

PUROWIN







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IMPORTANT INFORMATION

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1. General information

1.1 Relevant documents

- Operating manual InfoWIN Touch, Operating manual PuroWIN
- Operating and installation instructions for system components

1.2 Safety instructions and other symbols in this documentation

1.2.1 Structure of safety instructions



KEYWORD Type of risk

Here, possible consequences are listed that may result from failure to observe the safety instructions.
▶ Steps to prevent the risk are listed.

1.2.2 Symbols, type of risk or meaning

Symbol	Type of risk or meaning	Symbol	Type of risk or meaning
	Injury		Risk of burns
	Electrocution		Risk of crushing
	Risk of explosion		Risk of fire
	Risk of suffocation		Hand injuries
	No smoking, flames or other sources of ig- nition are permitted		Material losses (appliance damage, consequential losses and environmental pollution)
	No unauthorised access		Appliance disposal This symbol means that the parts indica- ted must not be disposed of with domestic waste.
	Information or tips	•	This symbol indicates that you have to do something. The action you need to take is described step by step.
	Follow instructions		Pull out the power plug

Important information

Symbol	Type of risk or meaning	Symbol	Type of risk or meaning
	Press the ON / OFF button	X	Ensure sufficient ventilation before ente- ring
	Only enter the store under the supervision		Protect from damp
	Access only with a personal CO detector		

1.2.3 Keywords

KEYWORD	Meaning			
DANGER	Ignoring the warnings identified by this symbol can lead to serious injuries or death .			
WARNING	Ignoring the warnings identified by this symbol can lead to injury .			
CAUTION Ignoring the warnings identified by this symbol can lead to malfunction of or of the boiler or heating system .				
Information or tips	The blocks of text identified by this symbol provide information and tips for operation. ▶ Read these texts carefully.			

1.3 Units of measurement

Note.

All measurements are given in mm unless stated otherwise.

2. Safety

The boiler together with its accessories complies with the latest state of the art as well as the relevant safety regulations, and is operated with electric current (230/400 V AC). Improper installation or repair can pose the danger of life-threatening electric shock. Installation may be performed only by appropriately qualified technicians.

2.1 General safety information



WARNING Risk of crushing from rotating auger

▶ If you have to touch these parts, always de-energise the boiler.



WARNING Risk of burns

▶ Before touching these surfaces, you must switch off the boiler and let it cool.



DANGER Injury

► Also read and observe the safety information in the operating manual.

3. Flue

A properly dimensioned flue is required for optimum functioning of the combustion system. The dimensions must be calculated in accordance with EN 13384-1. See the technical data section for the values required for this calculation.

Please note that in the lower performance range, flue gas temperature may be below 90 °C. Therefore, thermally insulated flues meeting thermal transmittance coefficient Group I requirements according to DIN 18160 T1 or otherappropriate, officially approved flue gas systems may be connected to the hearths.

The minimum classification for the flue gas system is as follows:

Temperature class:	T400	 nominal operating temperature 400 °C
Soot fire resistance class:	G	= flue gas system with soot fire resistance
Corrosion resistance class:	2	= suitable for unprocessed wood fuels

We would recommend fitting an energy-saving intake regulator for problem-free operation. This will largely prevent moisture in the flue, and losses resulting from downtime will be reduced (draught interruptions). If you have a feed pressure (flue draught) of more than 0.20 mbar, the energy-saving intake regulator must be fitted.

We would recommend fitting the draught limiter outside the flue, around 1/2 m below where the flue gas pipe enters the flue.



CAUTION Material losses

The overhaul of existing systems frequently involves over-sized flue cross-sections or flues not designed for low-temperature operation. We recommend an evaluation by the local building inspector before installing the boiler system. In this way, appropriate modifications can be made to the flue before system installation.

3.1 Guidance values for dimensioning the flue gas system

All the specified values are guidelines only and should not take the place of an actual flue calculation!

PuroWIN pellet boiler	Unit	PWPE 60	PWPE 75		PWP	E 90	PWPE 100		
Minimum height	m	6.5	5.5	5	6.5	5.5	8	6	
Required diameter	mm	180	180	200	180	200	180	200	

The specifications have been calculated for a boiler that is subject to average levels of use and runs on pellets. Non-in-sulated (brickwalled) flues are not suitable

3.2 Technical data for calculating the flue gas system acc. to EN 13384-1

	Formula symbol	Unit	PWPE 60		PWPE 75		PWPE 90		PWPE 100	
PuroWIN pellet boiler			Partial load	Nominal load	Partial load	Nominal load	Partial load	Nominal load	Partial load	Nominal load
Nominal thermal output	Q _N	kW	18	60	22.5	75	27	90	30	100
Nominal heat load (firing thermal output)	Q _B	kW	19.2	63.4	23.9	79.5	28.7	95.9	31.9	106.9
Volume concentration of CO ₂	σ (CO ₂)	%	13.7	15	13.7	15	13.7	15	13.7	15
Flue gas mass flow rate at nominal output	m	kg/s	0.0105	0.0319	0.0131	0.0401	0.0157	0.0483	0.0174	0.0539
Flue gas temperature at nominal output ¹	Τ _w	°C	80	140	87	146	89	154	90	158
Required feed pressure	P _w	Pa	3	10	4	6	4	6	4	6
Flue gas connection diameter	Ø	mm	130	130	180	180	180	180	180	180

¹ Values in practical operation (average between two cleaning intervals)

4. Boiler room/installation room

Important information for the design of the boiler house, fuel store.



DANGER Injury

The construction and layout of the boiler house, fuel store and chimney must comply with the fire safety requirements of Approved Document B for high risk compartments.

The configuration of the entire system must comply with the requirements of regional legislation, local planning, applicable regulations, standards and guidelines.

- The minimum clearances for connections, cleaning and full service must be complied with see Section 13.1 Minimum clearances for fire protection, cleaning and maintenance on page 14.
- Sufficient ventilation of the set-up area must be provided. See Section 12. Combustion air on page 13.
- The boiler may only be installed in a dry location.
- The boiler may not be installed in rooms that are dusty or humid.
- Permissible limit values:Humidity: max. 85 % at room temperature of 25 °C (non-condensing)
Room temperature: +2 to +40 °C
- Do not allow pets or other animals to enter the boiler room or installation room. Install appropriate barriers across openings.
- In the event of floodwater, switch off the boiler in good time and disconnect it from the mains before water enters the boiling room or installation room. You must remember to replace all components that come into contact with water before you put the boiler back into operation.
- Sufficient lighting must be provided for service and full service.

5. Sound emission

The usual measures that are required for all boiler rooms are sufficient to limit the level of airborne noise emitted:

- Heavy doors such as the fire protection doors that are stipulated anyway
- Air supply openings to be kept to an absolute minimum
- Footfall sound insulation to be fitted in the floors of the rooms above

Structure-borne noise:

Structure-borne noise emissions are the primary cause of noise problems on boilers, i.e. the acoustic energy that is transferred to the building. The main sources of structure-borne noise and the insulation measures required are listed below:

- Squeaking and creaking noises emitted by the fuel auger conveyors (depending on the type of fuel):

Place mineral wool around the delivery chute in the masonry feed-through as a soundproofing measure to prevent the sound from being transferred to the wall. Similarly, the storage room should be constructed on floating floor screed so that the conveyor system is acoustically isolated from the building.

- To avoid noises from the chimney or the flue gas pipe caused by the induced draught fan, use a soft non-flammable soundproofing material (e.g. ceramic cord) when installing the flue gas pipe in the chimney.

6. Technical data and Product fiche

see Operating manual PuroWIN

7. Fuel storage room



DANGER Injury

The configuration of the entire system must comply with the requirements of regional legislation, local planning, applicable regulations, standards and guidelines.

- Pay proper attention to the statics, i.e. from the perspective of the weight of the stored fuel and the weight of the system.
- Protect the fuel storage room from humidity and moisture.
- Make sure the store is easy to access and fill.

8. Commissioning and operation



DANGER Injury

Unauthorised start-up!

The boiler/system must be started up for the first time by Windhager Customer Service or the customer service partner, who will familiarise the customer with system operation and how to clean the boiler by referring to the operating manual. The flue gas will be measured to verify that the combustion system is working correctly.

The following preconditions must be met before scheduling the boiler commissioning:

- ► Boiler installed correctly.
- ► System fully wired up electrically.
- ► System flushed, filled and vented heat load must be available (e.g. functioning heating system connected).
- ► Sufficient quantity of fuel available.
- ► The customer must be present during commissioning.

The initial start-up cannot be carried out if any of these points are not complete. The customer will be charged for any unnecessary costs arising as a result of incorrect start-up.

Commissioning by Windhager Customer Service or an approved technician with a valid WIN-5 certificate are part of the warranty requirements.

Register My Boiler

Following the commissioning the customer must register their Windhager boiler(s)online via the windhager.co.uk web site to validate their boiler warranty.

9. Disposal/recycling

Disposing of the packaging

The packaging material (wooden crate, cardboard boxes, inserts, plastic films and plastic bags, etc.) must be disposed of correctly in line with the local legal provisions and regulations.

Disposing of components or the boiler

To dispose of defective components or the heating system (e.g. boiler or control system) after the product life has expired, please observe the following information:

- ▶ Dispose of the items correctly, i.e. separate the parts to be disposed of into material groups.
- Do not simply dispose of electrical or electronic waste with the general waste under any circumstances; instead, use the public collection points provided for this purpose.
- ► As a matter of principle, dispose of items in a way that is as sustainable as possible and that is in line with the current environmental protection, reprocessing and disposal technology.

FOR THE INSTALLER

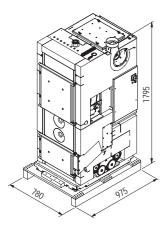
10. Scope of supply, packaging

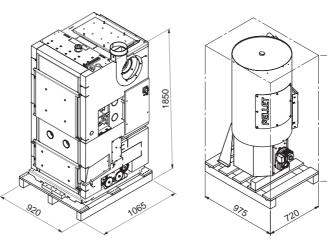


DANGER Risk of suffocation from plastic films.

Plastic films, bags and so on can become dangerous 'toys' in a child's hands. Therefore, never leave packaging material unattended or allow children to get hold of it.

When delivered, the boiler and integral fuel hopper (for pneumatic feed) are on a wooden pallet covered with a plastic sack. The cladding and assembly parts are delivered in separate cardboard boxes.





Boiler PWPE 60 Fig. 2

Boiler PWPE 75 – 100

Integral fuel hopper with wooden pallet

I630

11. System

11.1 Area of use

For heating buildings acc. to EN 12831.

The boilers are designed and approved as heat generators for hot water heating systems with permissible flow temperatures of up to 90 °C. They are to be installed in sealed systems only. The resulting flow temperature depends on the relevant operating status and the line losses to the system.

The maximum flow temperature is factory-set at 75 °C.

11.2 Standards

The following European Standard should be followed: EN 12828, according to this standard the following should be fitted:

- a) A closed expansion tank.
- b) A reliably functioning safety valve (with max. 3 bar reaction pressure) installed at the highest point of the boiler or at a non-closable line.
- c) A thermometer, a pressure gauge.
- d) A low-water cut-off: A low-water cut-off is not required for systems providing up to 300 kW nominal thermal output, if it can be ensured that a lack of water in the system will not result in excess heating. If the boiler is above the radiators, then a low-water cut-off must be installed.
- e) An automatic device for dissipating heat which will prevent the maximum water temperature in the boiler of 110 °C from being exceeded. The built-in thermal safety device (heat exchanger) should always be used with the thermal discharge safeguard (accessory FK-060).

11.3 Heating circuits

Several heating circuits:

In-line regulating valves must be installed to permit better regulation of the system. In a building without insulation (new building, not yet plastered) there is often a considerable difference between the calculated heat demand and what is actually required.

Motorised mixing valve:

A motorised mixing valve is **always required** for each heating circuit. A feed control thermostat (FK-001) must be installed for underfloor circuits.

Boiler start-up relief:

A boiler start-up relief must be installed and connected in all cases so that the circulation pump(s) turn/s off when the boiler temperature is below 55 °C. This prevents condensation forming in the boiler and extends its service life. A boiler start-up relief of this kind is included in the MES control system.

11.4 Circulation pump

Since 2013, regulations in Europe require that new circulation pumps satisfy a minimum level of energy efficiency. The Energy Efficiency Index (EEI) must be observed.

