ermaf

GB CZ HU PL RO DE

Installation Instructions NX80

Montážní návod

Telepítési útmutató

Instrukcja montażu

Instrucțiuni de instalare

Einbauanleitung

CE

2806DP0248

Air heater

Ohřívač vzduchu

Kényszerkonvekciós légfűtő

Nagrzewnica powietrza

încălzitor de aer

Heizgerät

GB

Table of Contents

1 Safety Guidelines

Please read through these instructions carefully before installing or operating. Following the installation, pass the instructions on to the operator. This unit must be installed and commissioned in accordance with the regulations and standards in force. These instructions can also be found at www.ermaf.nl.

1.1 Liability

We will not be held liable for damage resulting from non-observance of the instructions and non-compliant use.

1.2 Safety instructions

Information that is relevant for safety is indicated in the instructions as follows:

DANGER!
Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING!
Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION!
Indicates a hazardous situation which, if not avoided, will result in minor or moderate injury.

All interventions may only be carried out by qualified gas technicians. Electrical interventions may only be carried out by qualified electricians.

Persons under the age of 18 as well as persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge are not allowed to use, clean or service this device.
Staying near the device or its use is prohibited, even if said persons are supervised or have been instructed on the safe use of the devices and are aware of the resulting dangers.

2 Technical Data

Pressure values	
Inlet pressure p_U:	20 to 60 mbar
Specifications	
Gas types:	I2E, I2L, I2EK, I3P, I3B/P
Natural gas H (gases of category 2)	20 mbar
Natural gas L (gases of category 2)	25 mbar
Propane-Butane gas (gases of category 3)	30 - 50 mbar
Gas connection:	R $^3/_4$" to ISO 7-1
Gas consumption: Natural gas H Natural gas HY20 Natural gas L Natural gas LLY20 Propane-Butane	 8.45 m^3/h 8.45 m^3/h 9.51 m^3/h 9.51 m^3/h 6.67 kg/h
Connection rating:	230 V AC, -15/+10%, 50/60 Hz
Current consumption I_N:	50 Hz: 4.8 A 1105 W
NOx Class:	Depending on gas type up to Class 4.
Capacity:	80 kW Hi
Hot air blow distance	42 m
Speed of air at the end	0.5 m/s
Staged control:	On/Off signal 230 V AC. Burner control unit with direct spark ignition and ionization control.
Main fan type:	Axial
Burner fan type:	Radial
Housing material:	Stainless steel
Combustion chamber:	Stainless steel
Burner control unit:	Flame-retardant acrylonitrile butadiene styrene copolymer (ABS)
Air circulation Controlled air flow: Heating:	 50 Hz ± 6850 m^3/h 50 Hz ± 7500 m^3/h

Sound level:	≤ 68 dB
Dimensions:	1994 x 789 x 987 mm
Weight:	162 kg

2.1 The Netherlands

The device has been designed for equipment category K (I2K) and is suitable for use with distribution gases G- and G+ in accordance with the specifications set out in NTA 8837:2012, Annex D, with a superior Wobbe index of 43.46 – 45.3 MJ/m3 (dry, 0 °C) or 41.23 – 42.98 (dry, 15 °C).
In addition, this device can be converted to equipment category E (I2E) and/or calibrated.
This means the device is "suitable for G+ gas and H gas or proven to be suitable for G+ gas and proof has been provided that it can be converted for use with H gas" as defined by the "Dutch Decree of 10 May 2016 regarding amendment of the Dutch Gas Appliances Decree...".

2.2 H_2 blend compability

The device is certified according to PrCEN/TS 437-1:2024 and is suitable to use 20% hydrogen inside the natural gas mix. The correct H2 blend settings must be exact the same as natural-gas H (G20). See table **9.2 Checking that the device is calibrated**.

2.3 Logistics

2.3.1 Transportation and Storage

Keep parts in their original packaging and unpack them shortly before use.
The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. storage temperature:	-20 °C
Max. storage temperature:	50 °C
Storage time:	6 months before using for the first time. If stored for longer than this, the overall service life will be reduced by the corresponding amount of extra storage time.
Ambient temperature $T_{max.}$:	-10 ≤ 40 °C
Temperature differential $\Delta T_{max.}$:	≤ 35 °C

Example for calculating the jet temperature:
T + ΔT = 40 °C + 35 °C = 75 °C

2.3.2 Packaging

The packaging material is to be disposed of in accordance with local regulations.

2.3.3 Disposal

Observe the local requirements regarding correct waste recycling/disposal!

WEEE Directive 2012/19/EU
Waste of Electrical and Electronics Equipment Directive Disposal Information -
Do not dispose this device and contained batteries with the general household waste. For proper treatment, recovery and recycling, please take the device and contained batteries to designated collection points. Disposing of this device and of contained batteries correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

3 Declaration of conformity

We, the manufacturer, hereby declare that the product NX80 complies with the requirements of the listed Directives and Standards.

Directives:

- 2014/30/EU – EMC
- 2014/35/EU – LVD

Regulation:

- (EU) 2016/426 – GAR

Standards:

- EN 17082:2019
- PrCEN/TS 437-1:2024
- EN 60335-1:2020
- EN 60335-2-102:2032
- EN 55011:2016
- EN 61000-6-2:2016
- EN 15502-1:2015

The relevant product corresponds to the tested type sample.
The production is subject to the surveillance procedure pursuant to Regulation (EU) 2016/426 article 14, section 2. (b), module D.
Ademco 2 GmbH
Scan of the Declaration of conformity (D, GB) – see www.ermaf.nl

4 Checking the usage

Atmospheric heater with heat-exchanger for animal sheds and horticultural greenhouses. Depending on the type and setting, the heater can be operated with natural gas or LPG (propane/butane).
This function is only guaranteed when used within the specified limits – see chapter **2 Technical Data**. Any other use is considered as non-compliant.

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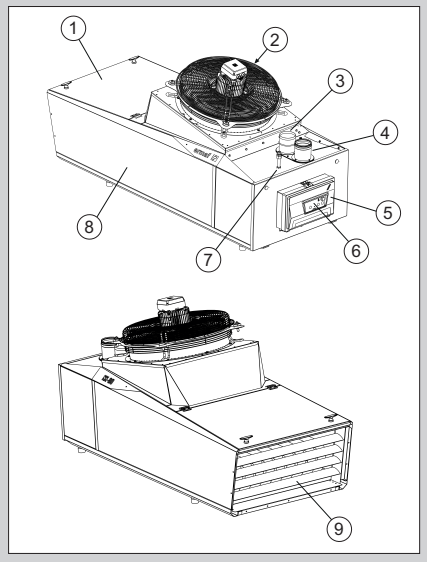
4.1 Type code

Type	
Code	Description
NX	Heater
80	Capacity 80 kW, jet length > 42 m

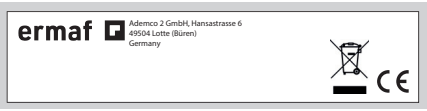
4.2 Part designations



1 Service Flap
2 Main-Fan
3 Flue gas outtake
4 Fresh Air intake
5 Housing cover with ACU
6 Status indicator (operation/faults)
7 Connection for gas
8 NX80 stainless steel housing
9 Air diffuser

4.3 Type label

Air displacement, electric connection data, voltage, heating power, gas type / category, supply pressure, burner pressure, IP-class: see type plate on the heater.



Before installation, check whether the device is suitable for the regional gas type and the specified limits, see chapter **4.1 Type code** and chapter **2 Technical Data**.

5 Installation

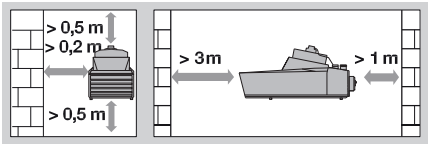
DANGER!
Danger of death!
Gases are generated during the storage of slurry which remain partly dissolved in the liquid. If the slurry is strongly agitated during mixing and purging, poisonous, explosive gases such as hydrogen sulphide and methane are released. If an ignition source is present, the released gas can explode.

To avoid damage during operation, please observe the following:

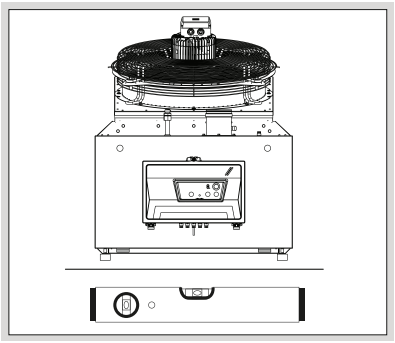
- Switch off the heater before mixing and purging the slurry.
- Close the slide valves when storing slurry outside.
- The fan for the air supply must not be part of a closed pipe system.
- Respect the safety distance of the heater to inflammable materials, see chapter **5.1 Installation position**.
- Consult your fire insurance provider and/or local fire protection engineer to assess the foreseeable, general risk of fire.
- For cleaning, care and maintenance, note the applicable national regulations and directives.
- No condensation permitted. Comply with ambient temperature, see chapter **2 Technical Data**.

5.1 Installation position

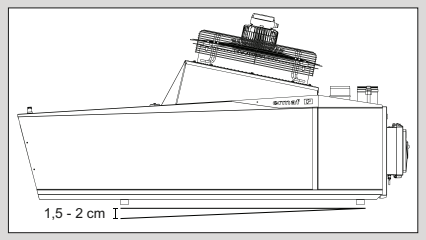
- Note the safety distance to walls and inflammable materials.



- Ensure sufficient free space around the device. There must be no obstructions in front of the inlet and outlet side of the heater.
- To avoid overheating, do not cover the electric motor.
- NX80 must be installed parallel to the floor – please use a spirit level.



- The front part must be lower than the back part which will create a slope to ensure cleaning water will flow out of the heater.
- The height difference from front to back should equal 2 cm.



5.2 Flue gas / air system

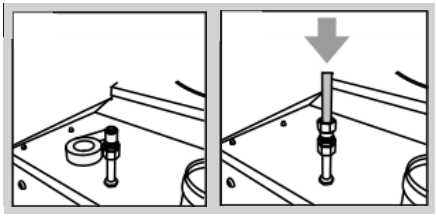
CAUTION!
The heater is only deemed CE tested and approved with the original Flue gas / air set-up and parts as described in chapter **14.1.1 Flue gas / air system**.

- Do not exceed the maximum length (6 m) of the flue gas / air system.
- The design of the flue gas / air system depends on the premises and the roof construction.
- Various system elements for individual applications can be supplied, see chapter **14.1 Accessories**.

