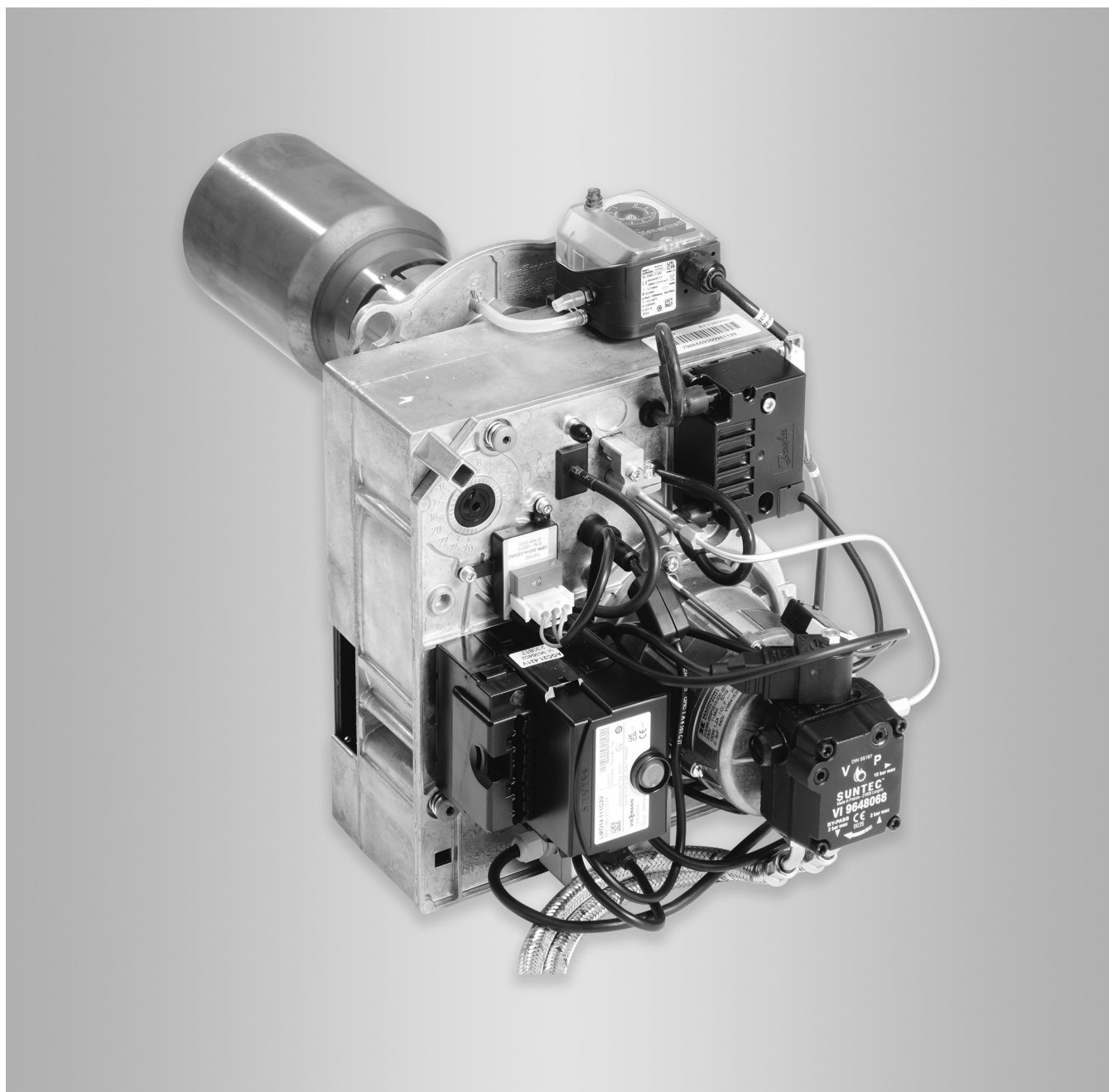


Vitoflame 300
Type VHG
Blue flame oil burner
With fuel oil preheating
For Vitorondens 200-T, Vitoladens 300-T
Rated heating output 40 and 50 kW



VITOFLAME 300



Safety instructions



Please follow these safety instructions closely to prevent accidents and material losses.

Safety instructions explained



Danger

This symbol warns against the risk of injury.

Note

Details identified by the word "Note" contain additional information.



Please note

This symbol warns against the risk of material losses and environmental pollution.

