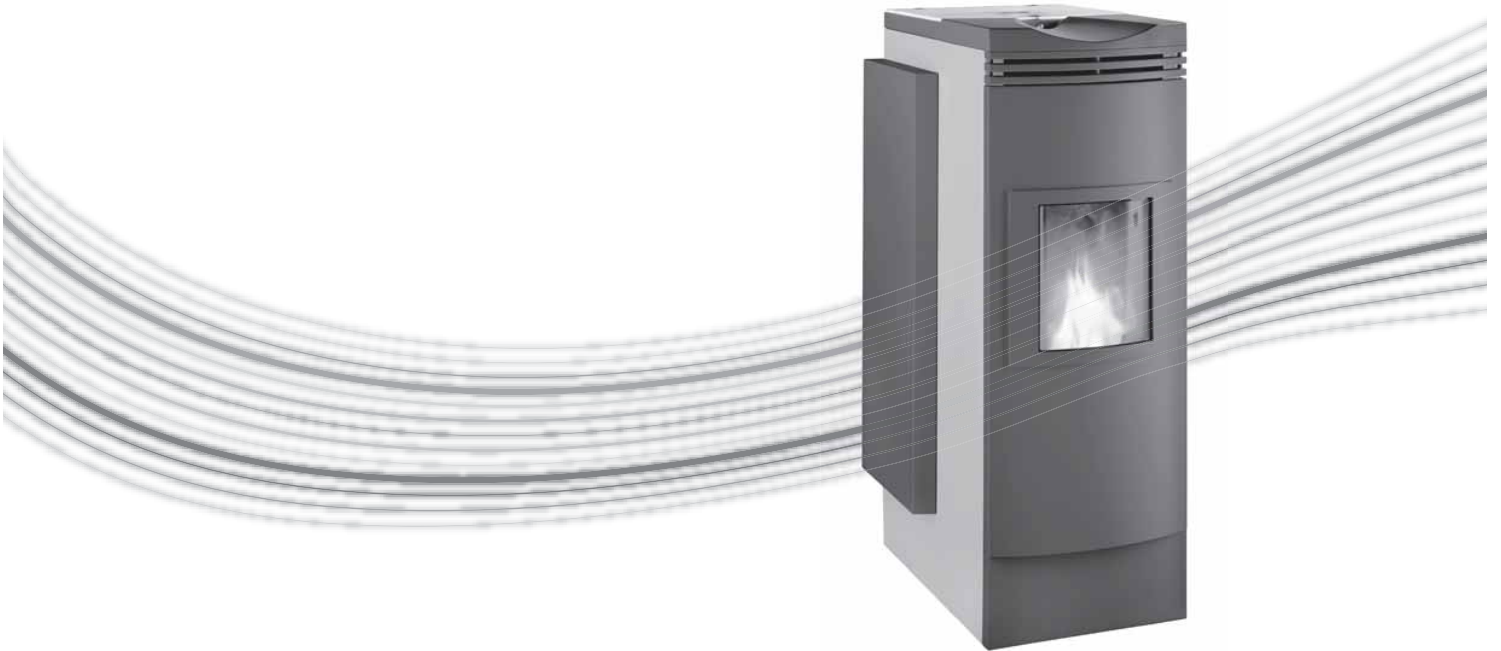


BAXI

Installation & Servicing Instructions



Bioflo

Pellet Central Heating System Boiler

These instructions should be read in conjunction with the
Supplementary Instructions

Please keep these instructions in a safe place.
If you move house, please hand them over to the next occupier.

Baxi Bioflo 12 kW Granite
Baxi Bioflo 12 kW Pearl

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Important initial information for the Technician

1.1 Safety

The boiler and related accessories reflect the state of the art and meet all applicable safety regulations.

1.2 Please note!

Your boiler and all accessories operate using 230 VAC electrical current. Improper installation or repair can pose the danger of life-threatening electrical shock. Installation and repair may be performed only by appropriately qualified technicians.

Caution symbols

Please take careful note of the following symbols in these Installation instructions.



Ignoring the identified warnings can lead to **personal injury**.



Ignoring the identified warnings can lead to **malfunction of, or damage to the boiler or heating system**.



The specified safety requirements are to be followed in accordance with nationally applicable regulations, standards and guidelines.

1.3 Fuel

The boilers are designed to burn the following fuels:

Pellets according to ÖNORM M7135 or DIN *plus*.

Significant criteria based on the standards are as follows:

Diameter 6 mm	Length 80% between 15 – 30 mm
Smooth surface	Density at least 1.1 kg/dm ³
Residual moisture content max. 10%	Energy content min. 18 MJ/kg = 5 kWh/kg (in water-free condition)
Ash content max. 0.5%	Abraded particles max. 2.3%
Chemical/synthetic binding agents are strictly prohibited	No impurities from varnish or paint residues, etc.

Important initial information for the Technician

1.4 Fuel storage

1.4.1 Automated pellet supply

The pellets can be stored in bulk in a storage room, sheet steel tank, fabric tank or a buried tank. See the separate "Pellet storage room" planning documents for planning information about this pellet storage.

The requirements for pellet storage are defined in ÖNORM M7137 for Austria or the Firing Ordinance FeuV for Germany.

The pellets must be stored in a dry place in order to achieve trouble-free operation with optimum combustion and at maximum efficiency.



The pellets must be transported carefully into and out of the storage room so as to maintain good pellet quality.

The maximum transport length or height for a pellet feed system is **25 m horizontally with a 6 m vertical difference** between the highest and lowest levels of the hose. These maximum values require a stable electricity supply (min. 220 VAC under load).

1.4.2 Manual pellet supply

Pellets in bags must be stored in a dry place.

Please observe the local regulations on storing fuel.

1.5 Application options

FireWIN is designed for installation in the living area and is configured as a fully featured central heating system. This means no second heat generator is required. If desired, however, FireWIN can be combined with alternative heat generators (e.g. solar or solid fuel boiler). Refer to the hydraulic systems for details about this.

The necessary hydraulic components for a heating circuit as well as hot water preparation are integrated in FireWIN (see hydraulic equipment). This means there is no longer any need for a boiler room or equipment room and that FireWIN is ideally suited for use as a central heating system in houses without a basement or when central heating is being installed in a building for the first time as part of a renovation project.

1.6 Flue

A properly dimensioned flue is required for optimal functioning of the combustion system. Measurement of the dimensions must follow EN 13384-1. See the Technical data section for values required for this calculation.

Please note that in the lower performance range, flue gases may be below 90 °C. Therefore, thermally-insulated flues meeting thermal transmittance coefficient Group I requirements according to DIN 18160 T1 or other appropriate, officially approved **moisture-resistant exhaust systems** may be connected to the hearths.

Frequently, these requirements on the flue are not satisfied during the renovation of existing systems. We therefore suggest 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. (See the technical data for flue calculation values.)



Energy-saving intake regulators or explosion flaps are not allowed to be installed in the living area. Comply with the statutory regulations and directives.

For the Installer

2.1 Delivery, packaging

Hydraulic equipment	FireWIN type/order no.	
without heating fittings	FW_ 090	FW_ 120
with circulation pump, expansion tank 12 l, motorised mixing valve, safety valve and pressure gauge	FW_ 090 UAM	FW_ 120 UAM
with circulation pump, hot water tank feed pump with gravity brake, expansion tank 12 l, motorised mixing valve, safety valve, pressure gauge and supplied gravity brake for heating circuit	FW_ 090 UAML	FW_ 120 UAML

2.1.1 FireWIN Klassik

The boiler is supplied on a wooden pallet covered with a plastic sack. The cladding parts are in a separate cardboard box. Cleaning tools are packed in the combustion chamber and the ash pan.

2.1.2 FireWIN Premium and Exklusiv

The boiler is supplied on a wooden pallet covered with a plastic sack. The cladding parts are in a separate cardboard box. Cleaning tools are packed in the combustion chamber and the ash pan. In addition, the suction turbine (fully automated pellet feed) is packed in a cardboard box.

2.1.3 Optional accessories

(acc. to price list and order)

- **MES system control**
Heating controlled by outside temperature + hot water tank, subsequent expansions possible
- **REG standard control**
Heating controlled by outside temperature + hot water tank, no expansion possible
- **Exhaust gas sensor in protective tube** – JW-010
installed in the exhaust pipe – flue gas temperature is shown on the InfoWIN display
- **Ash pan for heating surfaces** – FIRE 020
facilitates cleaning or unloading of the ash from the heating surfaces
- **Heat shield** – FIRE 023
patented cover for the front window to reduce heat radiation during summer operation
- **Adapter for external combustion air supply** – FIRE 024
already integrated in the boiler if ordered; connection for plastic pipes Ø 75 mm.
- **Covering screen, platinum silver** – FIRE 025
140 mm deep, for covering the boiler connections at the side and rear
- **Covering screen, quartz beige** – FIRE 026
140 mm deep, for covering the boiler connections at the side and rear
- **Mounting pedestal for FireWIN** – FIRE 022
for initial installation without finished floor screed
- **Fully automated feed unit** – FIRE 040
with maintenance-free suction turbine in storage room and standard hose connection downwards.
- **Hose connection at top for feed unit** – FIRE 041
- **Fully automated changeover unit with 3 pcs. Suction wands** – PMX 042
- **Delivery and return air hose** with earthing DN 50/25 m – PMX 013
- **Metal pipes** for delivery and return air straight – FIRE 044
for routing the feed hoses downwards close to the exhaust pipe without fire risk
- **Metal pipes** for delivery and return air curved – FIRE 045
for routing the feed hoses to the left/right close to the exhaust pipe without fire risk

For the Installer

- **Connecting piece for return air hose** – PMX 0131
- **Fire protection collars** (2 pieces) incl. masonry attachment – BIO 010
- **Floor plate**

	Suitable for mounting base	Dimensions (W x D x H)	Order no.	For Austria, Switzerland	For Germany
Glass floor plate, transparent	-	850 x 700 x 6	FIRE 032	X	X
Floor plate Black-coated steel plate with section for mounting base	X	1139 x 550 x 3	FIRE 033	X	-
Floor plate, Black-coated steel plate with section for mounting base	X	1239 x 1000 x 3	FIRE 034	-	X
Floor plate, Black-coated steel plate	-	1139 x 550 x 3	FIRE 035	X	-
Floor plate, Black-coated steel plate	-	1239 x 1000 x 3	FIRE 036	-	X



The technical fire protection requirements for the ground and/or dimensions¹⁾ of the floor plate should be observed in accordance with applicable regulations, standards and guidelines.

- **Ribbon cable for feed unit** – FIRE 042
8 x1 mm² and 5 x 2.5 mm²; 15 m roll
- **Ribbon cable for feed unit** – FIRE 043
8 x1 mm² and 5 x 2.5 mm²; 50 m roll



Please note: **Two separate cables are required** for connecting the boiler to the suction turbine – this is a requirement of the guarantee conditions! (E.g. accessory FIRE 042 or FIRE 043.)

- **Stainless steel flue accessory DN 100 mm**
Pipes, bends, pipe clamp, wall trim ring
- **Filling coupling set** – PMX 014
NW 100 mm, 2 Storz A couplings with 0.5 m pipe and blockable blind covers, incl. fastening material
- **Z-bracket (2 pcs. at 2 m)** – PMX 016
incl. bolts and dowels for storage room door
- **Baffle plate** – PMX 017
made from plastic (1500 x 1500 x 2 mm) incl. fastening material for storage room
- **Pipe clamp** for earthing the filling and return air lines Ø 100 mm and attaching them to the wall
- **Pipes and bends (natural aluminium)** for extending the filling and return air pipes Ø 100 mm
- **Sheet steel tank and fabric tank in various sizes**

For the Installer

2.2 Taking in

FireWIN is delivered without cladding (door, cover, side panels) on a pallet, without wood partitions. The cladding parts are in a separate cardboard box. The taking-in weight is less than 200 kg, the taking-in width is 55 cm.

2.3 Installation

2.3.1 Installation room

Basically, any room with normal air humidity and living space temperature in the living area is suitable for installation, providing it has a flue connection with an adequate draught (see technical data for flue requirements) and satisfies the statutory regulations and directives.

Note: Due to the operating and flame noises, we do not recommend installing the device in bedrooms or quiet rooms.

FireWIN is not allowed to be installed in rooms that are very dusty or humid (e.g. bathrooms, sanitary rooms, etc.). The combustion air must be free from halogens and hydrocarbons (detergents, e.g. chlorine, ammonia, fluorine, etc.) otherwise malfunctions may occur.

The installation room should not be too small otherwise the room could be overheated by the heat radiation. The recommended rule of thumb is: The installation room should account for at least 15% of the area to be heated.



The boiler must be installed in dry, frost-free premises!

Limits (maximum): Air humidity: 85% at 25° room temperature (noncondensing)
Room temperature +2 to 40°C

2.3.2 Heat radiation

The viewing panel of the FireWIN means it is inevitable that heat will be radiated into the installation room. The distribution of heat between air and water heating is approx. 15 : 85 % without the heat shield and approx. 9 : 91 % with the heat shield (accessory FIRE 023).

The following should be noted:

- Heating domestic water in summer:

Heat radiation always heats up the installation room when domestic water is being heated. Although the amount of radiated heat can be significantly reduced by using the patented heat shield (accessory FIRE 023), it can never be totally prevented.

This means it may not be possible to rule out overheating the installation room on hot days and, above all, during the summer months.

To remedy this, we recommend heating domestic water using an alternative system such as solar.

- Heating surfaces/radiators in the installation room:

The heat radiation from FireWIN has been reduced to the minimum necessary, therefore a corresponding heating surface or radiator should also be installed in the installation room. Heating surfaces in the installation room are essential when the system is combined with alternative heat generators (solar, accumulator tank or solid fuel boiler) – Fig. 2.

We recommend using thermostat heads in the installation room.

- Minimum room size:

FireWIN very rapidly provides the necessary amount of heat at very low building heat demands or in autumn/spring. Despite the fact that the boiler quickly reduces its output to the minimum level or actually switches itself off entirely, there will nevertheless be a corresponding amount of heat radiation into the installation room.

This means it may not be possible to rule out overheating the installation room on hot days and, above all, during the autumn/spring.

As a remedy, we recommend having an installation room with a minimum size of approx. 15 % of the entire area to be heated) – Fig. 2.

For the Installer

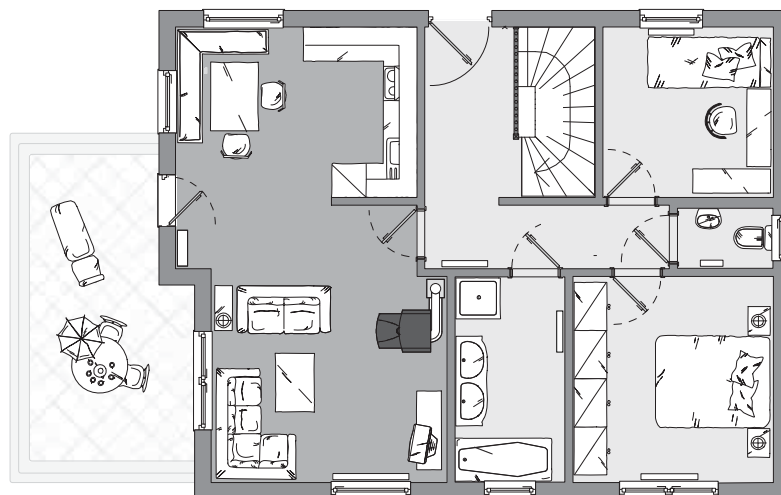


Fig. 2 FireWIN in an installation room (more than approx. 15 % of the entire area to be heated)

2.3.3 Installation place

- The minimum service clearances from flammable materials and for connections, cleaning and maintenance must be complied with – see point 3.2 Minimum service clearances.
- FireWIN must be placed directly on a non-flammable base plate (e.g. accessory FIRE 030 or FIRE 032).



The configuration of the entire system must comply with technical fire protection requirements in accordance with the applicable regulations, standards and guidelines.

For the Installer

2.3.4 Combustion air

An adequate supply of combustion air is absolutely essential. The following combustion air flow is required for operation at max. heat output:

FireWIN 90 (9 kW): approx. 20 m³/h

FireWIN 120 (12 kW): approx. 26 m³/h

There are various possible ways of supplying the combustion air:

- a) Operating with room air
(Combustion air supply from the installation room or adjacent room)
- b) Operating independently of the room air
(Combustion air supply from ventilation draught in the chimney)

Note: There may be an induction noise from the air supply induction point (air opening in the device), depending on the modulation. The noise can be transferred outside or into an adjacent room by relocating the air supply induction point.

