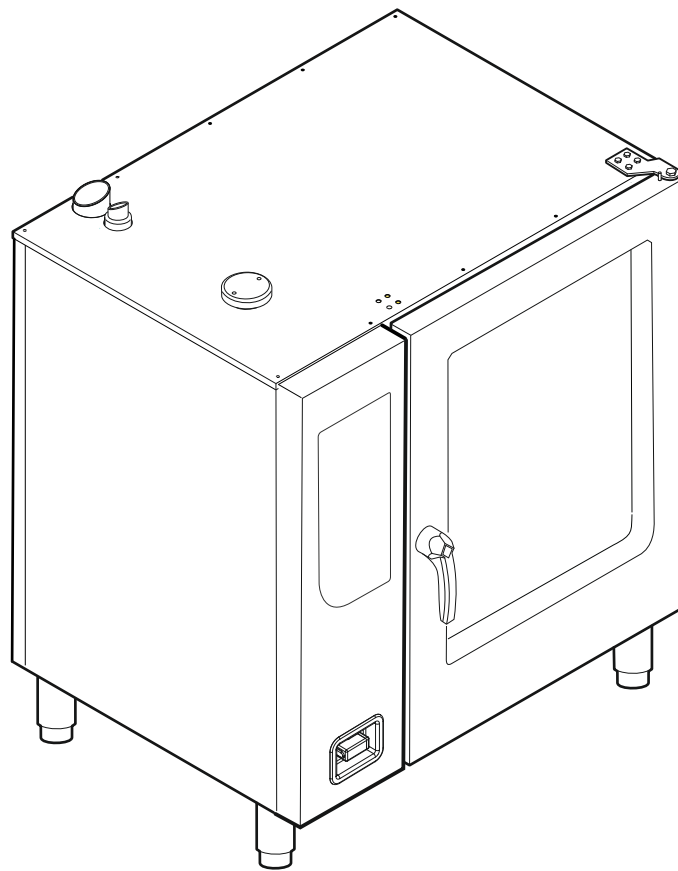




Read the operating instructions prior to commissioning

Installation instructions

## Combisteamer



Translation from the original document • 10014471-1AIBE-- • 23/11/2016

Unit	Type of energy	Unit type	Model
FlexiCombi Classic	Gas	Countertop unit	FKECOD615 FKECOD621 FKECOD115 FKECOD121
		Floor-standing unit	FKECOD215 FKECOD221

**Manufacturer**

MKN Maschinenfabrik Kurt Neubauer GmbH & Co. KG  
Halberstädter Strasse 2a  
38300 Wolfenbüttel  
Germany

Phone +49 5331 89-0  
Fax +49 5331 89-280  
Internet [www.mkn.eu](http://www.mkn.eu)

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# 1 Introduction

## 1.1 About this manual

The instruction manual is part of the unit and contains information on safe installation of the unit.

Observe and adhere to the following instructions:

- Read the instruction manual in its entirety prior to installation.
- Make the instruction manual available to the installer at the operating site at all times.
- Preserve the installation manual throughout the service life of the unit.
- Insert any supplements from the manufacturer.
- Pass on the installation manual to any subsequent operator of the unit.

**Target group** The target group for the installation manual is trained technical personnel that is familiar with installing and operating the unit.

**Figures** All figures in this manual are intended as examples. Discrepancies between these and the actual unit can arise.

## 1.1.1 Explanation of signs



**DANGER**  
**Imminent threat of danger**

Failure to comply will lead to death or very severe injuries.

---



**WARNING**  
**Possible threat of danger**

Failure to comply can lead to death or very severe injuries.

---



**CAUTION**  
**Dangerous situation**

Failure to comply can lead to slight or moderately severe injuries.

---

**ATTENTION**  
**Physical damage**

Failure to comply can cause physical damage.

---



Notes for better understanding and operation of the unit.

---

Symbol / sign	Meaning
•	Listing of information.
→	Action steps, which can be performed in any sequence.
1. 2.	Action steps, which must be performed in the specified sequence.
↳	Result of an action performed or additional information about it.

## 1.2 Use of the unit

This unit is intended to be used solely for commercial purposes, particularly in commercial kitchens.

**The use of the unit is prohibited in the following countries:**

- USA
- Canada

## 1.3 Warranty

The warranty is void and safety is no longer assured in the event of:

- Improper conversion or technical modifications of the unit,
- Improper use,
- Incorrect startup, operation or maintenance of the unit,
- Problems resulting from failure to observe these instructions.

## 2 Safety information

The unit complies with applicable safety standards. Residual risks associated with operation or risks resulting from incorrect operation cannot be ruled out and are mentioned specifically in the safety instructions and warnings.

The installer must be familiar with regional regulations and observe them.

The installer must observe the safety instructions in these mounting instructions and in the "Safety information" chapter of the operating instructions.

**Ensuring conformity with standards** Observe applicable international, European and national laws, regulations, standards and directives for the unit when transporting, setting up and connecting it.

**Improper installation Risk of property damage and personal injury from improper installation**

- Install the unit only as specified in these installation instructions.
- Do not add anything to the unit or modify the unit.
- Use only original spare parts.

**Transportation and storage Risk of personal injury and property damage from improper transportation and improper storage**

- Store the unit in a dry, frost-free environment.
- Observe the safety regulations for the lifting gear used.
- Attach the unit to the lifting gear securely during transport and setup, and prevent it from dropping.
- Transport the unit in an upright position, do not tilt or stack.
- Pay attention to protruding parts when transporting the unit without packaging.

**Fire prevention Risk of fire from combustible surfaces**

- Observe general fire prevention regulations.
- When setting up the unit in close proximity to heat-sensitive substances or substances that pose a risk of fire, observe fire prevention regulations.
- Ceilings above the unit must be noncombustible.

**Risk of fire from objects**

- Do not obstruct the exhaust gas duct.

**Risk of fire from combustion gases and hot surfaces**

- Maintain an adequate distance from grease filters on ventilation systems.



**Organisational measures Risk of property damage and personal injury from lack of organizational measures**

- Identify hazard areas when transporting, setting up and connecting the unit.
- Prior to starting the installation work, notify any operators present about the procedure.
- Prior to starting the installation work, discuss how to behave in an emergency.
- Use equipment and protective gear suitable for the activity.
- Brace housing components to prevent them from falling over and dropping.

**Setup Risk of property damage and personal injury from improper setup**

- Ensure that the installation area has adequate load-bearing capacity.
- Wear safety shoes and protective gloves.

**Electrical connection Risk of fire from improper connection**

- Observe applicable regional regulations of the electrical utility.
- Ensure that only electricians licensed by the electric utility connect the unit.
- Ensure that the electrical system is earthed by a protective earthing conductor.
- Note the information on the nameplate.

**Risk of electric shock from live components.**

- Prior to working on the electrical system, switch off the unit, disconnect the electrical system from the mains and prevent power from being switched on again. Check to ensure absence of voltage.
- Use only insulated tools.

**Risk of electric shock**

- The unit must be incorporated into the potential equalisation circuit through use of the specified minimum wire sizes.

**Gas connection Risk of explosion and fire from improper connection**

- Observe applicable regional regulations of the gas utility.
- Ensure that only a tradesman licensed by the gas supplier connects the unit to the gas supply.

- Prior to working on the gas system, switch off the unit, close the gas supply from the gas system and secure it against being reopened. When bleeding air or degassing, ensure that the air and gas are discharged to the outside in a technically correct manner and without creating a risk.
- Observe the information on the nameplate and *Gas type* supplemental label.
- Check for leaks.
- When working on the gas system and units in buildings, ensure that a hazardous gas-air mixture cannot form in the rooms.

### **Risk of poisoning from exhaust gases**

- Ensure that exhaust gases are discharged properly and that the necessary amount of combustion air is supplied.
- Ensure that a maximum CO content of < 0.1 vol. % or < 1000 ppm is achieved in undiluted exhaust gas.

### **Unit on casters Risk of a line breaking if subjected to high tensile load**

- Secure the unit with a chain as a strain relief for the power connection at the installation site so that no tensile load is applied to the power connection if the unit is moved.

### **Additional connection work Risk of physical damage and personal injury from improper connection**

- Prior to working on the unit, switch off the unit, disconnect the unit from the mains and prevent power from being switched on again. Check to ensure absence of voltage.
- Prior to working on the unit, switch off the unit, close the gas supply and secure it against being reopened.
- Route connection lines such that they cannot be damaged from heat.

### **Commissioning Risk of property damage and personal injury from improper commissioning**

- Read the operating instructions prior to commissioning. Observe the safety instructions in this installation manual and in the "Safety information" chapter of the operating instructions.
- Put the unit into service only after a successful function test following assembly.
- Put the unit into service only after it has reached room temperature.
- Observe the units during operation.

## 3 Description of the unit

### 3.1 Overview of the unit

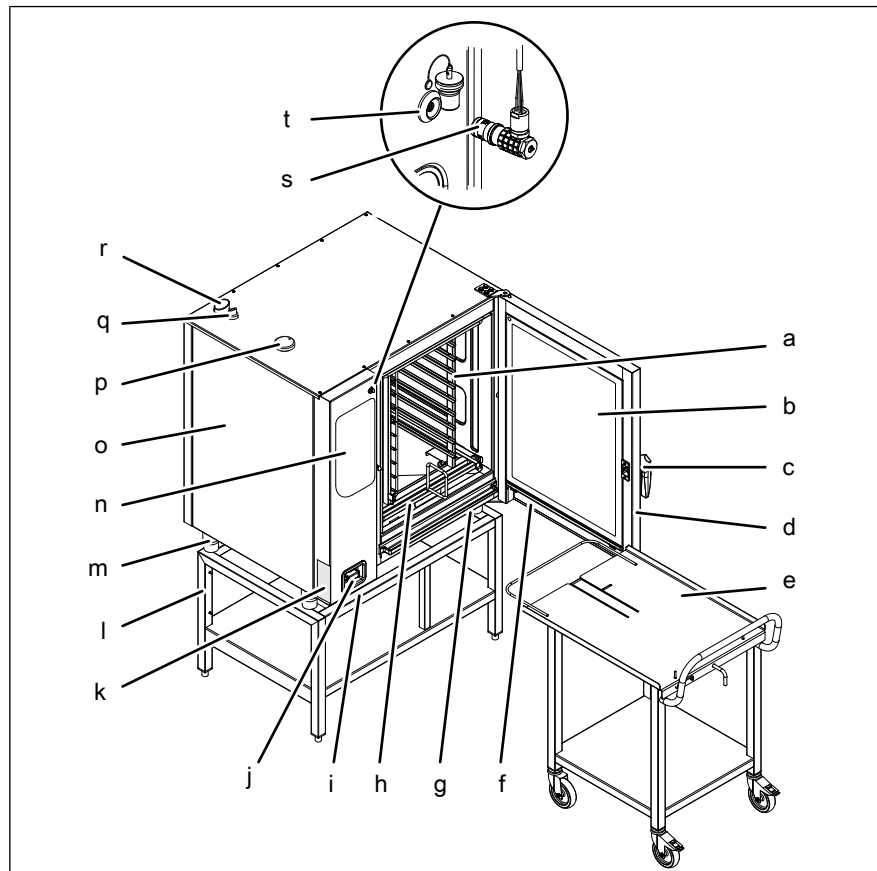


Image: Unit with tray rack trolley

- |   |                                     |   |   |
|---|-------------------------------------|---|---|
| a | Tray rack                           | k | Nameplate   |
| b | Insulated window                    | l | Base frame (optional)                             |
| c | Door handle                         | m | Equipment leg                                     |
| d | Cooking zone door                   | n | Control unit                                      |
| e | Tray rack trolley (optional)        | o | Housing   |
| f | Steam drain channel, door           | p | Air inlet   |
| g | Steam drain channel, unit           | q | Waste gas connection                              |
| h | Guide rail for tray rack (optional) | r | Steam outlet                                      |
| i | USB port (covered)                  | s | Core temperature sensor (optional)                |
| j | Hand shower                         | t | Connection for core temperature sensor (optional) |

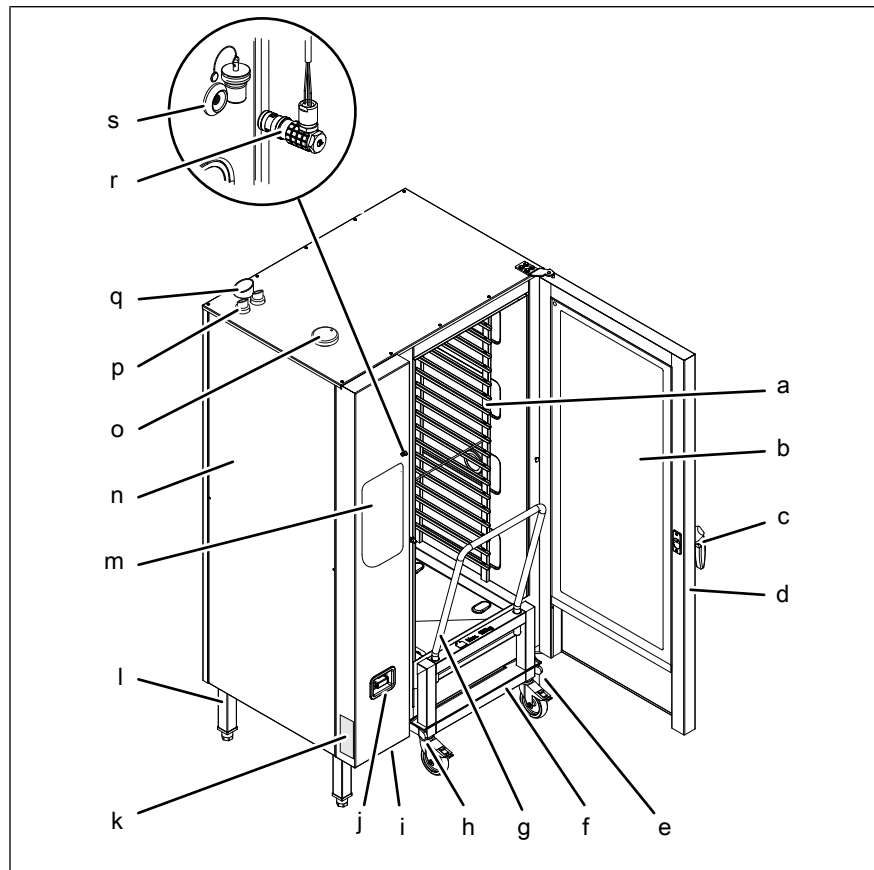


Image: Unit with tray trolley

- |   |                    |   |   |
|---|--------------------|---|---|
| a | Tray rack          | k | Nameplate   |
| b | Insulated window   | l | Equipment leg                                     |
| c | Door handle        | m | Control unit                                      |
| d | Cooking zone door  | n | Housing   |
| e | Guide rail (right) | o | Air inlet   |
| f | Tray trolley       | p | Waste gas connection                              |
| g | Push handle        | q | Steam outlet                                      |
| h | Guide rail (left)  | r | Core temperature sensor (optional)                |
| i | USB port (covered) | s | Connection for core temperature sensor (optional) |
| j | Hand shower        |   |   |