Target group

These instructions are exclusively intended for qualified contractors.

- Work on gas installations may only be carried out by a registered gas fitter.
- Work on electrical equipment may only be carried out by qualified electricians.

Regulations to be observed

- National installation regulations
- Statutory regulations for the prevention of accidents
- Statutory regulations for environmental protection
- Codes of practice of the relevant trade associations
- Relevant country-specific safety regulations

Working on the system

- Where gas is used as the fuel, close the main gas shut-off valve and safeguard it against unintentional reopening.
- Isolate the system from the power supply, e.g. by removing the separate fuse or by means of a main switch, and check that it is no longer live.
- Safeguard the system against reconnection.
- Wear suitable personal protective equipment when carrying out any work.



Danger

Hot surfaces and fluids can result in burns or scalding.

- Before maintenance and service work, switch off the appliance and let it cool down.
- Never touch hot surfaces on the boiler, burner, flue system or pipework.

- ! Please note**
 - Electronic assemblies can be damaged by electrostatic discharge. Before beginning work, touch earthed objects, such as heating or water pipes, to discharge any static.

Repair work

- ! Please note**
 - Repairing components that fulfil a safety function can compromise the safe operation of the system. Replace faulty components only with genuine Viessmann spare parts.











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Disposal of packaging

Please dispose of packaging waste in line with statutory regulations.

Symbols

Symbol	Meaning
	Reference to other document containing further information
	Step in a diagram: The numbers correspond to the order in which the steps are carried out.
	Warning of personal injury
	Warning of material losses and environmental pollution
	Live electrical area
	Pay particular attention.
	<ul style="list-style-type: none">▪ Component must audibly click into place.or▪ Acoustic signal
	<ul style="list-style-type: none">▪ Fit new component.or▪ In conjunction with a tool: Clean the surface.
	Dispose of component correctly.
	Dispose of component at a suitable collection point. Do not dispose of component in domestic waste.

Intended use

The burner must only be operated when installed in the boiler. "Appliance" here refers to the boiler with burner fitted.

The appliance is only intended to be installed and operated in sealed unvented heating systems that comply with EN 12828, with due attention paid to the associated installation, service and operating instructions as well as the details in the datasheet.

It is only designed for the heating of heating water.

Intended use (cont.)

Commercial or industrial usage for a purpose other than the heating up of heating water shall be deemed inappropriate.

Intended use presupposes that a fixed installation in conjunction with permissible components designed for this purpose has been carried out.

Every other use will be deemed to be inappropriate.

Any resulting losses are excluded from the manufacturer's liability.

Any usage beyond this must be approved by the manufacturer for the individual case.

Intended use also includes the adherence to maintenance and inspection intervals.

Product information

Vitoflame blue flame oil burner with fuel oil preheating for Vitorondens 200-T, Vitoladens 300-T, suitable for operation with EL fuel oil according to DIN 51603-1. Rated heating output 40 to 50 kW.

The Vitoflame is suitable for **open flue** and **room sealed** operation.

