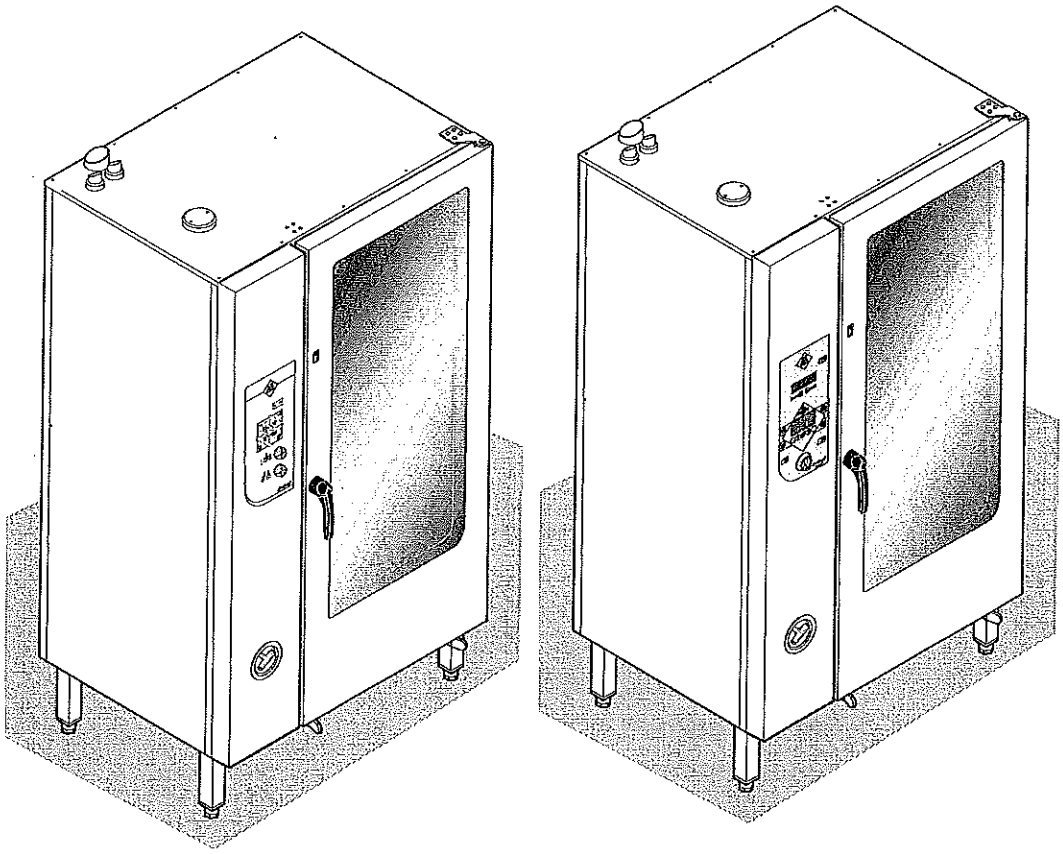
HENNY PENNY®
Global Foodservice Solutions

US-en

Installation instructions

Gas *ClassicCombi*™ & *SmartCombi*™



Model	Model No.	
ClassicCombi™ & *SmartCombi*™ 615	GCC61XXXX	GSC61XXXX
ClassicCombi™ & *SmartCombi*™ 620	GCC62XXXX	GSC62XXXX
ClassicCombi™ & *SmartCombi*™ 115	GCC11XXXX	GSC11XXXX
ClassicCombi™ & *SmartCombi*™ 120	GCC12XXXX	GSC12XXXX
ClassicCombi™ & *SmartCombi*™ 215	GCC21XXXX	GSC21XXXX
ClassicCombi™ & *SmartCombi*™ 220	GCC22XXXX	GSC22XXXX

Contents

Transportation

Packaging

The combi steamer is supplied on a throw away pallet with a cardboard enclosure. The appliance packaging is not suitable for stacking and is not protected against moisture.

Transportation

When transporting by vehicle, the pallet should be protected against slipping or tipping over.

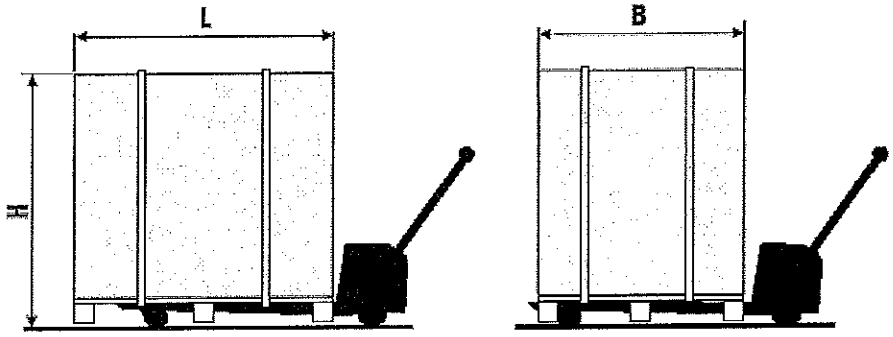
CAUTION

Always transport the appliance in an upright position, do not tilt or stack, or damage to the unit could result!

If using a forklift, make sure that the siphon and the drainage pipe protruding underneath are not damaged.

Do not lift table top models by their doors or control pillars, or do not insert the forks of the forklift in the oven chamber. Damage to the unit could result!

When packaged, the appliance can be transported either from the side, or front-to-back.



Gas Models	Packaging dimensions (in) L x B x H	Weight (lbs) gross
615 & 620	42.5 x 37.8 x 40.2 (108 x 96 x 102 cm)	375 (170 kg)
115 & 120	42.5 x 37.8 x 50.4 (108 x 96 x 128 cm)	430 (195 kg)
215 & 220	45.7x 37.8 x 86.6 (116 x 96 x 220 cm)	915 (415 kg)

Freestanding models can be lifted by the guide rails.

Installation

Prior to installation

Henny Penny combi steamers are designed for commercial use. They are not tested according to the regulations and standards for household appliances. We accept no liability nor provide any guarantee for use as a household appliance!

NOTICE

Check appliance for transport damage in the presence of the delivery agent.

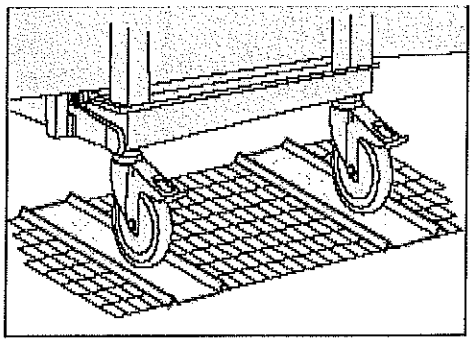
Do not install and operate damaged appliances.

This appliance cannot be equipped with casters or with stands with casters.

Installing in buildings

Installation should only take place in accordance with the fire prevention regulations and on non-flammable surfaces.

The floor / table must be able to support the appliance weight (see table).



The level, using the height-adjustable feet.

If a drainage grate is located in front of an upright appliance, then a ramp must be attached across the grate by the customer for use with a mobile oven rack.