Negative pressures in the installation/induction room with point a) **Operating with room air** are not permitted. The function and safety of FireWIN is affected when combining with room ventilation systems and combustion air supply from the installation room or adjacent room. Room ventilation systems must switch off automatically when the negative pressure in the device is more than 4 Pa below the external pressure. Special ventilation systems are available for controlled living area ventilation in combination with solid fuel systems – refer to information provided by the manufacturers of ventilation systems.

If ventilation systems (e.g. extractor hoods or pneumatic pumping systems, etc.), we recommend routing the combustion air according to point b) **Operating independently of the room air**. This means it is possible to decouple the combustion air from the air conditions in the installation room to a large extent.

In addition, the device is equipped as standard with a pressure monitoring device in the fire box in order to guarantee safe operation of the device.

- a) **Operating with room air:**
(Combustion air supply from the installation room or adjacent room)

Always ensure there is a sufficient combustion air supply (no windows and doors that provide a complete air seal).

Combustion air supply from a well ventilated adjacent room via an air intake pipe.

The combustion air is carried along an air intake pipe from a well ventilated adjacent room (e.g. stairwell) to the FireWIN. This avoids the induction noise in the installation room during operation. The accessory FIRE 024 is also required for this variant. The air supply is carried in commercially available plastic pipes ¹⁾ Ø 75 mm. The maximum induction length is 9 m, each 90° bend¹⁾ reduces the length by 1 m.

Combustion air supply directly from the installation room:

The combustion air is drawn directly by the device from the installation room, therefore the installation room has to be adequately ventilated.



Malfunctions or complaints occasioned by inadequate combustion air will not be covered by the guarantee!

- b) **Operating independently of the room air:**
(Combustion air supply from ventilation draught in the chimney)

This variant is to be preferred over operating with room air, because it ensures that there will always be sufficient combustion air and that the induction noise during operation will be transferred to the outside.

The accessory FIRE 024 is required for this operation. The air supply is carried in commercially available plastic pipes of diameter 75 mm. The maximum induction length is 9 m, each 90° bend reduces the length by 1 m.

For the Installer

Air intake from ventilation draught in the chimney; flue in the chimney:

The combustion air is drawn in through an unobstructed ventilation draught in the chimney – Figs. 3, 4. The openings for the intake air and the flue gas are only allowed to be located with a square with a 500 mm side length. This ensures that the same air pressure always prevails in the openings (even in very windy conditions).

Only flue gas systems that have been tested and approved for solid fuel applications, such as the Schiedl Absolut with thermal ventilation, the Plewa air flue gas system Univers KE or the Universal pipe flue with thermal vent may be used.

Opening

The opening should be designed such that a dangerous volume of flue gases is not sucked away into the vent and wind-related pressure fluctuations impact as evenly as possible on the vent and flue gas shaft.

If using barred air inlet openings, the opening's free cross-section should be increased by at least 20 % compared with air intake cross-sections defined in detail X. The mesh width of the barred openings should not be any less than 10 mm.

Conditions:

$$H_U \geq 2 D_h$$

$$h_A \geq 5/8 D_h \text{ and } h_A \geq 10 \text{ cm}$$

$$0 \text{ cm} \leq e \leq 8 \text{ cm}$$

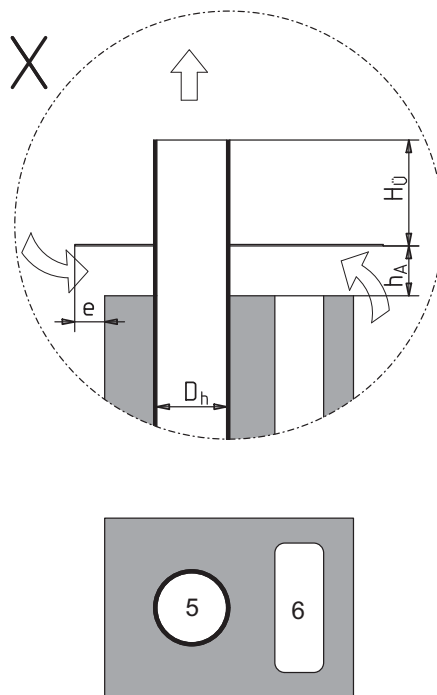


Fig. 3 Cross-section of ventilation draught and flue

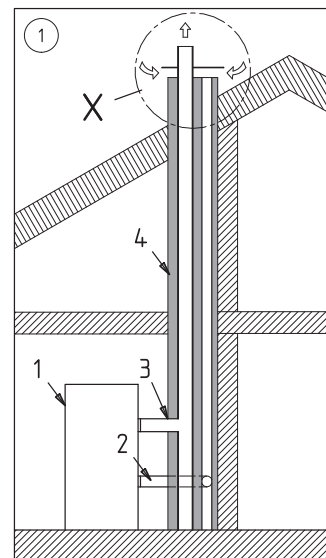


Fig. 4 Flue in the chimney, air supply in a free ventilation draught

Legend

H_U Distance from opening of flow-out plate
 h_A Distance of flow-out plate from head of supply air shaft and/or flue gas shaft
 e Distance of flow-out plate from exterior walls
 D_h Inner diameter of internal pipe

1FireWIN
 2Combustion air line
 3Connecting piece
 4Air/flue gas system
 5Flue
 6Air line

For the Installer

2.4 Dimensional sketches

2.4.1 FireWIN flue gas and air supply connection

All dimensions in mm:

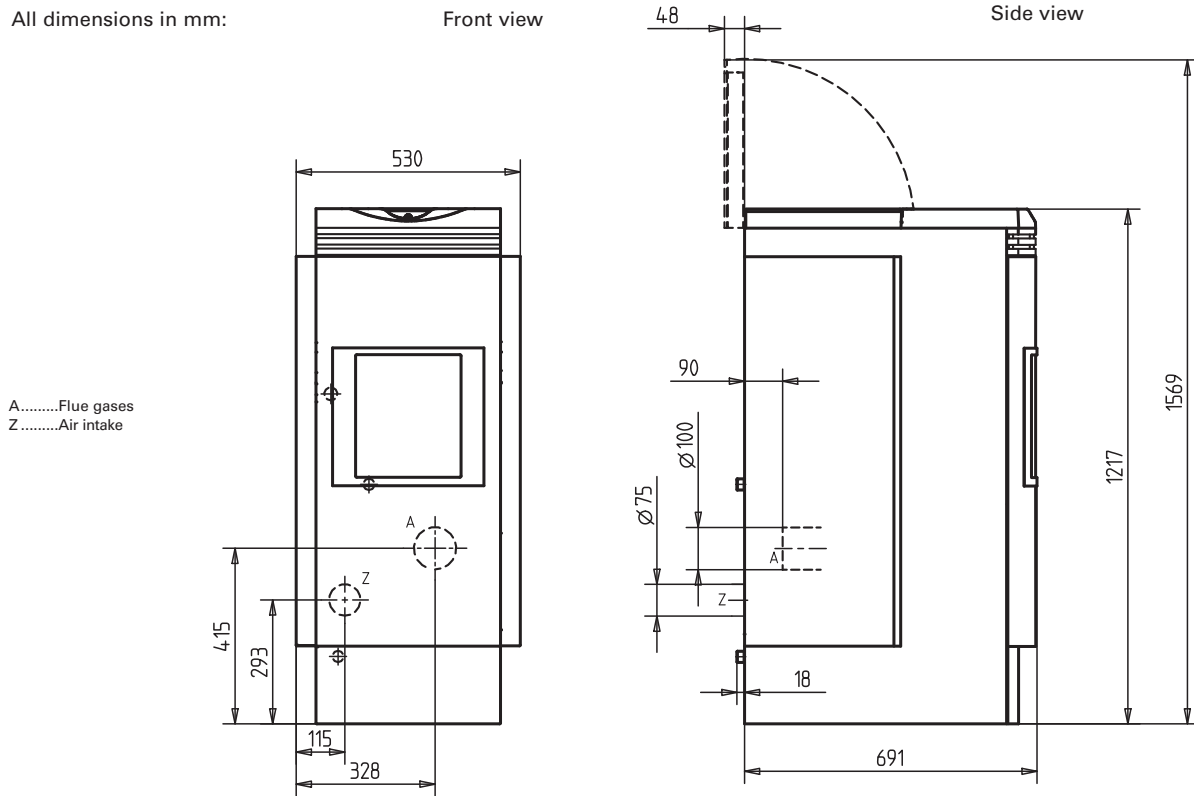


Fig. 5 FireWIN flue gas and air supply connection

Standard:

Accessories – AZB 057, AZB 055 for exhaust pipe connection in the middle:

- 1Double exhaust pipe bend rigid – AZB 057
- 2Pipe clamp – AZB 055

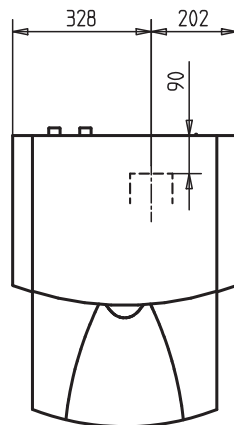


Fig. 6 FireWIN flue gas connection – standard

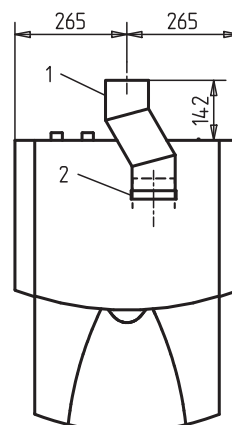
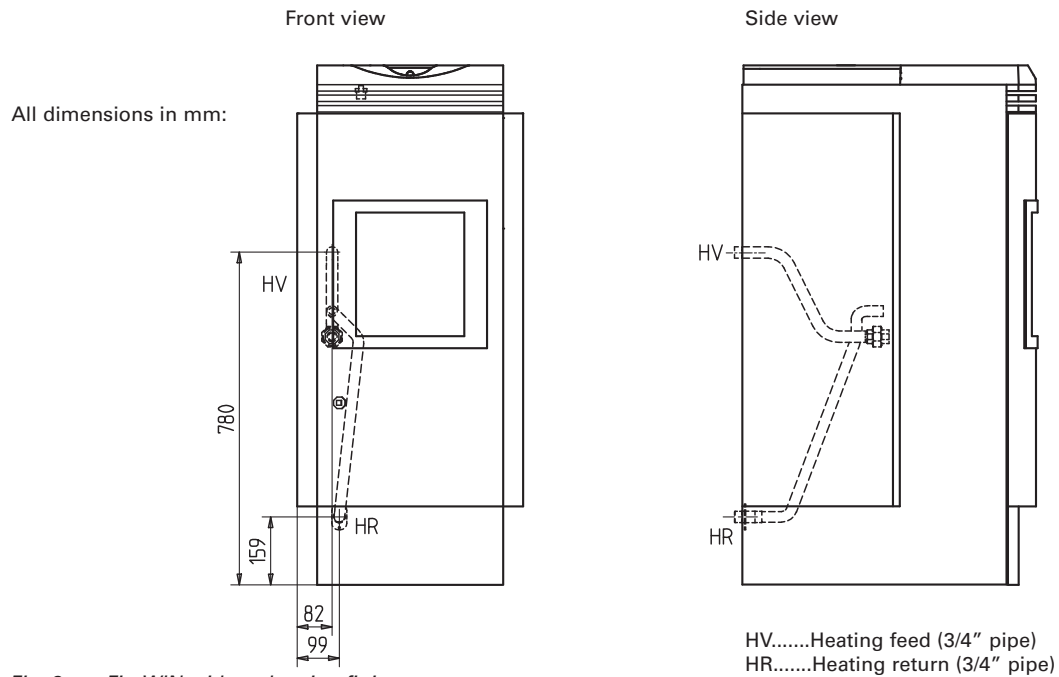


Fig. 7 FireWIN flue gas connection – accessories: AZB 057, AZB 055

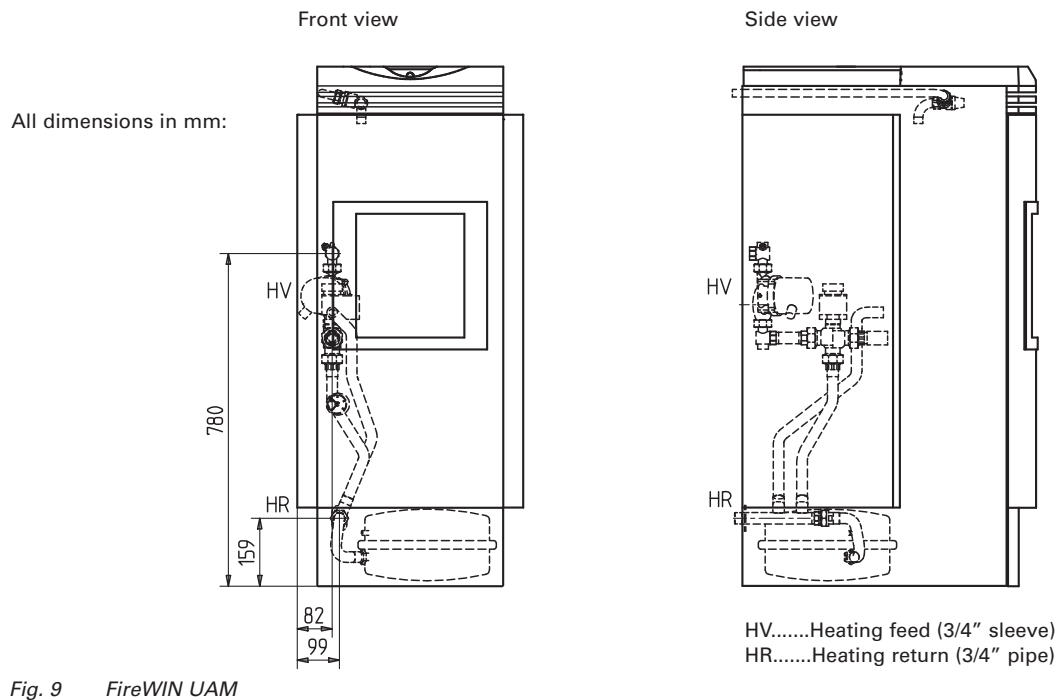
For the Installer

2.4.2 FireWIN without heating fittings



2.4.3 FireWIN – UAM

with circulation pump, expansion tank 12 l, motorised mixing valve, safety valve and pressure gauge



For the Installer

2.4.4 FireWIN – UAML

with circulation pump, hot water tank feed pump with gravity brake, expansion tank 12 l, motorised mixing valve, safety valve, pressure gauge and supplied gravity brake for heating circuit

Note: when using the FIRE 025 and 026 covering screens, all connections must be positioned under the exhaust pipe because the covering screens are fully closed above the exhaust pipe.

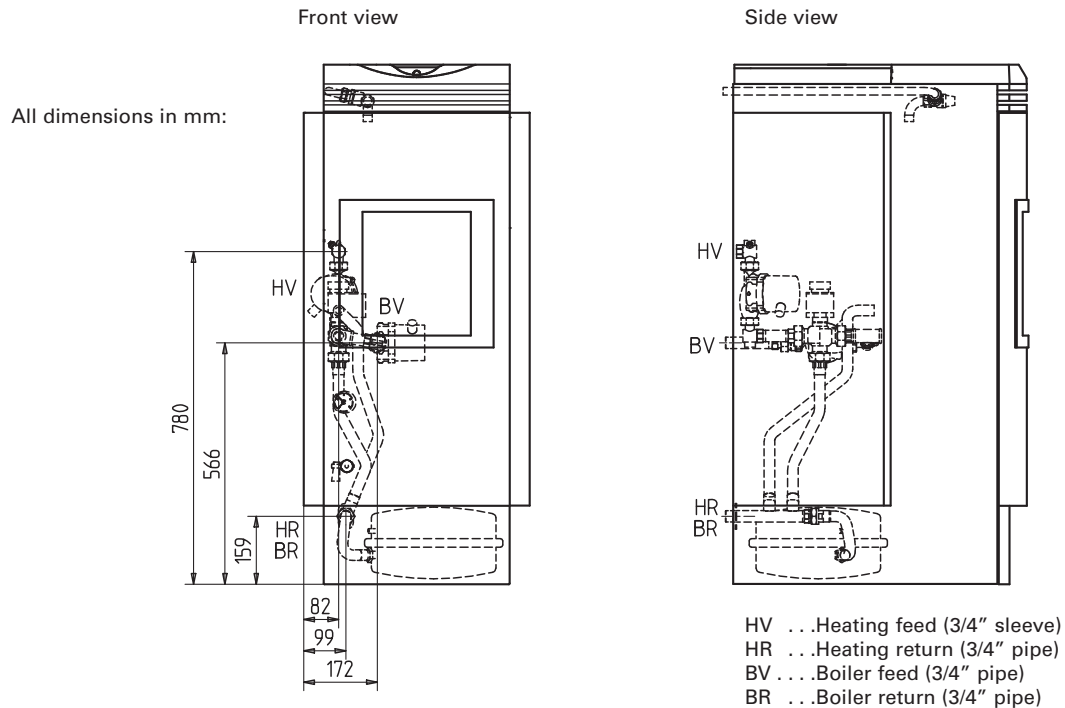


Fig. 10 FireWIN UAML

2.4.5 Suction turbine

Note: The hose connection to the changeover unit can be turned through 180° to the other side.