5.3 Connecting the gas supply

- The heater is set to the correct gas type as specified in the purchase order.
- If you wish to use a different gas type, see chapter **5.4 Changing the gas type**

1. Disconnect the system from the electrical power supply.
2. Shut-off the gas supply.
3. Remove the sealing plug from the gas inlet on the top of the cabinet.
4. Connect the gas pipe with threaded connection (R $^3/_4$" external thread) or gas hose (see chapter **14.1 Accessories**) to the inlet tube of the gas combination control.
   - Use approved sealing material only.



5.4 Changing the gas type

- The heater must be adjusted to the new gas type, see chapter **9 Adjusting the heater**
- Note the new gas type on the type label with a waterproof pen.

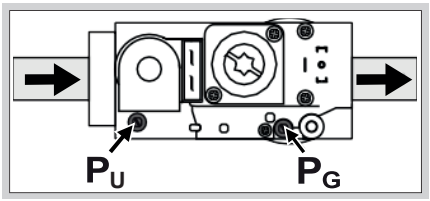
6 Tightness test

- The heater may only be disconnected from the electrical power supply once the device has been switched off.

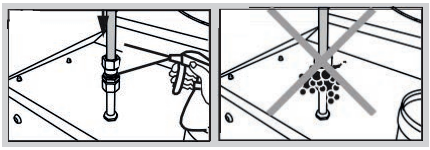
1. Disconnect the system from the electrical power supply.

- The valves are closed when de-energized.

2. Open the pressure test point for p_U on the gas combination control.
3. Connect a pressure gauge to test point p_U.



4. Switch on the power supply.
5. Release the gas supply.
6. Check the maximum inlet pressure p_U
7. Close the manual valve.
8. Check the pressure gauge on p_U
   - The pressure must not drop.
     N2=max. 60mbar



9. Having successfully completed the tightness test, remove the pressure gauge and close the pressure test point for p_U.

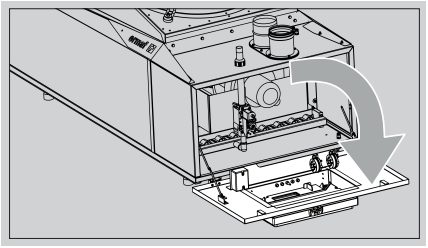
7 Wiring

CAUTION!
Danger of electric shocks!

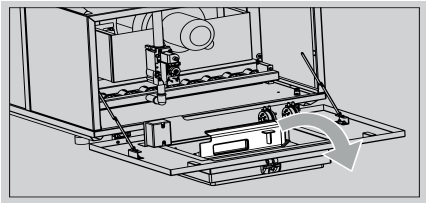
- Before working on possible live components, ensure the unit is disconnected from the power supply.
- The heater must have an external 16 A fuse.
- It must be possible to isolate the system from the power supply. The heater must be equipped with a mains cable or a plug featuring a contact gap according to the specifications for Overvoltage category III for full isolation at each pin. If this is not the case, the permanently wired electrical installation must include an isolating switch of this type pursuant to the local installation regulations.

- The heater may only be disconnected from the electrical power supply once the device has been switched off.

1. Disconnect the system from the electrical power supply.
2. Shut off the gas supply.
3. Open the hatch of the heater control cabinet.



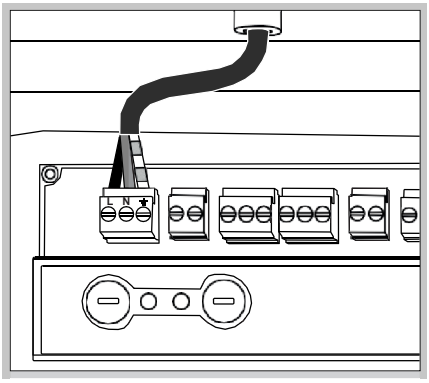
4. Open the cover of the burner control unit.



- External electrical interference must be avoided.
- Check electric phase on the grey (or black) wire.
- The terminal block is marked with L1, N and PE.

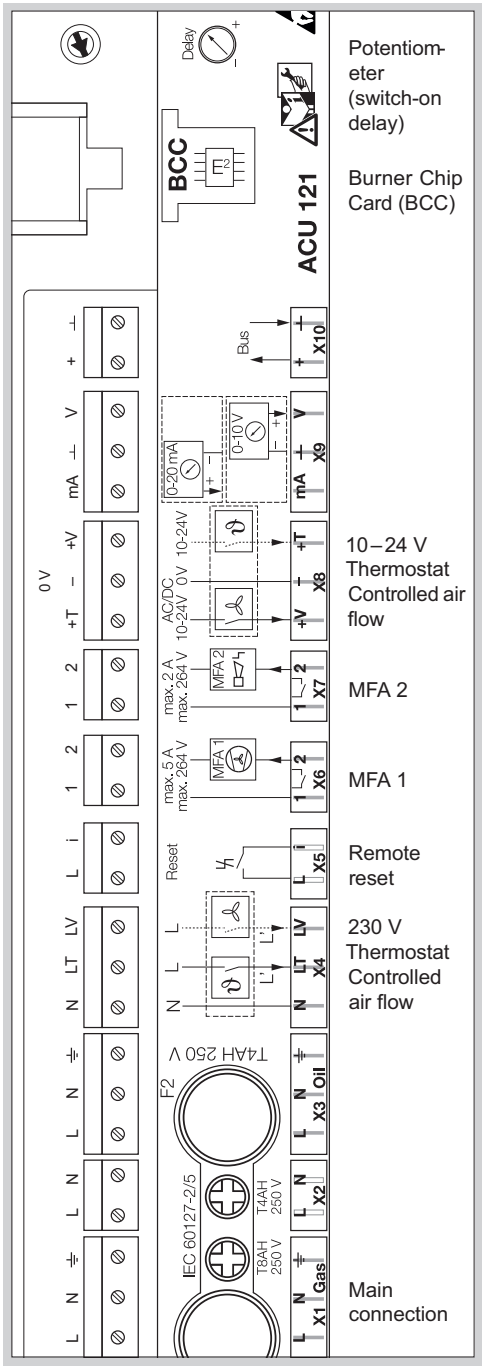
5. Connect the mains cable.
   L1 = grey (or black)
   N = blue
   PE = green/yellow

- The selection of cables and mains plug must comply with local/national regulations.

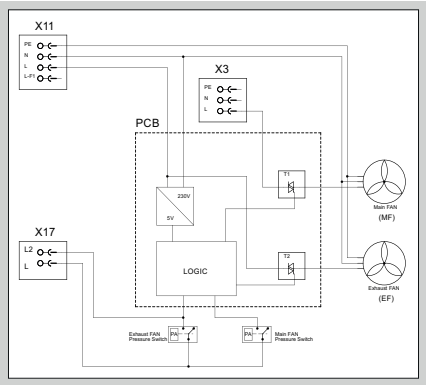


7.1 External connection diagram

The burner control unit is fitted with coded connectors to prevent them being mixed up.

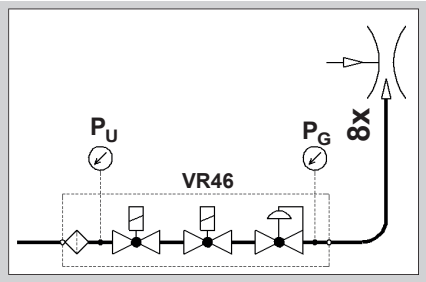


7.2 Wiring diagram for internal fan monitoring



(Full size see chapter **15.1 External connection diagram to mains and computer**)

7.3 Gas block diagram



7.4 Connecting the room thermostat

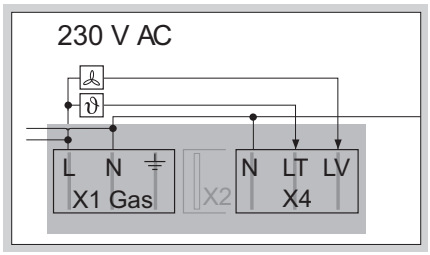
CAUTION!
To avoid damage to the heater, please observe the following:

- ▶ Provide post-cooling for the heater. The heater requires a continuous supply of 230 V AC, 50 Hz.
- ▶ In case of a power failure, an emergency power supply unit should automatically take over the power supply.

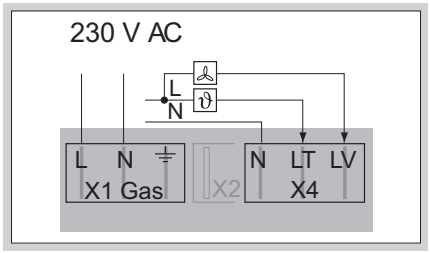
- Use a room thermostat with a hysteresis of ± 1°C. It switches on if the room temperature is 1°C less than the set temperature and switches off again once the room temperature is 1°C more than the set temperature.
- The floating connectors X4 (230 V) or X8 (24 V) are used to connect the room thermostat.
- If the room thermostat is connected to the mains supply of other connectors (connector X1 or X3), the heater will be damaged.

7.5 Connecting a single heater to a room thermostat

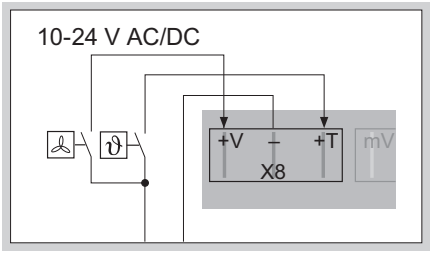
1. Connect a room thermostat for 230 V AC
   - Power supply via the heater.



   - Power supply via the environmental control computer.

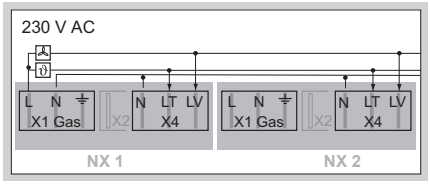


2. Connect a room thermostat for 24 V DC/AC to connector X8
   - The 24 V power supply must always be from an external source.

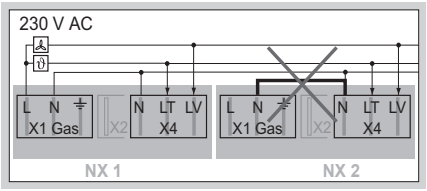


7.6 Connecting multiple heaters to a room thermostat or an environmental control computer

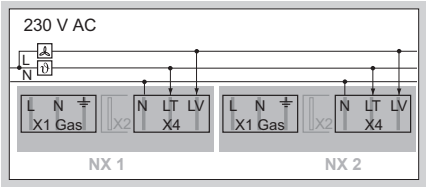
1. Connect a room thermostat for 230 V AC
   - Power supply via the heater.