### 3.2 Planning drawing

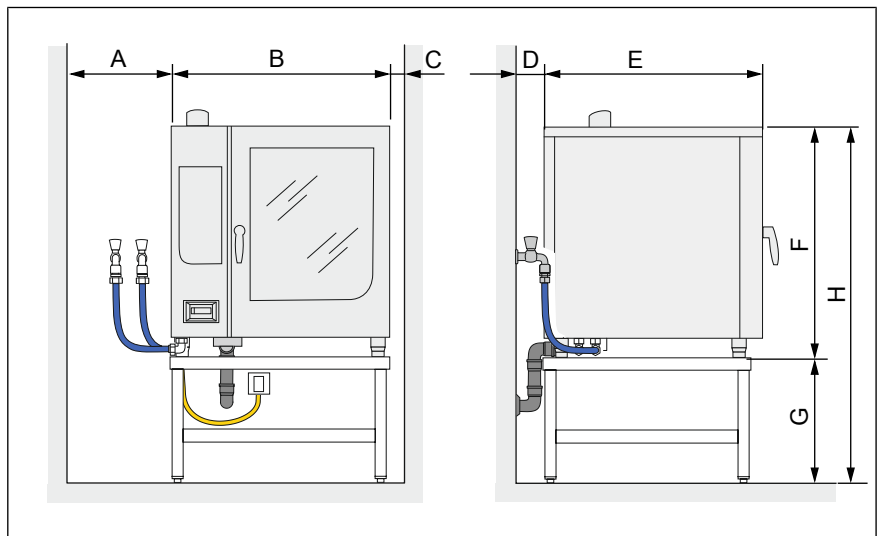


Image: Size 6XX and 1XX

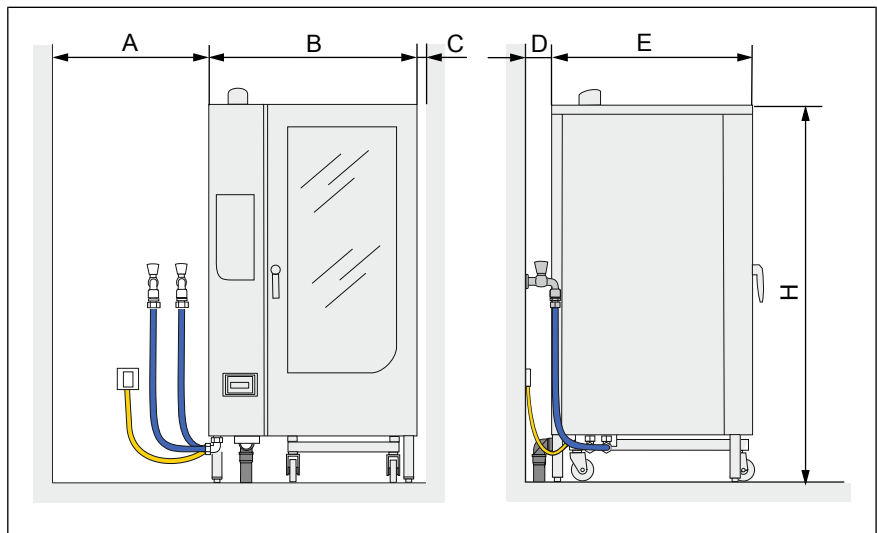


Image: Size 2XX

	Model: FKGCOD		
Size	615, 621	115, 121	215, 221
A	50	50	50
B	1020	1020	1075
C	50	50	50
D	50	50	50
E	799	799	813
F	790	1060	---
G	850	580	---
H	1640	1640	1960
All dimensions in mm			

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### 3.3 Equipment and connection data

	Model: FKG COD					
Size	615	621	115	121	215	221
<b>Dimensions</b>						
Unit Length x Width x Height (mm)	1020 x 799 x 790		1020 x 799 x 1060		1075 x 813 x 1960	
<b>Weight</b>						
(kg) unit	137	142	167	187	355	355
<b>Emissions</b>						
Noise level (db(A))	< 70					
Latent heat (W)	2200*	3400	3600	5200	7200	10400
Sensible heat (W)	1700	2600	2700	3900	5400	7800
* The stated value is reduced by 80 % when operating with a condensation hood; the sensible heat is increased by the amount of the reduction.						
<b>Operating environment</b>						
Temperature (°C)	5 — 40					
Relative humidity (%) non-condensing	95					
<b>Power connection</b>						
Protection class	IPX5					
Type of connection	1NPE / AC 50/60 Hz					
<b>Voltage (V)</b>	<b>100</b>					
Connected load (kW)	0.6				1.0	
Recommended fuse (A)	16					
<b>Voltage (V)</b>	<b>120</b>					
Connected load (kW)	0.6				1.0	
Recommended fuse (A)	16					
Type of connection	1NPE / AC 50/60 Hz, 2PE / AC 50/60 Hz					
<b>Voltage (V)</b>	<b>220 — 240</b>					
Connected load (kW)	0.6				1.0	
Recommended fuse (A)	16					
<b>Soft water connection</b>						
Type of water	Soft water, cold					
Carbonate hardness CaCO <sub>3</sub> (mmol/l (°dH))	< 0,9 (5)					
Chloride Cl (mg/l)	< 50					
Iron Fe (mg/l)	< 0.1					
Connection pressure (kPa (bar))	200 (2) — 600 (6)					
Connection (")	R 3/4					
<b>Tap water connection</b>						

	Model: FKGCOD					
Size	615	621	115	121	215	221
Type of water	Tap water, cold					
Carbonate hardness CaCO <sub>3</sub> (mmol/l (°dH))	< 4 (22)					
Connection pressure (kPa (bar))	200 (2) 600 (6)—					
Connection (")	R 3/4					
<b>Water consumption for steaming</b>						
Soft water (l/h)	16	21	18	24	36	48
<b>Water consumption for Combisteaming</b>						
Soft water (l/h)	3,5	4,6	4	5,3	8	10,6
<b>Water consumption for WaveClean cleaning program</b>						
Soft water (l)	3					
Tap water (l)	32					
<b>Wastewater connection</b>						
Wastewater type	Dirty water, maximum 80 °C					
Connection to unit (mm)	50					
Maximum length (m)	1					
Temperature resistance (°C)	95					
Maximum flow rate (l/min)	10					
<b>Exhaust air connection</b>						
Connection to unit (mm)	53				73	
Maximum length (m)	2,5					
Temperature resistance (°C)	180					
<b>Gas connection</b>						
Rated heat input (kW)	11	17	18	26	36	52
Gas type	The gas type, for which the unit is set, is indicated on the gas type supplemental label.					
Connection dimension (") in accordance with EN10226-1	R 3/4					
Connection pressure (hPa (mbar)) Natural gas 2H, 2E, 2L, 2LL *	20					
Connection pressure (hPa (mbar)) Liquefied gas 3B/P, 3P *	50					
Natural gas E/H, G20 (m <sup>3</sup> /h) **	1,14	1,76	1,87	2,7	3,74	5,4
Natural gas LL/L, G25 (m <sup>3</sup> /h) **	1,33	2,05	2,17	3,14	4,35	6,28
Natural gas 13A, G21 (kcal/h)	9500	14600	15500	22400	31000	44700
Liquefied gas B, G30 (kg/h)	0,87	1,34	1,42	2,05	2,84	4,1
Liquefied gas P G31 (kg/h)	0,85	1,32	1,4	2,02	2,8	4,04
LP Gas B/P G30/G31 (kg/h)	0,87	1,34	1,42	2,05	2,84	4,1

## Description of the unit

	Model: FKGCOD					
Size	615	621	115	121	215	221
Combustion air (m <sup>3</sup> /h) **	15	23	23	33	45	65
<b>Supply air routing and exhaust gas routing</b>						
Required delivery pressure B <sub>13BS</sub> (Pa)	0 — 5					
Exhaust gas temperature B <sub>13BS</sub> (°C)	170	230	195	240	205	250
Exhaust gas mass flow rate B <sub>13BS</sub> (kg/h)	30	47	49	71	99	142
* Information is country-specific and applies to Germany; for further information, see "Checking the connection pressure"						
** Information applies at 15 °C and 1013,25 hPa (mbar)						

## Transformer voltage

Type of connection	1NPE / AC 50/60 Hz			
Voltage range (V)	100 — 120			
Transformer	T1		T2 / T3	
Marking or colour of the cores	Blue	Red	Blue	Red
Voltage measured (V)	Voltage at the transformer (V)			
90 — 100	0	110	-20	120
101 — 110	0	110	0	120
111 — 120	0	120	0	120

Type of connection	1NPE / AC 50/60 Hz, 2PE / AC 50/60 Hz			
Voltage range (V)	200 — 240			
Transformer	T1		T2 / T3	
Marking or colour of the cores	Blue	Red	Blue	Red
Voltage measured (V)	Voltage at the transformer (V)			
190 — 200	0	200	0	200
201 — 220	0	220	0	220
221 — 230	0	230	0	230
231 — 240	0	240	20	220
241 — 250	0	250	20	230



## Basic control setting

Basic setting	Parameters	Standard value	Adjustment range	Explanation
Unit of temperature	1	0	0 = °C	Celsius (°C)
			1 = °F	Fahrenheit (°F)
Altitude	2	0	0 — 999 m	Request the altitude above sea level from the local weather station. If the altitude is unknown, set 0 – 999 m.
			1000 m — 1999 m	
			2000 m — 2499 m	
			2500 m or higher	
Audible signal volume	33	0	0 = Quiet	Sets the volume.
			1 = Loud	
Unit of volume	34	0	0 = (ml)	Millilitre (ml)
			1 = (fl.oz.)	Fluid ounce (fl.oz.)
	35	0	0 = Imperial (fl.oz.)	Imperial fluid ounce
			1 = U.S. (fl.oz.)	U.S. fluid ounces

## Basic control setting (Advanced)

Basic setting	Parameters	Standard value	Adjustment range	Explanation
Ready2Cook preheating temperature	4	15	0 — 30 %	If the unit is fully loaded with a large mass (roasts, loaves of bread), increase the preheat temperature so that the cooking zone temperature does not drop too suddenly.
Time extension for condensation hood	5	60	0 – 600 s	Time extension for the condensation hood, after the cooking zone door has been opened
Preselect steaming temperature	9	100	30 °C — 130 °C	Preset temperature for steaming
Preselect Combisteaming temperature	10	150	30 °C — 250 °C	Preset temperature for Combisteaming
Preselect hot air temperature	11	180	30 °C — 250 °C	Preset temperature for hot air
Preselect regeneration temperature	12	130	30 °C — 150 °C	Preset temperature for regeneration
Maximum waiting time after Ready2Cook, for T < 250 °C	37	120	0 — 300 min	Maximum waiting time after the Ready2Cook temperature is reached, for set value < 250 °C
Cleaning monitoring	46	0	0 = No 1 = Yes	When cleaning monitoring is activated, a message appears if the cleaning program has not been started for more than 1 day.

## Description of the unit

Basic setting	Parameters	Standard value	Adjustment range	Explanation
Steam elimination	48	1	0 = Low 1 = Normal 2 = High	Sets the steam elimination level

### Gas connection pressure

Gas type	Connection pressure (hPa (mbar))	Connection pressure range (hPa (mbar))
<b>Germany:</b>		
Natural gas 2H, 2E, 2L	20	17 — 25
Natural gas 2LL	20	18 — 25
Liquefied gas 3B/P, 3P	50	42,5 — 57,5
<b>Europe:</b>		
Natural gas 2E, 2H	20	17 — 25
Natural gas 2L	25	20 — 30
Natural gas 2K	25	20 — 30
Liquefied gas 3B/P, 3P	50	42,5 — 57,5
Liquefied gas 3B/P	29	25 — 35
Liquefied gas 3P	30	25 — 35
Liquefied gas 3+	28 — 30 / 37	20 — 45
Liquefied gas 3P	37	25 — 45
Liquefied gas 3B	29	20 — 35
<b>Asia:</b>		
Natural gas 13A	20	10 — 25
Liquefied gas B/P	28	23 — 33

### Gas blower speed

Model: FKGCOD	Gas blower speed (rpm)	
	High output (High)	Low output (Low)
615	5050 *	4800
621	6700	4800
115	5050	2800
121	6700	2800
215	5050	2800
221	6700	2800

\* Contrary to the table, the gas blower speed on the 615 model is **5500 1/min** at the described setting after the rated heat input has been checked.

## Exhaust gas values

Gas type	Output	Model: FKG COD	CO <sub>2</sub> (Vol %) *		p <sub>offset</sub> (hPa (mbar)) **		CO (ppm) ***	
			Range	Optimum	Range	Optimum	Range	Optimum
Natural gas	High	All models	8.6 — 9.6	9.2	---	---	0 — 1000	< 100
	Low	615, 621	0.5 — 1.2	0.6	-0,8 — 0	-0,55		
	Low	115, 121, 215, 221	0.5 — 1.2	0.6	-0,4 — 0	-0,15		
Liquefied gas, propane	High	All models	10.0 — 10.6	10.3	---	---		
	Low	615, 621	0.5 — 1.2	1.0	-0,8 — 0	-0,55		
	Low	115, 121, 215, 221	0.5 — 1.2	1.0	-0,4 — 0	-0,15		
Liquefied gas, butane	High	All models	11.5 — 12.5	11.8	---	---		
	Low	615, 621	0.5 — 1.2	1.0	-0,8 — 0	-0,55		
	Low	115, 121, 215, 221	0.5 — 1.2	1.0	-0,4 — 0	-0,15		

\* At partial load (Low) 0.5 — 1.2 lower than at full load (High)

\*\* Offset pressure adjustment aid applies only at low output (Low)

\*\*\* In undiluted exhaust gas

## Gas orifice size for natural gas

Model: FKG COD	Natural gas E/H	Natural gas LL/L	Natural gas L	Natural gas K	Natural gas 13A
Test gas	G20	G25	G25	G25.3R	G21
Wobbe index (kWh/m <sup>3</sup> )*	15.0	12.4	12.4	12.5	16.1
Wobbe index range (kWh/m <sup>3</sup> )*	12.0 — 16.1	10.0 — 13.1	10.0 — 13.1	12.1 — 12.6	14.5 — 16.3
Connection pressure (hPa (mbar))	20	20	25	25	20
Primary air gap (mm)	30 — 50				
CO content (ppm) ***	< 1000 (optimum < 100)				
<b>Orifice size (1/100 (mm))</b>					
615	650	720	720	720	N/A**
621	590	670	670	670	N/A**
115	565	650	650	650	N/A**
121	565	640	640	640	N/A**
215	565	650	650	650	N/A**
221	565	640	640	640	N/A**

## Description of the unit

Model: FKGCOD					
	Natural gas E/ H	Natural gas LL/ L	Natural gas L	Natural gas K	Natural gas 13A
* Upper Wobbe index, information applies at 0 °C and 1013,25 hPa (mbar)					
** For manually setting the rated heat input (see "Adjusting the basic gas setting").					
*** In undiluted exhaust gas					

## Gas orifice size for liquefied gas

Model: FKGCOD	Liquefied gas B/P	Liquefied gas B/P	Liquefied gas B/P
Test gas	G30/G31	G30/G31	G30/G31
Wobbe index (kWh/ m <sup>3</sup> )*	25.7 / 22.5	25.7 / 22.5	23.5
Wobbe index range (kWh/m <sup>3</sup> )*	21.4 — 25.7	21.4 — 25.7	21.4 — 25.7
Connection pressure (hPa (mbar))	50	30	28
Primary air gap (mm)	30 — 50		
CO content (ppm)**	< 1000 (optimum < 100)		
<b>Orifice size (1/100 (mm))</b>			
615	470		
621	430		
115	420		
121	400		
215	420		
221	400		
* Upper Wobbe index, information applies at 0 °C and 1013,25 hPa (mbar)			
** In undiluted exhaust gas			

## Status messages

Burner operation			
Display			Meaning
HI	CO2	G1F1	HI = High output
			CO2 = CO <sub>2</sub> measurement
			G1 = Gas supply open (gas solenoid valve open)
			F1 = Flame present (burner on)
85°C	CO2	2800	85 °C = Current cooking zone temperature
			CO2 = CO <sub>2</sub> measurement
			2800 = Gas blower speed (rpm)

Burner status messages			
Display			Meaning
HI	CO2	G0F0	G0 = Gas supply closed (gas solenoid valve closed) F0 = No flame (burner off)
HI	CO2	G1F0	G1 = Gas supply open (gas solenoid valve open) F0 = No flame (burner off)
HI	CO2	G1F1	G1 = Gas supply open (gas solenoid valve open) F1 = Flame present (burner on)

Burner error messages					
Display			Meaning	Possible cause	Remedy
Err	CO2	71	Err = Error	Gas valve closed. Air in the gas line.	Open the gas valve and repeat ignition.
			CO2 = CO <sub>2</sub> measurement		
			71 = No gas		
Err	CO2	72	Err = Error	Power supply interrupted. Error in the control electronics.	Contact customer service
			CO2 = CO <sub>2</sub> measurement		
			72 = Blower not running		
Err	CO2	73	Err = Error	Wrong gas quality	Contact customer service
			CO2 = CO <sub>2</sub> measurement		
			73 = General gas error		

## 4 Transporting the unit

---



### CAUTION

**Risk of property damage and personnel injury from tipping equipment**

- Do not linger next to or behind raised equipment.
  - Move raised equipment carefully.
- 

### ATTENTION

**Risk of physical damage from improper transport**

- Transport the unit upright.
  - Do not tilt or stack the unit.
  - Pay attention to protruding parts when transporting the unpacked unit.
- 

Prior to transporting the unit to the installation site, ensure that:

- The roadway has adequate load-bearing capacity.
- Wall openings are large enough.