11.5 Return temperature

The PuroWIN requires a return temperature of 55 °C and this must be ensured by means of a return rising group (available as an accessory).

In order to achieve good temperature stratification in the heat accumulator or buffer tank, we recommend that the boiler circuit be regulated. If return rising group is used in connection with the stratified charge function (MES INFINITY buffer load/switching function module), regulation of the boiler circuit is no longer necessary.

11.6 Heat accumulator (buffer)

Having a correctly sized heat accumulator (buffer tank) is essential for correct operation.

Recommended minimum sizes for buffer / heat accumulator for PuroWIN:

PuroWIN	Buffer / heat accumulator
PWPE 60	≥ 1500 l
PWPE 75	≥ 2500 l
PWPE 90, PWPE 100	≥ 3000 l

This recommendation does not replace the appropriate configuration of the heat accumulator / buffer size in relation to the conditions of the system (such as the coincidence factor, heating requirements of the building, or increased demand for hot water). Please observe the directives and supply conditions (such as BAFA 30 l/kW (BAFA = the Federal Office for Economic Affairs and Export Control)) of the respective country at all times!

11.7 Operation by external control

This is only possible with the **special function external heating requirement function module INF FO5 W** (accessories); the control must fulfil the following demands:

- Minimum boiler temperature and start-up relief:
 The consumer pumps (heating circuit and domestic hot water pumps) may only be switched on at a boiler temperature of more than 60 °C if the burner is on, and will be switched off when the boiler temperature is less than 55 °C.
- Pump over run:
 A over run of at least 10 minutes will be observed for all consumer pumps and a minimum heat load must be ensured during the burnout phase.
- The system specific control settings must be set so that the boiler runs on average for at least 1.5 hours (shorter operating times cause more contamination of the boiler and greater wear and tear).

11.8 System water

Clean system wate is vital for the faultless operation and long service life of the system. It prevents corrosion damage in the boiler and in the heating system.



CAUTION Material losses

The chemical composition of the system water must conform with BS 7593:2006 or e.g. ÖNORM H 5195, VDI 2035, SWKI BT 102-01.

Soft water is required during initial filling and refilling after repairs. Feeding lime-rich fresh water should be kept to a minimum in order to limit scaling.

pH value between 8 and 9.5

The pH value in the heating system must be set to between 8 and 9.5.

- a) The chemical composition of the system water must meet the specifications of BS 7593:2006 Code of Practice for treatment of water in domestic hot water central heating systems. The condition of the system water must be checked every 2 years by a heating technician in order to avoid corrosion and sediment accumulation in the heating system.
- b) The pipe lines and heating appliances should be power flushed before the boiler is connected.
- c) To protect the boiler from contamination from the heating system, installation of a dirt trap (filter) is required in old or existing systems (mesh size 0.5 mm) with full service cocks installed in the return line or equivalent magnetic device.
- d) If oxygen diffusion or sludge build-up cannot be prevented in the existing system, the system must be decoupled by means of a heat exchanger.
- e) If antifreeze and anti-corrosion liquids are used they must be in concentrations recommended by the product manufacturer and details of the chemical treatment recorded in commissioning documentation.
- f) Failure to maintain correct system water quality may invalidate boiler warranty.

11.9 Water-side resistance (pressure loss)

11.9.1 PuroWIN PWPE 60

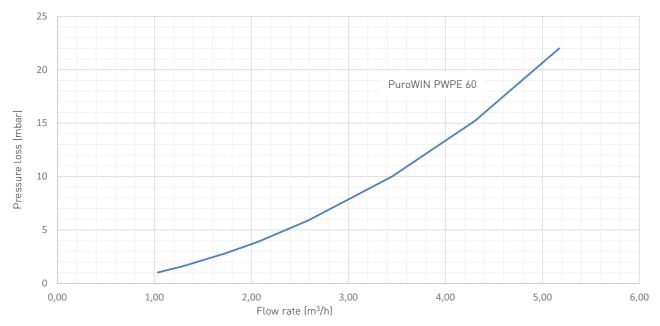


Diagram 1 Water-side resistance

11.9.2 PuroWIN PWPE 75-100

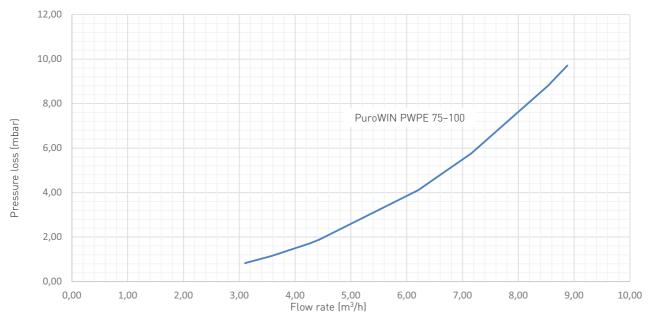


Diagram 2 Water-side resistance

12. Combustion air



DANGER Injury

The configuration of the entire system must comply with the requirements of regional legislation, applicable regulations, standards and guidelines.

The combustion air is drawn directly by the boiler from the installation room; therefore, the installation room has to be adequately ventilated. The combustion air should be directed to the vicinity of the boiler and must be free from pollutants (gases, vapours and dusts); otherwise, malfunctions and increased wear (e.g. corrosion) may occur.

The operational reliability of the system must not be impaired by other equipment or systems within the air network that extract surrounding air. Devices or systems of this kind should not be installed within the air network if at all possible. If they do have to be installed, suitable measures must be implemented accordingly. Possible options include:

- 1. Using safety devices to prevent the hearth from being used at the same time as the system that is responsible for extracting air.
- 2. Using a safety device to monitor flue gas evacuation.
- 3. Implementing system-specific safeguards to prevent dangerous negative pressure from occurring when the hearth is operated at the same time as the system that is responsible for extracting air.



CAUTION Material losses

Malfunctions or complaints occasioned by inadequate combustion air will not be covered by the warranty.

Combustion air supplied directly from the plant room

The combustion air is drawn directly by the boiler from the plant room, therefore the plant room has to be adequately ventilated. The combustion air should be fed to near the boiler.

Ventilation

All combustion appliances require adequate ventilation to operate correctly. If an appliance is present or installed at the same time, care must be taken to add purpose provided ventilation in accordance with Approved Document J of the Building Regulations or the appliance manufacturer's instructions, whichever is the greater.

13. Installation sequence

13.1 Minimum clearances for fire protection, cleaning and maintenance

The following minimum clearances from flammable materials and for connections, cleaning and maintenance must be complied with.

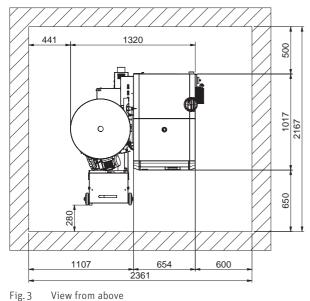


DANGER Injury

Follow the installation guidelines for boiler rooms! The configuration of the flue gas line must comply with technical fire protection requirements in accordance with the applicable regulations, standards and guide-lines.

PuroWIN PWPE 60

All measurements in mm. Minimum room height: 2100 mm



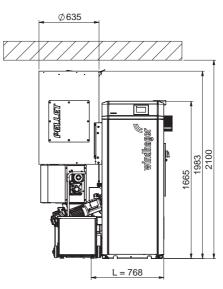


Fig. 4 Front view L.....Installation dimensions

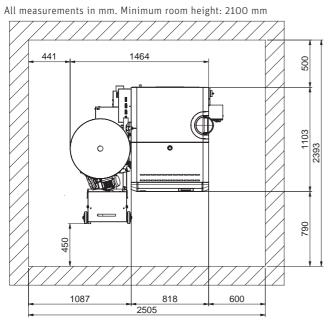


Fig. 5 View from above

PuroWIN PWPE 75-100

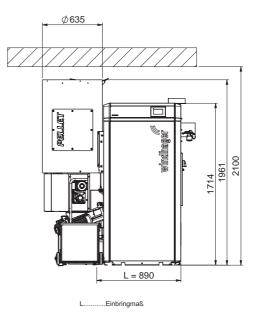


Fig. 6 Front view L..... Installation dimensions

13.2 Taking into the building and installing

It is best to transport the boiler to the place of installation by lift truck on a wooden pallet. If transporting via stairs or similar, the boiler should be secured appropriately. For installation dimensions and weights, see Section 10 and also the technical data.

The boiler can be installed directly on a fire-resistant surface and does not require a special foundation.

13.2.1 Removing the crate and base pallet, and transporting the boiler to the place of installation

The boiler can be removed from the transport pallet by:

- a) Using iron rods to roll it off by hand Fig. 8–Fig. 11.
- b) Sawing through the crate with a hand-held power saw Fig. 12–Fig. 13.
- c) Lifting it off by crane using the eye Fig. 14–Fig. 15.
- ▶ Remove wooden crate.



CAUTION Material losses

The bottom of the boiler is secured to the base pallet by 2 screws positioned on either side – Fig. 7. ► Remove the screws.



Note!

To make it easier to handle the boiler, a 5/4" pipe can be screwed into the front on both sides - Fig. 7.

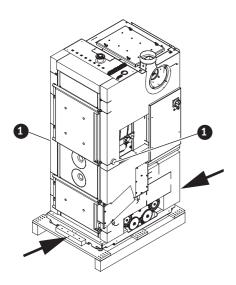


Fig. 7 Boiler secured to base pallet, 5/4" couplings for screwing in pipes

1......5/4" couplings

a) Using iron rods to roll it off by hand



CAUTION Material losses

Before removing the base pallet, screw in all 4 adjustable feet on the bottom of the boiler; otherwise, there is a risk of causing damage – Fig. 8.

► To make it easier to remove the pallet, slide some iron rods with a diameter of between 25 and 30 mm under the boiler (Fig. 9, Fig. 10). Then roll the boiler off the pallet and pull the pallet away – Fig. 11.

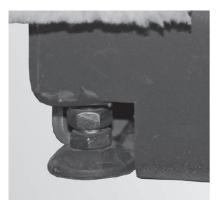


Fig. 8 Screwing in all 4 adjustable feet on the bottom of the boiler



Fig. 10 Sliding the boiler off the pallet



Fig. 9 Placing an iron rod under the boiler

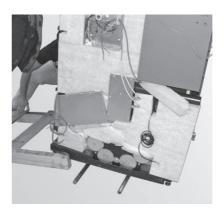


Fig. 11 Rolling the boiler off the pallet

b) Sawing through the crate with a hand-held power saw

- ▶ Remove the wooden crate surrounding the boiler, e.g. by sawing through it with a power saw.
- ▶ Tilt the boiler backwards on the base pallet. Then saw through the two front slats at the sides Fig. 12
- ▶ Tilt the boiler forwards and remove the remains of the base pallet Fig. 13.

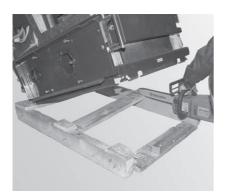


Fig. 12 Tilting the boiler backwards and sawing through and removing the front slats

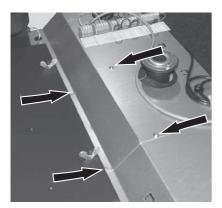


Fig. 13 Tilting the boiler forwards and removing the remains of the base pallet

c) Lifting it off by crane using the eye

Alternatively, the boiler can also be lifted off the pallet by using the crane eye on the top of the boiler – Fig. 14.

▶ Remove the 4 self-tapping screws and the cover concealing the crane eye – Fig. 15.



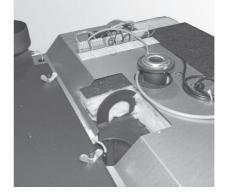


Fig. 14 Removing the 4 self-tapping screws and cover concealing the crane eye

Fig. 15 Crane eye

1.....Immersion sleeve

13.2.2 Installing the immersion sleeve and sensor of the thermal discharge safeguard

▶ The immersion sleeve and sensor of the thermal discharge safeguard (accessory: FK-060) should be sealed and installed before you complete the set-up process and install the cladding. This is because the locations are easier to access at this point.

However, you must not connect the thermal discharge safeguard until the rear panel **has been installed** – see Section 13.10 on page 45.

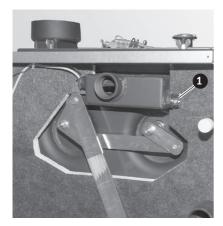


Fig. 16 Installing the immersion sleeve

13.2.3 Aligning the boiler horizontally

Move the boiler into position (remember to observe the minimum clearances; see section 13.1 on page 14) and use the adjustable feet to level the boiler.