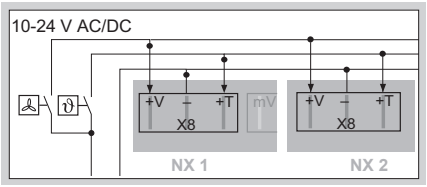
- Only one bridge may be connected in a single heater between connectors X1 and X4. “N” may be connected to all successive heaters between connectors X4 only.



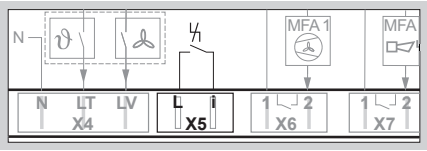
- Power supply via the environmental control computer.



2. Connect a room thermostat for 24 V DC/AC to connector X8
   - The 24 V power supply must be from an external source.

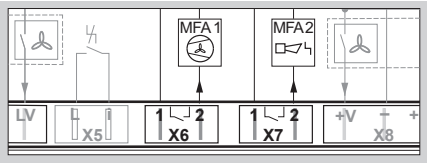


7.7 Remote reset



- An external remote reset may be connected to connector X5.

7.8 Multi-functional outputs (MFA)



- Floating multi-functional outputs can be parameterized using connectors X6 and X7. There are two methods of completing this parameterization:
  - The PC software for burner control units BCSoft can be used via the optical interface on the burner control unit, see chapter **14.1 Accessories**. The “Setting mode” menu can be opened using the MODE selection button (heater OFF) and used for parameterizing the outputs, see chapter **8.4 Setting mode**.

MFA 1, external fan (max. 5 A)

- For improved air circulation in the room, an additional fan can be connected. The external fan can be actuated with an adjustable delay (BCSoft) for switching it on and off. The exact time relates to the operation of the integrated fan.
- Possible parameterization options:
  - Inactive: the external fan is not actuated.
  - Integrated fan active: the external fan is actuated at the same time as the integrated fan.
  - Integrated fan inactive: the external fan is actuated when the integrated fan of the heater switches off.
  - Modulation enable: the external fan is not actuated until the heater starts modulating operation.

MFA 2, status signal (max. 2 A)

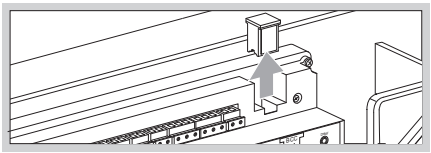
- Possible parameterization options:
  - Fault NO (default setting): For example, the output for a horn can be set to NO.
  - Fault NC: The input on an environmental control computer can be set to NC (e.g. to indicate a cable discontinuity).
  - Operation
  - Standby

7.9 Burner Chip Card (BCC)

- All the data relevant to the device are saved on the BCC and the internal device memory (EEProm). In addition, the parameters are saved on the BCC.

WARNING!
Danger of electric shocks!
Before working on possible live components, ensure the unit is disconnected from the power supply.
If the BCC is removed from the burner control unit, the heater will be non-functional.

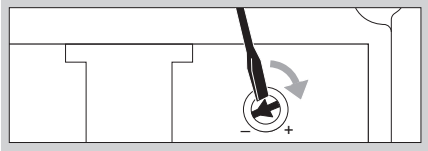
- In the event of faults which cannot be rectified by authorized trained personnel, contact the supplier.
- The BCC can be removed from the burner control unit and submitted for diagnostic purposes by agreement with the supplier.



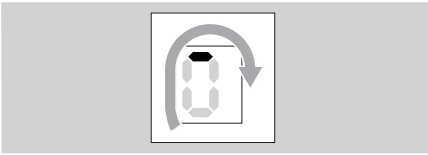
- If no other fault is active, the heater can be readied for use again by inserting a new BCC. The BCC must be compatible with the heater and version.

7.10 Setting the switch-on delay

- If multiple heaters switch on at the same time, there can be a gas and/or power shortage on individual devices. To avoid this happening, adjust the switch-on delay using the potentiometer on the burner control unit.
- The potentiometer is set to 0 s at the factory.



- If necessary, a switch-on delay of 5 to 60 s can be set between the devices.
  1) After completing the wiring, close the cover and the housing cover on the burner control unit again.
  2) Switch on the power supply.
  - If a switch-on delay has been programmed, a circulating dash will be displayed when the voltage supply is switched on to indicate that the switch-on delay is running.



  1) Release the gas supply.
  2) Commission the heater.

8 Commissioning

WARNING!
To avoid damage to the heater, please observe the following:

▶ The heater may only be commissioned once it has been ensured that the heater, gas pipes, mains voltage supply and room thermostat have been installed by authorized trained personnel according to the regulations.

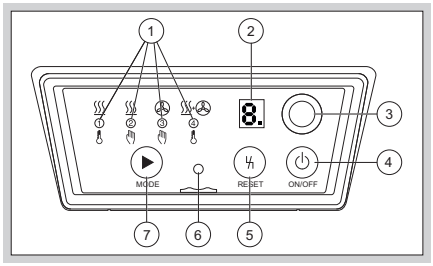
▶ During the initial commissioning procedure, the direction of rotation of the main fan must be checked first, see chapter **8.5 Checking the direction of rotation of the main fan**

▶ If the device needs to be converted to be operated with a different gas type:

- Use the correct nozzle, see chapter **14.2 Spare Parts**.
- Set the appropriate pressure on the burner, see table in chapter **9 Adjusting the heater**, and then seal the gas pressure setting.

The heater may only be commissioned using the gas type specified on the type label.

8.1 Control panel



1 ON/OFF
2 Operating modes
3 MODE selection button
4 RESET button
5 Status indicator light
6 Optical interface
7 7-segment display

8.1.1 Description of Function

① **ON/OFF :**
To switch the heater on and off.

② Operation modes

Operation mode	Explanation
①	The burner control unit waits for the signals for controlled air flow or heating (automatic)
②	Continuous heating (manual)
③	Controlled air flow in continuous operation (manual)
④	Controlled air flow in continuous operation and heating when a thermostat signal is applied (automatic)

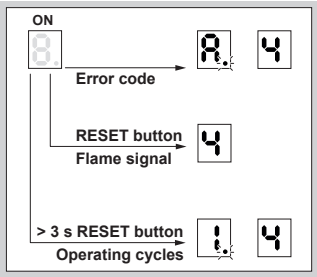
③ **MODE selection button (heater switched on):**
By pressing the MODE selection button, it is possible to switch between the different operating modes.
By pressing and holding the MODE selection button in operating mode ② Heating, the current capacity setting is displayed.
MODE selection button (heater switched off):
By pressing and holding the MODE selection button, you can go to Setting mode, see chapter **8.4 Setting mode**.
The multi-functional outputs can be assigned and the eBus address specified in this mode.

④ **RESET button:**
To reset the device after the occurrence of a fault.

⑤ **Status indicator light:**
red: fault
yellow: standby/ready for operation
green: in operation

⑥ **Optical interface:**
The PC software BCSoft can be used with the PC opto-adapter via this interface, see chapter **14.1 Accessories**.

⑦ **7-segment display:**
To display error codes, the flame signal or the number of operating cycles. The decimal point indicates that another figure follows.



Error code: an error is displayed immediately in the form of an alternating letter and number indicating a warning or fault, see chapter **12 Assistance in the event of malfunction**.
Flame signal: pressing the RESET button displays the flame signal, see chapter **9.3 Flame signal**.
Operating cycles: press and hold the RESET button for more than 3 s to show the number of operating cycles in changing displays, see chapter **11 Maintenance**.
Press the RESET button to exit the display of the flame signal or operating cycles.

8.2 Switching on

Press ON/OFF

- The LED for the last selected operating mode will flash. A different operating mode can be selected within 2 s. If you retain the selection, the flashing light will change to permanently lit after 2 s.
- The heater will start once the thermostat signal has been applied and the set switch-on delay elapsed, see chapter **7.10 Setting the switch-on delay**.
- The burner starts up and operates in the last selected operating mode.

8.3 Switching off

Press ON/OFF

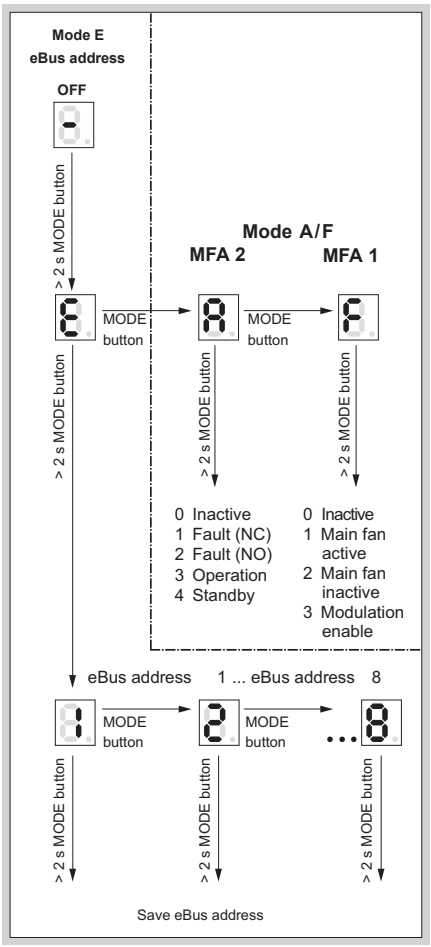
- The burner control unit display and the burner will switch off immediately. Mains voltage is still supplied however. The display indicates "–".
- The main fan cools the heater down until it reaches switch-off temperature.

CAUTION!
Do not disconnect the heater from the electrical power supply until the post-cooling process has been completed.

- The display "–" will go out.

8.4 Setting mode

- Press and hold the MODE selection button when the heater is switched off to go to Setting mode.
- Switch off the heater .
- Mode E: eBus addresses can be saved.
  Mode A/F: multi-functional outputs can be parameterized.



- Press the RESET button to return to the previous menu.
- After a timeout of 20 s, the display will automatically return to the initial mode. The display indicates "–".

8.5 Checking the direction of rotation of the main fan

1. Switch on the power supply.
2. Release the gas supply.
3. Switch on the heater. Press ON/OFF ⏻
4. Select the Heating ② ≋ operating mode.
   - The main fan will start.
   - If it is turning in the correct direction, the fan blades will turn clockwise.