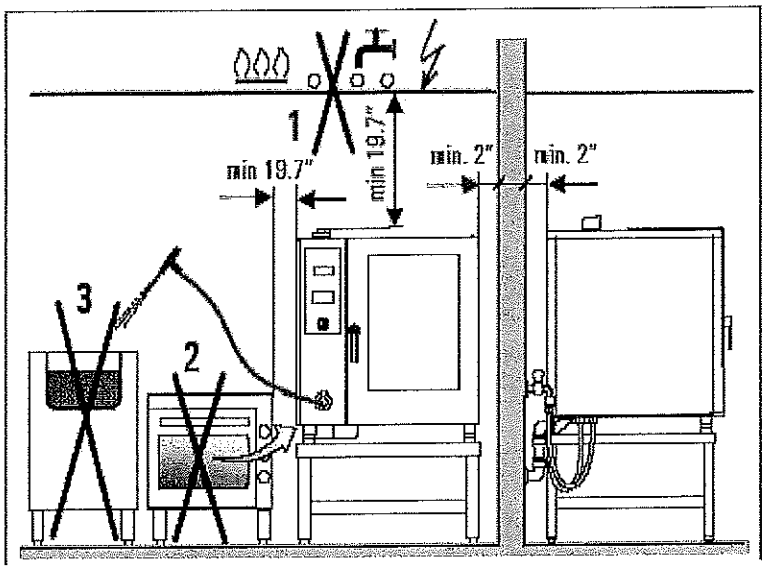
Installation below ground level

NOTICE

When installing the appliance in rooms beneath floor level (basements), particular attention should be paid to the current site regulations for liquid gas when connecting and operating the gas combi steamer.

Safety clearances

- Ceilings over the combi steamer must be non-flammable.
- There should be no electricity, gas or water supply lines in



the ceiling above the gas combi steamer [1].

- Heat sources such as a baking oven [2] must be at least 20" (500 mm) away, so that the cooling air which is sucked in beneath the floor is not heated.
- Chip makers or deep fryers must be outside the operating radius (spraying range) [3] of the tube spray head .

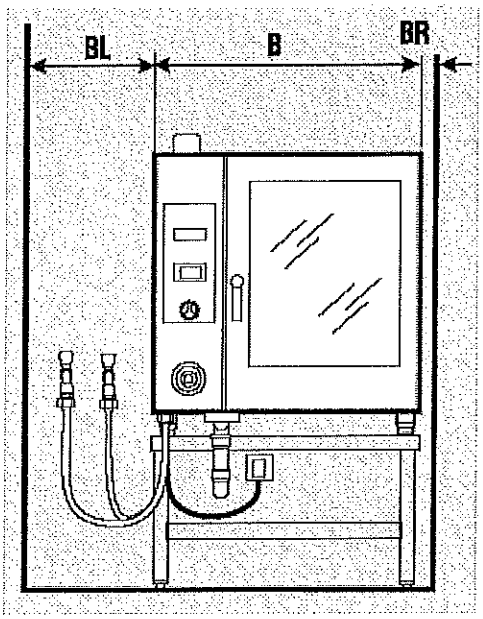
Water splashed in hot grease can cause severe burns.

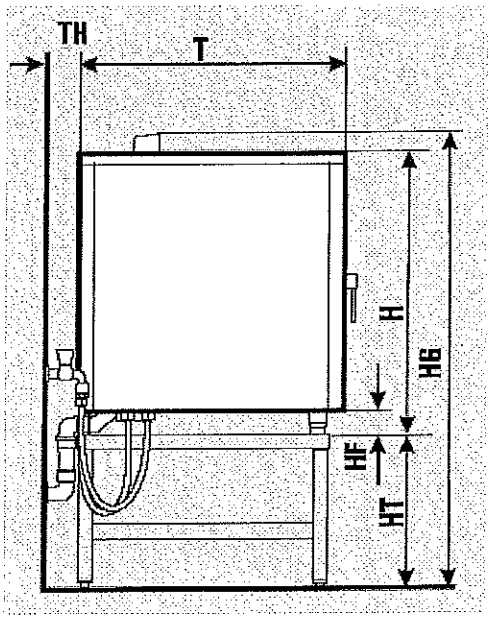
For built-in units

If the unit is built-in, the minimum distances shown in the diagram have to be recognized. The area between the feet and the base of the combi should not be closed. The minimum spacing between adjacent units is 2 inches (50 mm).

Positioning table top models

The appliance must be in a level position.
Use the feet to adjust the height.





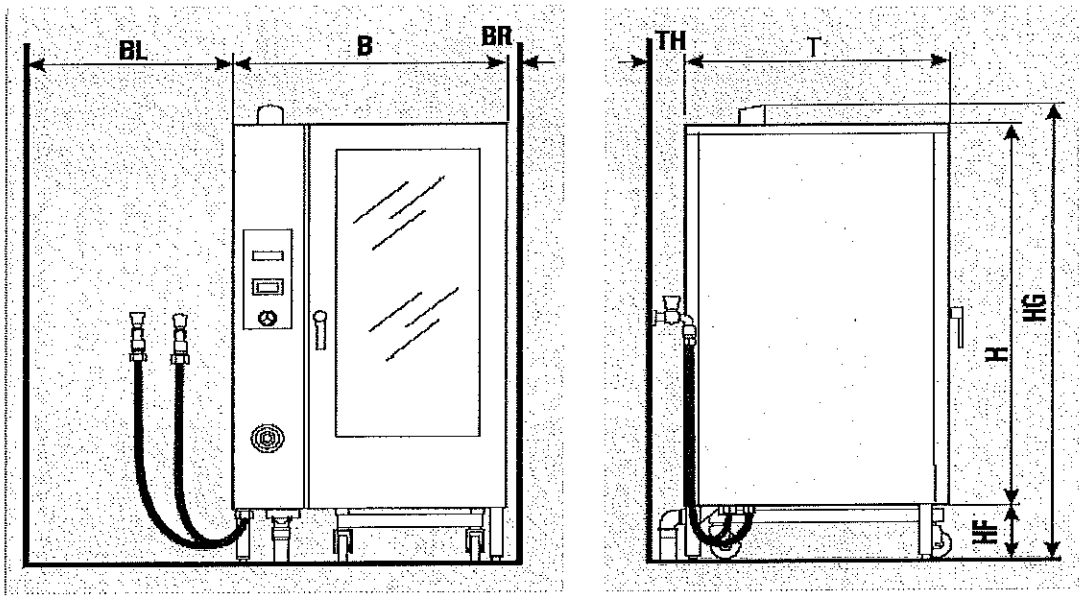
Gas Models	Dimensions in inches (Dimensions in mm)								
	B	BL	BR	H	HF	HG	HT[a]	T	TH
615 & 620	40.2 (1020)	19.7 (500)	2.0 (50)	31.1 (790)	3.9 (100)	66.3 (1684)	33.5 (850)	31.5 (800)	2.0 (50)
115 & 120	40.2 (1020)	19.7 (500)	2.0 (50)	41.1 (1060)	3.9 (100)	66.3 (1684)	22.8 (580)	31.5 (800)	2.0 (50)

a. A warning notice should be applied if the table is higher. See **"Positioning on higher tables"**.

Local fire codes are to be observed if the appliance is installed close to heat-sensitive or flammable material.

There should be at least 20" (500 mm) clearance on the left to allow servicing.

Positioning freestanding appliances



Gas Models	Dimensions inches (Dimensions in mm)							
	B	BL	BR	H	HF	HG	T	TH
115 & 120	42.3 (1075)	31.5 (800)	2.0 (50)	67.8 (1722)	9.4 (238)	79.3 (2013)	32.0 (813)	2.0 (50)
215 & 220								

Minimum clearances

There should be at least 2.0" (50 mm) clearance from the walls on the right and to the rear. Local fire codes are to be observed if the appliance is installed close to heat-sensitive or flammable material.

There should be at least 20" (500 mm) clearance on the left to allow servicing. We recommend at least 31.5" (800 mm) so that the mobile oven rack can be stowed at the side.

