


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.

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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Product information

Divicon with mixer

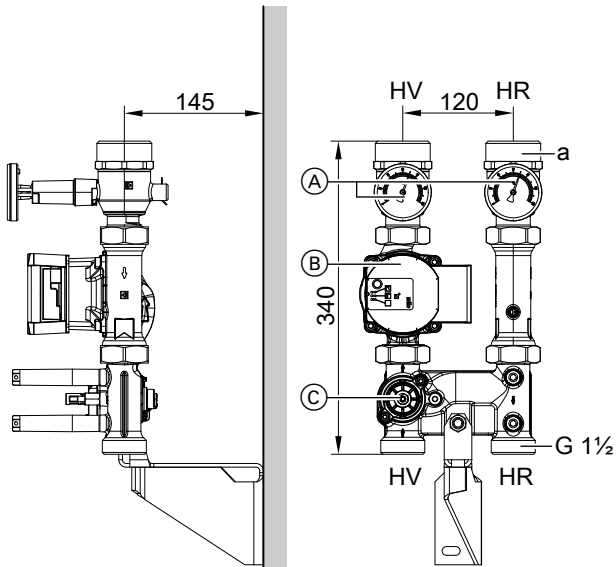


Fig. 1 Divicon with mixer: Wall mounting, shown without thermal insulation, mixer motor or mixer extension kit