5. Switch off the heater. Press ON/OFF ⏻
6. Disconnect the heater from the electrical power supply and rectify the fault, see chapter **12 Assistance in the event of malfunction**

9 Adjusting the heater

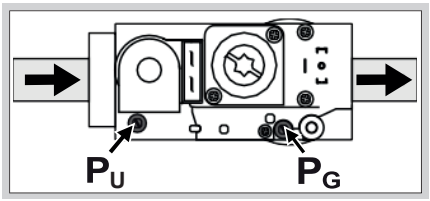
9.1 Burner gas pressure p_G

- The heater is set to the gas type specified in the purchase order.

1. Check whether the values in the table for gas type and adjusting range correspond to local conditions.

	Heating value H_S [MJ/m³]	
	Minimum	**Maximum**
Natural gas H G20	34.04	40.75
Natural gas L G25	30.58	35.05
Propane-Butane G30/31	90.76	125.75

- The fine adjustment on the gas combination control is made on the basis of the flue gas measurements on the flue gas / air system.
- The following are required for setting:
  – T40 torx Screwdriver
  – Pressure gauge with display range 0 to 50 mbar,
  – Flue gas analyzer. The flue gas analyzer must be able to measure λ (lambda), O_2, CO and CO_2. The sensor should be suitable for temperatures of up to 300 °C.
- The inlet pressure p_U must comply with the technical data, see chapter **2 Technical Data**.
- Important! Always check the inlet pressure when the heater is in operation.
- The inlet pressure p_U can be measured using a test point on the combination control.



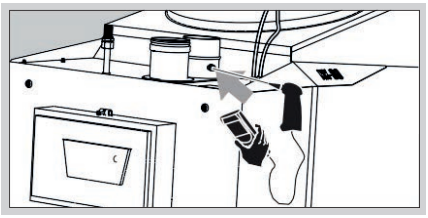
2. Open pressure test point p_G.

- Do not use force!

3. Connect a pressure gauge to test point p_U.
4. Disconnect the system from the electrical power supply.

- The heater may only be disconnected from the electrical power supply once the device has been switched off and post-cooling is complete.

5. Shut off the gas supply.
6. Remove the cap from the CO_2 test point on the flue gas.



7. Place the analyzer sensor in the test point.
8. Ensure that there is no air in the gas system.
9. Switch on the power supply.
10. Release the gas supply.
11. Measure the CO, λ and O2 values simultaneously and observe them. See third table on the next side.
12. Switch on the burner control unit. Press the ON/OFF button ⏻ until an LED lights up.

- The burner control unit switches on in the last operating mode selected.

13. Select the Heating ② ≋ operating mode.

9.2 Checking that the device is calibrated

- All appliances undergo a final factory check and calibration process after manufacture.
- The appliance is set to the type of gas ordered.
- The heater will always start at maximum output.
- The burner must start within 5 seconds after the ignition process is initiated.
- If the burner does not light after several attempts, the inlet pressure is too low.

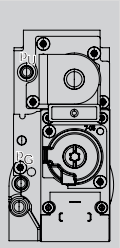
Monitor the CO value.

- During normal start-up, the CO value will rise for a short time and then fall rapidly.

NOTICE

To avoid damage to the heater, please observe the following:

- ▶ The CO value may rise to 500 ppm for a short time immediately after ignition.
- ▶ If the CO value does not decrease after a short time (60-90 seconds) to the below values (see table), contact your supplier.
- ▶ Remove the flue gas analyzer sensor from the test point immediately.



- The heater is suitable for the following gas types:

Natural gas, LPG			
Gas type	**Heating value**	**Nozzle size**	**Nozzle pressure**
	[MJ/m³]	**[mm]**	**[mbar]**
Natural gas H, E G20	37.78	2.63	10
Natural gas H with 20% hydrogen mix	31,86	2.63	10
Natural gas HY20,G20Y20, E20Y20	32,62	2.63	10
Natural gas L, LL G25	32.49	2.95	10
Natural gas LLY20, G25Y20	28.39	2.95	10
Propane-Butane G30/31	104.85	1.80	14
Propane G31	88.00	1.80	18

G + K gas*				
Gas type	**Wobbe index [MJ/m³]**		**Nozzle size**	
	min.	**max.**	**[mm]**	**[mbar]**
G + K gas	43.46	45.3	2.95	9.5

14. Allow the heater to operate for 10 minutes.
- During a normal start-up, it may take a few seconds for the main fan to start the cooling process.

15. Set the CO value on the combination control to the correct value shown in the table.

Gas type	CO [ppm]		Lambda λ	
	min.	max.	min.	max.
Natural gas LL 20, H_2 Blend	0	20	1.4	2.0
LPG G 30	0	20	1.4	2.0
LPG G30 / G 31	0	20	1.4	2.0
K gas (G+)	0	20	1.4	2.0

- If the measured CO value corresponds to the details on the type label and in the table, the heater has been set correctly. Otherwise, check that the type of gas available matches the settings of the appliance.
- Deviations from the above table may also be due to variations in the calorific value of the gas and the flue gas / air system length.
- In all cases, the factory measured values are indicated on the appliance. If you measure values which differ significantly from these values, please contact the manufacturer.

9.3 Flame signal

- The flame signal can be measured while the burner is operating.

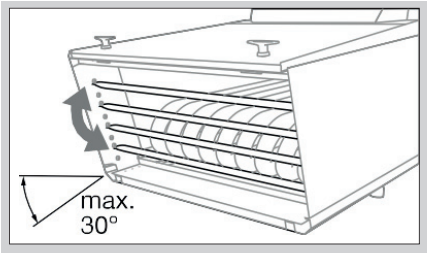
16. Press the RESET button to display the flame signal.
- The flame signal is shown in coded form as a number from 0 to 9.
- This number must be multiplied by a factor of 2.
  The result of this multiplication is the level of the flame signal in µA
  Example: the number 3 corresponds to a flame signal of 6 – 8 µA.

Display	Flame current [µA]
0	0-2
1	2-4
2	4-6
3	6-8
4	8-10
5	10-12
6	12-14
7	14-16
8	16-18
9	18...

17. Check the flame signal.
    - The flame signal is displayed for 20 s.
18. Press the RESET button to exit the flame signal display.

9.4 Adjustment of air flow direction

The vertical airflow can be controlled by inclining of the four air flaps.



10 Cleaning

CAUTION!
To ensure that no damage occurs during operation and cleaning, please observe the following instructions. Otherwise, injuries or damage to the device may occur and/or the function of the device may be impaired, and the manufacturer's warranty will be cancelled.

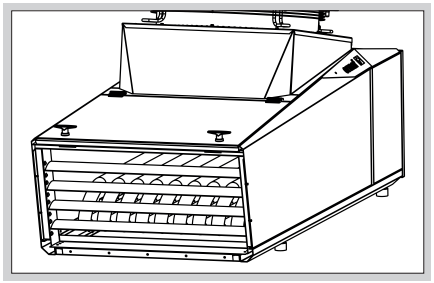
▶ Sharp-edged metal sheets. Always wear protective gloves.

▶ After cleaning, check that the components on and in the heater are in good condition. The device may only be restarted if all safety devices have been installed and the safety functions have been checked.

▶ Clean the heater once a year when used in horticulture and at regular intervals as well as after each fattening period when used in agriculture, as described below. Inadequate or irregular cleaning can cause the device to overheat and can thus lead to fire damage or damage to the device. For example, dirt particles can catch fire and can be blown out of the device.

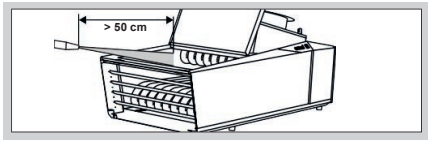
- The NX80 is made of high-quality stainless steel and is resistant to external influences such as dirt and moisture.
- It is designed so that it can be cleaned carefully both inside and outside with a high-pressure cleaner.
- The housing cover and cable glands on the burner control unit must be closed during the cleaning process.
- The electrical components are protected from moisture by additional water drip edges on the housing cover. Direct water influence on the edges of the housing cover should be avoided.
- A downward slope inside the device ensures that dirty water drains out.
- Never direct the high-pressure cleaner at the heater when it is set to water jet. Always use the spray setting.
- The distance between the nozzle and the surface to be cleaned must be at least 50 cm. Placing the high-pressure cleaner at too short a distance can cause serious damage to the device.

1. Switch off the burner control unit.
2. Disconnect the system from the electrical power supply.
   - The heater may only be disconnected from the electrical power supply once the device has been switched off and post-cooling is complete.
3. Shut-off the gas supply.
4. Check the cover on the burner control unit and the housing cover to ensure they are both tightly closed.

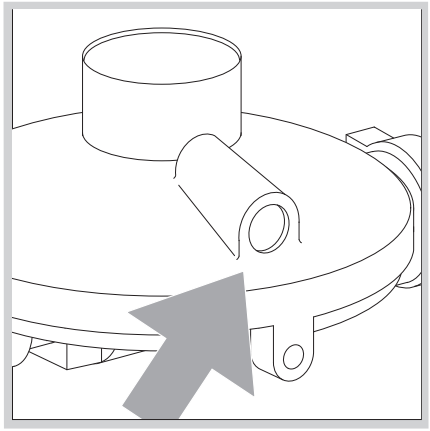


- The heat exchanger can be easily accessed via the service hood.

5. Open the service hood and carefully clean the tubes on the heat exchanger with the high-pressure cleaner (spray setting).



6. Chemical cleaning agents, disinfectants and/or pesticides contain corrosive substances which can even corrode stainless steel. Always rinse the devices with water after cleaning using such agents to remove any residue of these agents from the surface.
7. After cleaning, select operating mode ③ Controlled air flow so that the interior of the device can dry properly.
8. After cleaning the heater, check it is functioning faultlessly in normal operation, see chapter **11.3 Checking the safety functions and burner operation**.
9. When operating with LPG, check and clean the breather orifice of the pressure reducer.



11 Maintenance

CAUTION!
To ensure that no damage occurs during operation and maintenance, please observe the following instructions. Otherwise, injuries or damage to the device may occur and/or the function of the device may be impaired. The supplier/manufacturer cannot accept liability for damage resulting thereof.

- ▶ Have the heater cleaned at least once a year by qualified maintenance personnel.
- ▶ Have the safety functions checked at least once a year by qualified maintenance personnel, see chapter **11.3 Checking the safety functions and burner operation**.
- ▶ Check the flue gas / air system once a year with your local flue gas / air system sweep to find whether the flue gas and air supply routes are clear.
- ▶ Sharp-edged metal sheets. Always wear protective gloves.
- ▶ After cleaning or repair work, check that the components on and in the heater are in good condition. The device may only be restarted if all safety devices have been installed and the safety functions have been checked, see chapter **11.3 Checking the safety functions and burner operation**.

