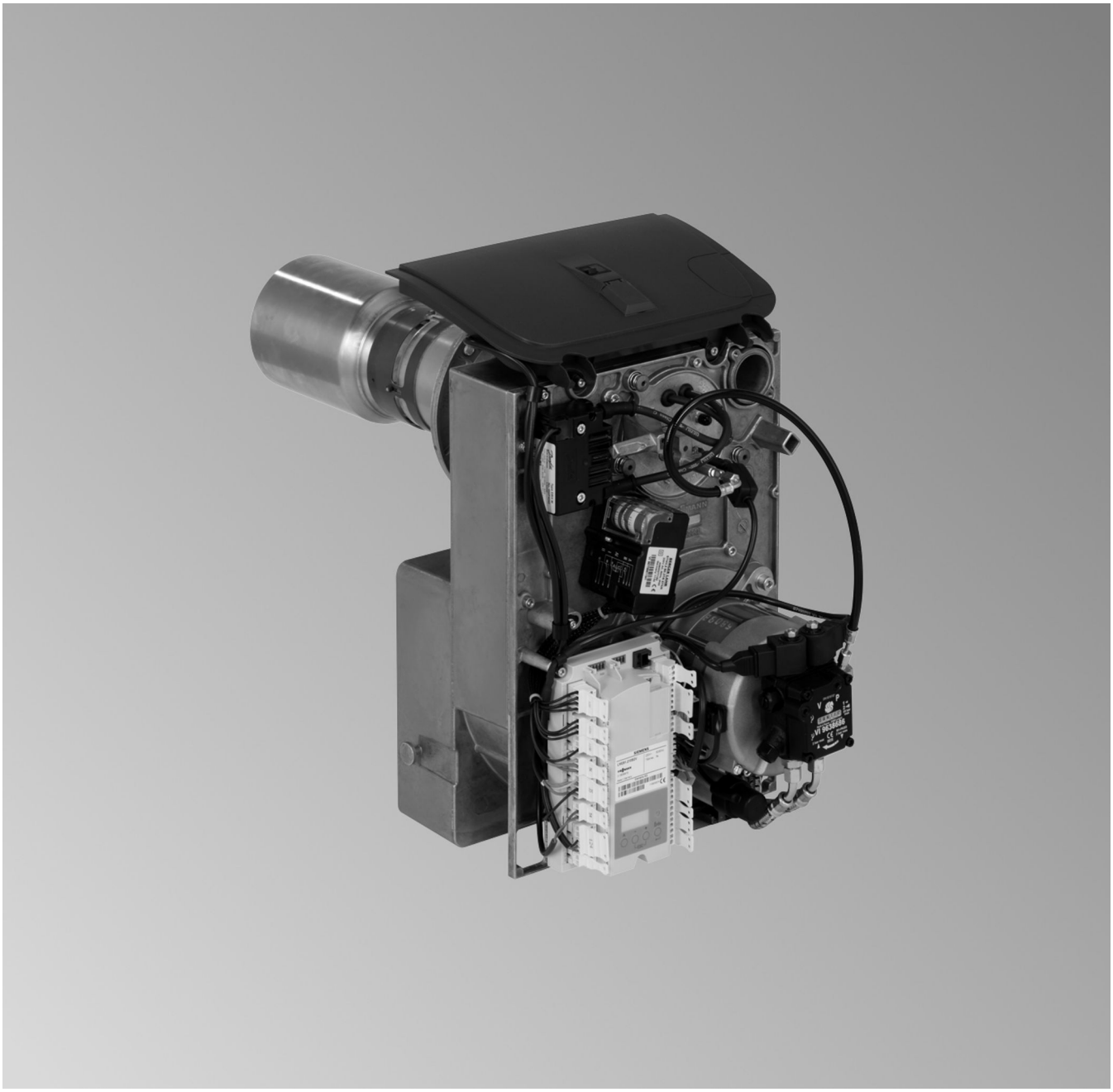
Installation instructions

for contractors

Vitoflame 300
Type VHG III
Pressure-jet oil burner
for Vitorondens 200-T, 67.6 to 107.3 kW

VITOFLAME 300



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Dispose after installation.

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.

! **Please note**
This symbol warns against the risk of material losses and environmental pollution.

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

Target group

These instructions are exclusively designed for qualified contractors.
- Work on electrical equipment must only be carried out by a qualified electrician.

