessary, the person authorized to perform these operations must develop a "safety plan" to protect the people directly involved.

PACKAGING AND UNPACKING

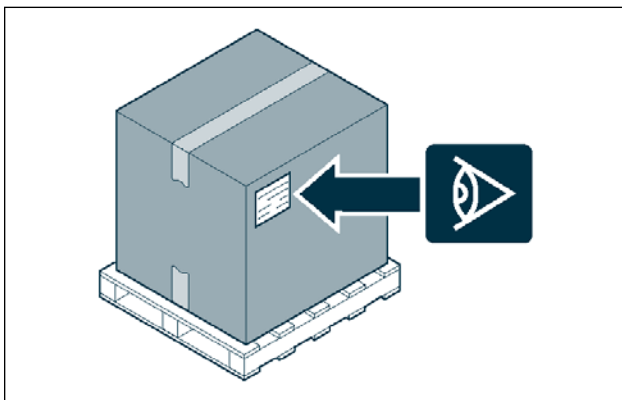
Packaging is designed to reduce space and as appropriate to the type of transport used.

To simplify transport, some components may be removed and suitably protected and packed for transport.

The packaging carries all information necessary for loading and unloading.

When unpacking, check that all components are provided in the correct quantities and undamaged.

Packaging material must be properly disposed of in accordance with all local recycling rules and regulations.

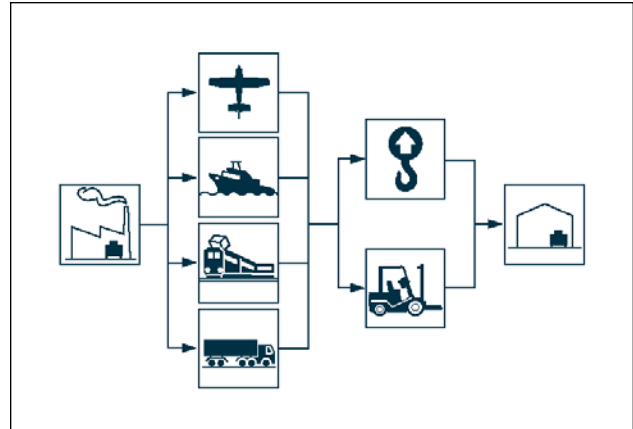


TRANSPORT

Different means of transport may be used, depending on the destination.

The chart below shows the most commonly used alternatives.

During transport, secure the package(s) properly to prevent unwanted shifting.

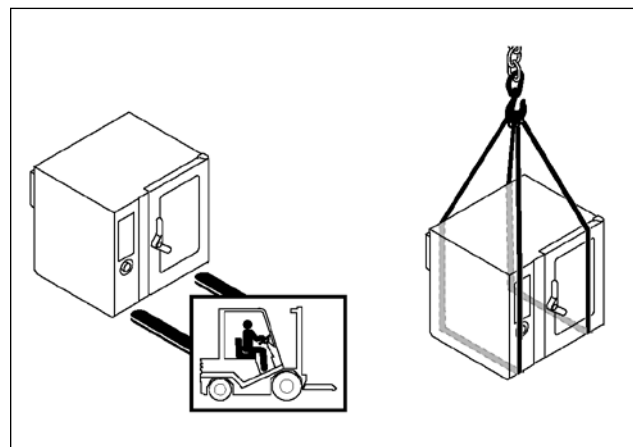


HANDLING AND LIFTING

The appliance can be handled using fork-lift or hook equipment of suitable load-carrying capacity. Before lifting, check the position of the load's center of gravity.

i IMPORTANT

When engaging with the lifting equipment, note the location of all intake and outlet pipes.



APPLIANCE INSTALLATION

All installation stages must be considered based on the site survey and specific installation location of the unit. Before starting these stages, as well as deciding the place of installation, the person authorized to perform these operations must organize a “safety plan” to protect people directly involved, and must also ensure strict compliance with all legal requirements, especially those relating to mobile work-sites.

The location of the installation must have all the utility supply, ventilation, extraction and production residue venting connections required. In addition, the location must be suitably lit and meet all local health department and hygiene requirements to prevent the contamination of foods.

It is suggested to mark the location of each individual appliance or subassembly prior to installation.

Install in accordance with the relevant local codes, regulations and specifications in the country of use.

⚠️ WARNING Fire risk! If the appliance is positioned near walls, partitions, kitchen cabinets, decorative trim, etc. these items must be made from a nonflammable material. All fire prevention regulations must be strictly observed.

i IMPORTANT

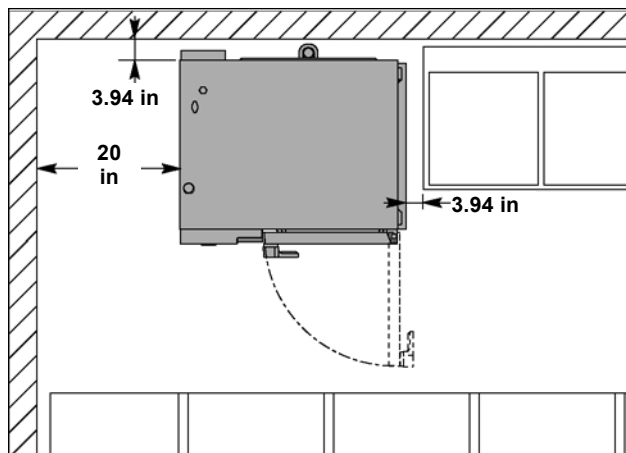
Install the appliance on a stand (available as an option) and position it as shown in the diagram (For version FX61-101-82-122 only).

If the oven is installed in the middle of a room, please leave at least a distance of 20 inches between its back and other appliances.

i IMPORTANT

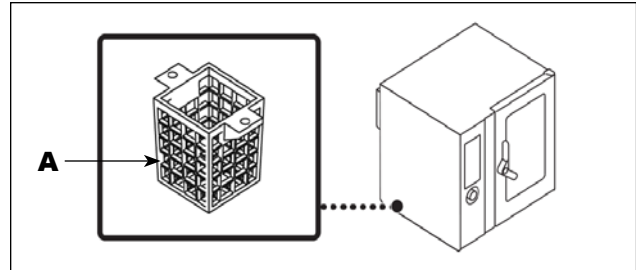
All clearance requirements are the same for combustible or non-combustible constructions.

Suitable for installation on combustible floors.



