


**Divicon**

Heating/cooling circuit distributor with mixer and extension kit  
Heating/cooling circuit distributor with mixer without extension kit  
Heating/cooling circuit distributor without mixer


**Divicon**




## 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 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.

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### 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.

## Index

<b>1. Product information</b>	.....	6
<b>2. Preparing for installation</b>	.....	8
<b>3. Installation sequence</b>	Fitting the wall mounting bracket .....	9
	■ Fitting the wall mounting bracket for 1 Divicon .....	9
	■ Fitting the wall mounting brackets for a manifold for 2 or 3 Divicons .	9
	Installing the manifold .....	11
	■ Manifold for 2 Divicons .....	11
	■ Manifold for 3 Divicons .....	12
	Installing the low loss header .....	13
	Installing the Divicon .....	14
	■ Fitting the Divicon to the wall mounting bracket .....	14
	■ Fitting the Divicon to the manifold .....	15
	Setting the $K_V$ value .....	16
	Installing the flow temperature sensor .....	16
	Connecting the heating/cooling circuit .....	18
	■ Connecting the heating/cooling circuit to 1 Divicon .....	18
	■ Connecting the heating/cooling circuit to 2/3 Divicons with manifold .	19
	Filling the system .....	21
	Fitting the thermal insulation .....	22
	■ Fitting the thermal insulation to the low loss header .....	22
	■ Fitting the thermal insulation to the manifold .....	23
	■ Fitting the thermal insulation to the Divicon .....	25
	Installing the mixer motor .....	30
	Installing the mixer extension kit .....	33
<b>4. Electrical connections</b>	Electrical connections without a mixer extension kit .....	34
	Mixer extension kit, PlusBus subscriber .....	34
	■ Overview of electrical connections .....	34
	■ Connecting the temperature limiter to restrict the maximum tempera- ture (accessories) .....	35
	■ Connecting the contact humidistat .....	35
	■ Setting rotary switch S1 .....	37
	■ Connecting the PlusBus to the heat generator .....	37
	■ Power supply .....	38
	■ Connecting several accessories .....	39
	■ Connection and wiring diagram .....	40
	Mixer extension kit, KM-BUS subscriber .....	41
	■ Overview of electrical connections .....	41
	■ Connecting the temperature limiter to restrict the maximum tempera- ture (accessories) .....	42
	■ Connecting the contact humidistat .....	42
	■ Connecting the extension kit to the control unit .....	43
	■ Connecting 2 extension kits .....	45
	■ Power supply .....	46
	■ Connection and wiring diagram .....	47
	Cable routing for mixer extension kit .....	48
<b>5. Sealing the thermal insula- tion</b>	.....	49
<b>6. Commissioning</b>	.....	50
<b>7. Setting the mixer motor manually</b>	.....	51
<b>8. Specification</b>	.....	52

## Index (cont.)

<b>9. Declaration of conformity for extension kit</b>	.....	62
<b>10. Keyword index</b>	.....	63

## Product information

### Divicon with mixer

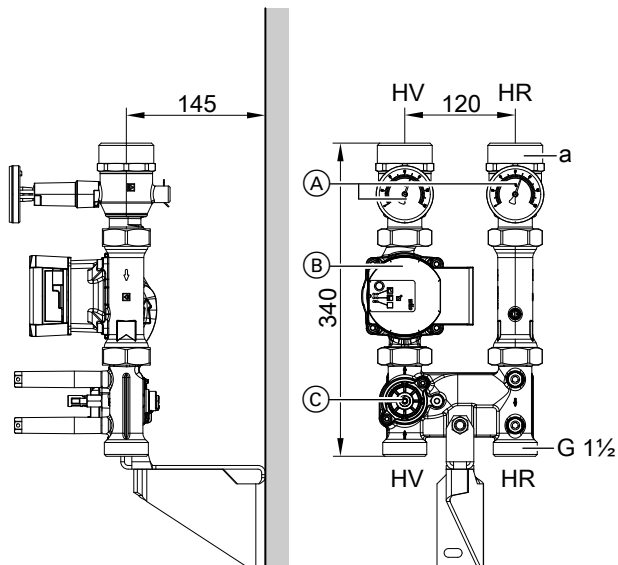


Fig. 1 Divicon with mixer: Wall mounting, shown without thermal insulation, mixer motor or mixer extension kit

- HR Heating/cooling circuit return
- HV Heating/cooling circuit flow
- (A) Ball valves with thermometer (as operating element)
- (B) Circulation pump
- (C) Mixer

### Divicon without mixer

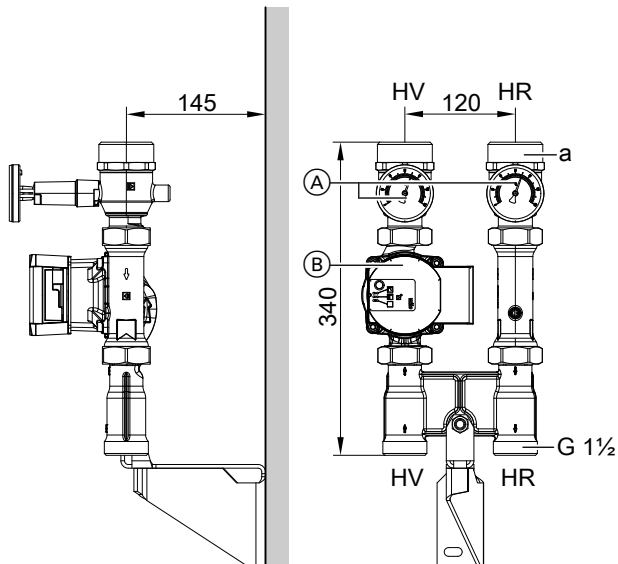


Fig. 2 Divicon without mixer: Wall mounting, shown without thermal insulation

- HR Heating/cooling circuit return
- HV Heating/cooling circuit flow
- (A) Ball valves with thermometer (as operating element)
- (B) Circulation pump

Heating circuit connections	R ¾	R 1	R 1¼
Nominal diameter	DN 20	DN 25	DN 32
Max. flow rate	1.0 m³/h	1.5 m³/h	2.5 m³/h
a (female)	Rp ¾	Rp 1	Rp 1¼
a (male)	G 1¼	G 1¼	G 2

### Installation example: Divicon with double manifold

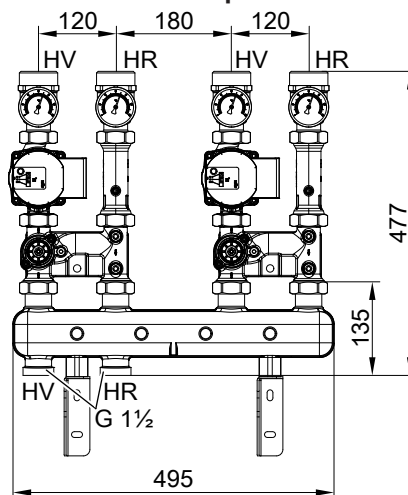


Fig. 3 Shown without thermal insulation, mixer motor or mixer extension kit

- HR Heating/cooling circuit return
- HV Heating/cooling circuit flow

### Installation example: Divicon with triple manifold

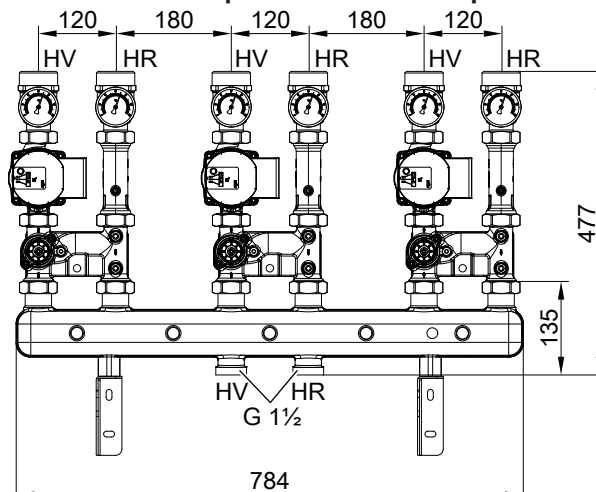


Fig. 4 Shown without thermal insulation, mixer motor or mixer extension kit

- HR Heating/cooling circuit return
- HV Heating/cooling circuit flow

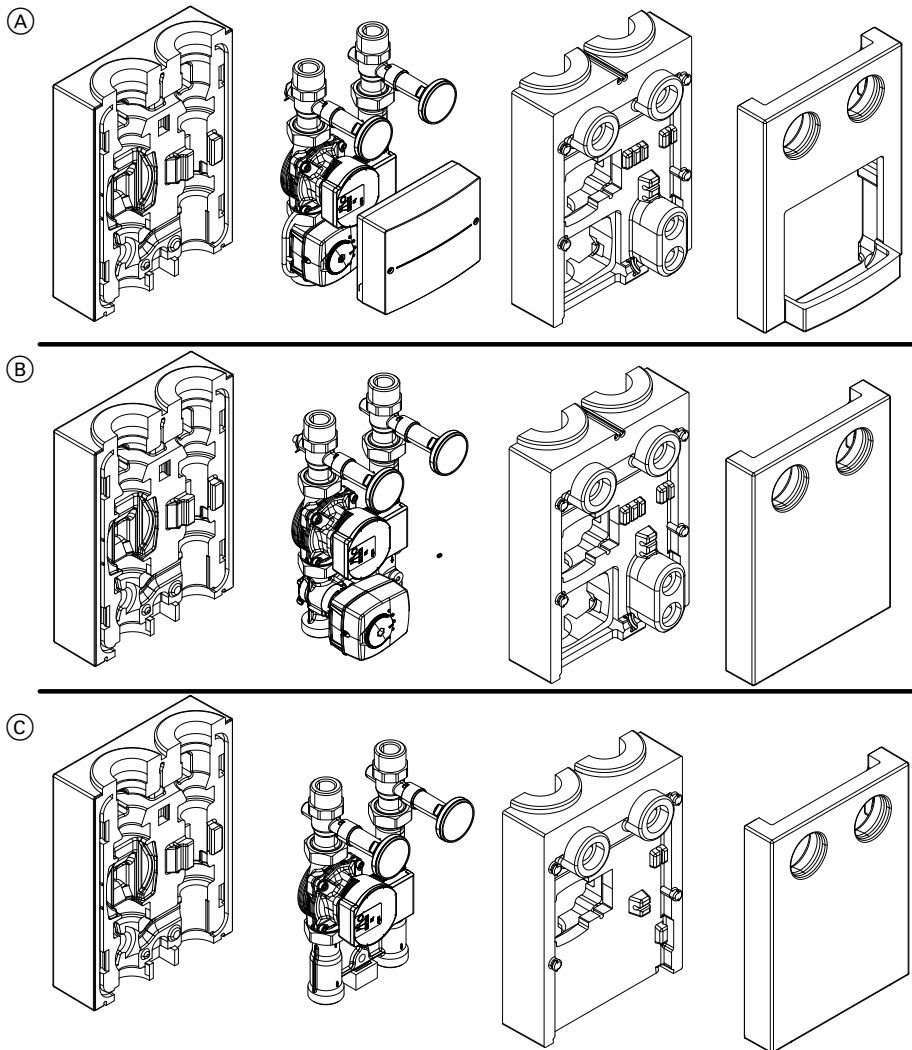


Fig. 5

- (A) Divicon heating/cooling circuit distributor with mixer and extension kit (shown with Wilo circulation pump)
- (B) Divicon heating/cooling circuit distributor with mixer without extension kit (shown with Wilo circulation pump)
- (C) Divicon heating/cooling circuit distributor without mixer (shown with Wilo circulation pump)

**Note on diagrams**

The information in the following chapters applies to all Divicon types. The Divicon heating/cooling circuit distributor with mixer and extension kit (A) is shown as an example.

If the steps differ for the various types, the differences are shown.

## Preparing for installation

### Removing the thermal insulation

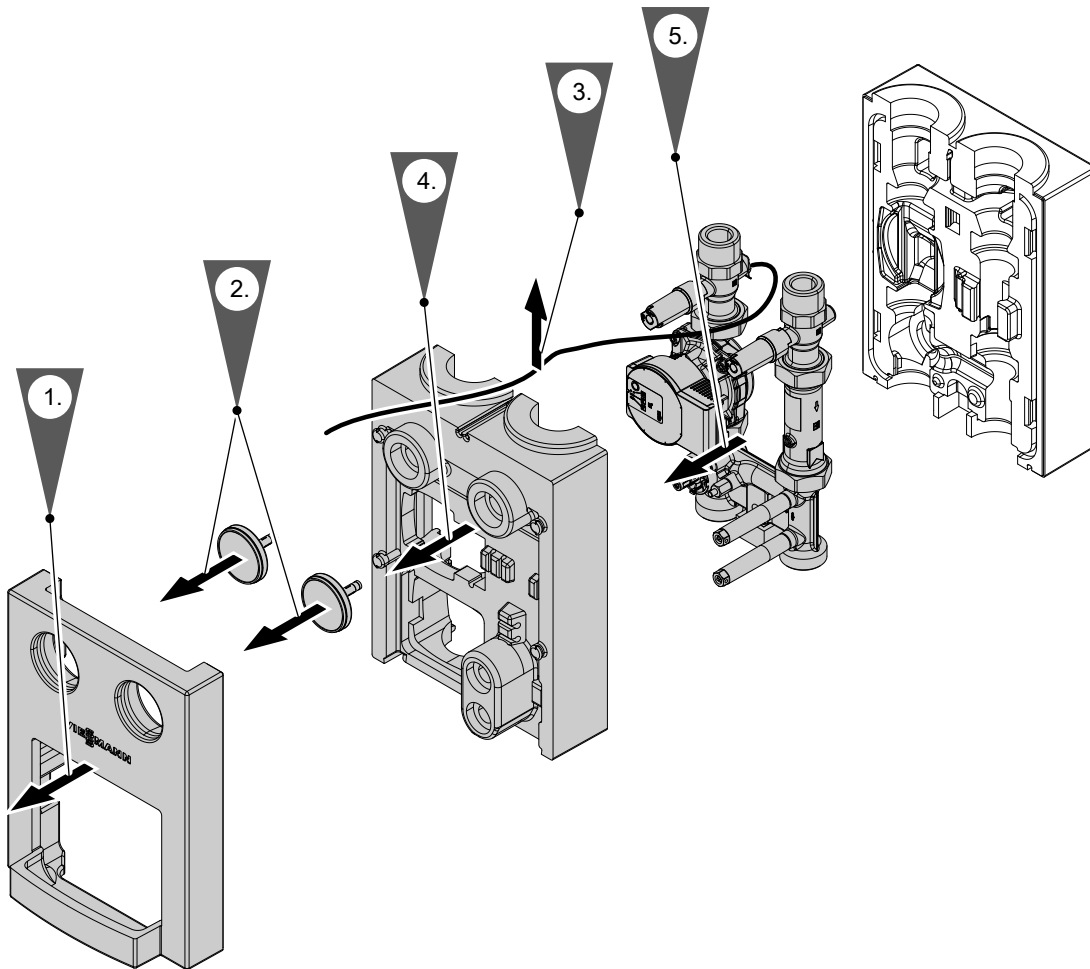


Fig. 6

#### Note

Depending on the type, the flow temperature sensor and cable (step 3) may not be fitted.

6. Remove the thermal insulation from the manifold (if fitted).
7. Remove the thermal insulation from the low loss header (if fitted).