Mounting the air pressure switch

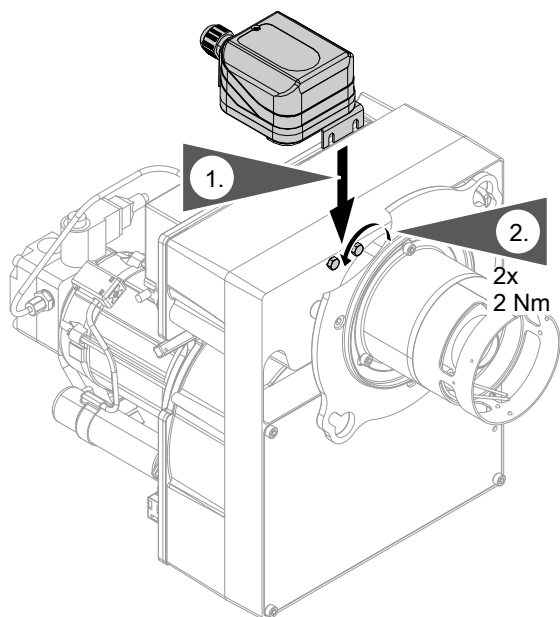


Fig. 1

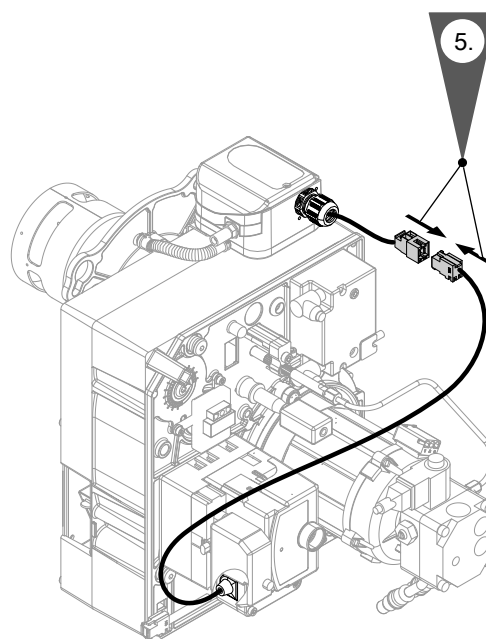


Fig. 3

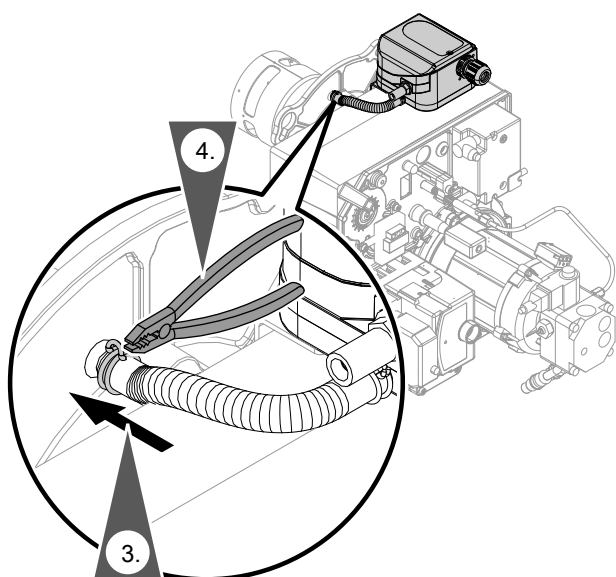


Fig. 2

Mounting the burner on the boiler

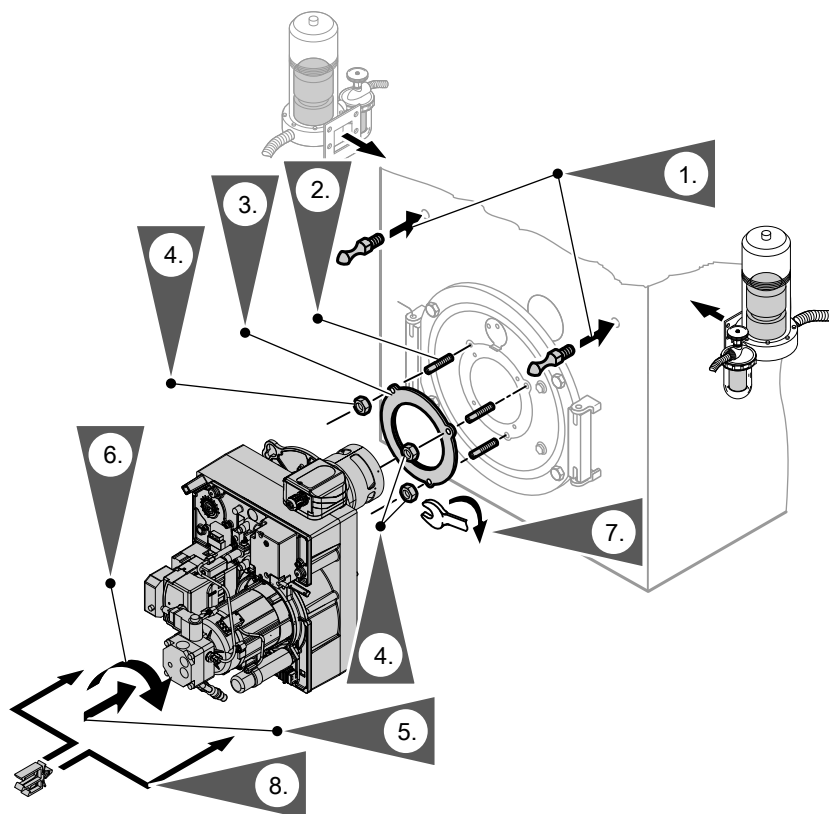


Fig. 4 Shown: Vitoladens 300-T

Note

Depending on the arrangement of the oil filter, insert the fixing for the oil feed either on the right **or** left.