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

- 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 unauthorised 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.
- Do not touch hot surfaces on the appliance, fittings 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.
Faulty components must be replaced with original Viessmann spare parts.

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Mounting the burner

Note
If required, widen the opening in the thermal insulation block on the boiler door to enable the flame tube to be inserted.

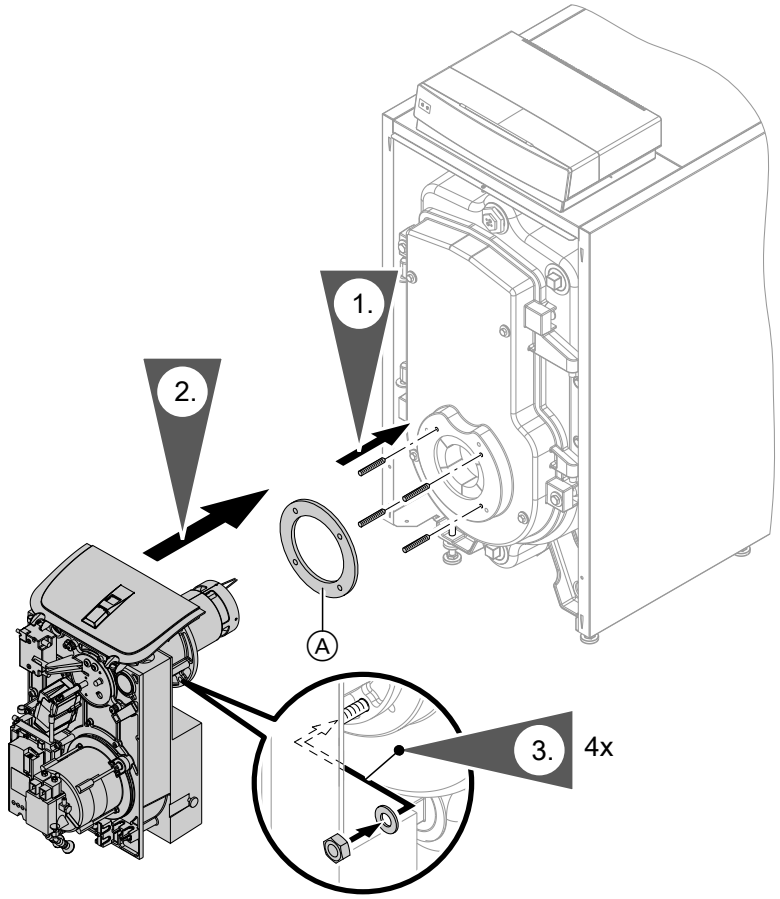

Fig. 1

Ⓐ Sealing plate

Mounting the burner (cont.)