## Fitting the wall mounting bracket

### Fitting the wall mounting bracket for 1 Divicon

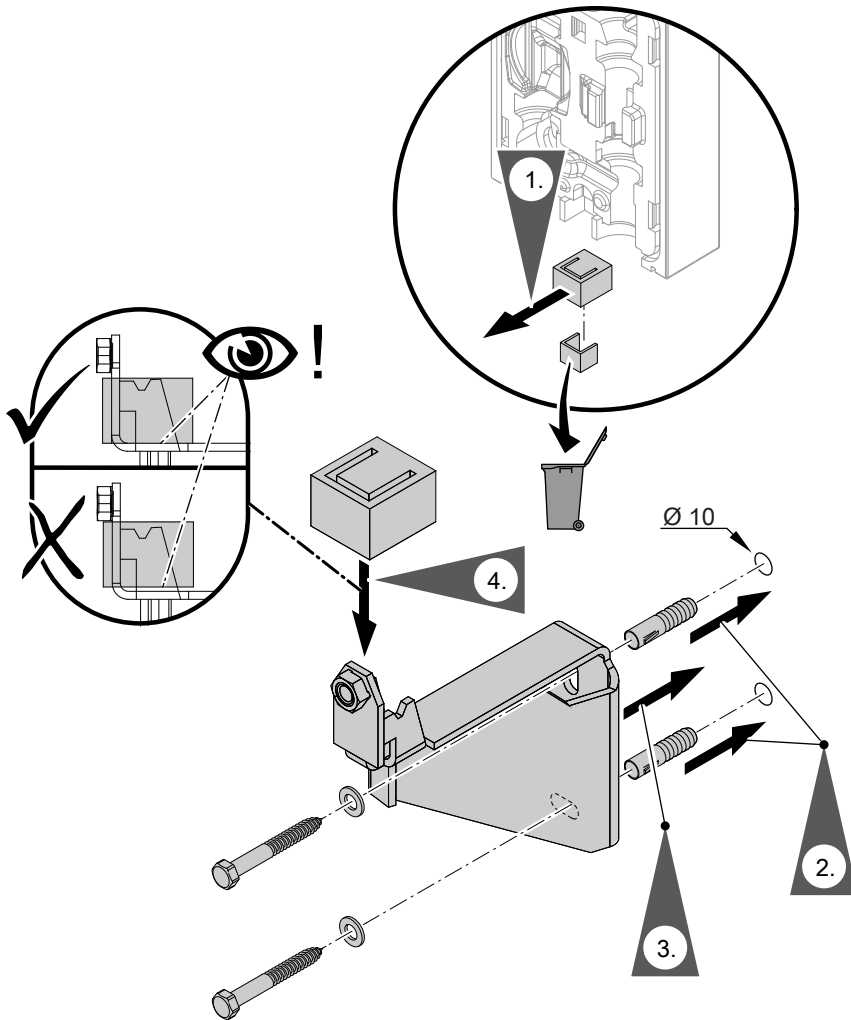


Fig. 7

### Fitting the wall mounting brackets for a manifold for 2 or 3 Divicons

## Fitting the wall mounting bracket (cont.)

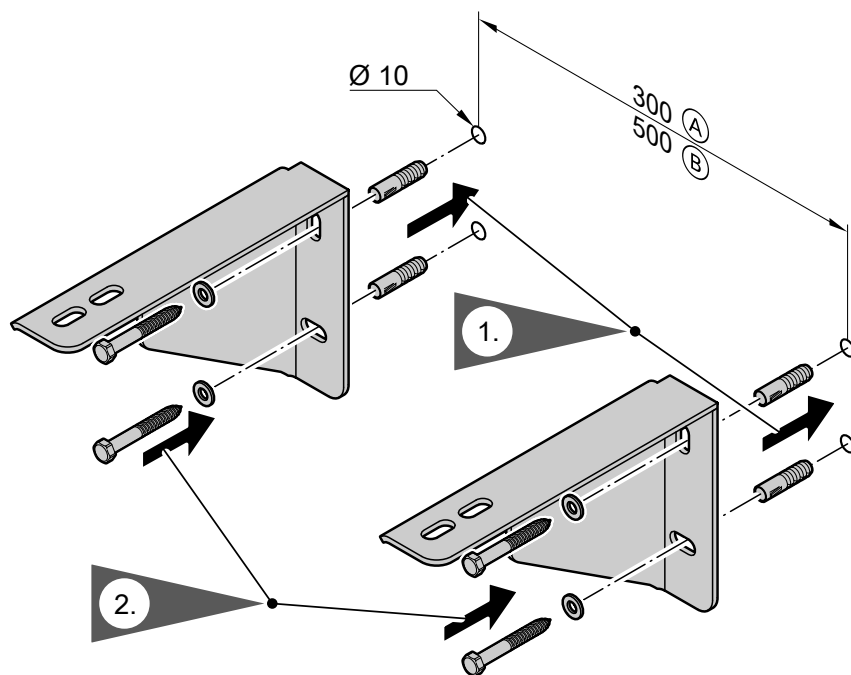


Fig. 8

- Ⓐ Manifold for 2 Divicons
- Ⓑ Manifold for 3 Divicons

## Installing the manifold

### Manifold for 2 Divicons

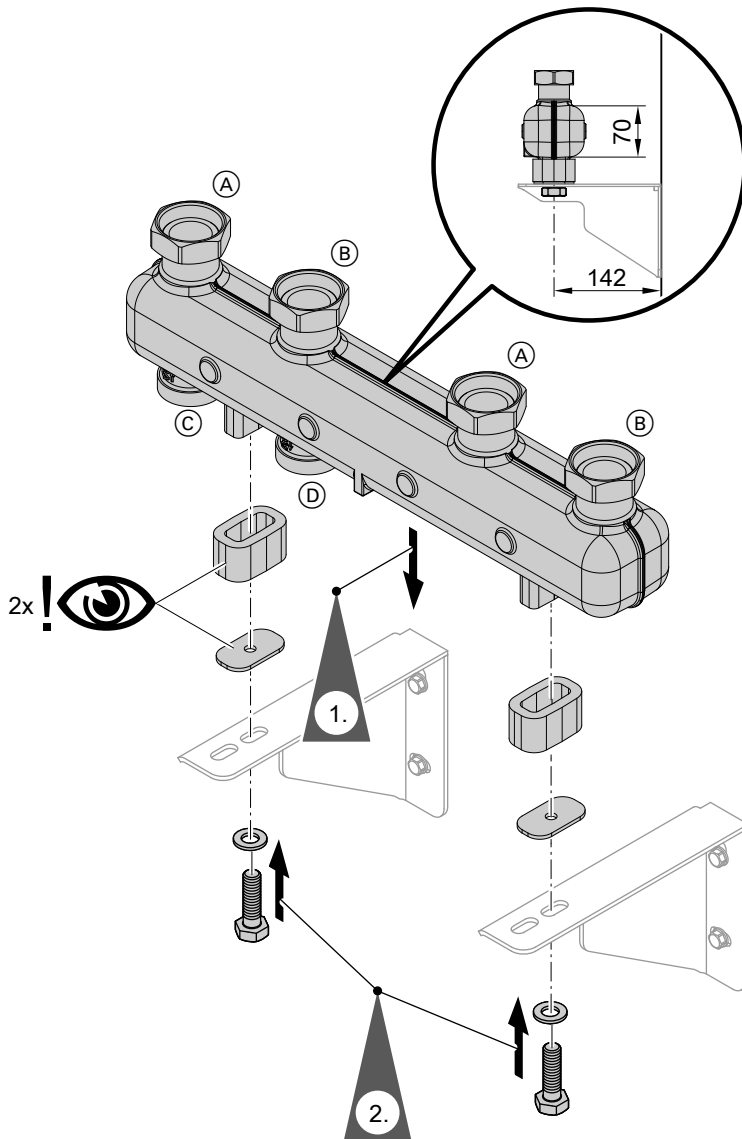


Fig. 9

- (A) Heating flow
- (B) Heating return

- (C) From the heat generator
- (D) To the heat generator

Manifold for 3 Divicons

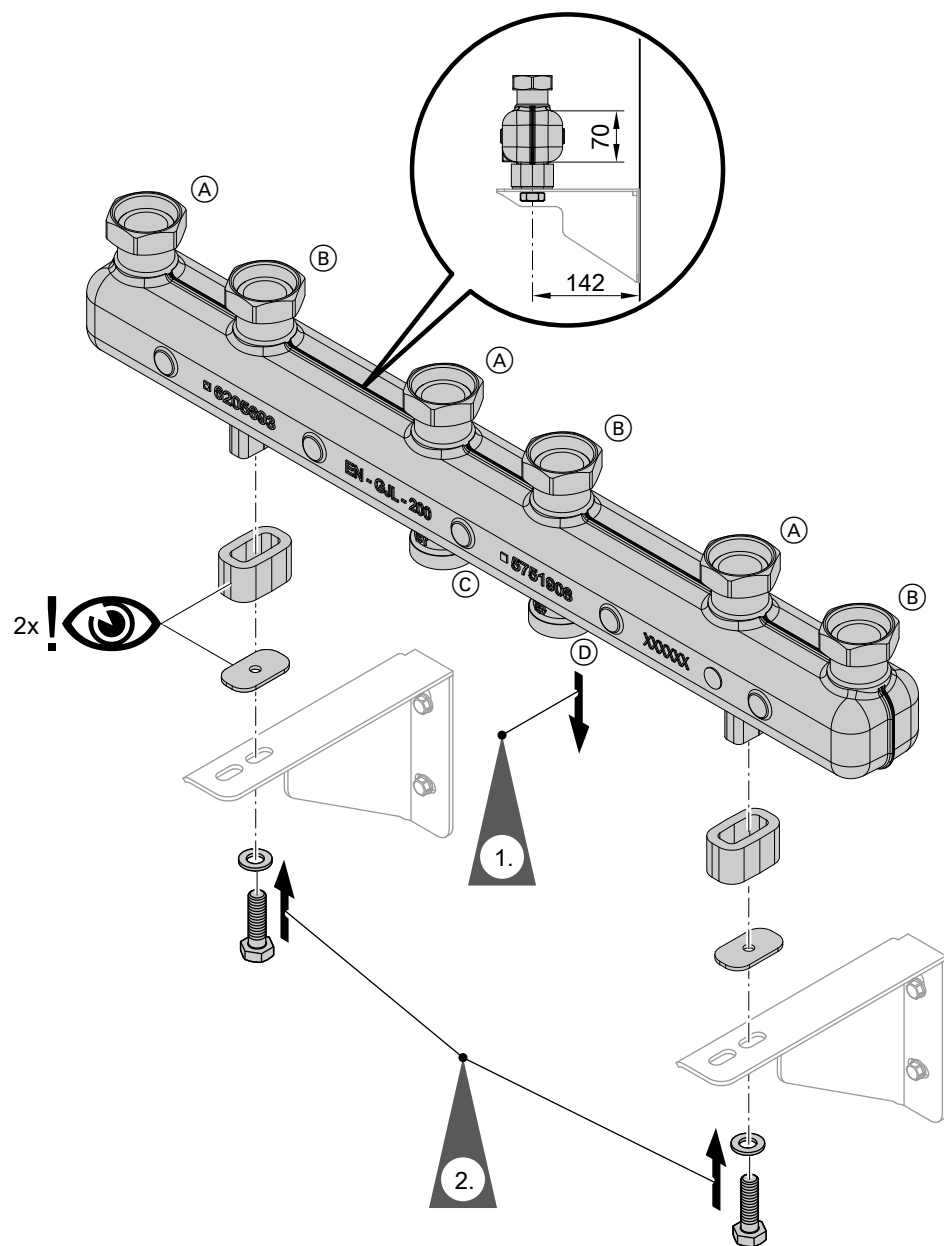


Fig. 10

- (A) Heating flow
- (B) Heating return
- (C) From the heat generator
- (D) To the heat generator

## Installing the low loss header

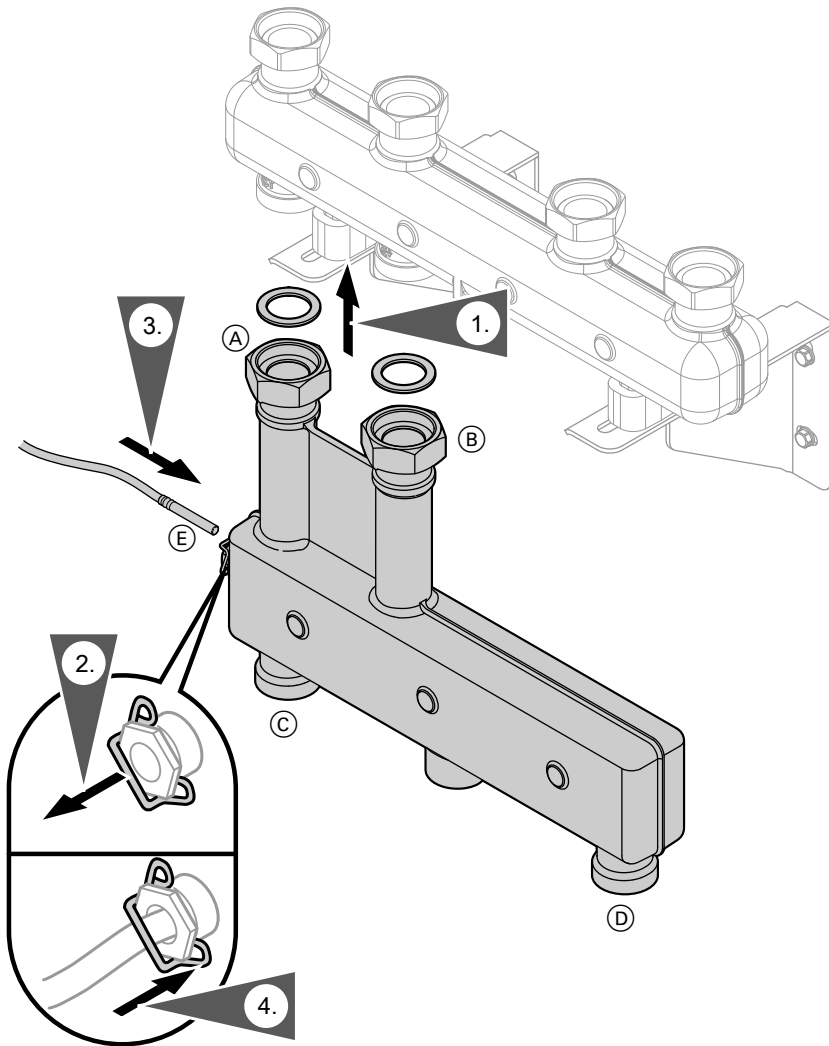


Fig. 11

- (A) Heating flow
- (B) Heating return
- (C) From the heat generator

- (D) To the heat generator
- (E) Temperature sensor, low loss header

## Installing the Divicon

### Fitting the Divicon to the wall mounting bracket

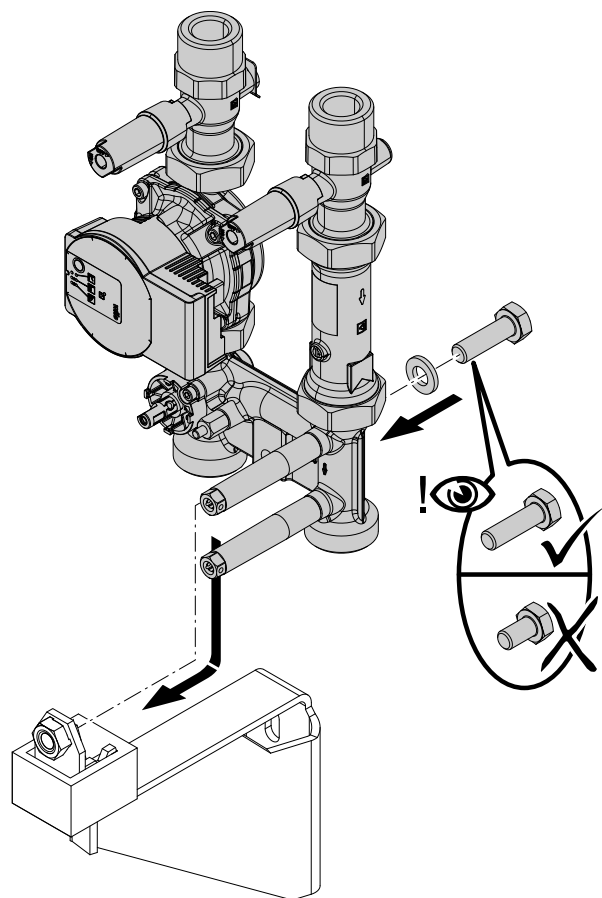


Fig. 12

Fitting the Divicon to the manifold

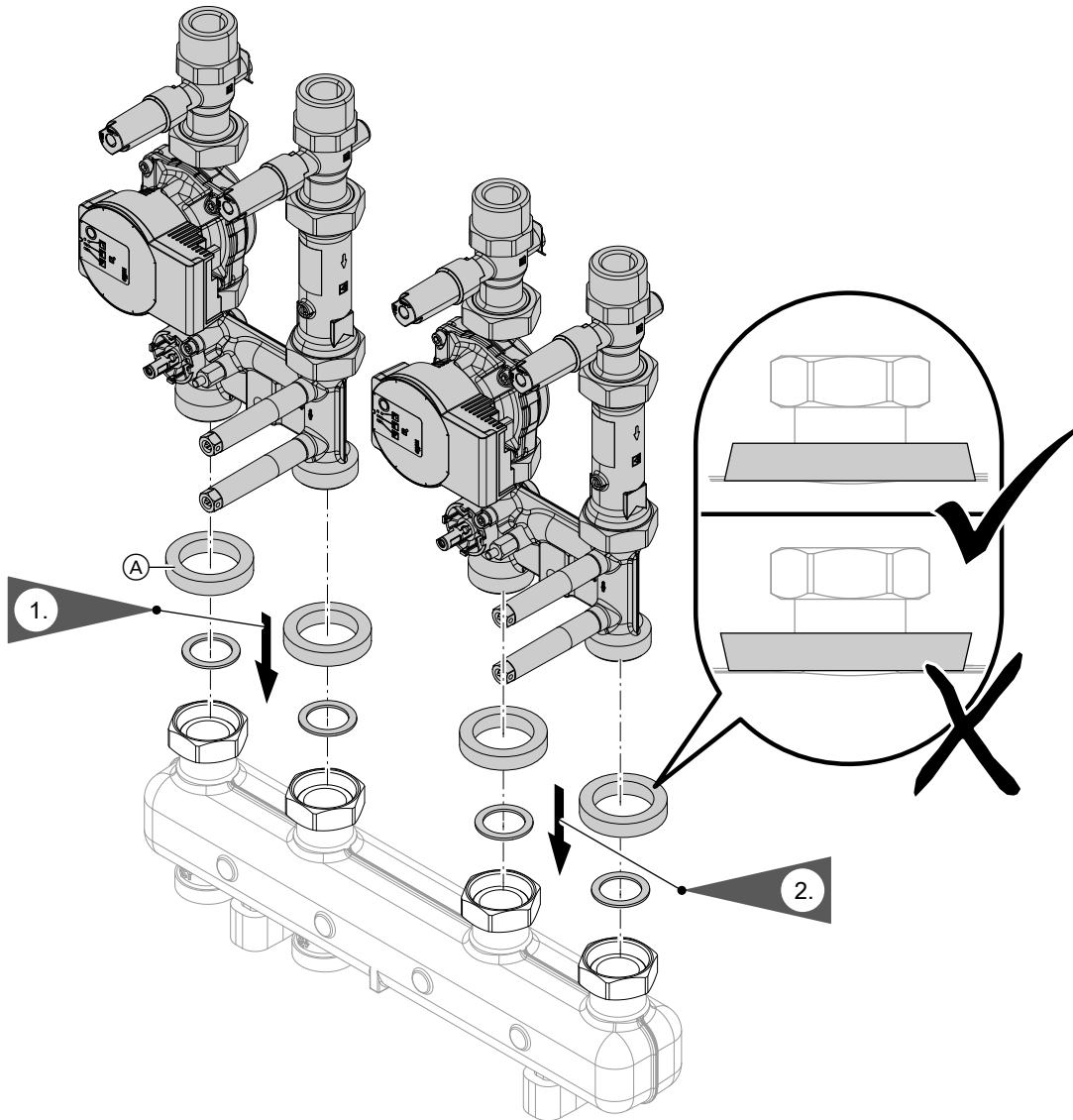


Fig. 13

**Note**

*This installation procedure applies to manifolds for 2 or 3 Divicons. The installation for manifolds for 2 Divicons is shown as an example.*

- Ⓐ Thermal insulation rings from the "cooling kit" (only required for cooling mode)

## Setting the $K_V$ value

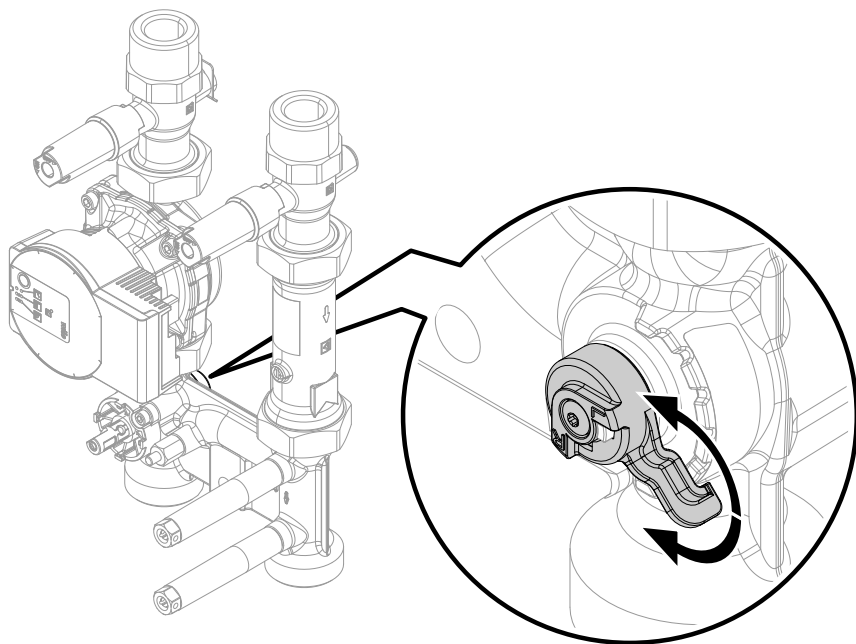


Fig. 14

### $K_V$ values

Heating circuit connections	R $\frac{3}{4}$	R 1	R $1\frac{1}{4}$
Nominal diameter	DN 20	DN 25	DN 32
Level 1	3.1	4.0	4.7
Level 2	3.7	4.5	5.1
Level 3	4.5	5.1	5.6
Level 4	4.8	5.5	5.8
Level 5	4.9	5.6	5.9

## Installing the flow temperature sensor

### Note

- The flow temperature sensor is already installed in the Divicon heating/cooling circuit distributor with mixer and extension kit.
- The Divicon heating/cooling circuit distributor without mixer does not allow for installation of the flow temperature sensor.



## Installing the flow temperature sensor (cont.)

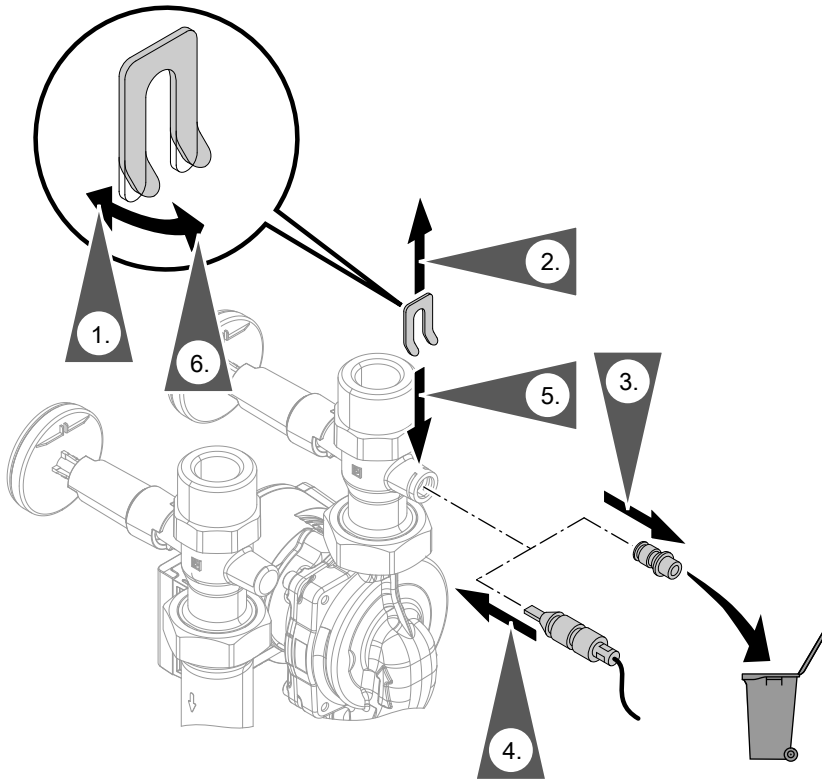


Fig. 15

## Connecting the heating/cooling circuit

### Connecting the heating/cooling circuit to 1 Divicon

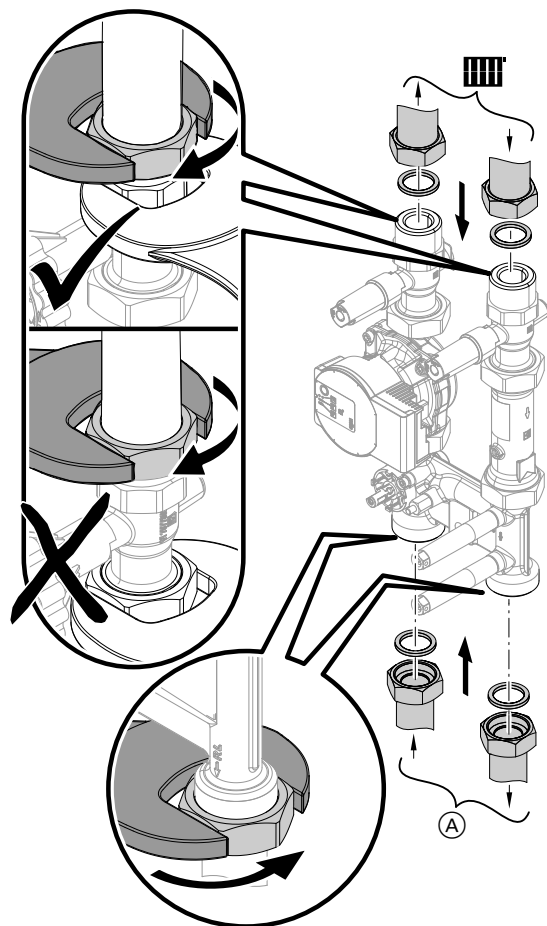


Fig. 16

Ⓐ Heat generator

Connecting the heating/cooling circuit to 2/3 Divicons with manifold

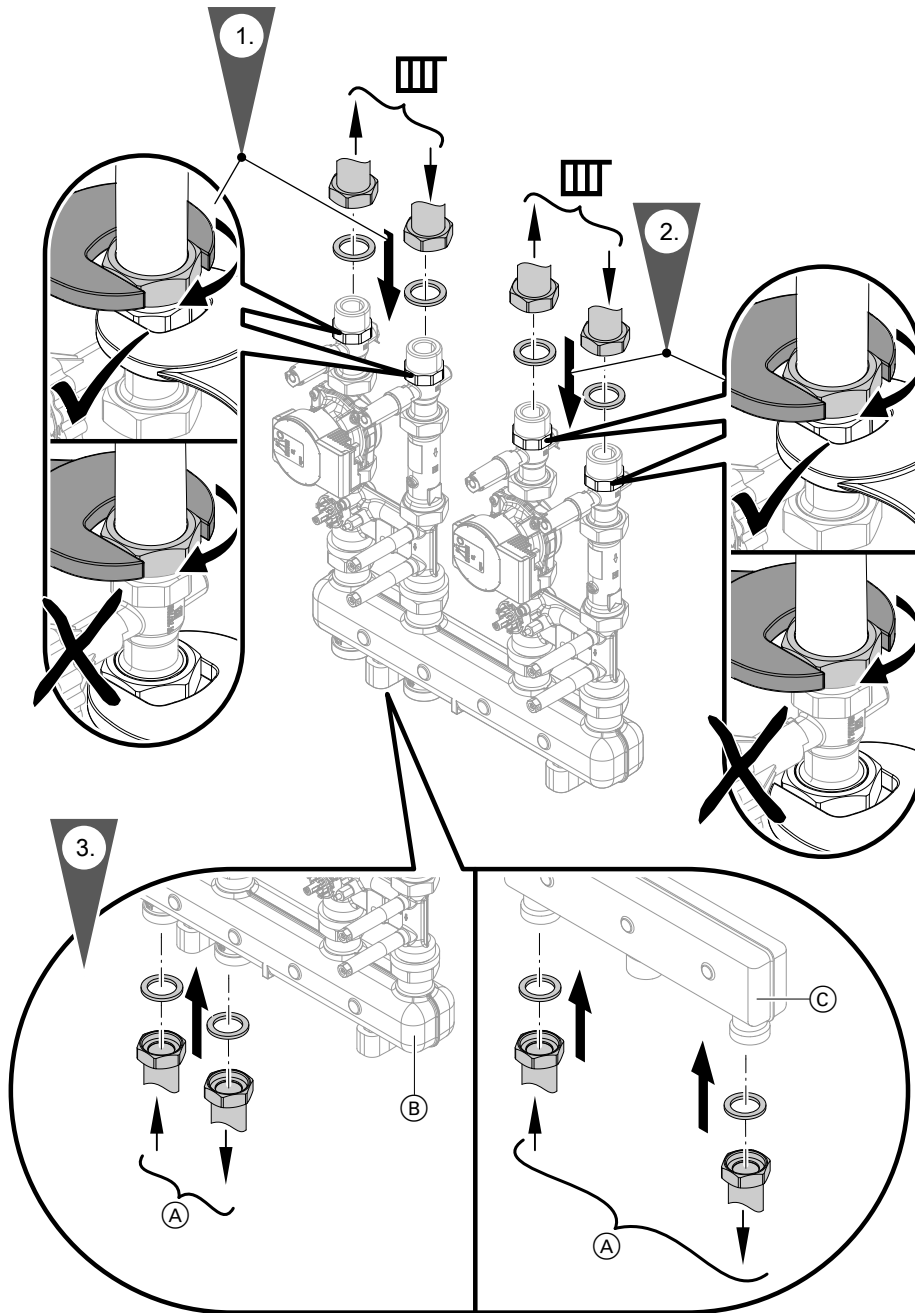


Fig. 17

**Note**

*This installation procedure applies to manifolds for 2 or 3 Divicons. The installation for manifolds for 2 Divicons is shown as an example.*

- (A) Heat generator
- (B) Manifold for 2 or 3 Divicons
- (C) Low loss header

Connecting the heating/cooling circuit (cont.)