### 4.1 Transporting the unit to the installation site

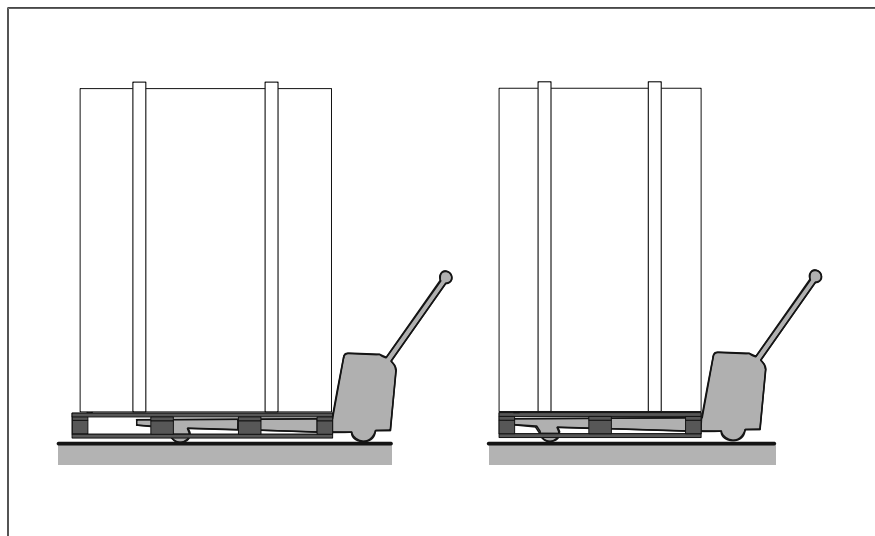


Image: Lengthwise and crosswise transport on pallet

→ Use suitable transport means to move unit to installation site.

## 4.2 Unpacking the unit



---

**CAUTION**  
**Risk of injury from sharp edges**

- Wear protective gloves.
- 



---

When unpacking the unit, inspect it for transport damage.

Do not install damaged units or put into service.

---

1. Remove the packaging.
2. Pull the protective film off the unit.
3. Remove the packaging material from the cooking zone completely.
4. Clean the unit (see "Cleaning and maintaining the unit" in the operating instructions).
5. Enter the information from the nameplate into the commissioning report.

## 5 Setting up the unit



### WARNING

#### Risk of burns from spraying hot fat

- Set up deep fat fryers outside the range of the hand shower.



### CAUTION

#### Risk of crushing from improper setup

- Protect the unit and work area during setup and alignment.



### CAUTION

#### Risk of fire from failure to observe applicable regional fire prevention regulations

- Observe applicable regional fire prevention regulations.

### ATTENTION

#### Risk of physical damage from overheating of the unit

- Do not set up the unit close to heat sources.

### 5.1 Minimum clearances

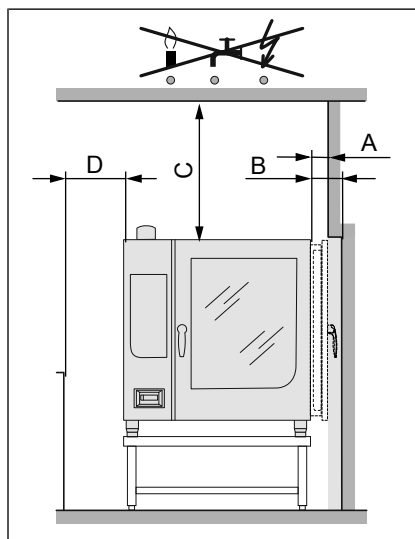


Image: Minimum clearances to walls, ceiling or units

A	B	C	D *
50	100	500	50
All dimensions in mm			
* Recommended for service work 500 mm			

The following clearances from walls, ceilings or other equipment must be maintained when setting up the unit:

- Left, right and rear at least 50 mm.



- For service work, 500 mm on the left is recommended.
- For parking the tray trolley, 800 mm on the left.
- Clearance from heat sources (baking oven), 500 mm on the left.
- Clearance to deep-fat fryers, at least one length of the hand shower on the left and right.
- There must be no water, gas or electric lines in the ceiling above the unit.

## 5.2 Lifting the unit off the pallet



### CAUTION

**Risk of property damage and personnel injury from tipping equipment**

- Do not linger next to or behind raised equipment.
- Move raised equipment carefully.

### ATTENTION

**Risk of physical damage from lifting the unit incorrectly**

- Place the forks of the lift truck next to the waste trap.

**Requirement** Unit unpacked  
Protective film removed  
Unit cleaned

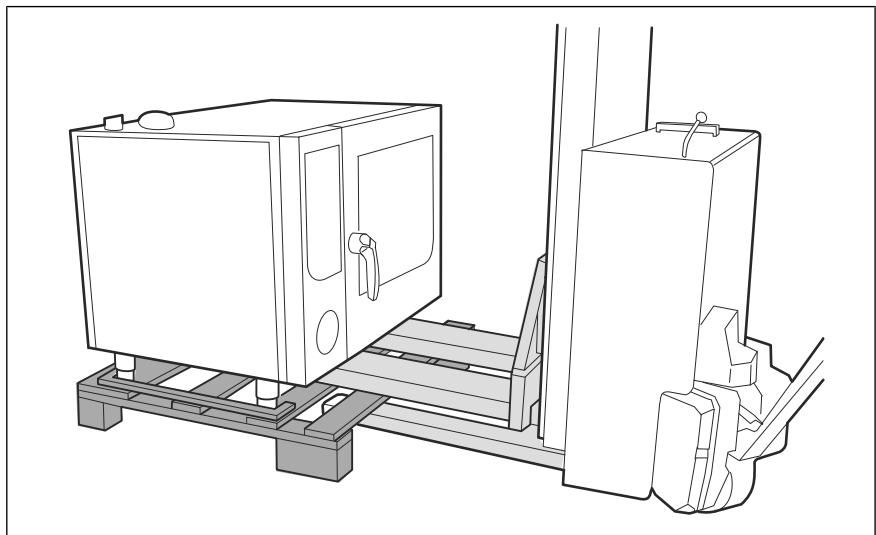


Image: Lifting the unit off the pallet

1. Slide the forks of the pallet truck under the unit and to the right of the waste trap.
2. Lift the unit off the pallet.

### 5.3 Setting up the unit on the equipment legs

**Requirement** The floor must carry the weight of the unit

1. Lift the unit with the pallet truck.
2. Move the unit to the installation site.
3. Place the unit on the floor.
4. Set up the unit in accordance with the planning drawing (see "Planning drawing").

### 5.4 Placing the unit on the base frame

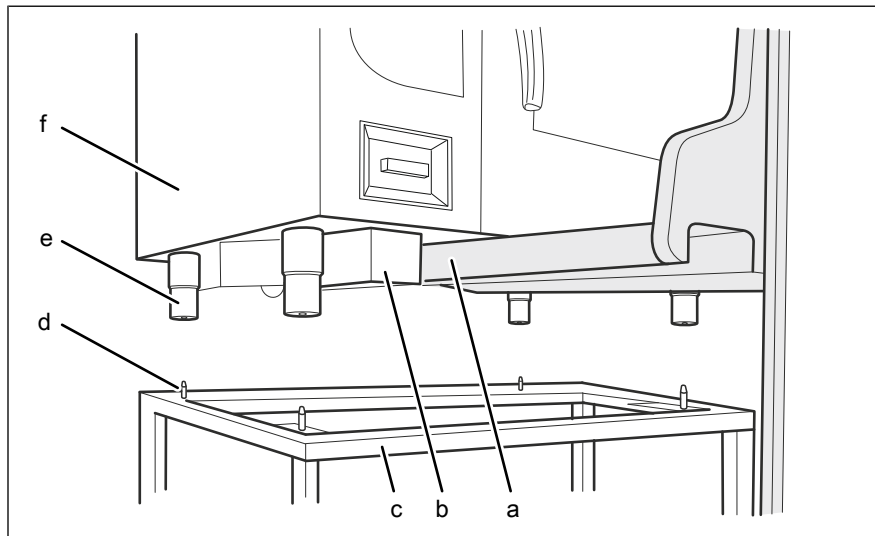


Image: Setting up the unit on a base frame

- |                          |                 |
|--------------------------|-----------------|
| a Lifting fork           | d Stud bolt     |
| b Waste trap on the unit | e Equipment leg |
| c Base frame             | f Unit          |

**Requirement** The base frame must carry the weight of the unit

Base frame levelled

Base frame must be set up in accordance with the planning drawing

1. Lift the unit.
2. Place the unit over the stud bolts and onto the base frame.



#### **CAUTION**

**Risk of scalding due to spillage of hot cooked food**

- Attach sticker if the upper slide-in rails are higher than 1,6 m.

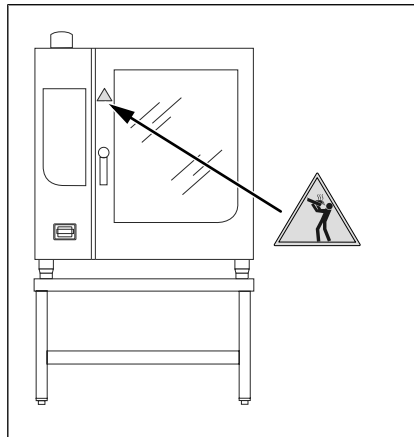


Image: Attach a warning sign about the shelf height

3. Clean the adhesive surface for the sticker.
4. Attach the sticker to the cooking zone door at a height of 1,6 m.

### 5.4.1 Installing the support rack

Depending on the version, the base frame can be equipped with a support rack.

The support rack is used to hold containers, metal trays and grates.

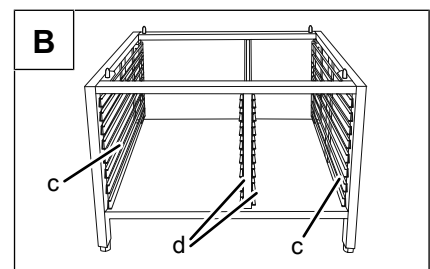
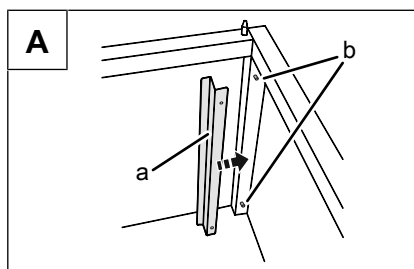


Image: A Stop profile, B Support rack

- a Stop profile
- b Pin

- c Outboard support rack
- d Inboard support rack

**Requirement** Pins installed in the uprights of the base frame

1. Place the stop profiles on the pins (at the back).
2. Install the support racks.

### 5.5 Aligning the unit

#### 5.5.1 Aligning countertop units

**Requirement** Base frame levelled

- Level the unit by screwing the equipment legs in or out.
- Fill out the Commissioning report.

#### 5.5.2 Aligning floor-standing units

---

##### **ATTENTION**

##### **Risk of water discharge from leaking cooking zone**

The cooking zone will leak if the tray trolley is not aligned.

- Operate a floor-standing unit only with the tray trolley.
  - Align the tray trolley carefully.
- 



---

The tray trolley is needed to align a floor-standing unit.

Prepare the tray trolley.

---

##### **Aligning tray trolleys**

**Requirement** The floor under and in front of the unit is flat

1. Level the unit by screwing the equipment legs in or out.
2. If the floor conditions are poor, insert spacers on the casters of the tray trolley.
3. Open the cooking zone door.
4. Move the tray trolley into the unit until it stops and check the alignment.
5. Close the cooking zone door.
  - ↳ The sheet metal seal on the tray trolley should make full contact (no gaps) with the door seal.
  - ↳ The shelves in the unit should be horizontal.
6. Fill out the Commissioning report.

##### **Aligning the tray trolley with the insertion system**

The Combisteamer can be equipped with the *EasyIn* insertion system(optional).

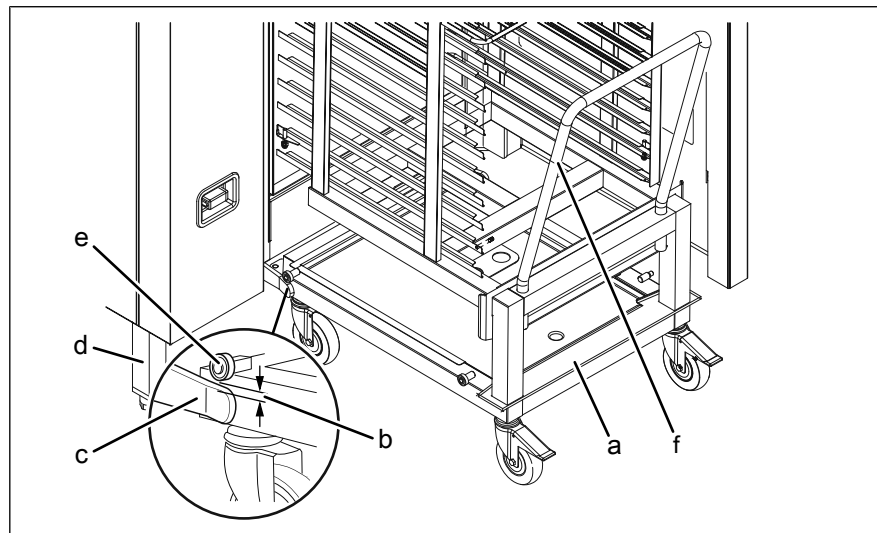


Image: Aligning the tray trolley with the insertion system

- |                |                  |
|----------------|------------------|
| a Tray trolley | d Equipment leg  |
| b Distance     | e Support roller |
| c Guide rail   | f Push handle    |

1. Level the unit by screwing the equipment legs in or out.
2. Open the cooking zone door.
3. Place the tray trolley against the guide rails.
4. Screw the equipment legs in or out, until the support rollers are 1 mm — 5 mm above the guide rails.
5. Retract the tray trolley.
6. Level the guide rails.
7. Move the tray trolley into the unit until it stops and check the alignment.
  - ↳ The casters of the inserted tray trolley should no longer have floor contact.
8. Remove the push handle.
9. Close the cooking zone door.
10. Fill out the Commissioning report.

## 6 Connecting the unit



### DANGER

**Risk of personal injury and physical damage from electric shock**

- Prior to working on the unit, ensure that the unit has been disconnected from the mains.
- Do not operate the unit with the housing open.



### CAUTION

**Risk of injury from sharp edges**

- Wear protective gloves.

### ATTENTION

**Risk of physical damage from damage to the lines**

- Remove and attach housing components carefully.

## 6.1 Opening and closing the housing

### 6.1.1 Removing and attaching side wall

#### Removing the side wall

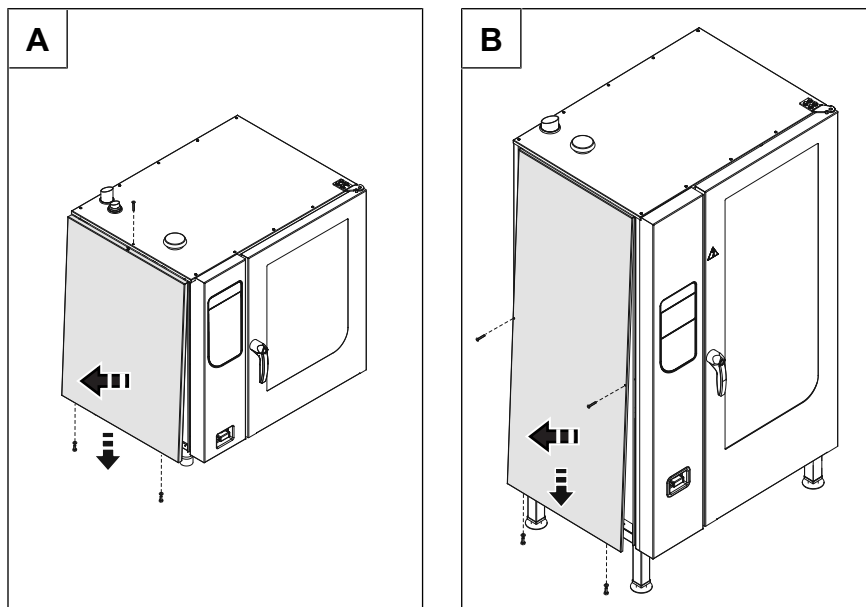


Image: A Size 6XX and 1XX; B Size 2XX

1. Unscrew the screws on the side wall.
2. Pull the bottom edge of the side wall forwards.
3. Remove the side wall.

### Attaching the side wall

#### ATTENTION

##### Risk of physical damage from leaky housing

- Check seals when attaching the housing parts.
- Replace damaged gaskets.

1. Insert the top edge of the side wall.
2. Carefully push the bottom of the side wall inwards.
3. Fasten the side wall with the screws.
4. Check that the side wall is in contact with the unit on all sides.

## 6.2 Checking the supply air routing and exhaust gas routing

Routing of the supply air and exhaust gas must comply with the national and regional laws, regulations, standards and directives.



#### WARNING

##### Risk of poisoning from exhaust gases

- Ensure that exhaust gases are routed to the outside.
- Install the unit below or at ventilation systems.
- For type B devices: Connect unit to ventilation system or chimney.
- Ensure that the unit can be operated only when the ventilation system is switched on.



#### WARNING

##### Risk of burns and fire from the high temperature of the exhaust gas

The temperature of the exhaust gas can be up to 400 °C.

- Do not touch the exhaust gas opening or its cover.
- Do not place any objects in close proximity to the exhaust gas opening or on the unit.