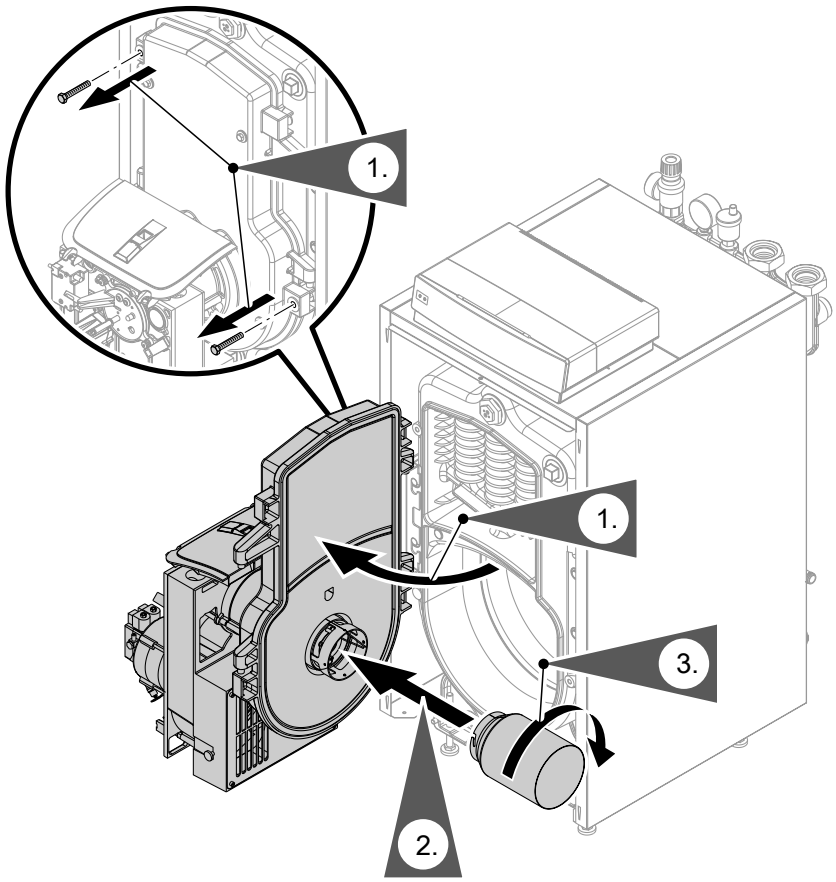

Fig. 2

Open the boiler door. Install the flame tube extension provided.

Oil filter

Oil filter for single-line system

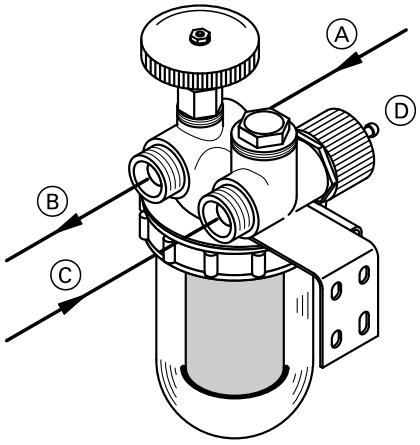

Fig. 3

It is essential to install an R ⅜ single-line fuel oil filter **(filter grade max. 40 µm)** and a fuel oil air vent valve in the oil supply system.

Ⓐ Oil line from the tank
Ⓑ To oil pump on burner
Ⓒ From oil pump on burner
Ⓓ Air vent valve

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Oil filter (cont.)

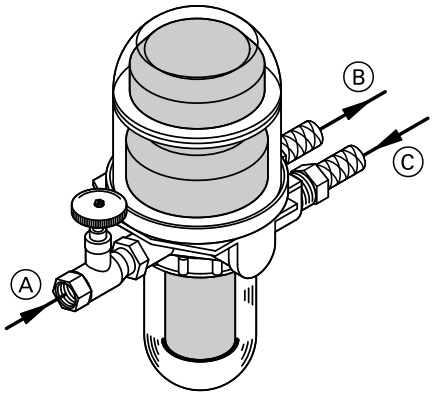

Fig. 4

We recommend the use of an automatic fuel oil air vent valve with integral oil filter.

Ⓐ Oil line from the tank
Ⓑ To oil pump on burner
Ⓒ From oil pump on burner

Oil filter for two-line system

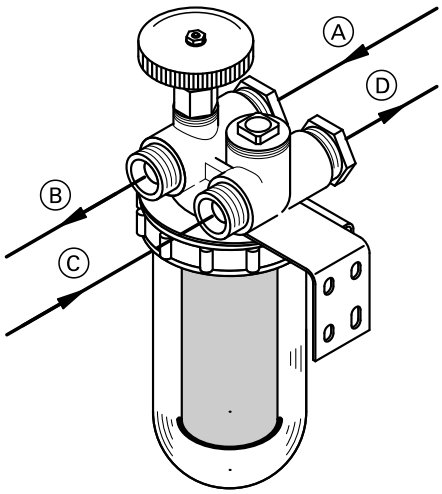

Fig. 5

It is essential to install an R ⅜ fuel oil filter in the oil supply **(filter grade max. 40 µm)**.

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

Oil supply

Note
Also observe the requirements regarding oil lines according to DIN 4755-2.
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 10.
The difference in height H between the oil burner pump and the foot valve inside the tank below must not be greater than:
- *with tank below oil burner pump 3.5 m*
- *with tank above oil burner pump 4 m.*

Greater height differences lead to noisy operation and pump wear.
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. If an oil feed pump is installed, the pressure at the suction connector of the oil burner pump must not exceed 2 bar, and the pressure-jet oil burner should be protected by an additional 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 pressure-jet 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).

   Note
   The pressure-jet 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.
5. Connect the pressure-jet oil burner to the oil filter.