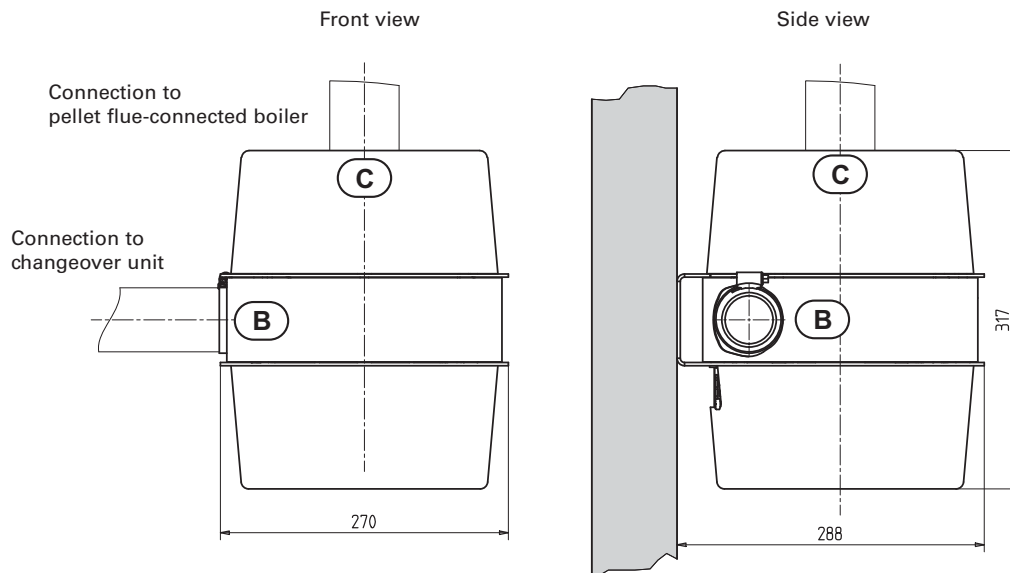


Fig. 11 Suction turbine

For the Installer

2.4.5 Mounting base – FIRE 022

for initial installation of FireWIN without finished floor screed

- 1Sheet steel floor plate with recess for mounting base (FIRE 032 or FIRE 033)
- 2Floor structure with lining
- 3Concrete ceiling – provided by customer

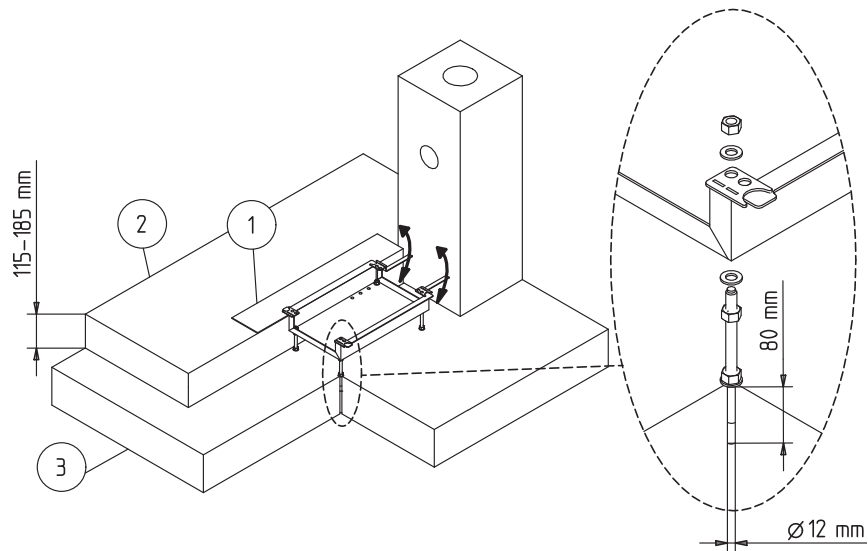


Fig.. 12 FireWIN mounting base

For the Installer

2.5 Minimum service clearances for fire protection, cleaning and maintenance

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

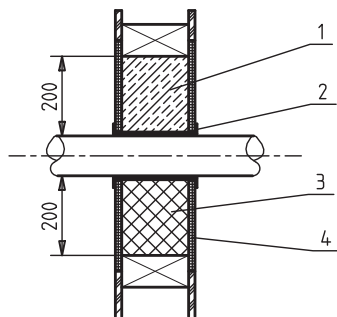


The configuration of the entire system must comply with technical fire protection requirements in accordance with the applicable regulations, standards and guidelines.

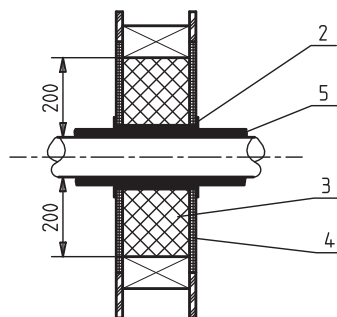
2.5.1 Masonry feed-throughs for the exhaust pipe

Examples of masonry feed-throughs tested by the IBS – Institut für Brandschutztechnik und Sicherheitsforschung (Institute for Fire Protection Technology and Safety Research)

Multi-layer flammable wall



Multi-layer flammable wall



Non-flammable wall

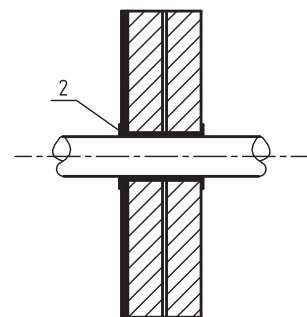
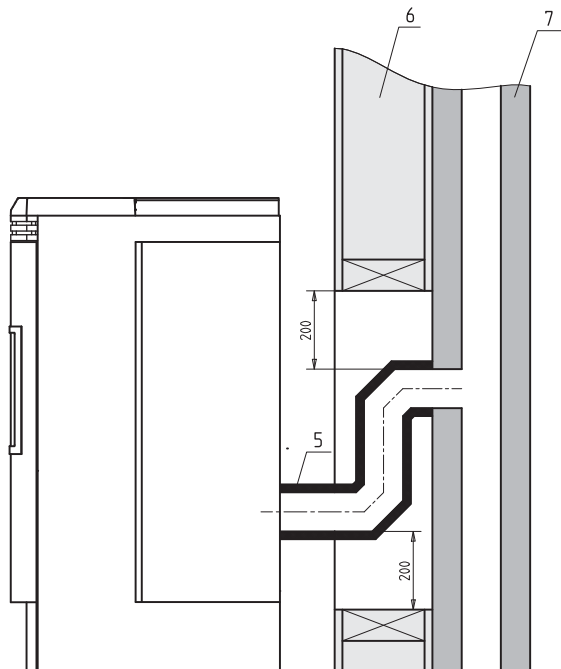


Fig. 13 Tested masonry feed-throughs for exhaust pipe

Multi-layer flammable wall

There must be a gap of 200 mm from flammable components all round the exhaust pipe.



All dimensions in mm:

- 1Concrete fill
- 2Lining pipe
- 3Cavity fill with non-flammable material (e.g. rock wool)
- 4Non-flammable cover
- 5Exhaust pipe insulation 20 mm
techn. data of insulation:
– Mineral wool insulation
– Melting point: > 1000 °C
– Thermal conductivity: < 0.04 W/mK
– Minimum thickness: 20 mm
- 6Multi-layer flammable wall
- 7Flue

Fig. 14 Tested masonry feed-throughs for exhaust pipe

For the Installer

2.5.2 Minimum service clearances with flue gas tube connection straight back

Dimension	Clearance	Description
a	800 mm	Minimum clearance in radiation area (front window) from flammable materials
b	500 mm	Minimum lateral clearance from non-movable objects (e.g. wall)
c	50 mm	Minimum lateral clearance from movable objects (e.g. furniture)
f	400 mm	Minimum clearance from flammable walls with non-insulated exhaust pipe
	200 mm	Minimum clearance from flammable walls with insulated exhaust pipe (20 mm) ²⁾
		Minimum clearance from flammable walls with tested double-walled insulated exhaust pipe, acc. to accreditation of connecting piece ³⁾

Note: The intake air line must be non-flammable (e.g. flexible aluminium tube) if the exhaust pipe is uninsulated. If the walls are non-flammable, there are no fire protection reasons for a minimum service clearance from the exhaust pipe and no need to insulate the exhaust pipe.

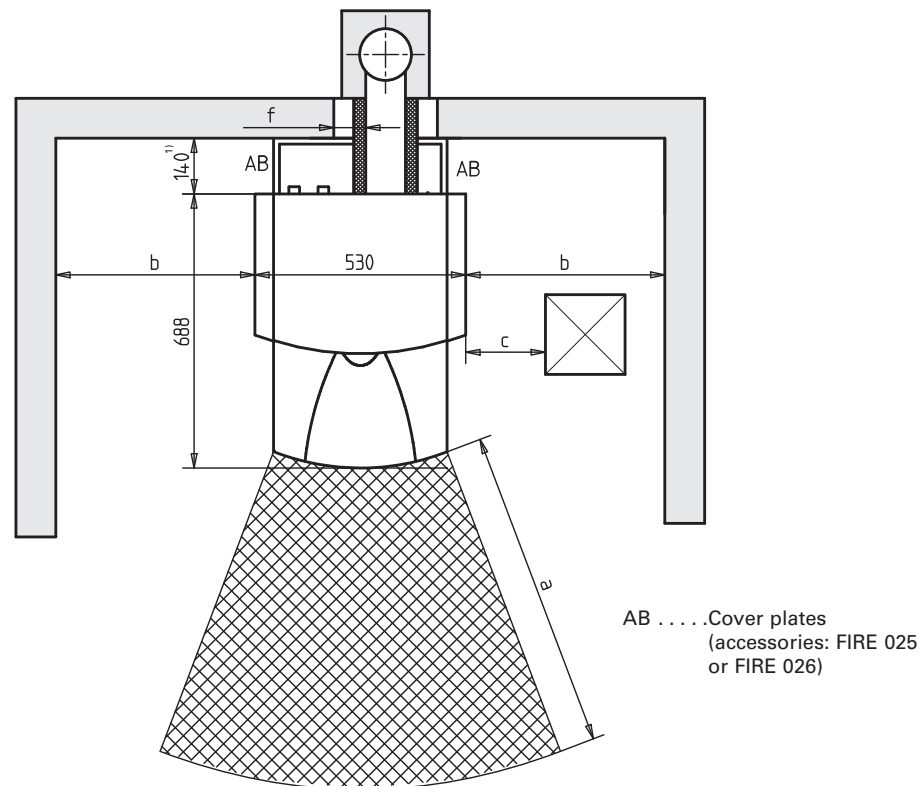


Fig. 15 FireWIN – view from above

- ¹⁾ When the fully automated feed unit FIRE 040 is installed subsequently, the pellet flue-connected boiler must be closed again by a heating expert. Subsequent installation is highly complicated and can only be done by our customer service, with charging based on the actual work done.
- ²⁾ Technical data for exhaust pipe insulation: Mineral wall insulation; melting point: >1000 °C; thermal conductivity: < 0.04 W/mK
- ³⁾ The minimum service clearance is determined by the design specifications (Ø of the double pipe) of the flue gas system used or the minimum service clearances demanded in the accreditation.

For the Installer

2.5.3 Minimum service clearances with flue gas tube connection to the left or right side

Dimension	Clearance	Description
a	800 mm	Minimum clearance in radiation area (front window) from flammable materials
b	500 mm	Minimum lateral clearance from non-movable objects (e.g. wall)
c	50 mm	Minimum lateral clearance from movable objects (e.g. furniture)
d ¹⁾	>500 mm	Minimum clearance from flammable walls with non-insulated exhaust pipe
	>305 mm	Minimum clearance from flammable walls with insulated exhaust pipe (20 mm) ²⁾
	>210 mm ³⁾	Minimum service clearance from flammable walls, flue connection to left or right and tested double-walled insulated exhaust pipe ³⁾
	>250 mm ³⁾	
>140 mm	Minimum service clearance from non-flammable walls, flue connection to left or right	
f	400 mm	Minimum clearance from flammable walls with non-insulated exhaust pipe
	200 mm	Minimum clearance from flammable walls with insulated exhaust pipe (20 mm) ²⁾
	>50–70 mm ³⁾	Minimum clearance from flammable walls with tested double-walled insulated exhaust pipe, acc. to accreditation of connecting piece ³⁾

Note: The intake air line must be non-flammable (e.g. flexible aluminium tube) if the exhaust pipe is uninsulated. If the walls are non-flammable, there are no fire protection reasons for a minimum service clearance from the exhaust pipe and no need to insulate the exhaust pipe.

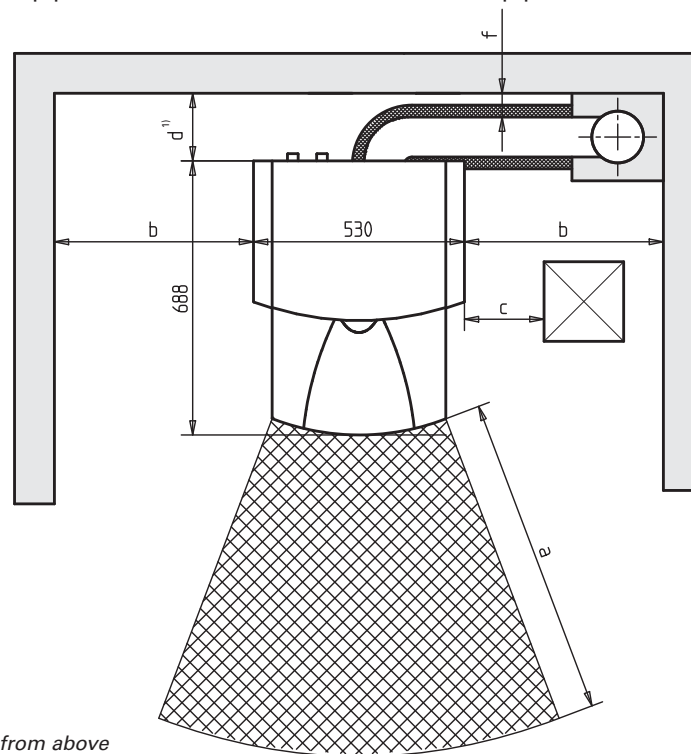


Fig. 16 FireWIN – view from above

- 1) When the fully automated feed unit FIRE 040 is installed subsequently, the pellet flue-connected boiler must be closed again by a heating expert. Subsequent installation is highly complicated and can only be done by our customer service, with charging based on the actual work done.
- 2) Technical data for exhaust pipe insulation: Mineral wall insulation; melting point: >1000 °C; thermal conductivity: < 0.04 W/mK
- 3) The minimum service clearance is determined by the design specifications (Ø of the double pipe) of the flue gas system used or the minimum service clearances demanded in the accreditation.

For the Installer

2.6 Routing variants of delivery and return air hose

2.6.1 Routing / connection options for boiler



The delivery and return air hose must be replaced by non-flammable steel pipes in the area of the **insulated** exhaust pipe.