NOTICE

To ensure the unit operates properly, the intake and outlet openings for the cooling system fan on the lower left side of the appliance should not be blocked or closed and sources of heat or steam to the side or behind the appliance should be avoided. If this is not feasible, shields are to be used to prevent an intake of warm or damp air.

Mobile Oven Rack 215

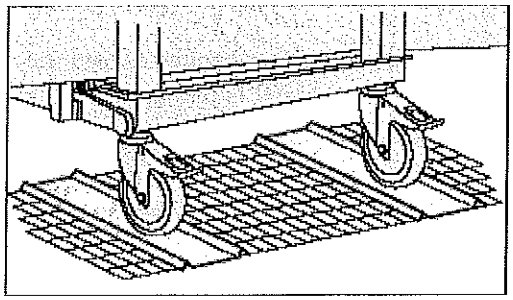
In the 215 model, the surface below and in front of the appliance should be level so that the mobile oven rack can be moved in easily. The adjustable legs on the frame can be used to level out any unevenness. If the floor is very uneven, spacers can be inserted on the mobile oven rack castors.

If water leaks out of the mobile oven rack or foods bake unevenly, the mobile oven rack is not properly aligned with the appliance. The sealing plate on the mobile oven rack must fit evenly against the seal. The rails in the appliance must be level. There must be no gap between the sealing plate on the mobile oven rack and the seal on the appliance.

To prevent damage or personal injury, ensure that the floor is strong enough. There is at least 1100 lbs(500 kg) = 4 load points of 275 lbs (125 kg) on the adjustable legs.

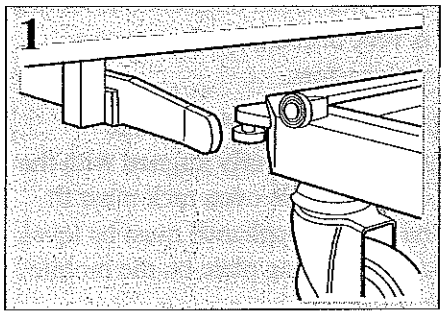
The *ClassicCombi*™ & *SmartCombi*™ 215 can also be fitted (optional) with the "EasyIn" entry system. Alignment is then carried out as described for the *ClassicCombi*™ & *SmartCombi*™ 220.

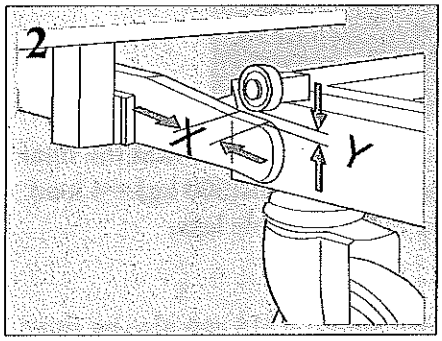
If a drainage grate is located in front of an upright appliance, then a ramp must be attached across the grate by the customer for use with a mobile oven rack.

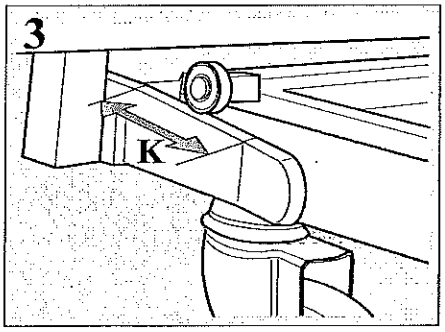


Mobile Oven Rack 220

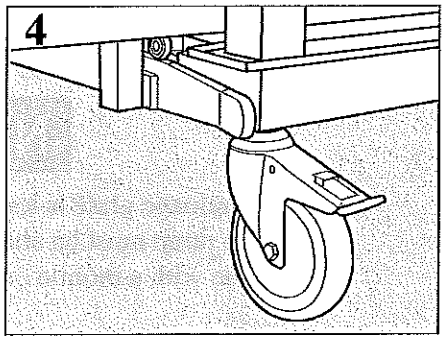
The *ClassicCombi*™ & *SmartCombi*™220 are fitted with the "EasyIn" entry system, so that the mobile oven rack goes into the appliance on rails.The rails must be horizontally aligned with the combi steamer feet. The rail height is to be adjusted so that the mobile oven rack wheels do not come into contact with the floor when they are moved into the appliance.







1. Bring the mobile oven rack into the mounting area.
2. The rail supporting rollers [x] should not rest on the rails [y] in the mounting area.
3. Push the mobile oven rack further up the rail [k] into the appliance. The mobile oven rack lifts up.
4. Push the mobile oven rack into the appliance until it locks into place. The wheels should not touch the floor at all when the mobile oven rack is fully pushed in. The mobile oven rack rests on the rail supporting rollers only [4]. If necessary, the rails should be aligned with the appliance legs so that the rail supporting rollers do not run yet on the rail in the mounting area.



If water leaks from the mobile oven rack during use, the door seal is damaged. In this event, replace the seal.

To prevent damage or personal injury, ensure that the floor is strong enough. There is at least 1100 lb (500 kg) =4 load points of 275 lbs (125 kg) on the adjustable legs.

Connection

Technical data

ClassicCombi™ & *SmartCombi*™ Gas Combi Steamer						
Model	615	620	115	120	215	220
Length Width Height	39.4" (1000 mm) 31.5" (800 mm) 31.1" (790 mm)	39.4" (1000 mm) 31.5" (800 mm) 31.1" (790 mm)	39.4" (1000 mm) 31.5" (800 mm) 41.7" (1060 mm)	39.4" (1000 mm) 31.5" (800 mm) 41.7" (1060 mm)	42.3" (1075 mm) 32.0" (813 mm) 67.8" (1722 mm)	42.3" (1075 mm) 32.0" (813 mm) 67.8" (1722 mm)
Weight	310 lbs (140 kg)	310 lbs (140 kg)	355 lbs (160 kg)	355 lbs (160 kg)	783 lbs (355 kg)	783 lbs (355 kg)
Gas connection capacity	37500 BTU/hr 11 kW	58000 BTU/hr 17 kW	61500 BTU/hr 18 kW	89000 BTU/hr 26 kW	123000 BTU/hr 36 kW	178000 BTU/hr 52 kW
Gas connection	R 3/4" External thread					
Electrical connection capacity	0.8 KW 1 N PE 230 V AC 50 Hz	0.8 KW 1 N PE 230 V AC 50 Hz	0.8 KW 1 N PE 230 V AC 50 Hz	0.8 KW 1 N PE 230 V AC 50 Hz	1.5 KW 1 N PE 230 V AC 50 Hz	1.5 KW 1 N PE 230 V AC 50 Hz
Ambient temp. and humidity	41 to 104°F (5 to 40°C), 95% rel. humidity, non-condensing					
Water connection	Water hardness max. 89.5 ppm (5° dH) (soft water), (5.22gr/gal) (1.08 mmol/l) DN 15 hose with 3/4" union nut; Pressure: 2-6 bar (30-88 psi) (200-600 kPa)					
Cooling and rinsing water connection	Cold drinking water pH value: 0-447.5 ppm (0-25 ° dH) DN 15 hose with 3/4" union nut; Pressure: 2-6 bar (30-88 psi)(200-600 kPa)					
Drain connection	DN 50, fixed connection, waste water temperature: max. 176°F (80°C)					
Latent heat loss	2.2 kW	3.4 kW	3.6 kW	5.2 kW	7.2 kW	10.4 kW
Direct heat loss	1.7 kW	2.6 kW	2.7 kW	3.9 kW	5.4 kW	7.8 kW
Noise level	70 dB (A)					

Gas data[1]

Family	Type of gas and Symbol	Connection pressure mbar	Wobbe index		Heating value		Calorific value	
			W_u MJ/m³	W_o MJ/m³	H_u MJ/m³	H_u MJ/kg	H_o MJ/m³	H_o MJ/kg
2H(E)	Natural gas H/E G20	15-25	45.7	50.7	34.0	47.4	37.8	52.7
2L (LL)	Natural gas L G25	15-30	37.4	41.5	29.3	37.0	32.5	41.1
3B/3P	Butane/Propane G30/G31	15-57.5	80.6/ 70.7	87.3/ 76.8	116.1/ 88.0	45.7/ 46.4	125.8/ 95.7	49.5/ 50.4

1. at 15°C and 1013 mbar dry

Appliance gas connection

Installation of the *ClassicCombi*™ & *SmartCombi*™ should only be carried out by an approved sub-contractor installation company and the appropriate gas supply company.
The installation must conform 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 Istallation Code, CSA B149.1, as applicable.