Note
If an anti-lift valve is required to meet the regulations of the regional water authority and the tank fill level is higher than the lowest point in the suction line, we recommend the installation of an electrically operated anti-lift valve.

Installing the oil supply as a two-line system

Tank above oil burner pump

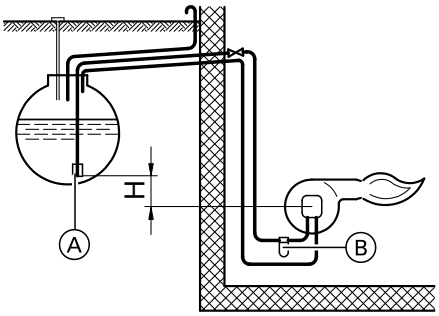

Fig. 6

Ⓐ Foot valve
Ⓑ Fuel oil filter

Suction head H	**Diameter of the suction line in mm**		
	8x1	**10x1**	**12x1**
in m	**Max. line run in m**[*1]		
+4.0	21	67	100
+3.5	20	63	100
+3.0	19	59	100
+2.5	17	55	100
+2.0	16	51	100

[*1] *A total pressure drop of 0.35 bar is assumed, based on EL fuel oil with 6.0 cSt (DIN 51603-1) including 4 pipe bends, 1 shut-off valve, 1 foot valve and 1 fuel oil filter.*

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Installing the oil supply as a two-line system (cont.)

Suction head H	Diameter of the suction line in mm		
	8x1	10x1	12x1
in m	Max. line run in m[*1]		
+1.5	15	46	100
+1.0	13	42	100
+0.5	12	38	94

Tank below oil burner pump

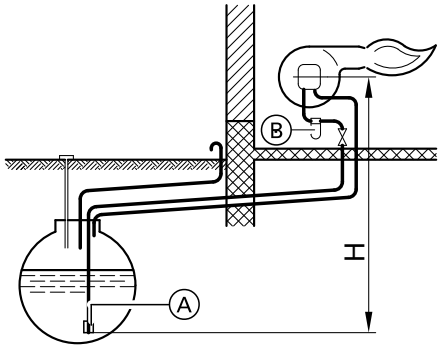

Fig. 7

Ⓐ Foot valve
Ⓑ Fuel oil filter

Suction head H	Diameter of the suction line in mm		
	8x1	10x1	12x1
in m	Max. line run in m[*1]		
0	11	34	84
–0.5	10	30	74
–1.0	8	26	64
–1.5	7	22	54
–2.0	6	18	44
–2.5	4	14	34
–3.0	—	10	24
–3.5	—	6	14

*[*1] A total pressure drop of 0.35 bar is assumed, based on EL fuel oil with 6.0 cSt (DIN 51603-1) including 4 pipe bends, 1 shut-off valve, 1 foot valve and 1 fuel oil filter.*

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Installing the oil supply as a single-line system

Tank above oil burner pump

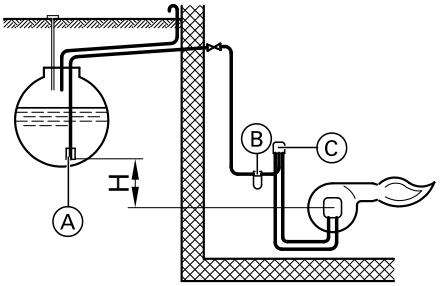

Fig. 8

Ⓐ Foot valve
Ⓑ Fuel oil filter
Ⓒ Fuel oil air vent valve

Suction head H	Rated boiler heating output in kW							
	80 to 105		115 to 200			225 to 300		
	Diameter of the suction line in mm							
	8x1	10x1	8x1	10x1	12x1	8x1	10x1	12x1
in m	Max. line run in m[*1]							
+4.0	100	100	64	100	100	43	100	100
+3.5	100	100	60	100	100	40	100	100
+3.0	100	100	56	100	100	38	100	100
+2.5	100	100	52	100	100	35	100	100
+2.0	97	100	49	100	100	33	100	100
+1.5	90	100	45	100	100	30	94	100
+1.0	82	100	41	100	100	27	86	100
+0.5	74	100	37	100	100	24	78	100