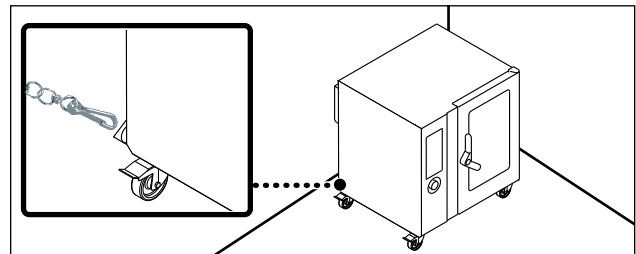
i IMPORTANT

During installation of the appliance, take care to prevent all possible obstruction of the combustion air intake A.



CASTER - MOUNTED OVENS

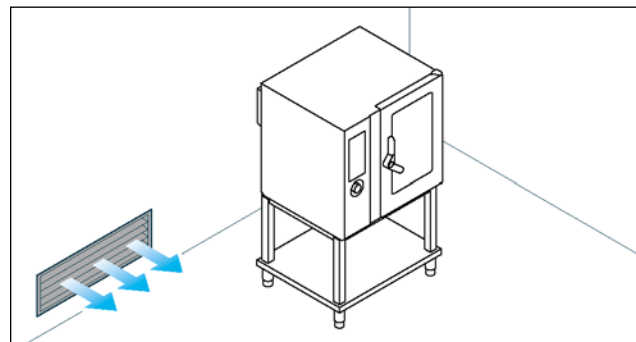
For an appliance equipped with casters, the installation must be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 CSA 6.16, and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41 CSA 6.9. Adequate means must be provided to limit the movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit appliance movement.



ROOM VENTILATION

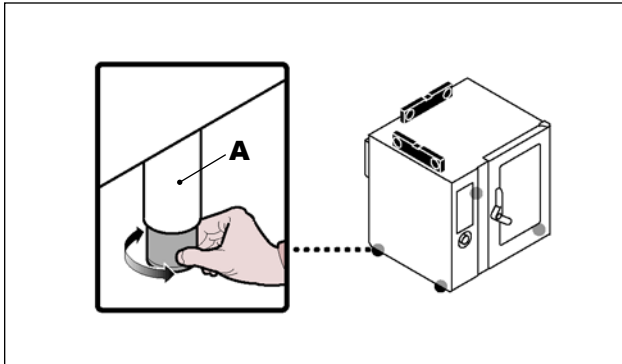
The room where the appliance is installed must have air inlets to ensure that the appliance can operate correctly and provide the necessary air exchange in the room.

Air inlets must be of appropriate size, protected by gratings and placed so that they cannot be obstructed.



LEVELLING

Adjust the floor-mounted feet (A) to level the appliance.



ELECTRICAL CONNECTION

The appliance must be connected, grounded in accordance with all local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2.

i IMPORTANT

The connection must be made by authorized, skilled personnel, in accordance with the relevant legal requirements, using appropriate and specified materials. The appliance is supplied with operating voltage 120V/1 Ph (see wiring diagrams).

⚠ WARNING Electrical connections or any work required on the electrical circuits inside the appliance, must be performed by trained technicians in compliance with local, state, and federal regulations.

⚠ WARNING Before performing any service that involves electrical connection or disconnection and/or exposure to electrical components, always follow the Electrical LOCKOUT/TAGOUT Procedure. Disconnect all circuits. Failure to comply can cause property damage, injury or death.

⚠ WARNING Before doing any work, cut off the main electricity supply.

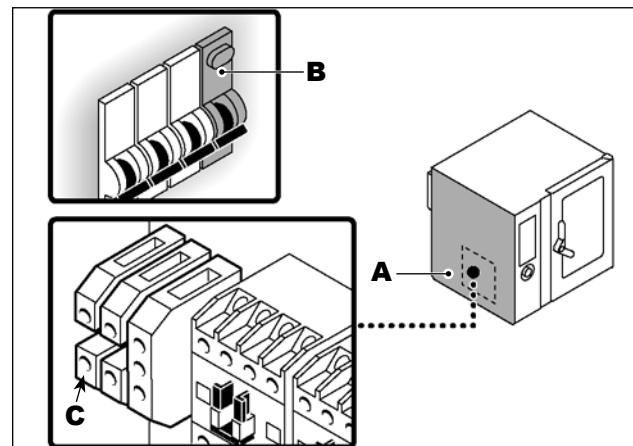
Connect the appliance to the main power supply as follows.

1. Remove the screws and side panel (A).
2. Connect the automatic circuit-breaker (B) to the appliance's terminal board (C) and to the electrical mains supply, in accordance with the electrical system diagram provided at the back of the manual and using a cable with the following characteristics.
 - Wire insulation temperature rating: $\geq 75^{\circ}\text{C}$ (167°F).

i IMPORTANT

When connecting, take care to connect the neutral and earth lines.

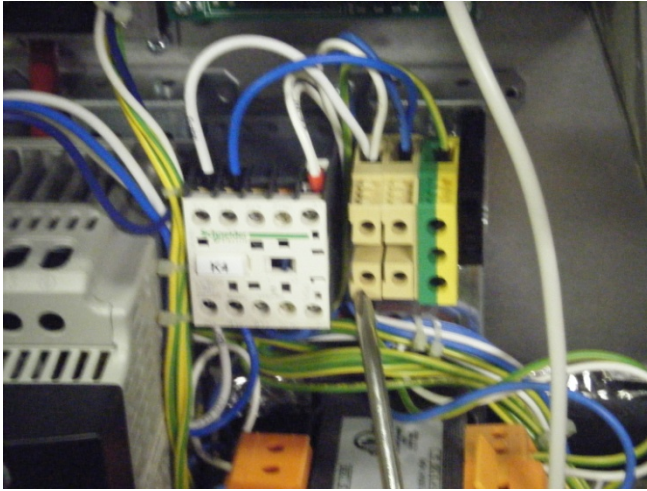
3. Replace side panel (A) and retighten all screws when the operation is complete.



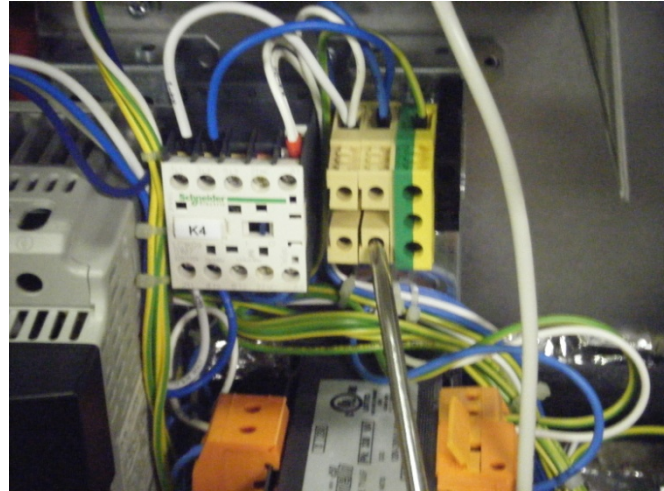
i IMPORTANT

Cooking chamber convection fan can rotate in a clockwise and counter-clockwise direction.