1. Switch off the burner control unit.

11.1 Visual inspection

2. Check all heaters for dirt and clean them accordingly, see **10 Cleaning**.
3. Check all heaters for damage and loose parts.
4. The rubber seals between the electrodes and terminal boots may be displaced by the water jet.
5. Check the wiring.
6. Check the cable glands.
7. Depending on the number of operating cycles, we recommend that the spark electrode and flame rod be replaced once per year.
8. Check the seal on the housing cover of the burner control unit. Replace it if necessary.
9. Check the inside of the housing cover for traces of dust, dirt or moisture. If you find such traces, the cause must be rectified at all times, e.g. by sealing an open cable gland.
10. Check the cable harness and wiring for signs of damage.

11.2 Number of operating cycles

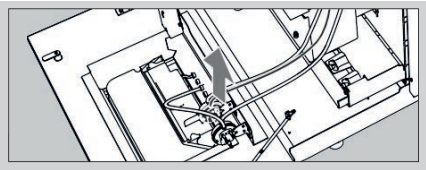
Check the number of operating cycles (heater ON): the number of operating cycles can be displayed by pressing and holding the RESET button. The number of operating cycles is composed as follows in alternating displays: The first character (X.) stands for X,000,000 operating cycles, the second character (Y) stands for Y00,000 operating cycles. For example, the first character is the number 2.: the unit has exceeded 2,000,000 operating cycles. The second character is the number 3: the unit has exceeded 300,000 operating cycles. The total number of operating cycles is composed of the numbers 2 and 3. This gives a total number of operating cycles of 2,300,000.

11.3 Checking the safety functions and burner operation

WARNING!
If these checks are not carried out, the gas valves might remain open allowing non-combusted gas to escape. Risk of explosion!

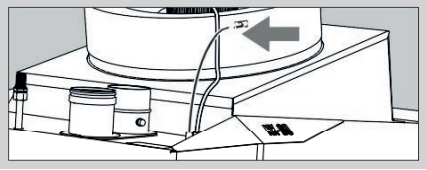
11.3.1 Safety functions

1. Switch off the heater during operation. Press ON/OFF ⏻.
   - The flame goes out < 1 s.
   - The fan cools the heater down until it reaches switch off temperature.
2. Remove the valve plug on the combination control during operation.
   - The gas valves close < 1 s.
   - The flame goes out.
   - The burner control unit displays the fault message “The flame has gone out during operation”. Error code F. and 2 flash alternately.
   - If a restart has been programmed, the burner control unit will initially attempt to restart and will then perform a fault lock-out. Error code F. and 1 flash and indicate the fault message “No flame has been detected during the safety time”.
3. Shut-off the inlet pressure during operation.
   - The burner control unit performs a safety shutdown: the gas valves are disconnected from the electrical power supply.
   - The flame goes out.
   - The burner control unit displays the fault message “The flame has gone out during operation”. Error code F. and 2 flash alternately.
   - If the burner control unit responds in a different way to that described, a fault has occurred, see chapter **12 Assistance in the event of malfunction**.
4. To check the flue gas fan air leakage switch, remove the silicone tube from the black sampling stub.



- The unit should stop on error and error code A. and 3 flash alternately.

5. To check the air pressure switch on the main fan, remove the silicone tube from the gauge attached to the main fan basket.



- The unit should stop on error and error code A. and 3 flash alternately.

CAUTION!
The fault must be remedied before the system may be operated.

11.3.2Checking burner operation

1. Switch on the burner control unit ACU.
2. Select the Heating ② operating mode.
3. Check the CO value, see chapter **9 Adjusting the heater**

- Settings data, see service form in housing cover. Update if necessary.

12 Assistance in the event of malfunction

WARNING!
To avoid harm to persons and animals or damage to the heater, please observe the following:

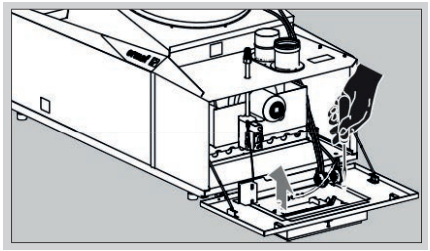
- ▶ Electric shocks can be fatal! Before working on possible live components, ensure the unit is disconnected from the power supply.
- ▶ Fault-clearance must only be undertaken by authorized trained personnel!
- ▶ Repairs to components, e.g. the burner control unit ACU or the combination control CG, may only be carried out by the manufacturer. Otherwise, the guarantee will be cancelled. Unauthorized repairs or incorrect electrical connections, e.g. the connection of power to outputs, can cause gas valves to open and the burner control unit to become defective. In this case, fail-safe operation can no longer be guaranteed.
- ▶ (Remote) resets may only be conducted by authorized trained personnel with continuous monitoring of the devices concerned.

- In the event of an installation fault, the burner control unit closes the gas valves and the status indicator light will be red at the latest after a restart has been unsuccessful.
- The 7-segment display will show an error code in the form of a letter with a decimal point and a number alternately indicating a warning. Together with the red status indicator light, this then constitutes a fault.
- Warnings and faults may be cleared only using the remedies described below.

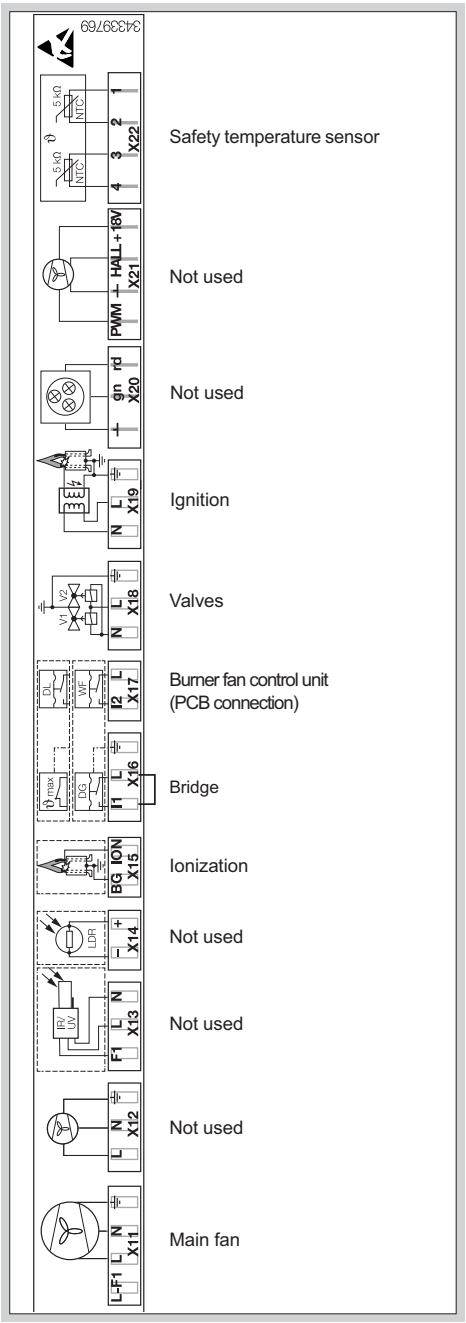
12.1 Internal wiring

- To rectify a fault, it is sometimes necessary to check the internal wiring.

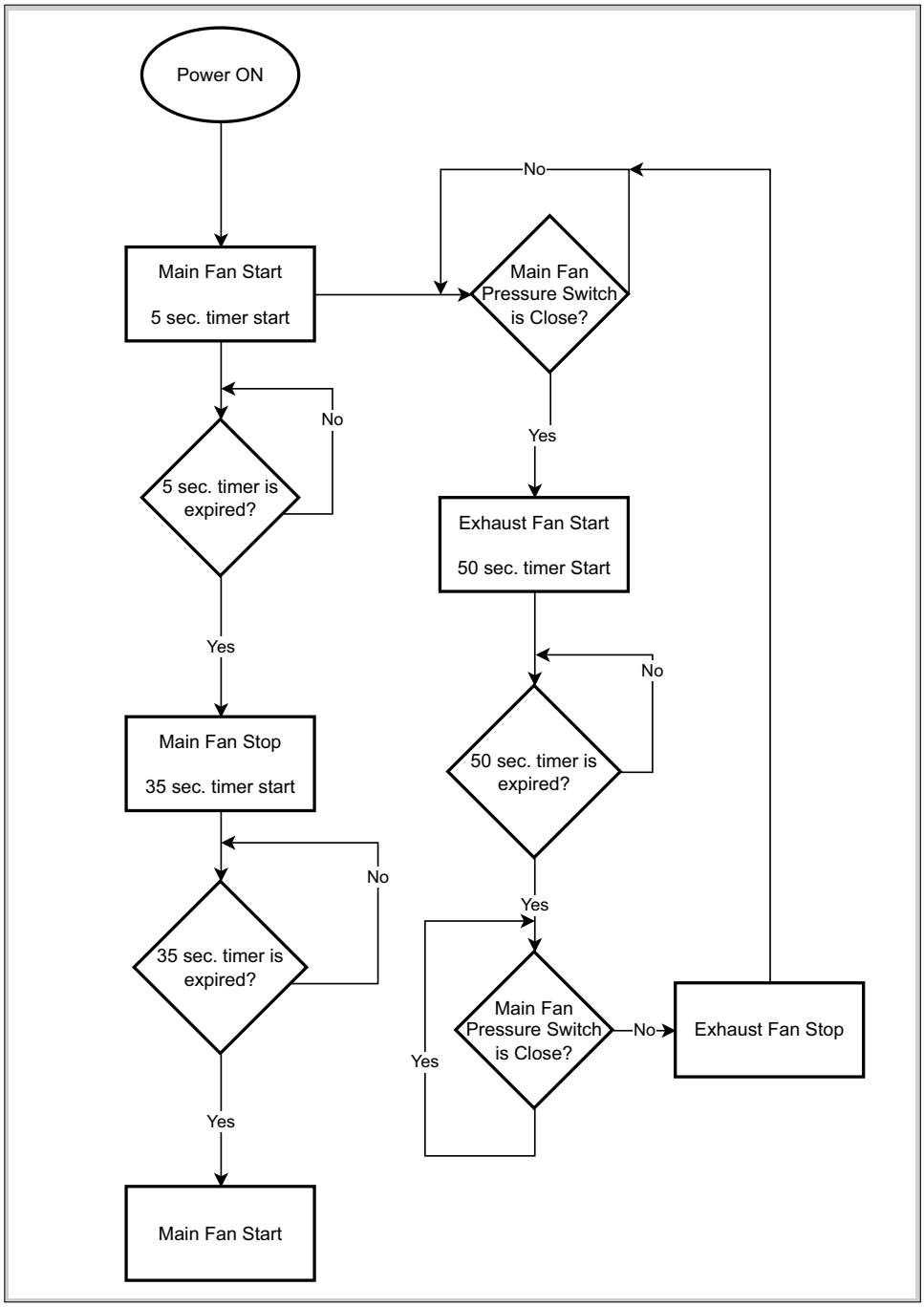
1. Open the housing cover of the burner control unit.
2. Undo the two Torx T10 screws using a Torx screwdriver and remove the complete plastic cover from the burner control unit.