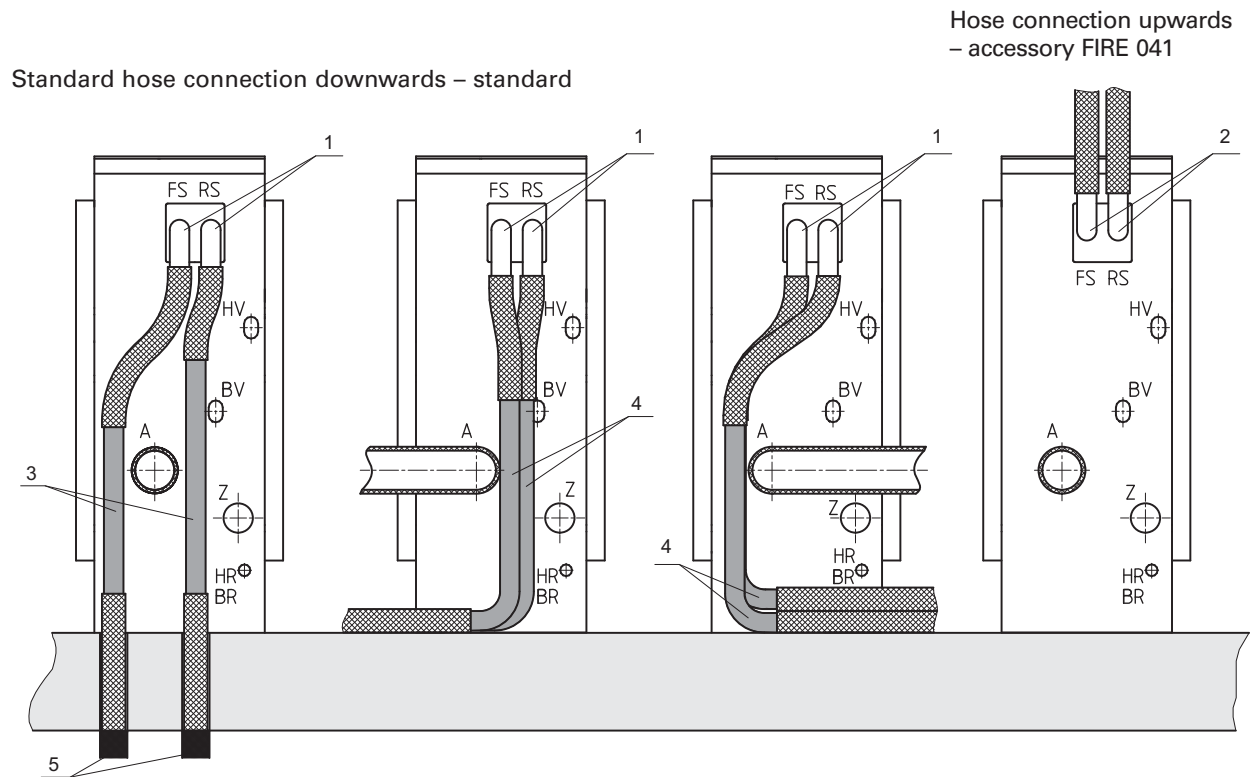


Fig. 17 FireWIN with feed and storage room – view from rear

- 1Standard hose connection downwards
- 2Hose connection upwards – accessory: FIRE 041
- 3Metal pipes for delivery and return air straight – accessory: FIRE 044
- 4Metal pipes for delivery and return air curved – accessory: FIRE 045
- 5Fire protection collars incl. masonry attachment - accessory: BIO 010

- FSTransport hose
- RS . . .Reverse air flow hose
- AExhaust pipe
- ZAir supply connection
- HV . . .Heating feed
- HR . . .Heating return
- BV . . .Hot water tank feed (type UAML only)
- BR . . .Hot water tank return (type UAML only)

For the Installer

2.6.2 Storage room and feed system in living area or basement

With this routing variant, to avoid the formation of condensation inside the hoses, the temperature difference between the boiler installation room, suction turbine, changeover unit, hoses and storage room must not exceed 20 °C.



The configuration of the entire system must comply with technical fire protection requirements in accordance with the applicable regulations, standards and guidelines.

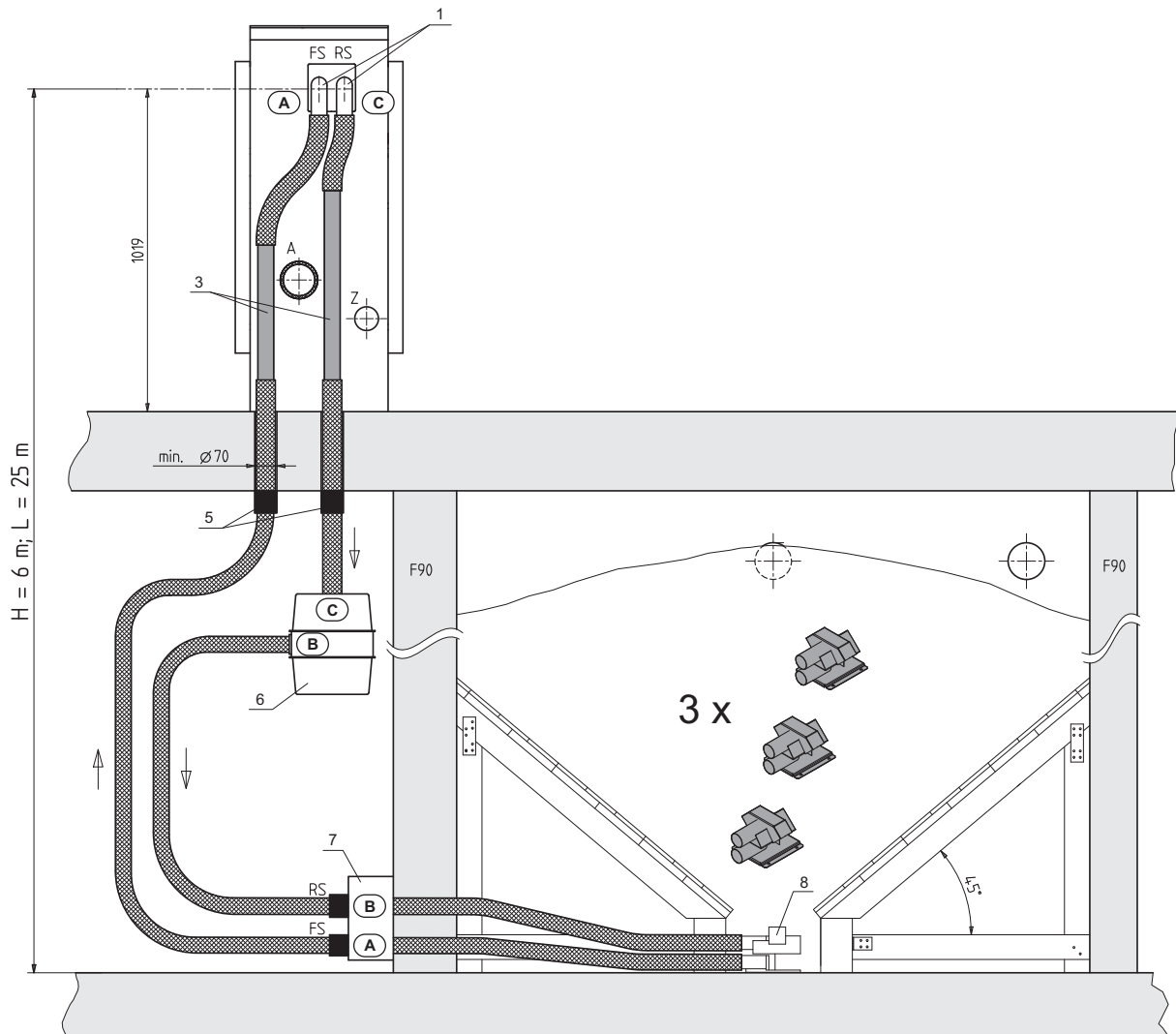


Fig. 18 FireWIN with feed and storage room in heated living area - View from rear

- 1 Standard hose connection downwards
- 2 Hose connection upwards – accessory: FIRE 041
- 3 Metal pipes for delivery and return air straight – accessory: FIRE 044
- 4 Metal pipes for delivery and return air curved – accessory: FIRE 045
- 5 Fire protection collars incl. masonry attachment – accessory: BIO 010
- 6 Suction turbine
- 7 Fully automated changeover unit – in accessory: PMX 042
- 8 Suction wands in storage room – in accessory: PMX 042

- FS Transport hose
- RS Reverse air flow hose
- A Exhaust pipe
- Z Air supply connection
- H Maximum transport height in metres
- L Maximum hose length in metres

For the Installer

2.6.3 Storage room and/or feed system in unheated non-living areas (e.g. attic)

If the temperature difference between the boiler installation room, suction turbine, changeover unit, hoses and storage room is greater than 20 °C, they must be routed as shown in the sketch, Fig. 19. In this case, only 2 suction probes may be connected as the 3rd connection is the idle position. This 3rd connection must be tightly sealed to prevent cold air from circulating in the hoses and condensation forming inside them.



The configuration of the entire system must comply with technical fire protection requirements in accordance with the applicable regulations, standards and guidelines.

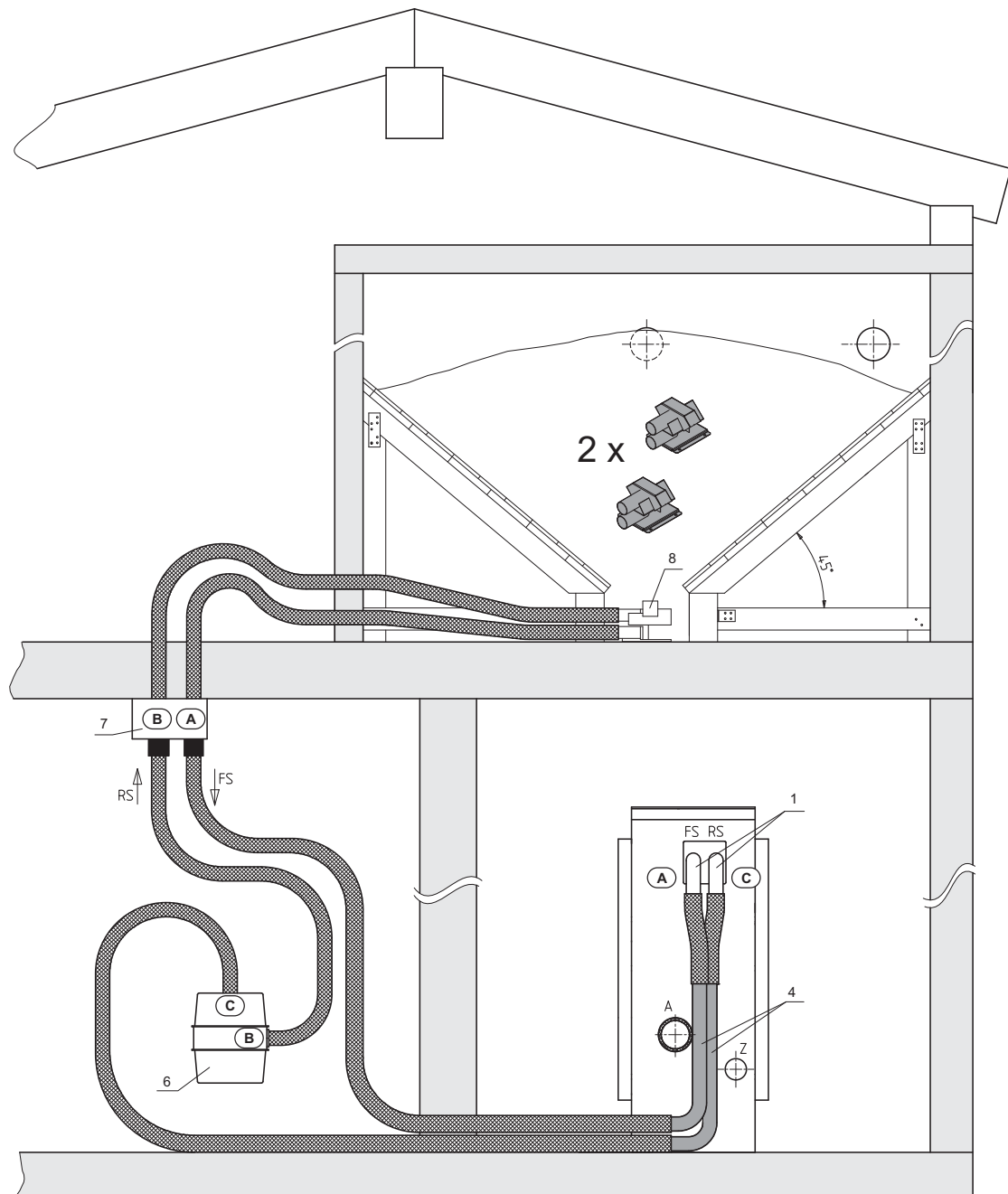


Fig. 19 FireWIN with feed and storage room in unheated living area - View from rear

For the Installer

2.7 System

The boilers are designed and approved as heat generators for hot water heating systems with a permissible flow temperatures of up to 90°C. The maximum flow temperature is factory-set at 75°C. They may be installed **only in sealed systems**.



The En 12828 standard must be followed!

2.7.1 Heating fittings

Safety valve 2.5 bar (in FireWIN versions UAM and UAML installed under the front cover as standard):

The safety valve is type-tested (code letter "H"). Only safety valves of this kind are allowed to be used. The **client must provide a safety valve in FireWIN versions without heating fittings**. The drainage line from the safety valve must be provided by the client. The line can be routed backwards on the left side between the pellet reservoir container and the left side panel – Fig. 20.

Break out the cut-out on the rear wall. **Please note:**

- Have the function checked by an expert on start-up and at least once a year.

Break out the cut-out in the rear wall

Drain line from safety valve

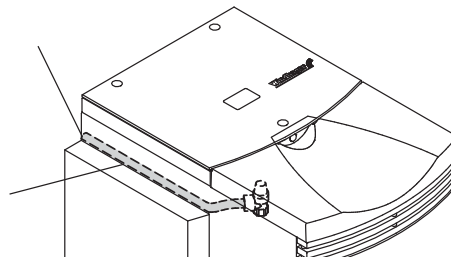


Fig. 20 Drain line from safety valve

Expansion tank:

An expansion tank must be installed in water heating systems in accordance with the technical regulations. The size of the expansion tank depends of the parameters of the heating system and must be calculated on a case-by-case basis. The flat pressure expansion tank installed in FireWIN versions is designed for a feed pressure of 1.0 bar and a content of 12 l.

An additional expansion tank must be provided by the client if this volume is not sufficient.

Pressure gauge (in FireWIN versions UAM and UAML installed at the front behind the cladding door as standard):

The system pressure should be at least 1 bar. Check the system pressure, more frequently at first and then twice a year later on.

Bleeder valve:

Installed as standard in all boilers under the front cover. In addition, the variants UAM and UAML also have a manual ventilation function behind the left side panel at the feed above the circulation pump.

In boilers without fittings, ventilation is to be provided on the **feed** if the **feed is routed downwards**.

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 assured that excess heating will not result from a lack of water in the system.

The boilers are equipped with an electronic temperature regulator and a type-tested safety temperature limiter.

If the boiler is above the radiators, then a low-water cut-off must be installed.

For the Installer

Circulation pump (installed as standard in FireWIN versions UAM and UAML):

The circulation pump shaft is lubricated by water, therefore the pump is never allowed to run without water.

Model: HUP 15-4.0 U

Installation dimension: 130 mm

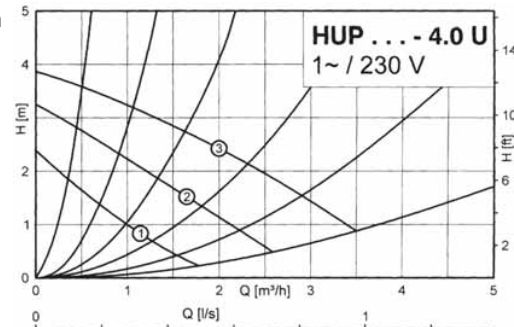


Diagram 1 Pump characteristic curve

2.7.2 Heating circuits

A motorised mixing valve is always required for the FireWIN in order to protect the boiler **and one must be fitted in each heating circuit**. A feed contact thermostat (FK-001) must be installed for underfloor circuits. If required, the hydraulic fittings can be integrated in the boiler for 1 mixed heating circuit (UAM or UAML version).

2.7.3 Domestic water (hot water tank)

If FireWIN is used for loading a hot water tank, a gravity brake must be installed in the heating return. This is provided as standard with FireWIN UAML.

2.7.4 Return temperature

The return flow temperature increase installed as standard means that FireWIN can be operated with a return temperature down to min. 20 °C. No external return flow temperature increase is required.