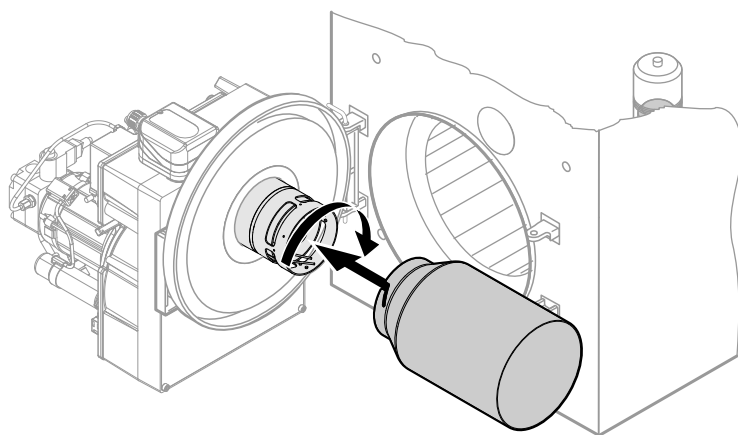


Fig. 5

Oil supply

Observe the requirements regarding oil lines to DIN 4755 or TRÖL (Technical Regulations for Oil Systems) [or local regulations] and any applicable regulations concerning water pollution control.

If the oil supply needs to be converted from a two-line to a single-line system, select the suction line diameter according to the table on page 11.

For tanks sited below the oil burner pump: The height differential H between the oil burner pump and the foot valve in the tank below must not exceed:

- 4 m in a single-line system
- 3.5 m in a two-line system

Greater height differentials lead to noisy operation and oil pump wear (max. vacuum 0.3 bar).

Oil supply (cont.)

An oil feed pump is required if the suction head or maximum line run for tanks below the oil burner pump is greater than that shown in the following tables. We recommend a standalone vacuum pump drive. If an oil pressure vessel drive is installed, the pressure at the inlet connection of the oil burner pump must not exceed 1.5 bar, and the oil burner should be protected by an additional solenoid valve.

A connection line for an external fuel valve (accessories, see Vitotec pricelist) is required to control the solenoid valve.

Connecting the solenoid valve line:



Installation instructions for accessories

1. Size the oil line in accordance with the tables below.
2. Install the oil line.
3. Disconnect the oil burner from the oil line before testing for leaks.
4. Check the oil line and oil filter for leaks using a leak testing kit (min. 5 bar pressure).
5. Connect the oil burner to the oil line.

Note

The oil burner must not be connected during these tests. There must be absolutely no leaks from the oil lines or joints!

Any leaks in the suction line would draw in air, causing an ongoing oil spray feed to the burner.

Note

An anti-lift valve is required in the following cases:

- By some regional water regulations.
- If the tank filling level is higher than the lowest point of the suction line.

Oil filters

Oil filter for single-line system

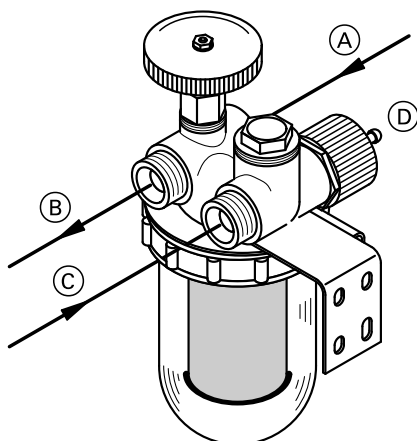


Fig. 6

- | | |
|---------------------------|-----------------------------|
| (A) Oil line from tank | (C) From oil pump on burner |
| (B) To oil pump on burner | (D) Air vent valve |