13.3 Installing the ash removal device

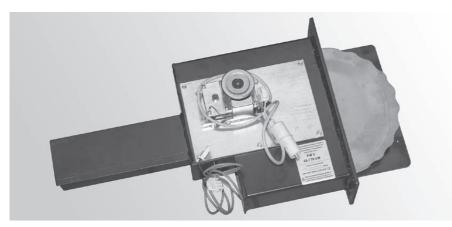
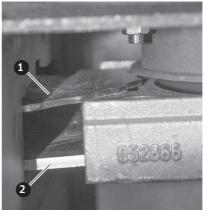


Fig. 17 Ash removal device (Illustration PuroWIN PWPE 60)

- Slide the ash removal device into the guides on the left-hand side of the boiler (Fig. 18), making sure that the guide for the ember bed slide is at the top and the one for the ash scraper is at the bottom of the boiler (open the ash chamber door) Fig. 19.
- ► Secure the ash removal device using 4 M8 flange nuts Fig. 20.
- ► Attach the bracket inside the boiler to the bottom of the ash scraper using 2 M8x8 hexagon screws Fig. 21.



Fig. 18 Sliding the ash removal device into the designated guides





1..... Ember bed slide at top 2..... Ash scraper at bottom



Fig. 20 Screwing on the ash removal device





Fig. 21 Attaching the bracket to the ash scraper

Μ8

13.4 Installing the retaining bracket for the integral fuel hopper

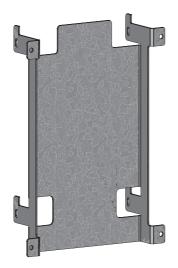


Fig. 22 Retaining bracket for the integral fuel hopper

Screw the retaining bracket onto the boiler with 4 M8 flange nuts – Fig. 23.

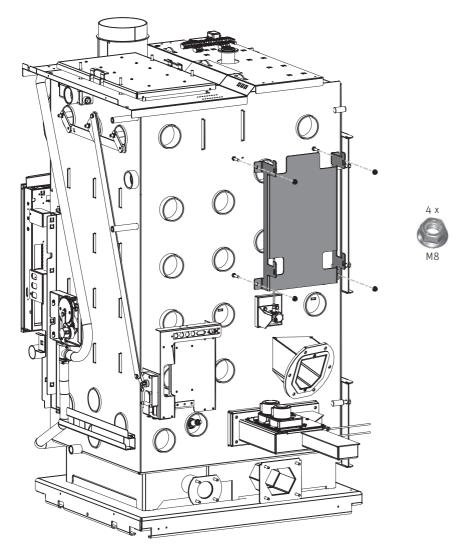


Fig. 23 Screwing down the retaining bracket

13.5 Installing the cladding

13.5.1 Installing the left side panel

▶ Punch out this cut-out [1] –Fig. 26.

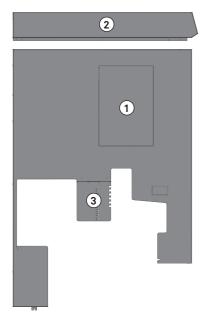


Fig. 24 Left side panel (Figure: PuroWIN PWPE 75-100)



Fig. 25 Removing the rear panel that has been stuck onto the side panel

Only at PuroWIN PWPE 75-100

- ▶ Secure the top part [2] of the left side wall with self-tapping screws -Fig. 26.
- ▶ Bend in the flap [3] at the cut-outs to relieve strain Fig. 27.



Fig. 26 Secure top part [1]

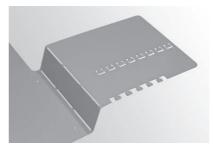


Fig. 27 Bend flap [2] at cut-outs

- Take 1–2 M5x12 self-threading TT screw (this will be used for hooking on the cladding) and screw it halfway into the base on the bottom left-hand side at the back Fig. 28.
- ► Hook the left side panel onto the screw on the bottom left, making sure that the cladding is behind the connection panel, the level control proximity switch [1] and the flange Fig. 29.



Fig. 28 Screwing in the screw halfway



Note!

Before installing the side panel, you must remove the rear panel that has been stuck inside the side panel – Fig. 25.

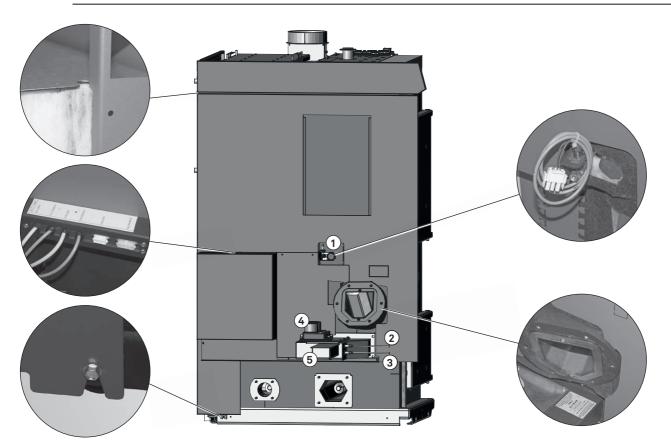


Fig. 29 Installing the left side panel (Illustration PuroWIN PWPE 60)

- 1...... Level control proximity switch (LC 12V)
- 2 Ember bed slide proximity switch (GB 12V)
- (3)...... Ash scraper proximity switch (AS 12V)
- 4...... Ember bed slide motor (GB 230V)
- (5)..... Ash scraper motor (AS 230V)

Screw the side panel onto the bottom left-hand side of the base at the back (Fig. 30). At the front, secure it using 1 self-threading M5x12 TT screw at the bottom (Fig. 31) and 2 self-tapping screws at the top – Fig. 32.



Fig. 30 Tightening the screw at the back



Fig. 31 1 screw at front of base

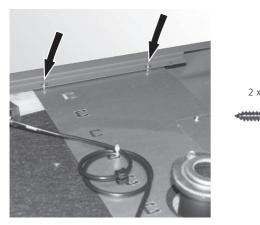


Fig. 32 2 screws at the top

Attaching the cladding on the bottom left using 2 self-tapping screws – Fig. 34.

PuroWIN PWPE 60

PuroWIN

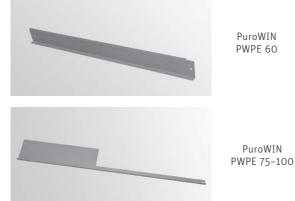
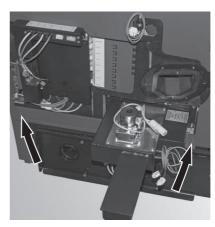


Fig. 33 Bottom left cladding



2 x

1 x

TT M5x12

Attaching the cladding on the bottom left using 2 self-tapping Fig. 34 screws

Connect the 3 proximity switches (LC 12V, GB 12V, AS 12V) and 2 motors (GB 230V, AS 230V) and secure with cable ties to relieve strain – Fig. 35.

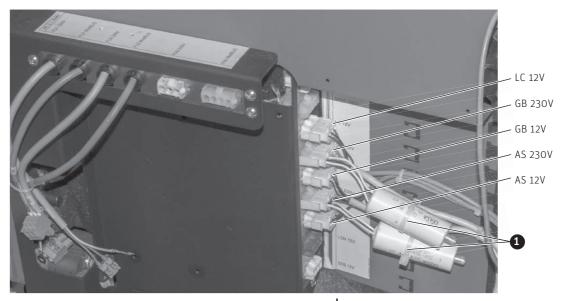


Fig. 35 Connecting the 3 proximity switches and 2 motors

1..... Secure with cable ties to relieve strain

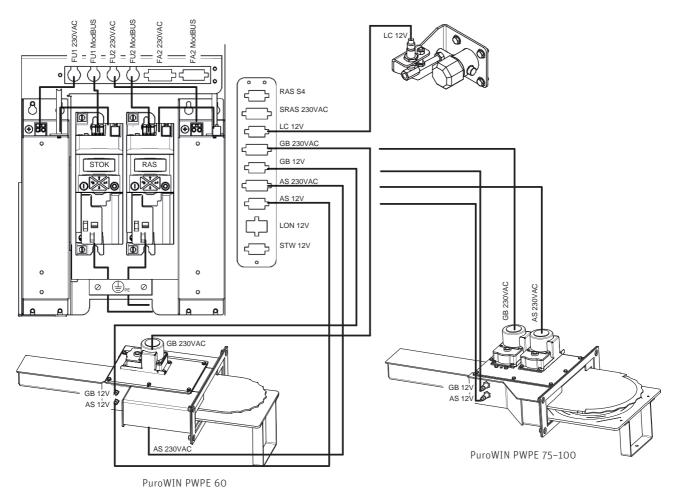


Fig. 36 Connecting the 3 proximity switches and 2 motors

13.5.2 Installing the top connector

- Only at PuroWIN PWPE 60: Route the pre-assembled door safety switch to the top left-hand corner of the boiler and push the grommet (already threaded onto the cable) into the opening Fig. 38.
- Only at PuroWIN PWPE 75–100: Mount the door safety switch on the connector using 2 nuts. Please bear in mind that you will need to adjust it after installing the cladding door Fig. 39.
- Attach the top connector to the boiler using 2 U-washers and 2 M12pcs30 hexagon screws, but only screw them handtight to begin with. Do not tighten them fully until all the cladding parts have been installed and the cladding has been correctly adjusted (gap size) – Fig. 40.
- ▶ Fasten the top connector and left side panel using 2 or 3 self-tapping screws Fig. 40.
- Only at PuroWIN PWPE 60: Mount the door safety switch on the top connector using 2 self-tapping screws. Please bear in mind that you will need to adjust it after installing the cladding door Fig. 40.

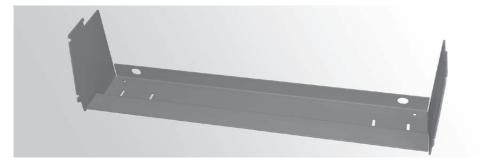


Fig. 37 Top connector (Illustration PuroWIN PWPE 60)



Fig. 38 Routing the door safety switch (only at PuroWIN PWPE 60)

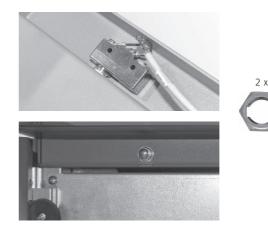
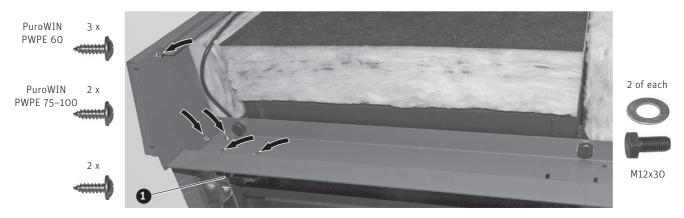


Fig. 39 Installing the door contact switch (only at PuroWIN PWPE 75–100)





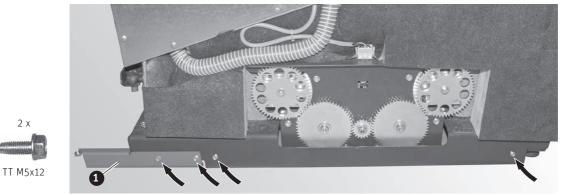
Note!

▶ You must adjust the door contact switch after installing the cladding door.

13.5.3 Installing the right side panel

- Install the door retaining bracket on the bottom right-hand side of the base using 2 M5x12 self-threading TT screws

 Fig. 41.
- Take 2 M5x12 self-threading TT screws (these will be used for hooking on the cladding) and screw them halfway into the base on the bottom right-hand side – Fig. 41.





Secure the cladding bracket at the bottom using 1 M5x12 self-threading TT screw (Fig. 44) and at the top using 1 self-tapping screw (only at PuroWIN PWPE 60, Fig. 45).



Fig. 42 Cladding bracket

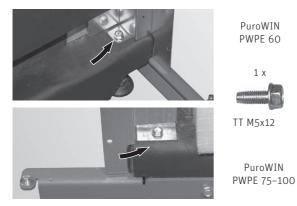


Fig. 44 Securing the cladding bracket at the bottom with a TT screw



Fig. 43 Installing the cladding bracket 1.....Cladding bracket



····

Fig. 45 Securing the cladding bracket at the top with a self-tapping screw (only at PuroWIN PWPE 60)

On the right side panel, you will find two flaps at the cleaning opening. Bend them inwards by approximately 90° – Fig. 47.