- The 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 ½ psi (3.5 kPa).
- 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 ½ psi (3.5 kPa).
- If an external pressure regulator is installed, it must be listed by a nationally recognized testing agency.

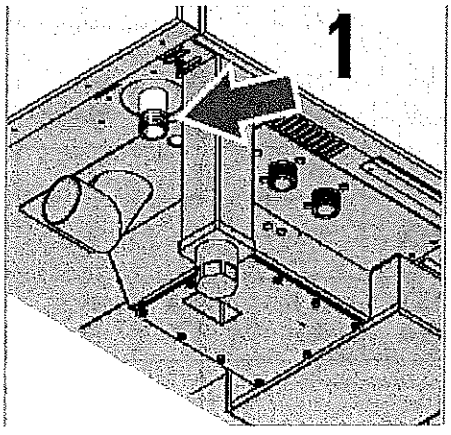
Gas connection is undertaken in 5 steps:

- Checking whether the gas type on the appliance name plate matches the gas type available on site, if necessary, conversion to another gas type (see section "Conversion to another gas type")
- Check connection of the gas (including customer supplied) line to the appliance, according to DIN-DVGW.
- Leak testing of all gas lines and valves inside and outside of the appliance
- Checking of the connection pressure
- Measurement of the CO_2/CO fractions in the exhaust gas

The customer supplied gas shut-off must not be installed within the safety clearances around the unit, but must have easy access. The equipment is intended for permanent fixed connection by the customer. Connection line diameter must be at least ¾" . Connection is via the ¾" steel pipe connector beneath the appliance floor [1].

NOTICE

Connecting a 45 degree elbow, 3/4"-NPT fitting, onto the appliance helps in the gas line connection.



CAUTION

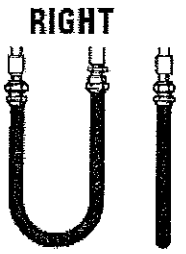
Do not confuse the gas connection with the water connection or damage to the unit could result.

WARNING

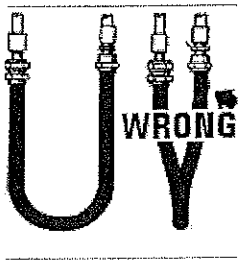
To prevent damage to gas lines and possible fire, this appliance cannot be equipped with casters or with stands with casters.

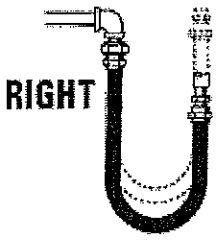
If using a flexible gas line for connection, only use a DVGW-approved stainless steel hose. Alternately a gas connection with a quick-disconnect is possible.

Hose connection

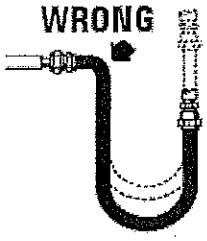


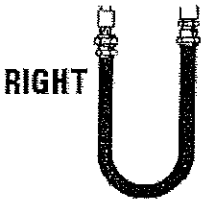
Connections and hose should be installed in the same plane as shown on the left. If the connection points are misaligned, the additional torsional stress causes heavy loading of the hose, which could cause its early failure.



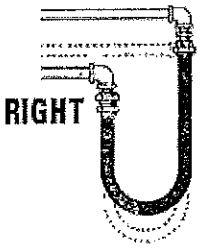


This is the correct type – vertical and horizontal lines with a metal hose for connection. Ensure that the hose has only one bend. A sharp bend, as shown on the right, stresses and twists the metal hose, which can lead to early failure of the connection.

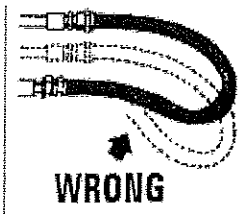


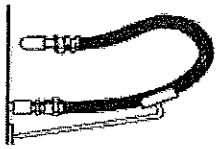


Maintenance of the minimum bending diameter, or a larger bend ensure a longer service life for the hose connection.
If the separation between the two connection points is smaller than the minimum bending diameter, it results in bending in opposite directions of the hose ends, which can lead to a fatigue fracture.



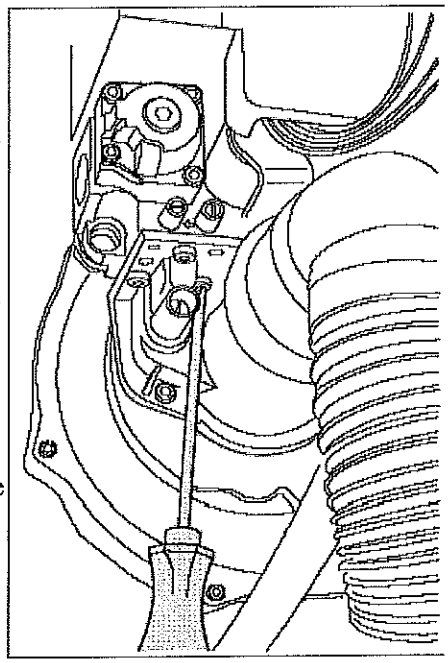
For all installations, where "self emptying" is not necessary, connect the metal hose in a vertical loop.
If the metal hose is installed horizontally due to "self emptying", then the lower hose end must be supported so that no "water sack" can form.



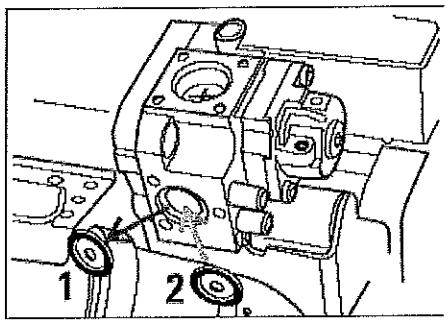


Converting to another type of gas

To convert to another gas type, the burner orifice must be changed. The orifices with an orifice table are stored in a plastic bag, located behind the left side panel.



- Close the gas shut-off valve (Customer installation)
- Turn the circuit breakers to off or pull out the plug from wall receptacle
- Unscrew the two bottom left securing screws on the appliance and remove the side panel
- Unscrew the securing screws for the gas valve
- Remove the gas valve
- Remove the gas restrictor with its seal [1]



- Select an orifice, by using the table and refit using an **undamaged seal** [2]
- Replace the gas valve and tighten up
- Open the gas connection valve again
- Reconnect to the power supply

After the conversion, **test for leaks, check the connection pressure** and **calibrate the CO_2/CO-valves,** following the instructions on the following pages.

Marking

Change the gas type label on the unit. A new label comes with the conversion kit.

