

HAAS
+
SOHN

HSP 6 with heat exchanger

Equipment sheet
Pellet stove with heat exchanger

GB

0553808501400m

Introduction

We thank you very much for purchasing our product!

The description of the heating device will inform you in detail about the design, technical specification and operation of the heating device. We recommend you to acquaint yourselves closely with these data. In this way, you will avoid possible faults during the proper assembly and operation.

You will find detailed conditions of installation and operation in General Manual of Operation (included in the scope of the delivery).

Notes in the text

GB



Of utmost importance there are the notes entitled **WARNING**. The notes entitled **WARNING** advise you on **serious danger of damage to the heating device or of an injury**.



The note entitled **Notice** advises you on possible damage to your heating device.



The note entitled **Important** calls your attention to the information important for the operation of your heating device.



The note itself calls your attention to the information important for the operation of your heating device in general.

Contents

1. Technical data	1
2. Dimensions	2
2.1. Dimensions	2
2.2. Connection of the exchanger with hydraulic modulus	3
2.3. Connection of the exchanger without hydraulic modulus	4
3. Pellet Stove Installation and Connection to Chimney	5
4. Cleaning work	9
4.1. Cleaning the surface	9
4.2. Cleaning the glass panel	9
4.3. Clean combustion chamber "function instruction" Error F040.....	9
4.4. Cleaning the combustion pot - weekly	9
5. Maintenance work	11
5.1. Cleaning the pellet container - annual maintenance	11
5.2. Cleaning of the ash pan - once a week.....	12
5.3. Cleaning of the exchanger - once a week	13
5.3.1. Vertical cleaning of the exchanger	13
5.3.2. Horizontal cleaning of the conduits of combustion products	14
5.4. Cleaning of the exchanger.....	18
6. Replacement parts list	21
6.1. Replacement parts list (without trim parts).....	21
6.2. Detail A1	24
6.3. Replacement parts list HSP 6 with heat exchanger.....	25
7. Circuit diagram	27

Important Information from Manufacturer!



IMPORTANT

Please, observe the following instructions:

Quality of wood pellets:

Depending on the manufacturer, there are light, dark, shorter or longer pellets. **Even deliveries from one supplier may contain different qualities.** Standards for wood pellets are constantly tightened, but: The wood remains wood and has its peculiarities in terms of ash and slag.

Cleaning:

Once you find ash and slag deposits in the cold combustion chamber, you must clean it. **See Chapter 4 and 5.** If you fail to do it, the layer will increase and the stove will no longer be able to self-ignite properly.

The pellets may accumulate in the combustion chamber. In the extreme case, the pellets can accumulate up to their filling chute. Possible consequences could result in their bursting in the flame and burning in the pellet container. **It would destroy your stove, which is not covered by the warranty.**

To ensure maximum service life and trouble-free operation:

Read the installation and operating instructions carefully and completely. We recommend keeping it if required in future.

1. Enhanced daily control according to the instructions should be carried out on each new supply of pellets or if the stove has been shut down for a longer period of time – e.g. summer season.

2. Recommendations:

Consign the first installation and their first cleaning and inspection to one of our contracted professional service organizations. Their employees are professionally trained and have the knowledge needed to install your new pellet stove safely, put it into operation and carry out its maintenance. They will personally familiarize you with the rules of its use and maintenance and will show you the stove in practice.

Keep in mind that in the event of any malfunctions due to improper installation, operation or maintenance, your warranty claims will be lost.

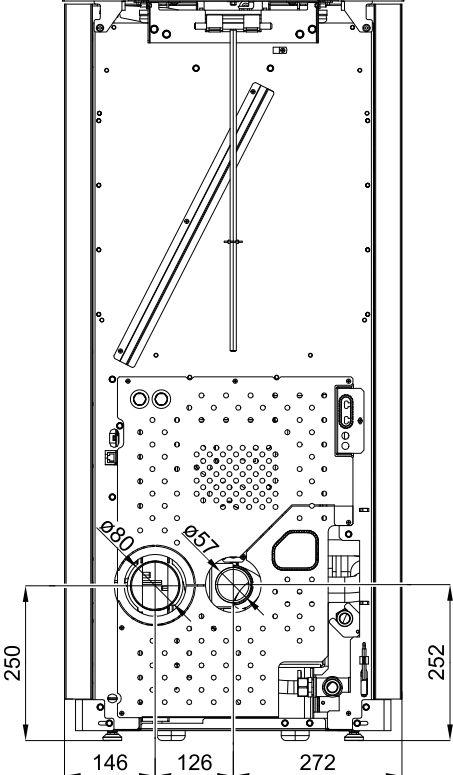
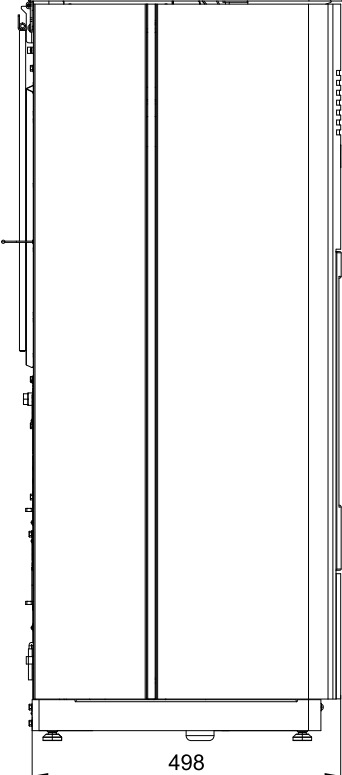
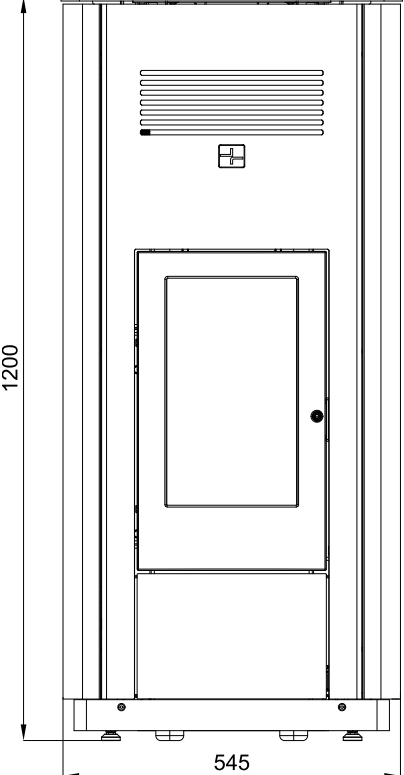
1. Technical data

	HSP 6 with heat exchanger
Heat output range:	3,2 – 10,9kW
Nominal heat output:	10 kW
Output delivered by the stove body only (NO/PO):	4,1/2,4 kW
Output available for heating of water (NO/PO):	6,8/0,8 kW
Testing standard:	EN 14785
Height:	1200 mm
Width:	545 mm
Depth:	498 mm
Weight:	174 kg
Diameter of flue elbow:	80 mm
Flue gas temperature:	152 °C
Testing transport pressure at nominal output:	12 Pa
Testing transport pressure at partial output:	5 Pa
Min. flue draft:	5 Pa
Max. flue draft:	15 Pa
Flue gas flow rate in g/s:	7,4 g/s
Efficiency (NO/PO):	93/96 %
CO level in flue gas at 13% O ₂ (%):	≤ 0,02 %
CO level in flue gas at 13% O ₂ :	≤ 300 mg/Nm ³
OGC level in flue gas at 13% O ₂ :	≤ 60 mg/Nm ³
NO _x level in flue gas at 13% O ₂ :	≤ 200 mg/Nm ³
Proportion of dust in flue gas at 13% O ₂ :	≤ 20 mg/Nm ³
Contents of storage container (pellet tank):	about 32 kg
Duration of burn with one charge (min./max.):	about 15 h/60 h
Permitted fuel: Low-dust wood pellets	diameter: 6 mm
to Ö-Norm M 7135, DIN plus, EN plus-A1	length: max. 30 mm
Electricity supply:	230 V (50 Hz)
Electricity supply input in normal operation:	max. 85 W
Electric ignition (for max. 15 minutes on ignition):	max. 660 W
Electronics fuses: (F3)	T 0,315 A, 250 V
Fuses for the ignition, screw conveyor motor, induced draught, (F1), F2	T 3,15 A, 250 V
Maximum operating over-pressure of the exchanger:	200 kPa (2 bar)
Water contents of the exchanger:	30 l
Recommended heat gradient (t _{output} – t _{input}):	70 – 60 °C
Nominal flow rate:	315 l/h
Pressure loss at nominal flow rate:	130 mbar

2. Dimensions

2.1. Dimensions

Dimensions



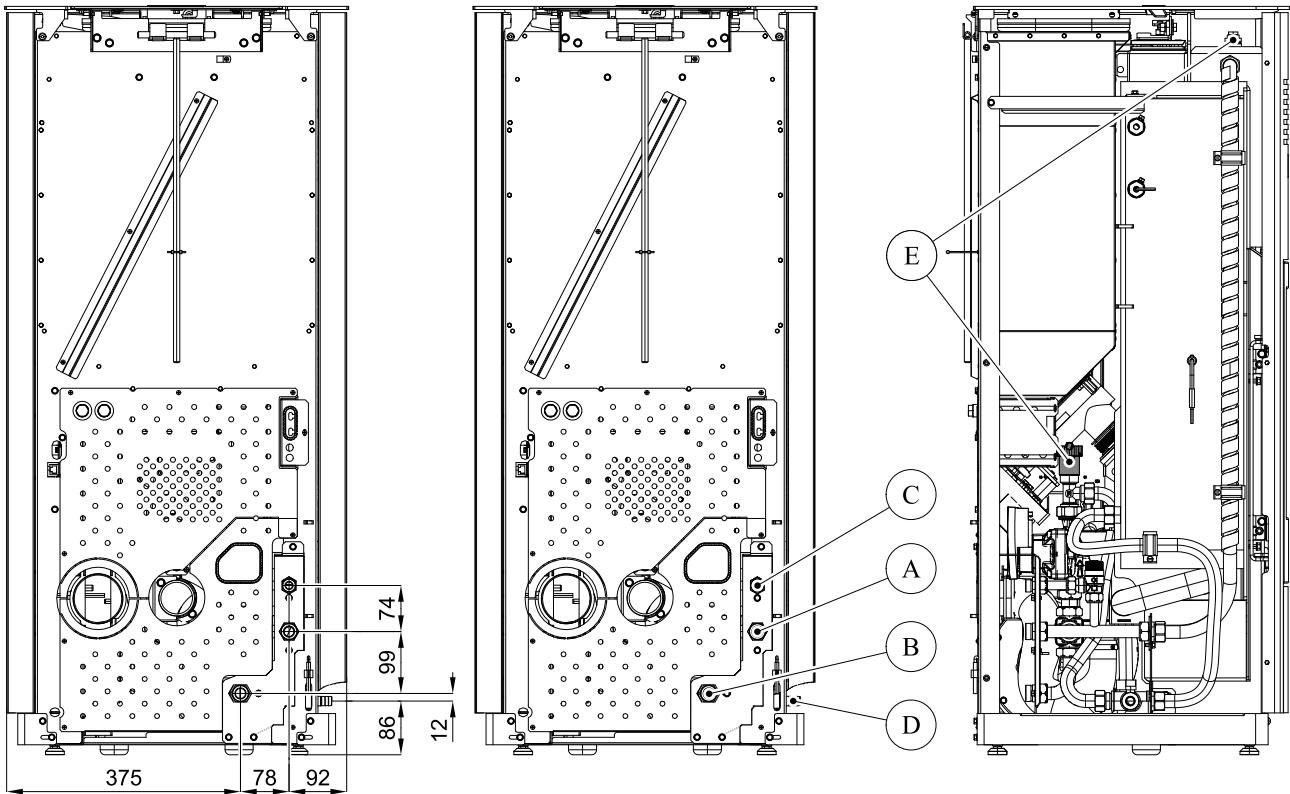
GB

2.2. Connection of the exchanger with hydraulic modulus



CAUTION

The hot-water system is self-ventilating.