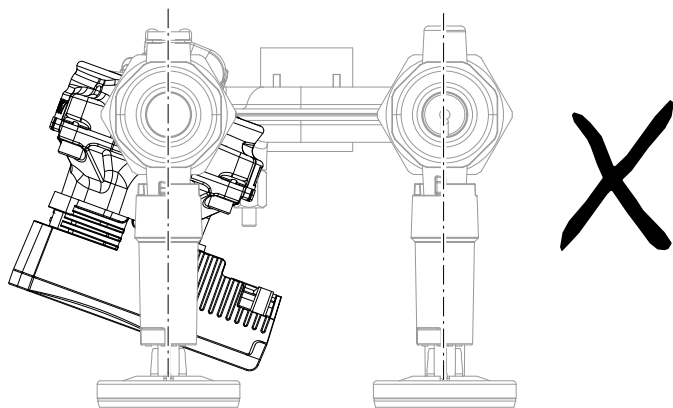
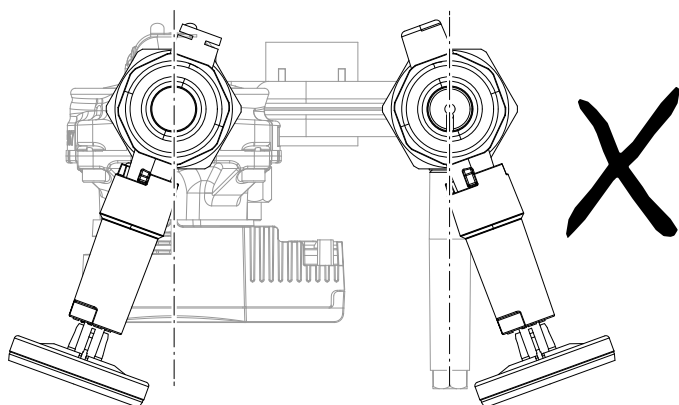
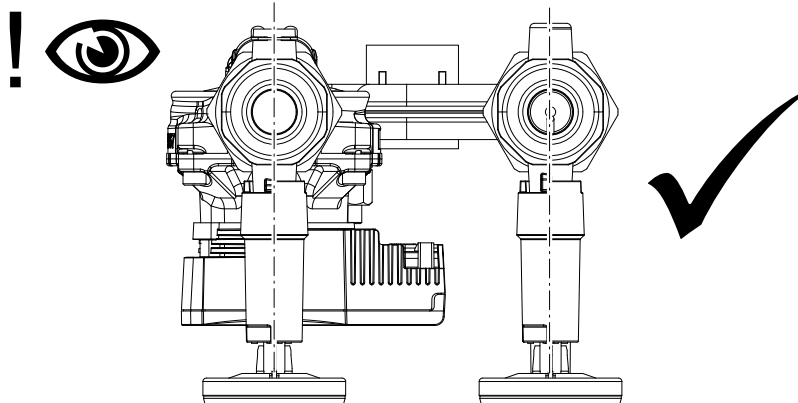


Fig. 18

## Filling the system

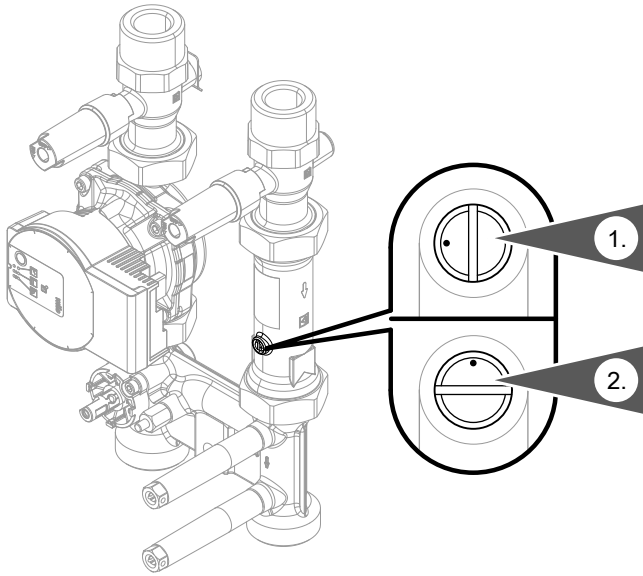


Fig. 19

1. For filling (with heating water), open the check valve in the heating return. To do so, move the slot of the screw to a vertical position.
2. For operation, position the slot of the screw in the horizontal position.

## Fitting the thermal insulation

### Fitting the thermal insulation to the low loss header

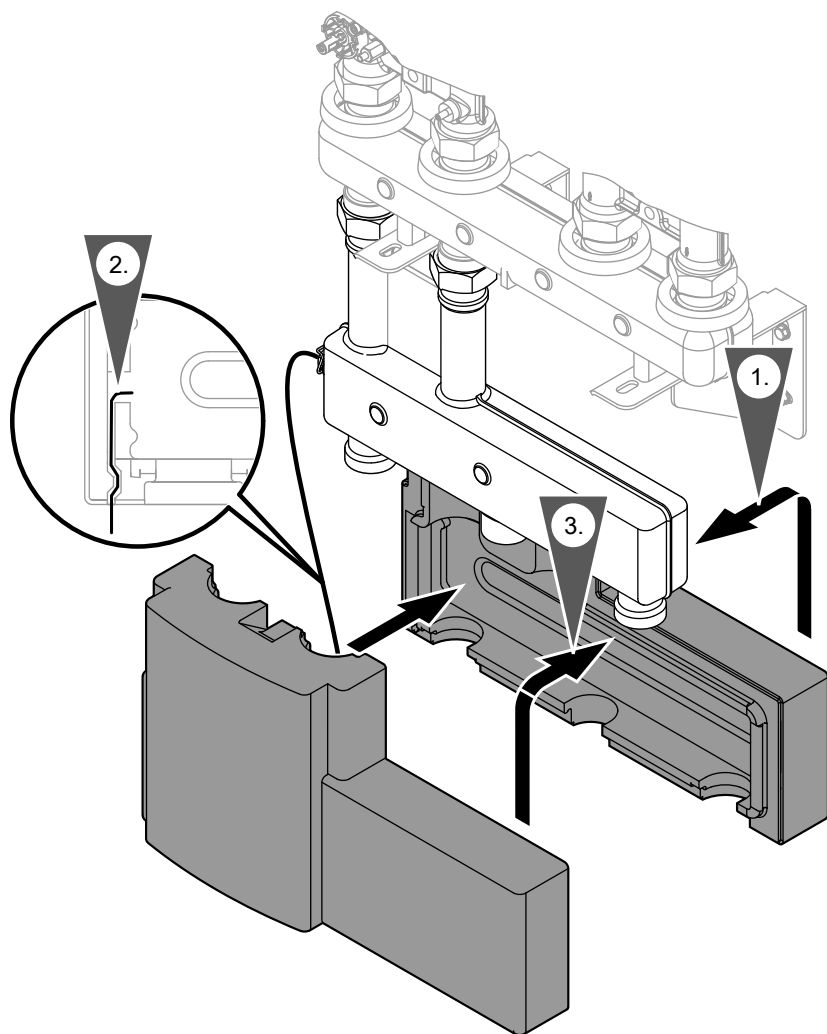


Fig. 20

Fitting the thermal insulation to the manifold

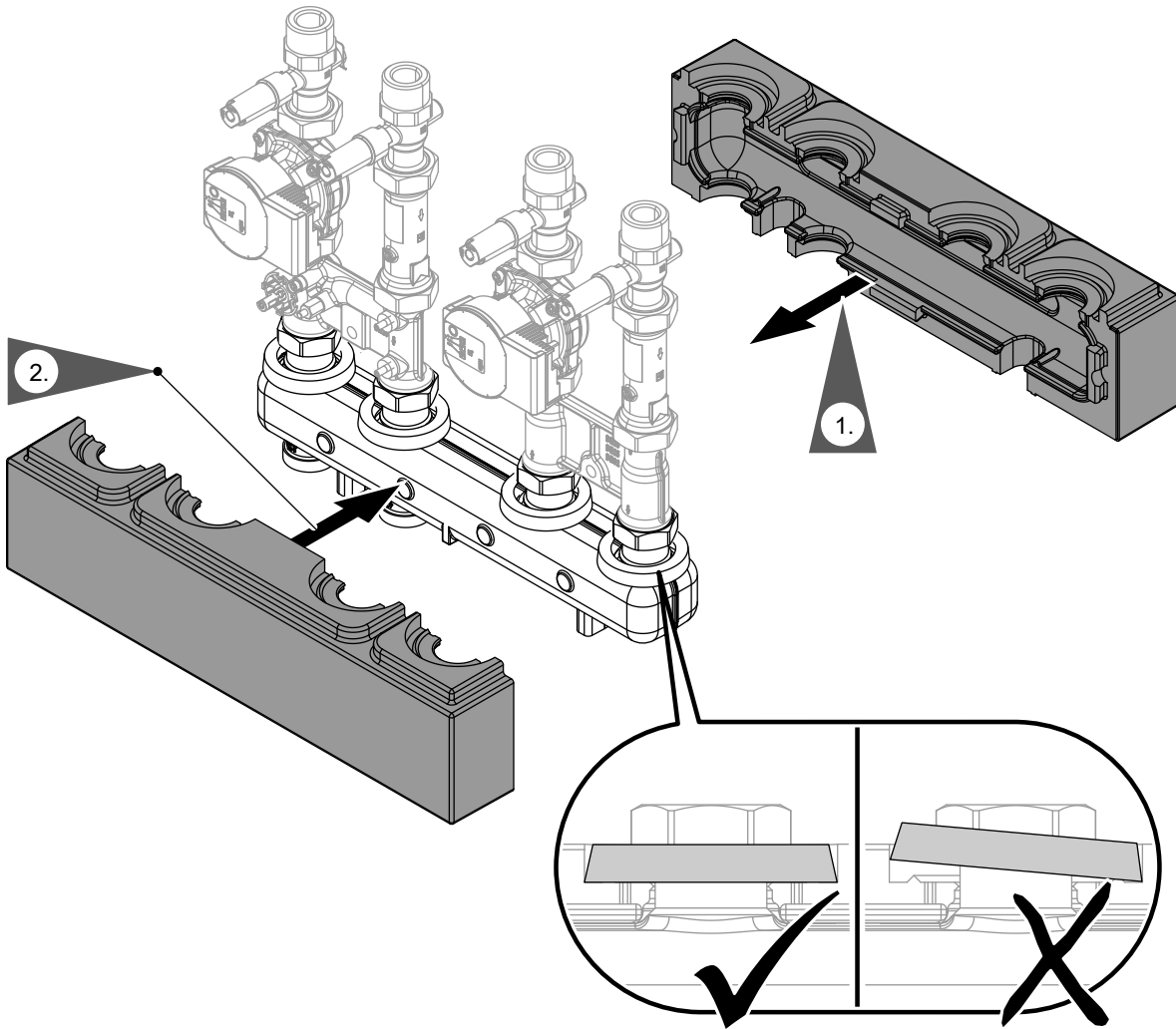


Fig. 21

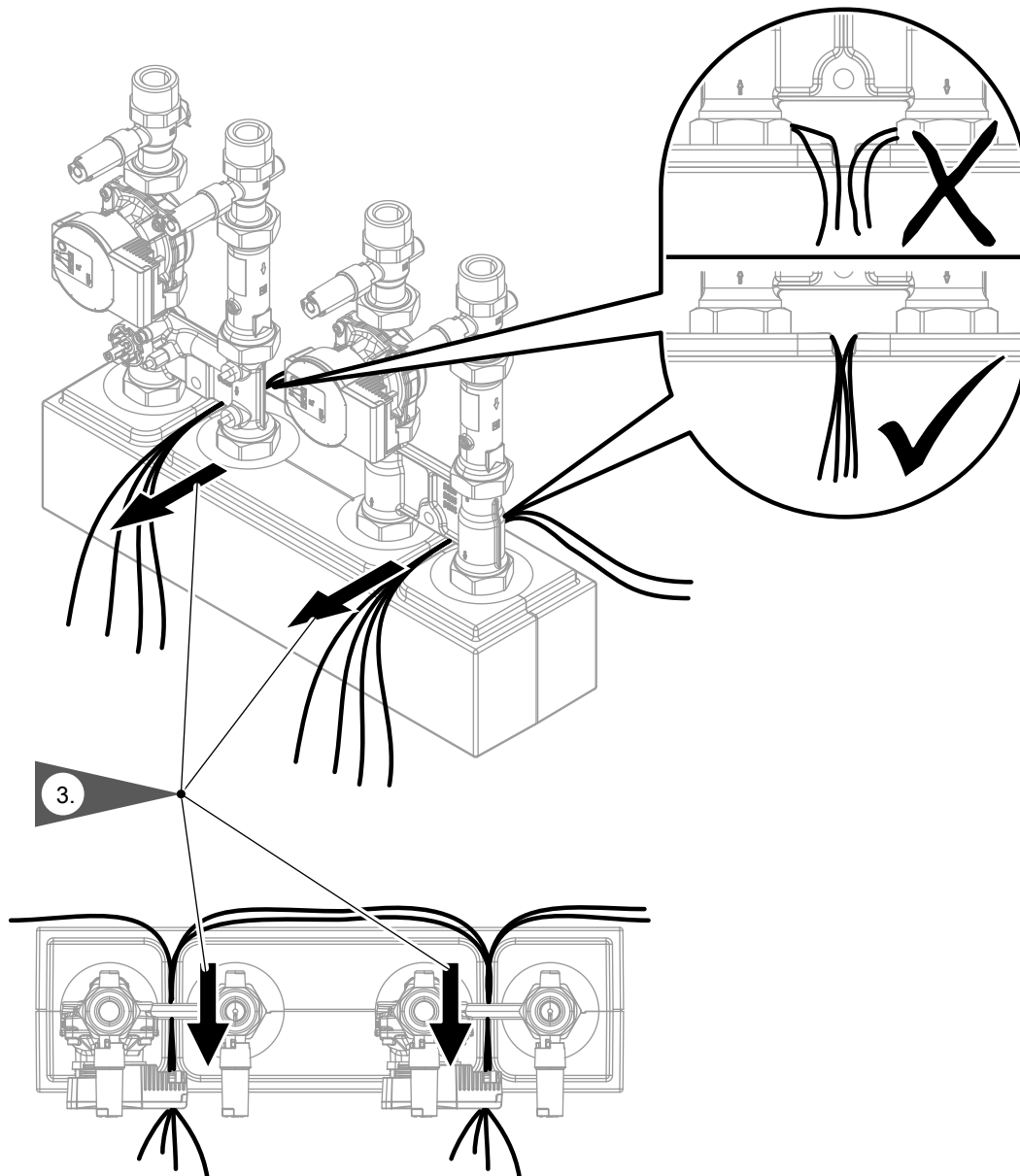


Fig. 22

**3.** Route power cables and communication cables (PlusBus/KM-BUS) in the joints of the thermal insulation:

- Cables to the heat generator
- Cables between 2 Divicons
- Cables to accessories, e.g. contact humidistat, temperature limiter to restrict the maximum temperature

**Note**

*The cables must be laid in the joints before the thermal insulation is fitted to the Divicon. The fitted thermal insulation sections of the Divicon conceal the joints for the cables.*



Fitting the thermal insulation to the Divicon

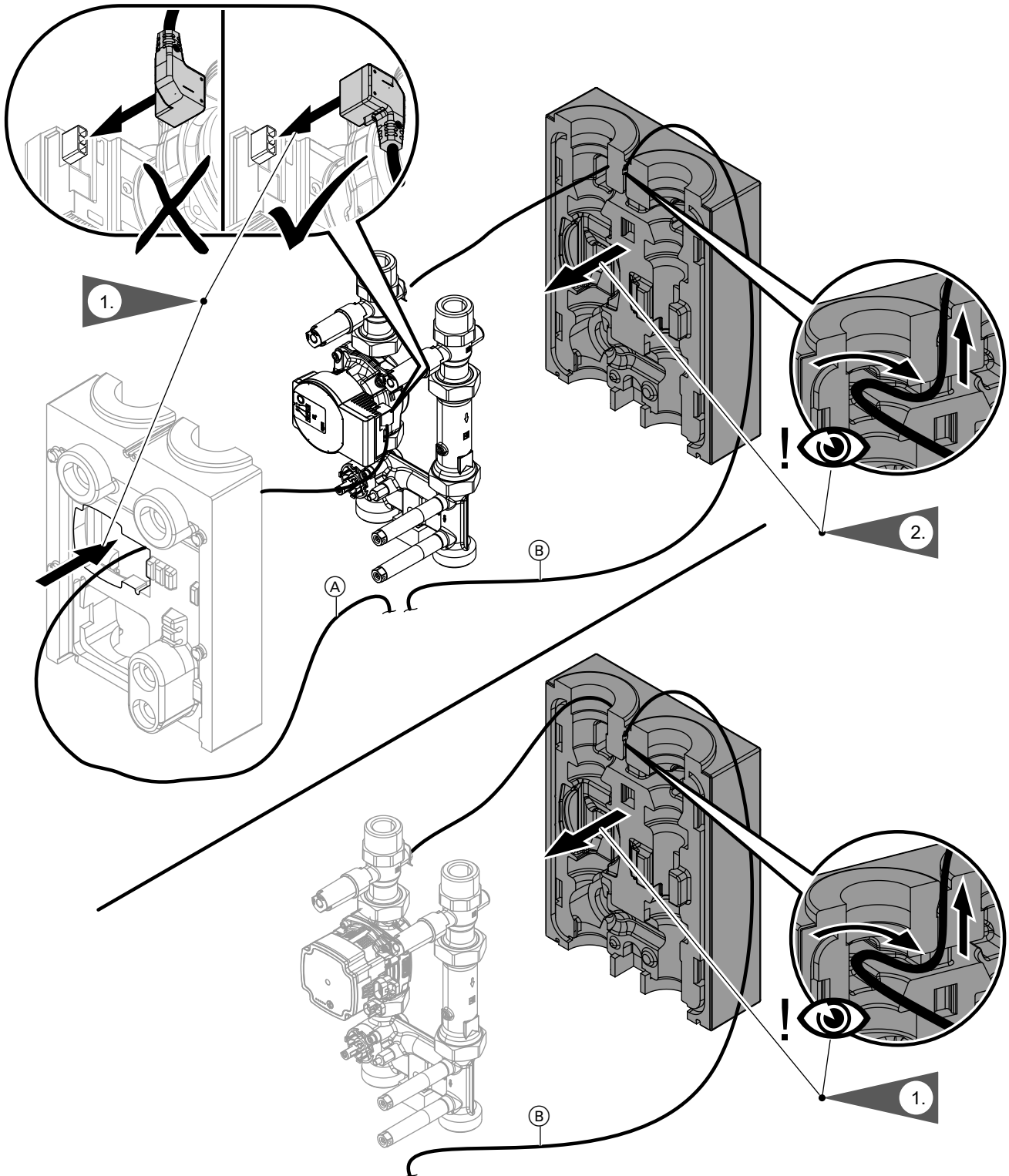


Fig. 23

- (A) Circulation pump connecting cable
- (B) Flow temperature sensor connecting cable

**Note**

Flow temperature sensor cable (B) is not available on all Divicon types.