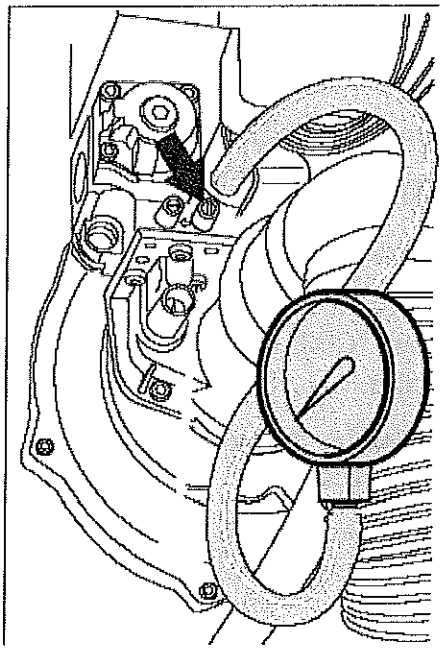
Leak testing

Prior to checking the connection pressure, all connection points both outside and inside the appliance must be checked for leaks according to the technical regulations governing gas installations (TRGI) (using a gas detector or leak spray).

CAUTION

Use only DVGW-approved, foam forming agents! Do not spray leak spray onto the wires of the ignition electronics, or damage to wires could result!

Checking the connection pressure



- Close the gas shut-off valve (customer-provided).
- Turn the circuit breakers to off or pull out the plug from wall receptacle.
- Unscrew the two bottom left securing screws on the appliance and remove the side panel.
- Unscrew the sealing screw from the pressure measurement connection on the gas valve and connect a manometer. The manometer used should be accurate to at least 0.1 psi (0.1 mbar).
- Open the gas connection valve again.
- Startup the appliance (see "Operation Manual").
- Measure the connection pressure and compare it to the table below.
- After measuring the pressure and with the shut-off valve still closed, refit the sealing screw in the pressure measuring point and check for leaks.

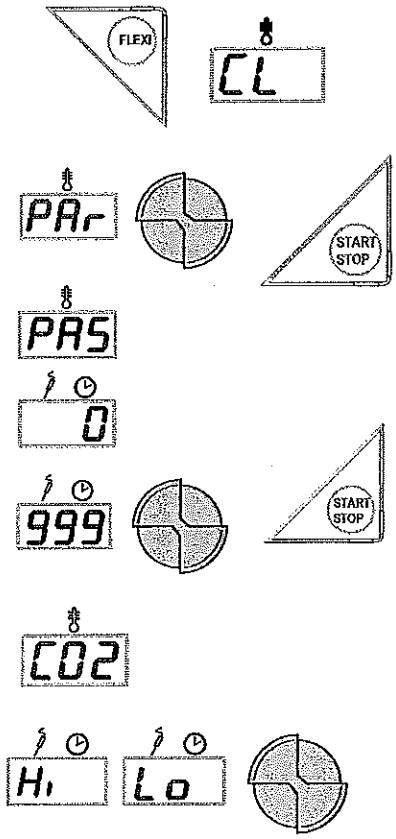
Connection pressure fluctuations

Type of gas Nominal connection pressure	Measured connection pressure	Action to be taken
Natural gas E, LL .29 psi (20 mbar)	.22-.36 psi (15.0 -25.0 mbar)	None, no working restrictions
Liquid gas B, P .73 psi (50 mbar)	.22-.83 psi (15.0 -57.5 mbar)	None, no working restrictions

If the connection pressure lies above the range given above, (max. .87 psi (60 mbar), the appliance must not be used. The gas supplier must be informed that the supply pressure is too high.

CO_2 -Value calibration

ClassicCombi™ **version**



CAUTION

This adjustment is crucial for the safe operation of the appliance.

After leak testing, the CO_2 value of the exhaust gas requires calibration and the CO value is to be checked.

Switch on the combi steamer by pressing the ON/OFF Button.

Press the Flexi Button.

- The upper display shows the first menu "CL" or CLE".

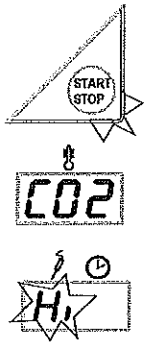
Choose "Par" (Parameter) with the upper knob and press the "Start/Stop" button.

- The upper display shows "PAS" (Password).
- The lower display shows "0".

Enter password "999" with the lower knob and press the "Start/ Stop" button.

- The upper display now shows "CO2" to indicate the CO_2 calibration procedure is active.
- The lower display shows a flashing "Hi" and at two chamber units "Hi1" for the upper chamber.
- It is possible to toggle with the lower knob between high power (Hi, Hi1, Hi2) and low power (Lo, Lo1, Lo2).

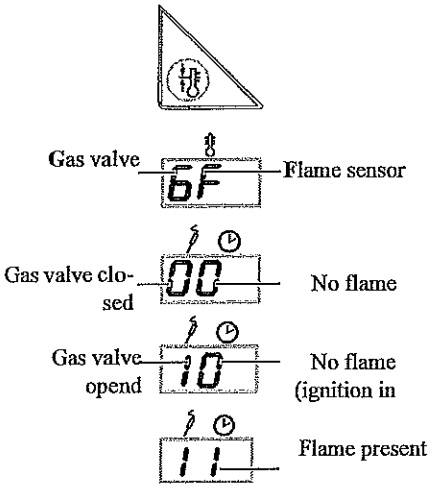
Starting the CO_2-calibration



The $C0_2$ is first to be measured at high power. After selecting "Hi, Hi1, Hi2" press the "START/STOP" -button.

- The LEDs of the "START/STOP"-button are flashing.
- In the upper display "CO2" is displayed.
- In the lower display "Hi, Hi1or Hi2" flashes.

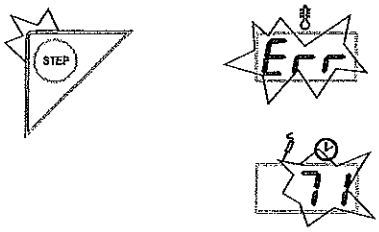
Burner status



Data is acessable if the preheating button is pressed duiring the active procedure.

- At one chamber unit "GF" is displayed in the upper display and on two chmaber units "GF1" or "GF2" is displayed. GF1 represents the upper chamber and GF2 represents the lower chamber. The two chambers are calibrated seperatly.
- For an error free starting procedure "00", "10", "11" is displayed in the lower display. "0"= not present or active, "1"= present or active. The digit below the "G" and "F" (or "F1","F2") represents its status. Indicating first no operation, then gas valved opend and within 6 seconds the flame has to be sensored otherwise the procedure is stopped with error code 71.

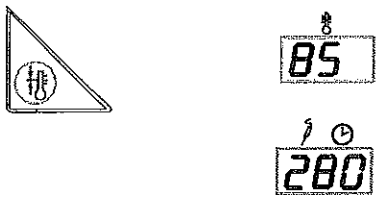
Error during start procedure



If the flame was not detected within 6 secondes after the gas valve was opend the procedure is stopped and the error 71 (No gas) is displayed. Please check to see if an extrernal gas valve is open. If a unit is started for the first time this error occurs several times until the air in the gas pipe is flushed out.

- In the upper display "Err" (Error) flashes.
- In the lower display the error code is displayed. In this case "71".
- The step button flashes.
- Press the step button to confirm the error and resart the procedure by pressing the "Start/Stop" button.

Oven chamber temperature



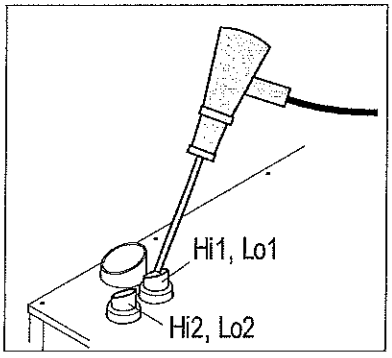
After the burner has ignited (lower display shows 11) press the preheating button to show the oven chamber temperature.