Item	Name
A	Heating water output (outside thread G3/4")
B	Return water intake (outside thread G3/4")
C	Outlet of the safety valve (outside thread G3/4")
D	Filling of the circulation system
E	Venting valve

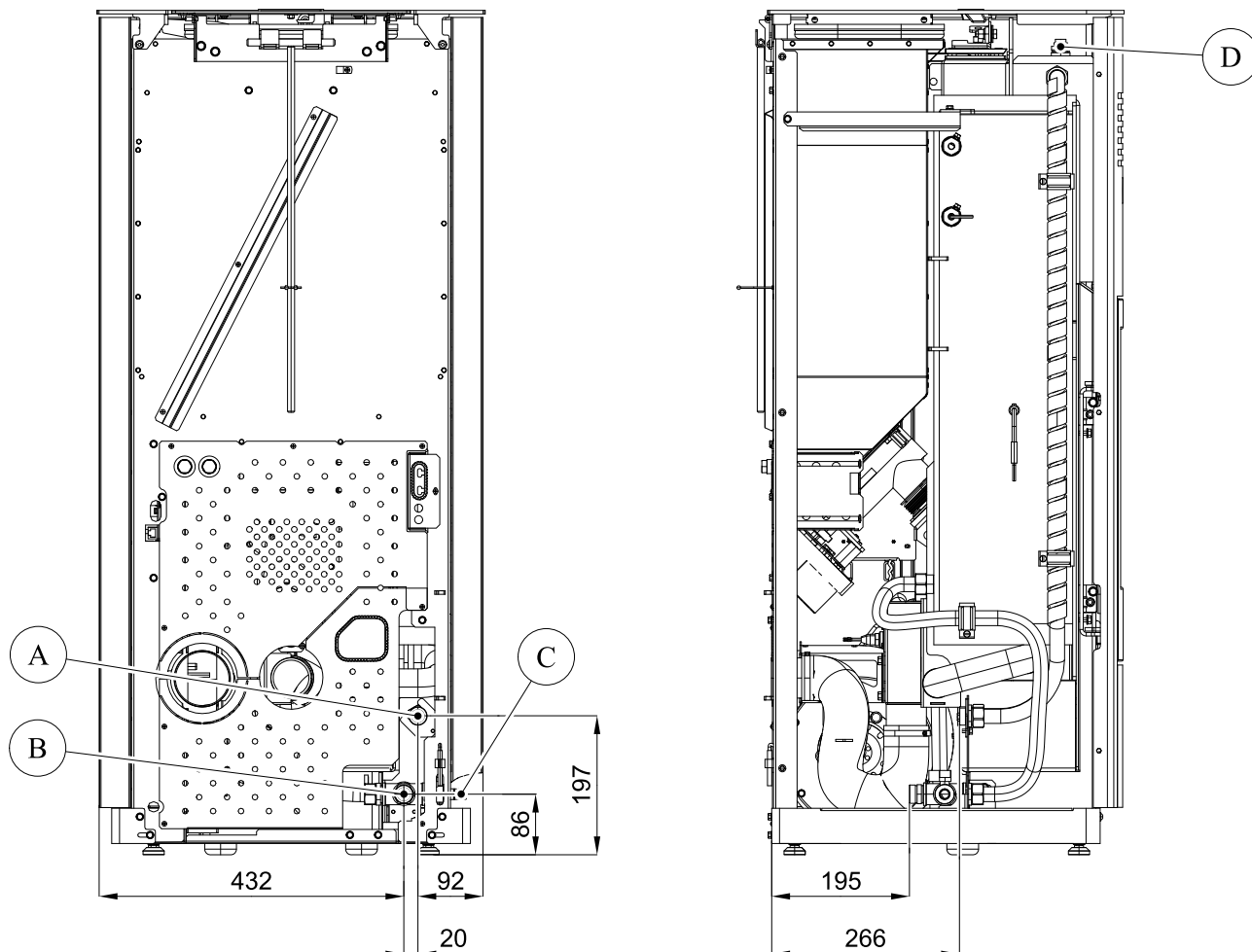
2.3. Connection of the exchanger without hydraulic modulus



CAUTION

The hot-water system is self-ventilating.

Dimensions



GB

Item	Name
A	Heating water output (outside thread G3/4")
B	Return water intake (outside thread G3/4")
C	Filling of the circulation system
D	Venting valve

3. Pellet Stove Installation and Connection to Chimney

The pellet stoves must be connected to a separate chimney. It is not permissible to divert flue gas from other equipment to this chimney. Flue gases are fed through an 80 mm smoke duct connected to the stove smoke-flue being located on the rear side of the stoves. The smoke-flue should be fitted with a T-piece and stopper, see **fig. 1.1 - 1.3**. The smoke-flue must be made of steel or stainless steel tubes. The horizontal part of the smoke-flue must have an incline of **at least 5 % (3°)** upwards from the heater. The connection must be made in the shortest way with a maximum length of 1.5 m and max. 2 fittings (T-piece, elbow). The connection of the solid fuel heater to the chimney **must comply with the provisions of ČSN 73 4201 standard**. It is necessary to observe all requirements for the chimney body which are required by the standard.

Under the Government Decree No. 91/2010 Coll. It is necessary to revise the combustion routes:

- before the flue route is put into operation or after each chimney reconstruction
- before replacing or re-installing a fuel appliance

The inspection is carried out by a competent chimney sweep who is also a chimney inspection technician.

Informative examples of pellet stove installation and connection to chimney:

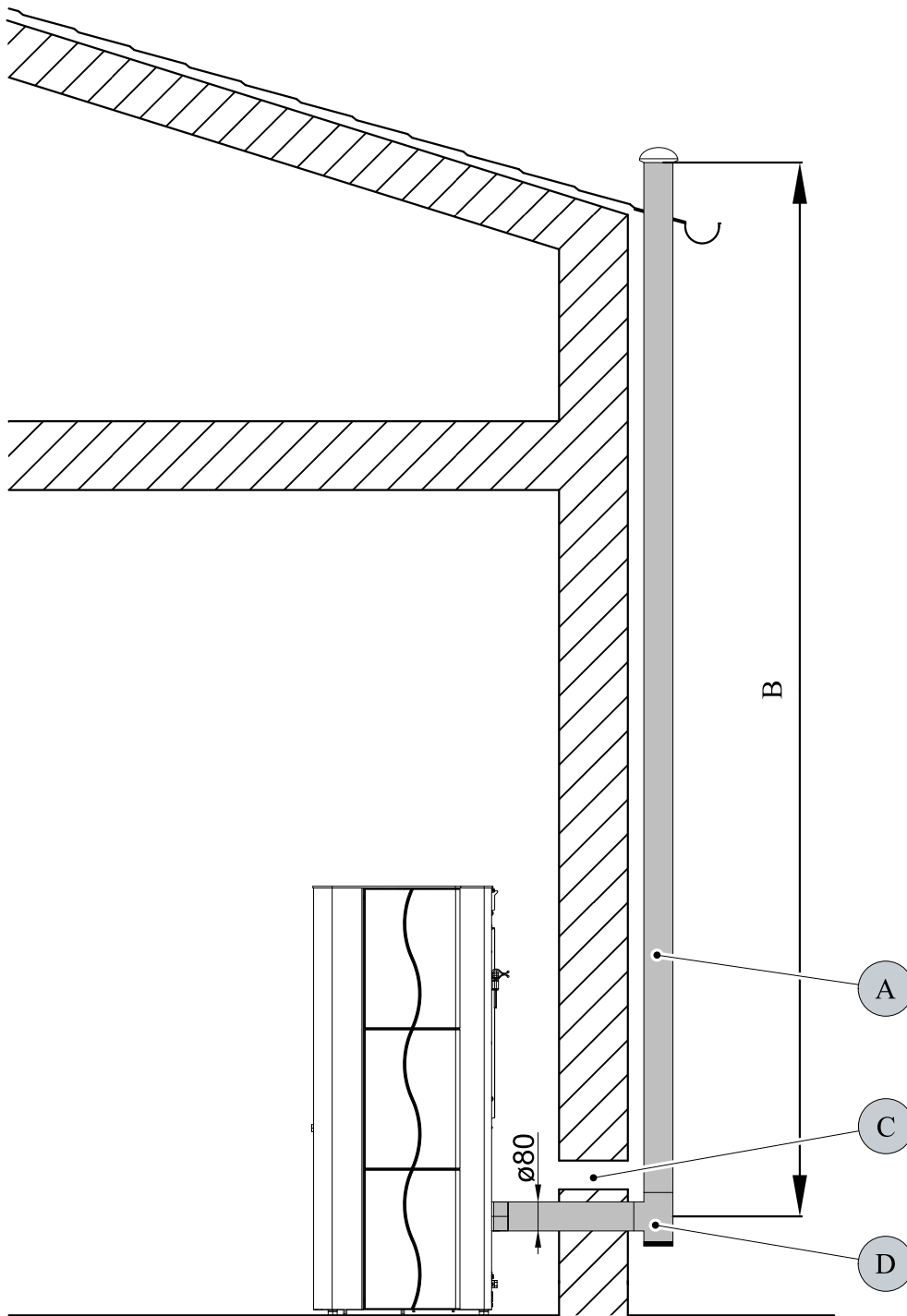


Figure 1.1: Chimney outside the building

- A) Chimney situated outside the building
- B) Effective chimney height. The chimney must be led above the roof level and fitted with thermal insulation
- C) External air inlet to the heater
- D) T-piece with stopper