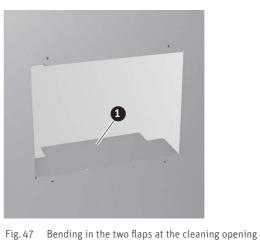


Fig. 46 Right side panel 1..... Flaps

▶ emove the cover from control panel 1 – Fig. 48, Fig. 49.





Fig. 48

Fig. 49

► Carefully cut out the insulation from the cleaning opening at the bottom – Fig. 50.



Fig. 50 Cutting out the insulation

► Hook the cladding on at the bottom and screw it onto the cladding bracket at the front using self-tapping screws (Fig. 52).



Fig. 51 Hooking on the side panel

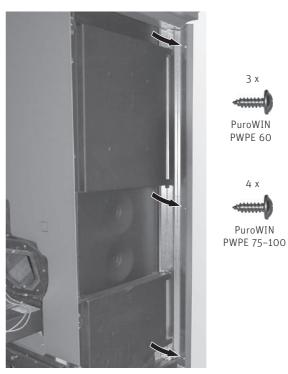


Fig. 52 Attaching the side panel to the cladding bracket with screws (Illustration PuroWIN PWPE 60)

- ▶ Insert the insulation in the cleaning opening (Fig. 53)
- Install the red knob of the main switch (which can be found in control panel 1), the cleaning cover and the cover for control panel 1 using self-tapping screws Fig. 54.



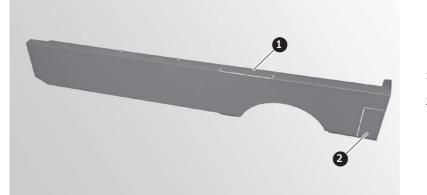
Fig. 53 Inserting the insulation into the cleaning opening



Fig. 54 Installing the knob of the main switch, the cover for control panel 1 and the cleaning cover

- 1..... Control panel cover
- 2..... Red knob of main switch
- 3..... Cleaning cover

- According to the position of the flue connection (top or rear), punch out the relevant cut-out on the top part of the cladding Fig. 55. Flue connection at top = punch out at the top
 - Flue connection at rear = punch out at rear
- ► Attach the top part of the cladding to the side panel on the right (Fig. 56) and secure it with 2 self-tapping screws at the front (Fig. 57) and 2 self-tapping screws at the top (Fig. 58).



1...... Punch out this cut-out if the flue connection is at the **top**

2..... Punch out this cut-out if the flue connection is at the **rear**

2 x

Fig. 55 Top part of the cladding for right side panel



Fig. 56 Attaching the top part of the cladding

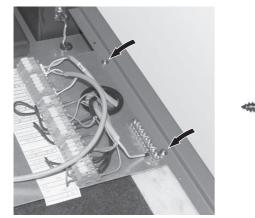


Fig. 58 Securing the top part of the cladding at the top with 2 screws

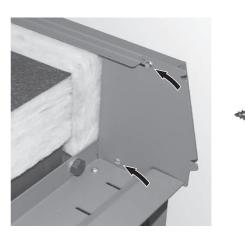


Fig. 57 Securing the top part of the cladding at the front with 2 screws

13.5.4 Installing the rear panel

Put the top part of the rear panel insulation in place with the smooth side against the boiler and then put the bottom part of the rear panel insulation in place against the boiler (Fig. 61); remember to detach the fan cable from the boiler first – Fig. 60.

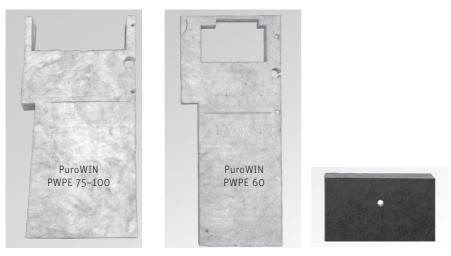


Fig. 59 Top and bottom parts of rear panel insulation

Note!

Before the rear panel is installed, the immersion sleeve and sensor of the thermal discharge safeguard (accessory: FK-O6O) should be sealed and installed. However, you must not connect the thermal discharge safeguard until the rear panel has been installed.



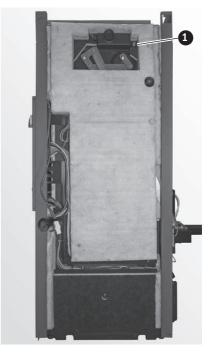


Fig. 61 Attaching the rear panel insulation

- Fig. 60 Detaching the fan cable
- 1.....Immersion sleeve and sensor for thermal discharge safeguardg
- Secure the rear panel using self-tapping screws (Fig. 64); the cable feed-through with the fan cable must be clicked into place in the rear panel first – Fig. 63.

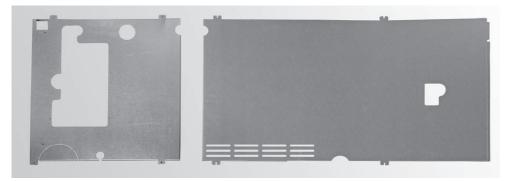


Fig. 62 Top and bottom of rear panel



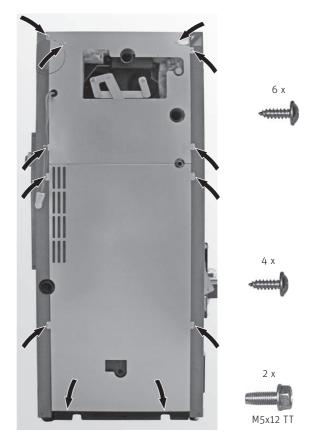


Fig. 64 Installing the top and bottom of the rear panel

▶ Insert the insulation for the cleaning linkage (Fig. 66) and mount the cover using 4 self-tapping screws – Fig. 67.

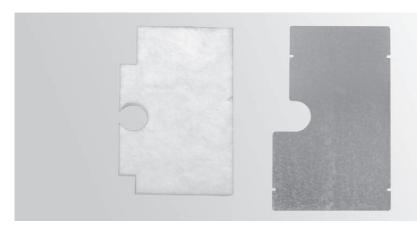


Fig. 65 Insulation and cover for cleaning linkage (Illustration PuroWIN PWPE 60)



Fig. 66 Inserting the insulation



Fig. 67 Installing the cover for the cleaning linkage

13.5.5 Installing the front cladding parts

PuroWIN PWPE 60

▶ Install the insulation (Fig. 69) and cladding above the combustion chamber door using self-tapping screws – Fig. 70



Fig. 68 Insulation and cladding for fitting above combustion chamber door - PuroWIN PWPE 60



Fig. 69 Attaching the insulation – PuroWIN PWPE 60





Fig. 70 Installing the cladding – PuroWIN PWPE 60

PuroWIN PWPE 75-100

► Cladding above the combustion chamber door using self-tapping screws – Fig. 72.

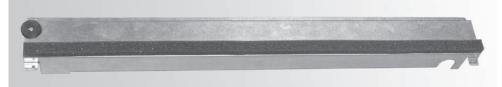


Fig. 71 Cladding for fitting above combustion chamber door – PuroWIN PWPE 75–100



Fig. 72 Installing the cladding – PuroWIN PWPE 75–100

Attach the insulation (Fig. 74) and cladding below the combustion chamber door, making sure that the top notch lines up with the door mounting (Fig. 75); secure them using 4 self-tapping screws – Fig. 76.

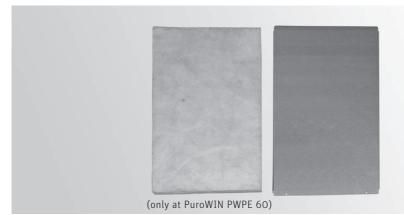


Fig. 73 Insulation and cladding for fitting below combustion chamber door



Fig. 74 Attaching the insulation (only at PuroWIN PWPE 60)



Fig. 75 Notch must line up with door mounting 1.....Notch



Fig. 76 Installing the cladding



Attach the cladding below the ash chamber door (only at PuroWIN PWPE 60), making sure that the top notch lines up with the door mounting (Fig. 78); secure it using 2 self-tapping screws – Fig. 79.



Fig. 77 Cladding for fitting below the ash chamber door (only at PuroWIN PWPE 60)

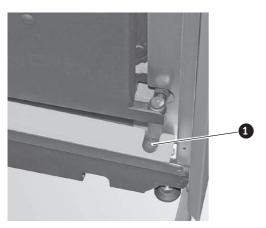






Fig. 78 Notch must line up with door mounting 1.....Notch

Fig. 79 Installing the cladding

Secure each of the two cable channels using 1 self-tapping screw (Fig. 80); the cable channels must protrude by approx. 5 mm from the back of the rear panel cladding – Fig. 81.

1 of each

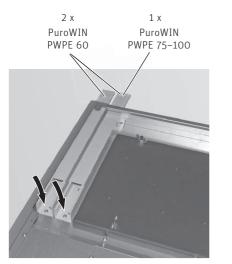


Fig. 80 Securing the cable channels



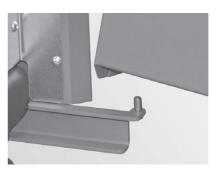
Fig. 81 Cable channels must protrude from the back by approx. 5 mm

13.5.6 Installing the cladding door and operating panel

- ▶ Hook the cladding door on at the bottom (Fig. 82), disconnect the operating panel; remember to hook the cladding doors onto the bolts first - Fig. 84.
- ▶ Secure the operating panel on the left and right using 2 Torx screw on each side Fig. 85.



Fig. 83 Cladding door and operating panel



Hooking on the cladding door at the bottom Fig. 82

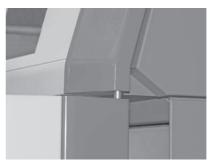


Fig. 84 Attaching the operating panel, hooking cladding door onto bolts





Fig. 85 Internally securing the operating panel on the left and right

- ► Adjust the cladding; adjust the side walls, cladding door and control panel by eye based on the width of the cladding door or make the gap size equal and then tighten all screws, including the 2 hexagon bolts for the top connector (see Section 13.5.2 on page 24).
- ► Adjust the door safety switch so that, when the cladding door is closed, there is still sufficient shifting travel left after switching (audible clicking) up until the point at which the cladding door is totally closed. If necessary, to readjust the switch - Fig. 86, Fig. 87.



Fig. 86 Adjusting the door safety switch PuroWIN PWPE 60



Fig. 87 Adjusting the door safety switch PuroWIN PWPE 75–100

13.5.7 Installing the InfoWIN Touch

- Connect the InfoWIN Touch connecting cable (Fig. 88) and insert InfoWIN Touch into the operating panel (with the connection plug at the top) Fig. 89.
- ▶ Insert the insulation into the operating panel Fig. 90, Fig. 91.

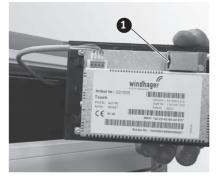


Fig. 88 Connecting the InfoWIN Touch connecting cable and inserting InfoWIN Touch into the operating panel (with the plug at the top) 1...... LAN connection



Fig. 90 Inserting the insulation into the operating panel



Fig. 89 Inserting InfoWIN Touch into the operating panel

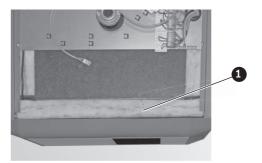


Fig. 91 Inserting the insulation into the operating panel – view from above

1..... Insulationg

13.5.8 Installing the top cladding parts (only at PuroWIN PWPE 60)

▶ Put on the top cover plate at the front and secure it using 4 self-tapping screws – Fig. 93.



Fig. 92 Top cover plate



Fig. 93 Putting on the top cover plate at the front and securing it (only at PuroWIN PWPE 60)

Place the front cover on the boiler, push it forwards (Fig. 95) and secure it internally at each side using 1 self-tapping screw – Fig. 96.



Fig. 94 Top covers



Fig. 95 Putting on the front cover and pushing it forwards

PuroWIN PWPE 60 Cut-out for a flue connection that is at the top





PuroWIN PWPE 75-100

Cut-out for a flue connection that is at the top

1

1.....direct feed PuroWIN PWPE 75-100

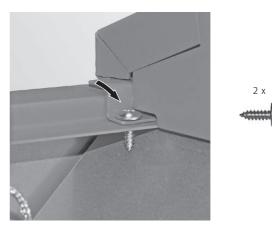


Fig. 96 Securing the cover internally with 2 screws

Punch out the cut-out on the rear cover if the flue connection is at the top (Fig. 97) and place the rear cover on the boiler – Fig. 98.