- The upper display shows the actual oven chamber temperature e. g. **85** (°C/°F).
- The lower display shows the rpms of the gas blower divided by 10 e.g. **280** for 2800 rpm.

CO_2-measurement

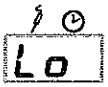
If the oven chammber has an approximate temperature of 302°F (150°C) and the rpm shows the values according to the table (check the CO_2 value).

Fan speed in rpm for high (Hi) power and low pwer (Lo)		
Model	Hi, Hi1, Hi2	Lo, Lo1, Lo2
615	5050	4800
620	6700	5300
115	5050	2800
120	6700	2800
215	5050	2800
220	6700	2800



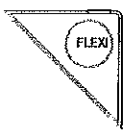
Place the CO_2 probe into the exhaust pipe. For correct measurement do not place the probe during the ignition process. Be sure to place the probe into the correct pipe for two chamber models. The $C0_2$ value has to be within the range according to the table. Take care that the oven chamber temperature does not exeed 392°F (200°C). If the temperature reaches 482°F (250°C) the procedure is automatically stopped.

CO_2-value at max./min power		
	At max. power (Hi, Hi1, Hi2)	At low power (Lo, Lo1, Lo2)
Natural gas	8,6-9,6 %	0,5-1 % lower as at maximum power (Hi, Hi1, Hi2)
Propane	10,0-11,0 %	
Butane	11,7-12,7 %	



After measuring the CO2 value at maximum power switch the units to low power (Lo,Lo1;Lo2).

- The upper display shows "CO2".
- Turn the lower knob to "Lo, Lo1 or Lo2" and press the FLEXI button to activate the low power mode. If the FLEXI button is not pressed within 5 seconds the prior mode is still active.
- The lower display shows "Lo, Lo1 or Lo2".
- The rpms of the gas blower shows the values according to the rpm table.

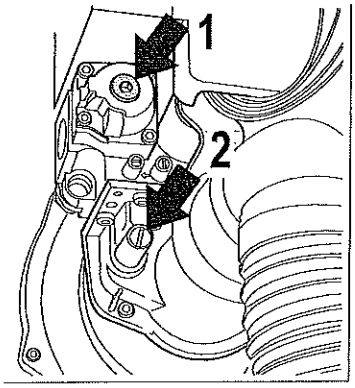


The CO_2 value at low power has to be 0,5-1% lower than at high power. This is for a safe operation of the appliance.

The CO content has to be always lower than 100 ppm (Except during the ignition phase), otherwise the appliance is not allowed to operate.

On the two chamber models the chambers are calibrated seperatly and can be can be toggled by turning the lower knob until the desired chamber and power is displayed. Then press the FLEXI button for confirmation. The upper chamber is active when Hi1 or Lo1 is displayed and the lower chamber is active when Hi2 or Lo2 is displayed. Be sure to have the CO_2 probe in the correct exhaust pipe.

Changing lower power CO_2 values



If the measured value differs from the values given in the table, the CO_2 value must be adjusted to match the values given in the restrictor table. The unit was designed in that way so that the CO_2 values at high power are automatically within the range. If this is not the case the installed orifice is wrong or the caloric heat value of the gas is not normal. With the adjustment screw [1] the CO_2 for high power can be influenced.

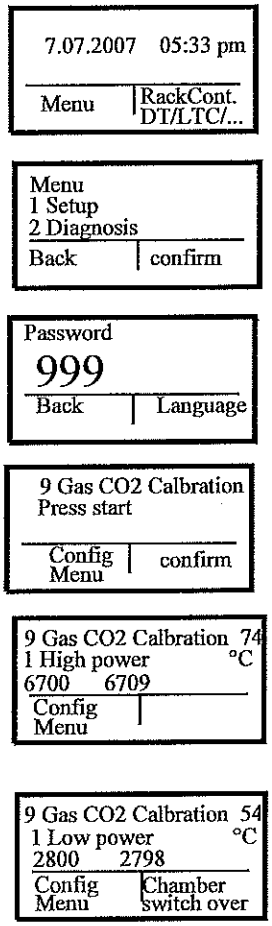
Unscrew the cap [1] on the gas valve and adjust the CO_2 value using the adjustment screw (white plastic) behind it during low power operation. Refit the metal cab after calibration is finished.

If the low power CO_2 value has been changed, the CO_2 values at high power have to be checked again.

If the CO_2 value at high power is too high or too low please check that the correct orifice is installed. The CO_2 value at high power can be reduced by using the adjustment screw [2]. It has to be turned inwards to reduce the CO_2 at high power.

CO_2 value calibration

SmartCombi™ version



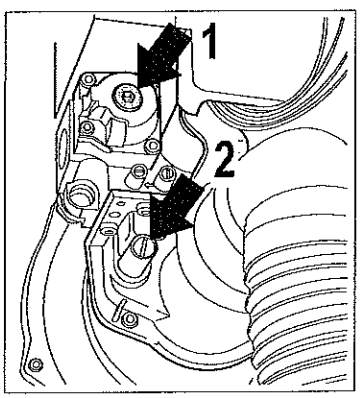
CAUTION

This adjustment is crucial for the safe operation of the appliance.

After leak testing, the CO_2 value of the exhaust gas requires calibration and the CO value is to be checked.

- Switch on the combi steamer by pressing the on / off button.
- Call up the menu points with the menu key.
- Select "Setup" using the CombiPilot.
- Enter the password "999" using the CombiPilot and confirm using the start button.
- Start CO_2 calibration using the start button or the CombiPilot.
- $C0_2$ should be measured at high power. The oven chamber should have a temperature of approx. 302°F (150°C) during the measurement. The current oven chamber temperature is shown in the top right of the display. The $C0_2$ value must lie within the limits given in the orifice table.
- Then switch over using the CombiPilot and operate at low power. The CO_2 value must be lower by the amount indicated in the orifice table, located behind the left side panel.
- With the two chamber combi steamer, Model 215 or 220, the button "Switch over chamber" can be used to switch between top and bottom chambers.
  The chamber selected is indicated in the display by the arrow alongside the speed.

Changing lower power CO_2 values



If the measured value differs from the values given in the table, the CO_2 value must be adjusted to match the values given in the restrictor table.

Unscrew the cap [1] on the gas valve and adjust the CO_2 value using the adjustment screw behind it during low power operation.

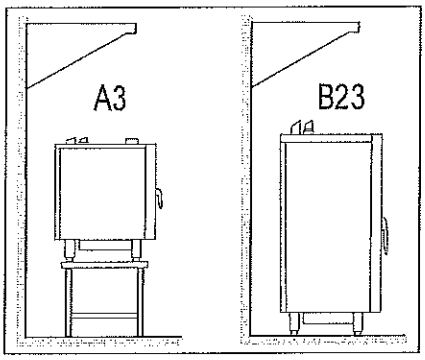
If the low power CO_2 value has been changed, the high power value should be checked and if necessary readjusted. Adjust the CO_2 value using the adjustment screw [2].

Exhaust gas flue

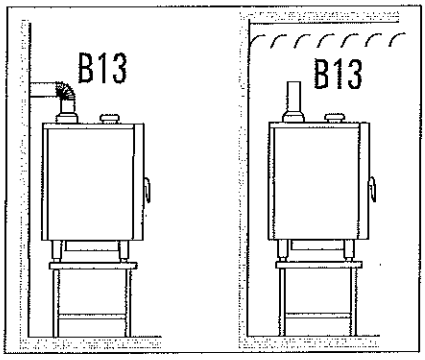
Gas appliances produce combustion gases which must flow through a correct sized exhaust flue to the outside.