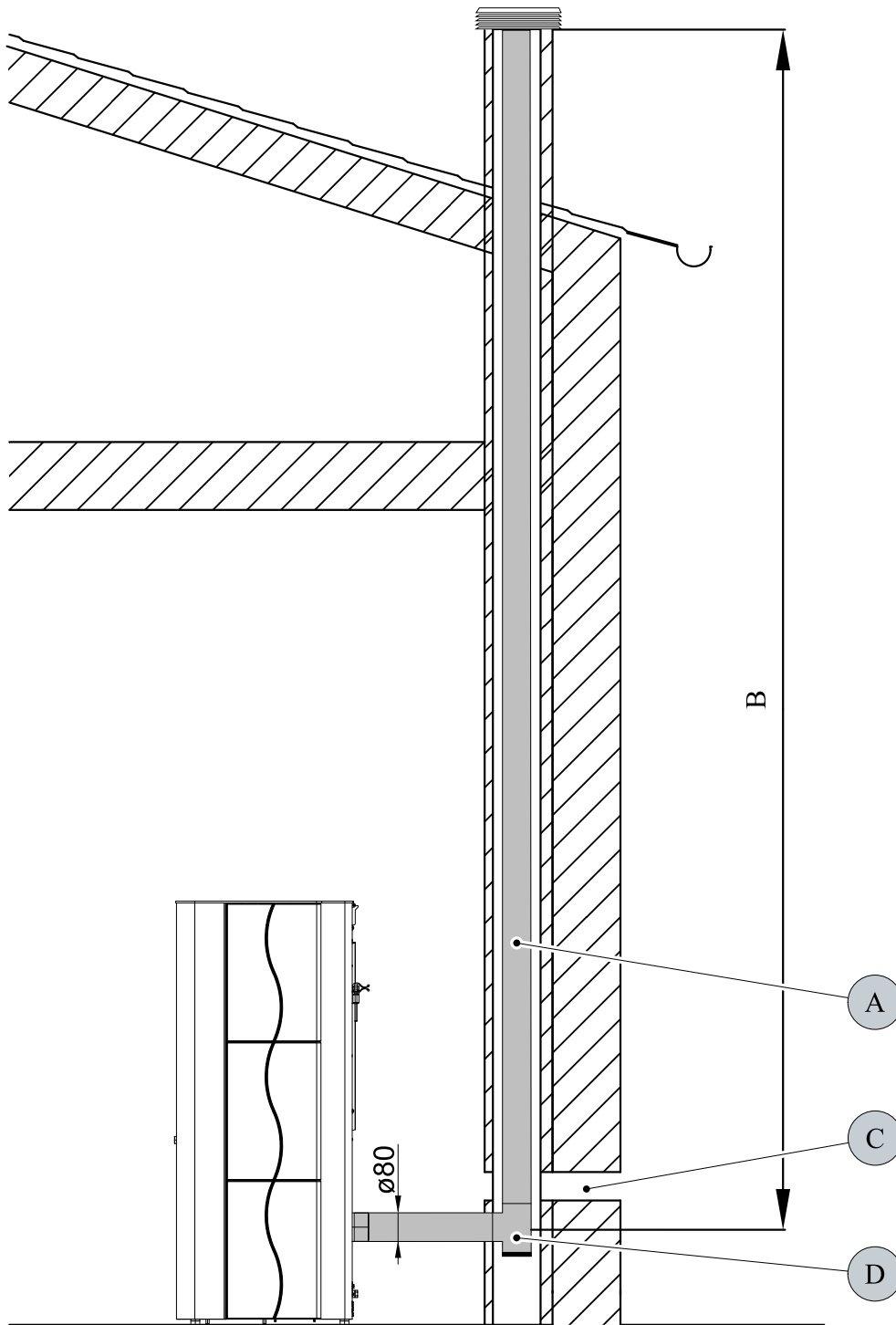


Figure 1.2: Chimney as a part of building

- A) The smoke-flue inserted into the existing chimney. Here, the possibility of cleaning is required.
- B) Effective chimney height.
- C) External air inlet to the heater
- D) T-piece with stopper

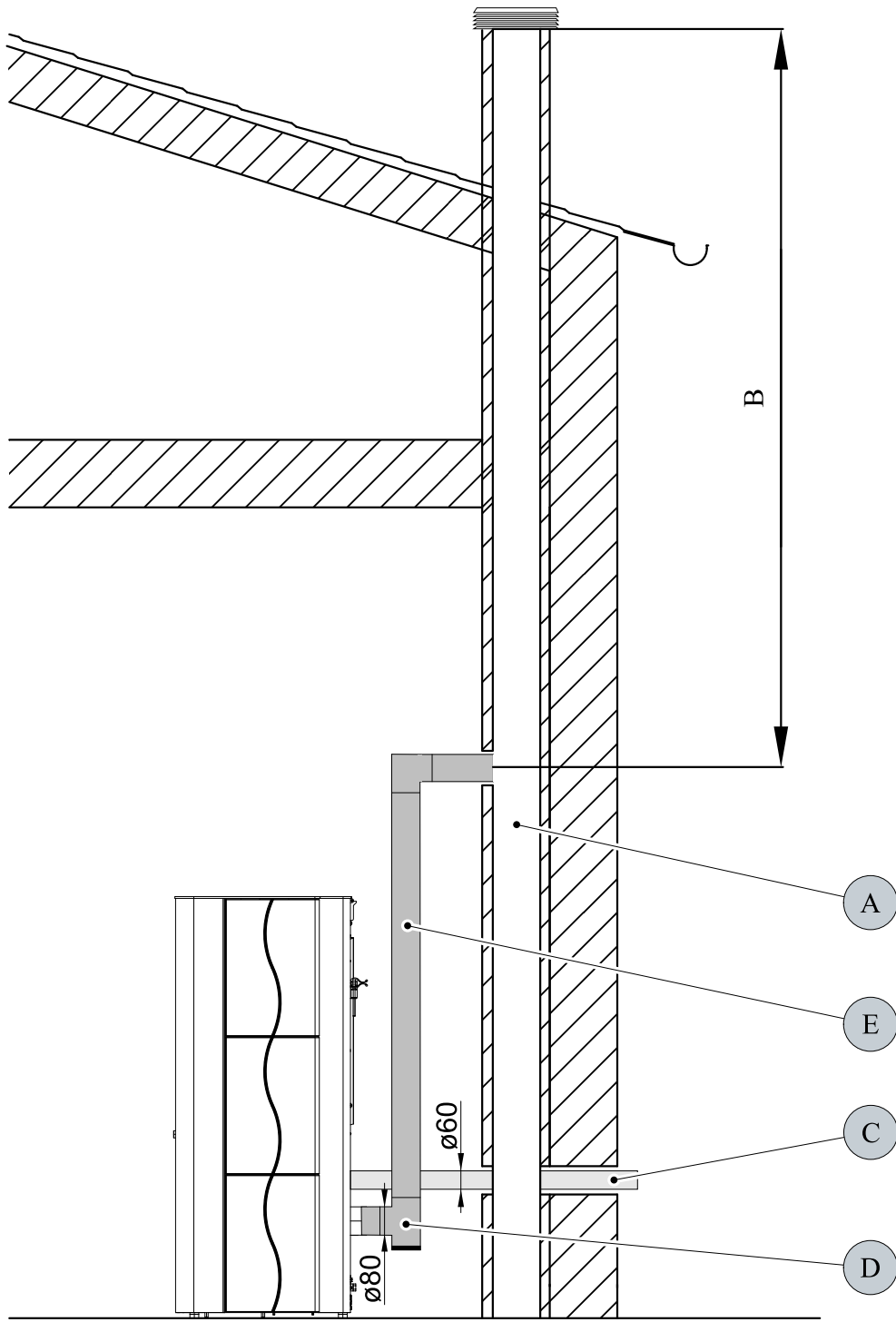


Figure 1.3: Connection to the existing chimney

- A) Existing chimney
- B) Effective chimney height.
- C) External air inlet to the heater
- D) T-piece with stopper
- E) Smoke-flue

4. Cleaning work



WARNING

Before starting any cleaning work, the stove must be cool down!

Once the cleaning work is completed, the correct operating status of the device must be re-established: Put the combustion pot in correctly, close the combustion chamber door.

4.1. Cleaning the surface

Dirt on the upper surface of the stove may be cleaned off with a damp cloth or if necessary with mild soapy water. You are advised against using corrosive cleaning agents and solvents since these might damage the surfaces.

4.2. Cleaning the glass panel

To clean the viewing panel, you must first open the stove door. Dirt on the glass panel can be removed with a glass cleaner or with a damp sponge on which you have sprinkled some of the wood ash present. (Environmentally friendly). Cleaning the glass panel may only be done with a cooled down stove in the OFF operating mode.

4.3. Clean combustion chamber “function instruction” Error F040

- The whole combustion space must be cleaned after **30-hours operation at the latest, or once a week**.
- The requirement to clean the fire-box (flickering of the display) appears during heating, in case that the cleaning interval has elapsed.
- After the fire-box has been cleaned, the error message "Clean the fire-box" will be confirmed automatically. The condition for automatic confirmation of this error message is that the fire-box door is opened for more than **60 seconds**. This time is necessary for careful cleaning of the fore-box, including the burner.
- This reset of the operating hours counter occurs even if the cleaning of the combustion chamber is performed before the 30 operating hours have run provided that the stove is in “Off” operating status and the door is open for longer than 60 seconds during cleaning.

4.4. Cleaning the combustion pot - weekly

During operation, deposits may form in the combustion pot. How quickly the combustion pot becomes dirty depends solely on fuel quality. The deposits or encrustations must be removed from time to time.



WARNING

If this is not done, the clinker will continue to accumulate. Then the device will no longer be able to ignite properly. Pellets can pile up in the combustion pot. In extreme cases, this can reach all the way back to the pellet chute. Backfire in the pellet container and smouldering in the pellet tank might possibly result.

This will destroy your device and is not covered in your guarantee.



WARNING

Cleaning the combustion pot may only be done with a cooled down stove in “OFF” operating mode. Otherwise there is a risk of burns!

- Take out the burner bowl from the stove.
- Remove the remains of ashes and slag.
- After the cleaning, mount the burner bowl back to its proper position on the burner rest.
- Re-check the proper seating of the burner bowl, in order to avoid any lack of tightness.

5. Maintenance work



WARNING

Before starting any cleaning work, the stove must be cool down! The mains plug must be pulled out of the power supply socket (always in advance)!



WARNING

Devices that are not maintained in accordance with our specifications must not be operated. Failure to observe this point will invalidate all guarantee claims.