- 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

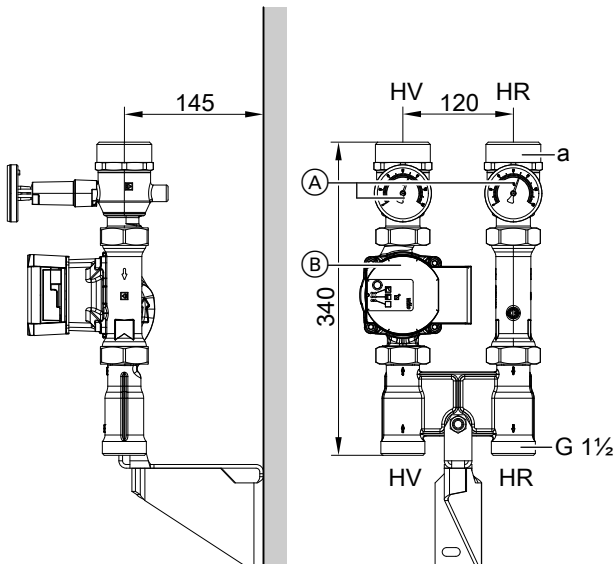


Fig. 2 Divicon without mixer: Wall mounting, shown without thermal insulation

- 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

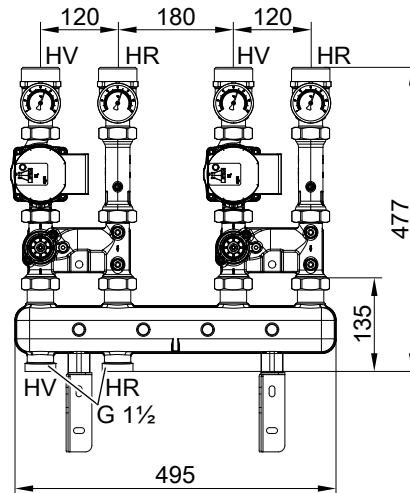


Fig. 3 Shown without thermal insulation, mixer motor or mixer extension kit