2.7.5 Accumulator tank

In principle a pellet boiler system does not need a buffer tank. A guaranteed minimum heat consumption is required, e.g. fit a consumer circuit that cannot be blocked off or do not fit thermostat valves on all radiators.

Exceptions:

If the total heating requirements of the building according to the ÖNORM M 7500 or EN 12831 calculation are less than 50 % of the boiler's nominal output, we would recommend integrating a buffer tank in the system. This means that the FireWIN loads the buffer tank with a return hold-up group. (Hydraulic system SYS 402, please contact Windhager for planning advice)

Boiler installation criteria:

- controlled residential area ventilation is an advantage if the boiler is being installed in a small space or if building heat loads are low
- heat shield (accessory: FIRE 023) needed
- the room temperature in the installation room is too high
- FireWIN operating times are set by the system control

For the Installer

2.7.6 Heating water

- a) The chemical composition of the heating water must meet the specifications of ÖNORM H 5195 Part 1 or VDI 2035 P1. According to ÖNORM M 5195 Part 1, the condition of the heating water must be checked every 2 years by a heating technician in order to avoid corrosion and sediment accumulation in the heating system.

The check must be performed once every year in heating systems with more than 1500 litres of heating water.

- b) The pipe lines and heating appliances should be thoroughly rinsed before the boiler is connected.
- c) To protect the boiler from contamination from the heating system, **installation of a dirt trap** is required in old or existing systems (mesh size 0.5 mm) with maintenance cocks installed in the return line.
- d) If oxygen diffusion or sludge build-up cannot be prevented, the system must be segregated by means of a heat exchanger.
- e) If antifreeze is used, a **minimum volume of 20 % antifreeze** is required, otherwise corrosion prevention is not guaranteed.

2.7.7 Water-side resistance (pressure loss)

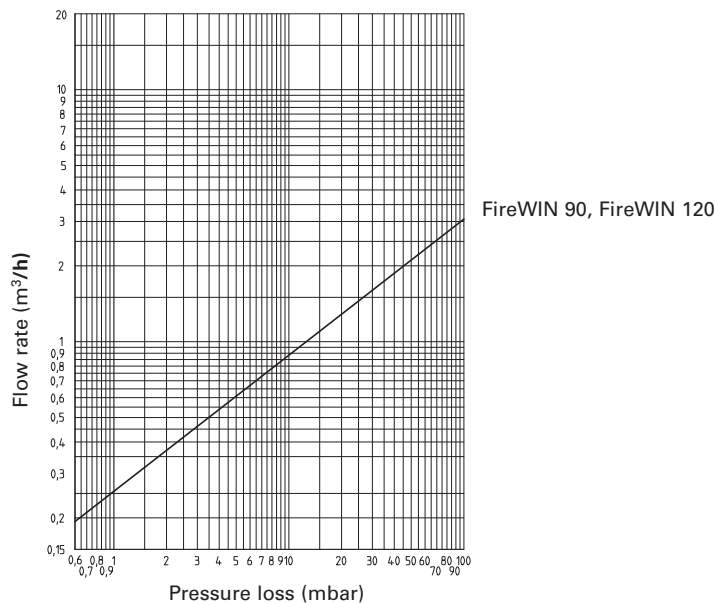


Diagram 2 water-side resistance - FireWIN

For the Installer

2.8 Installing the cladding

The cladding comprises the following parts:

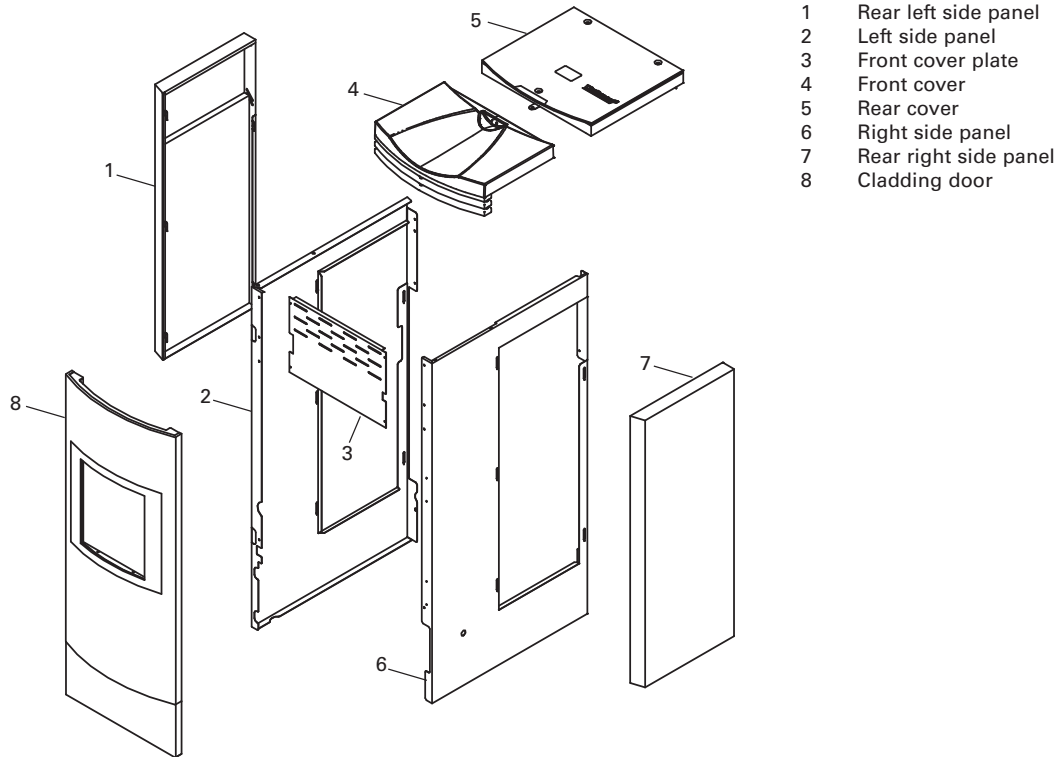


Fig. 21 Cladding parts

Installation sequence:

- Fit „rear cover“ (part 5) at the rear, use 4 nuts to secure to reserve supply container – Fig. 22.
- Connect 4-pin plug of InfoWIN cable (5-pin plug remains free), secure earth cables for screw to reserve supply container – Fig. 23.

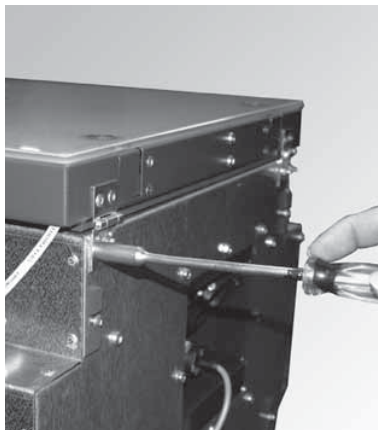


Fig. 22 Fit rear cover at 4 points

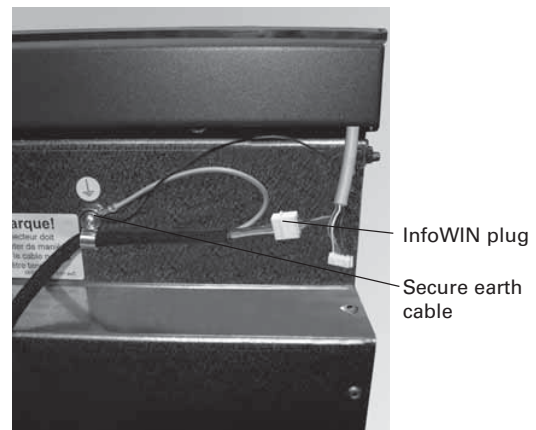


Fig. 23 Connect 4-pin InfoWIN plug, fit earth cable to reserve supply container

For the Installer

- Screw on the gas springs for FireWIN with manual filling (Fig. 24) or the cover holder and cover clamping plate on the cover for FireWIN with fully automated pellet feed – Fig. 25.

FireWIN with manual filling

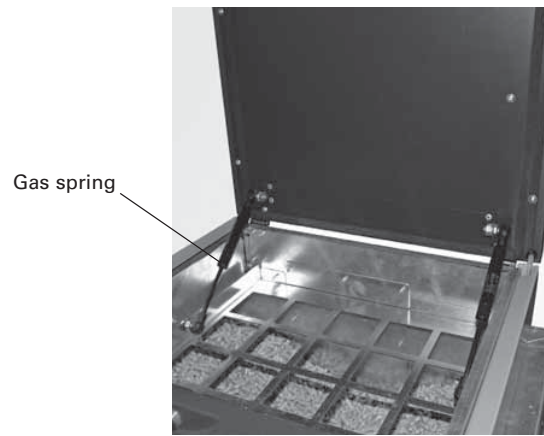


Fig. 24 Screwing on gas springs

FireWIN with fully automated pellet feed

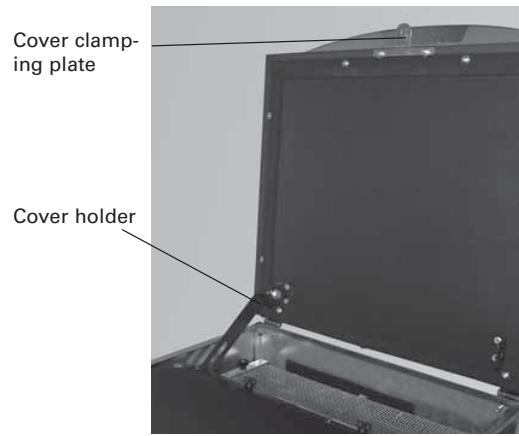


Fig. 25 Screwing on the cover holder and cover clamping plate

- Secure the "rear cover" (part 5) using 1 screw – Fig. 26, only for FireWIN with fully automated pellet feed.
- Take pressure gauge provided out of ash pan and screw into shut-off valve at front – Fig. 27.

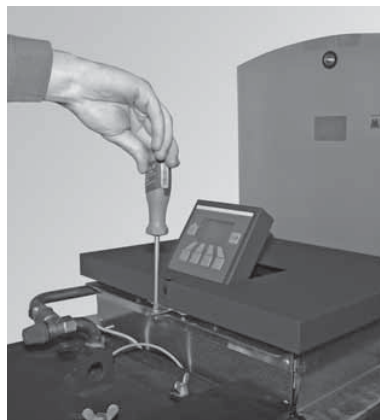


Fig. 26 Securing the front cover with a screw



Fig. 27 Screwing pressure gauge into shut-off valve

For the Installer

- Secure the “left side panel” (part 2) to the boiler at the rear using 3 screws – Fig. 28 and front using 2 screws – Fig. 29.

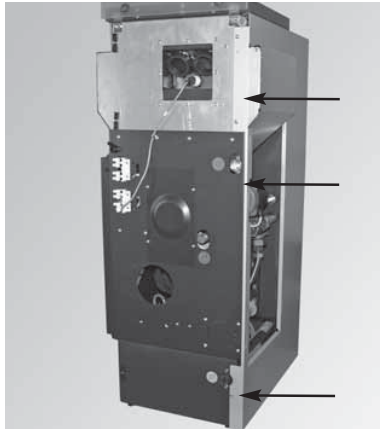


Fig. 28 Screwing the side panel on at the rear at 3 points

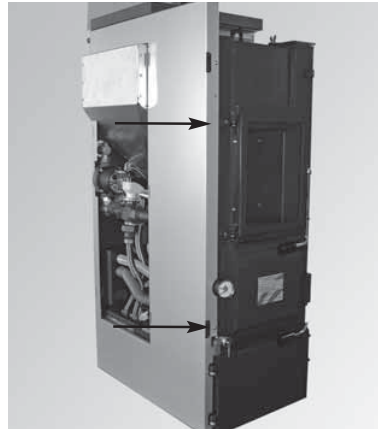


Fig. 29 Screwing the side panel on at the front at 2 points

- Secure the “front cover plate” (part 3) onto the side panel using 2 screws – Fig. 30.
- Secure the “right side panel” (part 6) to the boiler at the rear using 3 screws, at the front using 2 screws and screw onto the “front cover plate” (part 3) – Fig. 31.



Fig. 30 Screwing the front cover plate on at the front at 2 points



Fig. 31 Mounting the right side panel in the same way as the left side panel

For the Installer

- Hook in the "rear side panels" (parts 1 and 7) – Fig. 32.
- Secure the "rear left side panel" using a screw at the rear – Fig. 33.

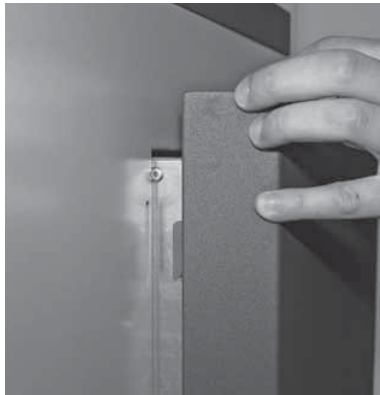


Fig. 32 Hooking in side panels at the rear

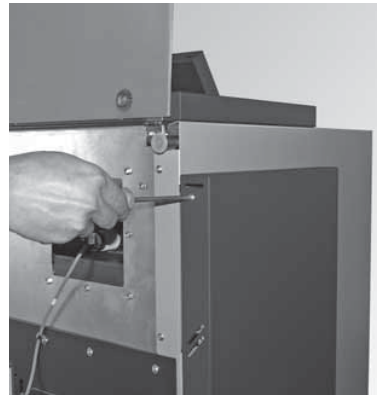


Fig. 33 Securing the left side panel using a screw at the rear

- Screw both hinges of the "cladding door" (part 8) onto the left side panel using – Fig. 34.
- Check the setting of the door safety switch; close the door, the door safety switch must be operated about 2 – 3 mm before the door magnet closes (audible clicking of the switch); adjust the actuation play with the screw if necessary – Fig. 35.



Fig. 34 Inserting the hinges in the side panel



Fig. 35 Checking the setting of the door safety switch

- Place the "front cover" (part 4) onto the side wall with its pins in the holes provided on the side panel – Fig. 36.
- Press the button (Fig. 37), it must be easy to open the glass cover, align the front cover if necessary.



Fig. 36 Putting on the front cover



Fig. 37 Checking the button moves easily

For the Installer

2.9 Installing the hose connection for fully automated supply

Insert the "standard hose connection downwards" (enclosed in ash pan) or "hose connection upwards" (accessory FIRE 041) into the prepared openings on the rear of the reserve supply container and secure with a screw to prevent slipping out – Figs. 38, 39.

Routing variants of the hoses and the non-flammable steel pipes in the area of the exhaust pipe, see section 2.6. Installation of the hoses, see installation instructions in the installation instructions for "Suction turbine FIRE 25"

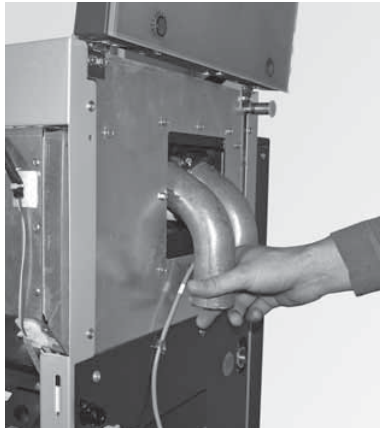


Fig. 38 Connecting the hose connection to the reserve supply container

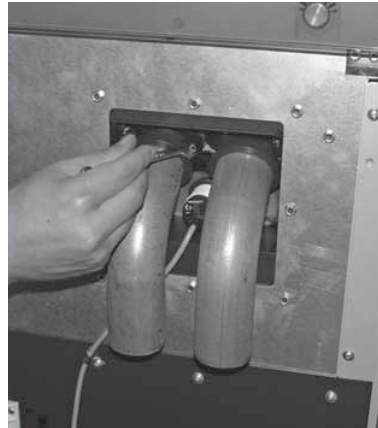


Fig. 39 Securing the hose connection with a screw

2.10 Mounting plate for non-flammable steel tubes within the area of the exhaust pipe

That the steel tubes of the supply do not rest against the exhaust pipe, the enclosed mounting plate can be installed in the back at the rear wall between steel tubes and exhaust pipe – Fig. 40

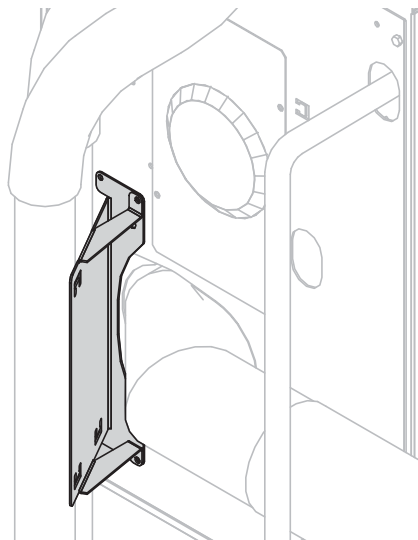


Fig. 40 Mounting plate for supply steel tubes

For the Installer

2.10 Installing cover plates

Installation sequence:

- Separate the required feed-throughs for the exhaust pipe, feed and return, transport hoses, etc. from the pre-punched cover plates.
- Every other hexagon screw (5) at the rear on each side panel should not be screwed all the way to the stop (1.5 mm gap).
- Hook both side cover plates (2 and 3) in at these screws and fix onto one another using 2 pcs. plastic rivets (4).
- Put on the top cover plate (1) and secure with 2 pcs. plastic rivets (4).