Fig. 97 Punching out the cut-out on the rear cover if the flue connection is at the top



Fig. 98 Putting on the rear cover

13.5.9 Installing the flue gas fan

▶ Install the flue gas fan using the 4 or 6 wing nuts and connect the fan plug – Fig. 99.

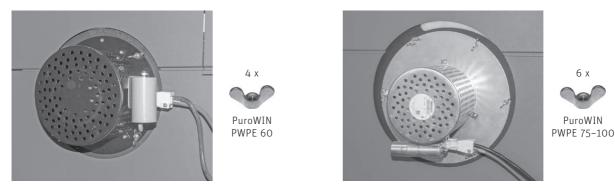


Fig. 99 Installing the flue gas fan and connecting the plug

13.5.10 Attaching the rating plate and serial number (barcode)

▶ Attach the rating plate and serial number (barcode) supplied to the inside of the central cover at the front – Fig. 100.





Fig. 100 Attaching the rating plate and serial number (barcode)

13.5.11 Installing the frequency converters and mains filters

- ▶ Install and connect the frequency converters as follows: install the one labelled Stok (FU1) on the left and the one labelled RAS or Tank (FU2) on the right, using 2 M5x12 TT screws for each one Fig. 101.
- ▶ Detach the 2-pin plugs from the frequency converters and attach them to the mains filter cables Fig. 102.
- ▶ Install the mains filters using 4 M5x12 TT screws for each one, and connect the cables and earth Fig. 102.

Tip!

Screw in the TT screws halfway, hook on the frequency converters/mains filters and then tighten the TT screws.

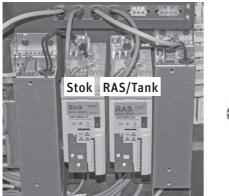






Fig. 101 Installing and connecting the frequency converters

Fig. 102 Connecting the cables and earth, connecting the plugs

13.5.12 Installing the covers for the frequency converters and strain reliefs

3 x



Tip!

Do not install the covers until all the cables have been properly connected and routed.

- Screw on the cover over the strain reliefs using 3 self-tapping screws Fig. 104.
- Hook on the cover for the frequency converters at the bottom and secure it at the top using 1 self-tapping screw Fig. 105.

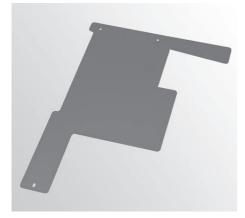


Fig. 103 Cover over the strain reliefs

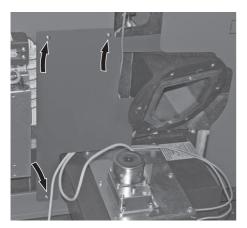


Fig. 104 Cover for fitting over the strain reliefs



1 x

Fig. 105 Cover over the frequency converters

13.6 Installing the stoker auger

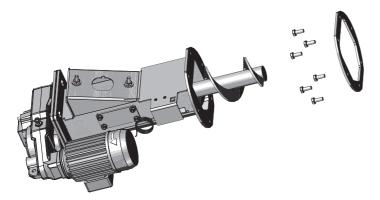


Fig. 106 Stoker auger with seal

Slide the stoker auger into the boiler and secure it together with the seal – Fig. 107.

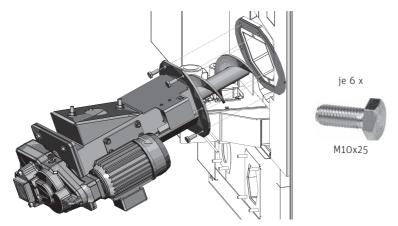


Fig. 107 Slide in and screw down the stoker auger

► Connect the safety temperature limiter (STW 12V) – Fig. 108.

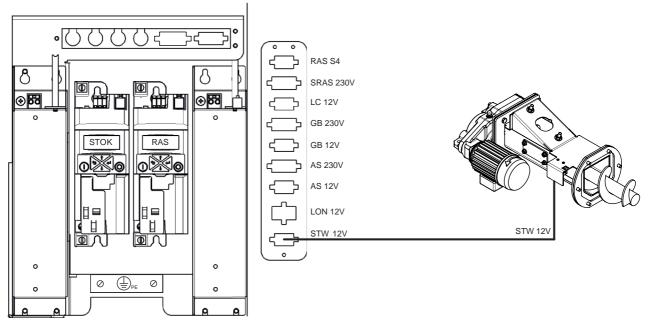


Fig. 108 Connecting safety temperature limiter plug STW 12V from the stoker auger

13.7 Installing the boiler pellet hopper

- ▶ Unscrew and remove both covers on the integral fuel hopper Fig. 109.
- 2 screws each. Loosen the fastening screws at the top of the transport foot to the integral fuel hopper and at the rotary feeder to the wooden frame Fig. 109.

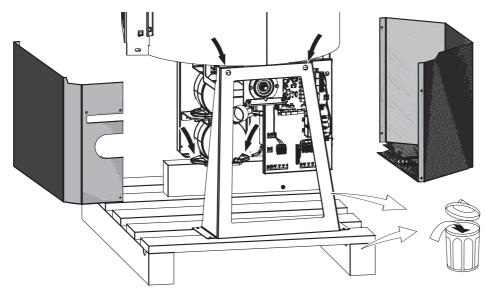
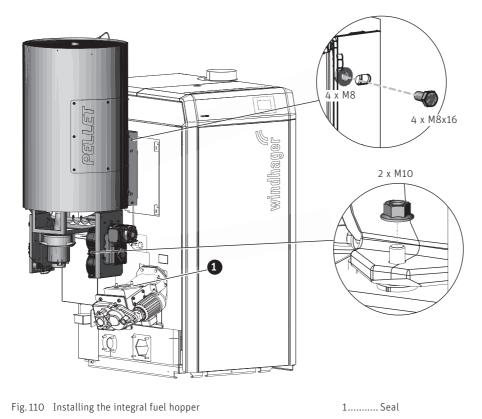


Fig. 109 Unscrew and remove both covers, remove 2 fastening screws each from the transport foot and the rotary feeder

- Lift the integral fuel hopper from the pallet and hook it into the retaining bracket on the PuroWIN and at the same time place it on the fastening screws of the stoker auger unit (seal must be present) – Fig. 110.
- Screw together the integral fuel hopper and the retaining bracket with 4 M8 hexagon nuts with flange and gearing and 4 M8x16 hexagon screws – Fig. 110.
- ► Attach the rotary feeder to the stoker auger unit with 2 M10 hexagon nuts with flange and gearing Fig. 110.



- ▶ Plug the 2 cables from control panel 5 of the hopper into the connection console Fig. 111.
- ▶ For details of how to connect the RAS-TANK cable, see section 18 on page 53.

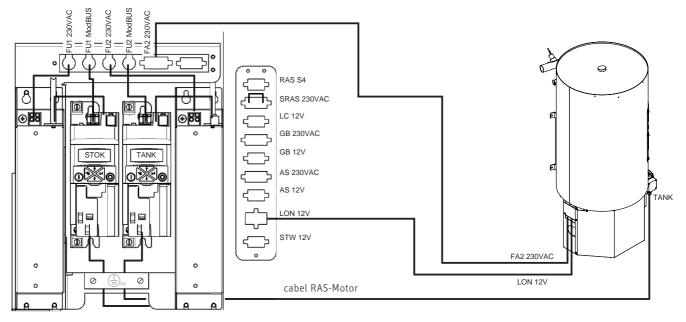
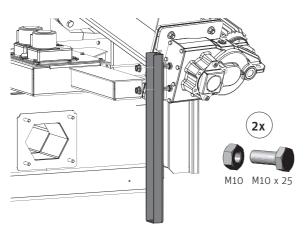


Fig. 111 Connecting 2 cables from control panel 5 of the hopper

- ▶ Dispose of the transport foot and pallet properly; they are not longer needed.
- Screw the support foot to the retaining bracket on the stoker auger unit with 2 M10 hexagon nuts with flange and gearing and M10x25 hexagon screws Fig. 112.

Tip!

- The support foot can also be fitted at the end.
- ▶ Install both covers on integral fuel hopper control panel 5 with 3 or 4 M5x10 self-threading TT Torx screws Fig. 113.



3x M5 x 10 M5 x 10 M5 x 10 M5 x 10

Fig. 112 Installing the support foot

Fig. 113 Installing both covers for control panel 5

13.8 Installing the ash box or the automatic ash conveyor (accessory)

13.8.1 Automatic ash conveyor (accessory)

▶ Refer to the supplied installation instructions for this accessory.

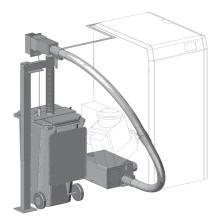


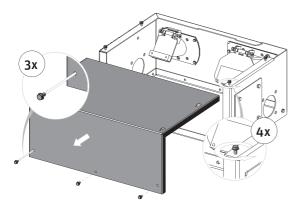
Fig. 114 Automatischen Ascheaustragung (Zubehör)

13.8.2 Installing the ash box



Fig. 115 Ash box

- ▶ Remove the cover on the storage container Fig. 116.
- ▶ Mount the auger holder / pipe output at the front with 4x M10x25 screws and M10 flange nuts Fig. 117.



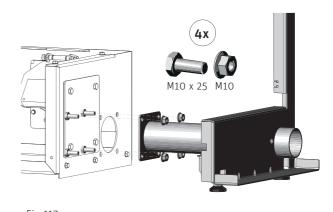
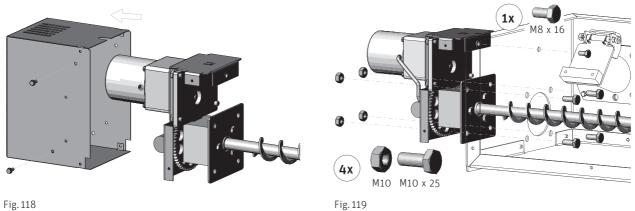


Fig. 116

Fig. 117

- ▶ Remove cover on motor Fig. 118.
- Mount the motor with 1x M8x16 screw at the top first (the screw is pre-assembled on the storage container), followed by 4x M10x25 screws and M10 nuts at the bottom – Fig. 119.



- ▶ Push both seals onto flange plates correctly. Screw the storage container to the holder using 8x M8 flange nuts Fig. 120.
- ► Adjust the set screws Fig. 121.

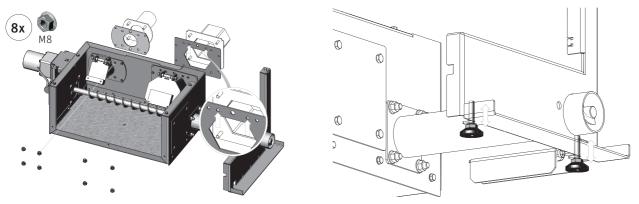
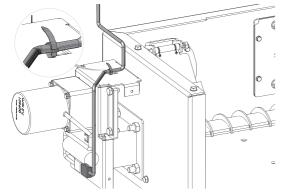


Fig. 120

Fig. 121

▶ Lay the cable for the motor and the cable for the proximity sensor, connect them, and secure with cable ties -Fig. 122, Fig. 123.



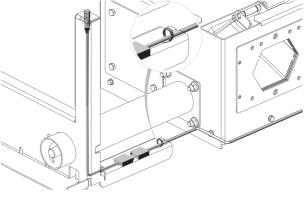
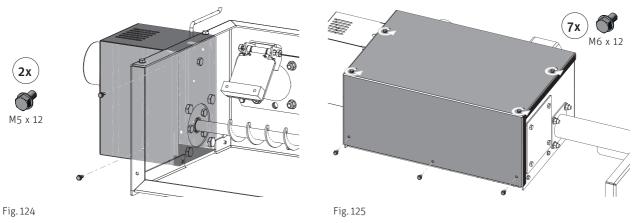


Fig. 122

Fig. 123

- ▶ Mount the motor cover with 2x M5x12 screws Fig. 124.
- ▶ Mount the storage container cover with 7x M6x12 screws Fig. 125.