### Installation room requirements

- There must be sufficient incoming air from gaps and openings to the open air or from a heating, ventilation and air conditioning system.
- Routing of exhaust gas to the open air is assured.
- The routing of the supply air and exhaust gas must not adversely affect proper operation (for example due to underpressure).
- A safety device must ensure, that gas can only be supplied when the ventilation system is switched on.
- How the exhaust gas is routed depends on the unit type:
  - Type A unit: Indirect routing of exhaust gas via ventilation systems such as a ventilated ceiling or ventilation hood.

## Connecting the unit

- Type B unit: Direct routing of exhaust gas via ventilation system or chimney or indirect routing of exhaust gas via ventilation systems such as ventilated ceiling or ventilation hood.

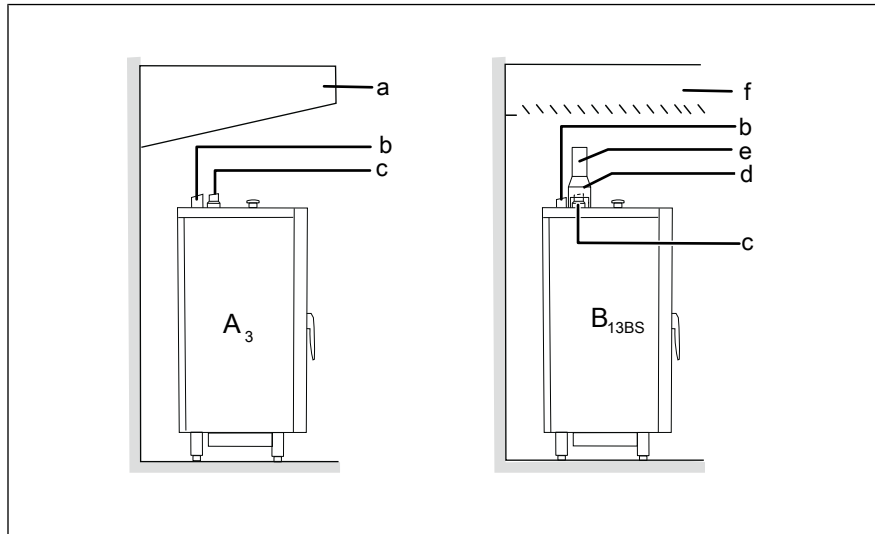


Image: Indirect exhaust gas routing

- |                                   |                      |
|-----------------------------------|----------------------|
| a Ventilation hood                | d Flow control       |
| b Steam outlet connection fitting | e Exhaust gas duct   |
| c Waste gas connection            | f Ventilated ceiling |

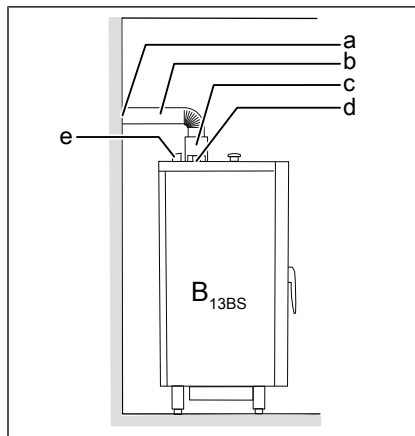


Image: Direct exhaust gas routing

- |                                 |                           |
|---------------------------------|---------------------------|
| a Ventilation system or chimney | d Waste gas connection    |
| b Exhaust gas duct              | e Steam outlet connection |
| c Flow control                  |                           |

1. Ensure that all conditions in this section are satisfied.
2. Ensure that the supply air and exhaust gas routing is unobstructed.
3. Ensure that supply air and exhaust gas routing functions properly.
4. Fill out the commissioning report.



## 6.3 Making the power connection

The unit must be connected on the basis of the information on the nameplate and this manual.

### ATTENTION

#### Risk of physical damage from incorrect connection voltage

- Before making the connection, measure the connection voltage and check the set voltage on the transformers in the unit.

### Wiring diagram

The wiring diagram is included with the unit.

The wiring diagram and additional documents are available on the manufacturer's Internet page by entering the serial number of the unit (see Impressum).

### Installation work

Electrical installation work must be carried out by an electrician. Comply with the local regulations of the electrical utility company.

### Power connection cable

Minimum requirements for the unit's power connection cable to the electric mains:

Connection	Power connection cable
Permanent connection for fixed installation with a cable from the unit to a separate connection box.	Rubber sheath cable, oil-resistant, shrouded and flexible in accordance with IEC 60245-57 (for example H05RN-F).
Connection of the unit with a plug.	
Permanent connection for fixed installation with a permanently laid cable and direct connection to the unit.	PVC sheathed cable for permanent ducting in buildings or damp and wet rooms.

### Permanent connection



### CAUTION

#### Risk of property damage and personal injury from improper installation

- In the case of a permanent electrical connection, install an all-phase disconnect switch before the unit.

Install an all-phase disconnect switch if the unit will be connected permanently to the electric mains.

### Plug-in connection

---



#### CAUTION

**Risk of property damage and personal injury from improper installation**

- The plug-in connection must be readily accessible.
- 

If the unit is connected with a plug to the power-supply mains, use plugs and sockets according to IEC60309.

The socket must be readily accessible so that the unit can be disconnected from the electric mains at any time.

### Insulation monitoring

If there is an unearthed network (IT network), the unit can be incorporated into the insulation monitoring.

### Fault current device

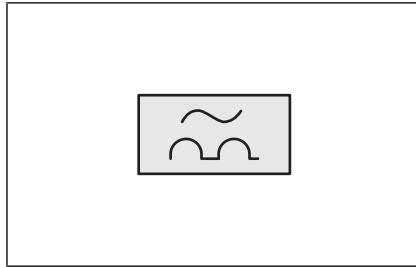


Image: RCD switch type A, circuit symbol

The unit can be connected to a fault current device.

If a fault current device is used, a fault current device type A (RCD type A) must be installed, to ensure that AC fault currents and pulsating DC currents are detected.

The unit generates a small fault current through use of special electronic components. To ensure that the residual current device does not trip during normal operation, each unit must have its own residual current device.

### Equipotential bonding

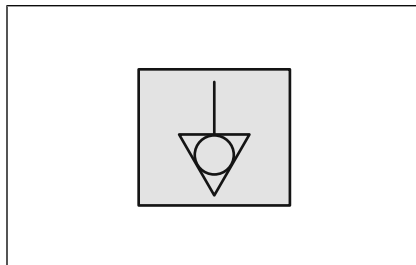


Image: Equipotential bonding symbol

The unit must be included in a potential equalisation system by means of appropriately sized wiring.

### 6.3.1 Matching the unit to the connection voltage



#### DANGER

**Risk of personal injury and physical damage from electric shock**

- Prior to working on the unit, ensure that the unit has been disconnected from the mains.
- Do not operate the unit with the housing open.

#### ATTENTION

**Risk of physical damage from incorrect connection voltage**

- Before making the connection, measure the connection voltage and check the set voltage on the transformers in the unit.

When the unit is delivered, it is preset to a certain connection voltage or voltage range.

If the connection voltage on site differs from the preset connection voltage, damage to the unit can arise.

Before connecting the unit, the connection voltage must be measured and the transformers in the unit checked, and if necessary they must be reconnected.

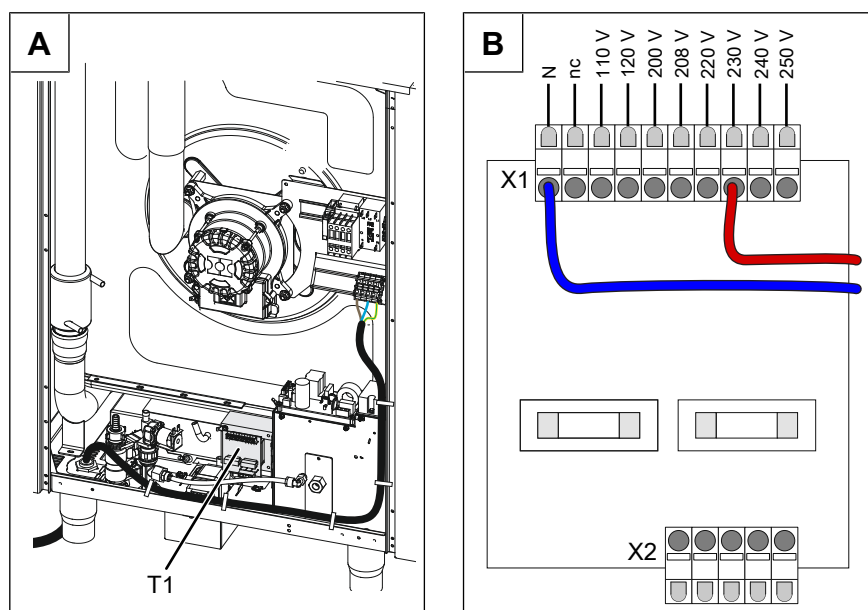


Image: A Transformer position T1; B Connection for transformer controls

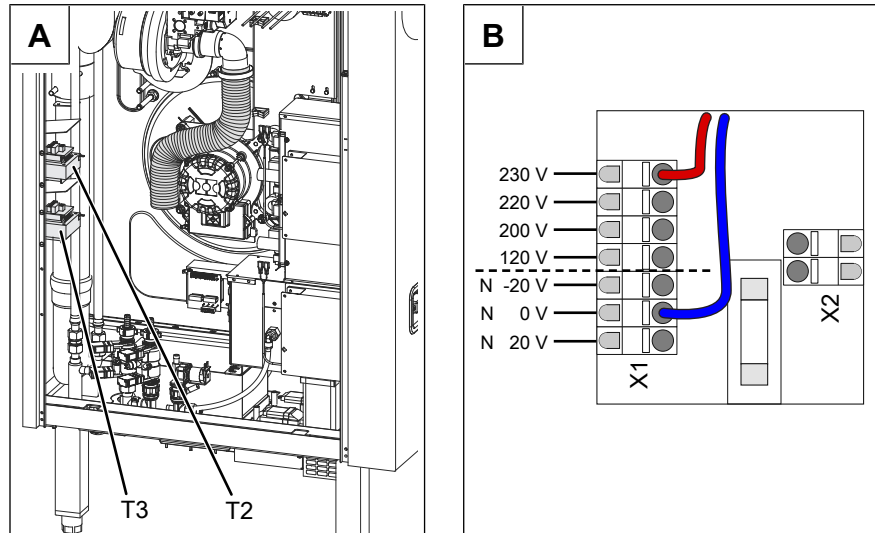


Image: A Transformer position T2, T3; B Connection for transformer glow electrode

**Requirement** Unit not live  
Left side wall removed

1. Measure the connection voltage with a suitable measuring device.
  - ↳ The voltage range must match that on the nameplate.
  - ↳ If there are voltage fluctuations, the maximum expected voltage must be taken into account.
2. Check whether the transformer voltage is within the specified range (see "Equipment and connection data").
  - ↳ If the set voltage differs, match the transformer voltage by reconnecting.
  - ↳ Document the new voltage set on the sticker.
3. In the case of units with several transformers, repeat the procedure for each transformer.
4. Close the housing (see "Opening and closing the housing").
5. Fill out the Commissioning report.

## 6.3.2 Connecting the power connection cable



**DANGER**  
**Risk of personal injury and physical damage from electric shock**

- Prior to working on the unit, ensure that the unit has been disconnected from the mains.
- Do not operate the unit with the housing open.



## DANGER

**Risk of personal injury and physical damage from electric shock**

- Before connecting, ensure that the power connection cable has been disconnected from the power supply.
- Ensure that the power connection cable is undamaged.

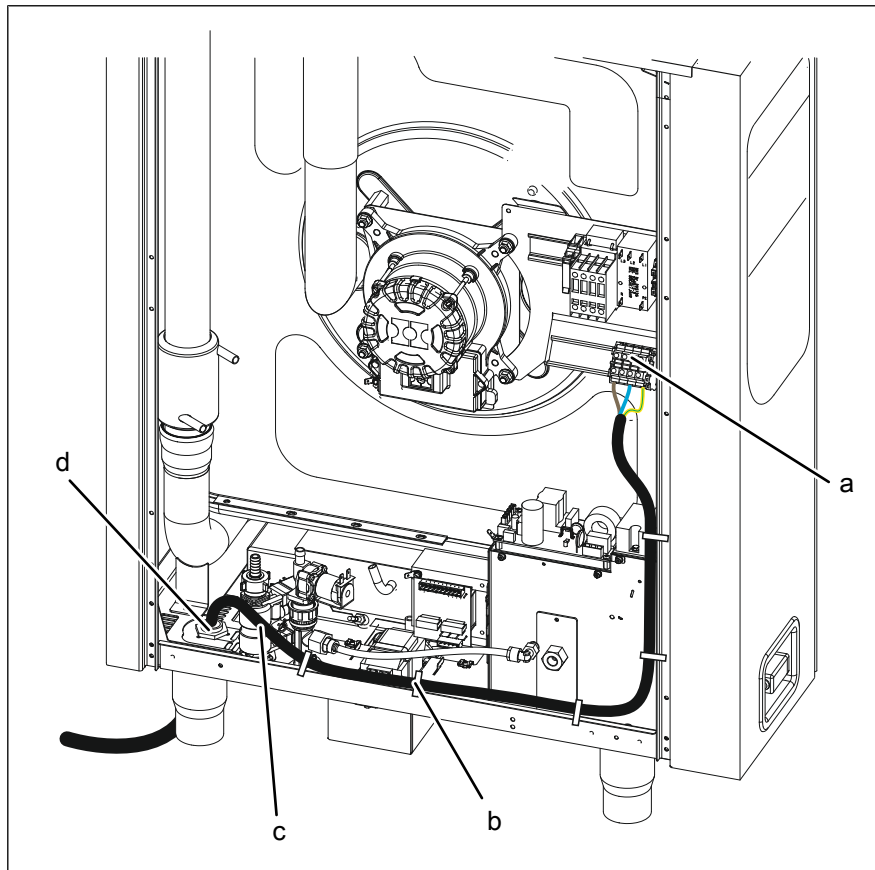


Image: Connecting the electric power cable

a Connection terminals

b Cable tie

c Electric power cable

d Cable gland

### Requirement Unit not live

Power connection cable not live

Unit matched to the connection voltage

Side wall open

1. Route the power connection cable into the unit through the cable gland.
2. Connect the power connection cable in accordance with the wiring diagram.
3. Secure the power connection cable with cable ties.
4. Tighten the cable gland securely to provide strain relief.
5. Close the housing (see "Opening and closing the housing").
6. Fill out the Commissioning report.

### 6.3.3 Connecting to the potential equalisation circuit

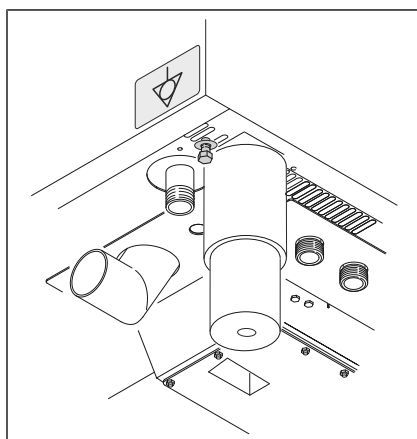
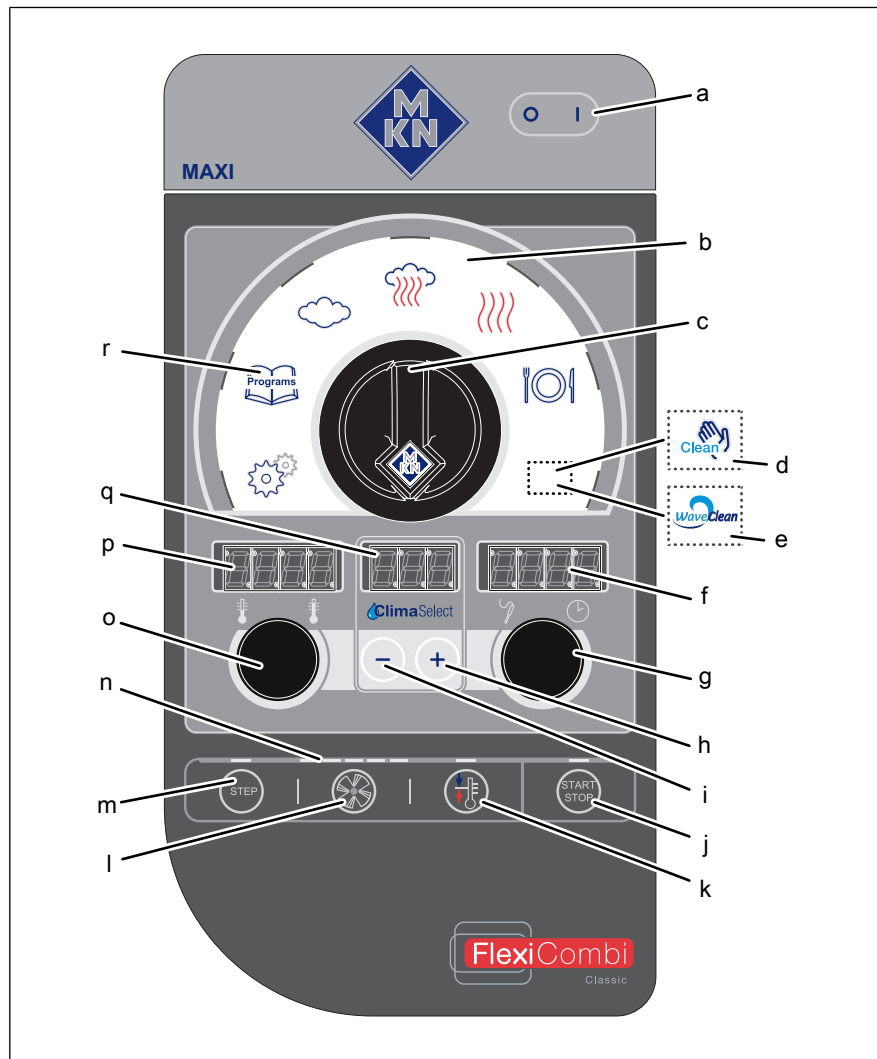


Image: Connecting the potential equalisation circuit

1. Run and attach potential equalisation line to the identified terminal.
2. Fill out the commissioning report.

## 6.4 Making the basic control settings



- |   |                     |   |                     |
|---|---------------------|---|---------------------|
| a | On Off "I O" button | j | "START STOP" button |
| b | Selection range     | k | Ready2Cook button   |
| c | Select knob         | l | Fan speed button    |
| d | HandClean symbol    | m | "STEP" button       |
| e | WaveClean symbol    | n | Indicator light     |
| f | Right display       | o | Left knob           |
| g | Right knob          | p | Left display        |
| h | Plus button         | q | Middle display      |
| i | Minus button        | r | "Programs" button   |

### 6.4.1 Calling up the Setting menu

By entering the password "2100", the basic settings for the installation can be displayed and changed.