5.1. Cleaning the pellet container - annual maintenance

- Heat the pellet stove until the storage tank is completely empty.
- Then the protective grille (1) in the pellet tank may be removed.
- Then clean the tank and the intake of the screw conveyor housing with a vacuum cleaner.
- After cleaning, it is essential to put back the protective grille. When doing this, make sure that no screws fall into the pellet tank so as to avoid consequential damage to the screw conveyor.

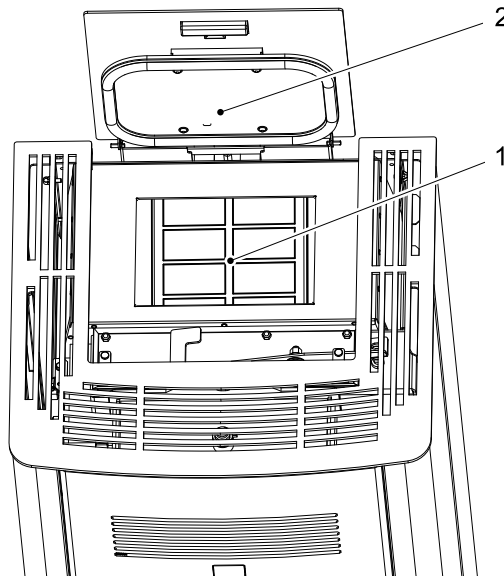


Figure 2: Pellet tank

- 1 Protective grille
- 2 Tank cover

5.2. Cleaning of the ash pan - once a week



WARNING

The frequency of maintenance in turn depends to a large extent on the pellet quality (ash content). Quality pellets have a low ash content of about 0.2-0.3%. However, if the ash content is higher (0.5% and over), the interval from maintenance to maintenance is reduced and the accumulation of ash increases by 2 or 3 times.

Maintenance work

GB

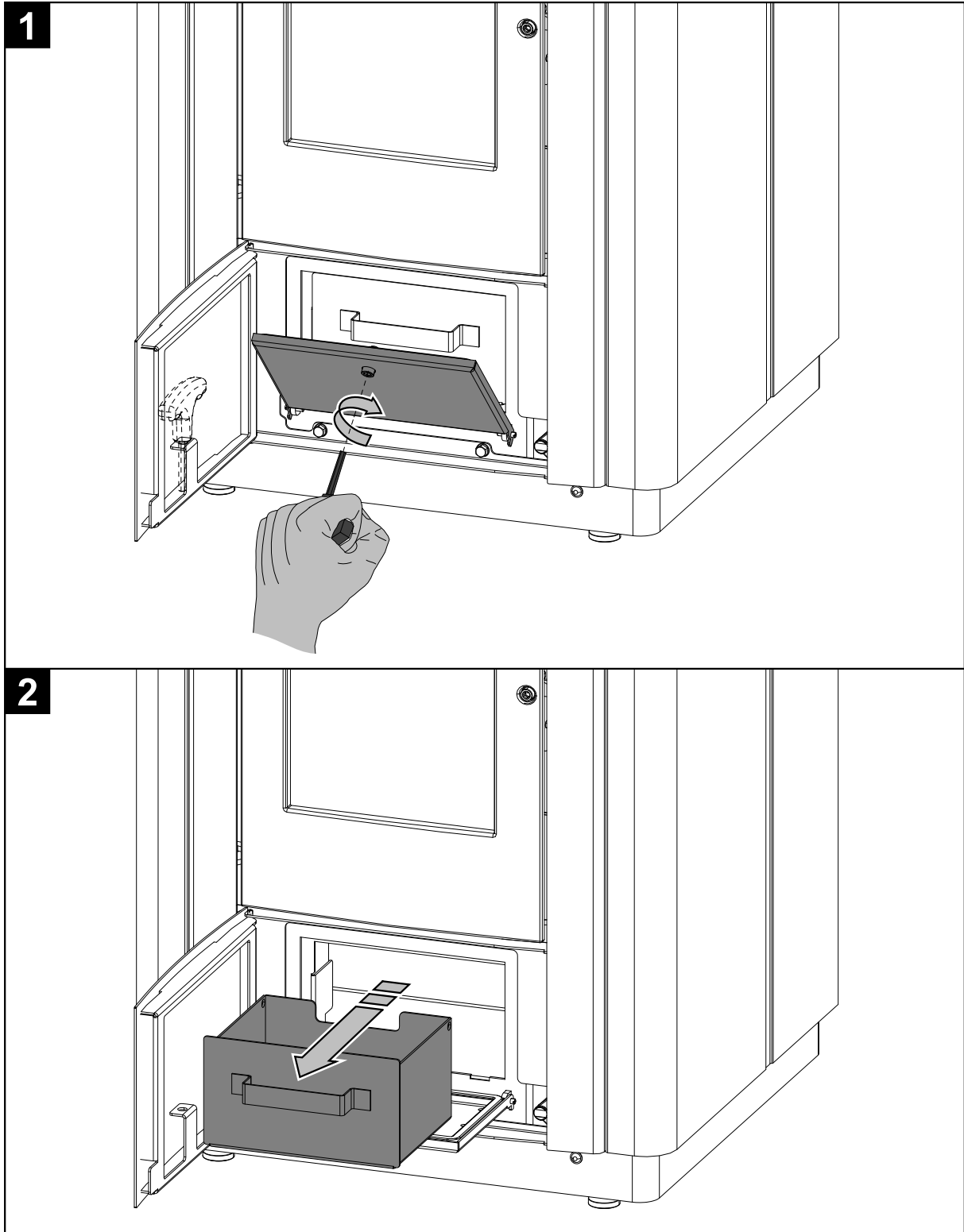


Figure 3

5.3. Cleaning of the exchanger - once a week



CAUTION

We recommend you to clean the conduits of combustion products and the exchanger once in a week.

Please perform the short-time cleaning in two steps:

5.3.1. Vertical cleaning of the exchanger

- For the purposes of vertical cleaning, move the cleaning lever 5 times at least, in compliance with the Fig. 4.

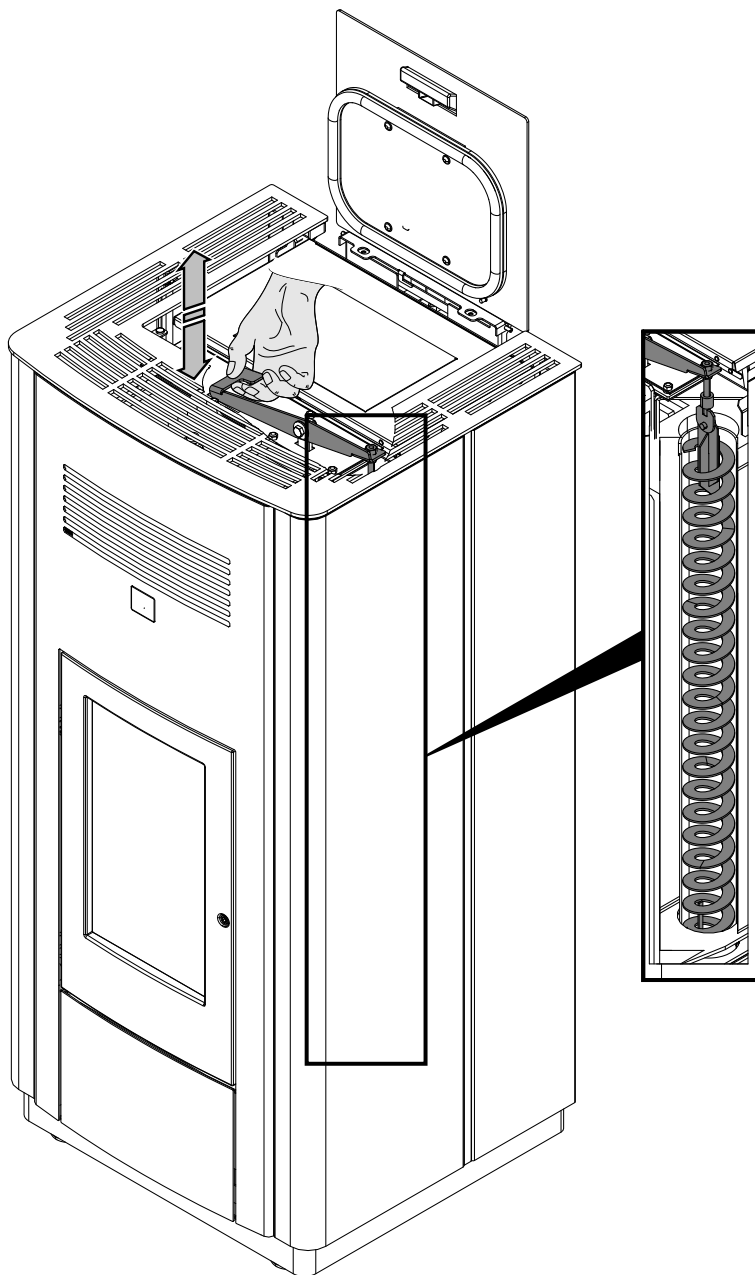
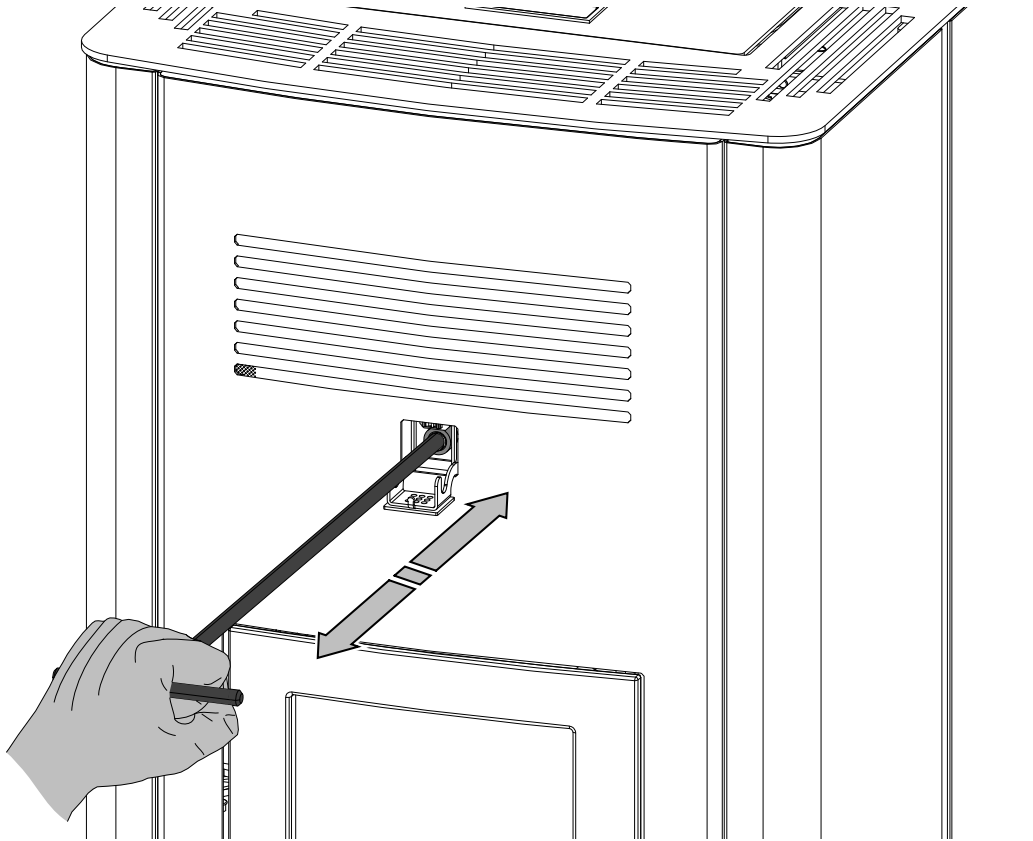