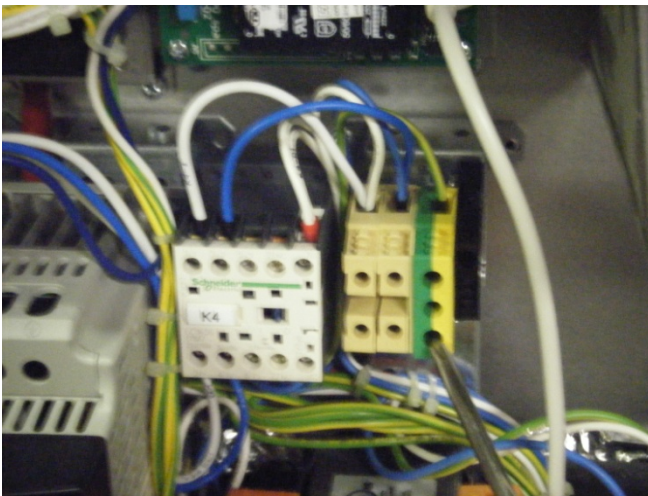
ELECTRICAL CONNECTION – FX GAS OVENS



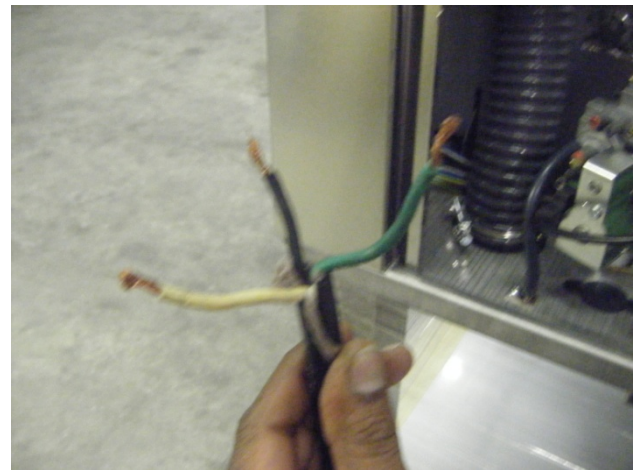
LIVE WIRE POSITION



NEUTRAL WIRE POSITION



GROUND WIRE POSITON



3 WIRE CONNECTION
 IN A 3 WIRE CONNECTION – THE BLACK WIRE IS USUALLY THE LIVE WIRE, THE WHITE WIRE IS USUALLY THE NEUTRAL AND THE GREEN WIRE IS USUALLY THE GROUND.

IMPORTANT

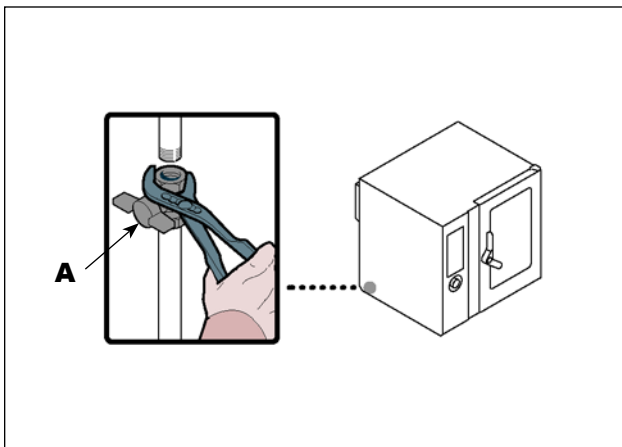
THESE OVENS ARE VERY SENSITIVE SO THE WIRE CONNECTION MUST BE CORRECT.

YOU MUST CHECK THE 3 WIRE CONNECTION CABLE TO DETERMINE WHICH WIRE IS THE LIVE AND WHICH WIRE IS THE NEUTRAL.

THIS IS DONE BY USING YOUR MULTI-METER. TOUCH ONE OF THE LEADS TO THE BLACK WIRE AND THE OTHER LEAD TO A GROUND POSITION ON THE OVEN. IF YOU GET 120V, THE BLACK WIRE IS THE 'LIVE' WIRE. IF THE READING IS '0', THE BLACK WIRE IS THE NEUTRAL WIRE.

GAS CONNECTION

All gas connections must be in accordance with local codes or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1, as applicable. This appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa) and the appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).



CAUTION Make the connection in compliance with the relevant legal requirements, using appropriate and recommended materials.

i IMPORTANT

This appliance is equipped for Natural or Propane (LP) gas. This appliance is adjusted in the factory with a nozzle size for operation with Natural gas (see table page 79). Nozzle necessary for conversion are provided with conversion kit located next to the manual instruction.

To make the connection, connect the mains line to the appliance's connection pipe, fitting a shut-off valve (A), to allow the gas supply to be cut off when necessary.

i IMPORTANT

Valve (A), not supplied with the appliance, must be installed in an easily accessible position and its status (on or off) must be obvious at a glance.

WATER CONNECTION

WARNING Make all connections in compliance with all relevant local codes, using appropriate and recommended materials.

WATER SUPPLY CONNECTION

i IMPORTANT

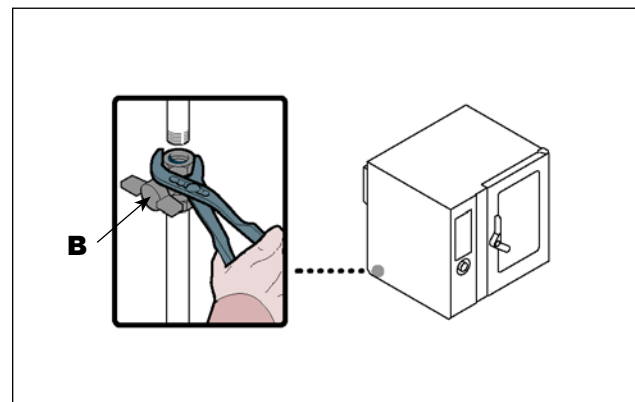
This appliance is to be installed in compliance with all applicable federal, state, or local plumbing codes having jurisdiction.