The rooms in which these appliances are installed must be well ventilated, in order to prevent an unacceptable build-up of harmful combustion products. (room ventilation system with safety switches).

Hot air steamers can be connected as follows :



- Beneath an extractor hood: Appliances of type A3 (615) and B23 (all appliance sizes except 615).
- Directly to the chimney:
  Appliances of type B13 (optionally, all appliance sizes)
- Beneath a ventilation cover:
  Appliances of type B13 (optionally, all appliance sizes)



When installing the appliance beneath a ventilation cover or an extractor hood system, safety devices must be in place that allow gas supply to the burners only when the extraction system is working.

When connecting appliances of type B13 directly to a chimney, all exhaust gas paths must be regularly cleaned.

Observe country-specific regulations.Route the exhaust gas pipe so that it is tightly sealed, according to the technical regulations governing liquid gas and the technical regulations governing gas installations (DVGW-TRGI and TRF). Make the appliance safe in respect to exhaust gas transport and mechanically against displacement.

Exhaust gas systems are to be agreed with the district chimney/ heating inspector. We recommend that this is recorded in writing.

Risk of fire

CAUTION

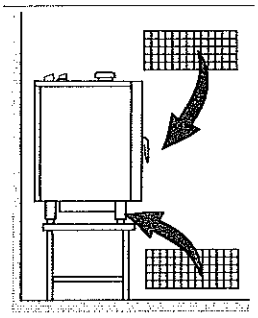
The exhaust gas temperature can reach 750°F (400°C). To reduce the risk of fire, keep appliance area free and clear from combustibles (ceiling, walls, floor). No objects should be placed on the combi steamer.

Ensure all users know the fire prevention regulations!

WARNING
BURN RISK

The exhaust flue connection, its covering, as well as the exhaust gas, can reach high temperatures and cause burns in cases of direct contact.

Combustion air



CAUTION

Ensure there is a sufficient supply of combustion air. The amount of fresh air needed for proper combustion is dependent upon the input power (BTU/hr) of the appliance.

In rooms in which the nominal heat loading caused by all gas appliances is less than 170,721 BTU/hr (50 kW), air supply via external joints or openings into the open air is permissible.

Find out about the following before installation (as far in advance as possible):

- the gas supplier
- the building safety office
- the chimney sweep
- the industrial inspectors
- the drainage and sewerage office.

All work on customer systems (gas/water/electricity/ sewerage) should only be carried out by the respective supply company or an installation company approved by them.

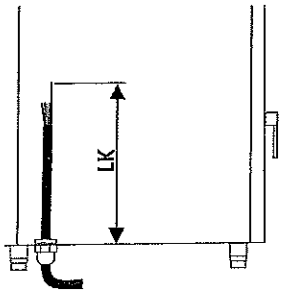
The current local codes should be adhered to.

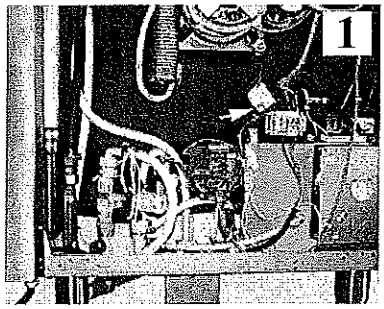
Power connection

Installation of this unit should be performed only by a qualified service technician.

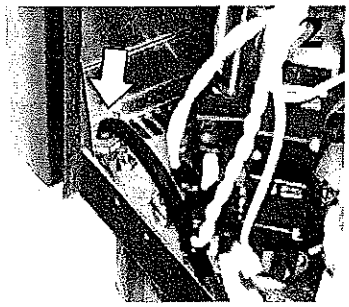
The standard unit is NOT supplied with a power cable.

The required cable length within the appliance can be seen in the table.

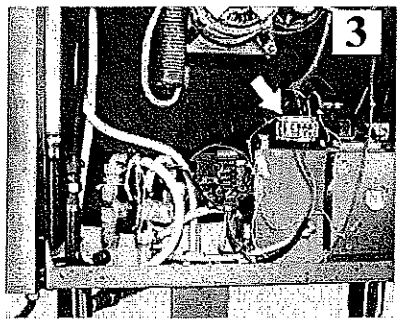
Required cable length in the appliance	
	
Gas Models	CL
615 & 620	80 cm 39.5 cm
115 & 120	31.5 in 80 cm
215 & 220	39.5 in 100 cm



Unscrew the left side panel.



Feed the connecting cable through the cable gland [2] into the appliance.



Connect the power cable to the connection terminals [4] according to the following terminal plan.

Shut-off installation

For fixed electrical connection an **all-pole**shut-off (e.g. automatic circuit breaker) with **a contact gap of at least 3 mm** must be included in the power supply so that the appliance can be disconnected from the mains at any time.

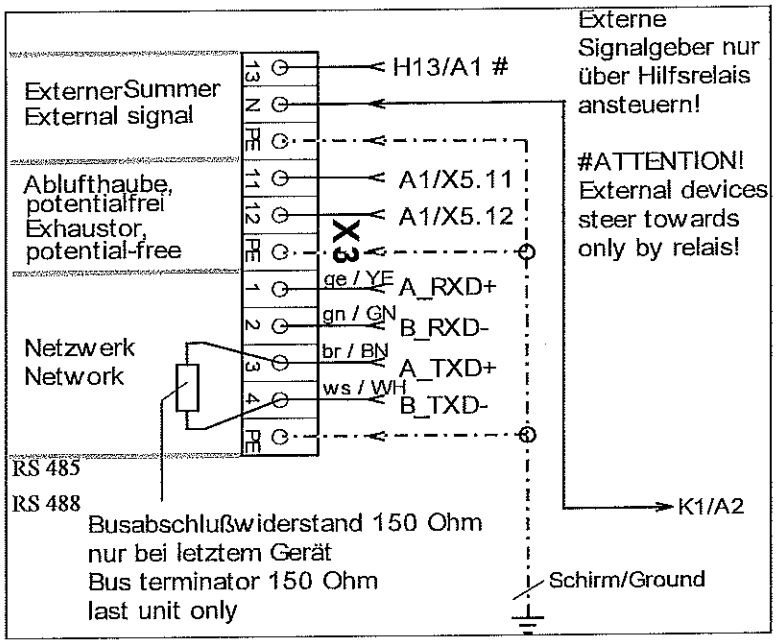
Leak current protection switch

A pulse current sensitive FI switch ≥ 30 mA of type A  or a type B  all current sensitive can be pre-switched in the appliance supply respectively for a combi steamer.

Grounding the unit

The appliance can be integrated into the building's grounding system (earth). The connection point is under the information label.

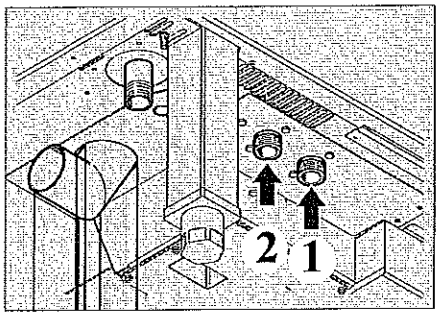
Terminal connection plan *SmartCombi*™ version



RS 488/RS 485 interface

The *SmartCombi*™ versions are fitted as standard with a four-pole RS 488. Linking from x3/1 to x3/3 and x3/2 to x3/4 reduces the interface to RS 485. Twisted cables are to be used as a connecting cable, e.g. LiYY (TP) 2x2x0.5. The final appliance is to be connected with a 150 Ohm resistor.