Cover plate FIRE 025 or FIRE 026
comprising:

- 1Top cover plate
- 2Right cover plate
- 3Left cover plate
- 44 pcs. plastic rivets
- 54 pcs. hexagon screws M5 x 12 TT

Other illustrated accessories acc. to price list:

- 6Double exhaust pipe bend rigid – AZB 057, for FireWIN exhaust pipe connection in the middle
- 7Mounting pedestal – FIRE 022, for pre-mounting FireWIN without finished floor screed

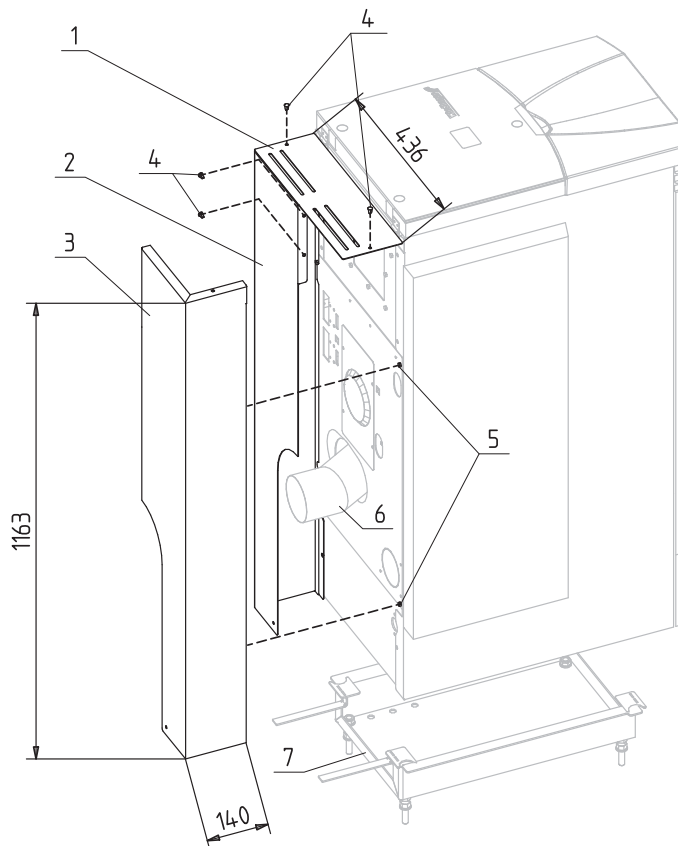


Fig. 41 Installing the cover plates

For the Installer

2.11 Installing the exhaust pipe

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



Any section of this exhaust line that only rises slightly (up to 30°) or is horizontal is not allowed to be more than 1 m in length.

- b) Avoid 90° bends, 45° bends are better.
c) Make the flue connection at 45° if possible.
d) Do not push the exhaust pipe too far into the flue.
e) **Do not seal the exhaust pipe completely into the flue.** Connection with flexible exhaust pipe inlet into the flue. The vacuum fan can cause sound transmissions that create noise pollution.
f) **The entire exhaust line** should be **sealed** (incl. cleaning aperture) because there can be positive pressure in the exhaust pipe for a short period during the starting phase.
g) **Always** fit exhaust pipes together with the **sleeve pointing upwards** (smaller diameter end of stainless steel flue accessory fits exactly onto flue outlet in FireWIN), so that any condensation flowing back cannot leak out of the exhaust pipe – Fig. 42.

The parts must be secured with pipe clamps to ensure adequate leak-tightness and stability. Pipelines are not allowed to sag.

- h) **The entire exhaust line** (particularly after 1 m length) should be **insulated** in order to prevent or minimise condensation.
i) An additional measuring opening is only allowed to be drilled in the stainless steel exhaust pipe using a stainless steel drill bit.

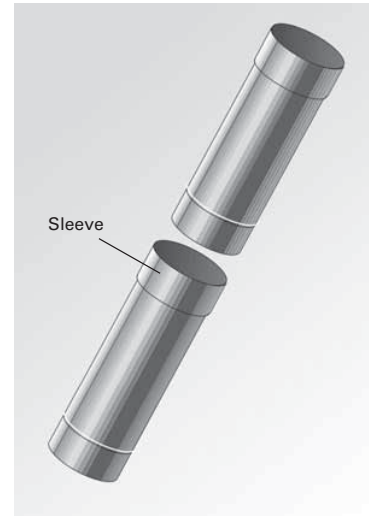


Fig. 42 Stainless steel exhaust pipe



In fully automated pellet feed, the exhaust pipe must be insulated and the delivery and return hose must be replaced by non-flammable steel pipes in this area.



Energy-saving intake regulators or explosion flaps are not allowed to be installed in the living area. Comply with the statutory regulations and directives.

For the Installer

Stainless steel flue accessory DN 100

Wall thickness of the stainless steel flue accessory is: 0.6 mm

Push-in depth into sleeve: 80 mm

Not illustrated: Wall trim ring AZB 056, length compensator 200 – 400 mm with adhesive tape

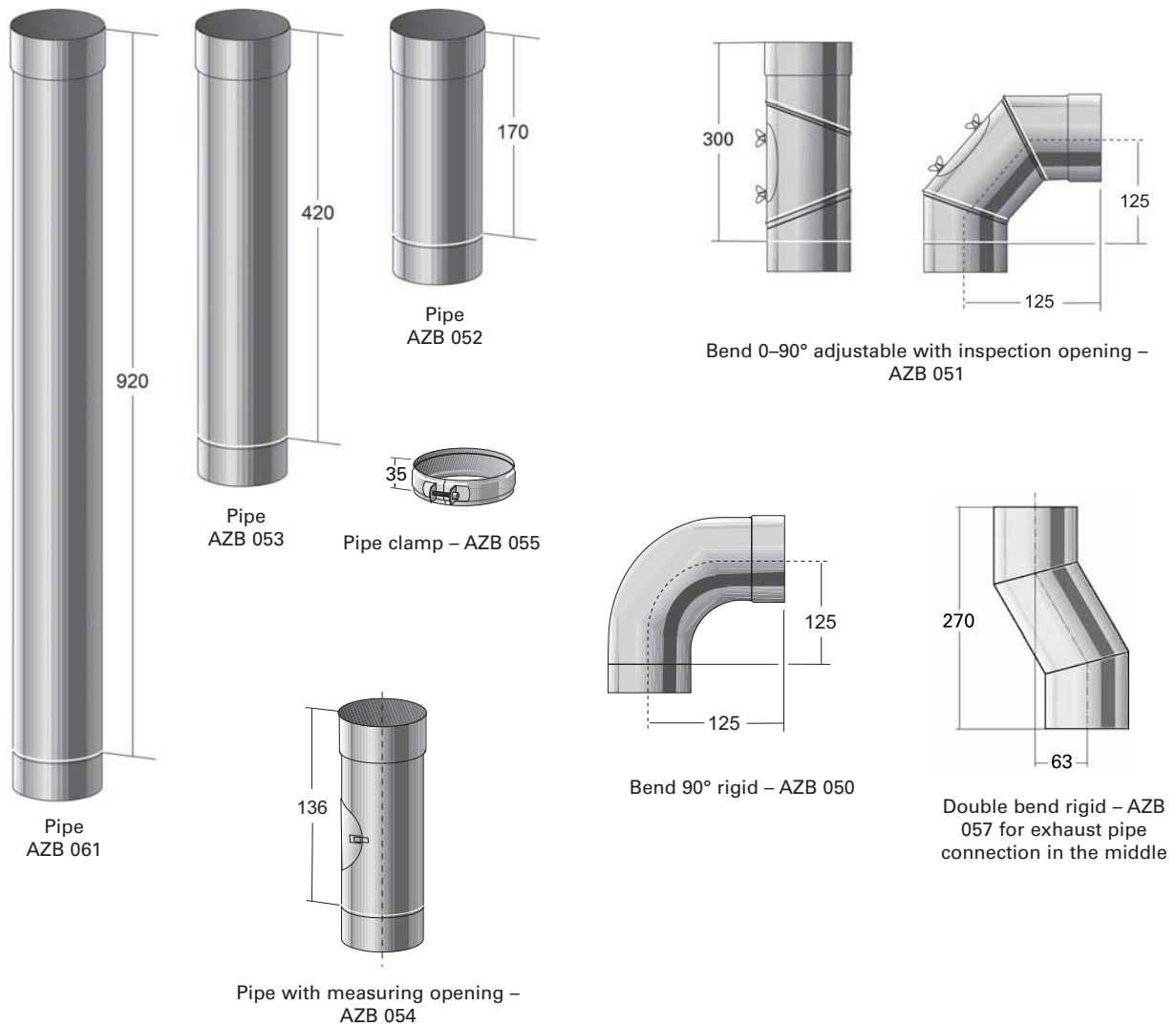


Fig. 43 Stainless steel flue accessory

For the Electrician

3.1 Electrical connections

The pellet flue-connected boiler and related accessories are designed to be installed only in dry areas (protection type IP 10).

Installation of electrical components may only be performed by a qualified technician. The regulations and specifications of ÖVE, VDI, SEV and local ordinances must be followed.



- The mains connection must be protected against short circuit with a 13 A delayed-action fuse.
- On site, the technician must install an all-pole disconnection with at least 3 mm contact gap at the mains access point. Current-operated r.c.d. protection switches are considered all-pole disconnections (ÖVE regulation).

The boiler is pre-wired and internally fused with a T 6.3 A fine-wire fuse to protect against short circuit. If an **MES module** is ordered (including boiler sensor), this will be installed in **FireWIN** and electrically wired at the factory. When there are **several MES modules**, they are **all installed in the wall-mount casing** to facilitate operation:

Maximum MES module switching capacity: Relay outputs: 230 VAC, 6 A (2 A inductive), 50 Hz
WVF and solar modules with X1/X2 contact: Solid-state relay: 230 VAC, 1 A



Be sure to note the separate wiring of the extra-low voltage line (sensor) and low-voltage line (230 VAC)!

The electrical power consumed depends on whether a fully automated pellet feed (suction turbine) is connected, and on the number of actuators supplied (pumps, mixing valves, etc.).

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

Electrical connection of the FireWIN pellet flue-connected boiler:

with fine-wire PVC sheathed cables, e.g. H05VV-F (YMM-J)

Electrical connections of the suction turbine:

Note: Each cable **must be routed separately together with** the delivery and return air hose. The cables can be routed together with the hoses through the fire protection collars to the suction turbine or to the changeover unit.

Connection of FireWIN pellet flue-connected boiler to the suction turbine:

Two separate cables (5 and 8-core) are required – this is a requirement of the guarantee conditions!
The cable cross-section must be selected according to the length of the electric cables so that **the suction turbine always has a stable voltage supply (min. 220 VAC under load)**.

Recommended accessory:
Ribbon cable **5 x 2.5 mm²** and **8 x 1 mm²** (FIRE 042 or FIRE 043).

Note: The 8-core cable must be connected in the suction turbine, because this also carries the LON bus and is required for service work.

Connection of suction turbine to the changeover unit:

Two separate cables (3 and 4-core) are required – this is a requirement of the guarantee conditions!
Cable for limit switch (extra-low voltage): **min. 3 x 0.5 mm²** (not earthed)
Cable for changeover unit motor (low voltage): **4 x 1.5 mm²**

- 1 FireWIN pellet flue-connected boiler
- 2 Suction turbine
- 3 Changeover unit

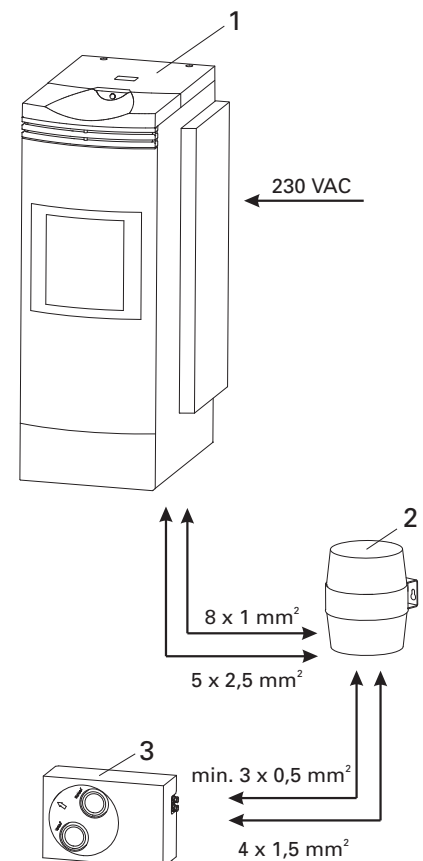


Fig. 44

For the Electrician

Electrical power supply 230 VAC (mains plug) and electrical connections:

Electrical power supply 230 VAC (mains power plug) and the control panel with all electrical connections are located behind the right side panel cladding. The mains plug, safety thermostats, fuse and MES module are located on the outside of the control panel. The control panel includes the main board and the connection terminals (screwless spring-type terminal) for connecting the control system – Fig. 45.



Fig. 45 Control panel



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

To access the control panel:

- The rear right side panel must be unhooked and removed upwards.
- Disconnect the mains power plug and remove the screw behind it – Fig. 46.
- Swivel out the control panel, remove 2 screws and take off the inner cover – Fig. 47.

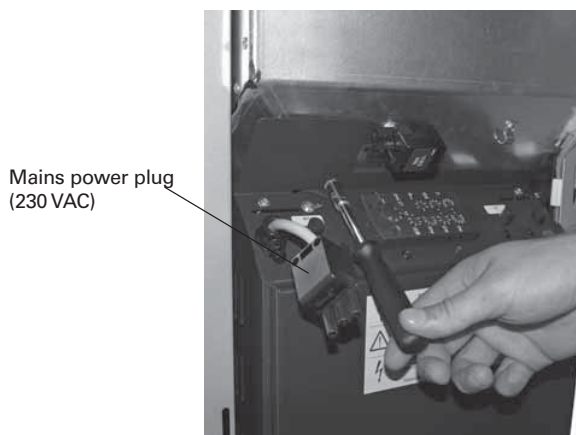


Fig. 46 Disconnecting the mains power plug (230 VAC) and removing the screw.

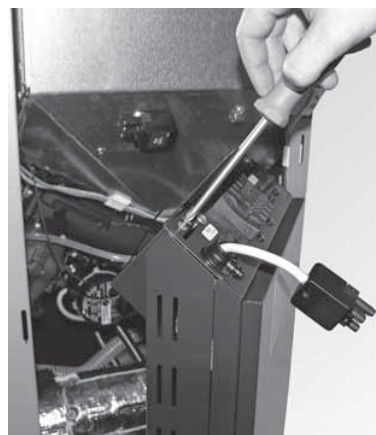


Fig. 47 Removing 2 screws, taking off the inside cover

For the Electrician

All electrical components (sensors, etc.) on the terminal blocks (screwless spring-type terminals) should be connected with fine-wire PVC sheathed cables and be fixed at the rear with strain reliefs – Figs. 48, 49.

Two separate cables are required for connecting the boiler to the suction turbine or changeover unit – this is a requirement of the guarantee conditions!

Recommended accessories: Ribbon cable FIRE 042 or FIRE 043; 5 x 2.5 mm² and 8 x 1 mm²

Guide the ribbon cable through the rectangular openings and secure with cable ties as strain relief – Fig. 50.



Each cable **must be routed separately together with** the delivery and return air hose. The cables can be routed together with the hoses through the fire protection collars to the suction turbine or to the changeover unit.