## Fitting the thermal insulation (cont.)

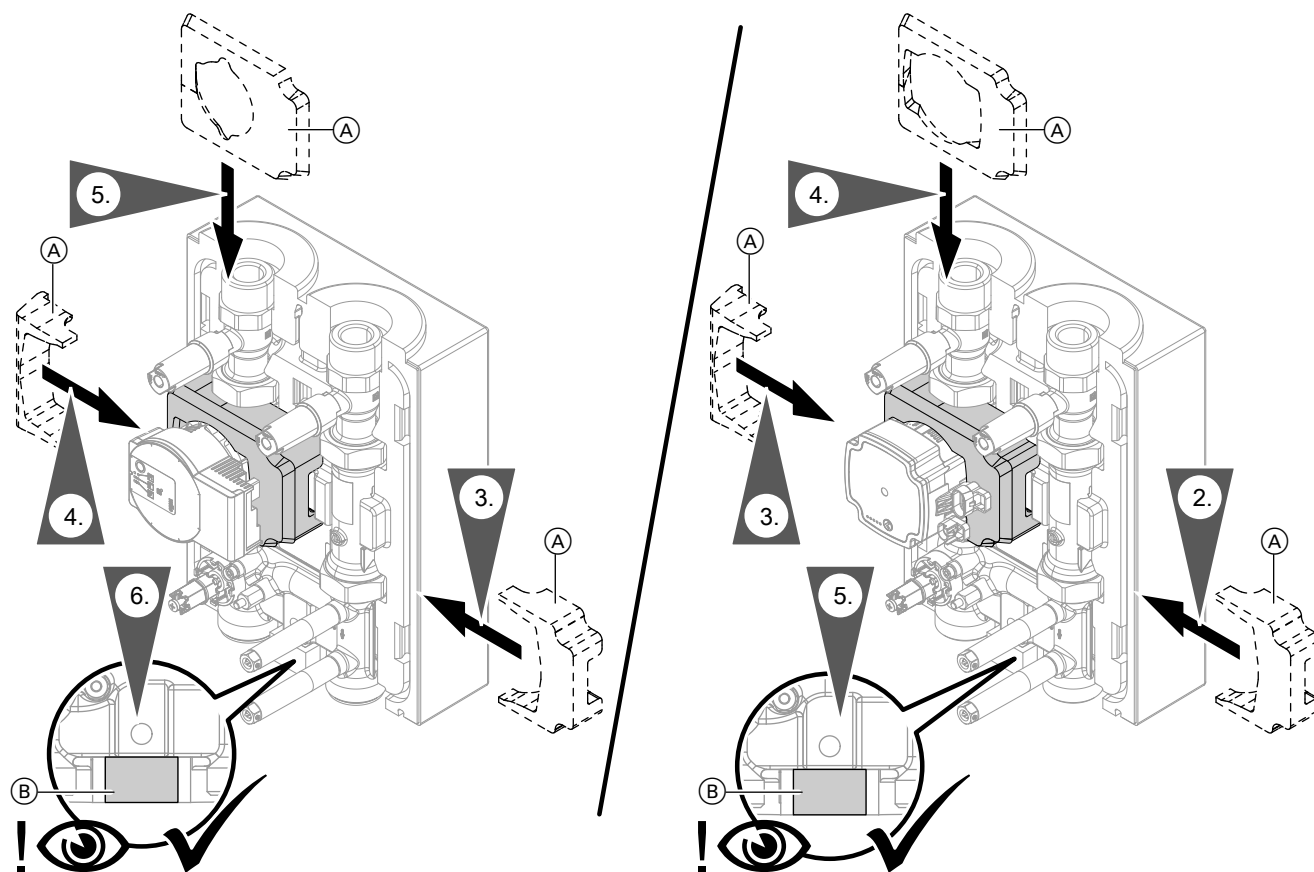


Fig. 24

- Ⓐ Thermal insulation sections from the "cooling kit" (only required for cooling mode)
- Ⓑ It is essential to use the thermal insulation section for installation with a manifold.

Fitting the thermal insulation (cont.)

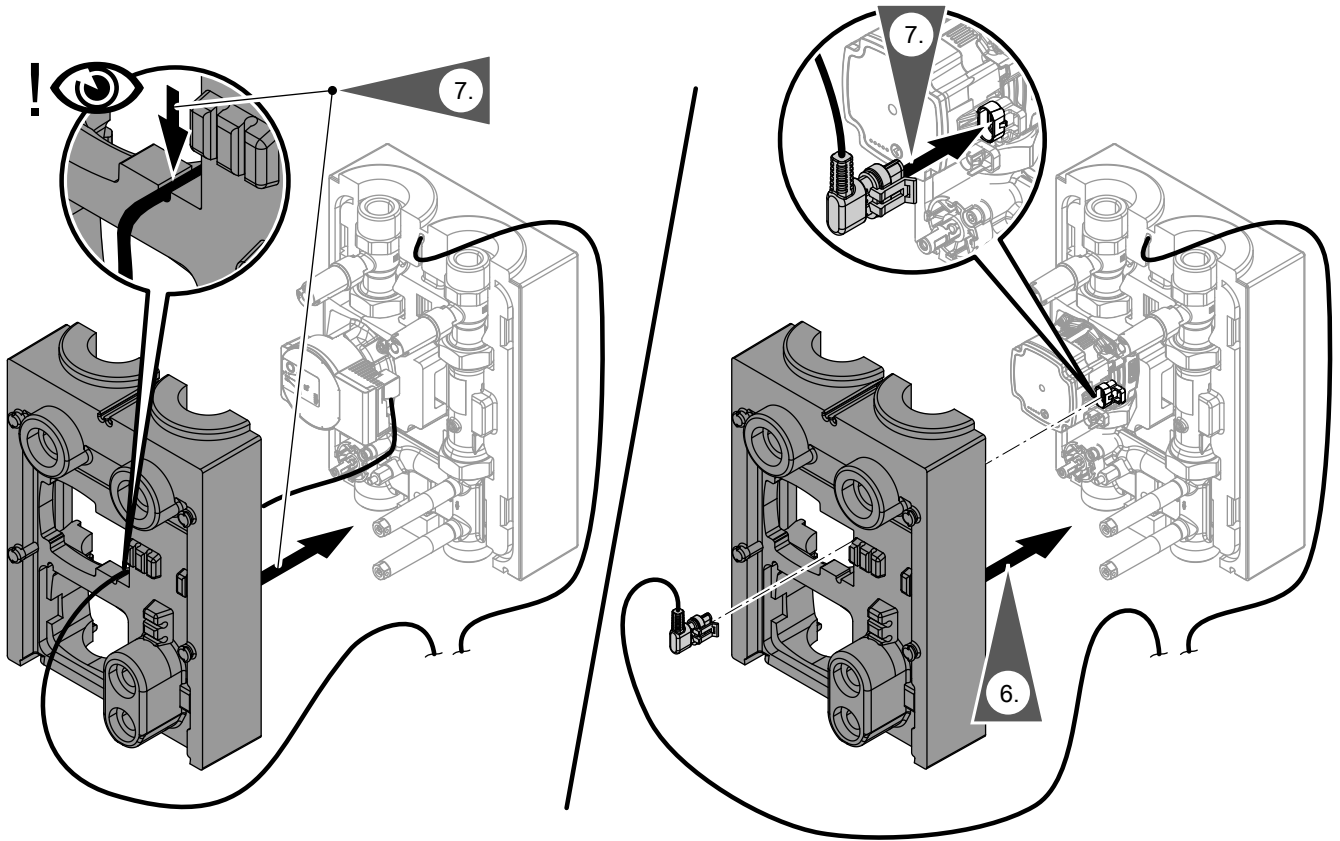


Fig. 25

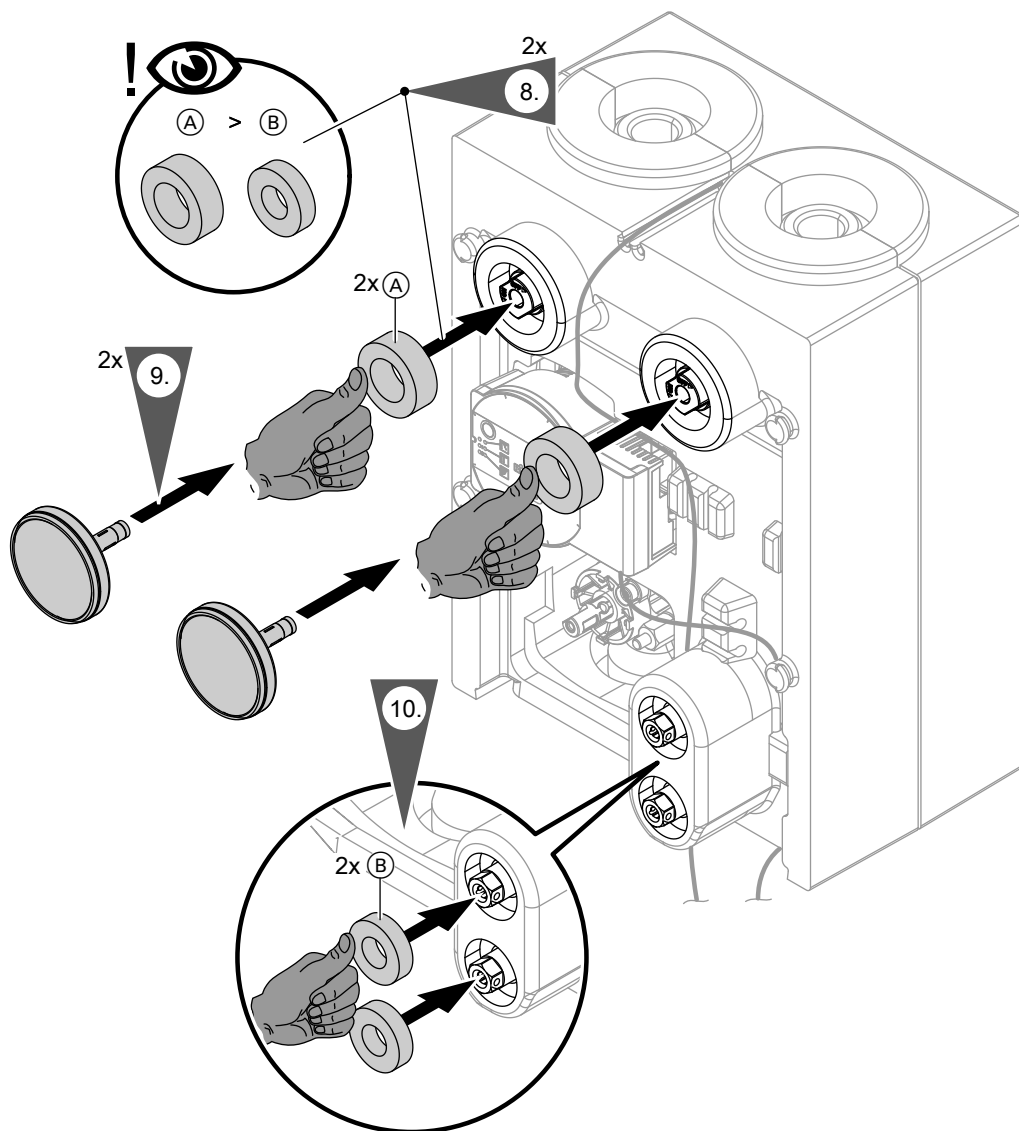


Fig. 26

Ⓐ and Ⓑ Thermal insulation sections from the "cooling kit" (only required for cooling mode)

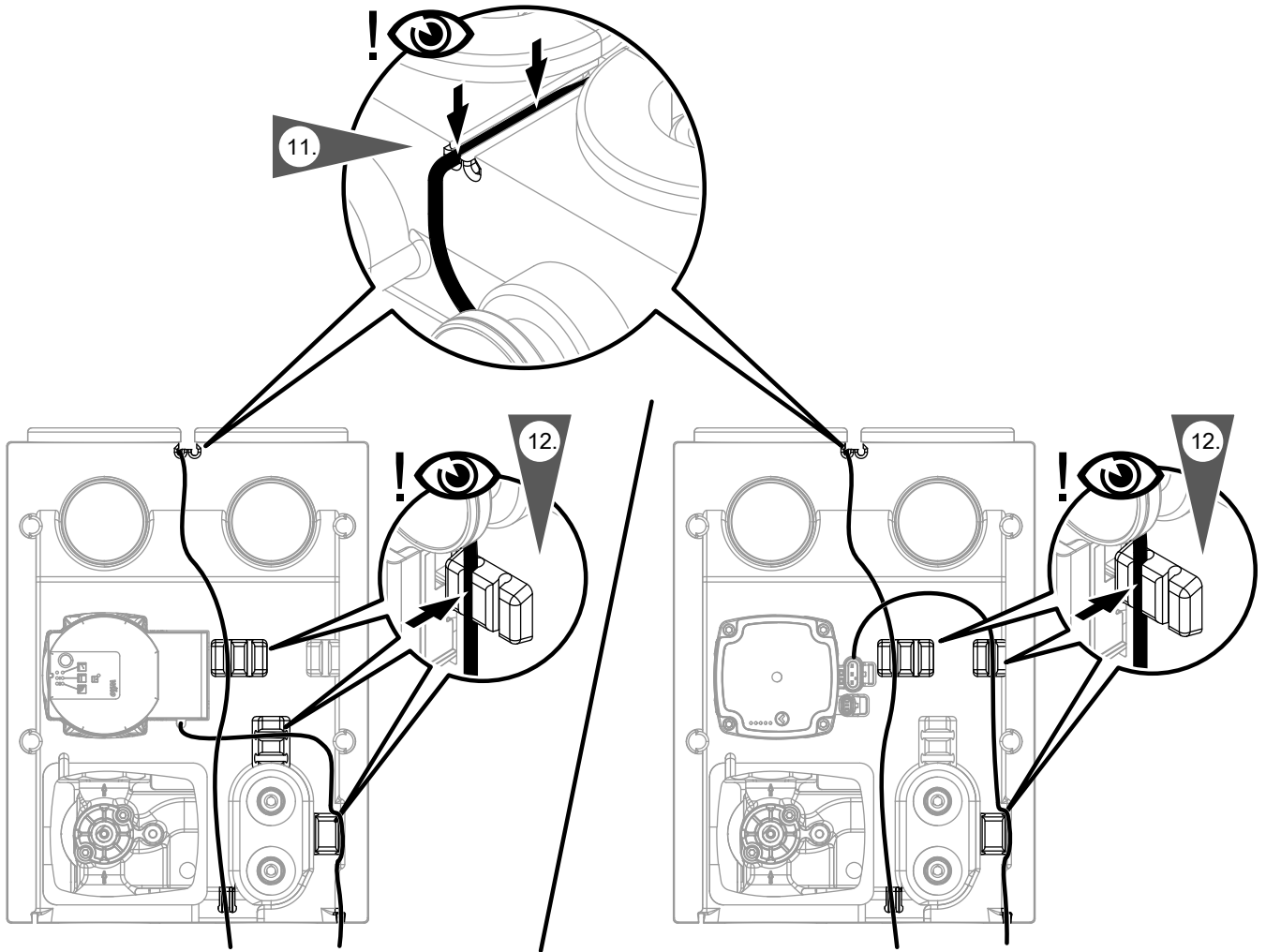


Fig. 27

**Note**

Do **not** yet attach the front section of the thermal insulation to the Divicon.