Water connection



If the stacking kit is used, the lower and upper appliances should be connected separately, so that if one fails, the other can continue operation.

The appliance is equipped as standard with a soft water connection [2] (steam) and a hard water connection [1] (cooling water, hand shower). The connections are located on the left side of the combi steamer beneath the floor.

The appliance must be connected to the **drinking water supply** in accordance with DIN 1988, Part 4.

Before making final connections, thoroughly flush the on-site water pipes.

Flow pressure	min. 29 psi/max. 88 psi min. 2.0 bar/max.6.0 bar
Static pressure	max. 88 psi max. 6.0 bar
Flow volume, soft water	max. 0.22 gal (US)/min max. 1 l/min
Flow volume, hard water	max. 4.4 gal (US)/min max. 20 l/min

Use ½" hoses with R¾" screw fittings. They should be long enough to allow the appliance to be pulled out by around 3.0 feet (0.8m) for servicing.

The stopcocks must be fitted with return flow inhibitors.

CAUTION

To prevent damage to the appliance, the filters supplied as standard with the appliance must be fitted on the water inlet.

Soft water connection

A soft water connection with the following features is required for steam generation: Cl<8.8 gr/gal(150 mg/l). Higher values may lead to corrosion in the oven chamber. The Cl content can be reduced with a water filtration system.

If the water is very impure, use a 0.08 mm sediment filter (X).

To prevent limescale deposits, use a water softener if the hardness is over 8.95 ppm (5°dH - German degrees of hardness (0.89 mmol/l)). The silica content must be .23 gr/gal (4mg/l). Otherwise, the glass panel in the appliance door may cloud over. Osmosis or water filtration systems are suitable for reducing silica levels.

Softening systems based on electromagnetic fields will not protect this type of appliance from limescale formation.

If a softening system or a water treatment system is not added, some components in the water (Na+ ions and silicates) may cause the panels to cloud over. This depends on the quality of the water and the amount and way the appliance is used. Softened water from decarbonating /dimineralisation systems delays or prevents this.

The appliance can show the service intervals for the water softener connected to it on its display. For more information see the operating instructions.

Do not use pipes made of galvanised steel or other material likely to corrode downstream of a water softener.

Systems that use phosphate and silicate should not be used.

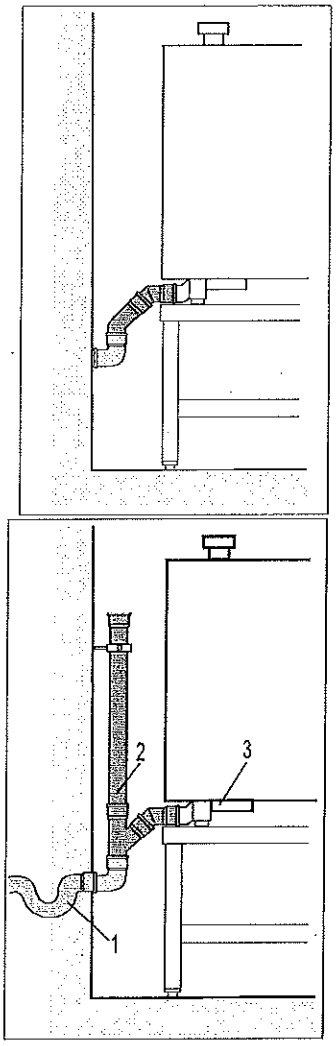
Hard water connection

Non-softened, cold water should be used for cooling. Using warm water results in increased water consumption and cooling is not effective with hot water.

CAUTION

Appliances fitted with "WaveClean" automatic cleaning are to be connected to the hard water connection, otherwise the appliance may be damaged.

Drain connection



The *SmartCombi*™ and the *ClassicCombi*™ models with WaveClean are equipped with a trap and an overflow and can be connected permanently to the public drainage system with no further action required. The maximum volume flow is 5.5 gal (US)/min (25 l/min) for all *SmartCombi*™ and *ClassicCombi*™ models.

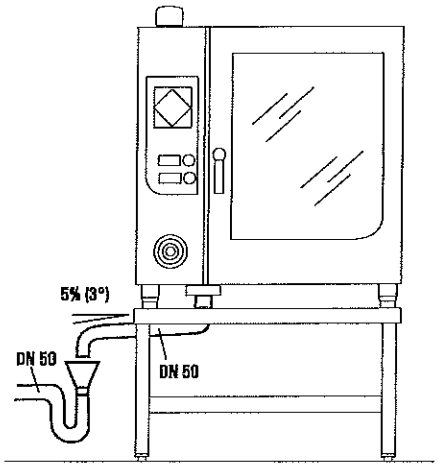
A second trap in the building waste system should be avoided. If the drain is connected to an on-site trap [1], the trap [3] in the unit will overflow because of the greater pressure. If there is another trap in the building waste system, then there must be an air vent[2] between the appliance and this trap.

The appliance must be connected to the drainage system with a heat-proof pipe (DN 50) with a falling gradient of at least 5%. We recommend HT pipe PA-I 1818 DIN 19560. **The diameter is not to be reduced.**

NOTICE

After it is connected up, pour 2 quarts (2 litres) of drinking water into the trap to ensure it works properly.

ClassicCombi™ without WaveClean



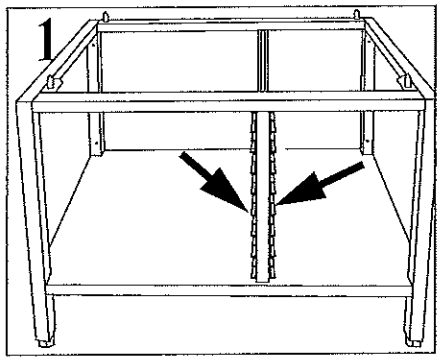
ClassicCombi™ models without WaveClean do not have an integrated overflow. Due to this they have to be connected by a funnel to the public drainage system. The funnel must not be placed directly below the combisteamer, otherwise the escaping steam will damage the unit.

Built-in installation

The underframes/built-in cupboards can be fitted retrospectively with rails to take 1/1 or 2/1 GN containers.

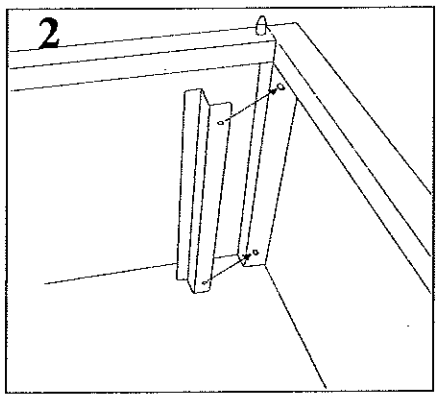
Fitting the shelf rails

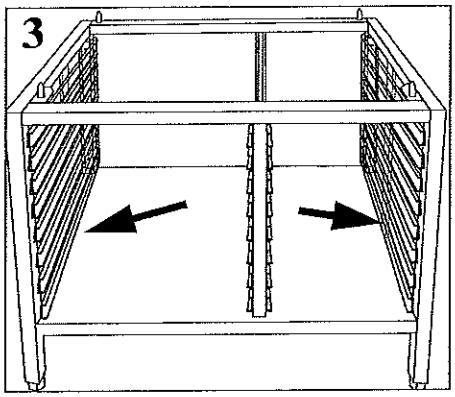
1. Fit the inner shelf tracks.



2. Push the back stop positioning section (right and left) onto the bolts.

3. Fit the external inner shelf tracks (right and left).





Noise level

The noise emitted at the workplace is less than 70 dB/A.

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