Connect the water supply line to the appliance's connection pipe, fitting a shut-off valve (B) to allow the water supply to be cut off when necessary.

i IMPORTANT

The tap (B), not supplied with the appliance, must be installed in an easily accessible position and its status (on or off) must be obvious at a glance.

CAUTION The appliance must be supplied with potable (drinking) water having the characteristics shown in the table. If these characteristics are not in compliance the appliance may suffer damage; a separate water treatment device would need to be installed.



Description	Value
Pressure	30 – 60 psi or 200 - 400 kPa (2 - 4 bar) (*)
Water flow rate (GPH)	2.4 gph (FX 61) (*) 3.2 gph (FX 101) (*) 4.6 gph (FX 82) (*) 4.6 gph (FX 122) (*) 6.3 gph (FX 201) (*) 8.5 gph (FX 202) (*)
pH	7 - 8.5
TDS	40÷150 ppm
Hardness	3÷9°f (1,5÷5°d; 2,1÷6,3°e; 30÷90 ppm)

Langelier Index (recommended) (**)		>0.5
Salt and metallic ion content		
Required	Chlorine	< 0.1 mg/l
	Chlorides	< 30 mg/l
	Sulphates	< 30 mg/l
Recommended (**)	Iron	< 0.1 mg/l
	Copper	< 0.05 mg/l
	Manganese	< 0.05 mg/l

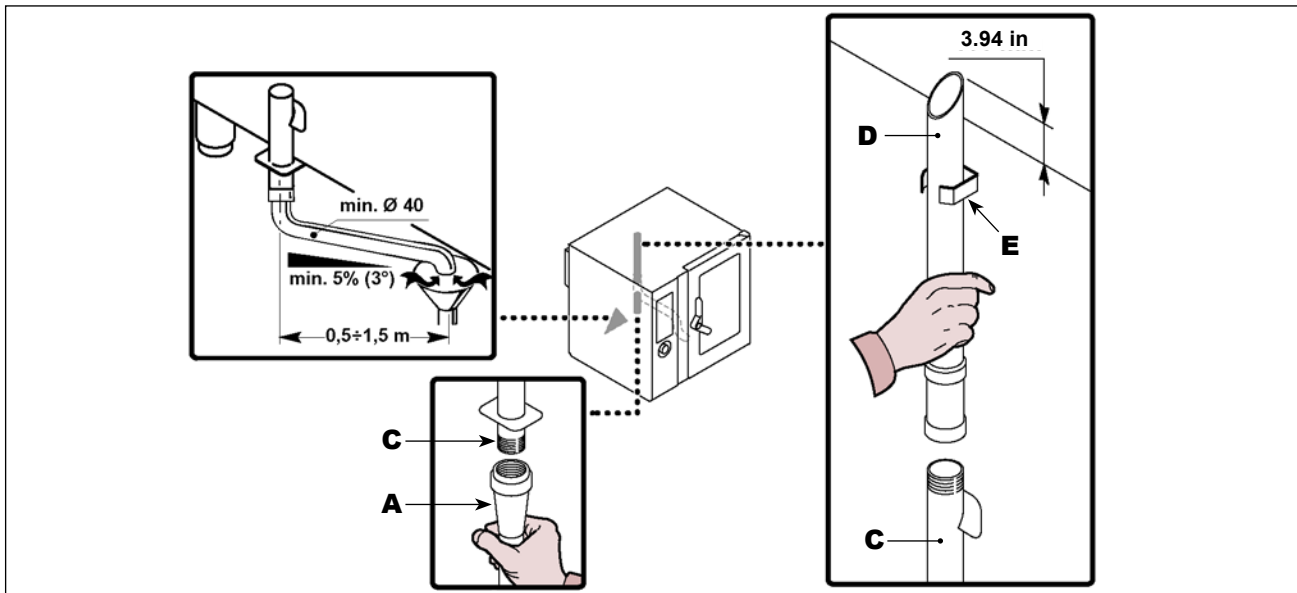
(*) The value refers to the amount of water needed for steam production inside the cooking chamber.

(**) Different values of these parameters may cause corrosion if combined with wrong usage and environment.

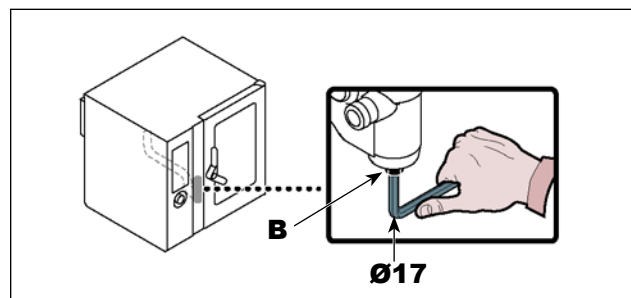
WATER DRAIN CONNECTION

To perform this operation, do the following.

1. Connect water supply line pipe (A) to the appliance's connection pipe (C).
2. Connect vent pipe (D) to the appliance connection pipe (C) and attach it to support (E).



The appliance's drain line is fitted with plug (B) to allow discharge of any waste.



WASHING SUPPLY CONNECTION

To carry out this operation, proceed as follows:

1. Connect red pipe (A) to pipe (B) and fit cone (C) into the cleaner tank (D).
2. Connect blue pipe (E) to pipe (B) and fit cone (C) into the sanitizing cleaner tank (F).

Use the cleaner and sanitizer supplied by the appliance manufacturer for the best results.

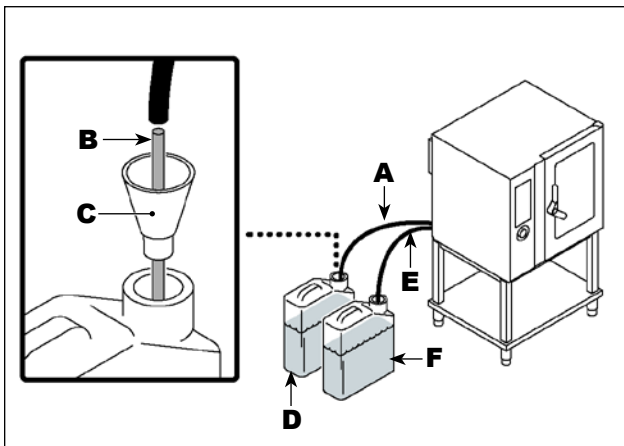
The chemical composition of the products referred to above is as follows:

Cleaner: caustic soda, concentration less than 20%.

Sanitizing cleaner: containing citrates and organic sequestering agents, less than 15%.

i IMPORTANT _____

The use of products with different compositions may damage the system and the oven walls, and any residues deposited may contaminate foods.