12.2 Internal connection diagram



12.3 Function of external PCB



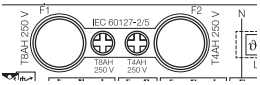
3. Press the RESET button to reset. The unit then reverts to the last operating mode selected.
   - Possible faults:

Display	Fault Type
F	Flame fault
A	Air fault
C	Temperature fault
E	Electronics fault

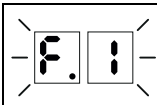
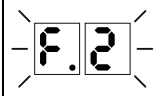
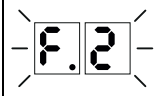
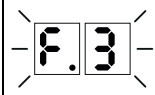
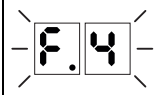
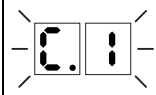
Display	Fault Type
U	Other possible faults
P	Other possible faults

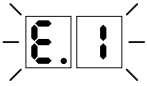
4. If the burner control unit does not respond even though all the possible faults have been rectified as described below, contact your supplier.

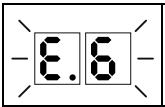
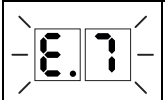
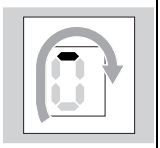
13 Troubleshooting

Overview	Problem	Cause	Remedy
	The 7-segment display has gone out despite the voltage supply being OK?	Fuse F2 is defective.	Check the fuse contacts. There is a spare fuse directly next to the fuse holder. Attention! Fit the correct fuse for 4 A. 
P.1	Error code P. and 1 flash alternately and the light is red?	1. Lumberg connector X16 on ACU Board faulty.	• Check connector X16 on ACU Board. • Replace cable or connector.
P.2	Error code P. and 2 flash alternately and the light is red?	During three consecutive restarts, error P1 remained.	• Check connector X16 on ACU Board. • Replace cable or connector.
A.1	Error code A. and 1 flash alternately?	1. The air pressure switch disengages during operation.	• Check the operation of the Air pressure switch, see chapter **11 Maintenance** • Dirt inside the pressure switch tubes, fan blades,intake side grille, or clogged flue gas outlet. See chapter **11 Maintenance**
		2. Faulty motor (on main or flue gas fan).	• Return the faulty motor to the supplier.
A.2	Error code A. and 2 flash alternately?	Pressure switch does not switch off during the “no flow” state check on burner start-up.	• Check that the air pressure switch is functional. See chapter **10 Cleaning**.
A.2	Error code A. and 2 flash alternately and the light is red?	The fault “Pressure switch” could not be rectified. The programmed number of start-up attempts having failed, the ACU initiates a fault lock-out.	• Reset using the RESET button on the ACU or via the remote reset. • Check that the pressure switch is functional, see chapter **11 Maintenance**.
A.3	Error code A. and 3 flash alternately?	1. The air pressure switch has not switched on 15 s after the heater has been switched on.	• Air pressure switch, fan or grille are dirty. See chapter **11 Maintenance**

		2. Motor defective.	• Remove the device and return it to the supplier.
		3. Motor is turning in the wrong direction (see chapter **8.5 Checking the direction of rotation of the main fan**)	• Bridges in the motor circuit are not connected correctly. Please disconnect the appliance from the mains and check the circuit on the main fan. • U1 and W2 must be bridged as well as V1 and U2.
	Error code 8. and 3 flash alternately and the light is red?	The fault could not be rectified. The programmed number of start-up attempts having failed, the ACU initiates a fault lock-out.	• Reset using the RESET button on the ACU or via the remote reset. • Check that the air pressure switch is functional. Clean the APS or grille if soiled.
	Error code F. and 1 flash alternately?	1. On burner start-up, the burner control unit has not detected a flame during the safety time. Several automatic start-up attempts will be completed if a restart has been programmed.	
		2. Inadequate inlet pressure available.	• Check the inlet pressure.
		3. Ignition is not working properly.	• Check the connection of the ignition cables for damage or moisture. • The spark plug must be fitted correctly. • Check the ignition spark acoustically during the 3-second ignition time from the burner fan side. • Clean the spark electrode. • Check the ignition transformer and replace it if necessary
		4. Poor flame signal due to dirty/ badly connected flame rod.	• Check the flame rod and clean it with fine abrasive paper if necessary. • Check the cable connection, cable and terminal boot for damage or moisture. The terminal boot must be fitted correctly. • Check the yellow and green burner ground cable for corrosion and to ensure it is firmly connected. Check also grounding inside power socket. • The flame rod is defective and must be replaced.
		5. Air in the gas pipe.	• Vent the gas pipe.
		6. Valves do not open.	• Disconnect the valve plug on the gas combination control and measure the voltage at the valve plug during the safety time. • If the voltage is not adequate, first check fuse F2 (4 A). If the display and the LEDs are not lit, it is defective. • If the voltage is not adequate, replace the gas combination control and return it to the supplier

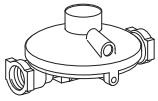
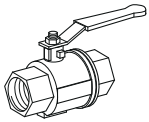
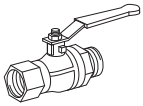
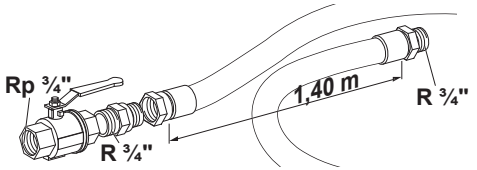
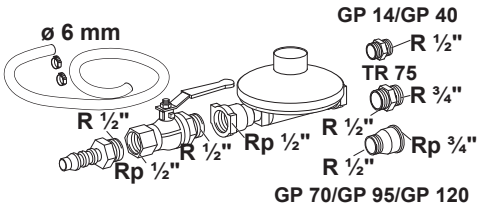
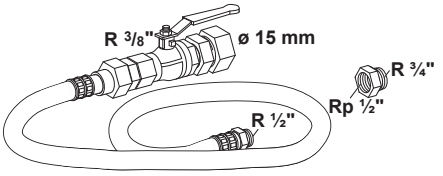
	Error code F. and 1 flash alternately and the light is red?	1. The fault could not be rectified. All start-up attempts have been used and the burner control unit goes into lock-out.	• Reset is only possible by pressing the RESET button on the burner control unit or using the remote reset if there is one. • Rectify the cause of the fault as described for warning F.1.
	Error code F. and 2 flash alternately?	1. The flame has gone out during operation. If a restart has been programmed, an automatic restart will be completed.	
		2. Poor flame signal due to incorrect burner adjustment.	• Readjust the heater, see chapter **9 Adjusting the heater**.
		3. Poor flame signal due to dirty or badly connected flame rod.	• Check the flame rod and clean it with fine abrasive paper if necessary. • Check the cable connection, cable and terminal boot for damage or moisture. The terminal boot must be fitted correctly. • Check the yellow and green burner ground cable for corrosion and to ensure it is firmly connected. Check also grounding inside power socket. • The flame rod is defective and must be replaced.
	Error code F. and 2 flash alternately and the light is red?	1. The fault could not be rectified. All start-up attempts have been used and the burner control unit goes into lock-out.	• Reset is only possible by pressing the RESET button on the burner control unit or using the remote reset if there is one. • Rectify the cause of the fault as described for warning F.2.
	Error code F. and 3 flash alternately and the light is red?	1. The burner control unit detects a flame signal during start-up or in fault status.	
		2. Incorrect flame signal due to leakage/creepage current.	• Check wiring, see chapter **7 Wiring**. • Check the flame rod.
		3. Incorrect flame signal through conductive ceramic insulation, e.g. surge via PE wire, possible.	• Remedy incorrect flame signal. Replace the flame rod and, if necessary, also the complete burner control unit and housing. • Reset is only possible by pressing the RESET button on the burner control unit or using the remote reset if there is one.
	Error code F. and 4 flash alternately and the light is red?	1. The flame has not gone out within 5 s of the burner being switched off. A gas valve does not close correctly.	• Turn off the gas supply to the appliance. Check the burner and gas valves for correct operation, see chapter **11.3 Checking the safety functions and burner operation**
	Error code C. and 1 flash alternately and the light is red after 5 minutes?	1. Monitor temperature of the safety temperature sensor has exceeded >85°C.	• Leave heater to cool down for longer.
		2. The main fan does not switch on.	• Check the main fan.
		3. Wiring fault.	• Check the wiring to actuate the main fan, see chapter **7 Wiring**.
		4. Safety temperature sensor is incorrectly aligned.	• Check the position of the safety temperature sensor.

		5. Ambient temperature exceeded.	• The temperature is > 40 °C. Allow the room to cool.
		6. The safety temperature sensor is measuring an incorrect temperature.	• Replace the safety temperature sensor.
		7. The heater is badly soiled.	• The heater must be cleaned urgently.
		8. Installation position.	• The heater is too close to other heaters, see chapter **5 Installation**.
		9. Incorrect CO_2 value	• The heater is not set correctly and must be adjusted, see chapter **9 Adjusting the heater**.
		10. In the event of a power failure during operation, the heater will be switched off without a cooling phase. If the power failure lasts less than 5 minutes, the heat exchanger will heat the device excessively.	• Once the voltage supply has been restored, Controlled air flow mode is activated. The heater is cooled for a maximum of 1 minute.
	Error code C.2 and 2 flash alternately and the light is red?	1. Limiter temperature of the safety temperature sensor has exceeded >95°C.	
		2. The cause of the fault as described above for fault C.1 could not be rectified.	• Check the heater for damage, see chapter **11.1 Visual inspection**.
	Error code C. and 9 flash alternately and the light is red?	1. C.2 could not be rectified.	
		1. Temperature sensor incorrectly connected.	• Check contact at connector X22.
		2. Temperature sensor is below - 30 °C.	
		3. Temperature sensor defective.	• Replace temperature sensor.
	Error code E. and 1 flash alternately?	The remote reset input is defective.	• If you use the remote reset input, contact your supplier.
	Error code E. and 2 flash alternately and the light is red?	An adjustable parameter and the CRC check are not the same. The parameters are implausible.	• Order a new BCC. Contact your supplier. • Reset is only possible by pressing the RESET button on the burner control unit or using the remote reset if there is one.
	Error code E. and 3 flash alternately and the light is red?	A fixed parameter and the CRC check are not the same. The parameters are implausible.	• Order a new BCC. Contact your supplier. • Reset is only possible by pressing the RESET button on the burner control unit or using the remote reset if there is one.
	Error code E. and 4 flash alternately and the light is red?	Limits for fixed parameters not observed.	• Order a new BCC. Contact your supplier.
	Error code E. and 5 flash alternately and the light is red?	The BCC is not connected.	• Connect the BCC to the printed circuit board.