Figure 4

5.3.2. Horizontal cleaning of the conduits of combustion products

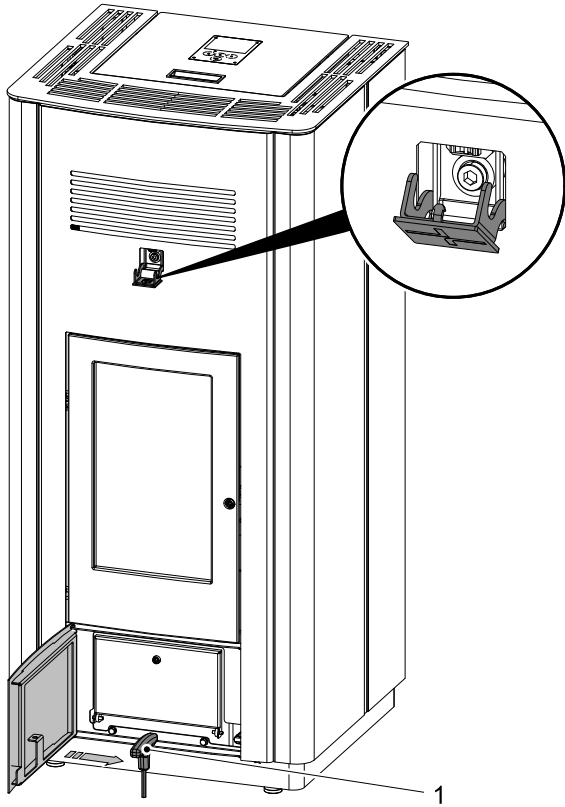
- Get the cleaning bar from the rear cover of the stove. Next, remove the cover plug and dismount the screw M10x70 by means of an Allen wrench, located behind the ash-pan door. After having finished the cleaning by means of the blade, mount the screw and fit the cover plug to their places again. (see Fig. 5a-5c).

Maintenance work



GB

1



2

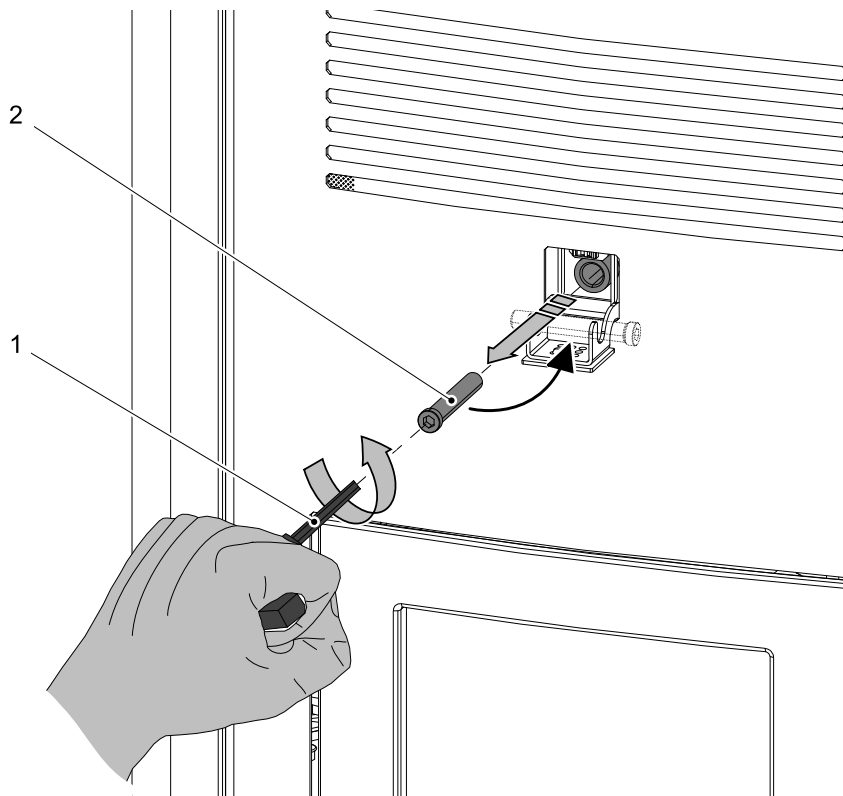
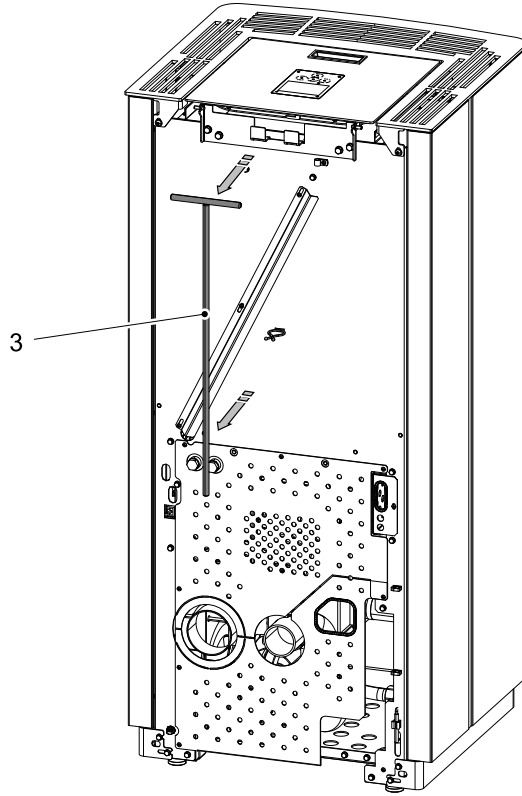


Figure 5a

3



4

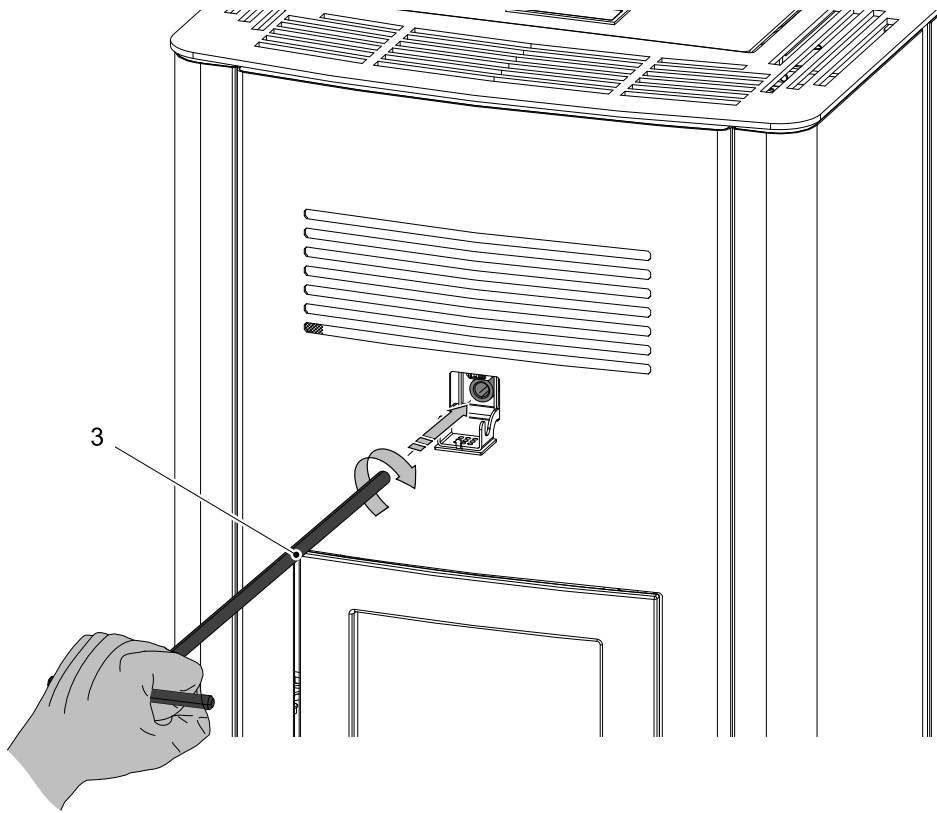
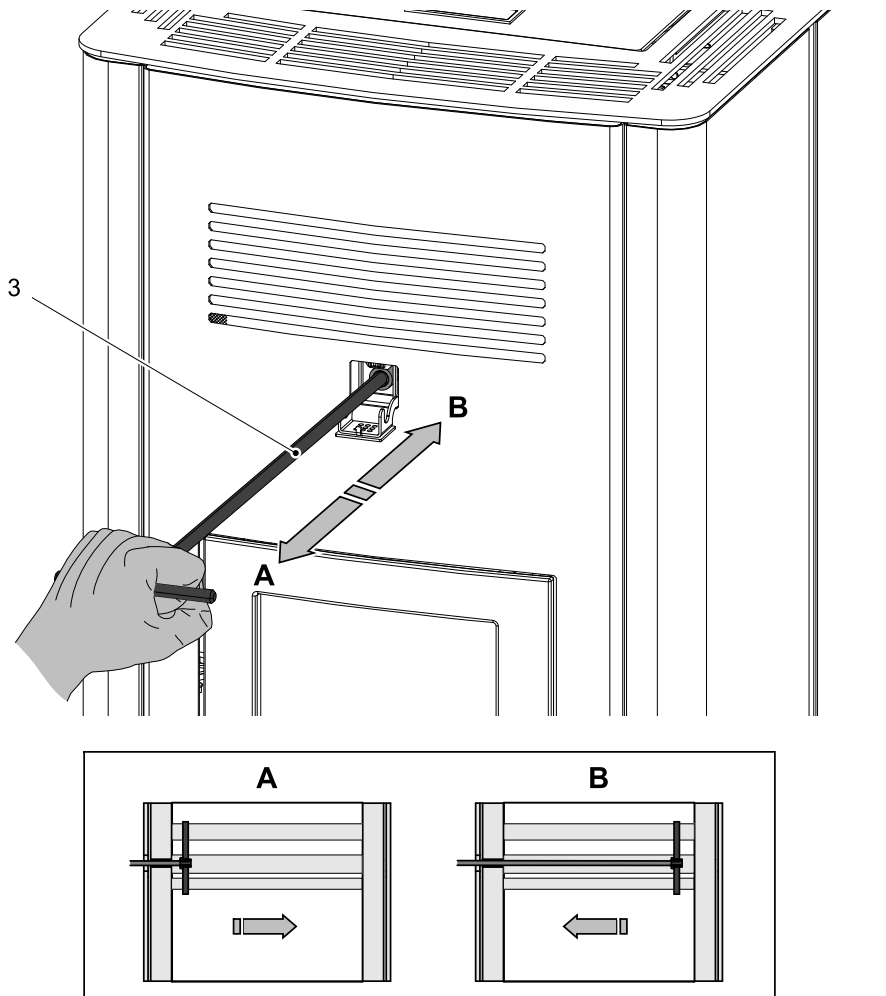