# Installing the mixer motor

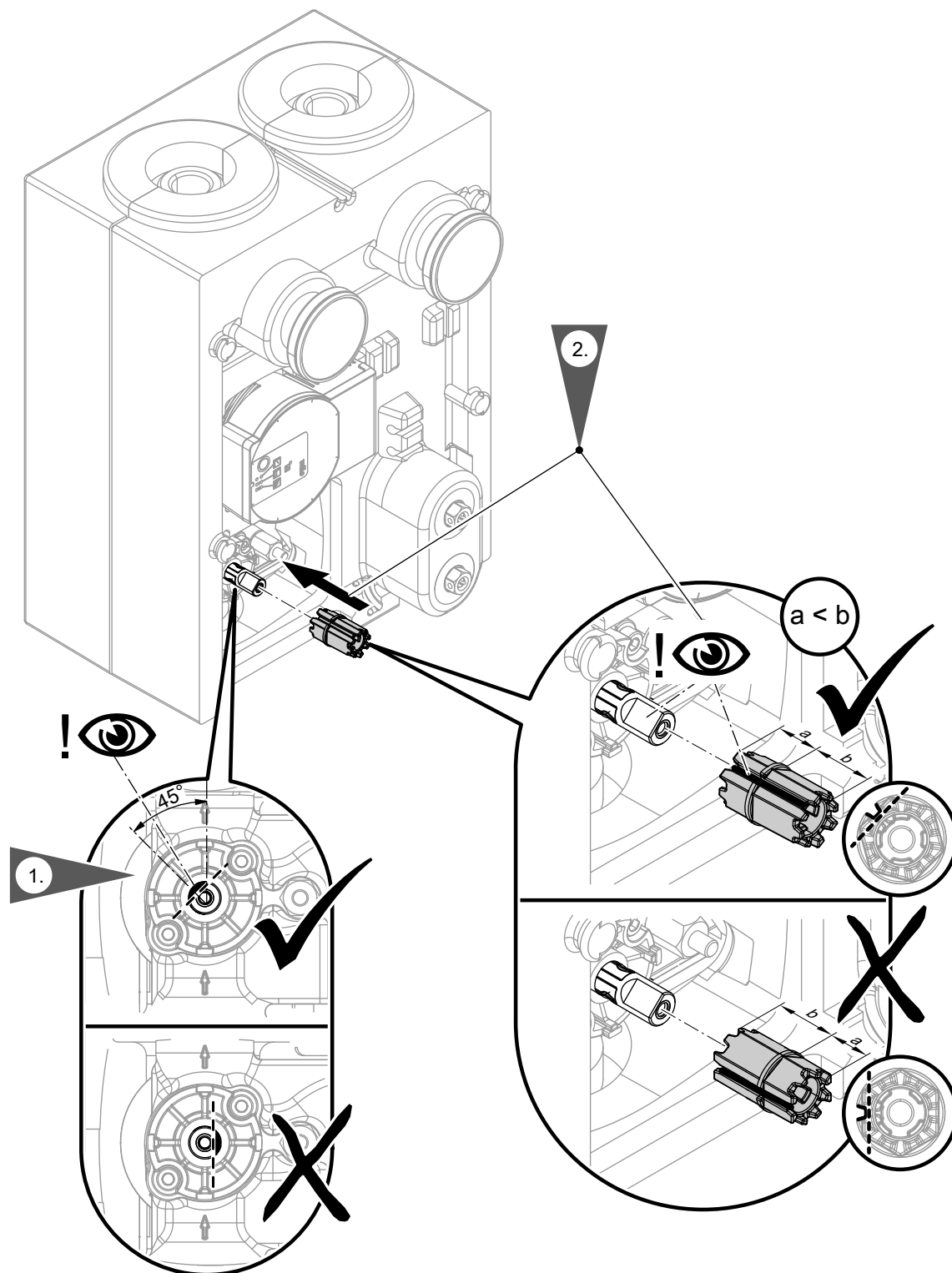


Fig. 28

## Installing the mixer motor (cont.)

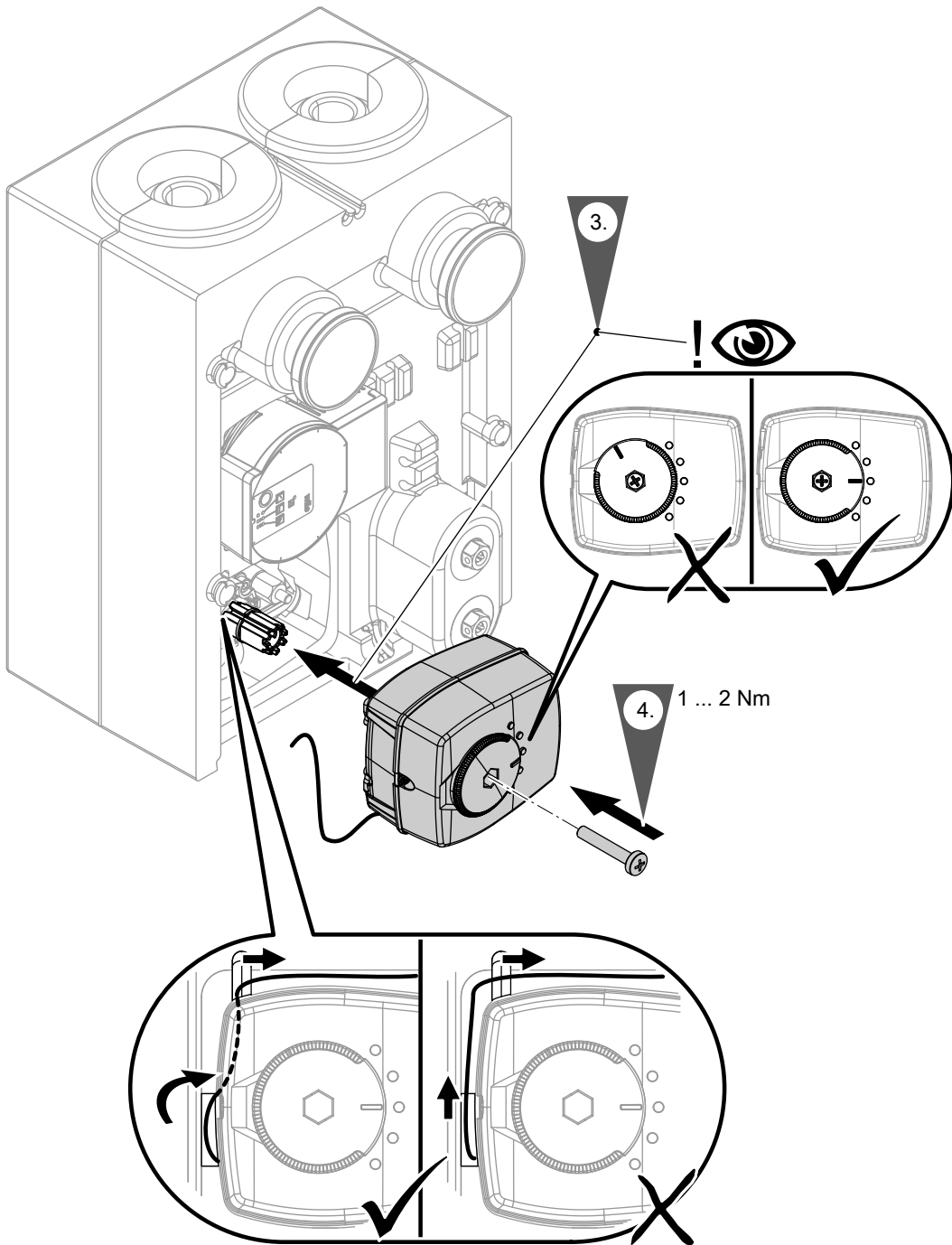


Fig. 29

## Installing the mixer motor (cont.)

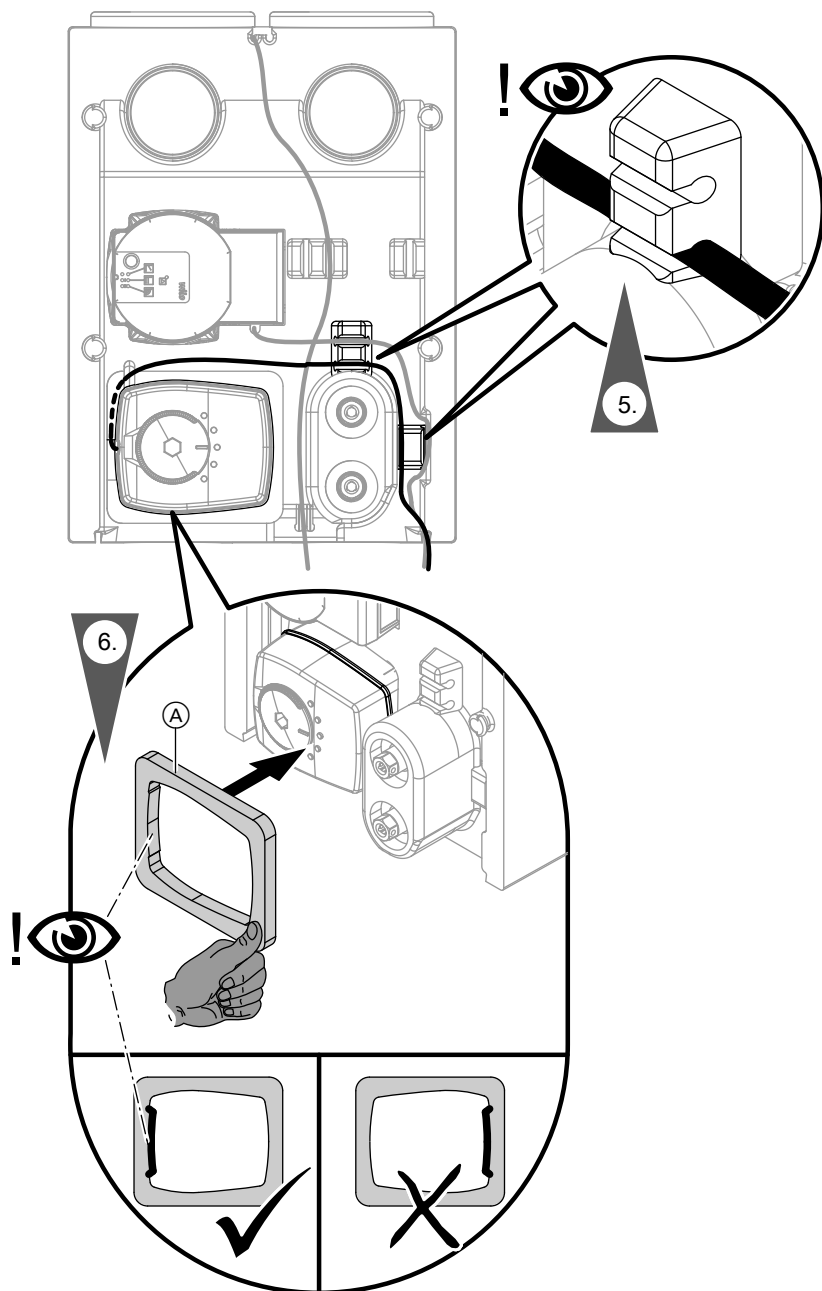


Fig. 30

- Ⓐ Thermal insulation section from the "cooling kit"  
(only required for cooling mode)

If the mixer motor needs to be set manually, see page 51.



## Installing the mixer extension kit

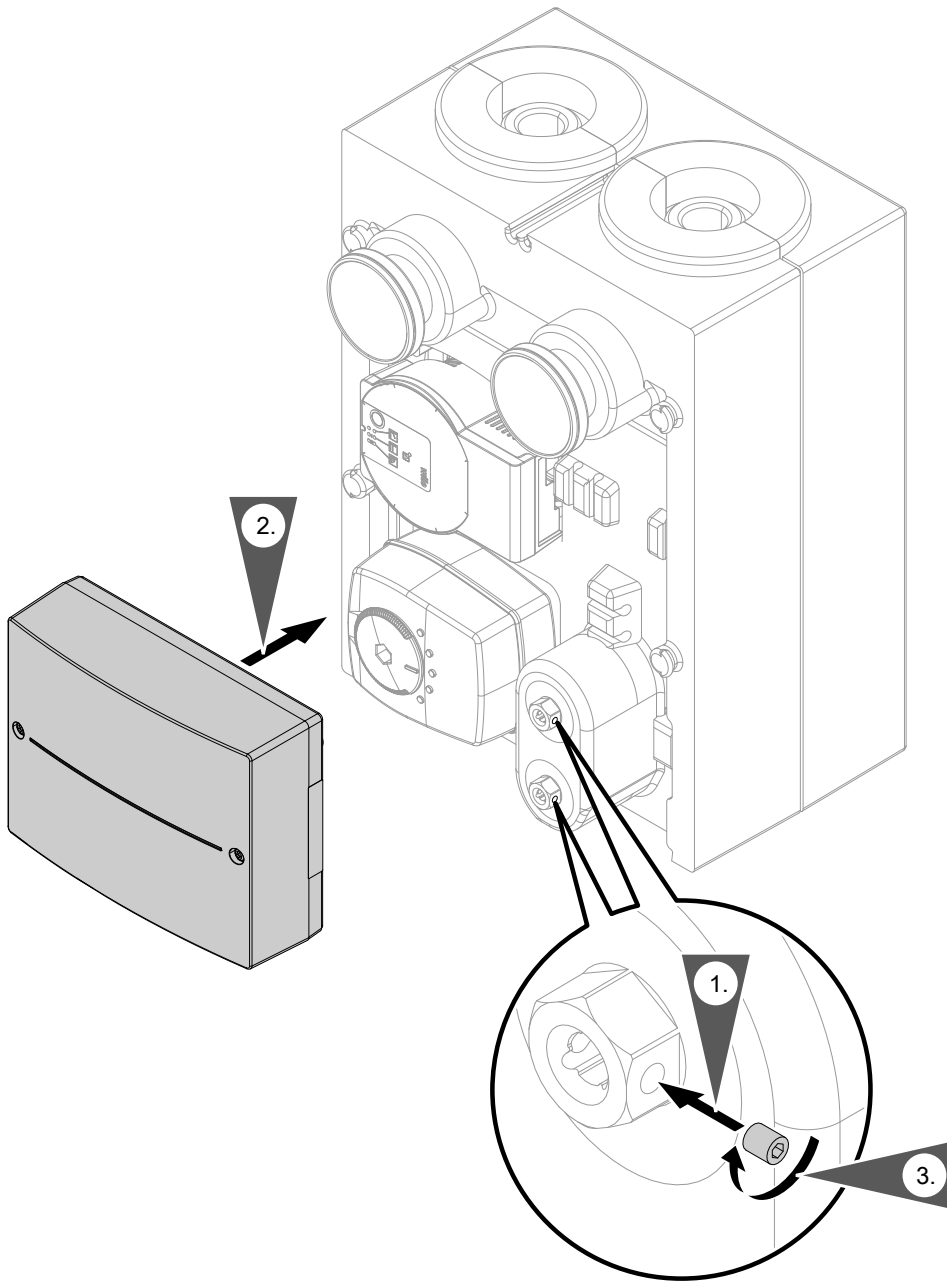





Fig. 31

## Electrical connections without a mixer extension kit

 Heat generator installation and service instructions

### Mixer extension kit, PlusBus subscriber

- Danger**  Incorrect wiring can lead to serious injury from electrical current and result in appliance damage.
- Take the following measures to prevent wires drifting into the adjacent voltage area:
- Route extra low voltage (ELV) leads < 42 V separately from cables > 42 V/230 V~/400 V~. Secure with cable ties.
  - Strip as little of the insulation as possible, directly before the terminals. Bundle the cables close to the corresponding terminals.
  - If 2 components are connected to the same terminal, press both cores together in a **single** wire ferrule.
  - When connecting external switching contacts and on-site components, observe the insulation requirements of IEC/EN 60335-1.

- Please note**  Electronic assemblies can be damaged by electrostatic discharge.
- Prior to commencing any work, touch earthed objects such as heating or water pipes to discharge static loads.
- Route the cables on the underside of the extension kit through grommets and strain relief fittings (standard delivery).
  - Seal any unnecessary apertures with cable grommets (not cut open).
  - Bundle individual wires from the connecting cables directly below the plugs and secure with cable ties.
  - Apply strain relief to on-site cables.

### Overview of electrical connections

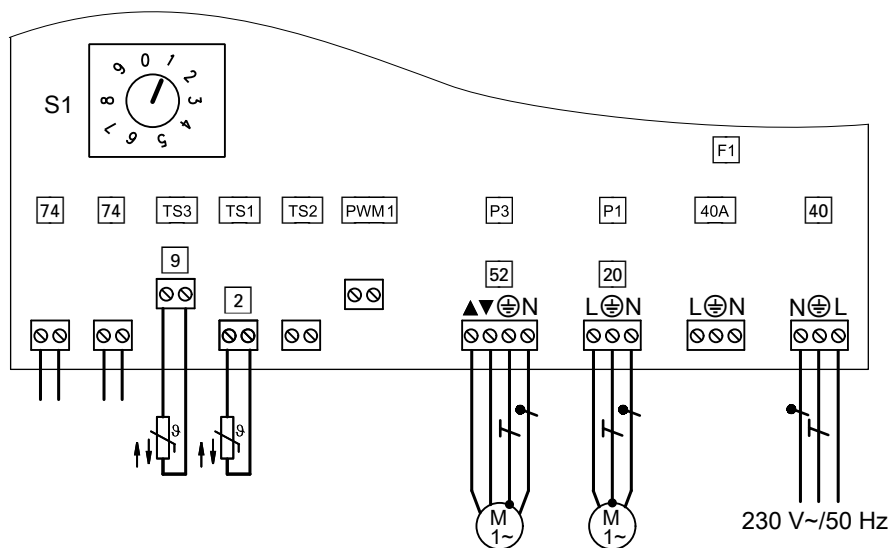


Fig. 32

S1 Rotary switch for subscriber number addressing  
F1 Fuse, 2 A (slow)

#### Extra low voltage (ELV) connections

74 PlusBus connection for connecting to the heat generator and another accessory  
PWM1 No function

#### Sensors

TS3, 9 Temperature sensor, low loss header (not for heat pumps)

#### Note

For heat pumps, connect the temperature sensor for the low loss header according to the system scheme; see:

**[www.viessmann-schemes.com](http://www.viessmann-schemes.com)**

TS1, 2 Flow temperature sensor  
TS2 No function

## Mixer extension kit, PlusBus subscriber (cont.)

### 230 V~ connection

P3, 52 Mixer motor  
P1, 20 Heating circuit pump

### Power supply 230 V~

40A Power supply for accessories  
40 Power supply 230 V/50 Hz

## Connecting the temperature limiter to restrict the maximum temperature (accessories)

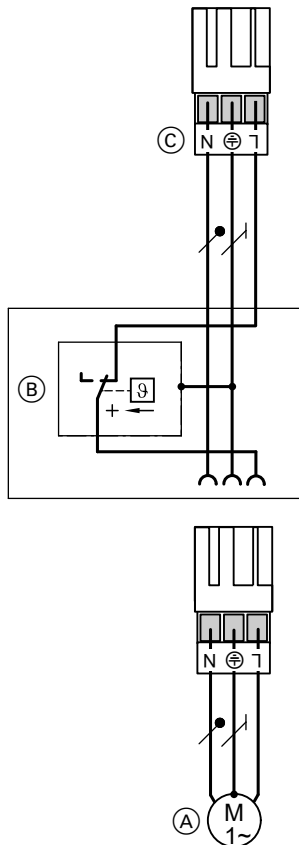


Fig. 33

- (A) Heating circuit pump
- (B) Temperature limiter
- (C) Plug 20 on mixer extension kit


Electromechanical temperature limiter using the liquid expansion principle

- Switches off the heating circuit pump if the set value is exceeded.
- The flow temperature is only slowly reduced in this situation. It may take several hours before the system restarts again automatically.
- Connection: Screw terminals for 1.5 mm<sup>2</sup>

### Specification

Setting range	30 to 80 °C
Switching differential	
■ Immersion thermostat	Max. 11 K
■ Contact thermostat	Max. 14 K

## Connecting the contact humidistat

- Contact humidistat 230 V~: Connect to the mixer extension kit.  
See the following chapter.
- Contact humidistat 24 V=: Connect directly to the heat pump.  
See:  
 Heat pump installation and service instructions

Depending on the heat pump type and system equipment, 1 to 2 contact humidistats can be connected directly to the heat pump.

### Note

For heat pumps with Viessmann One Base and a buffer cylinder, the "ADIO electronics module" mixer extension kit is always required to connect the contact humidistat.

Connecting the 230 V~ contact humidistat to the mixer extension kit

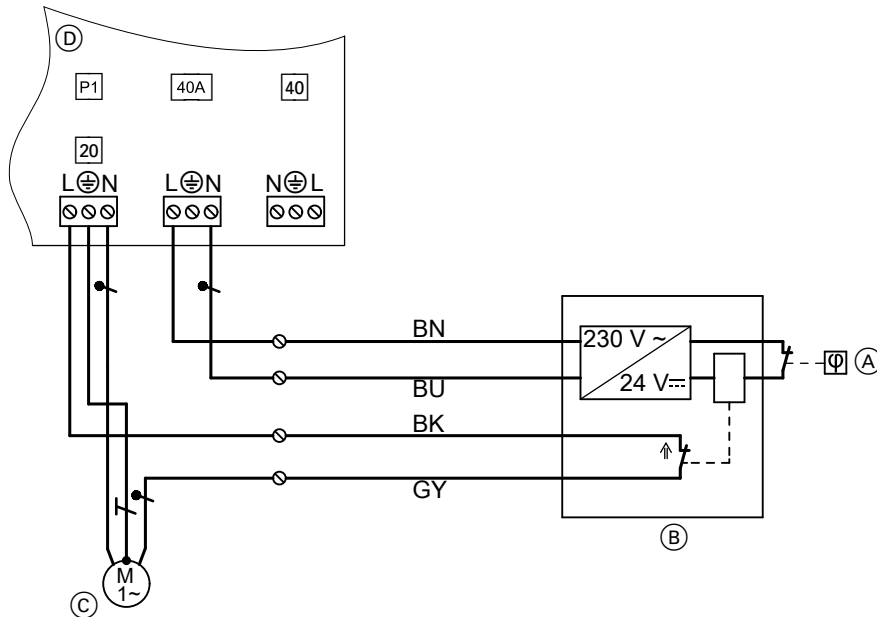


Fig. 34

- Ⓐ Contact humidistat
- Ⓑ 24 V~/230 V~ converter
- Ⓒ Heating/cooling circuit pump
- Ⓓ Mixer extension kit

**Note on installation with temperature limiter to restrict the maximum temperature**

If a temperature limiter to restrict the maximum temperature and a contact humidistat are installed on a heating/cooling circuit: Connect the temperature limiter and contact humidistat in series.

### Setting rotary switch S1

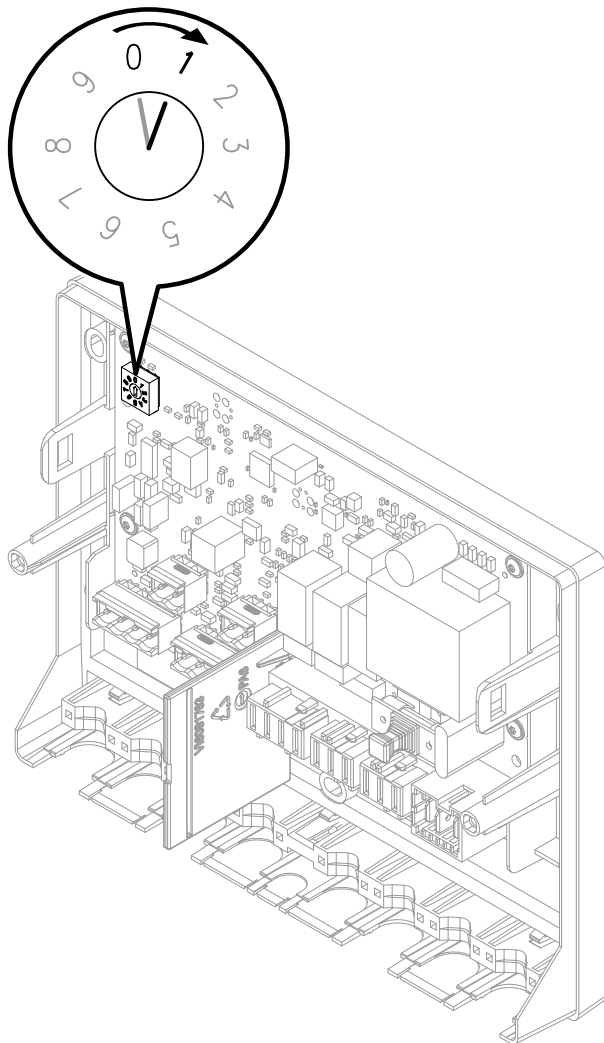


Fig. 35

If several mixer extension kits are being connected, set rotary switch S1.

Set the rotary switch on each extension kit to a consecutive number:

- Heating/cooling circuit 2 w.mixer: Rotary switch to 1
- Heating/cooling circuit 3 w.mixer: Rotary switch to 2
- Heating/cooling circuit 4 w.mixer: Rotary switch to 3

**Note**

*If additional EM-P1 extensions are connected, always set the subscriber numbers for the EM-P1 extensions to consecutive numbers after the mixer extension kits.*

**Note**

*For heat pumps: The cooling circuits are assigned via the programming unit or ViGuide service app.*

### Connecting the PlusBus to the heat generator

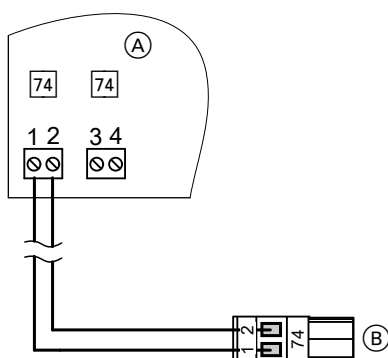


Fig. 36

- (A) Extension (electronics module)
- (B) PlusBus to heat generator

**For connection to heat generators with external plug, luster terminals or spring-loaded terminals:** For the bus connection, disconnect plug 74. Connect the wires directly. The wires are interchangeable.

 Heat generator installation and service instructions

## Power supply

### Power supply at heat generator

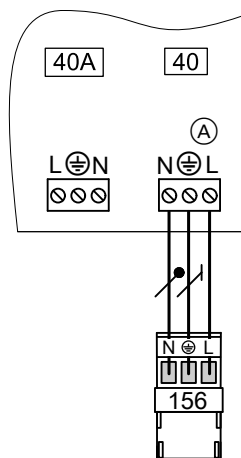




Fig. 37 Example: Power supply with plug 156


- Ⓐ Extension (electronics module)
- 40 Power supply
- 40A Power supply for further accessories
- 156 Plug for heat generator accessories power supply

Connect the power cable to the extension. Route the power cable to the heat generator and connect to plug 156. Observe the fuse protection of the contact (output) on the heat generator. If the power supply is connected to another accessory, use plug 40A provided.

 Heat generator installation and service instructions


 **Danger**  
Incorrect core assignment can result in serious injury and damage to the appliance.  
Do not interchange cores "L" and "N".

If there is no plug 156 at the heat generator:

- Use a separate power supply. See the following chapter.
- Or
-  Heat generator installation and service instructions


### Separate power supply

If the power supply for the extension is **not** made at the heat generator.

 **Danger**  
Incorrect electrical installations can lead to serious injury from electrical current and result in appliance damage.

Connect the power supply and implement all safety measures (e.g. RCD circuit) in accordance with the following regulations:

- IEC 60364-4-41
- VDE regulations
- TAR low voltage VDE-AR-N-4100
- Connection conditions of the local grid operator

 **Danger**  
The absence of system component earthing can lead to serious injury from electric current if an electrical fault occurs.  
The appliance and pipework must be connected to the equipotential bonding of the building.

### Isolators for non-earthed conductors

- The mains isolator (if installed) must simultaneously isolate from the mains all non-earthed conductors with a minimum contact separation of 3 mm.
- If **no** mains isolator is installed, isolate all non-earthed conductors from the power supply by the upstream circuit breaker with a minimum contact separation of 3 mm.

## Mixer extension kit, PlusBus subscriber (cont.)

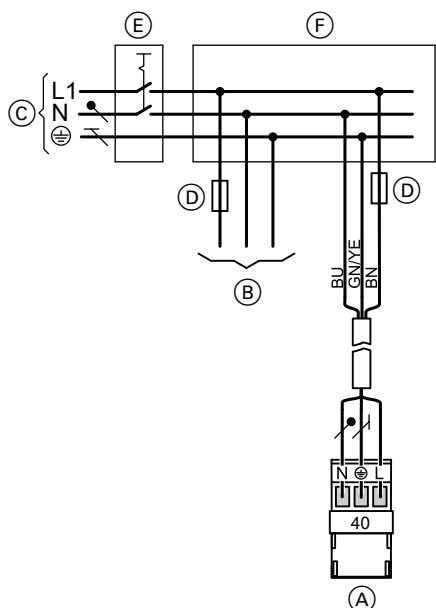


Fig. 38

- (A) Power supply for extension (electronics module)
- (B) Power supply for heat generator
- (C) Power supply 1/N/PE, 230 V/50 Hz
- (D) Fuse (max. 16 A)
- (E) Mains isolator, 2-pole, on site
- (F) Junction box (on site)

Connect the power supply in accordance with the diagram.  
If the power supply to the appliance is connected with a flexible power cable, ensure that the live conductors are pulled taut before the earth conductor in the event of strain relief failure. The length of the earth conductor wire will depend on the design.

**⚠ Danger**  
Incorrect core assignment can result in serious injury and damage to the appliance.  
Never interchange cores "L" and "N".