Tank below oil burner pump

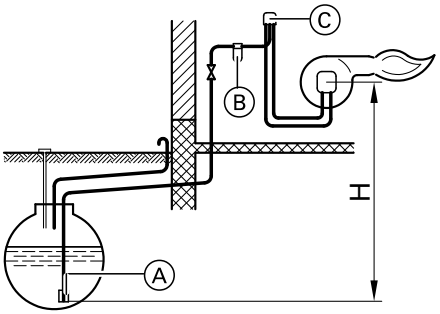

Fig. 9

Ⓐ Foot valve
Ⓑ Fuel oil filter
Ⓒ Fuel oil air vent valve

*[*1] A total pressure drop of 0.35 bar is assumed, based on EL fuel oil with 6.0 cSt (DIN 51603-1) including 4 pipe bends, 1 shut-off valve, 1 foot valve and 1 fuel oil filter.*

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Installing the oil supply as a single-line… (cont.)

Suction head H	Rated boiler heating output in kW						
	80 to 105		115 to 200		225 to 300		
	Diameter of the suction line in mm						
	8x1	10x1	8x1	10x1	8x1	10x1	12x1
in m	Max. line run in m[*1]						
0	32	100	100	100	22	70	100
–0.5	28	100	93	100	19	61	100
–1.0	24	100	80	100	16	53	100
–1.5	20	100	68	100	14	45	100
–2.0	17	100	56	100	11	36	88
–2.5	13	84	43	100	8	28	67
–3.0	9	59	31	75	6	19	47
–3.5	5	35	19	45	3	11	26

Electrical connections

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

[*1] *A total pressure drop of 0.35 bar is assumed, based on EL fuel oil with 6.0 cSt (DIN 51603-1) including 4 pipe bends, 1 shut-off valve, 1 foot valve and 1 fuel oil filter.*