Figure 5b

5



6

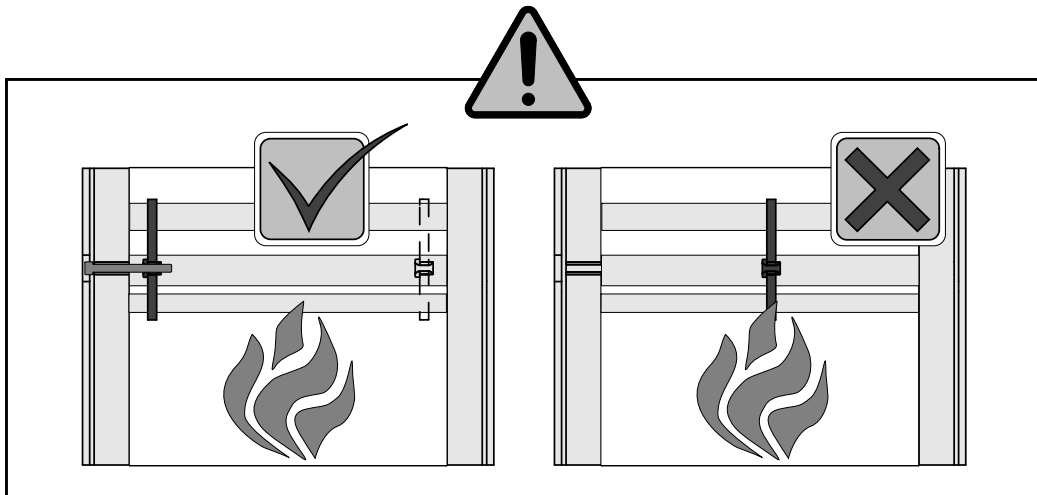


Figure 5c

Pos.	Description	Piece	No. PR
1	Allen wrench 6mm	1 piece	9001700060005
2	Screw M10x70	1 piece	0030121000705
3	Drawbar of cleaning	1 piece	0433317006063

5.4. Cleaning of the exchanger



CAUTION

Check and clean the flue-gas ways, exhaust (flue-gas) fan and flue-gas ducts at the latest after 1000 kg of pellets have been consumed. Clean with a brush or an ash extractor.



CAUTION

After completion of the cleaning make sure that when putting back the covers, the seals are seated in the right positions. It is essential to replace defective seals.

Please perform the long-time cleaning in two steps:

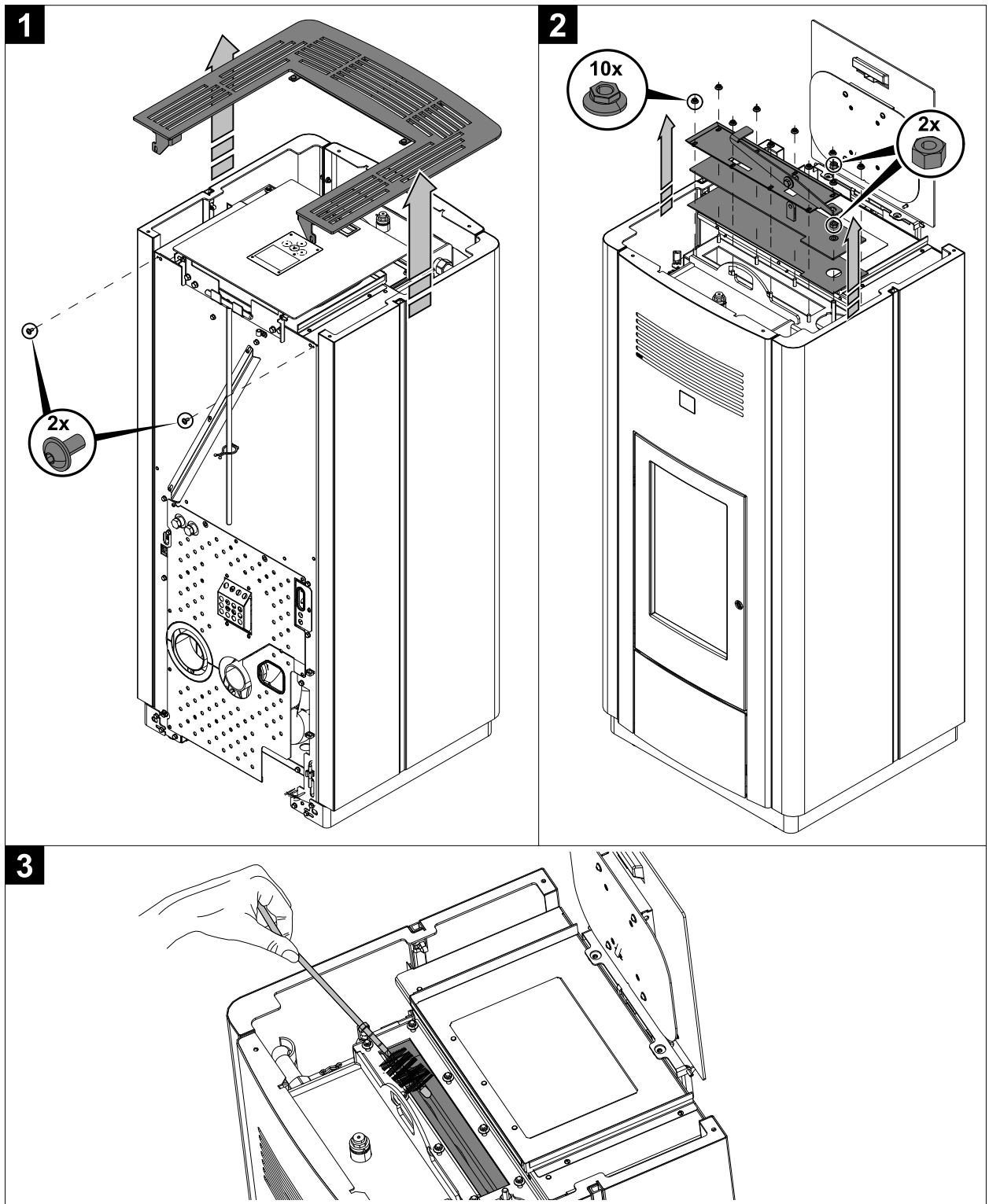


Figure 6

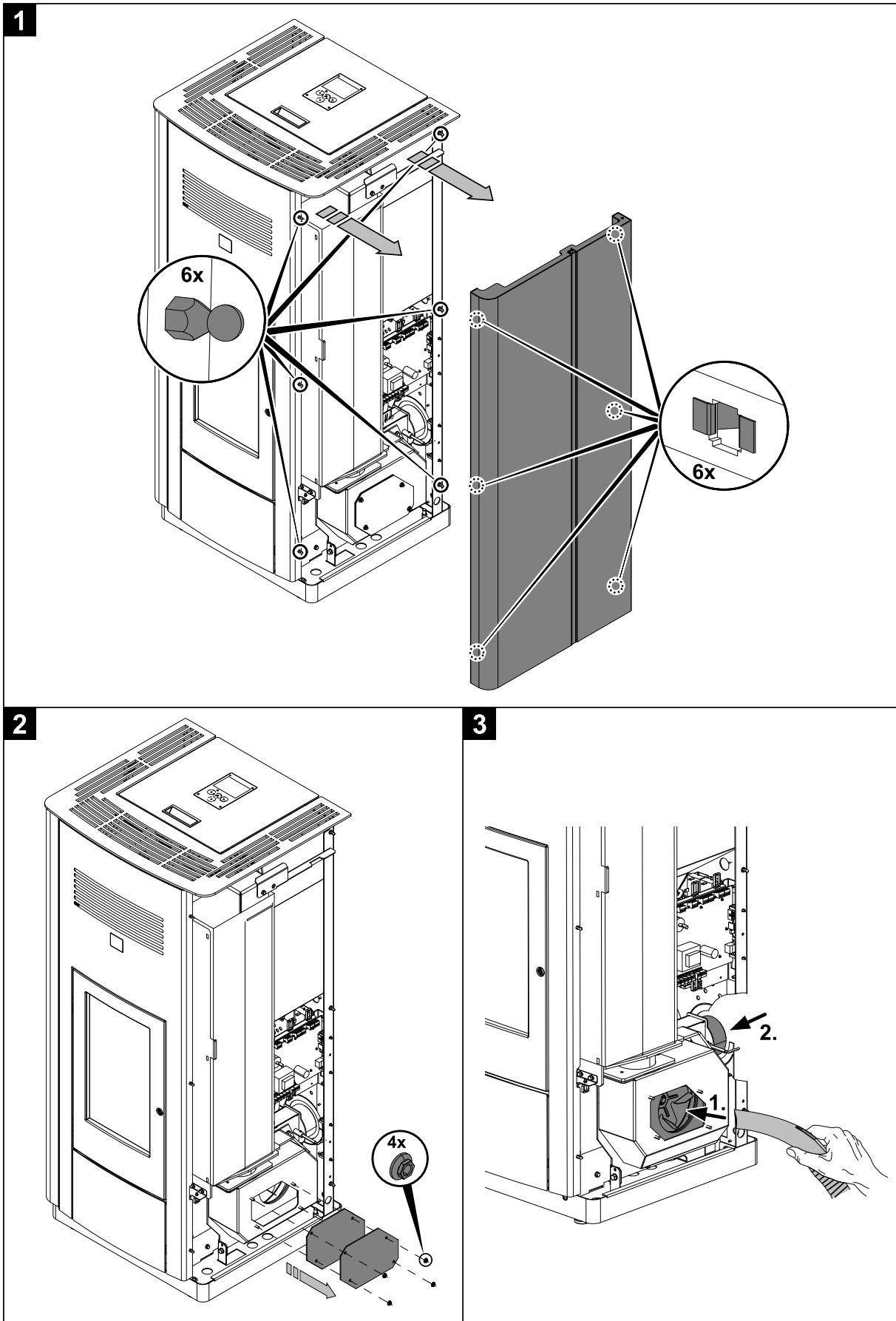
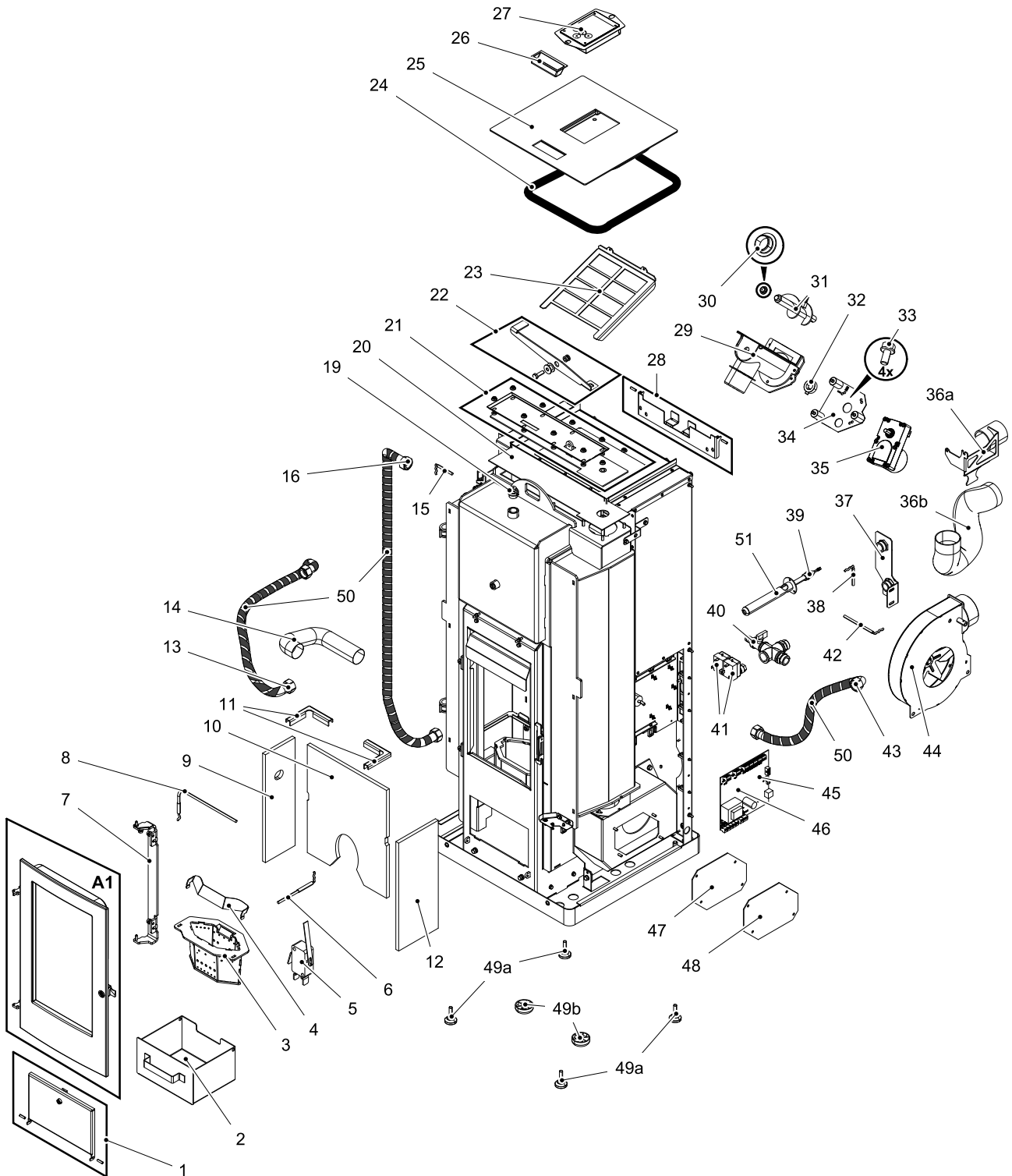


Figure 7: Removing the side wall

6. Replacement parts list

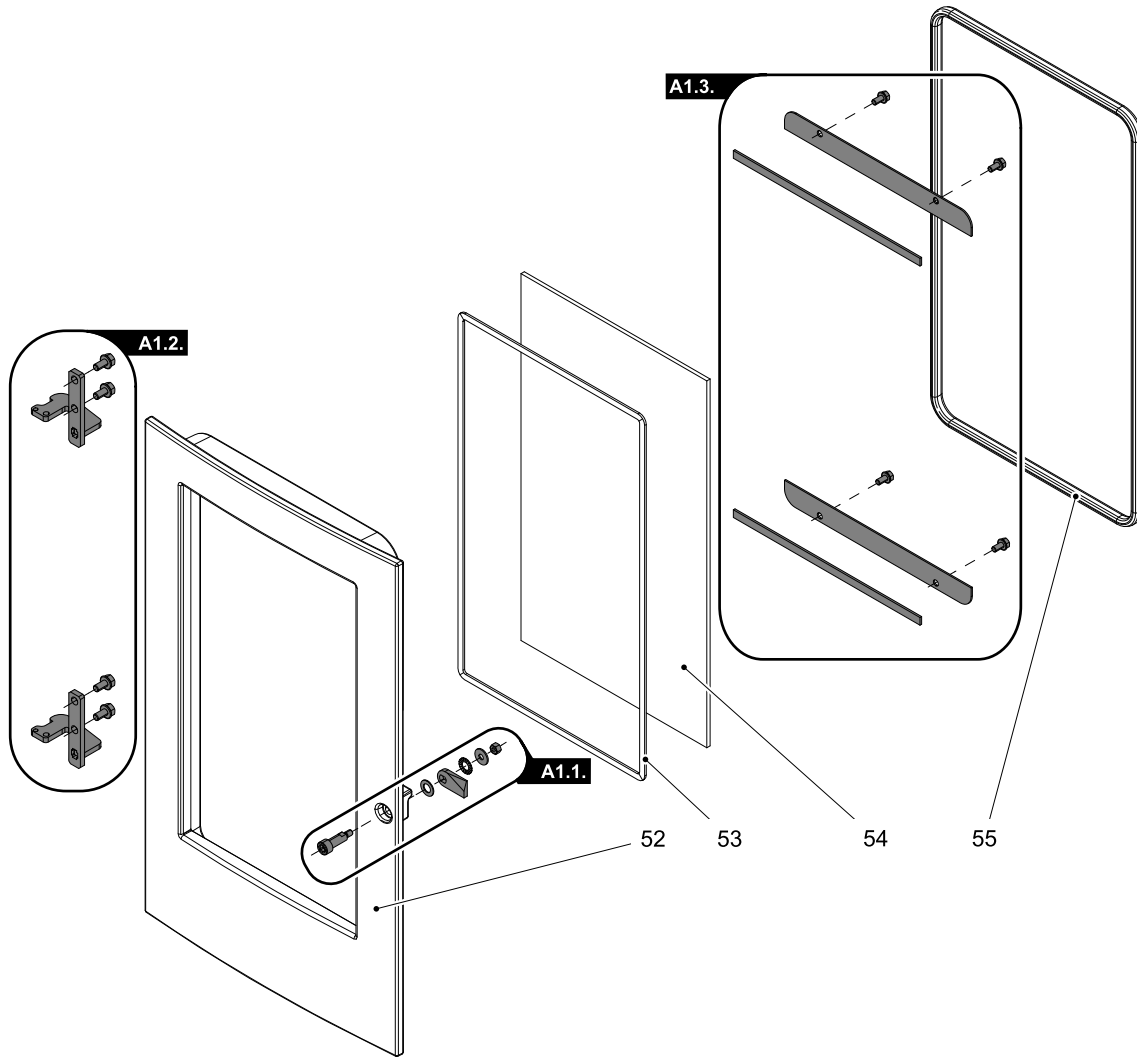
6.1. Replacement parts list (without trim parts)



Pos.	Description	Piece	No. PR
Replacement parts list (without trim parts)			
A1	Complete combustion chamber door/black	1 piece	0553808005300
A1	Complete combustion chamber door/ anthracite	1 piece	0553808015300
1	Ash-pan door/anthracite	1 piece	0553808005060
2	Ash pan/anthracite	1 piece	0553808005600
3	Burner	1 piece	0553808005620
4	Protection grate	1 piece	0551908006709
5	Door contact switch	1 piece	0089500040005
6	Bottom temperature sensor	1 piece	0561008005543
7	Door hinge (complete)/anthracite	1 piece	0553808005400
8	Flame temperature sensor	1 piece	0553808005541
9	Combustion chamber cladding left	1 piece	0553808005040
10	Combustion chamber cladding back	1 piece	0553808005041
11	Holders of the fire-box lining le+ri/anthracite	2 piece	0553808005042
12	Combustion chamber cladding right	1 piece	0553808005039
13	Conecting pipe 3/4 L=670	1 piece	0553808005903
14	Hose Meniflex L=300	1 piece	0553808005315
15	Room temperature sensor	1 piece	0089500390005
16	Conecting pipe 3/4 L=1100	1 piece	0553808005902
19	Venting valve	1 piece	0088600005270
20	Seal	1 piece	0553808005026
21	Shielding of the cleaning orifice - Set	1 piece	0553808005025
22	Cleaning lever/anthracite	1 piece	0553808005023
23	Protective grille	1 piece	0553808005931
24	Seal, tank cover	860 mm	0546608005189
25	Tank cover/anthracite	1 piece	0553808005190
26	Grip	1 piece	0089500940005
27	Operator console	1 piece	0571207005510
28	Cover hinge pins DIN 427 M5x18	1 piece	0553808005015
29	Conveyor	1 piece	0571207025560
30	Lower screw conveyor bearing	1 piece	0571207005026
31	Screw conveyor	1 piece	0571207005030
32	Collet	1 piece	0089000340009
33	Screw UN5950 M5x10	4 piece	-
34	Motor plate - set	1 piece	0551908007080