- ► Secure the ash box with both lower side bracket fasteners Fig. 126.
- ► Adjust the set screws on the ash box and secure with nuts Fig. 127.

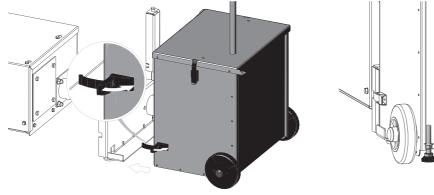


Fig. 126

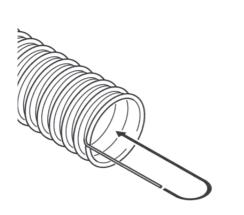
Fig. 127

13.9 Installing the feed and return air hose

- Expose approx. 5 cm of the flexible earth leads on all hose ends and bend inwards into the hose Fig. 128.
 Important: See also the notes on installing the feed and return air hose in the instructions provided for storage room accessories (changeover unit).
- ▶ Remove the 4 screws for the boiler pellet hopper cover and take off the cover Fig. 129.
- ▶ Attach the fastening clips to the hoses and connect Fig. 129.

Note.

If you have problems connecting, dampen connections with water (do not use lubricants).



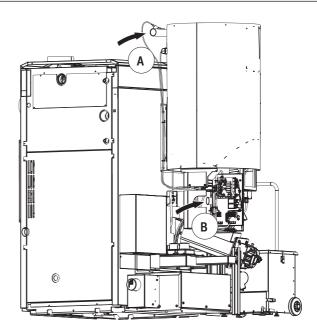


Fig. 128 Expose the flexible earth leads, bend inwards

Fig. 129 Install the feed and return air hose A Pellet feed B Return air flow

13.10 Installing the thermal discharge safeguard

- a) The thermal discharge safeguard and cleaning T-piece must still be accessible after installation.
- b) You must be able to see the water draining out in order to check the function; therefore, use a discharge funnel.
- c) It must not be possible to block the connection manually.

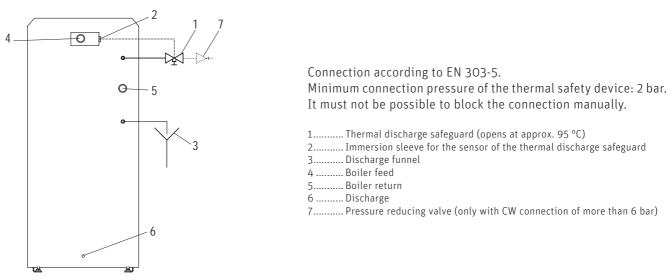


Fig. 130 Thermal safety device connection - view from rear

13.11 Fitting the flue connection

a) Install the flue gas pipe upward to the flue (45° is the ideal angle). Maximum flue gas pipe length: 3 m.



CAUTION Material losses

Any section of this flue gas line that only rises slightly (up to 30°) or is horizontal must be no longer than 1 m.

- b) Avoid 90° bends, 45° bends are better.
- c) Do not push the flue gas pipe too far into the flue.
- d) Do not seal the flue gas pipe completely into the flue. Connection with flexible flue gas pipe inlet into the flue. The induced draught fan can cause sound transmissions that create excessive noise.
- e) The boiler is a low-pressure boiler. This means that the flue gas system needs to meet the "N1" seal integrity requirement according to EN 1856-1 and EN 1856-2. Please ensure a sufficient immersion depth when fitting (e.g. when using Windhager stainless steel flue systems).
- f) The entire flue gas line should be insulated to a minimum thickness of 2 cm in order to prevent or minimise condensation.
- g) A condensation drain (length element with condensation drain available as an accessory) must be fitted in the flue gas pipe directly before the boiler to prevent escaping condensation (particularly in the case of wood chips with a high water content) from entering the boiler or fan box



CAUTION Material losses

The warranty does not cover boiler damage caused by condensation from the flue.

- h) It must be possible to clean the entire flue gas line, i.e. appropriate cleaning openings must be included. The first cleaning opening has to be in the first bend of the flue gas pipe.
- i) A draught limiter is needed if the maximum draught (see Section 3 on page 6) is exceeded during operation.



DANGER Injury

The configuration of the flue gas line must comply with technical fire protection requirements in accordance with the applicable legislation, regulations, guidelines and standards – refer also to Section 13.1 Minimum clearances for fire protection, cleaning and maintenance on page 14.

FOR THE ELECTRICIAN

The boiler and related accessories are designed to be installed only in dry areas (protection type IP 20).

Installation of electrical components may only be performed by a qualified electrician and must fully comply with Approved Document P and all electrical standards in place at the time of the installation.



DANGER Electrocution

The configuration of the entire system must comply with the requirements of regional legislation, applicable regulations, standards and guidelines.



CAUTION Material losses

Mains filters are installed in the PuroWIN. Please ensure compliance with all applicable standards and regulations.

14. Cable cross-sections and cable lengths

- All cable cross-sections quoted are minimum values. They are specified on the basis of a device's internal fuses as well as its connection data and cable resistances.
- The maximum cable lengths for bus cabling (LON, E-bus) refer to the total cable length of the bus this must be taken into account when setting up the system.
- The maximum cable lengths for sensors/signal lines may be exceeded subject to prior technical clarification, e.g. by including additional protective devices.
- Extra-low-voltage lines and low-voltage lines must be routed using separate cables.
- Cabling between buildings to which power is supplied separately by the PSC and/or which have their own operational earth and do not share potential equalisation is not permitted for bus cabling. Protective devices must be installed for sensor lines and signal lines might need to be electrically isolated. The customer is responsible for ensuring compliance with the requirements of the PSC (TAEV in Austria) and electrical installation standards.

LON bus (boiler, MES INFINITY and MES+ function modules, Touch and MES+ ,master control module, web server):

- 3 x 0.6 mm², maximum 1200 m the use of CAT5/CAT5e cables is permitted if multiple wires are combined where necessary (LON A, B and/or GND).
- 1 x 0.6 mm², maximum 100 m for the power supply (12 V), which is laid together with the LON bus. If necessary, this
 must be isolated and separate units supplied on site. Cable lengths can be increased by increasing the cross-section
 (including GND!).
- Cabling extending across different buildings is not permitted

E-bus (operating modules and MES INIFINTY and MES+ remote control, ZIF 250/260):

- 2 x 0.6 mm², maximum 50 m
- Cabling extending across different buildings is not permitted.

Sensor lines (feed sensors, external sensors, boiler sensors and buffer sensors):

- 2 x 0.6 mm², maximum 100 m - higher if protective devices are installed, increased cross-section possible.

Signal lines (extra-low voltage) O-10 V, PWM, analogue outputs:

2 x 0.6 mm², maximum 30 m - higher if protective devices are installed, increased cross-section and/or electrical isolation possible.

Low-voltage lines:

- The prescribed cross-sections for electrical installation must be observed, but no less than 1.5 mm².

15. Electrical connections

PuroWIN mains connection:230 V AC, 50 Hz, fuse 13 A slow-blow

Mains connection for pneumatic feed: 400 V AC, 50 Hz, fuse 16 A slow-blow

We recommend:

- Establishing the mains connection for the boiler using fine-wire PVC-sheathed cables, round cable Ø 6.5 8.3 mm, e.g. H05VV-F (YMM-J) with a nominal cross-section of 3 x 1.5 mm².
- Establishing the mains connection for the pneumatic feed using fine-wire PVC sheathed cables, e.g. HO5VV-F (YMM-J) with a nominal cross-section of 5 x 2.5 mm².

Each boiler is pre-wired and internally fused with a T 6.3 A fine-wire fuse to protect against short circuit.

In areas with increased power surge risk (e.g. lightning strikes in regions prone to storms), we recommend installation of an appropriate surge protector.



CAUTION Material losses

With a cable length of 50 m and a connection cross-section of 1.5 mm², the voltage loss is 8 V. This should not be exceeded; otherwise, the cable cross-sections will have to be increased accordingly.



DANGER Electrocution

On the PuroWIN, the connecting lines must be protected against short circuit using a 13 A slow-blow fuse. On the version with the pneumatic feed, a 16 A slow-blow fuse must be used.

An all-pole disconnection switch with a contact gap of at least 3 mm must be installed on site at the mains access point. Current-operated r.c.d. devices are classed as all-pole disconnection switches (provided that the frequency converter is compatible).



DANGER Electrocution

If you are installing the PuroWIN version with the pneumatic feed, the **suction tubes** must be properly **eart-hed** in accordance with the applicable regulations, standards and guidelines!

Current-operated r.c.d.:

Because of the innovative design of our frequency converters, the PuroWIN produces an earth leakage current. This is limited to no more than 3.5 mA per frequency converter. Consequently, our boilers must always be used with a current-operated r.c.d. that is sensitive to all forms of current (type B) with a residual operating current of at least 30 mA.

PuroWIN with direct feed (2 frequency converters) = max. 9 mA



Note!

The PuroWIN is not capable of tripping the current-operated r.c.d. on its own. As all the leakage currents from all consumers are added together and because other consumers will already be producing leakage currents (e.g. washing machine, TV), the r.c.d. can be tripped.



CAUTION Material losses

Electrical cables must not touch heating and flue gas pipes, nor must they come in contact with non-insulated boiler components. They are to be sufficiently braced and provided with a protective tube.

For the electrician

The control panel with the main switch, device fuse and safety thermostat is located on the right side panel at the rear – Fig. 131. The electrical connections (screwless cage-spring-type terminals) are located at the top under the cladding covers.

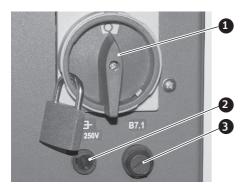


Fig. 131 Main switch, fuse and safety thermostat 1.......... Main switchr 2........... Fuse T 6.3 A 3........... Cover of safety thermostat

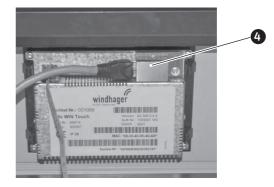


Fig. 132 LAN connection 4 LAN connection

MES INFINITY control system (if present):

The MES INFINITY control system (heating circuit and buffer load/switching function modules) is supplied and must be connected electrically.

Maximum switching capacity of the MES INFINITY control system: Relay outputs: 230 V AC, 6 A (2 A inductive), 50 Hz Buffer load function module with X1/X2 contact: Solid-state relay: 230 V AC, 1 A

The electrical power is dependent upon the number of function modules installed in the unit and the number of actuators powered (pumps, mixers, etc.).

LAN connection, integrated web server in the InfoWIN Touch

There is an RJ45 socket on the InfoWIN Touch for the LAN connection– Fig. 132. Use a standard LAN cable to connect the InfoWIN Touch with your Internet router (Internet modem). Alternatively, the InfoWIN Touch is suited to all LAN connection types, such as Powerline and PowerLAN, also known as dLAN.

The integrated web server can only be used in combination with a Windhager boiler and an MES INFINITY control system. An Internet connection (router) is needed for communication via the Internet. Operation requires a monthly data volume of approx. 100–300 MB, depending on usage.

The integrated web server automatically connects to the "WindhagerConnect" Windhager portal once started up. This web portal manages all data from the system owner of relevance to connections and systems. As the system owner, you have to register with the portal using your user name (e-mail address) and a password. Then your heating system is connected to the "WindhagerConnect" portal via the integrated web server and provides all data for the Windhager heating app "myComfort".

You can download and install the Windhager app "myComfort" for free from app stores. Once installed, launch "myComfort". Log on with your user name (e-mail address) and password and "myComfort" connects to your heating system.

An administration fee will be charged by Windhager UK Ltd to activate the web server Touch and to connect to the My-Comfort remote access. (This is a one off fee)

15.1 Boiler mains connection, control system connection, emergency heating switch

- The terminals for the mains connection (230 V AC), control system, vertical auger ModBUS, storage room safety loop (230 V AC) and emergency heating switch are located at the top under the front cover Fig. 136.
- ► First, remove the rear cover Fig. 133.
- ▶ Remove the 2 screws from the left and right-hand sides of the front cover Fig. 134.
- ► Slide the front cover backwards and lift it off Fig. 135.

For the electrician



Fig. 133 Removing the rear cover



Fig. 135 Sliding the front cover backwards and lifting it off



Fig. 134 Removing the 2 screws

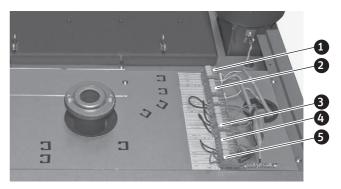


Fig. 136 Terminals

LON for control system
 Vertical auger ModBUS
 Storage room safety loop (230 V AC)
 Mains connection (230 V AC)
 Emergency heating switch (HNS)

▶ Reassemble by working through the steps in reverse order.