**Requirement** The unit is on

1. Turn the *Select* knob to the *Settings* symbol.
  - ↳ The indicator light illuminates.
  - ↳ The left display shows "PASS".
  - ↳ The right display flashes "0000".
2. Use the right not to set the password.
  - ↳ The right display shows the set password.
3. Press the "START STOP" button.
  - ↳ The left display flashes "HAC".
4. Use the left knob to select OPT.
  - ↳ The left display flashes "OPT".
  - ↳ The basic settings can be changed.

### 6.4.2 Changing the basic control settings

1. Press the "START STOP" button.
  - ↳ Left display flashes the basic setting parameter (see "Equipment and connection data").
  - ↳ "OPT" appears on the centre display.
  - ↳ The right display shows the first set value.
2. Turn the left knob.
  - ↳ Set number.
3. Press the "START STOP" button.
  - ↳ The basic setting can be adjusted.
4. Turn the right knob.
  - ↳ Set new value.
5. Press the "START STOP" button.
  - ↳ Accept changes.
6. Press and hold the "STEP" button for 3 seconds.
  - ↳ Changes are saved.
  - ↳ "OPT" flashes on the left display.
  - ↳ The centre display shows "Stor".
7. Press the "STEP" button to leave the Settings menu.
8. Fill out the commissioning report.



## 6.5 Making the water connection

Installation work involving drinking water must be performed by an authorised plumbing contractor.

Observe applicable regional regulations with regard to drinking water installations and connection data (see "Equipment and connection data").

The unit has a connection for permanent attachment the drinking water system.

The unit is equipped with a permanent connection for:

- Softened drinking water for steam generation
- Drinking water for cooling, rinsing and cleaning



### CAUTION

#### Hygiene risk from contaminated drinking water

- The connection to the drinking water supply must be equipped with a backflow preventer.

### ATTENTION

#### Risk of physical damage from the wrong water quality

- Ensure that the water quality complies with the equipment and connection data.



Always connect both water connections to the unit.

### 6.5.1 Connecting the tap water connection line

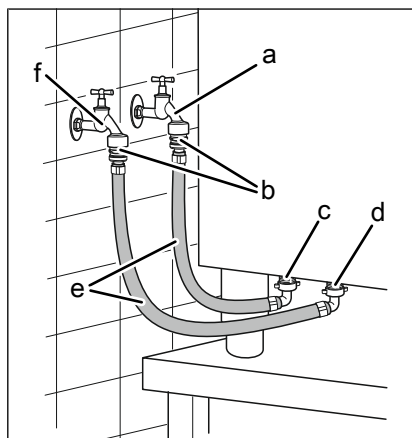


Image: Water connection

- |                         |                             |
|-------------------------|-----------------------------|
| a Soft water            | d Tap water connection      |
| b Backflow preventer    | e Tap water connection line |
| c Soft water connection | f Tap water                 |

## Connecting the unit

**Requirement** Water pressure complies with the specified range (see "Equipment and connection data")

Backflow preventer installed

The connection lines are pressure-tight and suitable for tap water

1. Connect the connection lines to the tap water valves using seals.
2. Flush the connection lines thoroughly.
3. Insert dirt filters into the water connections on the unit.
4. Connect the tap water connection line to the unit.
5. Connect the soft water connection line to the unit.
6. Open the tap water valves and check the threaded connectors for leaks.
7. Fill out the Commissioning report.

### 6.5.2 Connecting softened tap water to both connections

If only softened tap water is available at the installation site, use a T-piece to connect both water connections on the unit to each other.

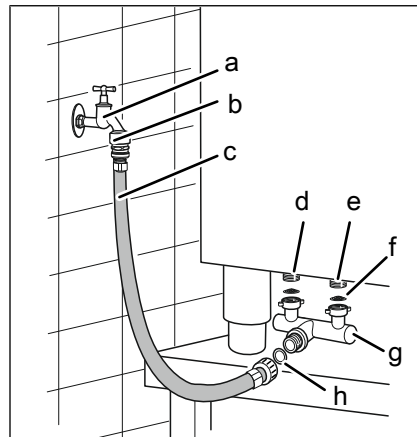


Image: Connecting softened tap water to both connections

- |                                 |                        |
|---------------------------------|------------------------|
| a Softened tap water            | e Tap water connection |
| b Backflow preventer            | f Dirt filter          |
| c Connection line               | g T-piece              |
| d Softened tap water connection | h Seal                 |

**Requirement** Water pressure complies with the specified range (see "Equipment and connection data")

Backflow preventer installed

The connection line is pressure-tight and suitable for tap water

1. Connect the connection line to the tap water valve for soft water using a seal.
2. Flush the connection line thoroughly.
3. Insert dirt filters into the water connections on the unit.
4. Connect the T-piece to the unit.
5. Connect the connection line for soft water to the T-piece using a seal.

6. Open the tap water valve and check the threaded connectors for leaks.
7. Fill out the Commissioning report.



## 6.6 Making the wastewater connection

Installation work involving wastewater must be performed by an authorised plumbing contractor.

Observe the applicable regional regulations of the sewage utility involved.

### 6.6.1 Determining the type of connection to the sewer system

The units can be equipped with either an automatic or manual cleaning system. The symbol on the control unit indicates which cleaning system is installed.

Cleaning system	Type of connection to the sewer system
 Automatic cleaning system	<b>Permanent connection</b> , with on-site waste trap: Install a vacuum breaker in the wastewater line.
 Manual cleaning system	<b>Unobstructed discharge</b> with funnel waste trap: With an on-site waste trap, connect only discharge funnel.

### 6.6.2 Connecting the wastewater line to a permanent connection

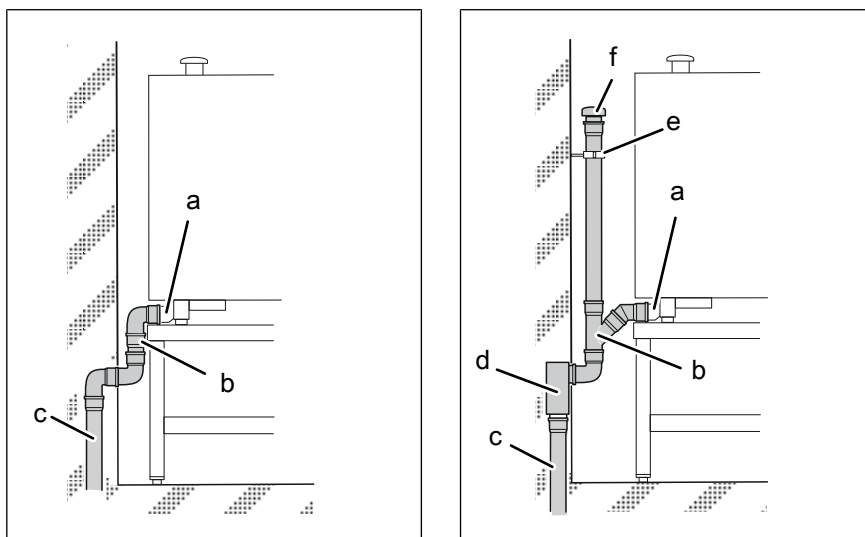


Image: Wastewater line to a permanent connection

- |                         |                           |
|-------------------------|---------------------------|
| a Wastewater connection | d Sewer system waste trap |
| b Wastewater line       | e Pipe clamp              |
| c Sewer system          | f Vacuum breaker          |



If a waste trap is installed in the wastewater system, a vacuum breaker must be installed in the wastewater line.

**Requirement** Wastewater line complies with the specifications (see "Equipment and connection data")

1. Install the wastewater line up to the connection at the sewer system.
2. Secure the wastewater line with pipe clamps.
3. Fill the waste trap on the unit with tap water.
4. Fill out the Commissioning report.

### 6.6.3 Connecting a wastewater line with an unobstructed discharge

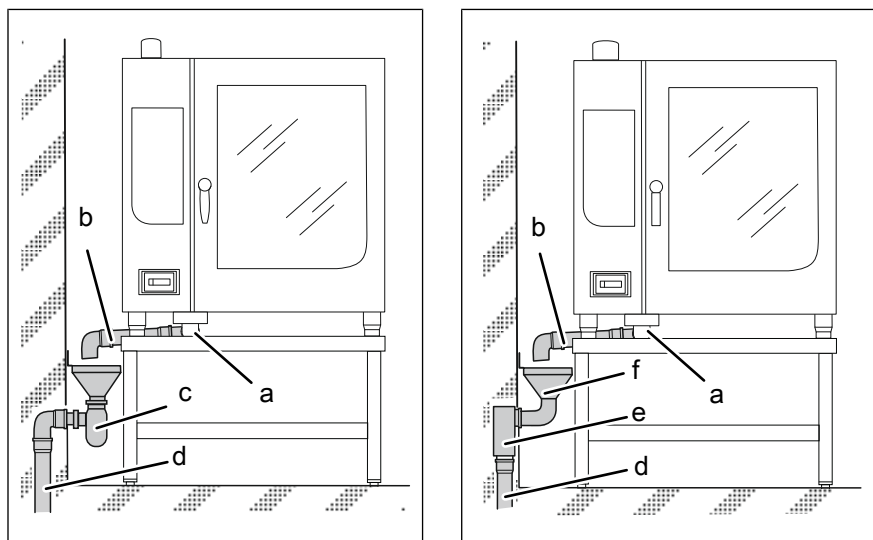


Image: Connecting a wastewater line with an unobstructed discharge

- |                         |                           |
|-------------------------|---------------------------|
| a Wastewater connection | d Sewer system            |
| b Wastewater line       | e Sewer system waste trap |
| c Funnel waste trap     | f Discharge funnel        |



Connect only the discharge funnel if a wastewater trap is installed in the wastewater system.

**Requirement** Wastewater line complies with the specifications (see "Equipment and connection data")

1. Connect the discharge funnel with waste trap to the sewer system.
2. Connect the wastewater line to the unit and route it as far as the discharge funnel.
3. Secure the wastewater line with pipe clamps.
4. Install the outlet of the wastewater line 20 mm above the discharge funnel.
5. Fill the discharge funnel with tap water.
6. Fill out the Commissioning report.

## 6.7 Making the gas connection



### **DANGER**

#### **Risk of fatal injury from operating the unit with the wrong gas type**

- Ensure that the gas type for which the unit is set (see gas type supplemental label) matches the gas type available at the site.
- Ensure that the unit is suitable for the available gas type (see nameplate).

The unit is a Category II multi-gas unit and is intended for operation with natural gas or liquefied gas (LPG).

The unit must be connected on the basis of the information on the nameplate, gas type supplemental label and this manual.

#### **Nameplate and gas type supplemental label**

The gas type for which the unit is set is indicated on the gas type supplemental label.

The connection pressure and the category are indicated on the nameplate. The gas types for which the unit is intended can be identified from the category.

#### **Conditions**

Before the gas connection line can be connected to the unit, the following conditions must be satisfied:

- The gas type for which the unit is set must match the gas type available at the site. If this is not the case, the unit must be converted to the gas type available (see "Converting the gas type"). Based on the category, check whether the unit is intended for the gas type available.
- All parts of the gas system must be approved for use with gas.
- The gas shut-off valve for the unit must be readily accessible.
- The diameter of the gas connection line must not be smaller than that of the connection on the unit.
- The gas connection and the gas connection line must be positioned such that they cannot be damaged by heat.

#### **Installation work**

Gas installation work on the gas system and the unit may be performed only by a licensed tradesman approved by the gas utility.

Observe the applicable regional regulations of the gas utility.

### Permanent connection

The unit is intended for a permanent connection. The connection line must be flexible. Route the flexible gas connection line or gas hose line in accordance with the manufacturer's information and without it being stressed, kinked or twisted.

### Shut-off device

The unit or the gas connection line must be equipped with a thermally activated shut-off. In strictly commercial buildings, a thermally activated shut-off is not necessary if the objective of providing fire and explosion safety is achieved by other means.

### 6.7.1 Description of the gas connection

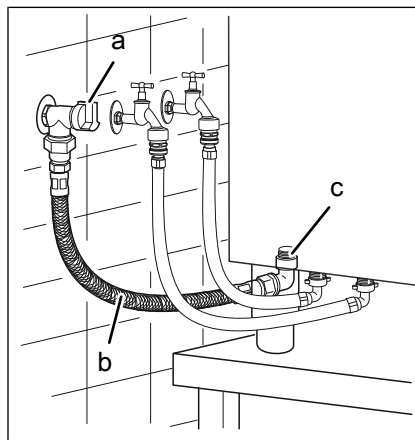


Image: Gas connection

a Gas shut-off valve  
b Gas connection line

c Gas connection

### 6.7.2 Connecting the gas connection line



#### **DANGER**

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

#### **ATTENTION**

**Risk of physical damage from improper gas connection**

- Do not mix up the gas connection with a tap water connection.
- If the gas connection has been mixed up with a tap water connection, contact Customer service.

**Requirement** Gas shut-off valve closed  
 Unit not live  
 Left side wall removed

1. Connect the unit to the gas connection line.

---

**ATTENTION**

**Risk of physical damage from excessively high pressure**

- When opening the gas shut-off valve on the unit, ensure that the pressure in the gas connection line is < 150 hPa (mbar).
- If the pressure is > 150 hPa (mbar), close the gas supply, reduce the pressure in a proper manner and notify the gas utility company.

2. Open the gas shut-off valve on the unit, while paying attention to the pressure in the gas connection line.



**DANGER**

**Risk of explosion and fire from escaping gas**

- When bleeding air from or degassing the gas system and the unit, ensure that the air and gas are discharged to the outside in a technically correct manner and without creating a risk.

3. Bleed the air from the gas system and unit in a proper manner.
4. Check for leaks outside the unit (see "Checking for leaks").



**WARNING**

**Risk of poisoning from exhaust gases**

- Ensure that exhaust gases are discharged properly and that the necessary amount of combustion air is supplied.
- Ensure that a maximum CO content of < 0.1 vol. % or < 1000 ppm is achieved in undiluted exhaust gas.

5. Switch on the unit.
6. Check the connection pressure (see "Checking the connection pressure").
7. Check for leaks inside the unit (see "Checking for leaks").
8. Check the ignition behaviour (see "Checking the ignition behaviour").
9. Check the flame pattern (see "Checking the flame pattern").
10. Check the basic gas setting (see "Checking the basic gas setting").
11. Switch off the unit.
12. Close the housing (see "Opening and closing the housing").
13. Fill out the Commissioning report.