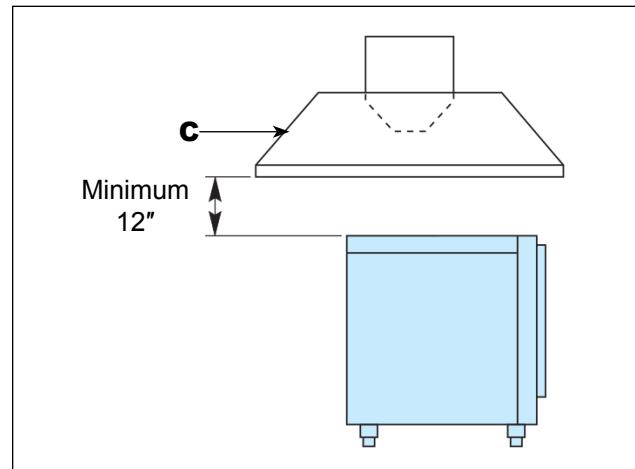
CONNECTING THE GAS EXHAUST VENT

i IMPORTANT _____

Make the connection in compliance with all relevant local and legal requirements, using appropriate and recommended materials.

i IMPORTANT _____

Maximum exhaust gas temperature at the outlet is approximately 750°F.



CONNECTING TO A FAN EXTRACTOR HOOD

Position the appliance underneath hood (C) as shown in the diagram.

i IMPORTANT _____

The gas supply valve must open automatically when the fan of the extraction system is switched on.

TESTING THE APPLIANCE

i IMPORTANT

Before it is put into service, the system must be tested to check the operating conditions of every single component and identify any malfunctions. In this stage, it is important to check that all health and safety requirements have been complied with in full.

To test the system, make the following checks.

1. Turn on gas and water supply valves and check that connections are tight.
2. Turn on the master switch to check the electrical connection.
3. Check that the mains gas is the same as that used for commissioning of the appliance, and carry out the conversion procedure if necessary.
4. Check that the gas pressure conforms to values stated in the table at the back of the manual.
5. Check that the combustion exhaust gases comply with the requirements.
6. Check the water pressure and adjust if necessary.
7. Check that the safety device is operating correctly.
8. Carry out a cooking cycle without food to ensure the appliance is operating correctly.

After testing, train the user in all skills necessary to ensure safe operation of the appliance, in accordance with all legal requirements.

i IMPORTANT

During performance of the test procedure and upon completion of the operation, make sure there are no gas leaks or malfunctions.

ADJUSTMENTS

RECOMMENDATIONS FOR ADJUSTMENTS

i IMPORTANT

Before making any type of adjustment, activate all the safety devices provided and decide whether staff at work and those in the vicinity should be informed. In particular, turn off the gas and water supply tap, cut off the electricity supply using the master switch and prevent access to all devices that might cause unexpected health and safety hazards if turned on.

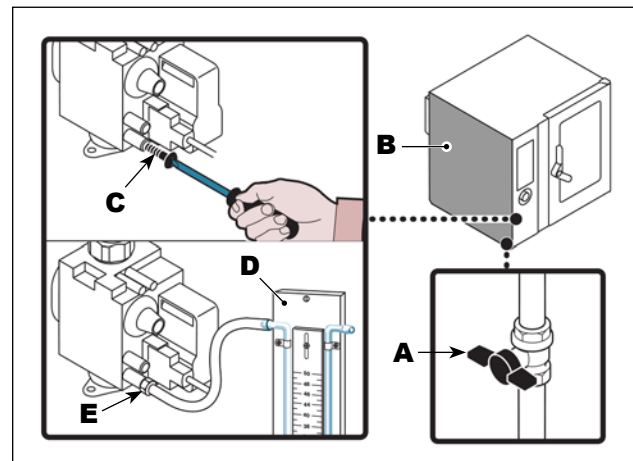
⚠ WARNING Before performing any service that involves electrical connection or disconnection and/or exposure to electrical components, always follow the Electrical LOCKOUT/TAGOUT Procedure. Disconnect all circuits. Failure to comply can cause property damage, injury or death.

⚠ WARNING Adjustments must be performed by an authorized service agent, in accordance with all relevant local and legal requirements.

CHECKING GAS PRESSURE

To carry out this operation, proceed as follows:

1. Turn off gas supply valve (A).
2. Undo screws and remove the side panel (B).
3. Unscrew screw (C).
4. Connect pressure gauge (D) to pressure test point (E).
5. Turn gas supply valve (A) back on.



6. Switch on the appliance and perform a cooking cycle without food at maximum temperature.
7. Check the pressure gauge reading complies with the values.

Gas type	Pressure in kPa (Inches Water Column)		
	rated	minimum	maximum
Natural gas	1.74 (7")	0.87 (3.5")	2.61 (10.5")
Propane	2.74 (11")	1.99 (8")	3.23 (13")

8. Switch off the appliance, turn off gas supply valve (A), disconnect pressure gauge (D) and retighten screw (C).

- Replace panel (B) and retighten screws when the operation is complete.

CHECKING THE COMBUSTION EXHAUST GASES

Once the appliance has been connected, proceed to analyze the combustion exhaust gases:

- Acquire an exhaust gas analyzer and calibrate the instrument in accordance with instructions in the operator's manual supplied with it.
- Insert exhaust gas analyzer measuring pipes into the appliance's exhaust gas discharge lines.
- Switch on the appliance.
- Access the "Service" menu and activate the "CO/CO² Measurement" procedure.
- Check CO and CO² emission values first at minimum power (cold), then maximum power, and at minimum power (hot) again.
- Check that readings obtained are as required by the manufacturer.
- Fill in the relative test report (enclosed) and send it to the manufacturer to activate the Warranty.

IMPORTANT

Maximum exhaust gas temperature at the outlet is approximately 750°F (400°C).