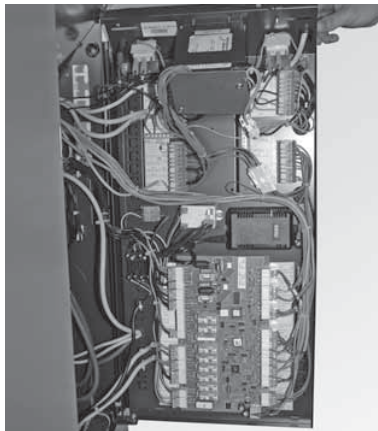


Fig. 48 Terminal blocks in the control panel

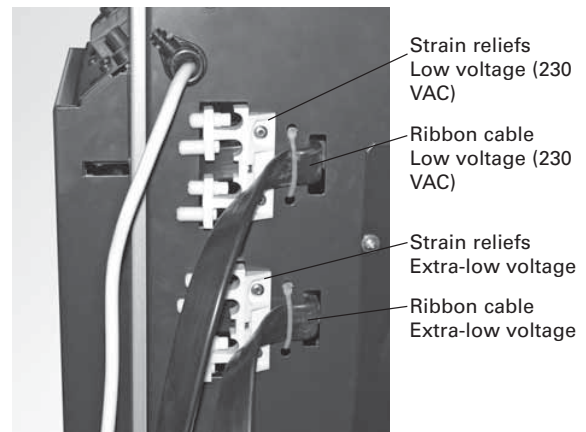


Fig. 49 Strain reliefs and feed-through for ribbon cable



Fig. 50 Cable feed-throughs – rear view

For the Service Technician

4.1 Initial start-up and operating instructions

Windhager Customer Service or the customer service partner will start up the boiler first of all, and will familiarize the customer with the system operation and cleaning of the boiler, with reference to the Operating Manual.

The following preconditions must be met before you order the initial start-up:

- 1.) Boiler installed correctly.
- 2.) System fully wired up electrically.
- 3.) System rinsed, filled and vented – heat consumption must be possible.
- 4.) Boiler connected to domestic water and filled.
- 5.) Sufficient quantity of fuel available (pellets, split logs, oil or gas).
- 6.) The customer must be present during start-up.

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

Start-up and maintenance are part of the guarantee requirements of the enclosed “guarantee limitations”.

Note: During the first few weeks after start-up, condensation can occur in the combustion chamber, ash pan and on the heating surfaces. This has no effect on the function and service life of the boiler.

4.2 Service and repair work

Service and repair may be performed only by appropriately qualified technicians.



Always disconnect the **mains power plug for service or repair purposes.**

After being switch off, the boiler and accessories are not completely without power! When replacing system components (pumps, mixing valves, etc.) prevent all power input by removing the mains power plug.

Remove the right side panel: Unhook the rear side panel, disconnect the mains power plug, remove the securing screw under the mains power plug (Fig. 51) and swivel open the control panel.

Remove the left side panel: Remove the securing screw at the rear on the left side panel (Fig. 52) and unhook the side panel.

Mains power plug
(230 VAC)



Fig. 51 Disconnecting the mains power plug and removing the screw.

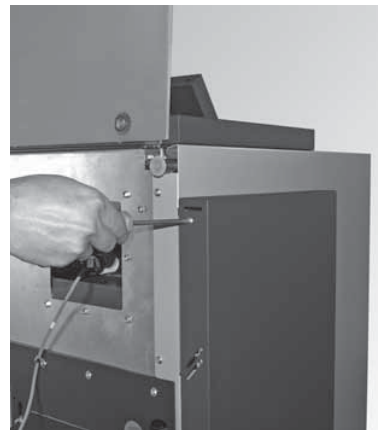


Fig. 52 Removing the securing screw

For the Service Technician

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

FireWIN pellet flue-connected boiler	Formula symbols	Unit	FW 090	FW 120
Set nominal thermal output	Q_N	kW	9.0	12.0
Nominal heat load (firing thermal output)	Q_B	kW	9.5	12.7
Volume concentration of CO ₂	σ (CO ₂)	%	12.0	12.3
Flue gas mass flow rate	\dot{m}	kg/s	0.0058	0.0076
Flue gas temperature	T_W	°C	105	125
Necessary feed pressure	P_W	Pa	5 (0) ¹⁾	5 (0) ¹⁾
Flue gas connection diameter		mm	100	100

¹⁾ Feed pressure 0 can be used in the calculation for marginal cases.

4.4 Technical data – General

FireWIN pellet flue-connected boiler	Unit	FW 090	FW 120
Boiler class according to EN 303-5		3	3
Set total thermal output	kW	9	12
Set water thermal output range	kW	3.8 – 7.8	3.8 – 10.4
Room thermal output range without heat shield (bottom) with heat shield (top)	kW	0.6 – 1.2 0.3 – 0.8	0.6 – 1.6 0.3 – 1.1
Firing efficiency Rated load			
Flue gas temperature Rated load/part load	°C	105/80	125/80
Water-side resistance $\Delta T = 20$ °K $\Delta T = 10$ °K	mbar	2.1 7.8	3.7 13.6
Boiler temperature control range	°C	60 – 75	
Max. operating pressure	bar	3	
Test pressure	bar	4.5	
Boiler water volume	l	30	
Pellet reservoir	l kg	60 approx. 37	
Weight (net)	kg	218	218
Dimensions W x D x H	mm	530 x 691 x 1230	
Electrical power consumption of pellet boiler:			
maximum current consumption	A	5.8	
maximum for igniting (ignition, motor, blower,)	W	860	
medium power for igniting (with purging, without flame stabilisation)	W	650	650
Heating operation Rated load Part load	W	44 33	50 33
Idle operation	W	8	

For the Service Technician

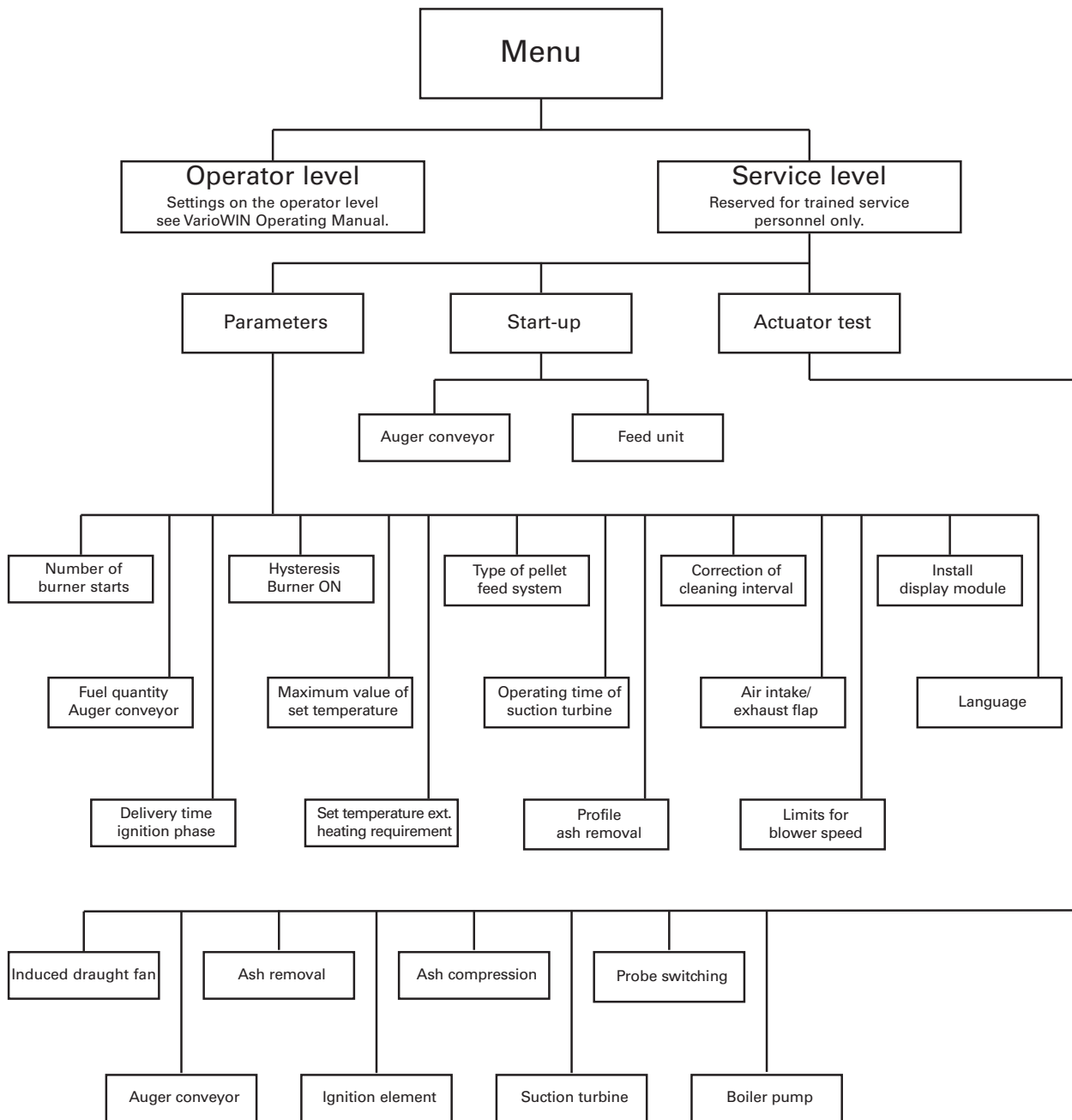
4.5 Service level

System parameters, start-up or actuator test can be displayed, modified and/or performed on the service level.



Only trained service personnel may perform **system modifications** on the service level.

Structure on the service level:



For the Service Technician

Service level

Pressing the *Menu* button changes the display to the “Operator level” and “Service level” – Fig. 53.

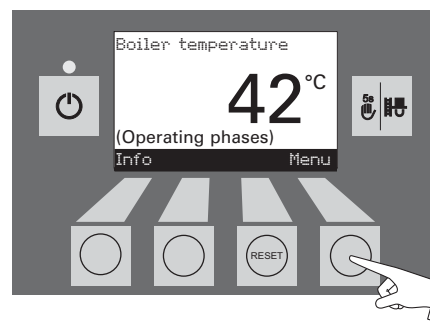


Fig. 53

Use the *arrow* buttons to select the “Service level” sub-menu (Fig. 54) and confirm with the *Choose* button – Fig. 55.

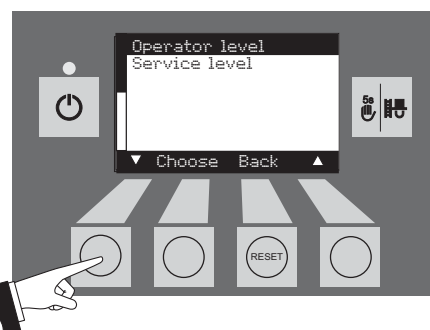


Fig. 54

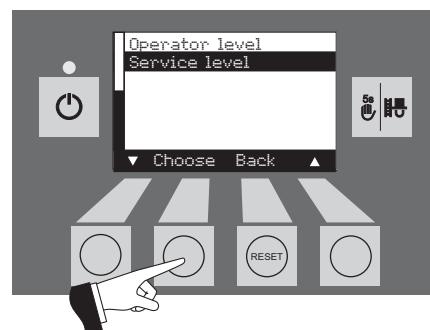


Fig. 55

Press the *5 s* button for longer than 5 seconds – Fig. 56 and select the required sub-menu of Parameters, Start-up or Actuator test using the *Choose* button – Fig. 57.



Fig. 56

Press for 5 seconds

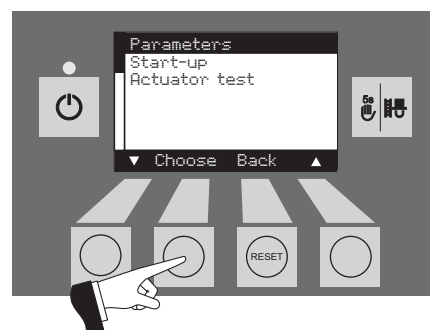


Fig. 57

The menu item or sub-menu item is exited by pressing the *Back* button or after a delay of 45 seconds.

For the Service Technician

4.5.1 Parameters

The following parameters can be selected with the *arrow* buttons, then confirmed using the *Choose* button.

- Number of burner starts
- Fuel quantity auger conveyor
- Delivery time ignition phase
- Hysteresis Burner ON
- Maximum value of set temperature
- Set temperature ext. heating requirement
- Type of pellet feed system
- Operating time of suction turbine
- Profile ash removal
- Correction of cleaning interval
- Air intake/exhaust flap
- Limits for blower speed
- Install display module
- Language
- Installation

Number of burner starts

The number of burner starts of the FireWIN is displayed – Fig. 58.

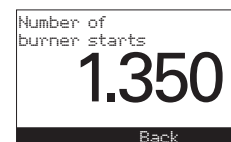


Fig. 58

Fuel quantity auger conveyor

The calculated fuel quantity (actual value) and the range is displayed in kg/h, and can be adjusted – Fig. 59.

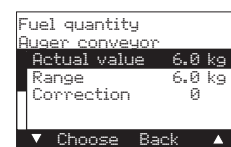


Fig. 59

	FireWIN	FW 90	FW 120
Actual value	Factory setting: Setting range:	6.0 kg/h ±2 kg of range	6.0 kg/h ±2 kg of range
Range	Factory setting: Setting range:	6.0 kg/h 6.0 – 8.0 kg/h	6.0 kg/h 6.0 – 8.0 kg/h
Correc- tion	Factory setting: Setting range:	0 ±5	0 ±5

Delivery time ignition phase

Fuel quantity in the ignition phase – Fig. 60.

FireWIN	FW 90	FW 120
Factory setting:	120 s	100 s
Setting range:	100 – 150 s	80 – 130 s

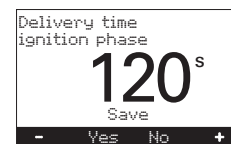


Fig. 60

Hysteresis Burner ON

Switching hysteresis for burner control – Fig. 61.

Factory setting: 5 K
Setting range: 0 – 20 K

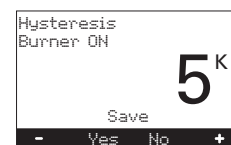


Fig. 61

For the Service Technician

Maximum value of set temperature

This is the maximum setpoint achievable in normal heating operation – Fig. 62.

Factory setting: 75 °C
Setting range: 60 – 75 °C

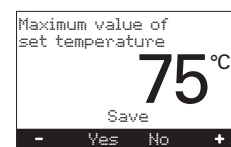


Fig. 62

Set temperature ext. heating requirement

This is the set temperature for external heating requirement – Fig. 63.

Factory setting: 70 °C
Setting range: 35 – 75 °C

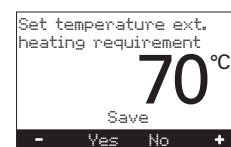


Fig. 63

Type of pellet feed system

Setting whether: operation without feed system, with 3 or 2 wands or with mixer (buried tank) – Fig. 64.

Factory setting: without feed system

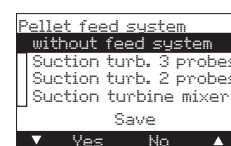


Fig. 64

Operating time of suction turbine

Factory setting: 80 s
Setting range: 50 – 120 s

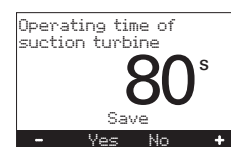


Fig. 65

Profile ash removal

This adjuster can be used to adjust the ash removal from the burner pot for different levels of pellet quality – Fig. 66.

Level 0: very low proportion of ash – no ash removal in modulation mode.

Level 3: very high proportion of ash (possibly formation of slag) – frequent ash removal in modulation mode

Factory setting: Level 1

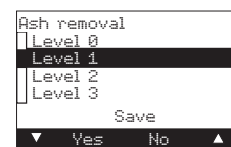


Fig. 66



Restore factory setting for next delivery of pellets.

Correction of cleaning interval

The cleaning interval is basically dependent on the proportion of ash in the pellets and the ash removal profile. This adjuster can be used to extend or shorten the cleaning interval by ±50 %.

The standard setting is a cleaning interval determined by testing. – Fig. 67.

Factory setting: 0 %
Setting range: ±50 %

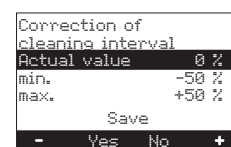


Fig. 67



If too long a cleaning interval is selected, the ash container may overfill.