15.2 Installing function modules (MES INFINITY control system)

Installing function modules on the wall



CAUTION Material losses

Do not install in plumbed rooms. Ambient temperature must not exceed +50 °C.



Fig. 137 Function modules (MES INFINITY control system) installed on the wall



Note!

The screws and plugs are included with the function modules.

Fasten all cables to the punched lugs with cable ties to relieve the strain - Fig. 140.

For the electrician

- ► Loosen the screws at the bottom of the cover for the function module and lift up the cover.
- ▶ Drill mounting holes (Ø 6 mm) in the wall in accordance with the diagram (Fig. 139).
- ► Screw the function module onto the wall with the D6 dowels and 3.5x30 screws supplied.
- Establish all electrical connections in line with Section 25–26 and the instructions supplied for the respective function modules. Route the cables into the bottom of the function module housing and fasten with cable ties as strain relief.
- ► Seal off any cable feed-throughs that are not required Fig. 138.
- ► Attach the cover and fasten it at the bottom with the screws.

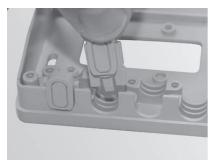


Fig. 138 Sealing off the cable feed-throughs

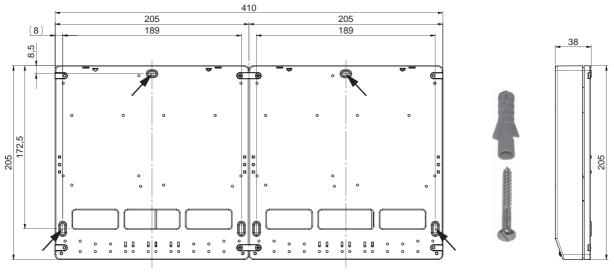


Fig. 139 Dimensional drawing – rear view

CAUTION Material losses

The extra-low-voltage line (0 – 12 V DC) and low-voltage line (230 V AC) must be wired separately! – Fig. 140.

A **3-pin LON cable** is used to connect the function modules (MES INFINITY control system) to the boiler. The +12 V contact does **not need to be connected or attached**, as the boiler and function module each have their own +12 V power supply.

The LON connection and the connections for the safety components are located at the top under the cladding covers (screwless cage-spring-type terminals). The electrical connections must be established on site. Fine-wire PVC-sheathed cables should be used for these connections – see the connection diagram in Section 25–26.

The installation procedure for the sensors and actuators is described in the instructions for the respective function modules (MES INFINITY control system). Please also pay close attention to these instructions.



CAUTION Material losses

The resistor for the LON connection and the bridges for the safety components must only be removed when a connection has been established.

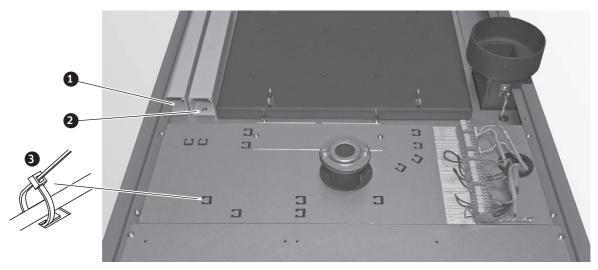


Fig. 140 PuroWIN cabling

1.....Cable, extra-low voltage (sensor, LON, etc.)

2.....Cable, low voltage (230 V AC) 3.....Cable ties as strain relief

16. Connecting the function modules

See the separate instructions for the respective function modules.

17. Operating with external control

This is only possible with **special function external heating requirement function module INF FO5 W** (accessories) – see Section 11.7 on page 11. For the connection diagram, see the separate instructions for the "special function" function module.

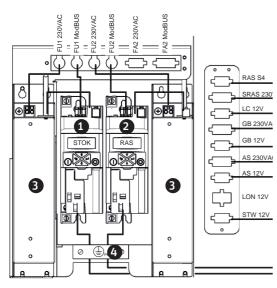
18. Connecting the frequency converters (FU)

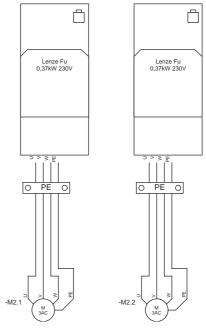
- Connect the cable wires from the lower Stok motor to the frequency converter on the left Fig. 141, Fig. 142, Fig. 143.
- Connect the cable wires from the upper room conveyor motor or, in the case of the pneumatic feed version, connect the tank motor of the hopper to the frequency converter on the right – Fig. 141, Fig. 142, Fig. 143.
- Secure both cables at the bottom using an earthing strap, making sure that the cable shield makes contact with this earthing strap Fig. 141, Fig. 143.
- ▶ For mains filter: fit plugs, connect cables and connect earth -Fig. 144.



DANGER Electric shock!

Once the frequency converter has been disconnected from the supply voltage, do not touch any parts of the device that may still be live or any line connections straight away. This is because the capacitors remain charged when the supply voltage is disconnected. Wait at least three minutes before starting work. Please also pay attention to the information plates on the frequency converter.





1..... RAS/Tank

- 2..... Stok
- 3..... Mains filter

4 Earthing strap

Fig. 141 Stok and RAS/Tank motor connected to frequency converter

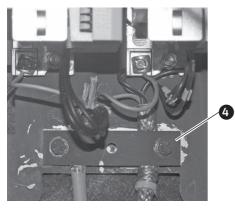


Fig. 143 Frequency converters connected

Fig. 142 Frequency converter connections



Fig. 144 Connect the mains filter and frequency converter, cables and earth; connect the plugs



CAUTION Material losses

A shielded motor connection cable must always be used for the connection between the frequency converter and the motor, and it must be specifically designed for use with frequency converter technology – accessory PWZ 106. **Do not extend the cables!**

19. Routing the cables for the proximity switches and motors



CAUTION Material losses

The extra-low-voltage line (12 V AC) and low-voltage line (230 V AC) must be routed separately!

Secure the cables with cable ties, making sure that the 12 V AC and 230 V AC lines are routed separately – Fig. 145. For further details of plug connections, see also Fig. 29 on page 21 and Fig. 35 on page 23.

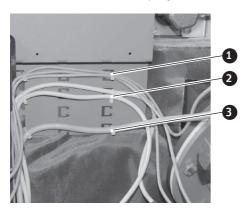


Fig. 145 Securing the cables with cable ties

Do not install the covers until all the cables have been properly connected and routed.

- Screw the cover over the strain reliefs using 3 self-tapping screws Fig. 146.
- Hook on the cover for the frequency converters at the bottom and secure it at the top using 1 self-tapping screw Fig. 147.
- ▶ Tie the cables together using cable ties Fig. 139.

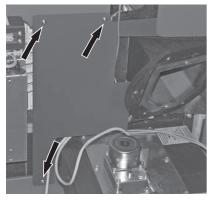


Fig. 146 Cover over the strain reliefs



Fig. 148 Tying the cables together using cable ties



Fig. 147 Cover over the frequency converters

1..... Cable tie

20. Connect cable from the integral fuel hopper

▶ Unscrew the cover of control panel 5 on the integral fuel hopper – Fig. 149.

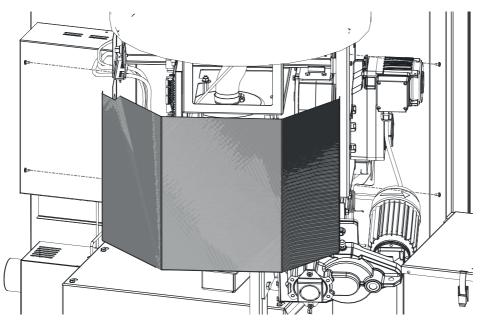


Fig. 149 Unscrew the cover of contr ol panel 5

- Connect both cables FA 2 230 VAC and LON 12 V from control panel 5 to the connection console on the boiler Fig. 152.
- Remove plug with bridge from control panel 5 (Fig. 150) and connect it to the connection console on the boiler at SRAS 230V - Fig. 151.
- ▶ Make the connections for the changeover unit see section 26. Connection diagram for control panel 5 on page 63.

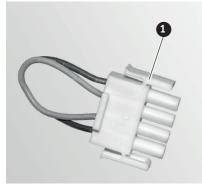


Fig. 150 Removing the plug with bridge from control panel 5 1......Plug with bridge

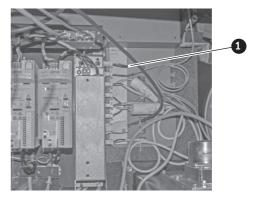
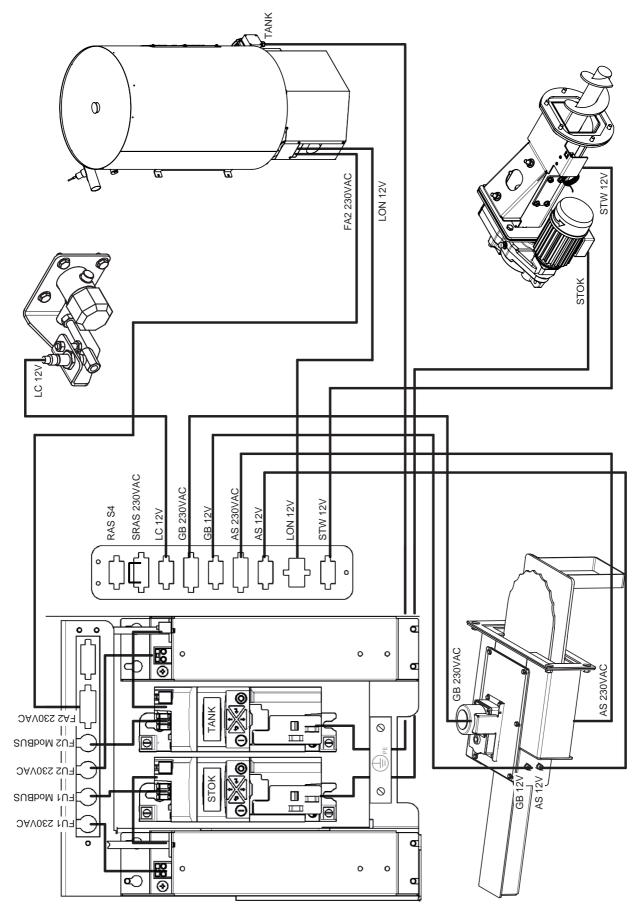


Fig. 151 Connecting plug with bridge to SRAS 230V

21. Connection/block diagram



FOR THE SERVICE TECHNICIAN

22. Commissioning and operating instructions

Windhager Customer Service or an approved technician with a valid WIN-5 certificate will start up the boiler and will familiarise the customer with the system operator and cleaning of the boiler. Commissioning and full service are part of the guarantee requirements of the "Warranty conditions". We recommend that you obtain a full service agreement.

Before commissioning:

- The DIP switch for the function modules (MES INFINITY control system) must be set correctly see function module instructions; Setting the DIP switch.
- The function modules (MES INFINITY control system) and the boiler(s) must be connected with one another see function module instructions; Connecting the function modules (establishing communication).

23. Service and repair work

Service and repair work may only be carried out on the boiler and the conveyor system/feed by appropriately qualified technicians.



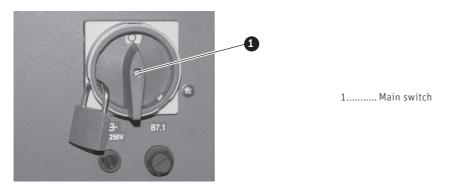
DANGER Injury

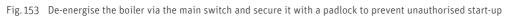
After being switched off, the boiler and accessories are not completely without power! Therefore, after the system has been switched off, it is essential to de-energise the boiler via the **main switch** before handling the boiler or the feed components (e.g. the auger), or before carrying out any service or repair work. The main switch must be padlocked and the key kept somewhere safe – Fig. 153.



DANGER Injury

If the boiler is controlled remotely (over the Internet), you must disable this remote access before carrying out any service and repair work (e.g. by unplugging the LAN cable from the router or InfoWIN Touch) so that the system cannot be switched on accidentally.





Handling the frequency converter (FU)



DANGER Electric shock!