	Error code E. and 6 flash alternately and the light is red?	An incorrect BCC is connected. The BCC must be compatible with the NX80.	• Remove the BCC and connect the correct BCC to the printed circuit board, see chapter **7.9 Burner Chip Card (BCC)**.
	Error code E. and 7 flash alternately?	Fuse defective.	• Check external fuse F1 (8 A).
	Error code E. and 8 flash alternately?	Programming mode is active.	• As soon as Programming mode has been deactivated, the display will go out.
	Error code E. and 9 flash alternately?	1. Internal electronics fault.	• Remove the BCC and return it to the supplier.
		2. Fuse defective.	• Check external fuse F1 (8 A).
	Error code U and 1 flash alternately and the light is red?	Voltage supply is below the limit (programmable limit, e.g. < 160 V).	• Ensure that adequate mains voltage is supplied.
	Error code U and 2 flash alternately and the light is red?	Voltage supply is above the limit (programmable, e.g. > 260 V).	• Ensure that adequate mains voltage is supplied.
	Error code U and 3 flash alternately and the light is red?	All start-up attempts in the programmed voltage range (e.g. 160 – 180 V) were unsuccessful. The last start-up attempt is not made to prevent a lock-out.	• Ensure that adequate mains voltage is supplied.
	Error code U and 5 flash alternately and the light is red?	While a fault was pending, the unit has been successfully reset more than 5 times within 15 minutes using the remote reset input.	• Reset is only possible by pressing the RESET button on the burner control unit or using the remote reset if there is one.
	Error code U and 6 flash alternately and the light is red?	The unit has been unsuccessfully reset more than 10 times within 15 minutes using the remote reset input.	• Reset is only possible by pressing the RESET button on the burner control unit or using the remote reset if there is one.
	A circulating dash is displayed rather than an error code? – After switching on the voltage, a circulating dash is displayed.	1. Switch on delay time running.	
		2. Cycle lock active. The time (cycle lock) between two starts is too short.	• The display will go out automatically as soon as the time between two starts is long enough. The burner control unit will ensure a pause between start-up attempts on the basis of its parameterization. This warning is displayed during this time.
		3. The pressure switch signal does not drop when the main fan is switched off.	• A burner restart is not possible. • After 25 s, the display will change to error code 8. 9.

14 Ordering Information

14.1 Accessories

	Description	Item No.
	**Room thermostat** Use a room thermostat with a hysteresis of ±1 °C, 230 V, Type TH215.	N50260145
	**Pressure reducer** Pressure reducer for LPG. RECA 1.5 bar to 50 mbar, 2 x $^1/_2$" internal thread connection, 10 kg/h	N52600023
	**Manual ball valve LPG** 2 x $^1/_2$" internal thread connection	N52600019
	**Manual ball valve LPG** $^1/_2$" internal and external thread connection	N52600027
	**Connection kit for natural gas** R $^3/_4$" threaded connection, total length = 1.50 m	N70000013
	**Connection kit for propane** Pressure reducer, manual valve, hose (length = 2 m), 2 hose clamps, R $^1/_2$" double nipple for GP 14/GP 40, R $^1/_2$"/R $^3/_4$" double nipple for TR 75, R $^1/_2$" – Rp $^3/_4$" reducing fitting for GP 70 – GP 120, to connect the gas combination control CG to the gas supply	N70000014
	**Connection kit** Manual valve and hose (DVGW certified, length = 2 m) to connect the gas combination control CG to the gas supply	N52990209
	Rp $^1/_2$" – R $^3/_4$" connector	N70000013
BCSoft There are two PC opto-adapters (PCO) available for the connection to the PC and BCSoft:		
Wireless connection using Bluetooth technology: Bluetooth adapter PCO 300 including BCSoft CD-ROM		N70000066
Cable connection via USB interface: Opto-adapter PCO 200 including BCSoft CD-ROM		N70000065
See PCO 200 and PCO 300 operating instructions at www.docuthek.com. The current BCSoft software can be downloaded from our Internet site at www.docuthek.com. To do so, you need to register in the DOCUTHEK.		

14.1.1 Flue gas / air system

C12 Horizontal balanced flue/inlet air system with fan downstream of heat exchanger

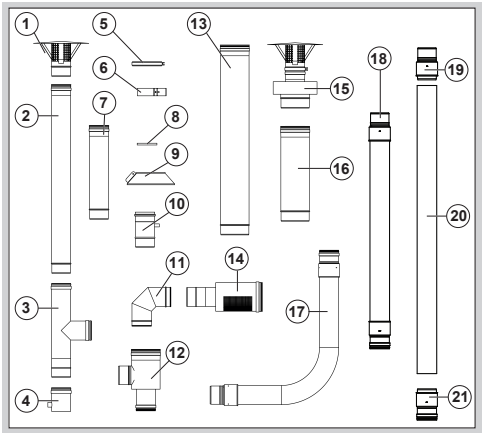
C32 Vertical balanced flue/inlet air system with fan downstream of heat exchanger

Internal/External diameter: 100/150 mm, maximum length: 6 m.

CAUTION!
To avoid damage during operation, please observe the following:

- ▶ The NX80 is only CE tested and approved with flue gas / air system described below.
- ▶ Do not exceed the maximum length of the flue gas / air system. Otherwise the CE approval will be voided and the function of the device may be impaired. The supplier/manufacturer cannot accept liability for damage resulting thereof.
- ▶ Check the applicable building regulations, standards and the relevant accident prevention regulations before installation. The same applies to the erection and maintenance of a scaffold.

- The design of the flue gas / air system depends on the premises and the roof construction.
- Before installation, the site and any wall mounting which may be required for a flue gas / air system length in excess of 2 m must be defined.
- The elements are sealed and connected using clamp strips. Each flue gas / air system element is supplied with a clamp strip. A seal is provided for each clamp strip which is either integrated or supplied separately.
- The clamp strips are only designed for sealing and connection purposes, not for absorbing axial forces.

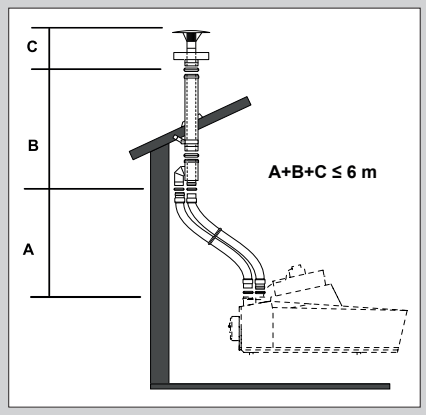


	Description	Diameter in mm	Item No.
1	flue gas / air system rain cap	100	NX0000009
2	Pipe 1 m	100	NX0000004
3	T-piece	100	NX0000006
4	Condensate trap horizontal	100	NX0000011
5	Seal clamp	150	NX0000003
6	Wall bracket	100	NX0000010
7	INOX Linear Element L=500	100	NX0000005
8	Seal ring	100	NX0000008
9	Roof pipe rain cover	150	NX0000014
10	Condensate trap vertical	100	NX0000021
11	Elbow 90 deg	100	NX0000024
12	Diverter	150/100	NX0000015
13	Pipe 1m	150/100	NX0000013
14	Air inlet	150/100	NX0000012
15	flue gas / air system head	150/100	NX0000019
16	Pipe 0,5m	150/100	NX0000022
17	Air/Flue gas Flex tube 1,5 m	100	NX0000023
18	Air/Flue gas Flex tube 1 m	100	NX0000027
19	Air hose adapter - female		NX0000017
20	Air supply hose	100	NX0000018
21	Air hose adapter - male		NX0000016

- Any roof bushing depends on the roof construction and must be ordered separately.

14.1.2 Application examples

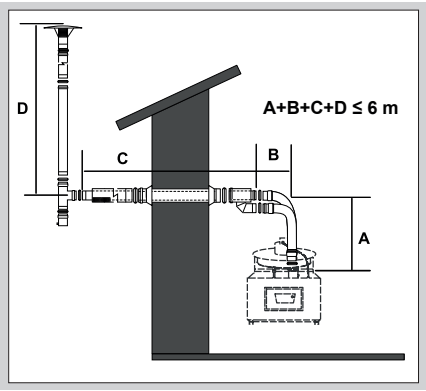
The pipe length must adjusted to match the wall height.



Standard flue gas / air system kit NX0000020: roof outlet, clamp for roof, extension pipe and condensate outlet, horizontal fresh air intake pipe with flexible connection and end with bird net. Coaxial roof drainage for horizontal roof.

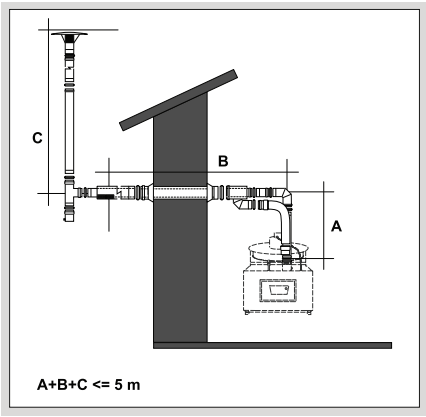
- The extension pipe can be shorter.
- Instead of flexible pipes, straight pipes can be used, in which case the pipe length can be extended by an ~ 1 m.
- Standard flue gas / air system set: 2 flexible pipes, additional wall and fixing clamps may be required.

This pattern shows a coaxial roof outlet for a pitched roof.
All the parts are identical to the horizontal roof outlet, except for the blanket over the roof baffle, which must be specially manufactured for the particular roof pitch.
In this example, the flue gas / air system is not routed through the roof, but laterally along the outer wall.