ADJUSTING THE WATER PRESSURE

To carry out this operation, proceed as follows:

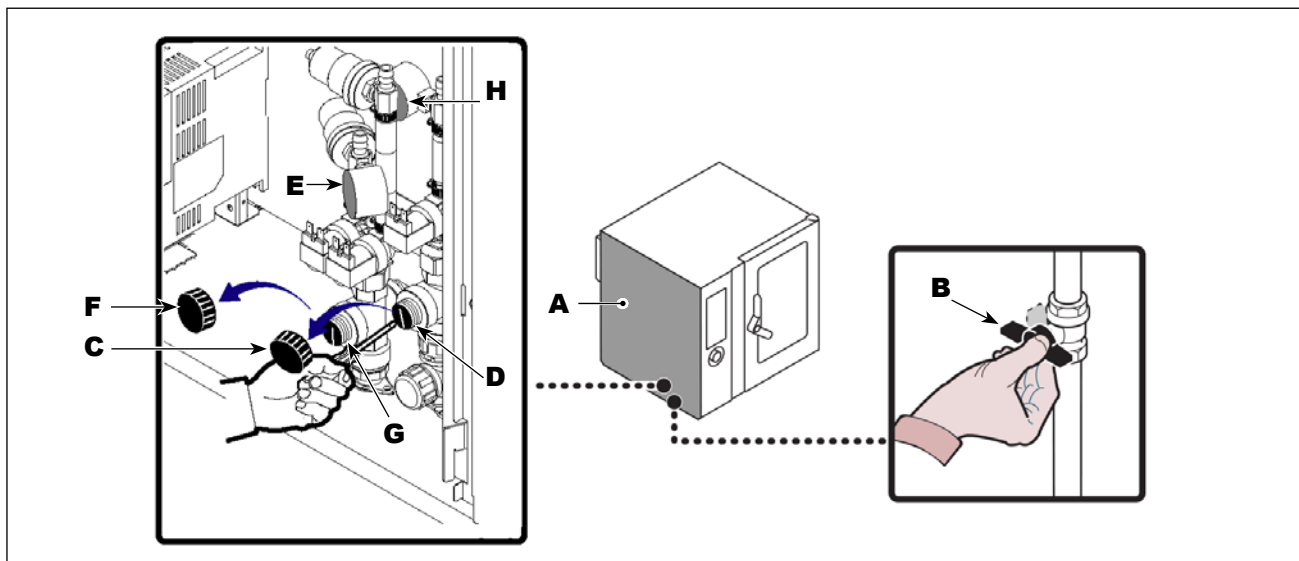
- Undo screws to remove side panel (A).
- Turn on water supply valve (B).
- Unscrew ring nut (C).
- Use screw (D) (cleaning system water intake) to bring the pressure reading on pressure gauge (E) to 22 psi (1.5 bar).

If the water pressure is too low, install a device to increase the pressure.

- Retighten ring nut (C).
- Unscrew ring nut (F).
- Turn screw (G) (cooking chamber water intake) to bring pressure reading on pressure gauge (H) to 14.5 psi (1 bar).

If the water pressure is too low, install a device to increase the pressure.

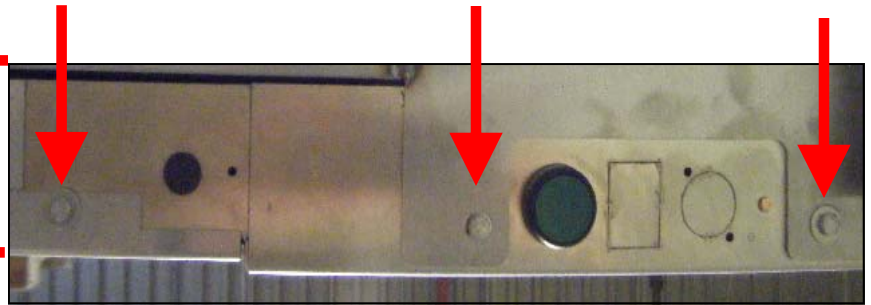
- Retighten ring nut (F).
- Return panel (A) to its original position and replace screws.
- Turn water supply valve (B) off when the operation is complete.



HOW TO ACCESS PCB's and FUSES



**REMOVE
SCREWS
and/or
BOLTS**



BOLTS LOCATED BENEATH PANEL



**GENTLY
LIFT
PANEL
AND
SWING
OPEN**



Reverse Osmosis Water Filter Installation

PLEASE MAKE NOTE OF THE FOLLOWING

The sediment pre filters in the Reverse Osmosis filtration system **MUST** be changed at least every six* (6) months to ensure proper operating conditions. Failure to change these pre-filters on a timely basis may lead to the failure of the internal membranes of the filter.

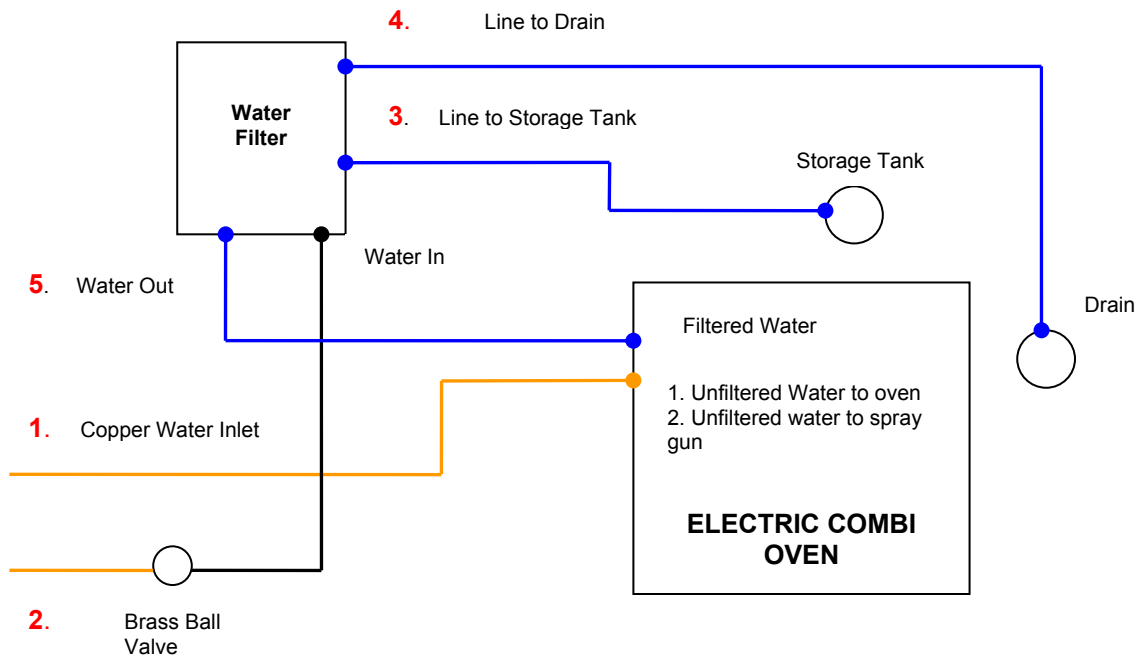
Failure to replace these sediment pre-filters will void the warranty on the filter itself. If this filter has been purchased in conjunction with any GBS FX CombiStar combination oven, and such purchase has extended the warranty of the oven, failure to replace the sediment pre-filters as prescribed above, will extinguish any warranty extension.