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

Installation example: Divicon with triple manifold

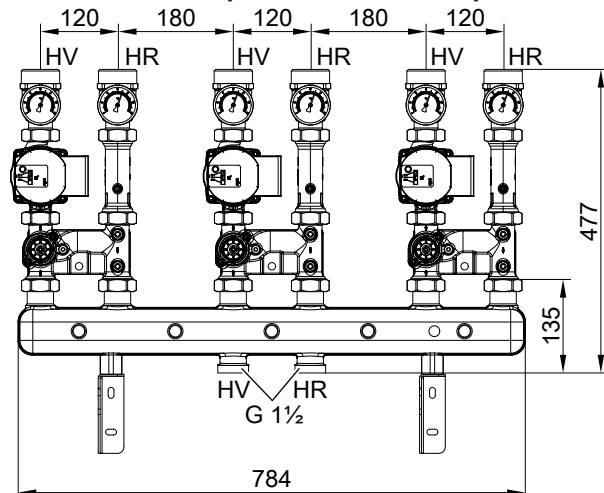


Fig. 4 Shown without thermal insulation, mixer motor or mixer extension kit

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

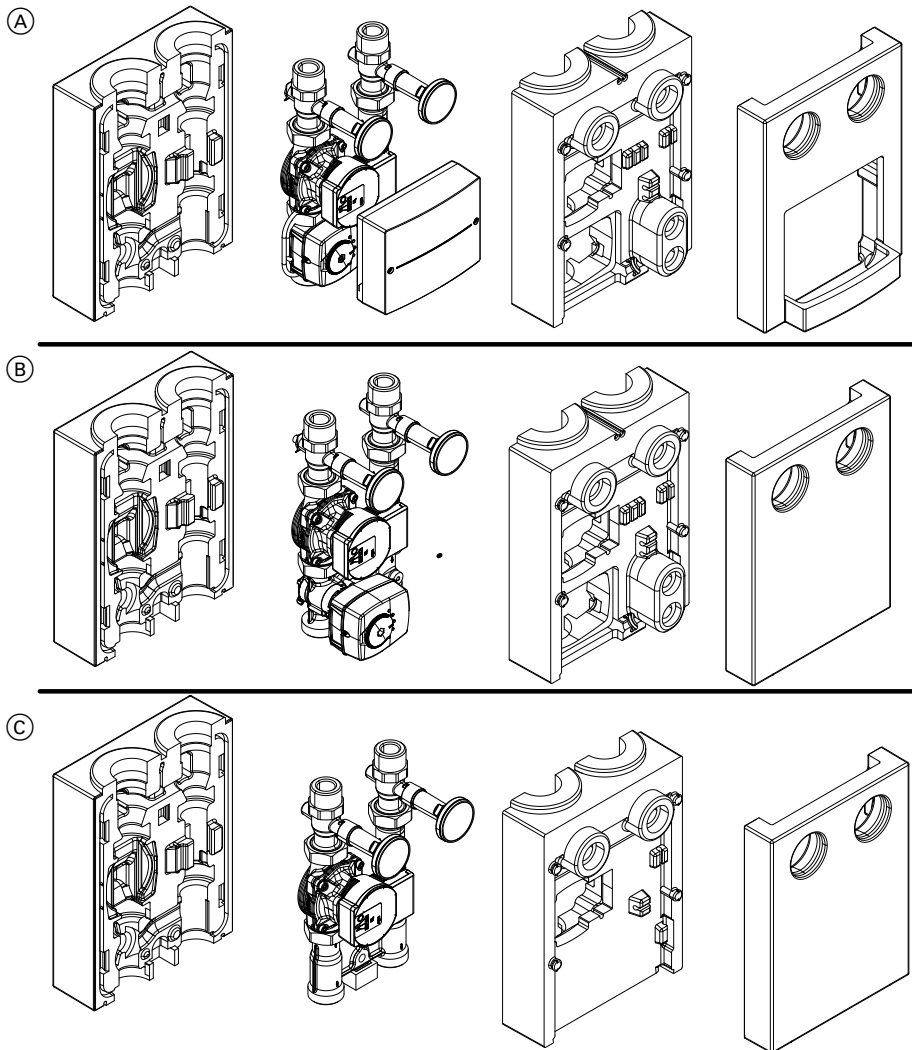