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Connecting plugs 41 and 90

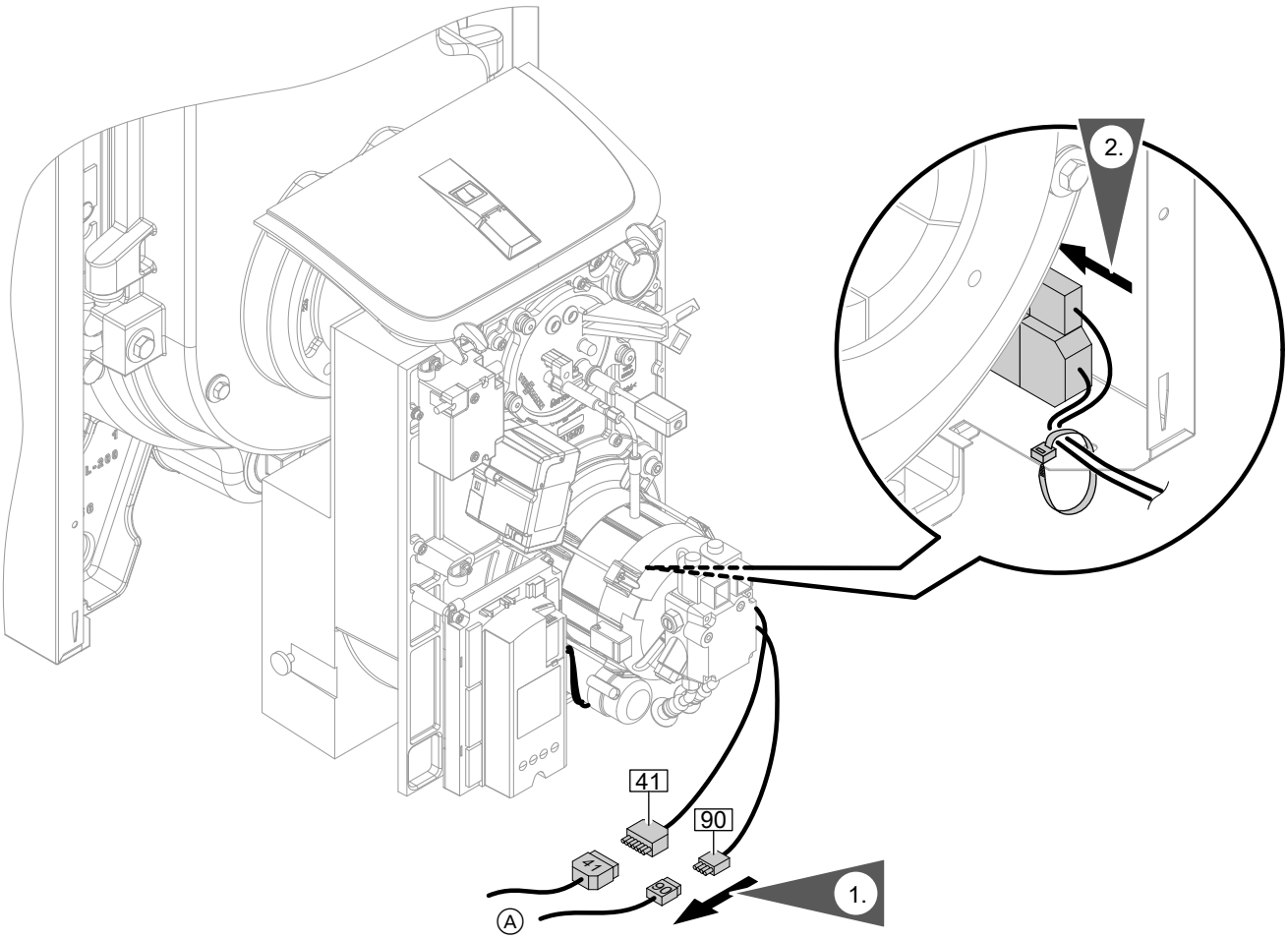

Fig. 10

Ⓐ To the control unit

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Mounting the burner hood

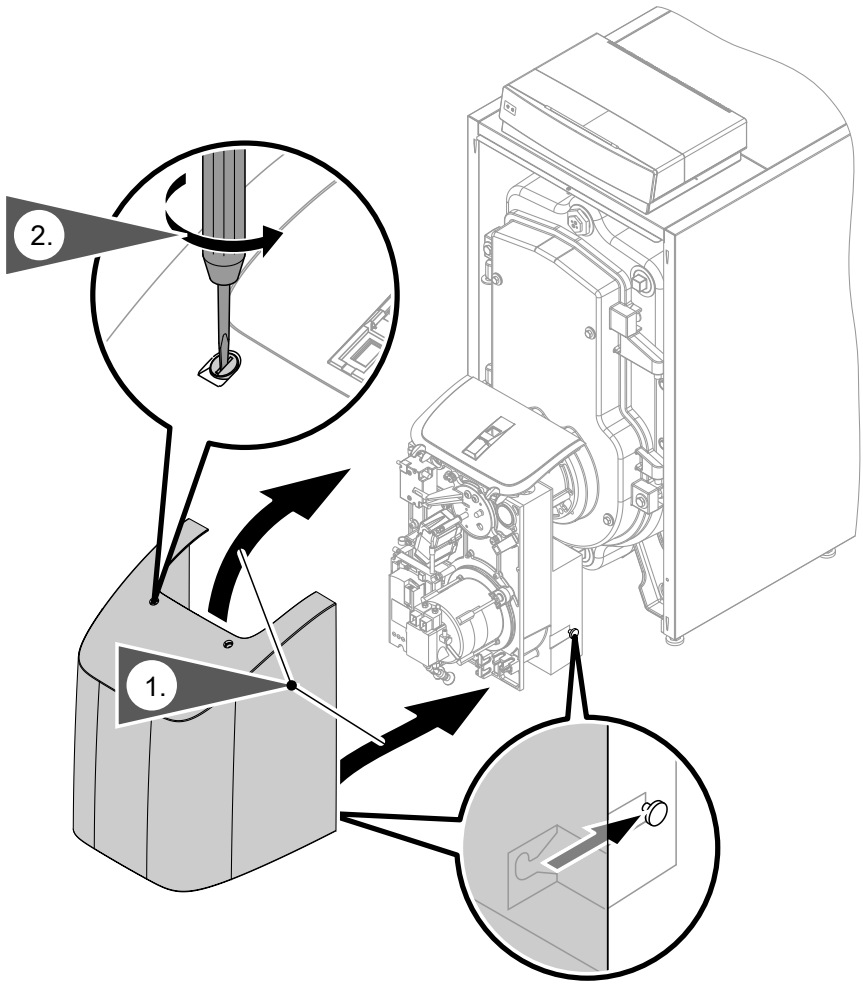

Fig. 11

Commissioning and adjustment

Service instructions

Danger
Contact with live components can lead to serious injury from electric current.
The burner must only be operated with the burner hood fitted.
Exception: Adjustments carried out by the heating contractor.

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