**! Please note**  
Incorrect phase sequence can cause damage to the appliance.  
Ensure phase equality with the heat generator power supply.

Colour ID  
 BN Brown  
 BU Blue  
 GNYE Green/yellow

## Connecting several accessories

### Power supply and PlusBus connection

Power supply to all accessories via heat generator control unit

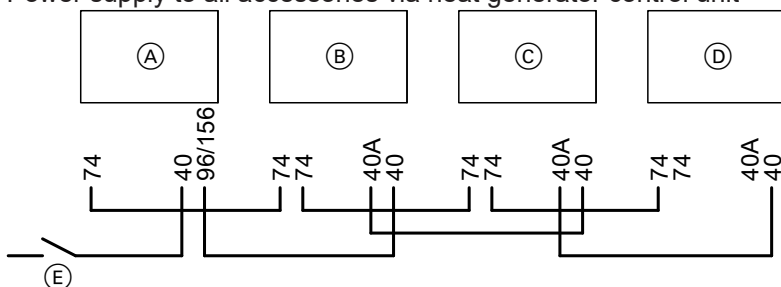


Fig. 39

Some accessories with direct power supply

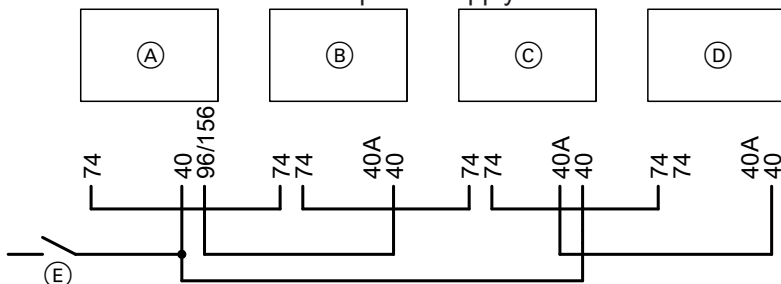


Fig. 40

- (A) Heat generator control unit
- (B) Mixer extension kit for heating/cooling circuit 2 with mixer
- (C) Mixer extension kit for heating/cooling circuit 3 with mixer
- (D) Further accessories

## Mixer extension kit, PlusBus subscriber (cont.)

- Ⓔ ON/OFF switch
- 40(A) Power supply
- 74 PlusBus
- 96, 156 Power supply to accessories in the heat generator control unit

- In the following circumstances, use the output for the accessories only to switch an on-site relay:  
An actuator (e.g. circulation pump) with a higher power demand than the fuse rating required for the accessories is connected at the accessories output.
- In the following circumstances, connect one or more accessories directly to the mains supply via an ON/OFF switch:  
The max. permissible total current of the heat generator control unit is exceeded.  
Separate power supply: See the following chapter.

### Note

In this event, the accessories concerned **cannot** be isolated with the ON/OFF switch on the control unit.

## Connection and wiring diagram

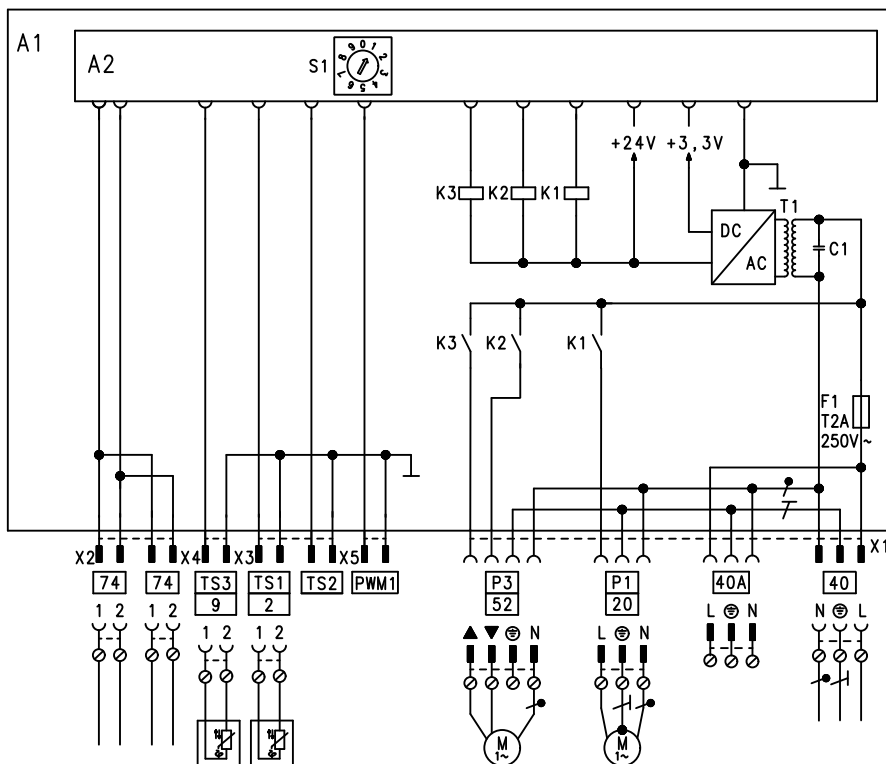


Fig. 41

- S1 Rotary switch for subscriber number addressing
- F1 Fuse, 2 A (slow)

### Extra low voltage (ELV) connections

- 74 PlusBus connection for connecting to the heat generator and another accessory
- PWM1 No function

### Sensors

- TS3, 9 Temperature sensor, low loss header (not for heat pumps)

### Note

For heat pumps, connect the temperature sensor for the low loss header according to the system scheme; see:

[www.viessmann-schemes.com](http://www.viessmann-schemes.com)

- TS1, 2 Flow temperature sensor
- TS2 No function



## Mixer extension kit, PlusBus subscriber (cont.)

### 230 V~ connection

P3, 52 Mixer motor  
P1, 20 Heating circuit pump

### Power supply 230 V~

40A Power supply for accessories  
40 Power supply 230 V/50 Hz

## Mixer extension kit, KM-BUS subscriber



### Danger

Incorrect wiring can lead to serious injury from electrical current and result in appliance damage.

Take the following measures to prevent wires drifting into the adjacent voltage area:

- Route extra low voltage (ELV) leads < 42 V separately from cables > 42 V/230 V~/400 V~. Secure with cable ties.
- Strip as little of the insulation as possible, directly before the terminals. Bundle the cables close to the corresponding terminals.
- If 2 components are connected to the same terminal, press both cores together in a **single** wire ferrule.
- When connecting external switching contacts and on-site components, observe the insulation requirements of IEC/EN 60335-1.



### Please note

Electronic assemblies can be damaged by electrostatic discharge.

Prior to commencing any work, touch earthed objects such as heating or water pipes to discharge static loads.

- Route the cables on the underside of the extension kit through grommets and strain relief fittings (standard delivery).
- Seal any unnecessary apertures with cable grommets (not cut open).
- Bundle individual wires from the connecting cables directly below the plugs and secure with cable ties.
- Apply strain relief to on-site cables.

## Overview of electrical connections

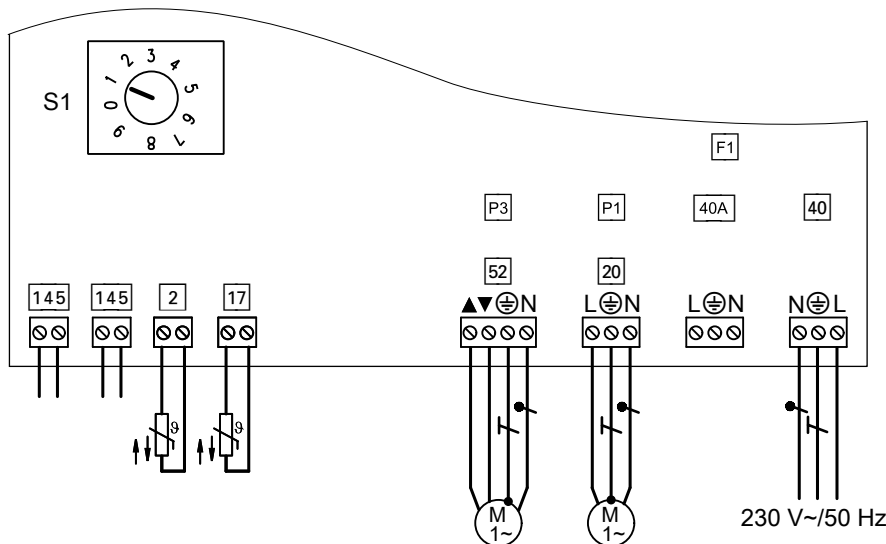


Fig. 42

S1 Rotary switch for subscriber number addressing  
F1 Fuse, 2 A (slow)

### Extra low voltage (ELV) connections

145 KM-BUS connection for connecting to the control unit and another extension kit

### Sensors

2 Flow temperature sensor  
17 Return temperature sensor (in conjunction with the Vitotronic 300, type KW3, if installed)

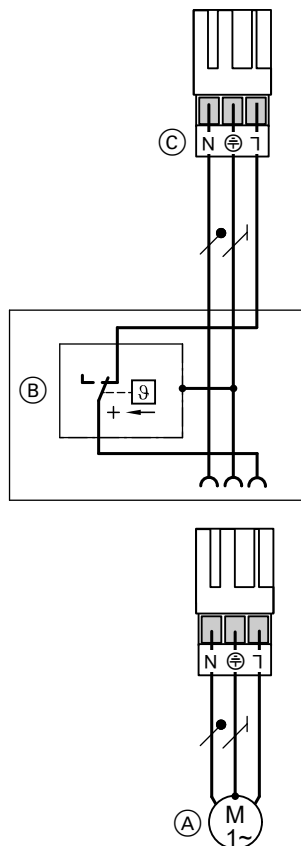
### 230 V~ connection

P3, 52 Mixer motor  
P1, 20 Heating circuit pump

### Power supply 230 V~

40A Power supply for accessories  
40 Power supply 230 V/50 Hz

### Connecting the temperature limiter to restrict the maximum temperature (accessories)



Electromechanical temperature limiter using the liquid expansion principle

- Switches off the heating circuit pump if the set value is exceeded.
- The flow temperature is only slowly reduced in this situation. It may take several hours before the system restarts again automatically.
- Connection: Screw terminals for 1.5 mm<sup>2</sup>

#### Specification

Setting range	30 to 80 °C
Switching differential	
▪ Immersion thermostat	Max. 11 K
▪ Contact thermostat	Max. 14 K

Fig. 43

- Ⓐ Heating circuit pump
- Ⓑ Temperature limiter
- Ⓒ Plug 20 on mixer extension kit

### Connecting the contact humidistat

Connect the contact humidistat directly to the heat generator. It is not possible to connect the contact humidistat to the mixer extension kit, KM-BUS subscriber.



Heat generator installation and service instructions

## Connecting the extension kit to the control unit

### Weather-compensated Vitotronic control unit

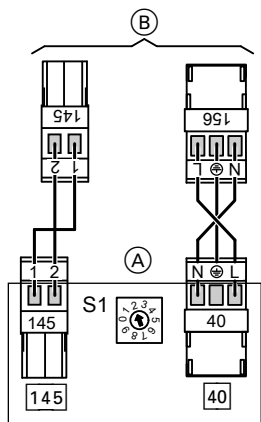


Fig. 44



#### **Danger**

Incorrect core assignment can result in serious injury and damage to the appliance. Take care not to interchange wires "L1" and "N".

- (A) Extension kit
- (B) To the control unit
- S1 Rotary switch: See the following table for position
- 145 KM-BUS to the control unit or to the KM-BUS distributor (accessories)
- 156 Power supply via control unit or via power distributor (accessories)

Set the rotary switch:

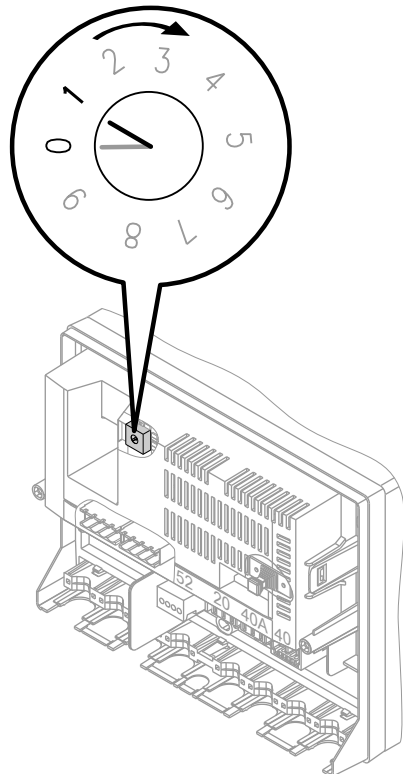


Fig. 45

## Mixer extension kit, KM-BUS subscriber (cont.)

Heating circuit affected by the mixer	Sensors connected	Rotary switch S1
Heating circuit with mixer M2	Flow temperature sensor	"2" (delivered condition)
	Flow temperature sensor and return temperature sensor	"3"
Heating circuit with mixer M3	Flow temperature sensor	"4"
	Flow temperature sensor and return temperature sensor	"5"

### Connection to a heat pump with Vitotronic 200 WO1B/C

Power supply to the mixer PCB:  
Connect phase "L" to X3.1, neutral conductor "N" to any X2 terminal and protective conductor "PE" to any X1 terminal.

 Service instructions for Vitotronic 200, type WO1B/C

### Wall mounted and storage combi boilers

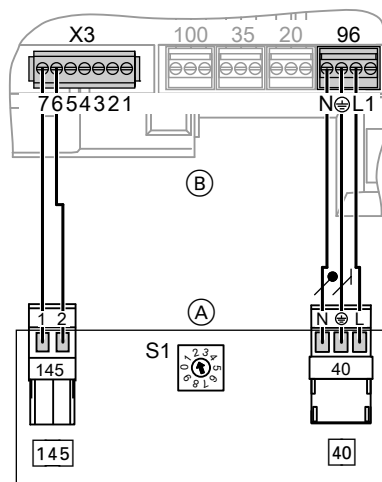


Fig. 46

- (A) Extension kit
  - 40 Power supply
  - 145 KM-BUS
  - S1 Rotary switch: See the following table for position
- (B) Control unit
  - "X3" KM-BUS at terminals "7" and "6" (remove plug 145)
  - Or
  - With plug 145 to the KM-BUS distributor (accessories)
  - 96 Power supply



#### Danger

Incorrect core assignment can result in serious injury and damage to the appliance.  
Take care not to interchange wires "L1" and "N".

#### Note

If the power supply has already been allocated, see chapter "Power supply".

### Set the rotary switch (see Fig. 45):

Heating circuit which should be affected by the mixer	Rotary switch S1
Heating circuit with mixer M2	"2" (delivered condition)
Heating circuit with mixer M3	"4"

## Mixer extension kit, KM-BUS subscriber (cont.)

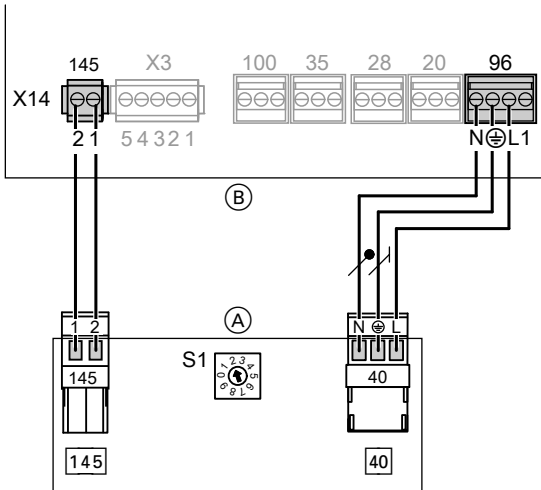


Fig. 47

- (A) Extension kit  
 40 Power supply  
 145 KM-BUS  
 S1 Rotary switch: See the following table for position
- (B) Control unit  
 "X14" KM-BUS at terminals "1" and "2" (remove plug 145)  
 or  
 With plug 145 to the KM-BUS distributor (accessories)  
 96 Power supply

### Note

If the power supply has already been allocated, see chapter "Power supply".

### Set the rotary switch (see Fig. 45):

Heating circuit which should be affected by the mixer	Rotary switch S1
Heating circuit with mixer M2	"2" (delivered condition)
Heating circuit with mixer M3	"4"

### Connecting 2 extension kits

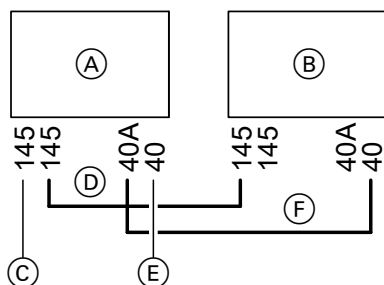


Fig. 48

- (A) Extension kit for heating circuit with mixer M2  
 (B) Extension kit for heating circuit with mixer M3  
 (C) KM-BUS cable (standard delivery) to the control unit  
 (D) KM-BUS cable 0.8 m long (included in cable set, accessories)  
 (E) Power supply (connect the power cable supplied, see the following chapter)  
 (F) Power cable with plug 40 and 40A (included in cable set, accessories)

## Power supply

Connect accessories with a total wattage **above 400 W directly** to the mains power supply.

**Danger**  
Incorrectly executed electrical installations can result in injuries from electrical current and in appliance damage.

Connect the power supply and implement all safety measures (e.g. RCD circuit) in accordance with the following regulations:

- IEC 60364-4-41
- VDE regulations
- Connection requirements specified by the local power supply utility
- Protect the power cable with a fuse of max. 16 A.

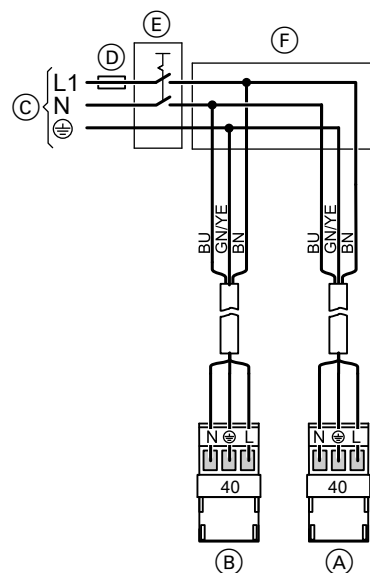



Fig. 49

- (A) Extension kit power supply
- (B) Control unit power supply
- (C) 230 V/50 Hz power supply
- (D) Fuse (max. 16 A)
- (E) Mains isolator, 2-pole, on site
- (F) Junction box, on site

**Danger**  
The absence of system component earthing can lead to serious injury from electric current if an electrical fault occurs.  
The appliance and pipework must be connected to the equipotential bonding of the building.

- The mains isolator (if installed) must simultaneously isolate all non-earthed conductors from the mains with a minimum contact separation of 3 mm.
- If **no** mains isolator is installed, all non-earthed conductors must be isolated from the power supply by the upstream circuit breaker with a minimum contact separation of 3 mm.
- We also recommend installing an AC/DC-sensitive RCD (RCD class B ) for DC (fault) currents that can occur with energy efficient equipment.

Connect the power supply in accordance with the diagram.

**Danger**  
Incorrect core assignment can result in serious injury and damage to the appliance.  
Do not interchange cores "L" and "N".

**Please note**  
Incorrect phase sequence can cause damage to the appliance.  
Ensure phase equality with the control unit mains connection.