Fig. 5

- (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

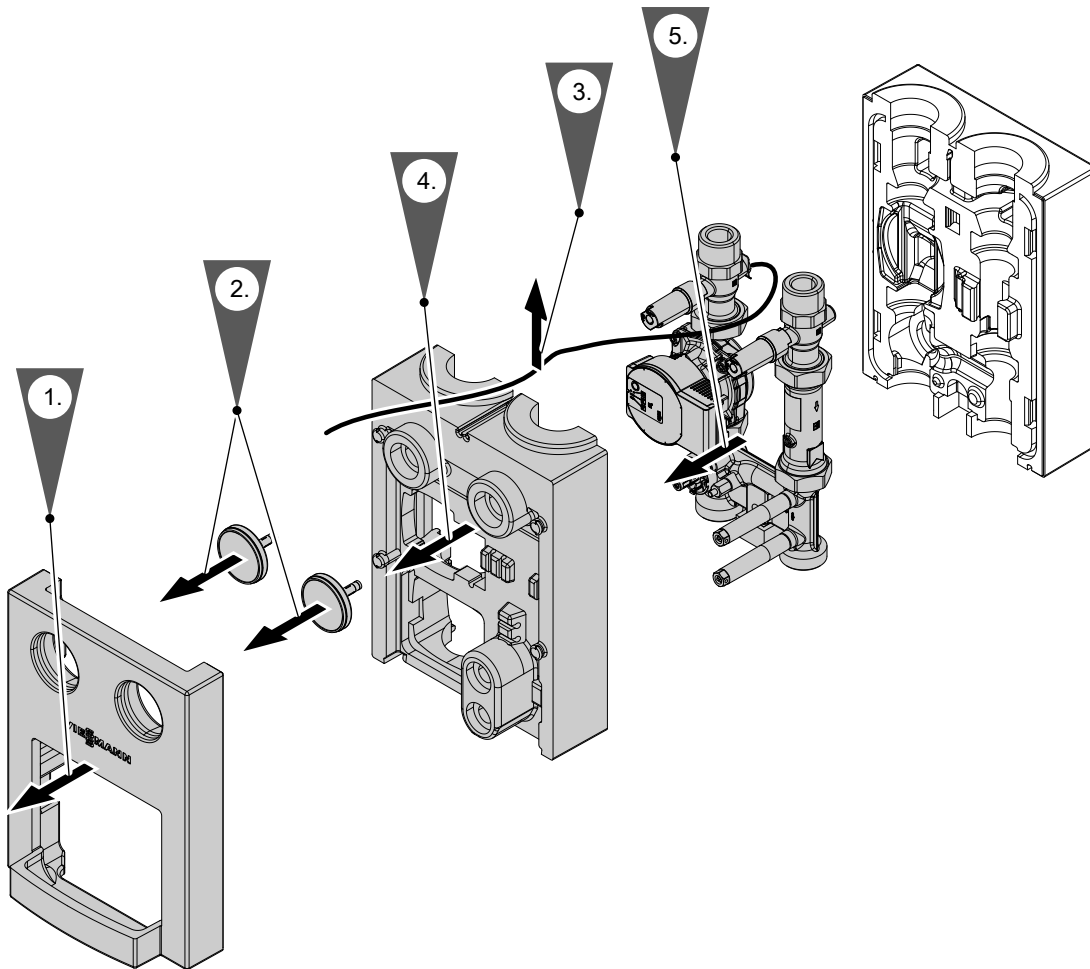


Fig. 6

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

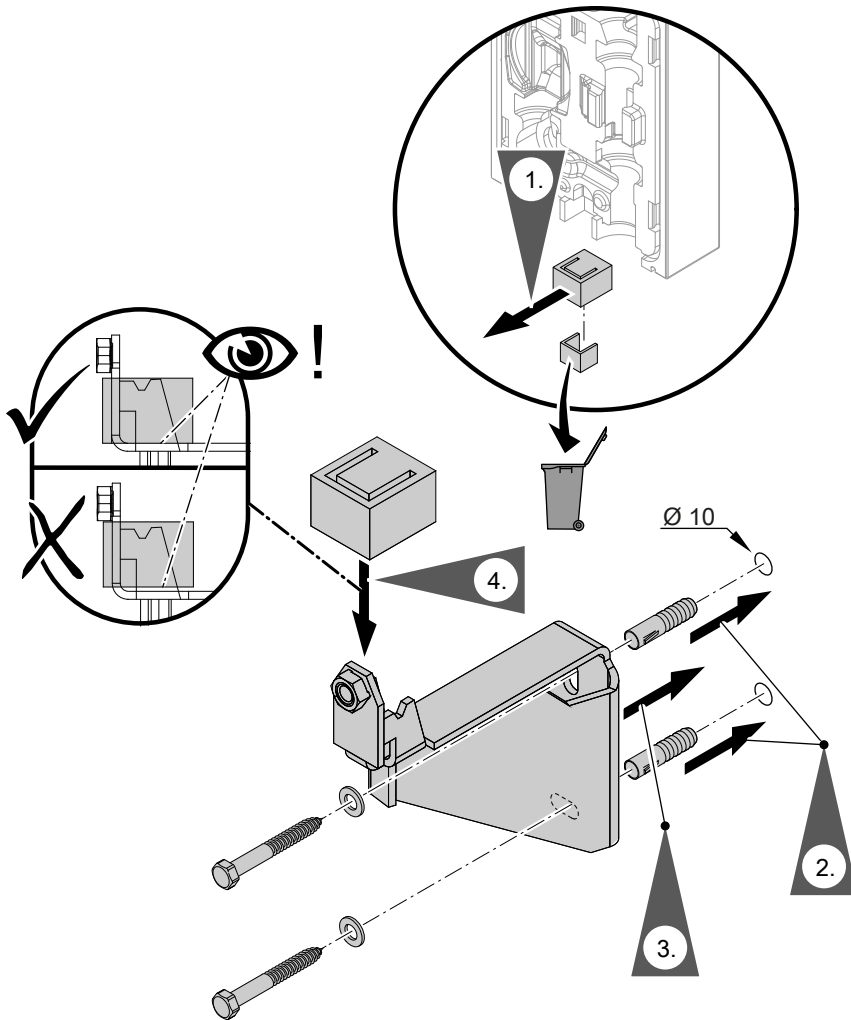


Fig. 7

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

Fitting the wall mounting bracket (cont.)