### 6.7.3 Checking for leaks

**Requirement** Gas connection line connected

Left side wall removed

1. Check for leaks outside the unit.
2. Check for leaks inside the unit.



**DANGER**

**Risk of explosion and fire from leaking, gas-conducting parts**

- Check the gas connection line and all gas-conducting parts for leaks at the operating pressure.
- Use only bubble-forming agents and gas leak detectors approved for use with gas.



**DANGER**

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

---

**ATTENTION**

**Risk of physical damage from electrical short-circuits**

- Do not spray bubble-forming agents onto electrical components and wires.



Gas leak detectors respond to almost all combustible gases, even CO.

For this reason, ensure that the zero-point calibration of the gas leak detector was performed in fresh air, free of combustible gases. Observe the manufacturer's information.

---

**Checking for leaks outside the unit**

1. Open the gas shut-off valve.
2. Before putting the unit into service at operating pressure, check the gas connection line and all gas-conducting parts outside the unit for leaks with a bubble-forming agent or gas leak detector in accordance with the Technical Regulations for Gas Installations.
3. Fill out the commissioning report.

**Checking for leaks inside the unit**

**Requirement** Connection pressure checked

1. Switch on the unit.
2. Call up the *CO2 setting* display (see "Checking the basic gas setting").
3. Press the "START STOP" button.



4. Using the left knob, set the burner to high output ("HI").
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO2".
5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at full load.
7. Check all gas-conducting parts within the unit for leaks under operating pressure, using a bubble-forming agent or gas leak detector in accordance with the Technical Regulations for Gas Installations.
8. To end the test, press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button goes out and the burner is off.
9. Switch off the unit.
10. Fill out the Commissioning report.

### 6.7.4 Checking the connection pressure



#### **DANGER**

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

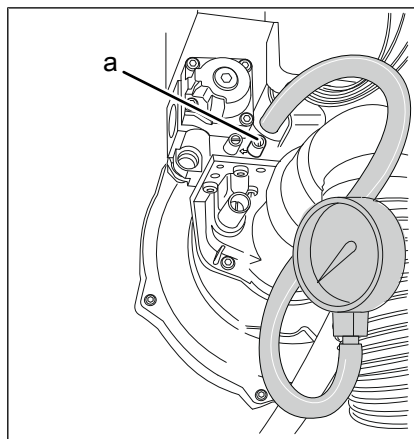


Image: Connection pressure measuring point

- a Connection pressure measuring point

**Requirement** Gas connection line connected

Checked for leaks outside the unit

Measuring accuracy of the pressure measuring device at least 0,1 hPa (mbar)

Left side wall removed

1. Close the gas shut-off valve on the unit.
2. Unscrew the sealing plug at the connection pressure measuring point.
3. Connect the pressure measuring device.

---

**ATTENTION**

**Risk of physical damage from excessively high pressure**

- When opening the gas shut-off valve on the unit, ensure that the pressure in the gas connection line is < 150 hPa (mbar).
- If the pressure is > 150 hPa (mbar), close the gas supply, reduce the pressure in a proper manner and notify the gas utility company.

- 
4. Open the gas shut-off valve on the unit, while paying attention to the pressure in the gas connection line.



---

**DANGER**

**Risk of explosion and fire from escaping gas**

- When bleeding air from or degassing the gas system and the unit, ensure that the air and gas are discharged to the outside in a technically correct manner and without creating a risk.

- 
5. Bleed the air from the gas system and unit in a proper manner.
  6. Switch on the unit.
  7. Call up the *CO2 setting* display (see "Checking the basic gas setting").
  8. Press the "START STOP" button.
  9. Using the left knob, set the burner to high output ("HI").
    - ↳ The left display flashes "HI".
    - ↳ The centre display shows "CO2".
  10. Using the right knob, select the first burner "-1-" (on models with two burners).
    - ↳ The right display flashes "-1-".
  11. Press the "START STOP" button.
    - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
    - ↳ The unit operates at full load.
  12. Measure the connection pressure.



**DANGER**

**Risk of fatal injury from operating the unit at a connection pressure outside the specified range**

- Do not put the unit into service.
- Notify the gas utility.

13. Check whether the measured connection pressure is within the specified range (see "Equipment and connection data").
14. To end the test, press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button goes out and the burner is off.
15. Switch off the unit.
16. Close the gas shut-off valve on the unit.
17. Remove the pressure measuring device.
18. Screw the sealing plug tightly into the connection pressure measuring point.
19. Open the gas shut-off valve on the unit.
20. Check the connection pressure measuring point for leaks (see "Checking for leaks").
21. On models with two burners: Repeat the procedure for the second burner.
22. Fill out the Commissioning report.

**6.7.5 Checking the basic gas setting**



**DANGER**

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.



**WARNING**

**Risk of poisoning from exhaust gases**

- Ensure that exhaust gases are discharged properly and that the necessary amount of combustion air is supplied.
- Ensure that a maximum CO content of < 0.1 vol. % or < 1000 ppm is achieved in undiluted exhaust gas.



Some measurements on the unit require it to be at a warm operating temperature.

- The unit reaches a warm operating temperature, when the temperature in the cooking zone is between 130 °C — 180 °C.

**Requirement** Gas connection line connected  
Checked for leaks outside the unit  
Connection pressure checked  
Checked for leaks inside the unit  
Left side wall removed

1. Check the rated heat input at full load.
2. Check the rated heat input at partial load.
3. Check the primary air quantity.
4. Check the exhaust gas values.

### Preparations

1. Switch on the unit.
2. Turn the *Select* knob to the Settings symbol.
  - ↳ The indicator light illuminates.
  - ↳ The left display shows "PASS".
  - ↳ The right display flashes "----".
3. Using the right knob, set "999".
4. Press the "START STOP" button.
  - ↳ The left display flashes "CO2".

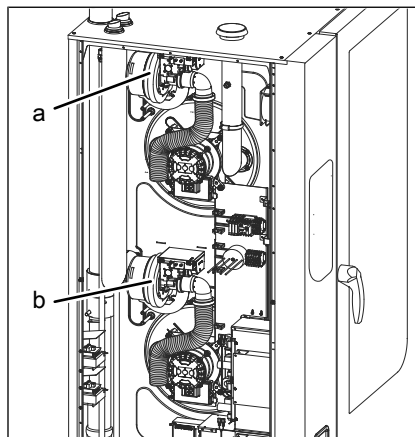


Image: Size 2XX

a Burner 1 (cooking zone 1)

b Burner 2 (cooking zone 2)

## Checking the rated heat input at full load

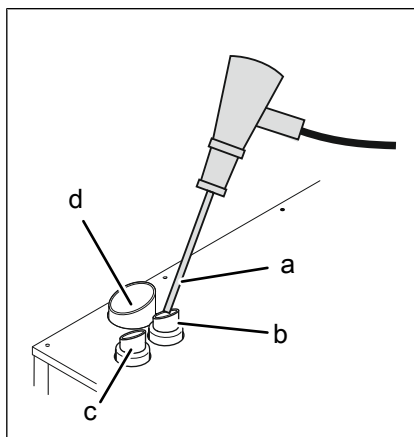


Image: Measurement in the exhaust gas

- |                                  |   |
|----------------------------------|---|
| a Exhaust gas measuring device   | c Waste gas connection for burner 2 (only size 2XX) |
| b Waste gas connection, burner 1 | d Steam outlet                                      |

- Requirement**
1. Switch on the unit.
  2. Call up the *CO<sub>2</sub> setting* display (see "Checking the basic gas setting").
  3. Press the "START STOP" button.
  4. Using the left knob, set the burner to high output ("HI").
    - ↳ The left display flashes "HI".
    - ↳ The centre display shows "CO<sub>2</sub>".
  5. Using the right knob, select the first burner "-1-" (on models with two burners).
    - ↳ The right display flashes "-1-".
  6. Press the "START STOP" button.
    - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
    - ↳ The unit operates at full load.
  7. Press the *Ready2Cook* button.
    - ↳ The left display shows the current temperature in the cooking zone.
    - ↳ The centre display shows the selected burner "-1-" (on models with two burners).
    - ↳ The right display shows the current status of the burner ("G1F1").
  8. Press the *Ready2Cook* button.
    - ↳ The right display shows the burner's gas blower speed.
  9. Check whether the displayed speed corresponds to the specified speed for the model (see "Equipment and connection data").
    - ↳ If the displayed speed does not match the specified speed for the model, contact Customer service.

10. Measure the exhaust gas values in the waste gas connection with an approved exhaust gas measuring device, while the unit is at a warm operating temperature.
11. Check whether the measured CO<sub>2</sub> content is within the specified range (see "Equipment and connection data").
  - ↳ If the CO<sub>2</sub> content is not within the specified range, adjust the basic gas setting (see "Adjusting the basic gas setting").
12. On models with two burners: Repeat the procedure for the second burner.
13. To end the CO<sub>2</sub> measurement, press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button goes out and the burner is off.
14. Switch off the unit.
15. Fill out the Commissioning report.

### Checking the rated heat input at partial load

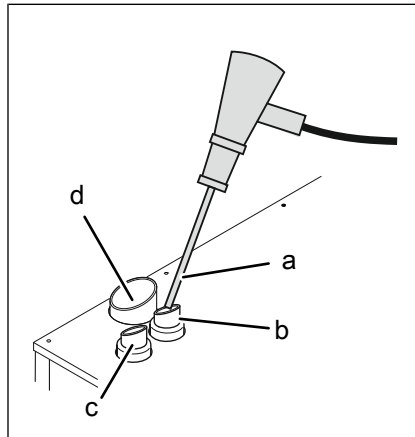


Image: Measurement in the exhaust gas

- |                                  |   |
|----------------------------------|---|
| a Exhaust gas measuring device   | c Waste gas connection for burner 2 (only size 2XX) |
| b Waste gas connection, burner 1 | d Steam outlet                                      |

#### **Requirement** Gas shut-off valve on the unit open

1. Switch on the unit.
2. Call up the *CO<sub>2</sub> setting* display (see "Checking the basic gas setting").
3. Press the "START STOP" button.
4. Using the left knob, set the burner to low output ("LO").
  - ↳ The left display flashes "LO".
  - ↳ The centre display shows "CO<sub>2</sub>".
5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".

6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at partial load.
7. Press the *Ready2Cook* button.
  - ↳ The left display shows the current temperature in the cooking zone.
  - ↳ The centre display shows the selected burner "-1-" (on models with two burners).
  - ↳ The right display shows the current status of the burner ("G1F1").
8. Press the *Ready2Cook* button.
  - ↳ The right display shows the burner's gas blower speed.
9. Check whether the displayed speed corresponds to the specified speed for the model (see "Equipment and connection data").
  - ↳ If the displayed speed does not match the specified speed for the model, contact Customer service.
10. Measure the exhaust gas values in the waste gas connection with an approved exhaust gas measuring device, while the unit is at a warm operating temperature.
11. Check whether the measured CO<sub>2</sub> content is within the specified range (see "Equipment and connection data").
  - ↳ If the CO<sub>2</sub> content is not within the specified range, adjust the basic gas setting (see "Adjusting the basic gas setting").
12. On models with two burners: Repeat the procedure for the second burner.
13. To end the CO<sub>2</sub> measurement, press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button goes out and the burner is off.
14. Switch off the unit.
15. Fill out the Commissioning report.

### Checking the primary air quantity



#### **DANGER**

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

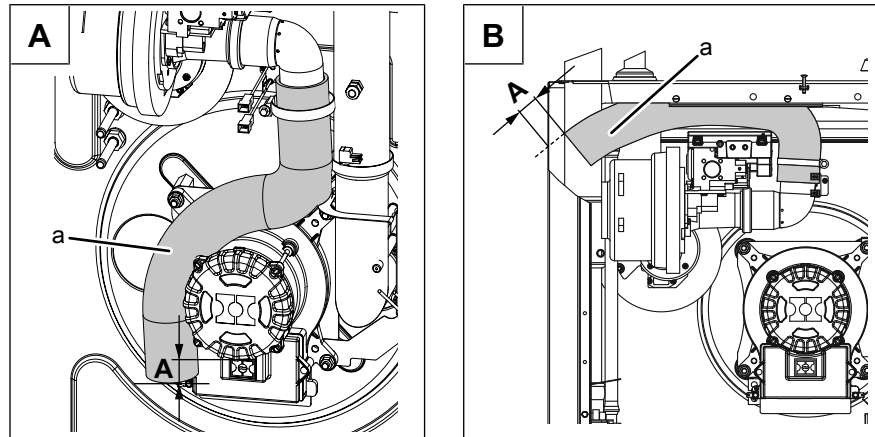


Image: A Size 1XX and 2XX; B Size 6XX

- a Suction hose
- A Primary air gap

### Requirement Left side wall removed

1. Check the suction hose for position and condition.
  - ↳ The suction hose must be routed without kinks.
  - ↳ The suction hose is routed in the shape and position as shown in the figure.
  - ↳ The suction hose does not have any damage.
  - ↳ The opening of the suction hose is unobstructed and not blocked.
  - ↳ If the position and condition are not OK, adjust the primary air gap (see "Adjusting the basic gas setting").
2. Measure the primary air gap (A).
3. Check whether the measured primary air gap is within the specified range (see "Equipment and connection data").
  - ↳ If the measured primary air gap is not in the specified range, adjust the primary air quantity (see "Adjusting the basic gas setting").
4. Check the ignition behaviour (see "Checking the ignition behaviour").
  - ↳ The ignition behaviour is OK.
  - ↳ If the ignition behaviour is not OK, adjust the primary air gap (see "Adjusting the basic gas setting").
5. Check the flame pattern (see "Checking the flame pattern").
  - ↳ Flame pattern OK.
  - ↳ If the flame pattern is not OK, adjust the primary air gap (see "Adjusting the basic gas setting").
6. On models with two burners: Repeat the procedure for the second burner.
7. Fill out the Commissioning report.



**Checking the exhaust gas values**



**DANGER**

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.



**WARNING**

**Risk of poisoning from exhaust gases**

- Ensure that exhaust gases are discharged properly and that the necessary amount of combustion air is supplied.
- Ensure that a maximum CO content of < 0.1 vol. % or < 1000 ppm is achieved in undiluted exhaust gas.

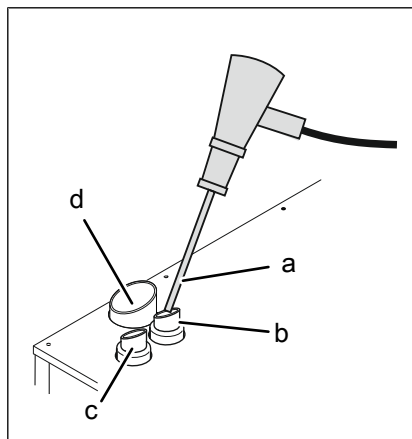


Image: Measurement in the exhaust gas

- |                                  |   |
|----------------------------------|---|
| a Exhaust gas measuring device   | c Waste gas connection for burner 2 (only size 2XX) |
| b Waste gas connection, burner 1 | d Steam outlet                                      |

**Requirement** Gas connection line connected  
 Checked for leaks outside the unit  
 Connection pressure checked  
 Checked for leaks inside the unit  
 Rated heat input checked  
 Primary air quantity checked  
 Left side wall removed

1. Switch on the unit.
2. Call up the *CO<sub>2</sub> setting* display (see "Checking the basic gas setting").
3. Press the "START STOP" button.

4. Using the left knob, set the burner to high output ("HI").
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO2".
5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at full load.
7. Press the *Ready2Cook* button.
  - ↳ The left display shows the current temperature in the cooking zone.
  - ↳ The centre display shows the selected burner "-1-" (on models with two burners).
  - ↳ The right display shows the current status of the burner ("G1F1").
8. Measure the exhaust gas values in the waste gas connection with an approved exhaust gas measuring device, while the unit is at a warm operating temperature.
9. Check whether the measured CO content is within the specified range (see "Equipment and connection data").
  - ↳ If the CO content is not within the specified range, adjust the basic gas setting (see "Adjusting the basic gas setting").
10. On models with two burners: Repeat the procedure for the second burner.
11. To end the CO measurement, press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button goes out and the burner is off.
12. Switch off the unit.
13. Fill out the Commissioning report.

## 6.7.6 Adjusting the basic gas setting



### DANGER

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.



### WARNING

**Risk of poisoning from exhaust gases**

- Ensure that exhaust gases are discharged properly and that the necessary amount of combustion air is supplied.
- Ensure that a maximum CO content of < 0.1 vol. % or < 1000 ppm is achieved in undiluted exhaust gas.



Some measurements on the unit require it to be at a warm operating temperature.

- The unit reaches a warm operating temperature, when the temperature in the cooking zone is between 130 °C — 180 °C.

### Adjusting the rated heat input at partial load



The offset pressure can be measured with the adjustment aid at partial load (see "Adjusting the basic gas setting"). This does not replace the basic gas setting.