Note: You can extend only A, B or D size, the C size always keep the smallest length.

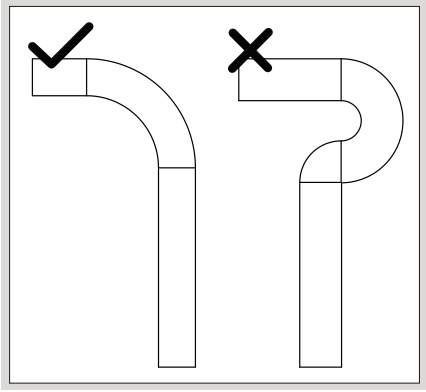
Standard flue gas / air system set NX0000025: with 2 flexible pipes, a jointing bend, a wall bend, a pipe end with a bird screen. The standard set includes a clamp for fixing to the roof. Additional wall and fixing clamps may be required.



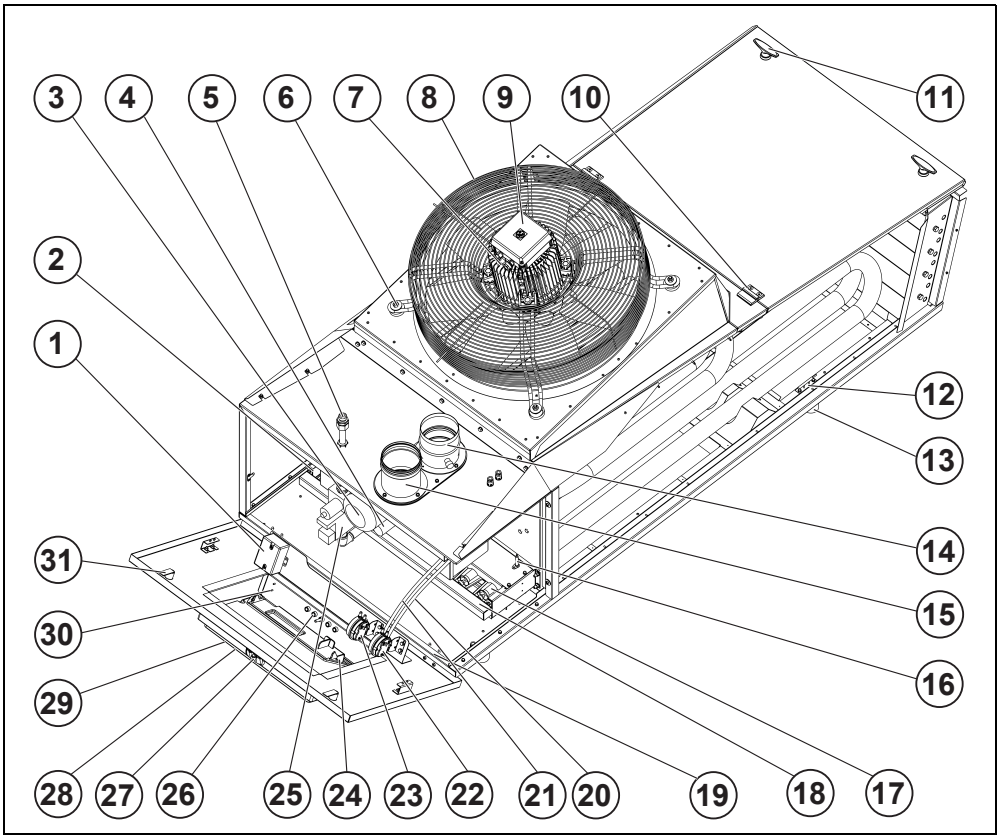
Standard flue gas / air system set NX0000001: with 1 flexible pipe, straight pipe and 90° elbow pipe, a jointing bend, a wall bend, a pipe end with a bird screen. The standard set includes a clamp for fixing to the roof. Additional wall and fixing clamps may be required.

14.1.3 Flexible metal hose

Please attach the flexible metal hose straight without a siphon. Otherwise water will collect in this area and cause damage.



14.2 Spare Parts

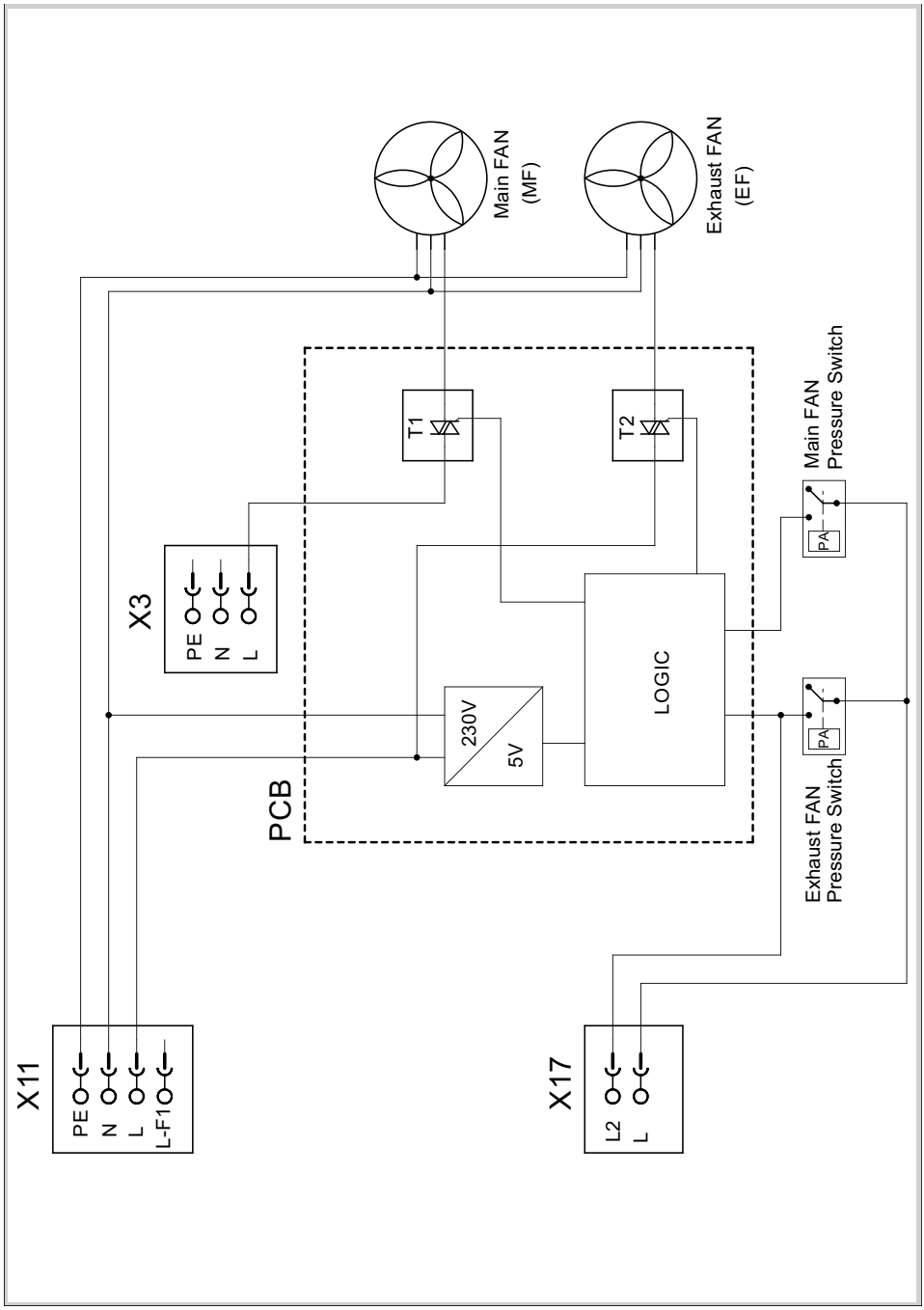


	Description	Item No.
1	NX80 Ignition unit repl. set	NX0000100
2	NX80 Ignition electrode repl. set	NX0000101
3	NX80 exhaust fan	NX0000113
4	NX80 exhaust fan capacitor	NX0000115
5	NX80 Inlet gas manifold	NX0000117
6	NX80 fixation material	NX0000112
7	NX80 main fan	NX0000110
8	NX80 main fan grill	NX0000111
9	NX80 main fan capacitor	NX0000114
10	NX80 front hatch hinge	NX0000120
11	NX80 front hatch closure	NX0000121
12	STB sensor GP14-120ACU	N70300095
13	NX80 vibration damper set	NX0000122
14	NX80 exhaust connection set	NX0000118
15	NX80 air connection set	NX0000119
16	NX80 Ionization electrode repl. set	NX0000102

	Description	Item No.
17	Burner NX80 without nozzles	NX0000123
18	NG-H nozzle rail for NX80 LPG nozzle rail for NX80 NG-L nozzle rail for NX80	NX0000124 NX0000125 NX0000126
19	NX80 back door hinge set	NX0000106
20	Silicone hose Black per 1m	NX0000105
21	Silicone hose 8/5 mm transparent	N52500050
22	NX80 exhaust fan pressure switch NG-H NX80 exhaust fan pressure switch LPG	NX0000104 NX0000128
23	NX80 main fan pressure switch	NX0000103
24	BCC CHIP for NX80	NX0000129
25	Gas valve VR4605 for NX80	NX0000127
26	Cable gands set of 7	NX0000116
27	ACU upper closure TR75/RGA100ACU	N70400016
28	Complete housing ACU121	N70000091
29	ACU complete for NX80	NX0000108
30	ACU hinge set	NX0000109
31	NX80 back door locks	NX0000107

15 Appendix

15.1 Wiring diagram for internal fan monitoring



16 Goods return form

Name of the Operator:			
P.O. Box/Street:			
Postcode and Town/City:			
Tel.:			
E-Mail:			
Returned by (Mr./Ms.):			
Date:			
Number of returns:			
Heater serial number:			
Power supply [V/Hz]:			
Inlet pressure p_U [bar]:			
Reasons for return:			
Description of fault:			
Desired action:	Credit Note:	Replacement:	Repair:
Remarks:			
Date and signature:			

Note: Please send returns back to your supplier.

ermaf

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49504 Lotte (Büren), Germany

For more information
www.ermaf.nl

Phone: +49 541 982490

Installation Instructions

EN

Einbauanleitung

DE

Montážní návod

CZ

Telepítési útmutató

HU

Instrukcja montażu

PL

Instrucțiuni de instalare

RO

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