Colour coding to DIN/IEC 60757

- BN Brown
- BU Blue
- GNYE Green/yellow

Connection and wiring diagram

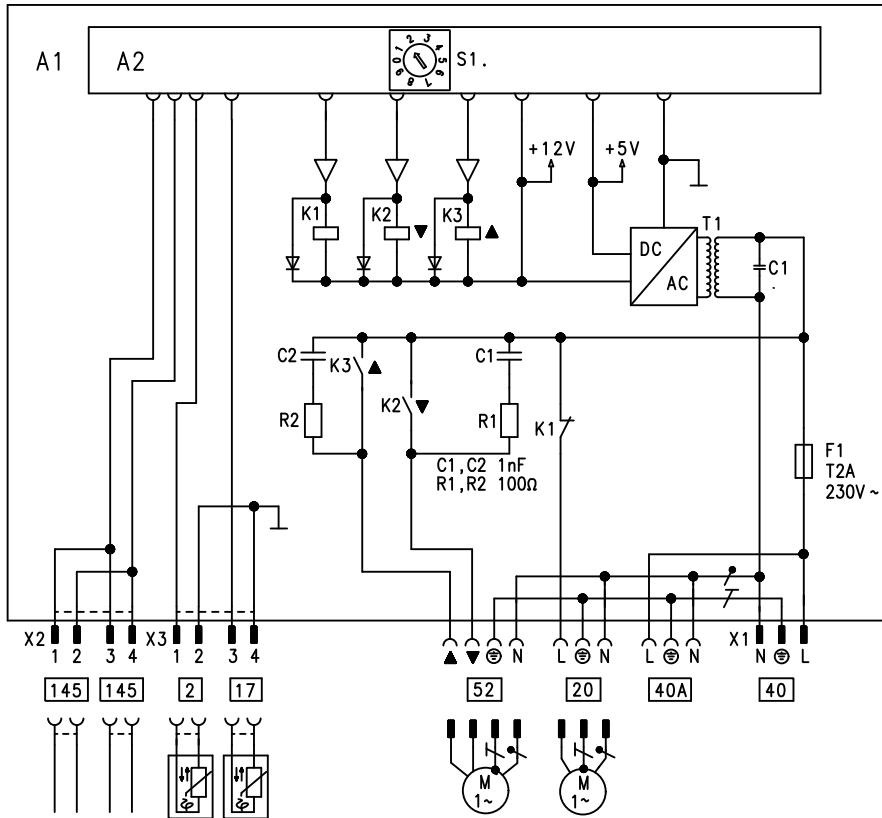


Fig. 50

S1 Rotary switch for subscriber number addressing  
 F1 Fuse, 2 A (slow)

**230 V~ connection**

52, (P3) Mixer motor  
 20, (P1) Heating circuit pump

**Extra low voltage (ELV) connections**

145 KM-BUS connection for connecting to the control unit and another extension kit

**Power supply 230 V~**

40A Power supply for accessories  
 40 Power supply 230 V/50 Hz

**Sensors**

2 Flow temperature sensor  
 17 Return temperature sensor (in conjunction with the Vitotronic 300, type KW3, if installed)

# Cable routing for mixer extension kit

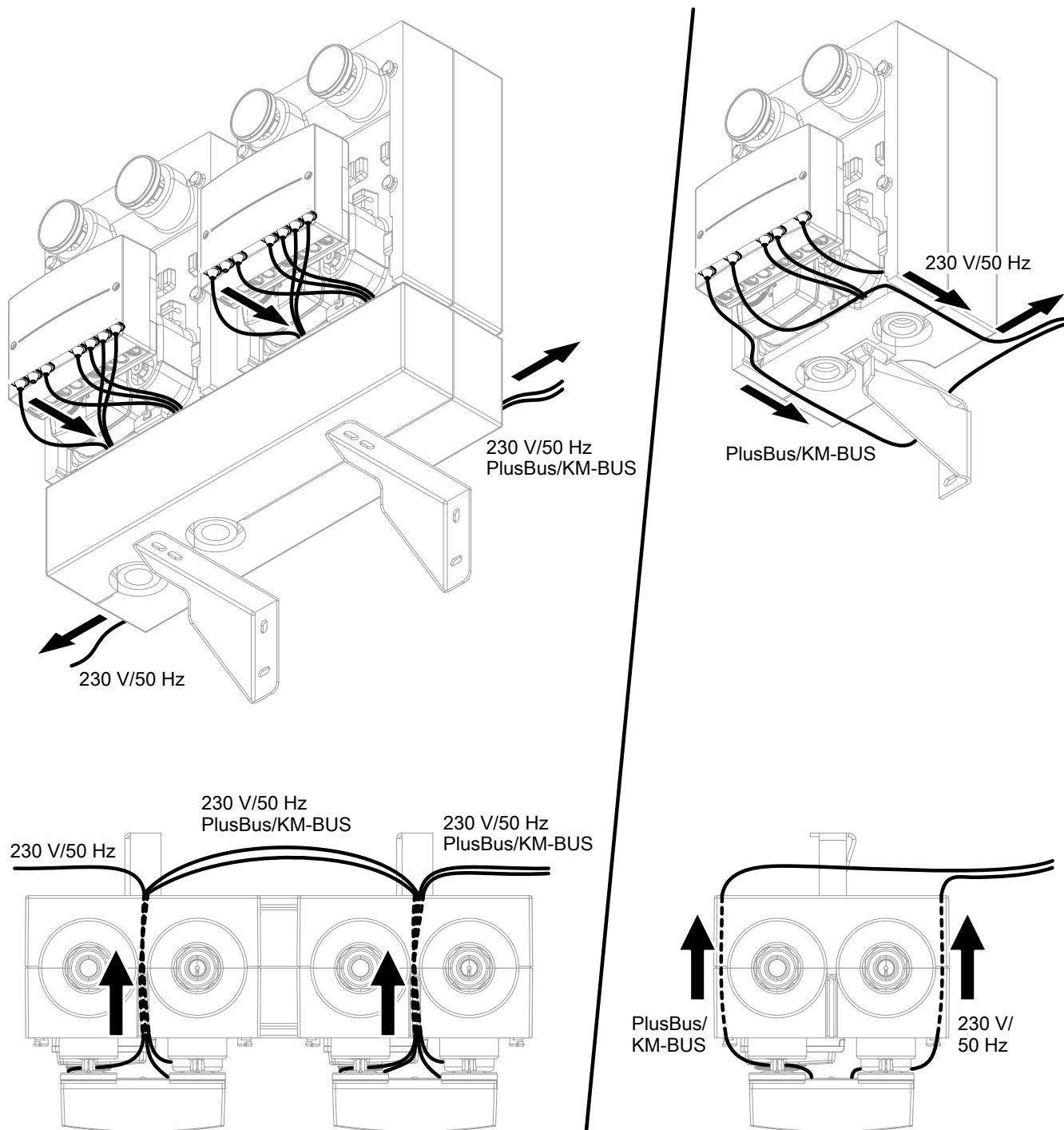


Fig. 51



## Sealing the thermal insulation

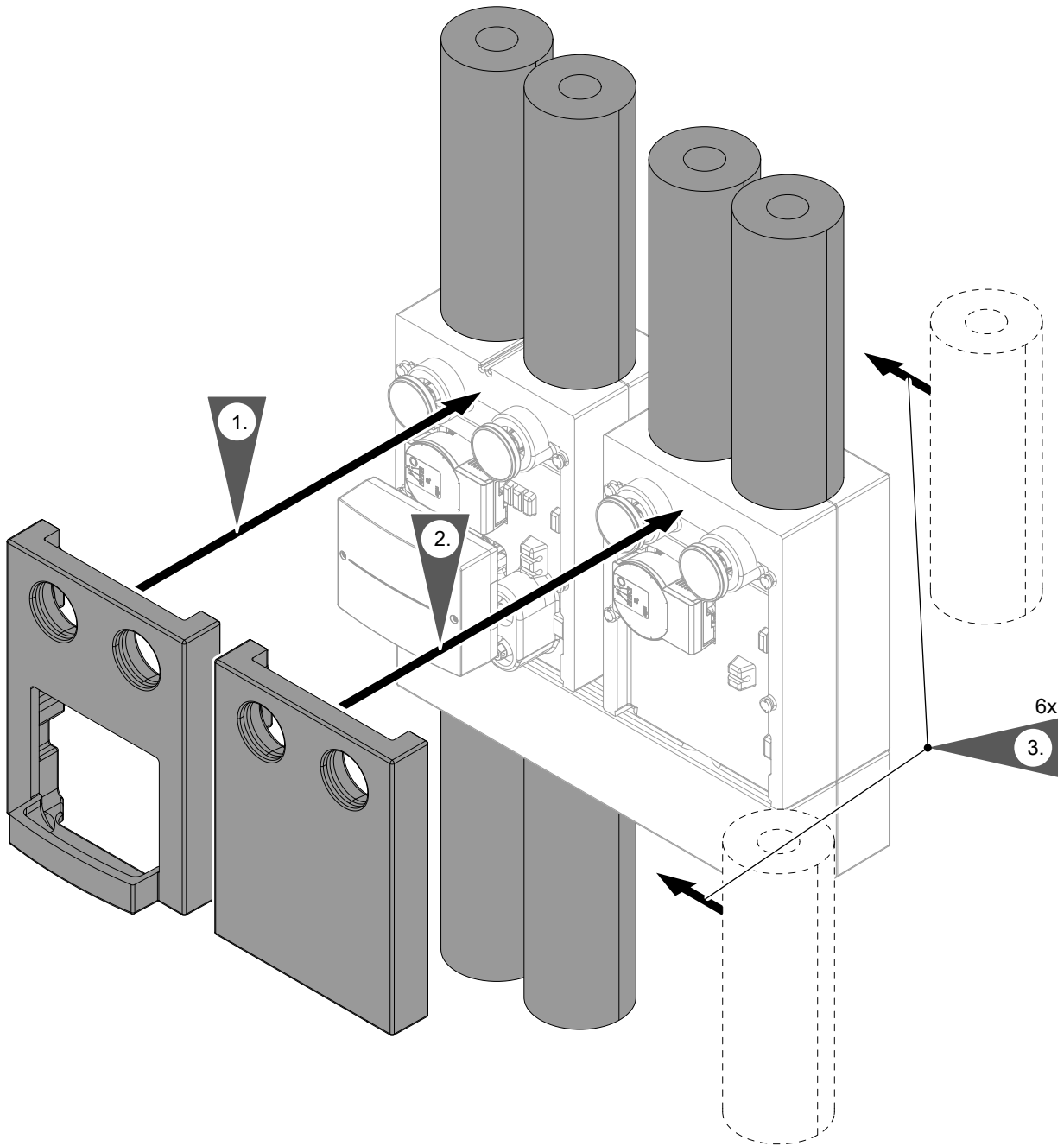


Fig. 52


3. Fit the pipe insulation such that it is vapour diffusion-proof.
4. Cover the joints between the insulating parts with insulating tape.

## Commissioning

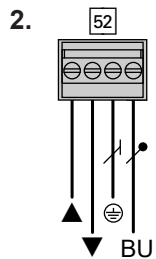


Heat generator installation and service instructions

### Changing the rotational direction (if required)

- 1.  Danger**  
An electric shock can be life threatening.  
Before opening the boiler, disconnect it from the mains voltage, e.g. at the fuse or mains isolator.
- 3. Refit the casing cover.**
- 4. Check the rotational direction.**

Undo the casing cover.



Interchange cores BK ▲ and BK ▼ at plug 52.

## Setting the mixer motor manually

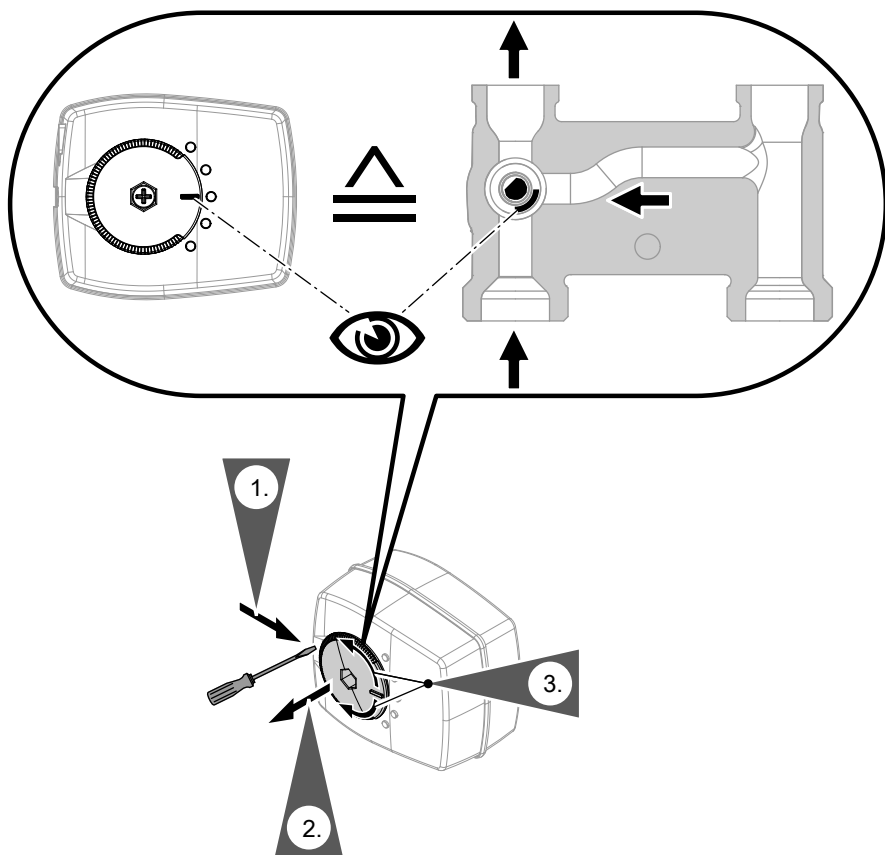


Fig. 54

## Specification

### Divicon heating/cooling circuit distributor with mixer and extension kit

Connection to heating circuit (nominal diameter)		DN 20	DN 25	DN 32
<b>High efficiency circulation pump</b>				
▪ Wilo	Type	PARA 25/6		PARA 25/8
▪ Grundfos	Type	UPM3S 25-60		UPM3K 25-70
Energy efficiency index EEI				
▪ Wilo		≤ 0.2		
▪ Grundfos		≤ 0.2		
<b>Electrical values</b>				
Connected load				
▪ With Wilo high efficiency circulation pump	W	49		66
▪ With Grundfos high efficiency circulation pump	W	45		58
Rated voltage		230 V~		
Frequency		50 Hz		
Rated current		2 A		
IP rating		IP20 to EN 60529; ensure through design/installation.		
<b>Mixer</b>				
Mixer motor	Type	ESBE ARA561		
Mixer travel time (from end-stop to end-stop)	s	120		
<b>Connections</b>				
Heating/cooling circuit connections				
▪ Indoor		R ¾ Rp ¾	R 1 Rp 1	R 1¼ Rp 1¼
▪ Outdoor		G 1¼		G 2
Connections to the heat generator		G 1½		
<b>Max. operating pressure</b>		bar		
		3		
<b>Max. operating temperature</b> (at 40 °C ambient temperature)		°C		
		80		
<b>Permissible ambient temperature</b>				
▪ Operation	°C	0 to 40		
▪ Storage and transport	°C	-20 to +65		
<b>K<sub>v</sub> value</b>		l/h		
		3.1 - 4.9	4.0 - 5.6	4.7 - 5.9
<b>Non-return valve</b>		mbar		
		20		
<b>Dimensions</b>				
Height x width x depth		mm		
		356 x 260 x 261		
<b>Weight</b>				
Excl. packaging				
▪ With Wilo high efficiency circulation pump	kg	8.1		8.7
▪ With Grundfos high efficiency circulation pump	kg	8.2		8.7
Incl. packaging				
▪ With Wilo high efficiency circulation pump	kg	9.3		9.9
▪ With Grundfos high efficiency circulation pump	kg	9.4		9.9

## Specification (cont.)

### Divicon heating/cooling circuit distributor with mixer without extension kit

Connection to heating circuit (nominal diameter)		DN 20	DN 25	DN 32
<b>High efficiency circulation pump</b>				
▪ Wilo	Type	PARA 25/6		PARA 25/8
▪ Grundfos	Type	UPM3S 25-60		UPM3K 25-70
Energy efficiency index EEI				
▪ Wilo		≤ 0.2		
▪ Grundfos		≤ 0.2		
<b>Electrical values</b>				
Connected load				
▪ With Wilo high efficiency circulation pump	W	43		60
▪ With Grundfos high efficiency circulation pump	W	39		52
Rated voltage				
230 V~				
Frequency				
50 Hz				
Rated current				
2 A				
IP rating				
IP20 to EN 60529; ensure through design/installation.				
<b>Mixer</b>				
Mixer motor	Type	ESBE ARA561		
Mixer travel time (from end-stop to end-stop)	s	120		
<b>Connections</b>				
Heating/cooling circuit connections				
▪ Indoor		R ¾	R 1	R 1¼
▪ Outdoor		Rp ¾	Rp 1	Rp 1¼
Connections to the heat generator				
G 1¼				
G 1½				
<b>Max. operating pressure</b>	bar	3		
<b>Max. operating temperature</b> (at 40 °C ambient temperature)	°C	80		
<b>Permissible ambient temperature</b>				
▪ Operation	°C	0 to 40		
▪ Storage and transport	°C	-20 to +65		
<b>K<sub>V</sub> value</b>	l/h	3.1 - 4.9	4.0 - 5.6	4.7 - 5.9
<b>Non-return valve</b>	mbar	20		
<b>Dimensions</b>				
Height x width x depth	mm	356 x 260 x 210		
<b>Weight</b>				
Excl. packaging				
▪ With Wilo high efficiency circulation pump	kg	6.9		7.4
▪ With Grundfos high efficiency circulation pump	kg	7		7.4
Incl. packaging				
▪ With Wilo high efficiency circulation pump	kg	8.1		8.6
▪ With Grundfos high efficiency circulation pump	kg	8.2		8.6

## Specification (cont.)

### Divicon heating/cooling circuit distributor without mixer

Connection to heating circuit (nominal diameter)		DN 20	DN 25	DN 32
<b>High efficiency circulation pump</b>				
▪ Wilo	Type	PARA 25/6		PARA 25/8
▪ Grundfos	Type	UPM3S 25-60		UPM3K 25-70
Energy efficiency index EEI				
▪ Wilo		≤ 0.2		
▪ Grundfos		≤ 0.2		
<b>Electrical values</b>				
Connected load				
▪ With Wilo high efficiency circulation pump	W	43		60
▪ With Grundfos high efficiency circulation pump	W	39		52
Rated voltage		230 V~		
Frequency		50 Hz		
Rated current		2 A		
IP rating		IP20 to EN 60529; ensure through design/installation.		
<b>Connections</b>				
Heating/cooling circuit connections				
▪ Indoor		R ¾ Rp ¾	R 1 Rp 1	R 1¼ Rp 1¼
▪ Outdoor		G 1¼		G 2
Connections to the heat generator		G 1½		
<b>Max. operating pressure</b>		bar		
		3		
<b>Max. operating temperature</b> (at 40 °C ambient temperature)		°C		
		80		
<b>Permissible ambient temperature</b>				
▪ Operation	°C	0 to 40		
▪ Storage and transport	°C	-20 to +65		
<b>K<sub>v</sub> value</b>	l/h	3.1 - 4.9	4.0 - 5.6	4.7 - 5.9
<b>Non-return valve</b>	mbar	20		
<b>Dimensions</b>				
Height x width x depth		mm		
		356 x 260 x 210		
<b>Weight</b>				
Excl. packaging				
▪ With Wilo high efficiency circulation pump	kg	6.1		6.7
▪ With Grundfos high efficiency circulation pump	kg	6.2		6.7
Incl. packaging				
▪ With Wilo high efficiency circulation pump	kg	6.9		7.5
▪ With Grundfos high efficiency circulation pump	kg	7		7.5

## Specification (cont.)

### Flow temperature sensor/low loss header temperature sensor (separate accessories)

(Not for heat pumps)

Sensor type	NTC 10 k $\Omega$ , at 25 °C
IP rating	IP 53 to EN 60529; ensure through design/installation.
Permissible ambient temperature	
▪ Operation	0 to 120 °C
▪ Storage and transport	-20 °C to +70 °C

## Pressure drop graphs

### Note

All diagrams refer to the respective Divicon with mixer, without manifold.