**Requirement** Gas connection line connected  
 Checked for leaks outside the unit  
 Connection pressure checked  
 Checked for leaks inside the unit  
 Basic gas setting checked  
 Left side wall removed

→ If the rated heat input is not OK when checked, adjust the rated heat input.

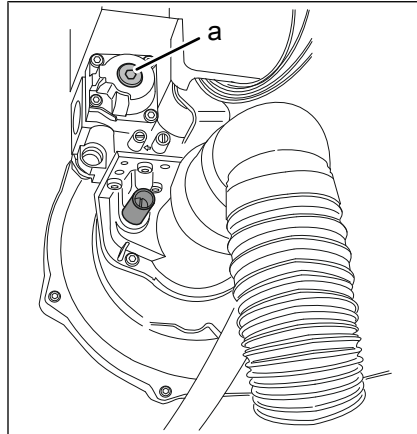


Image: Adjusting the rated heat input

a Adjusting screw for partial load (TX40)

1. Switch on the unit.
2. Call up the *CO<sub>2</sub> setting* display (see "Checking the basic gas setting").
3. Press the "START STOP" button.
4. Using the left knob, set the burner to low output ("LO").
  - ↳ The left display flashes "LO".
  - ↳ The centre display shows "CO<sub>2</sub>".
5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at partial load.
7. Press the *Ready2Cook* button.
  - ↳ The left display shows the current temperature in the cooking zone.
  - ↳ The centre display shows the selected burner "-1-" (on models with two burners).
  - ↳ The right display shows the current status of the burner ("G1F1").
8. Measure the exhaust gas values in the waste gas connection with an approved exhaust gas measuring device, while the unit is at a warm operating temperature.
9. Check whether the measured CO<sub>2</sub> content is within the specified range (see "Equipment and connection data").
10. Using the adjusting screw for partial load, adjust the CO<sub>2</sub> content to the specified range for low output (setting is very sensitive).
  - ↳ Turning anti-clockwise: CO<sub>2</sub> content is decreased.
  - ↳ Turning clockwise: CO<sub>2</sub> content is increased.

11. Press the *Ready2Cook* button.
  - ↳ The left display flashes "LO".
  - ↳ The centre display shows "CO<sub>2</sub>".
12. Using the left knob, set the burner to high output ("HI").
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO<sub>2</sub>".
13. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
14. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at full load.
15. Check whether the measured CO<sub>2</sub> content is within the specified range (see "Equipment and connection data").
  - ↳ If necessary, repeat the adjustment procedure until the CO<sub>2</sub> value at high and low output is within the specified range.
  - ↳ If the CO<sub>2</sub> content at high output is still outside the specified range, the rated heat input must be adjusted manually (see "Adjusting the basic gas setting").
16. On models with two burners: Repeat the procedure for the second burner.
17. To end the CO<sub>2</sub> measurement, press the "START STOP" button.
18. The indicator light in the "START STOP" button goes out and the burner is off.
19. Switch off the unit.
20. Fill out the Commissioning report.

## Adjusting the primary air quantity



### DANGER

Risk of personal injury and physical damage from electric shock

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

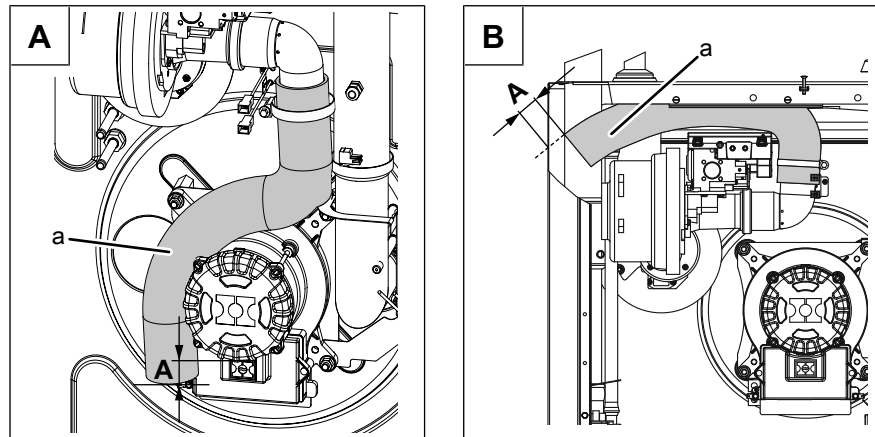


Image: A Size 1XX and 2XX; B Size 6XX

- a Suction hose
- A Primary air gap

**Requirement** Gas connection line connected  
Checked for leaks outside the unit  
Connection pressure checked  
Checked for leaks inside the unit  
Left side wall removed

→ If the primary air quantity is not OK when checked, adjust the primary air quantity.

1. Check the suction hose for position and condition.
  - ↳ If the suction hose is routed with kinks, replace the suction hose.
  - ↳ If the suction hose is not routed in the shape and position as shown in the figure, correct the position and shape.
  - ↳ If the suction hose is damaged, replace it.
  - ↳ If the opening of the suction hose is blocked, clean the suction hose.
2. Adjust the primary air gap to within the specified range (A) by aligning the suction hose (see "Equipment and connection data").
3. Check the basic gas setting (see "Checking the basic gas setting").
4. On models with two burners: Repeat the procedure for the second burner.
5. Switch off the unit.

6. Fill out the commissioning report.

### Manually adjusting the rated heat input



#### DANGER

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.



The offset pressure can be measured with the adjustment aid at partial load (see "Adjusting the basic gas setting"). This does not replace the basic gas setting.

**Requirement** Gas connection line connected  
 Checked for leaks outside the unit  
 Connection pressure checked  
 Checked for leaks inside the unit  
 Basic gas setting checked  
 Left side wall removed

1. Remove the gas orifice (see "Converting the gas type").
2. Screw in the adjusting screw for full load 10 mm (basic setting).
3. Manually adjust the rated heat input at partial load.
4. Manually adjust the rated heat input at full load.

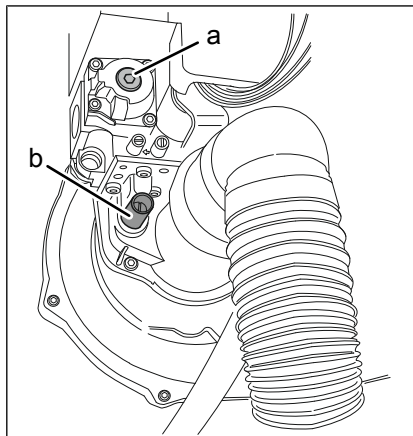


Image: Adjusting screws on the burner

a Adjusting screw for partial load (TX40)

b Adjusting screw for full load (4 mm Allen key or 1.2 x 6.5 mm screwdriver)

### Manually adjusting the rated heat input at partial load

1. Switch on the unit.
2. Call up the *CO<sub>2</sub> setting* display (see "Checking the basic gas setting").

3. Press the "START STOP" button.
4. Using the left knob, set the burner to low output ("LO").
  - ↳ The left display flashes "LO".
  - ↳ The centre display shows "CO2".
5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at partial load.
7. Press the *Ready2Cook* button.
  - ↳ The left display shows the current temperature in the cooking zone.
  - ↳ The centre display shows the selected burner "-1-" (on models with two burners).
  - ↳ The right display shows the current status of the burner ("G1F1").
8. Measure the exhaust gas values in the waste gas connection with an approved exhaust gas measuring device, while the unit is at a warm operating temperature.
9. Using the adjusting screw for partial load, adjust the CO<sub>2</sub> content to the specified range for low output (setting is very sensitive).
  - ↳ Turning anti-clockwise: CO<sub>2</sub> content is decreased.
  - ↳ Turning clockwise: CO<sub>2</sub> content is increased.
  - ↳ If necessary, repeat the adjustment procedure for full load until the CO<sub>2</sub> value at full load and partial load is within the specified range.
10. On models with two burners: Repeat the procedure for the second burner.
11. Check the exhaust gas values (see "Checking the basic gas setting").
12. To end the CO<sub>2</sub> measurement, press the "START STOP" button.
13. The indicator light in the "START STOP" button goes out and the burner is off.
14. Switch off the unit.
15. Fill out the Commissioning report.

### **Manually adjusting the rated heat input at full load**

1. Switch on the unit.
2. Call up the *CO2 setting* display (see "Checking the basic gas setting").
3. Press the "START STOP" button.
4. Using the left knob, set the burner to high output ("HI").
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO2".



5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at full load.
7. Press the *Ready2Cook* button.
  - ↳ The left display shows the current temperature in the cooking zone.
  - ↳ The centre display shows the selected burner "-1-" (on models with two burners).
  - ↳ The right display shows the current status of the burner ("G1F1").
8. Measure the exhaust gas values in the waste gas connection with an approved exhaust gas measuring device, while the unit is at a warm operating temperature.
9. Using the adjustment screw for full load, adjust the CO<sub>2</sub> content to the specified range for high output.
  - ↳ Turning anti-clockwise: CO<sub>2</sub> content is increased.
  - ↳ Turning clockwise: CO<sub>2</sub> content is decreased.
  - ↳ If necessary, repeat the adjustment procedure for partial load until the CO<sub>2</sub> value at full load and partial load is within the specified range.
10. On models with two burners: Repeat the procedure for the second burner.
11. Check the exhaust gas values (see "Checking the basic gas setting").
12. To end the CO<sub>2</sub> measurement, press the "START STOP" button.
13. The indicator light in the "START STOP" button goes out and the burner is off.
14. Switch off the unit.
15. Fill out the Commissioning report.

### Checking the offset pressure



#### **DANGER**

#### **Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

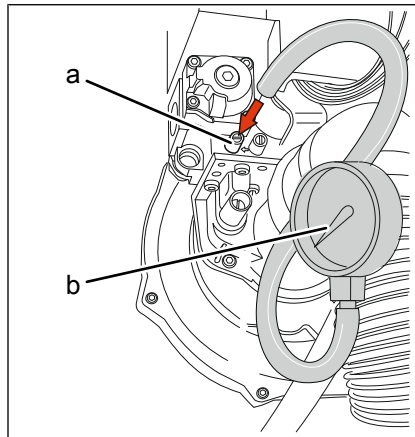


Image: Offset pressure

- a Offset pressure measuring point      b Pressure measuring device

**Requirement** Basic gas setting checked and not OK

Gas connection line connected

Checked for leaks outside the unit

Connection pressure checked

Checked for leaks inside the unit

Left side wall removed

Measuring accuracy of the pressure measuring device at least 0,01 hPa (mbar)

1. Unscrew the sealing plug at the offset pressure measuring point.
2. Connect the pressure measuring device.
3. Switch on the unit.
4. Call up the *CO<sub>2</sub> setting* display (see "Checking the basic gas setting").
5. Press the "START STOP" button.
6. Using the left knob, set the burner to low output ("LO").
  - ↳ The left display flashes "LO".
  - ↳ The centre display shows "CO<sub>2</sub>".
7. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
8. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at partial load.
9. Measure the offset pressure.
10. Check whether the measured offset pressure is within the specified range (see "Equipment and connection data").
11. To end the measurement, press the "START STOP" button.
12. The indicator light in the "START STOP" button goes out and the burner is off.
13. Switch off the unit.

14. Remove the pressure measuring device.
15. Screw the sealing plug tightly into the offset pressure measuring point.
16. Check the offset pressure measuring point for leaks (see "Checking for leaks").
17. On models with two burners: Repeat the procedure for the second burner.
18. Fill out the Commissioning report.

## 6.8 Converting the gas type

### 6.8.1 Changing the gas orifice



**DANGER**

**Risk of personal injury and physical damage from electric shock**

- Before working on the unit, ensure that the unit has been disconnected from the power supply.



**DANGER**

**Risk of explosion and fire from escaping gas**

- When bleeding air from or degassing the gas system and the unit, ensure that the air and gas are discharged to the outside in a technically correct manner and without creating a risk.



**DANGER**

**Risk of explosion or fire from operating the unit with the wrong gas type because of missing or incorrect gas type supplemental label**

- When converting to a different gas type, replace the gas type supplemental label on the unit with the appropriate gas type supplemental label for the gas type available.



**DANGER**

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

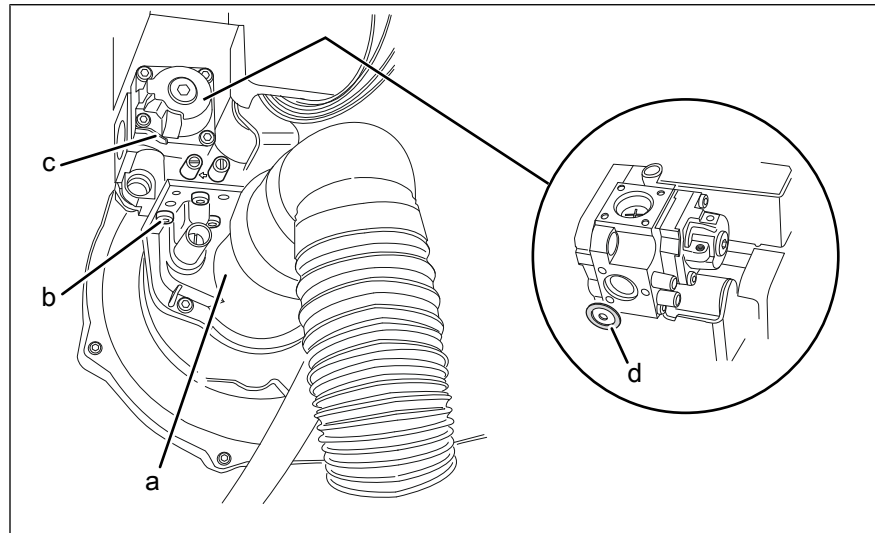


Image: Changing the gas orifice

- |                 |                         |
|-----------------|-------------------------|
| a Burner        | c Gas solenoid valve    |
| b Screws (TX25) | d Gas orifice with seal |

**Requirement** Unit not live  
Gas shut-off valve on the unit is closed  
Left side wall removed

1. If the unit is already filled with gas, degas the unit in a proper manner.
2. Unscrew the screws from the gas solenoid valve.
3. Remove the gas solenoid valve.
4. Remove the gas orifice with seal.



### **DANGER**

#### **Risk of asphyxiation and explosion from damaged seals**

- Check seals for damage
- Replace damaged seals
- Use only seals that are approved for use with gas

5. Select the gas orifice specified for the gas type available and insert it with the seal (see "Equipment and connection data").
6. Replace the gas type supplemental label on the unit with the appropriate supplemental label for the gas type available.
7. Put the gas solenoid valve back on and fasten it with the screws.
8. On models with two burners: Repeat the procedure for the second burner.
9. Fill out the Commissioning report.
10. Connect the unit to the gas connection line (see "Connecting the gas connection line").

### ATTENTION

#### Risk of physical damage from excessively high pressure

- When opening the gas shut-off valve on the unit, ensure that the pressure in the gas connection line is < 150 hPa (mbar).
- If the pressure is > 150 hPa (mbar), close the gas supply, reduce the pressure in a proper manner and notify the gas utility company.

11. Open the gas shut-off valve on the unit, while paying attention to the pressure in the gas connection line.



### DANGER

#### Risk of explosion and fire from escaping gas

- When bleeding air from or degassing the gas system and the unit, ensure that the air and gas are discharged to the outside in a technically correct manner and without creating a risk.

12. Bleed the air from the gas system and unit in a proper manner.

13. Check for leaks outside the unit (see "Checking for leaks").



### WARNING

#### Risk of poisoning from exhaust gases

- Ensure that exhaust gases are discharged properly and that the necessary amount of combustion air is supplied.
- Ensure that a maximum CO content of < 0.1 vol. % or < 1000 ppm is achieved in undiluted exhaust gas.

14. Switch on the unit.

15. Check the connection pressure (see "Checking the connection pressure").

16. Check for leaks inside the unit (see "Checking for leaks").

17. Check the ignition behaviour (see "Checking the ignition behaviour").

18. Check the flame pattern (see "Checking the flame pattern").

19. Check the basic gas setting (see "Checking the basic gas setting").

20. Switch off the unit.

21. Close the housing (see "Opening and closing the housing").

22. Fill out the Commissioning report.

### 6.9 Making the exhaust air connection

When setting up the unit under a ventilation system, observe the regional regulations for heating, ventilation and air conditioning systems.

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#### **ATTENTION**

##### **Risk of physical damage from fouling of the exhaust air ducts**

- Do not connect the exhaust air line directly to the ventilation system.