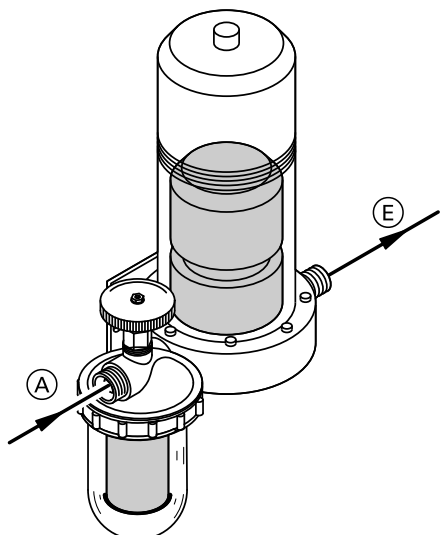


Fig. 7

- Ⓐ Oil line from tank
- Ⓔ To oil pump on burner

Oil filter for two-line system

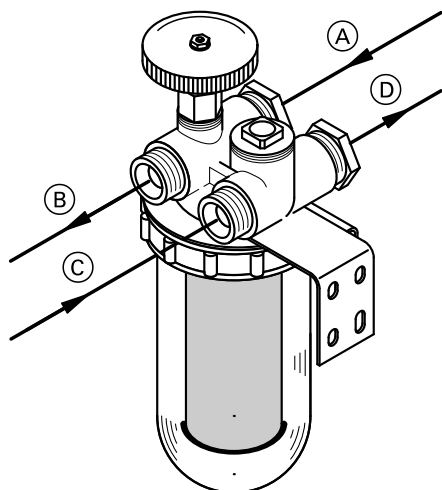


Fig. 8

- Ⓐ Oil line from tank
- Ⓑ To oil pump on burner
- Ⓒ From oil pump on burner
- Ⓓ Return to tank

It is essential to install an R $\frac{3}{8}$ fuel oil filter in the oil supply (**filter grade max. 40 μ m**).

For installation as a single-line system with a single-line R $\frac{3}{8}$ **fuel oil filter (filter grade max. 40 μ m)**, we recommend the installation of an automatic fuel oil air vent valve with integral oil filter.

Installing the oil supply as a single-line system

Tank above oil burner pump

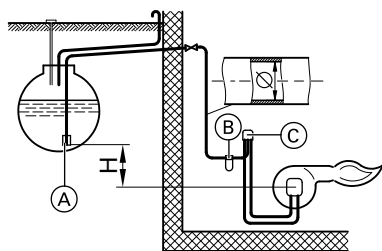


Fig. 9

- (A) Foot valve
- (B) Fuel oil filter
- (C) Fuel oil air vent valve

Suction head H in m	Max. line run in m ^{*2} with a suction line internal diameter of		
	4 mm	5 mm ^{*1}	6 mm
+4.0	100	100	100
+3.5	95	100	100
+3.0	89	100	100
+2.5	83	100	100
+2.0	77	100	100
+1.5	71	100	100
+1.0	64	100	100
+0.5	58	100	100

Tank below oil burner pump

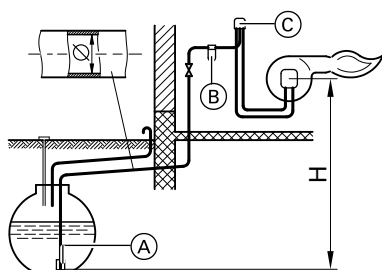


Fig. 10

- (A) Foot valve
- (B) Fuel oil filter
- (C) Fuel oil air vent valve

Suction head H in m	Max. line run in m ^{*2} with a suction line internal diameter of		
	6 mm	8 mm	10 mm
0	52	100	100
-0.5	46	100	100
-1.0	40	97	100
-1.5	33	81	100

^{*2} A total pressure drop of 0.35 bar is assumed, based on EL fuel oil with 6.0 cSt (DIN 51603-1), taking into account 4 pipe bends, 1 shut-off valve, 1 foot valve and 1 fuel oil filter.

^{*1} Not in CH.

Oil supply (cont.)

Suction head H in m	Max. line run in m ^{*2} with a suction line internal diameter of		
	6 mm	8 mm	10 mm
-2.0	27	66	100
-2.5	21	51	100
-3.0	15	36	75
-3.5	9	21	44
-4.0	—	6	12

Installing the oil supply as a two-line system

Two-line systems not in (CH).

Tank above oil burner pump

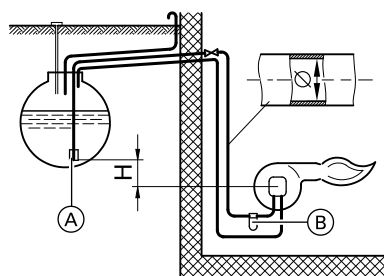


Fig. 11

- (A) Foot valve
- (B) Fuel oil filter

Suction head H in m	Max. line run in m ^{*2} with a suction line internal diameter of		
	6 mm	8 mm	10 mm
+4.0	33	100	100
+3.5	31	98	100
+3.0	29	91	100
+2.5	27	85	100
+2.0	25	79	100
+1.5	23	72	100
+1.0	21	66	100
+0.5	19	60	100

^{*2} A total pressure drop of 0.35 bar is assumed, based on EL fuel oil with 6.0 cSt (DIN 51603-1), taking into account 4 pipe bends, 1 shut-off valve, 1 foot valve and 1 fuel oil filter.