*if water conditions exceed those specified in the Installation Manual more frequent sediment pre-filter changes may be warranted. GBS always suggests that the operator have the water tested to determine the proper frequency of sediment pre-filter changes.

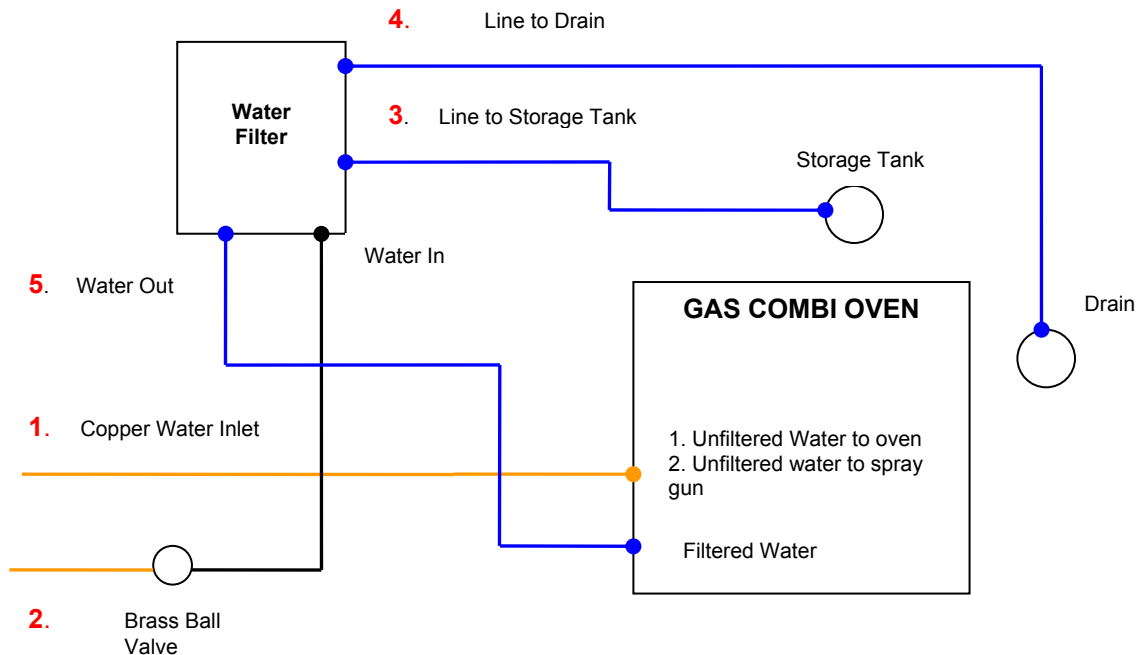
IMPORTANT:

- **ALL PLUMBING SHOULD BE OF COPPER CONSTRUCTION.**
- **THERE SHOULD BE NO PLUMBING UNDERNEATH THE OVEN**
- **MAKE SURE THAT NO POLY TUBING IS RUN UNDERNEATH THE OVEN**
- **ENSURE POLY TUBING DOES NOT COME INTO CONTACT WITH ANY HEAT SOURCE – LOCATED ON THE LEFT HAND UNDERSIDE OF THE OVEN**

ELECTRIC COMBI OVEN CONNECTION DIAGRAM



GAS COMBI OVEN CONNECTION DIAGRAM



Vertically mount unit on wall beside the oven no more than 6 feet high. Utilize the mounting plates affixed to the interior of the water filter cabinet (located top centre and bottom centre) to secure the cabinet to the wall.

Unit must be easily accessible for future filter change outs

Pressurized storage tank must be located behind the oven on the right hand side of the unit away from the heat source.

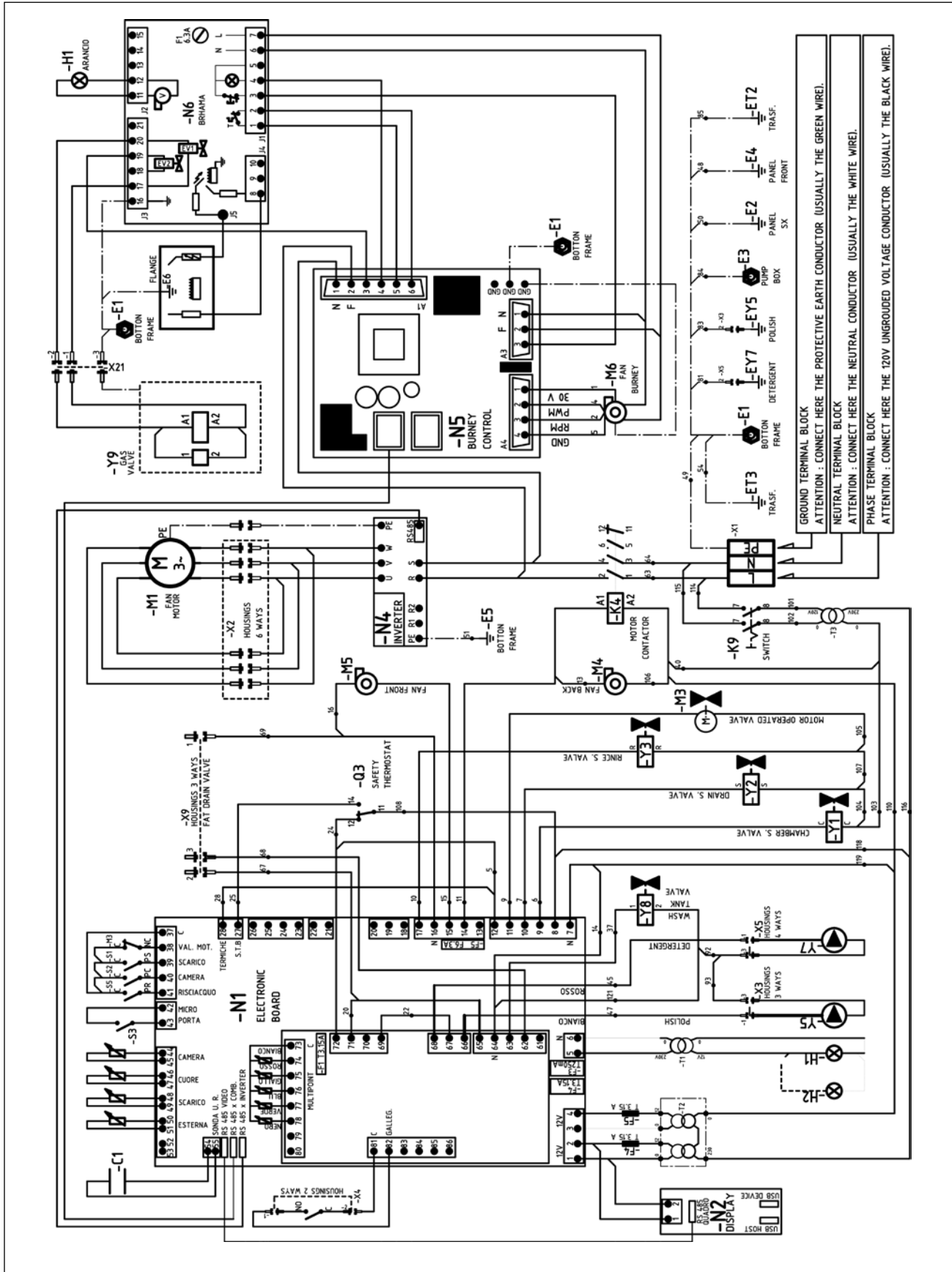
You will need two fresh water supplies. **The solenoids are clearly labeled on the oven "FILTERED" AND "UNFILTERED".**