Once the frequency converter has been disconnected from the supply voltage, do not touch any parts of the device that may still be live or any line connections straight away. This is because the capacitors remain charged when the supply voltage is disconnected. Wait at least three minutes before starting work. Please also pay attention to the information plates on the frequency converter.

- ▶ Do not switch the frequency converter on and off more often than once every two minutes.
- When servicing the motor, you must wait three minutes after moving the switch to the OFF position. Do not start work on the motor wiring before the end of this period because the converter stores electrical energy. Before servicing the converter, you must disconnect the mains connection upstream of the drive and wait for 3 minutes.

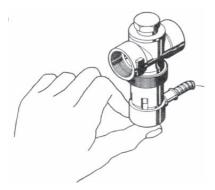
24. Checking and servicing the thermal discharge safeguard

Please inform your customer



DANGER Injury

The function of the thermal discharge safeguard must be checked once a year by a technician and the amount of limescale in the thermal safety device must be checked. If there is limescale in the thermal safety device, these deposits must always be removed.



- Press the red cap against the valve (Fig. 154) > Water must flow out into the funnel.
- ► Little outflow at funnel > Limescale in thermal safety device (pump limescale remover e.g. formic acid through the thermal safety device).
- Thermal process safeguard dripping > Clean the seal on the piston and valve seat. If the seal is damaged > Replace the piston.

Note: There is no need to remove the fitting for this purpose!

Fig. 154 Thermal discharge safeguard; pressing the red cap against the valve

DIMENSIONAL DRAWINGS

PuroWIN pellet boiler

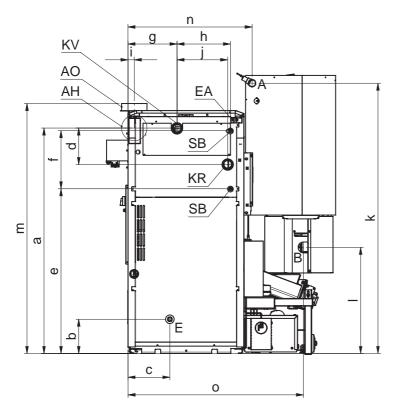


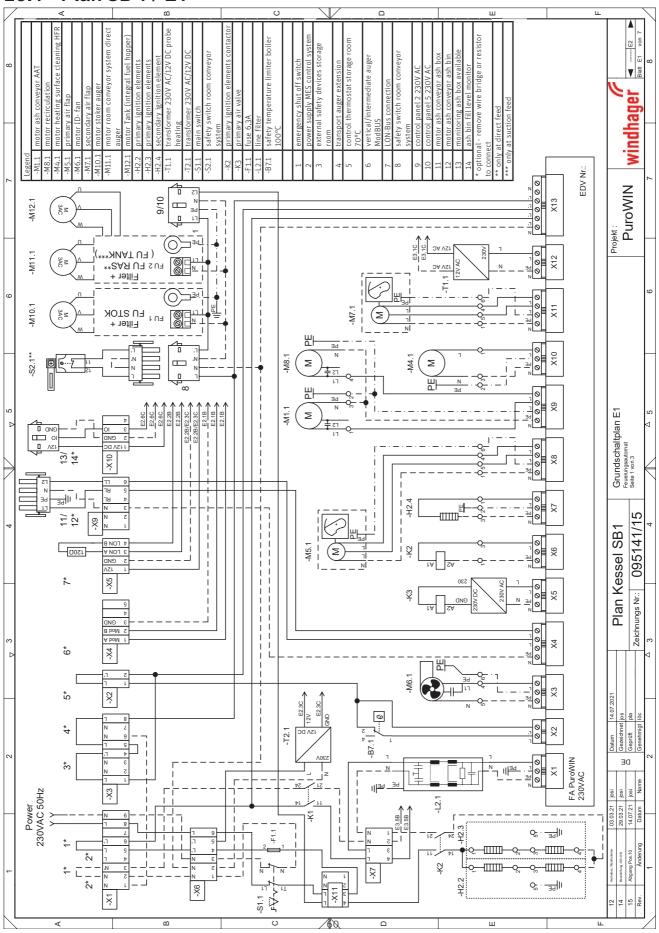
Fig. 155 Rear view

	Designation	Unit	PWPE 60	PWPE 75-100
KV	Boiler feed	Inch thread	5/4" sleeve	2" sleeve
KR	Boiler return	Inch thread	5/4" sleeve	2" sleeve
AO	Top flue gas pipe	mm	Ø 130	Ø 180
AH	Rear flue gas pipe	mm	Ø 130	Ø 180
E	Discharge	Inch thread	1/2" sleeve	3/4"sleeve
SB	Thermal safety device	Inch thread	1/2" pipe	1/2" pipe
А	Pellet feed	mm	Ø 50 pipe	Ø 50 pipe
В	Return air flow	mm	Ø 50 pipe	Ø 50 pipe
EA	Electrical connections			
а		mm	1521	1590
b		mm	247	239
С		mm	327	296
d		mm	240	256
е		mm	1090	1162
f		mm	370	410
g		mm	357	346
h		mm	198	376
i		mm	44	44
j		mm	190	357
k		mm	1928	1906
l		mm	770	748
m		mm	1674	1763
n		mm	650	790
0		mm	279	450

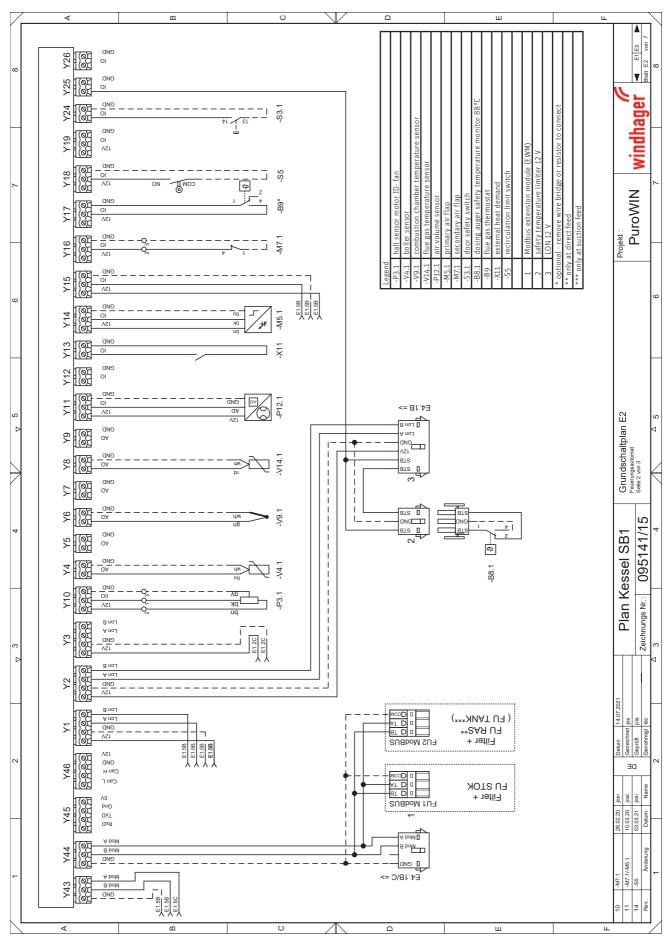
ELECTRIC CIRCUIT DIAGRAMS

25. Basic circuitry, PuroWIN pellet boiler

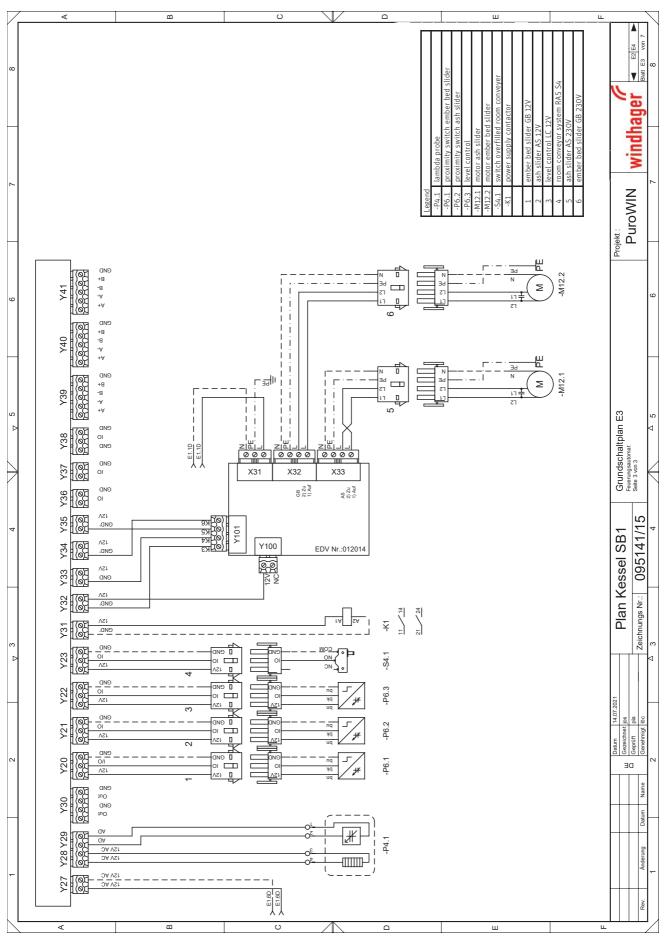
25.1 Plan SB 1 / E1



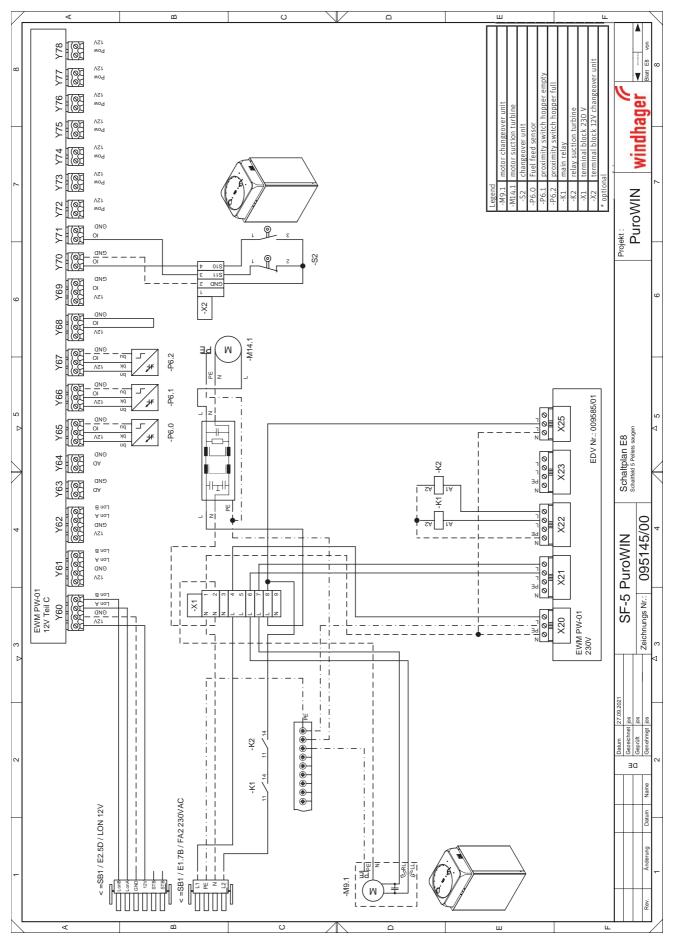
25.2 Plan SB 1 / E2



25.3 Plan SB 1 / E3



26. Connection diagram for control panel 5



+WARRANTY CONDITIONS

The warranty conditions require that the boiler and related accessories be properly installed and started up by Windhager Customer Service or the customer service partner; otherwise the manufacturer's warranty will not be honoured.

Malfunctions resulting from improper operation or adjustment as well as use of poor-quality fuel types or fuel types that are not recommended are not covered by the warranty. Further, the warranty shall be void if equipment other than that provided by Windhager is installed. The special warranty conditions for your system are available in the "Warranty conditions" sheet supplied in the boiler Customer Care Pack.

Commissioning and regular servicing following the terms of the "Warranty conditions" will assure safe, environmentally friendly and economical operation of your system. We recommend that you obtain a maintenance agreement.

Register My Boiler

Following the commissioning the customer must register their Windhager boiler(s)online via the windhager.co.uk web site to validate their boiler warranty.

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