Oil supply (cont.)

Tank below oil burner pump

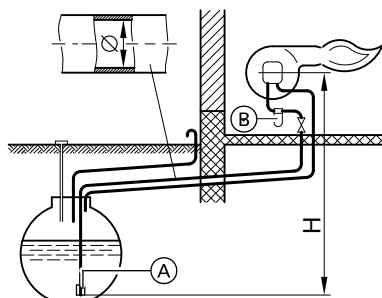


Fig. 12

- (A) Foot valve
- (B) Fuel oil filter

Suction head H in m	Max. line run in m ^{*2} with a suction line internal diameter of		
	6 mm	8 mm	10 mm
0	17	53	100
-0.5	15	47	100
-1.0	13	41	99
-1.5	11	34	84
-2.0	9	28	68
-2.5	7	22	53
-3.0	5	15	37
-3.5	—	9	22

Electrical connections

Note

Never interchange connections "L 1" and "N" at the power supply terminals of the control unit.

Mounting the burner hood

Note

Only for room sealed operation:
Before installing the burner hood, connect the inlet adaptor of the room sealed accessory to the burner.



Installation instructions, accessories for room sealed operation.

^{*2} A total pressure drop of 0.35 bar is assumed, based on EL fuel oil with 6.0 cSt (DIN 51603-1), taking into account 4 pipe bends, 1 shut-off valve, 1 foot valve and 1 fuel oil filter.

Mounting the burner hood (cont.)

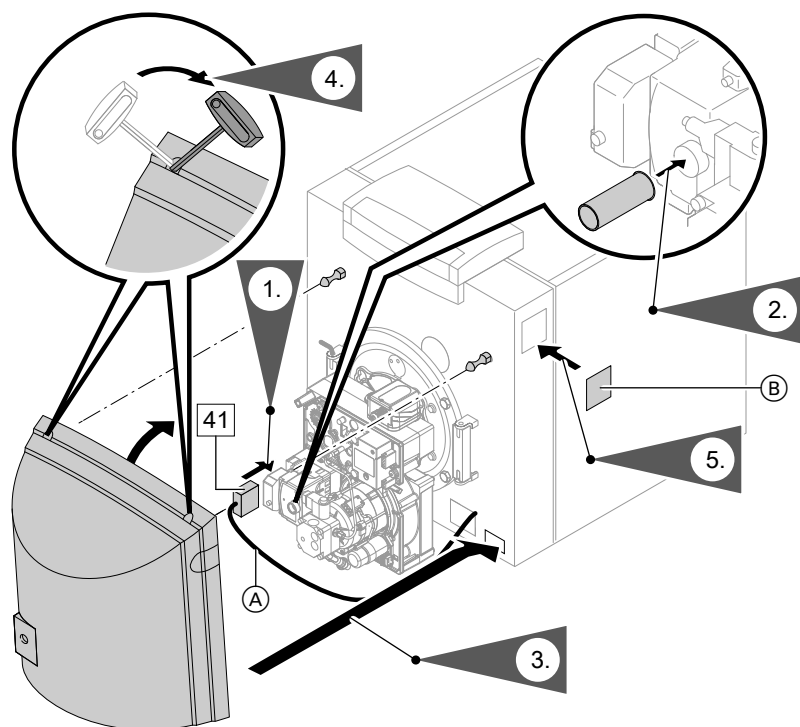

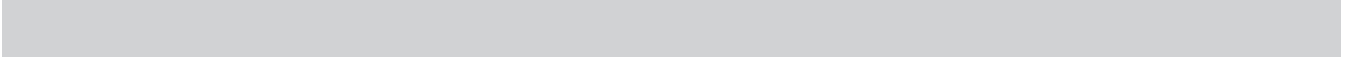


Fig. 13

- Ⓐ Burner plug 41
- Ⓑ Burner type plate

Commissioning and adjustment

 For commissioning and adjustment, see service instructions.



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