For the Service Technician

Air intake/exhaust flap

Factory setting: Control OFF
 Operating time in s 300

Setting range: 30 – 600 s



The set operating time should be twice as long as the actual operating time of the air intake/exhaust flap.

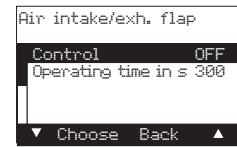


Fig. 68

Limits for blower speed

		FW 90		FW 120	
		minimum	maximum	minimum	maximum
Factory setting:	rpm	1250	2050	1250	2250
Setting range:	rpm	1150–1450	1950–2250	1150–1450	2150–2450
Step width:	rpm	50		50	

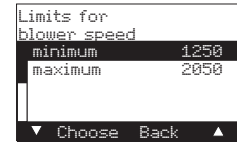


Fig. 69

Display module installation

This is not required for the FireWIN.



Fig. 70

Language

Selection of „Language“ for the display texts on InfoWIN.

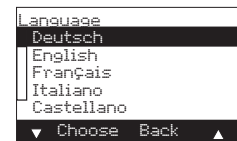


Fig. 71

For the Service Technician

4.5.2 Start-up

The auger conveyor and the feed can be selected on the Start-up level with the *arrow* buttons and the selection confirmed with the *Choose* button. A self-test is started at the end of the start-up.

Auger conveyor

The auger conveyor can be switched on for 6 minutes.

Feed

Depending on the set feed system, the feed and each probe including purging can be started up.

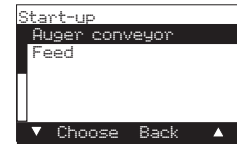


Fig. 72

4.5.3 Actuator test

The following actuators can be selected with the *arrow* buttons, then confirmed and started using the *Choose* button. The actuators are switched off again after 1 minute. A self-test is started at the end of an actuator test.

- Induced draught fan
- Auger conveyor
- Ash removal
- Ignition element
- Ash compression
- Suction turbine
- Probe switching
- Boiler pump

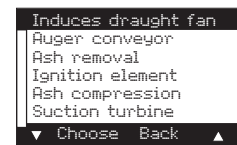


Fig. 73

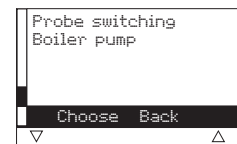


Fig. 74

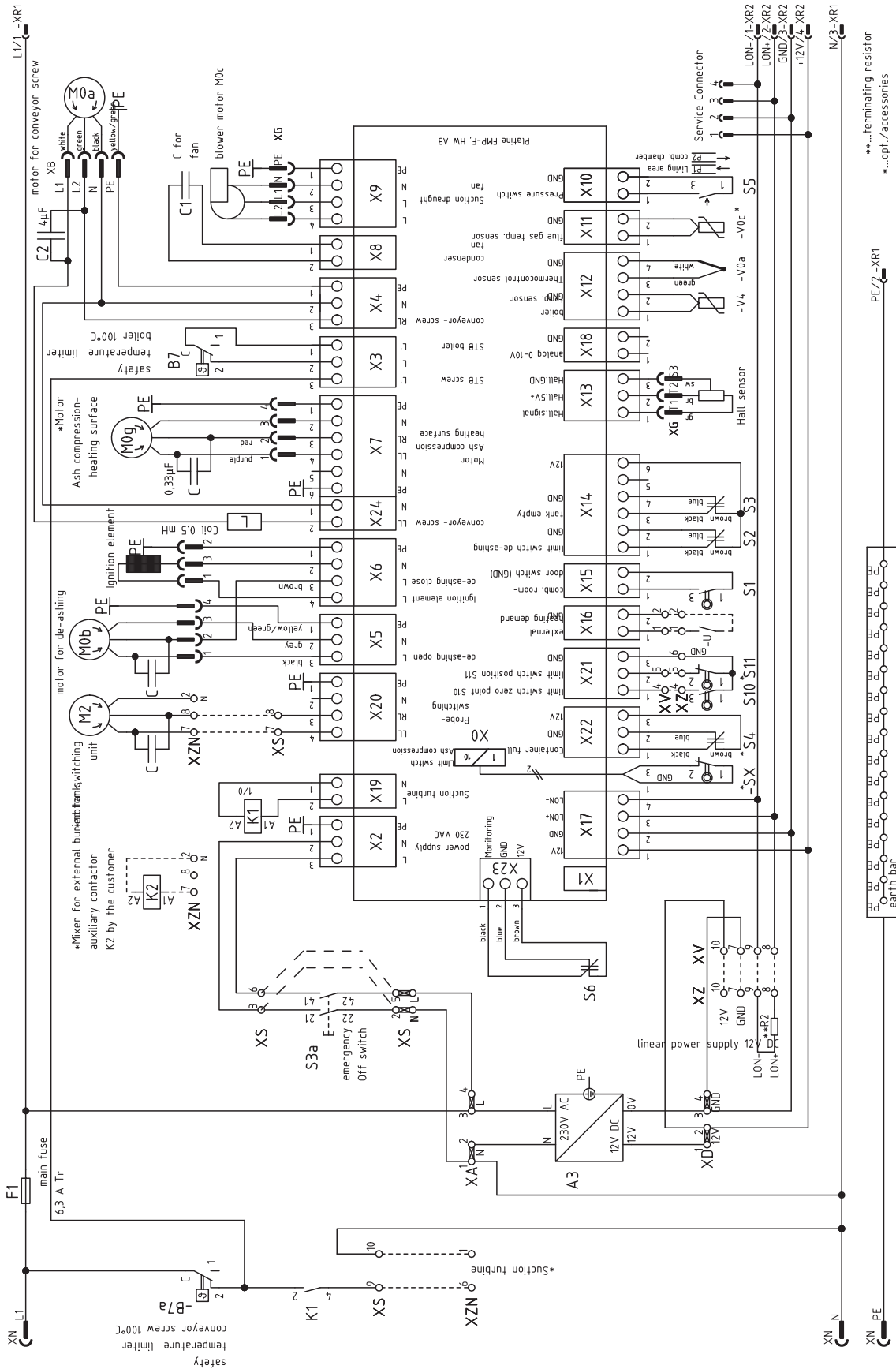
4.5.4 Installation of MES modules

Display when an MES module is installed (connected) or uninstalled (disconnected) – Fig. 75.



Fig. 75

4.6 FireWIN basic circuitry



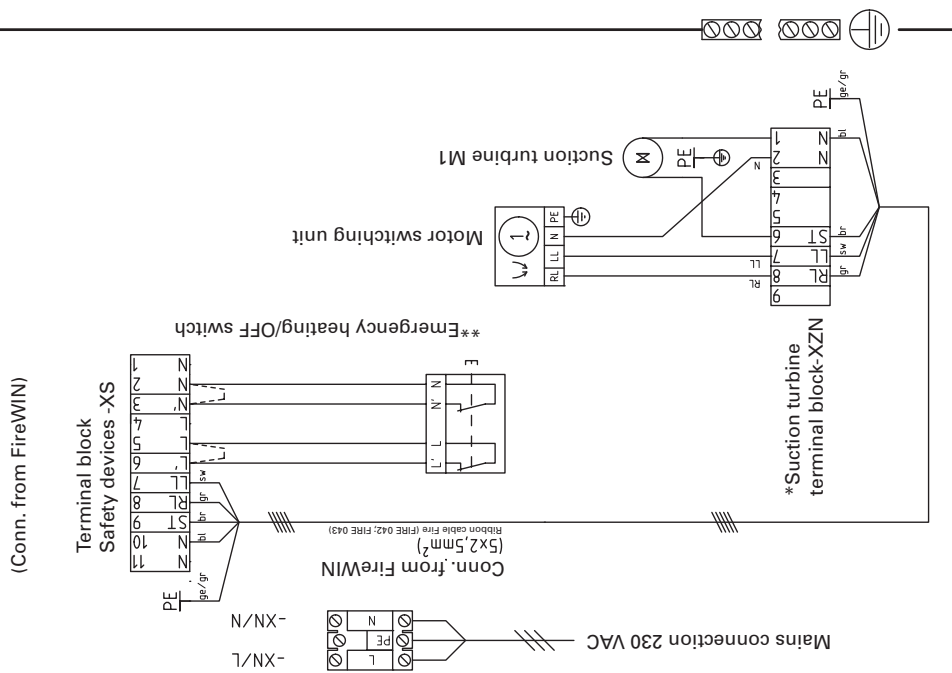
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4.7 FireWIN pellet feed connecting diagram

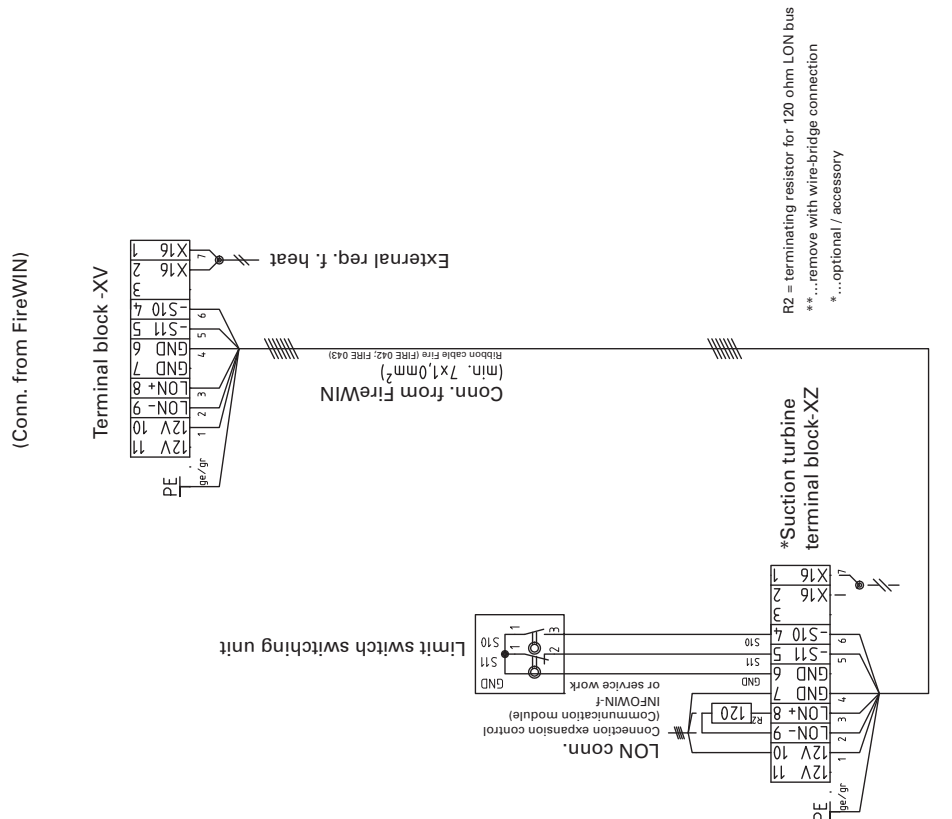


Two separate cables are required for connecting the pellet flue-connected boiler to the suction turbine – this is a requirement of the guarantee conditions!
 Recommended accessories: Ribbon cable 5 x 2.5 mm² and 8 x 1 mm²; FIRE 042 or FIRE 043

Low voltage 230 VAC



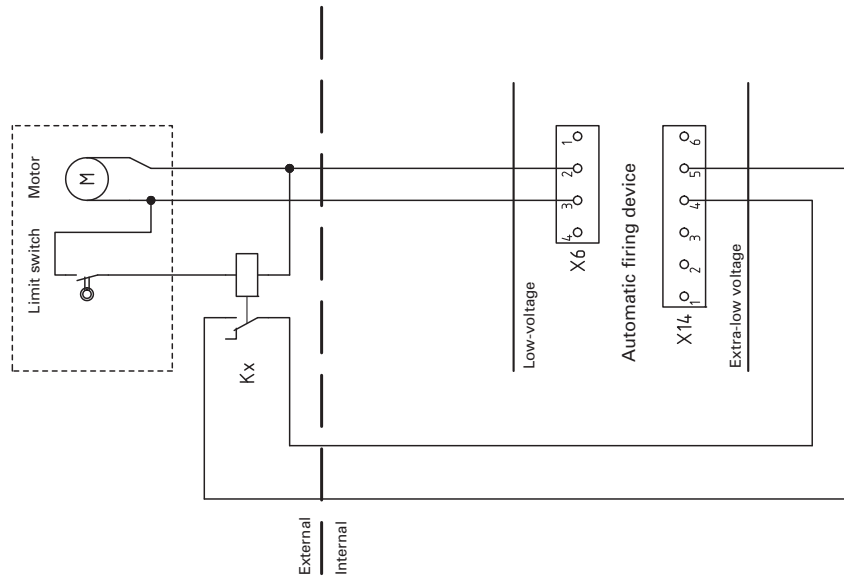
Extra-low voltage - sensor



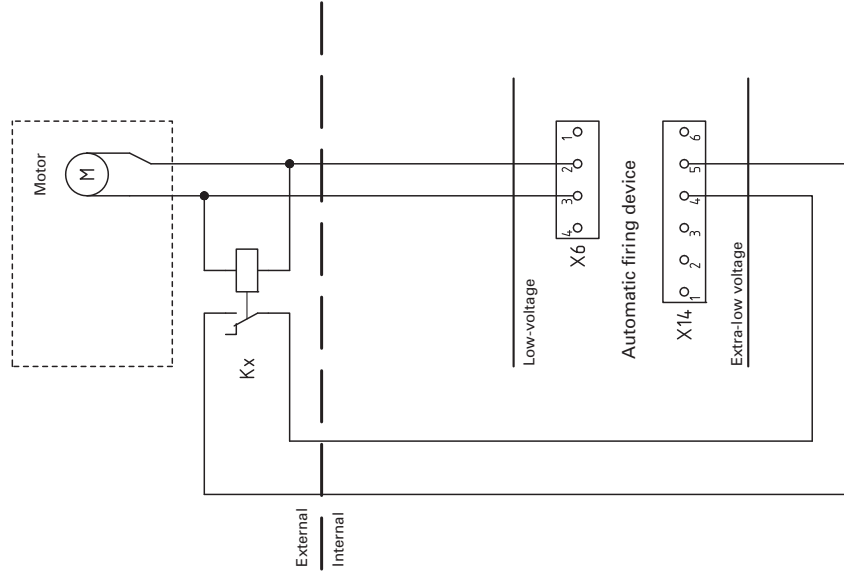
4.9 Connecting diagram for air intake/exhaust flap

The air intake/exhaust flap is directly connected to the automatic firing device (see basic circuit diagram 4.6) at plug X4 (motor) and X14 (limit switch). See section 4.5.1 Parameters; Air intake/exhaust flap for the setting of the parameters for the air intake/exhaust flap.

Air intake/exhaust flap with limit switch



Air intake/exhaust flap without limit switch



Guarantee & Warranty Limitations

The guarantee and warranty limitations require that the boiler and related accessories be properly installed, commissioned and started up by either i) heateam service engineer or ii) a HETAS approved engineer and the HETAS approved number must be logged on the supplied warranty card; otherwise the manufacturer's guarantee will not be honoured.

Malfunctions resulting from improper operation or adjustment as well as use of poor or not recommended fuel types are not covered by the guarantee and warranty. Further, the warranty shall be void if equipment other than those provided by heateam are installed. The special warranty restrictions for your system are available in the "Warranty Conditions" folder supplied with your boiler.

Start-up and regular maintenance 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 service contract.

The Baxi Bioflo wood pellet sealed central heating system boiler includes a one year parts and labour guarantee. The labour guarantee is subject to a set up and test being completed by a Baxi Engineer or Baxi approved installer (HETAS Qualified).

Baxi offer a free set up and test with this product. Please contact Baxi on 0844 871 1568 to arrange this service.

Open Monday - Friday, 8am - 6pm

Saturdays, 8.30am - 2pm

We are closed on Christmas Day & New Year's Day

Alternatively your HETAS qualified installer must complete the enclosed set up and test checklist and warranty registration card and return to the address below

Warranty Registrations

Baxi Heating UK Ltd

Brooks House

Coventry Road

Warwick

CV34 4LL

All descriptions and illustrations provided in this leaflet have been carefully prepared but we reserve the right to make changes and improvements in our products which may affect the accuracy of the information contained in this leaflet. All goods are sold subject to our standard Conditions of Sale which are available on request.

BAXI

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