1. Connect one of the main water supplies (unfiltered) to the combi oven using a brass coupling connection. **(Spray gun attaches to this unfiltered water connection).**
2. Connect the second main water supply to the filter using a brass ball valve. Attach one end of plastic tubing to poly tube connector. Attach the other end to the "water in" coupler on the water filter.
3. Attach one length of plastic tubing from the coupler on the filter labeled "tank" to the pressurized storage tank.
4. Attached one length of plastic tubing from the coupler on the filter labeled "drain" to the copper drainage pipe
5. Attach one length of plastic tubing from the coupler on the filter labeled "water out" to the combi oven using a brass coupler and poly tube connector.

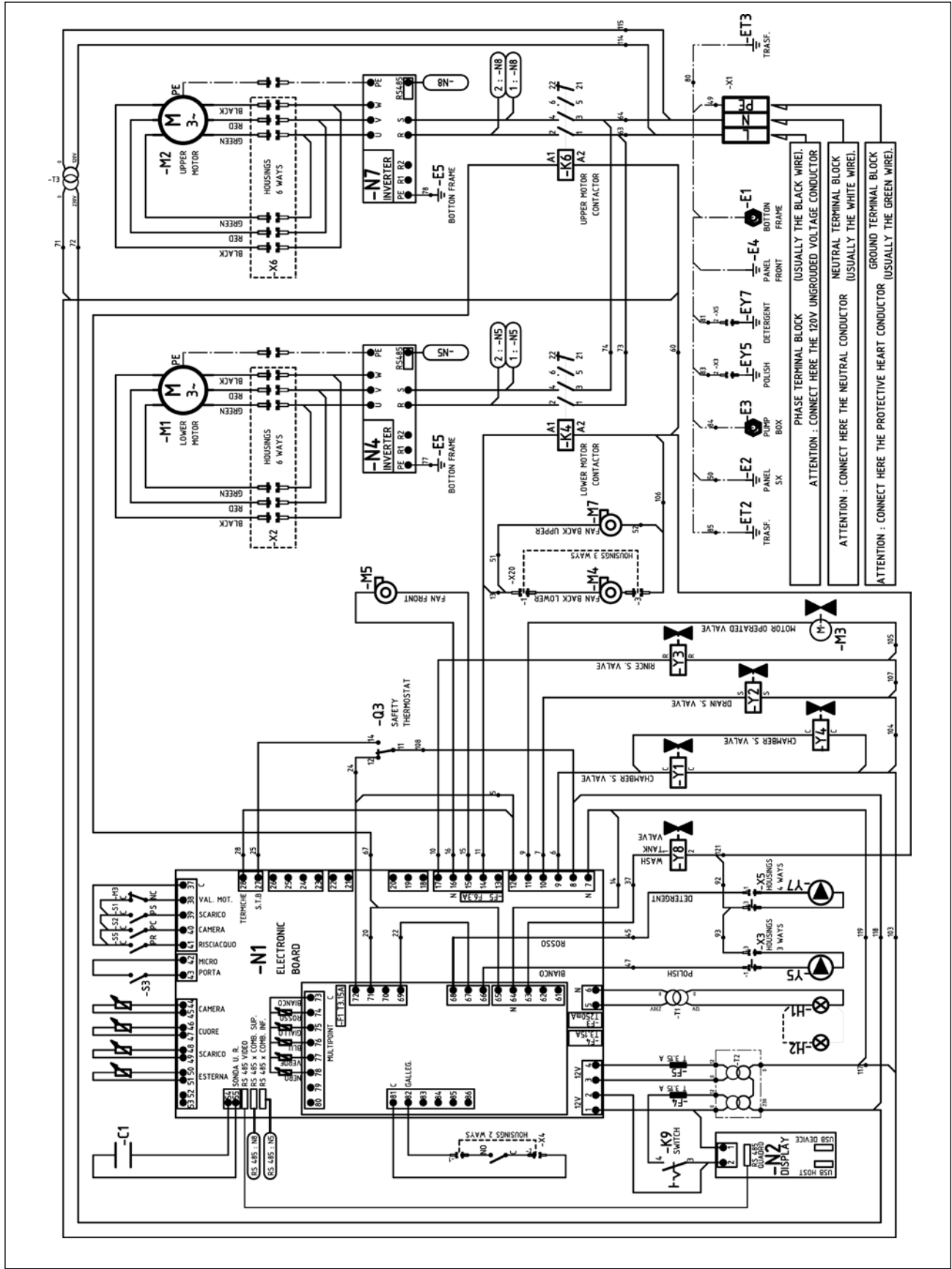
IMPORTANT

- **MAKE SURE THAT NO POLY TUBING IS RUN UNDERNEATH THE OVEN**
- **ENSURE POLY TUBING DOES NOT COME INTO CONTACT WITH ANY HEAT SOURCE – LOCATED ON THE LEFT HAND UNDERSIDE OF THE OVEN**

electRICAL sy STEM DIAGRAM (MODEL FX 61-101-82-122 G3 120v)



ELECTRICAL SYSTEM DIAGRAM (MODEL FX 201-202 G3 120v)



ELECTRICAL SYSTEM DIAGRAM (MODEL FX 201-202 G3 120v)