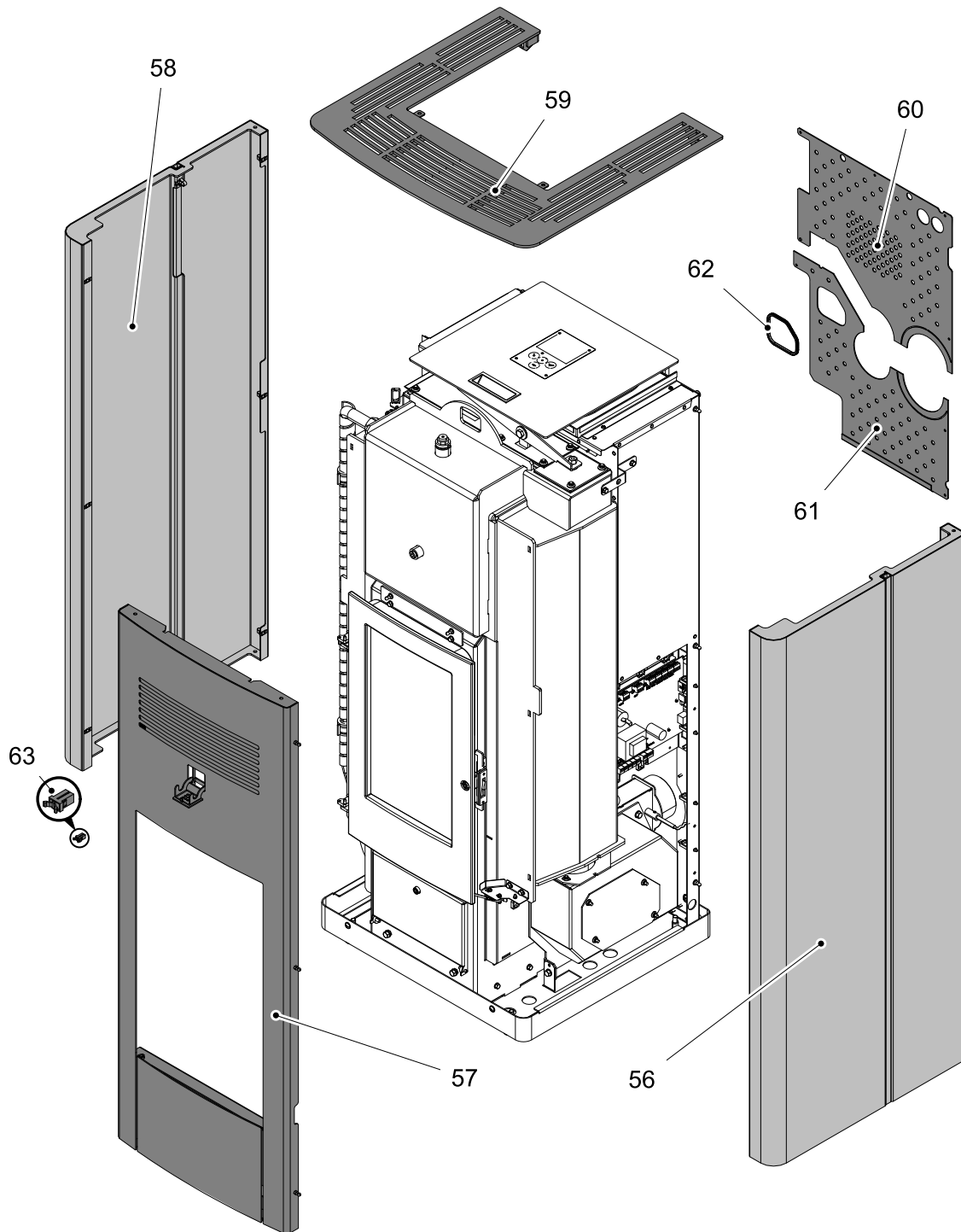
35	Screw conveyor motor	1 piece	0089500000006
36a	Air inlet funnel	1 piece	0553808015320
36b	Hose Meniflex AL L=500	1 piece	0553808005322
37	Entry to the panel of flanges	1 piece	0553808005901
38	Room temperature sensor	1 piece	0089500390005
39	Ignition	1 piece	0541908005202
40	Outlets of the hydraulic system – cock+Ms Cross+inserts – set	1 piece	0088600000055
41	OC	2 piece	0089500080005
42	Flue gas thermosensor	1 piece	0561008005540
43	Conecting pipe L=550	1 piece	0553808005904
44	Induced draught fan	1 piece	0553808005808
45	Complete control unit	1 piece	0553808005569
46	Backup battery CR 2032	1 piece	-
47	Seal (191x136x4)	1 piece	0553808005805
48	Cover	1 piece	0553808005806
49a	Stand	4 piece	0551908506005
49b	Stand	2 piece	0089501090005
50	Spiral guard cover	1950 mm	0089501160005
51	Lighter case	1 piece	0553808005215

6.2. Detail A1



Pos.	Description	Piece	No. PR
Detail A1			
A1.1.	Screwing door — set	1 piece	0541908305001
A1.2.	Door hinge/black — set	1 piece	0553808006340
A1.2.	Door hinge/anthracite — set	1 piece	0553808005340
A1.3.	Glass holder/black — set	1 piece	0551908035308
A1.3.	Glass holder/anthracite — set	1 piece	0551908005308
52	Combustion chamber door/black	1 piece	0541908007220
52	Combustion chamber door/anthracite	1 piece	0541908005220
53	Seal glass 10x4 mm	900 mm	0040210040005
54	Door glass (383x224x4)	1 piece	0551908005305
55	Seal door 11 mm	1306 mm	0040300110006

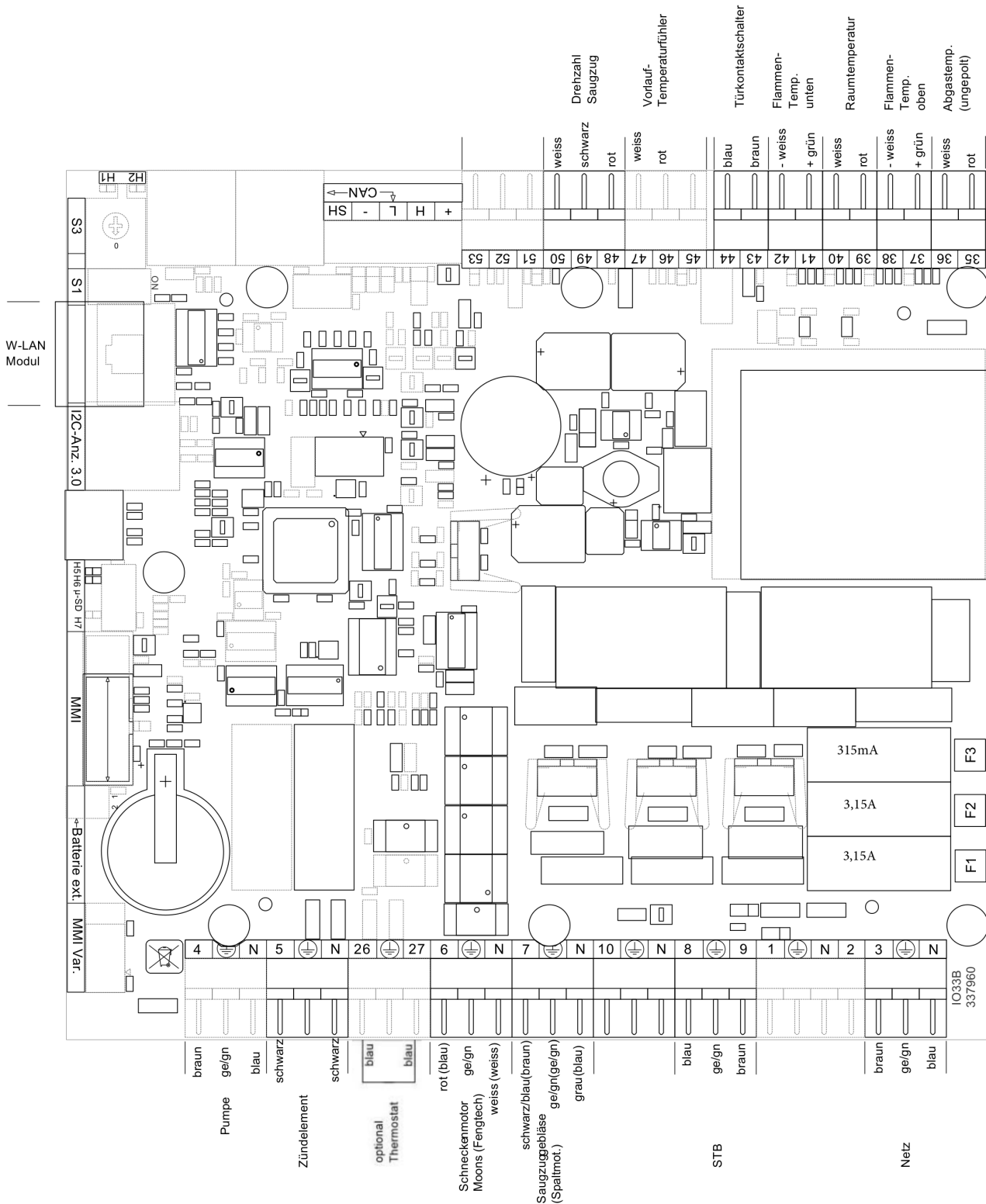
6.3. Replacement parts list HSP 6 with heat exchanger



Pos.	Description	Piece	No. PR
Replacement parts list HSP 6 with heat exchanger			
56+58	Side wall left+right/anthracite	2 piece	0553808006140
56+58	Side wall left+right/white	2 piece	0553808016140
57	Front plate/anthracite	1 piece	0553808016120
57	Front plate/anthracite-black	1 piece	0553808006120
59	Cover plate/anthracite	1 piece	0553808017160

60a	Back wall upper	1 piece	0553808006118
60b	Back wall upper	1 piece	0553808005220
61	Back wall lower	1 piece	0553808006119
62	Edge cover	225 mm	0089500640005
63	Spring piece	1 piece	0089500640005

7. Circuit diagram



Circuit diagram

GB

Description Circuit diagram:

No.:	Description Cable harness
3	Mains plug / mains filter
4	Pump
5	Electric ignition
26/27	Storage tank thermostat: optional*
6	Screw conveyor motor
7	Induced draught
8/9	OC
35/36	Flue gas temperature sensor
37/38	Flame temperature sensor
39/40	Room temperature sensor
41/42	Bottom flame temperature sensor TFL 2
43/44	Door contact switch
46/47	Temperature sensor on the input
48-50	Flue gas fan rotation speed
F1	Fuse T 3,15A ignition, induced draught fan, screw conveyor motor
F2	Fuse T 3,15A pump
F3	Fuse T 0,315A operator console

* If you use a thermostat for a storage tank, you can apply the following types, or any other potential-free thermostat that has at least one NC/NO switched contact:
(not supplied by Haas + Sohn)

Afriso 7P1



Watts Industries TC-200-AN



When using the thermostat function for the storage tank, the stove is switched on according to the external thermostat requirement via the NC contact. However, they are switched off according to the temperature sensor in the stove heat exchanger when the **Target temperature of water** is reached (stove must be in the **Room Temperature mode: NO**).