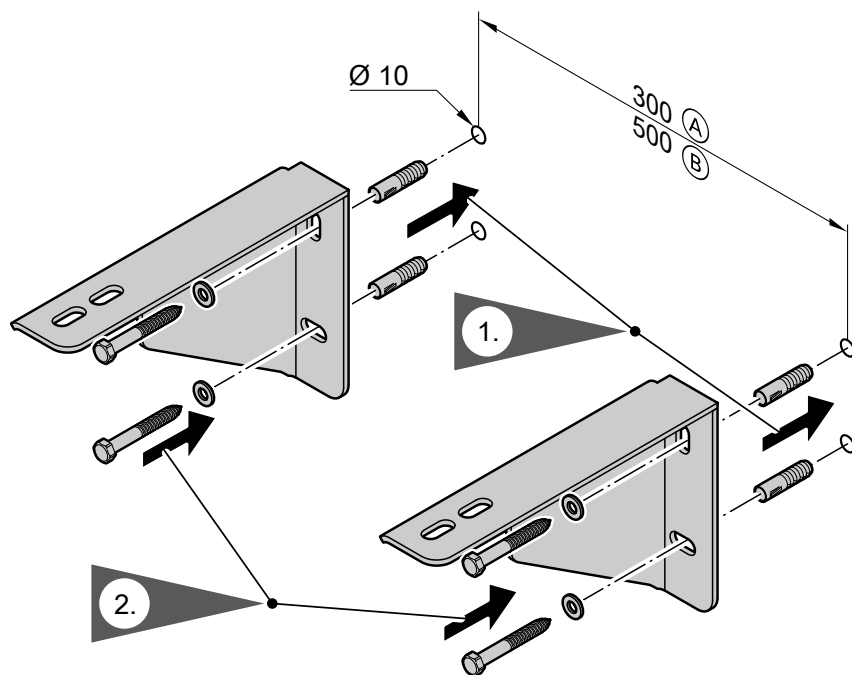


Fig. 8

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

Installing the manifold

Manifold for 2 Divicons

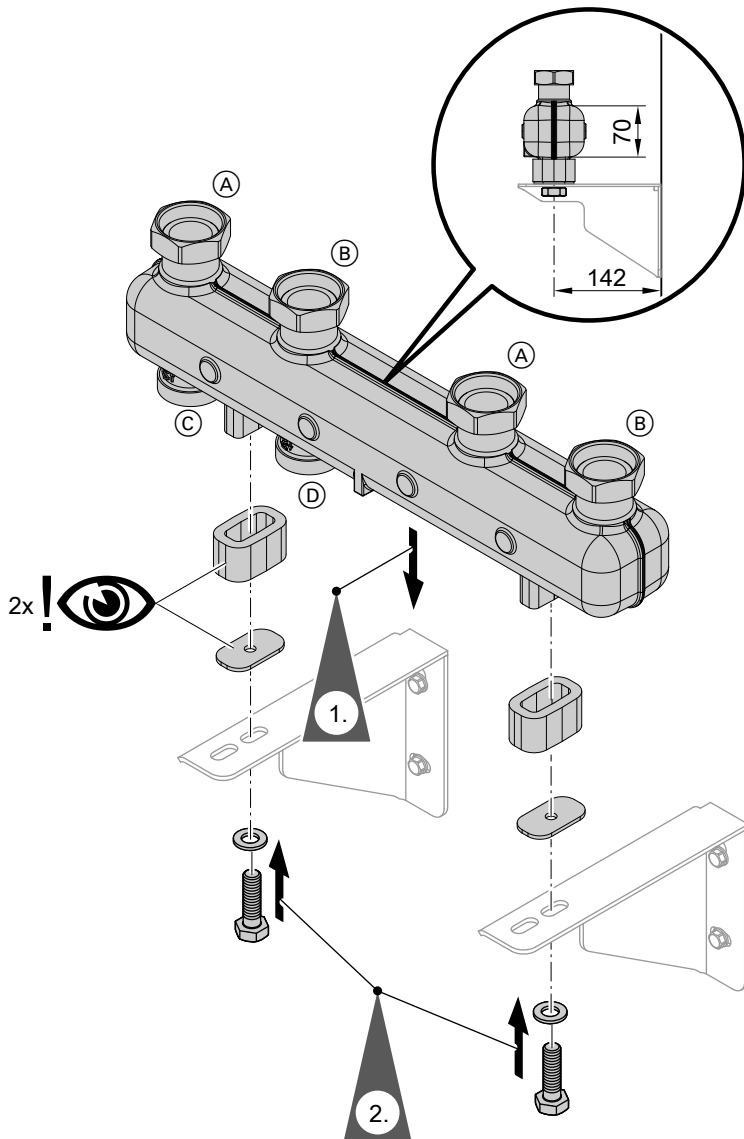


Fig. 9

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

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