### Divicon with mixer DN 20

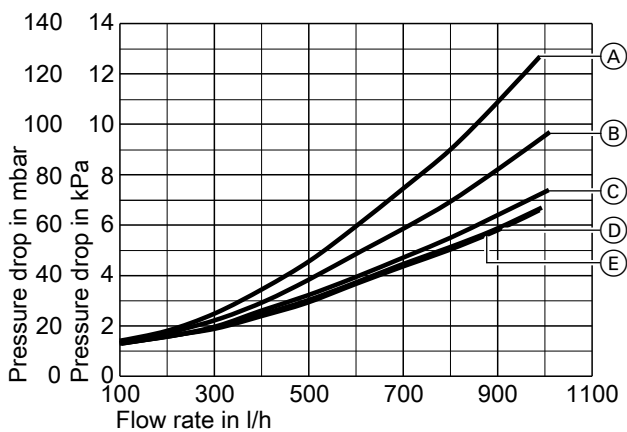


Fig. 55 With circulation pump Wilo PARA 25/6

- (A)  $K_V$  3.1
- (B)  $K_V$  3.7
- (C)  $K_V$  4.5
- (D)  $K_V$  4.8
- (E)  $K_{VS}$  4.9

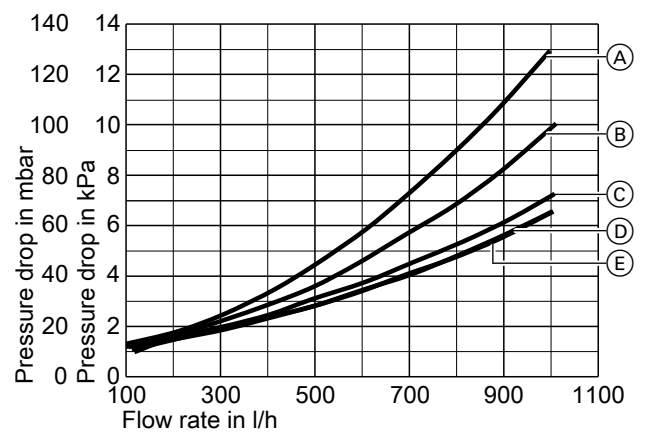


Fig. 56 With circulation pump Grundfos UPM3S 25-60

- (A)  $K_V$  3.1
- (B)  $K_V$  3.7
- (C)  $K_V$  4.5
- (D)  $K_V$  4.8
- (E)  $K_{VS}$  4.9

Divicon with mixer DN 25

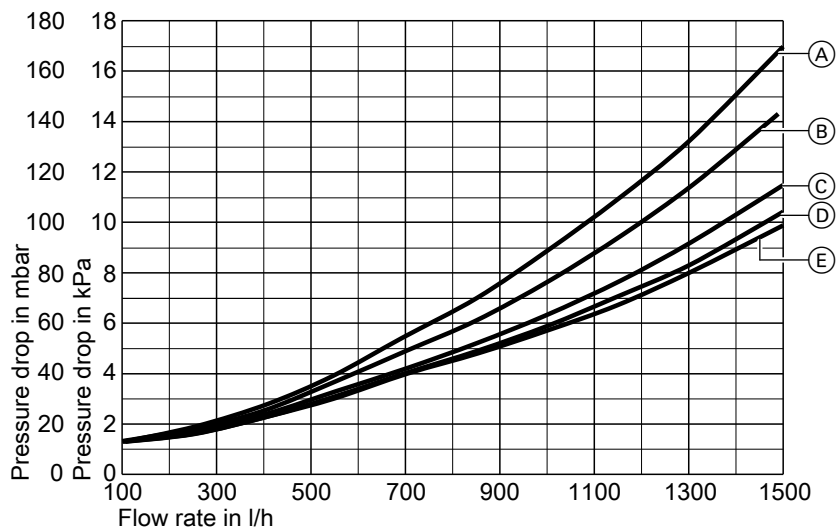


Fig. 57 With circulation pump Wilo PARA 25/6

- (A)  $K_V$  4.0
- (B)  $K_V$  4.5
- (C)  $K_V$  5.1
- (D)  $K_V$  5.5
- (E)  $K_{VS}$  5.6

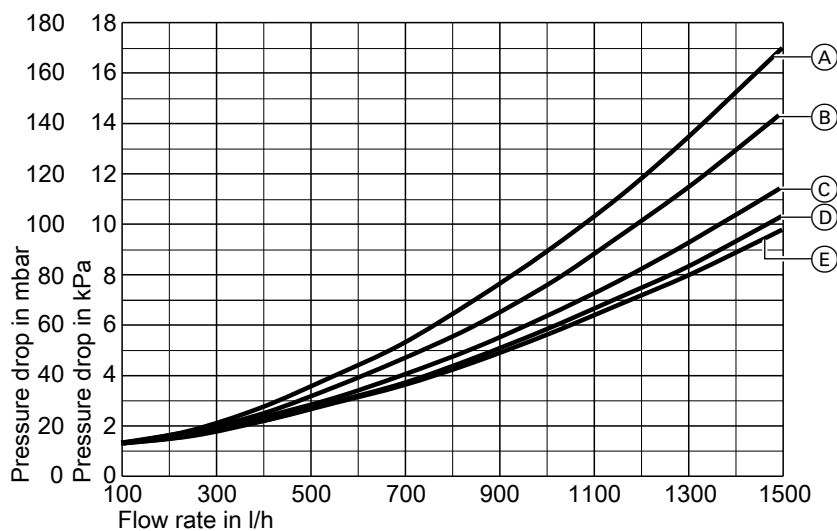


Fig. 58 With circulation pump Grundfos UPM3S 25-60

- (A)  $K_V$  4.0
- (B)  $K_V$  4.5
- (C)  $K_V$  5.1
- (D)  $K_V$  5.5
- (E)  $K_{VS}$  5.6



Divicon with mixer DN 32

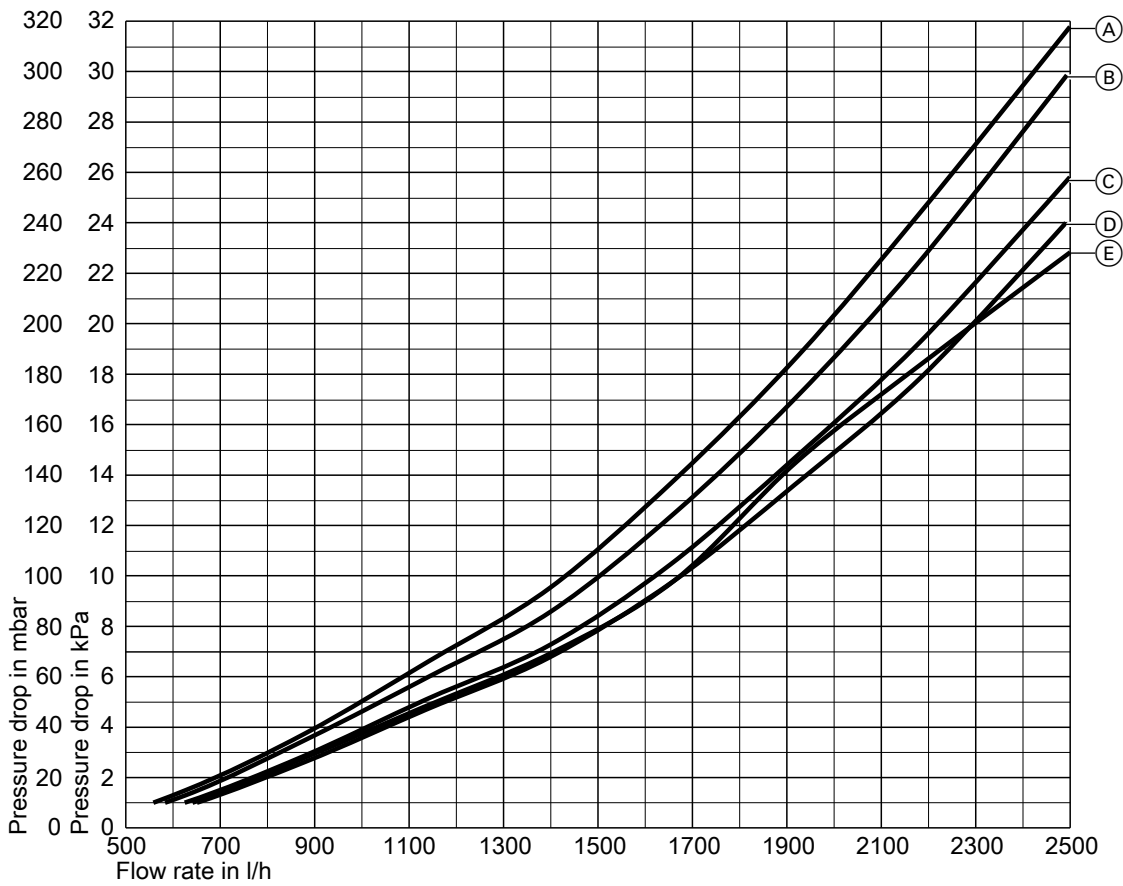


Fig. 59 With circulation pump Wilo PARA 25/8

- (A)  $K_V$  4.7
- (B)  $K_V$  5.1
- (C)  $K_V$  5.6

- (D)  $K_V$  5.8
- (E)  $K_{VS}$  5.9

## Specification (cont.)

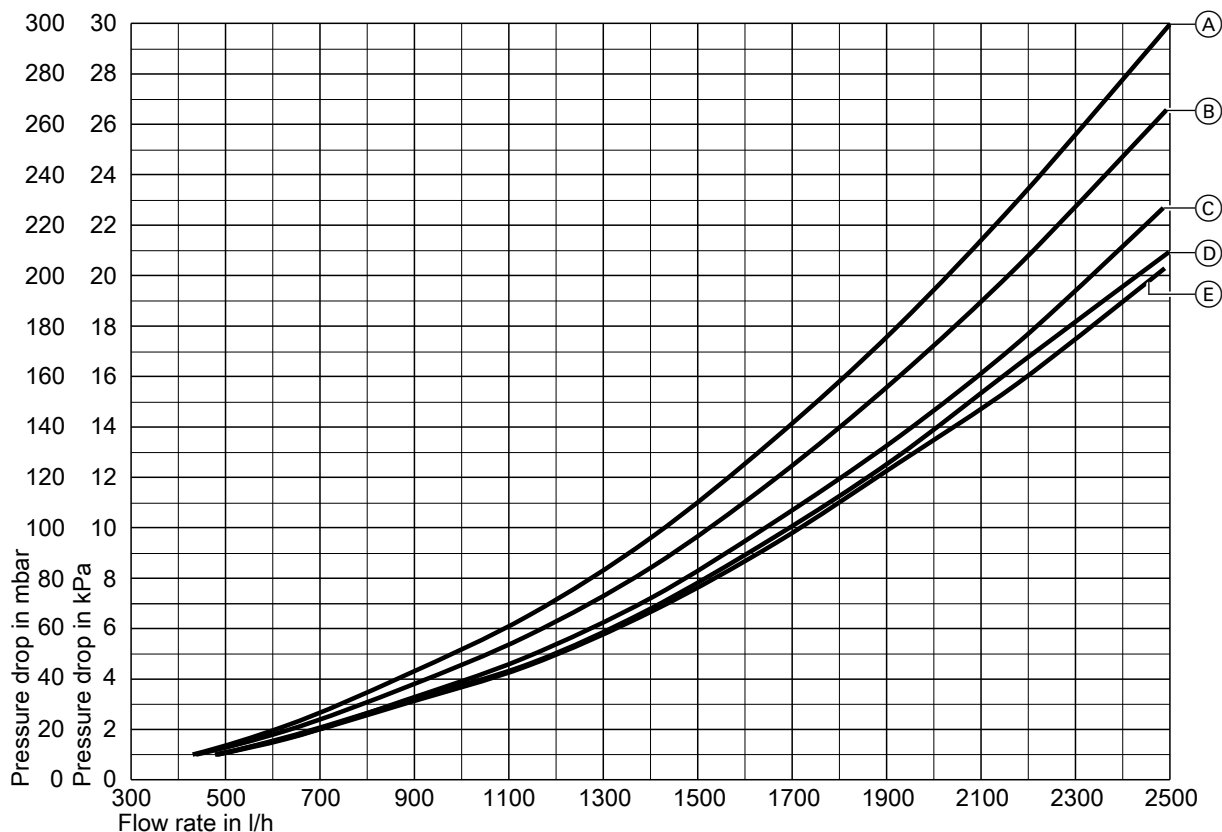


Fig. 60 With circulation pump Grundfos UPM3K 25-70

- (A)  $K_V$  4.7
- (B)  $K_V$  5.1
- (C)  $K_V$  5.6
- (D)  $K_V$  5.8
- (E)  $K_{VS}$  5.9

## Residual heads

### Note

All diagrams refer to the respective Divicon with mixer, without manifold.

### Divicon with mixer DN 20

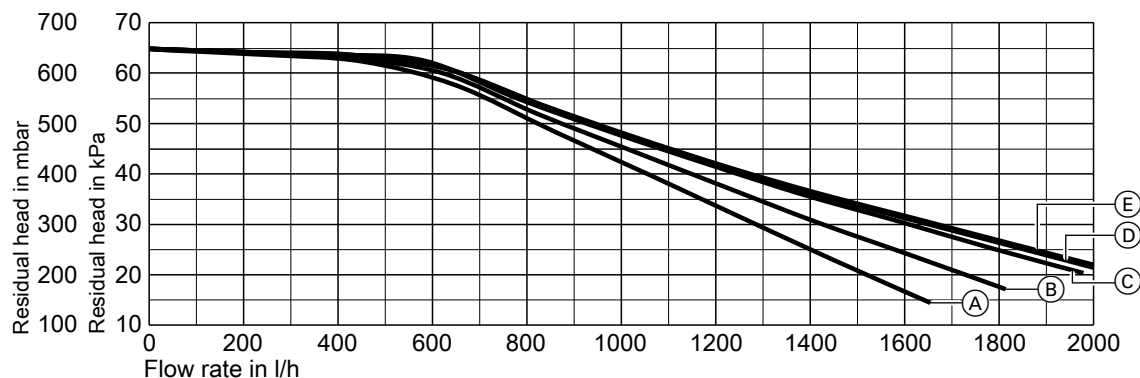


Fig. 61 With circulation pump Wilo PARA 25/6

- (A)  $K_V$  3.1
- (B)  $K_V$  3.7
- (C)  $K_V$  4.5
- (D)  $K_V$  4.8
- (E)  $K_{VS}$  4.9

## Specification (cont.)

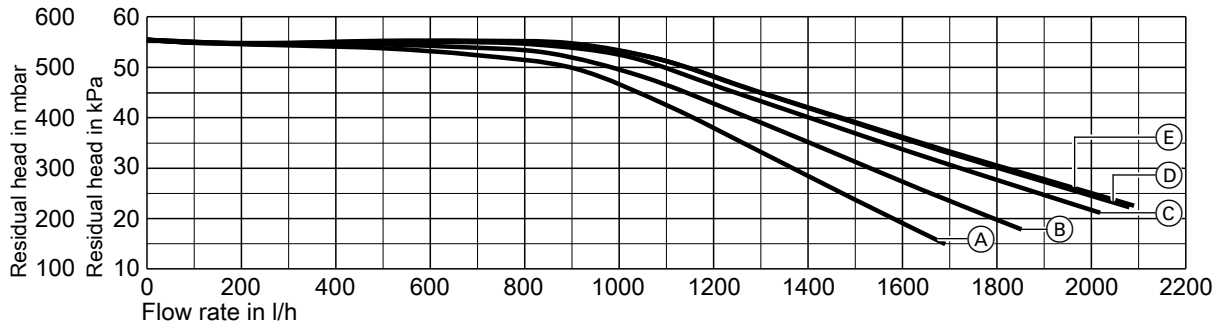


Fig. 62 **With circulation pump Grundfos UPM3S 25-60**

- (A)  $K_V$  3.1
- (B)  $K_V$  3.7
- (C)  $K_V$  4.5
- (D)  $K_V$  4.8
- (E)  $K_{VS}$  4.9

### Divicon with mixer DN 25

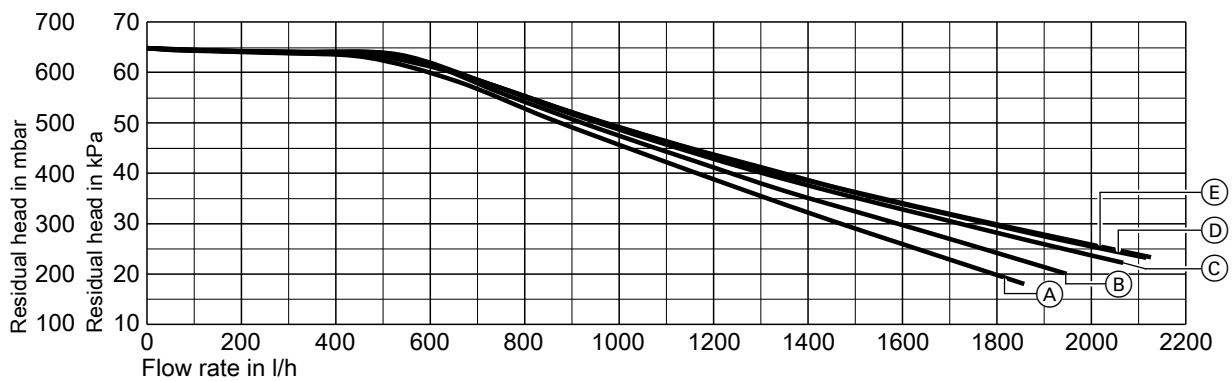


Fig. 63 **With circulation pump Wilo PARA 25/6**

- (A)  $K_V$  4.0
- (B)  $K_V$  4.5
- (C)  $K_V$  5.1
- (D)  $K_V$  5.5
- (E)  $K_{VS}$  5.6

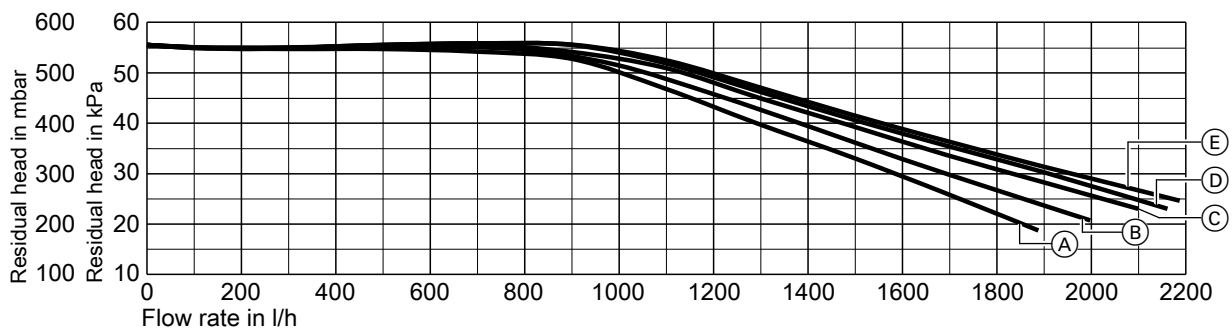


Fig. 64 **With circulation pump Grundfos UPM3S 25-60**

- (A)  $K_V$  4.0
- (B)  $K_V$  4.5
- (C)  $K_V$  5.1
- (D)  $K_V$  5.5
- (E)  $K_{VS}$  5.6

Divicon with mixer DN 32

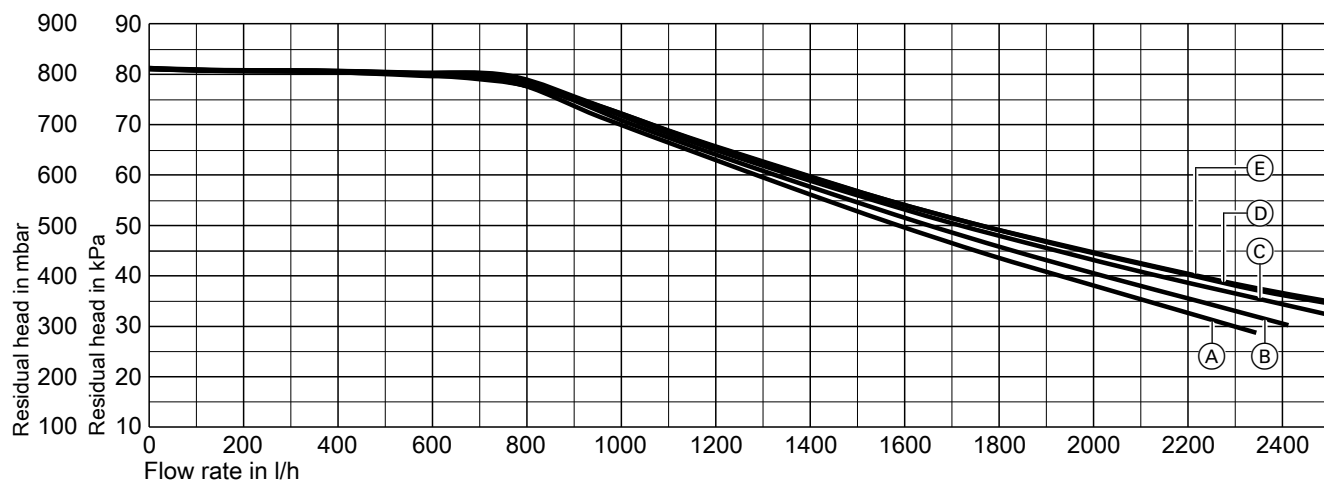


Fig. 65 With circulation pump Wilo PARA 25/8

- Ⓐ  $K_V$  4.7
- Ⓑ  $K_V$  5.1
- Ⓒ  $K_V$  5.6
- Ⓓ  $K_V$  5.8
- Ⓔ  $K_{VS}$  5.9

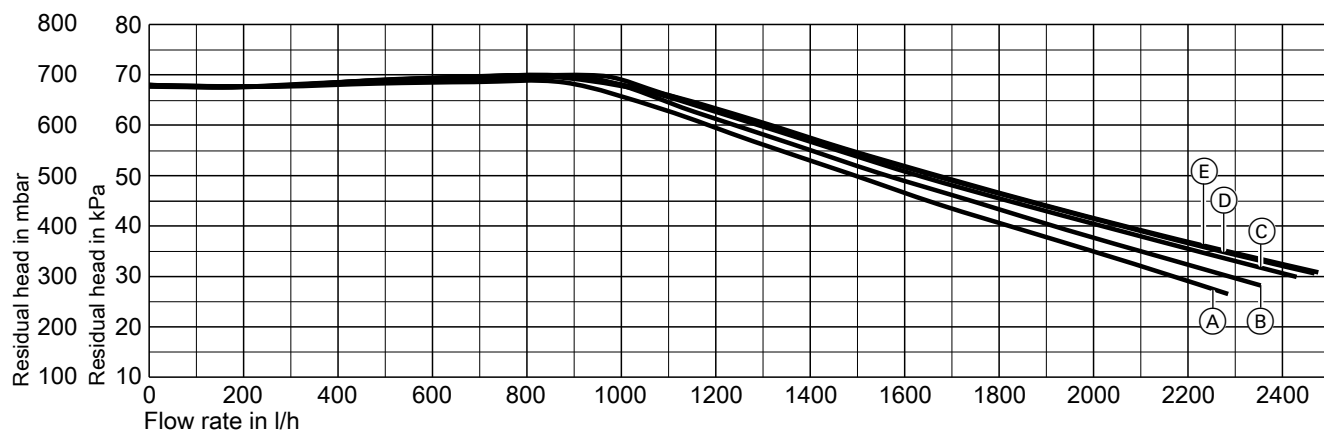


Fig. 66 With circulation pump Grundfos UPM3K 25-70

- Ⓐ  $K_V$  4.7
- Ⓑ  $K_V$  5.1
- Ⓒ  $K_V$  5.6
- Ⓓ  $K_V$  5.8
- Ⓔ  $K_{VS}$  5.9

### Curve

Divicon with mixer extension kit, PlusBus or KM-BUS subscriber

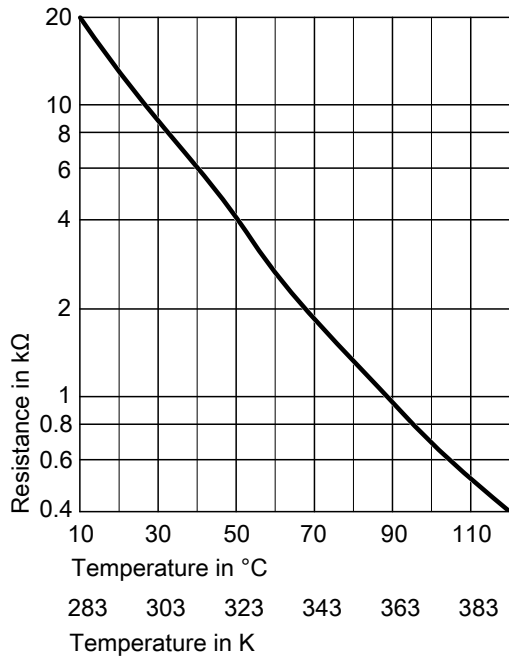


Fig. 67

## Declaration of conformity for extension kit

We, Viessmann Climate Solutions SE, D-35108 Allendorf, declare as sole responsible body that the named product complies with the European directives and supplementary national requirements in terms of its design and operational characteristics.

Using the serial number, the Declaration of Conformity can be found on the following website:  
**[www.viessmann.co.uk/eu-conformity](http://www.viessmann.co.uk/eu-conformity)**

## Keyword index

### C

- Connecting cables, routing
  - For installation with manifold.....24
  - For installation with mixer extension kit.....48
- Connection and wiring diagram
  - Mixer extension kit, KM-BUS subscriber.....47
  - Mixer extension kit, PlusBus subscriber.....40

### F

- Flow temperature sensor..... 16

### K

- Kv value setting..... 16

### L

- Low loss header
  - Installing..... 13
  - Thermal insulation, fitting..... 22

### M

- Manifold
  - Installation example..... 6
  - Installing..... 11
  - Thermal insulation, fitting..... 23
- Mixer
  - Motor, installing..... 30
  - Motor, setting manually..... 51
- Mixer extension kit
  - Electrical connection, KM-BUS subscriber.....41
  - Electrical connection, PlusBus subscriber..... 34
  - Installing.....33

### P

- Pressure drop
  - Divicon..... 55

### R

- Residual heads
  - Divicon..... 58
- Rotary switch S1, setting
  - KM-BUS subscriber.....43
  - PlusBus subscriber..... 37

### S

- System filling.....21

### T

- Thermal insulation
  - Fitting..... 22
  - Removing..... 8
  - Sealing..... 49

### W

- Wall mounting bracket.....9

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