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#### **ATTENTION**

##### **Risk of corrosion damage from condensate**

- Install the exhaust air line such that condensate cannot collect.
- 

#### 6.9.1 Connecting the exhaust air line

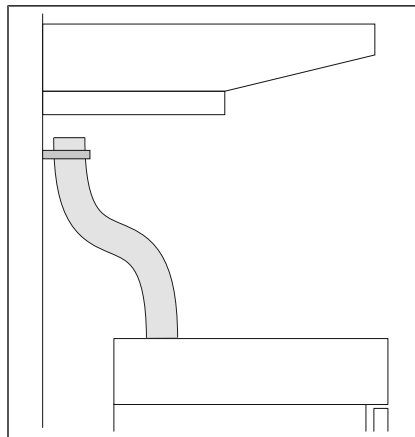


Image: Connecting the exhaust air line

**Requirement** Exhaust air line complies with the specifications (see "Equipment and connection data")

1. Connect the exhaust air line to the steam outlet.
2. Route the exhaust air line with a 3° rise as far as the ventilation system.
3. Fasten the end of the exhaust air line 50 mm — 200 mm underneath the ventilation system.
4. Fill out the Commissioning report.

## 7 Testing the function

- Requirement** Power connection made  
 Water connection made  
 Wastewater connection made  
 Supply air routing and exhaust gas routing checked and switched on  
 Gas connection line connected  
 Checked for leaks outside the unit  
 Connection pressure checked  
 Checked for leaks inside the unit  
 Basic gas setting checked  
 Unit cleaned

### 7.1 Checking the exhaust gas routing for leaks



#### **DANGER**

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

- Requirement** Left side wall removed
1. Switch on the unit
  2. Start any cooking program with the maximum temperature (see Operating instructions).
    - ↳ The burner ignites.
    - ↳ The flame burns stably.
    - ↳ The unit operates at full load.
  3. Using a condensation mirror or approved backflow testing device, check all those parts, which conduct exhaust gas, for leaks in a proper manner.
  4. Check at the flow control that the exhaust gas is being routed without problems (only B<sub>13BS</sub> type units).
  5. End the cooking program.
    - ↳ The flame goes out.
    - ↳ The burner is off.
  6. Switch off the unit.
  7. Fill out the Commissioning report.

### 7.2 Checking the monitoring of the exhaust gas routing

1. Switch on the unit
2. Start any cooking program with the maximum temperature (see Operating instructions).
  - ↳ The burner ignites.
  - ↳ The flame burns stably.
3. Switch off the ventilation.
  - ↳ The gas supply is disabled.
  - ↳ The flame goes out.
  - ↳ The burner is off.
  - ↳ The unit attempts to ignite.
  - ↳ The safety device trips after 1 second.
  - ↳ An error message flashes on the display.
  - ↳ An audible signal sounds.
  - ↳ The *STEP* indicator light flashes.
  - ↳ The monitoring of the exhaust gas routing is functioning.
4. Switch on the ventilation.
5. Press the "STEP" button.
  - ↳ The unit restarts.
6. The cooking program starts again.
  - ↳ The burner ignites within 5 seconds.
  - ↳ The flame burns stably.
7. End the cooking program.
8. Switch off the unit.
9. Fill out the Commissioning report.

### 7.3 Checking the ignition behaviour

**Requirement** Left side wall removed

1. Switch on the unit.
2. Call up the *CO2 setting* display (see Checking the basic gas setting).
3. Press the "START STOP" button.
4. Using the left knob, set the burner to high output ("HI").
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO2".
5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
7. Observe the ignition behaviour through the inspection opening, until the flame burns stably.



8. Press the "START STOP" button.
  - ↳ The flame goes out.
  - ↳ The burner is off.
9. Repeat the procedure several times.
10. On models with two burners: Repeat the procedure for the second burner.
11. Switch off the unit.
12. Fill out the Commissioning report.

## 7.4 Checking the flame pattern



### DANGER

**Risk of personal injury and physical damage from electric shock**

- Inspection and adjustment work that can be carried out only with the housing open and the unit under power must be performed only by electrically trained technical personnel.

### Requirement Left side wall removed

1. Switch on the unit.
2. Call up the *CO2 setting* display (see "Checking the basic gas setting").
3. Press the "START STOP" button.
4. Using the left knob, set the burner to high output ("HI").
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO2".
5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at full load.
7. Observe the flame pattern through the inspection opening.
  - ↳ The flame must be pointed at its core.
  - ↳ The flame must not generate soot, appear yellow, flash back or lift off.
8. Press the *Ready2Cook* button.
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO2".
9. Using the left knob, set the burner to low output ("LO").
  - ↳ The left display flashes "LO".
  - ↳ The centre display shows "CO2".

10. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
11. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at partial load.
  - ↳ The flame burns smaller.
12. Observe the flame pattern through the inspection opening.
  - ↳ The flame must be pointed at its core.
  - ↳ The flame must not generate soot, appear yellow, flash back or lift off.
13. Press the "START STOP" button.
  - ↳ The flame goes out.
  - ↳ The burner is off.
14. On models with two burners: Repeat the procedure for the second burner.
15. Switch off the unit.
16. Fill out the Commissioning report.

## 7.5 Checking the flame monitoring

**Requirement** Ignition behaviour checked  
Flame pattern checked

1. Switch on the unit.
2. Call up the *CO2 setting* display (see "Checking the basic gas setting").
3. Press the "START STOP" button.
4. Using the left knob, set the burner to high output ("HI").
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO2".
5. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
6. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at full load.

7. Close the gas shut-off valve on the unit.
  - ↳ The flame goes out.
  - ↳ The unit attempts to ignite 3 times.
  - ↳ The safety device trips.
  - ↳ An error message flashes on the display.
  - ↳ An audible signal sounds.
  - ↳ The *STEP* indicator light flashes.
  - ↳ The flame monitoring is functioning.
8. Open the gas shut-off valve on the unit.
9. Press the "STEP" button.
  - ↳ The unit restarts.
10. Call up the *CO2 setting* display (see "Checking the basic gas setting").
11. Press the "START STOP" button.
12. Using the left knob, set the burner to high output ("HI").
  - ↳ The left display flashes "HI".
  - ↳ The centre display shows "CO2".
13. Using the right knob, select the first burner "-1-" (on models with two burners).
  - ↳ The right display flashes "-1-".
14. Press the "START STOP" button.
  - ↳ The indicator light in the "START STOP" button flashes and the burner starts.
  - ↳ The unit operates at full load.
15. Press the "START STOP" button.
16. The indicator light in the "START STOP" button goes out and the burner is off.
17. On models with two burners: Repeat the procedure for the second burner.
18. Switch off the unit.
19. Fill out the Commissioning report.

### 7.6 Checking the controls

**Requirement** Ignition behaviour checked

Flame pattern checked

1. Switch on the unit
2. Select any cooking program (see Operating instructions).
  - ↳ Set the cooking zone temperature to a higher temperature than the current cooking zone temperature.
3. Start the cooking program.
  - ↳ The burner ignites.
  - ↳ The flame burns stably.
  - ↳ Once the set cooking zone temperature is reached, the controls switch off the burner.
  - ↳ The flame goes out.
  - ↳ The burner is off.
  - ↳ The controls are functioning.
4. End the cooking program.
5. Switch off the unit.
6. Fill out the Commissioning report.

### 7.7 Checking the monitoring of the cooking zone door

1. Switch on the unit
2. Start any cooking program (see Operating instructions).
  - ↳ The burner ignites.
  - ↳ The flame burns stably.
3. Open the cooking zone door during operation.
  - ↳ The flame goes out.
  - ↳ The burner is off.
  - ↳ The fan comes to a stop.
  - ↳ The monitoring of the cooking zone door is functioning.
4. Close the cooking zone door.
5. Switch off the unit.
6. Fill out the Commissioning report.

## 8 Putting the unit into service



If the unit is not put into service immediately after being connected and the function check, all inspections must be repeated.

- Requirement** Supply air and exhaust gas routing checked  
 Power connection made  
 Gas connection made  
 Water connection made  
 Wastewater connection made  
 Exhaust air connection made (if required by the customer)  
 Function successfully tested  
 Housing closed
1. Instruct operator
  2. Filling out the Commissioning report

### 8.1 Filling out the Commissioning report

General	Yes	No
Information from the nameplate entered? SN: _____ Typ: _____ QN (Hi): _____ E: _____ Bez: _____ Item-Nr.: _____ (if listed)	<input type="checkbox"/>	<input type="checkbox"/>
Obvious damage to the unit? What and where?: _____	<input type="checkbox"/>	<input type="checkbox"/>
Unit levelled?	<input type="checkbox"/>	<input type="checkbox"/>

Supply air and exhaust gas routing	Yes	No
Supply air and exhaust gas routing complies with regulations?	<input type="checkbox"/>	<input type="checkbox"/>
Supply air and exhaust gas routing connected in a technically correct manner?	<input type="checkbox"/>	<input type="checkbox"/>
Supply air and exhaust gas routing is functioning properly?	<input type="checkbox"/>	<input type="checkbox"/>
Supply air and exhaust gas paths unobstructed?	<input type="checkbox"/>	<input type="checkbox"/>
Unit connected to monitoring of the exhaust gas routing in a technically correct manner?	<input type="checkbox"/>	<input type="checkbox"/>
The monitoring of the exhaust gas routing is functioning?	<input type="checkbox"/>	<input type="checkbox"/>

Electrical connection	Yes	No
Power connection made properly?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Equipotential bonding	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Floating contact		
<input type="checkbox"/> Power optimizing system		
<input type="checkbox"/> ...		

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## Putting the unit into service

Electrical connection	Yes	No
Electrical connections made properly?	<input type="checkbox"/>	<input type="checkbox"/>
Residual-current protective device connected immediately before this unit?	<input type="checkbox"/>	<input type="checkbox"/>
Residual-current protective device connected before this and other units?	<input type="checkbox"/>	<input type="checkbox"/>
Connection voltage measured?	<input type="checkbox"/>	<input type="checkbox"/>
Connection voltage: _____ (V)		
Set transformer voltage T0: 0 V   _____ V   _____ V; T1: blue 0 V   red _____ V; T2/T3: blue _____ V   red _____ V		

Basic control setting	Yes	No
Unit of temperature set?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> °C		
<input type="checkbox"/> °F		
Altitude set?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 0 — 999 m		
<input type="checkbox"/> 1000 m — 1999 m		
<input type="checkbox"/> 2000 m — 2499 m		
<input type="checkbox"/> 2500 m or higher		
Audible signal volume set?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> quiet		
<input type="checkbox"/> loud		
Volume unit set?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> ml		
<input type="checkbox"/> fl.oz. (Imperial)		
<input type="checkbox"/> fl.oz. (U.S.)		

Water connection	Yes	No
Connection pressure within indicated range?	<input type="checkbox"/>	<input type="checkbox"/>
Connection pressure: _____ ( _____ ) kPa (bar)		
Water connection made properly?	<input type="checkbox"/>	<input type="checkbox"/>
Lines and connections leak-tight?	<input type="checkbox"/>	<input type="checkbox"/>
Water connections connected with T-piece?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Connected only to softened tap water		
<input type="checkbox"/> Connected only to tap water		

Wastewater connection	Yes	No
Wastewater connection made properly?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Waste trap in the building		
<input type="checkbox"/> Aerator		
<input type="checkbox"/> Funnel drain		
<input type="checkbox"/> Floor gutter		
Connection dimension of wastewater line: _____ mm		

Gas connection	Yes	No
Does the information on the gas type supplemental label match the gas type available?	<input type="checkbox"/>	<input type="checkbox"/>

Gas connection	Yes	No
Information from the gas type supplemental label entered?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Natural gas E/H, G20, 20 hPa (mbar) <input type="checkbox"/> Liquefied gas B/P, G30/G31, 50 hPa (mbar) <input type="checkbox"/> Natural gas LL/L, G25, 20 hPa (mbar) <input type="checkbox"/> Liquefied gas B/P, G30/G31, 30 hPa (mbar) <input type="checkbox"/> Natural gas L, G25, 25 hPa (mbar) <input type="checkbox"/> LP Gas B/P, G30/G31, 28 hPa (mbar) <input type="checkbox"/> Natural gas E+, G20/G25, 20/25 hPa (mbar) <input type="checkbox"/> Natural gas 13A, G21, 20 hPa (mbar)		
<input type="checkbox"/> Other gas type: _____ Connection pressure: _____ hPa (mbar)		
Is gas connection made in a technically correct manner?	<input type="checkbox"/>	<input type="checkbox"/>
Dimension of gas connection at the unit: _____ <input type="checkbox"/> mm or <input type="checkbox"/> inches		
Dimension of gas connection line: _____ <input type="checkbox"/> mm or <input type="checkbox"/> inches		
Is the thermally activated shut-off installed?	<input type="checkbox"/>	<input type="checkbox"/>
Is the gas connection line leak-free?	<input type="checkbox"/>	<input type="checkbox"/>
Are gas-conducting parts inside the unit leak-free?	<input type="checkbox"/>	<input type="checkbox"/>
Connection pressure OK?	<input type="checkbox"/>	<input type="checkbox"/>
Connection pressure: _____ hPa (mbar)		
Nozzle pressure OK?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Measured: _____ hPa (mbar) <input type="checkbox"/> Set: _____ hPa (mbar)		
Primary air gap OK?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Measured: _____ mm <input type="checkbox"/> Set: _____ mm		
Primary air gap unobstructed?	<input type="checkbox"/>	<input type="checkbox"/>
Offset pressure OK?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Measured: _____ hPa (mbar)		
Are exhaust gas values at full load OK?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Measured CO <sub>2</sub> : _____ Vol % <input type="checkbox"/> Set CO <sub>2</sub> : _____ Vol %		
<input type="checkbox"/> Measured CO: _____ ppm <input type="checkbox"/> Set CO: _____ ppm		
Are exhaust gas values at partial load OK?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Measured CO <sub>2</sub> : _____ Vol % <input type="checkbox"/> Set CO <sub>2</sub> : _____ Vol %		
<input type="checkbox"/> Measured CO: _____ ppm <input type="checkbox"/> Set CO: _____ ppm		
Conversion of gas type (if necessary)	Yes	No
Burner nozzle / gas orifice exchanged?	<input type="checkbox"/>	<input type="checkbox"/>
Before conversion:		
Number of nozzles / gas orifices: _____		
Coefficient: _____		
After conversion:		
Number of nozzles / gas orifices: _____		
Coefficient: _____		
Has the appropriate gas type supplemental label been attached after conversion?	<input type="checkbox"/>	<input type="checkbox"/>

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## Putting the unit into service

Conversion of gas type (if necessary)		Yes	No
Has information from the gas type supplemental label been entered after conversion?		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Natural gas E/H, G20, 20 hPa (mbar) <input type="checkbox"/> Natural gas LL/L, G25, 20 hPa (mbar) <input type="checkbox"/> Natural gas L, G25, 25 hPa (mbar) <input type="checkbox"/> Natural gas E+, G20/G25, 20/25 hPa (mbar) <input type="checkbox"/> Natural gas 13A, G21, 20 hPa (mbar)	<input type="checkbox"/> Liquefied gas B/P, G30/G31, 50 hPa (mbar) <input type="checkbox"/> Liquefied gas B/P, G30/G31, 30 hPa (mbar) <input type="checkbox"/> LP Gas B/P, G30/G31, 28 hPa (mbar)		
<input type="checkbox"/> Other gas type: _____ Connection pressure: _____ hPa (mbar)			

Exhaust air connection		Yes	No
Setting up below ventilation system?		<input type="checkbox"/>	<input type="checkbox"/>
Connected to exhaust air duct?		<input type="checkbox"/>	<input type="checkbox"/>
Connection dimension of exhaust air line: _____ mm			
Length of exhaust air line: _____ mm			

Function check		Yes	No
Controls are functioning?		<input type="checkbox"/>	<input type="checkbox"/>
Exhaust gas routing is functioning properly?		<input type="checkbox"/>	<input type="checkbox"/>
Exhaust gas routing is leak-free?		<input type="checkbox"/>	<input type="checkbox"/>
The monitoring of the exhaust gas routing is functioning?		<input type="checkbox"/>	<input type="checkbox"/>
Ignition behaviour OK?		<input type="checkbox"/>	<input type="checkbox"/>
Flame pattern OK?		<input type="checkbox"/>	<input type="checkbox"/>
Flame monitoring is functioning?		<input type="checkbox"/>	<input type="checkbox"/>
Monitoring of the cooking zone door is functioning?		<input type="checkbox"/>	<input type="checkbox"/>

Final notes		Yes	No
Was the unit put into service?		<input type="checkbox"/>	<input type="checkbox"/>
Comments:			
Operator trained?		<input type="checkbox"/>	<input type="checkbox"/>

Electrical installation was provided by:			
Company	Installer	City, date	Signature

Water installation was provided by:			
Company	Installer	City, date	Signature



Wastewater installation was provided by:			
Company	Installer	City, date	Signature

The gas was connected by:			
Company	Installer	City, date	Signature

Exhaust air connection was provided by:			
Company	Installer	City, date	Signature

The function check was performed by:			
Company	Installer	City, date	Signature

Operator training was provided by:			
Company	Installer	City, date	Signature







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