Manifold for 3 Divicons

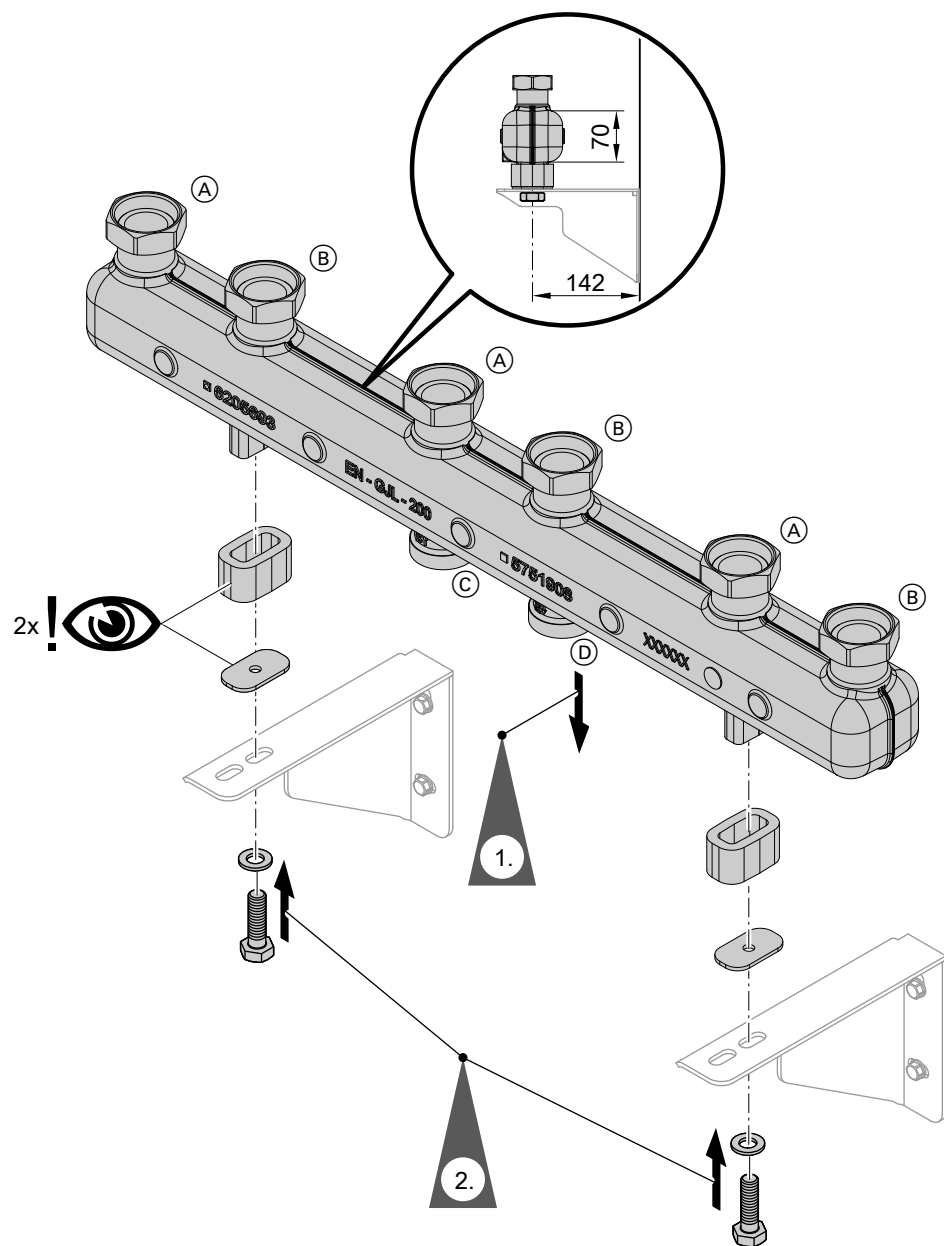


Fig. 10

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

Installing the low loss header

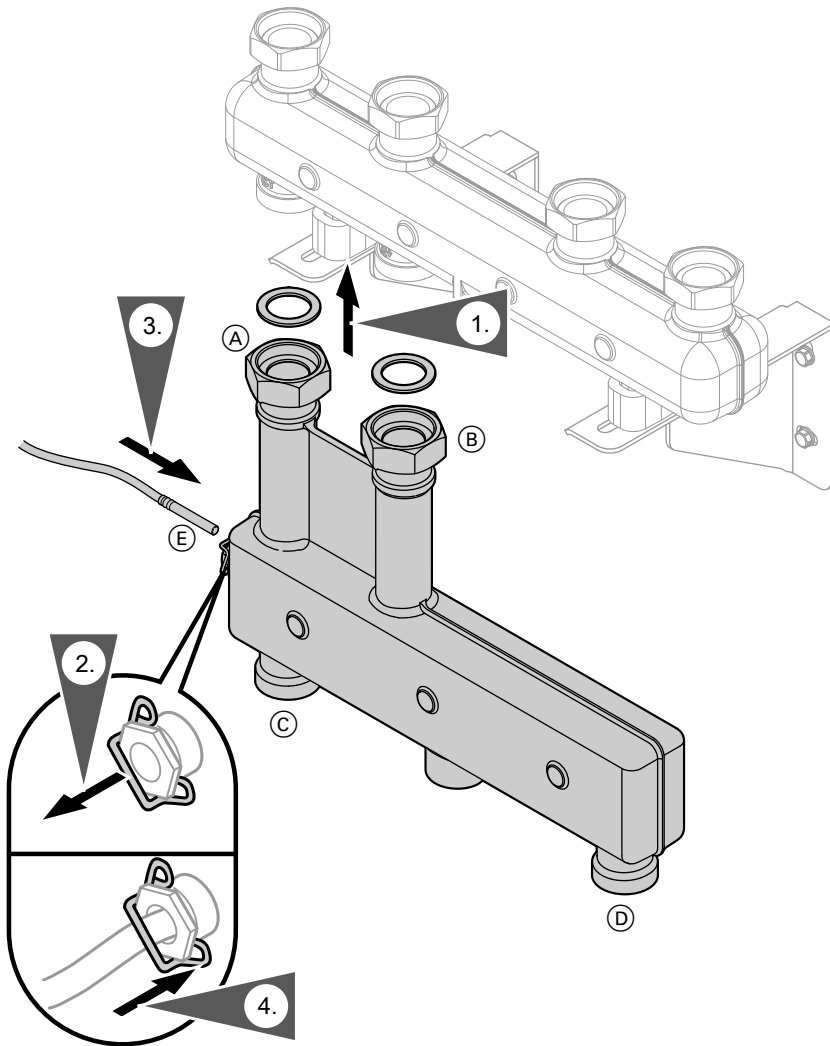


Fig. 11

- (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

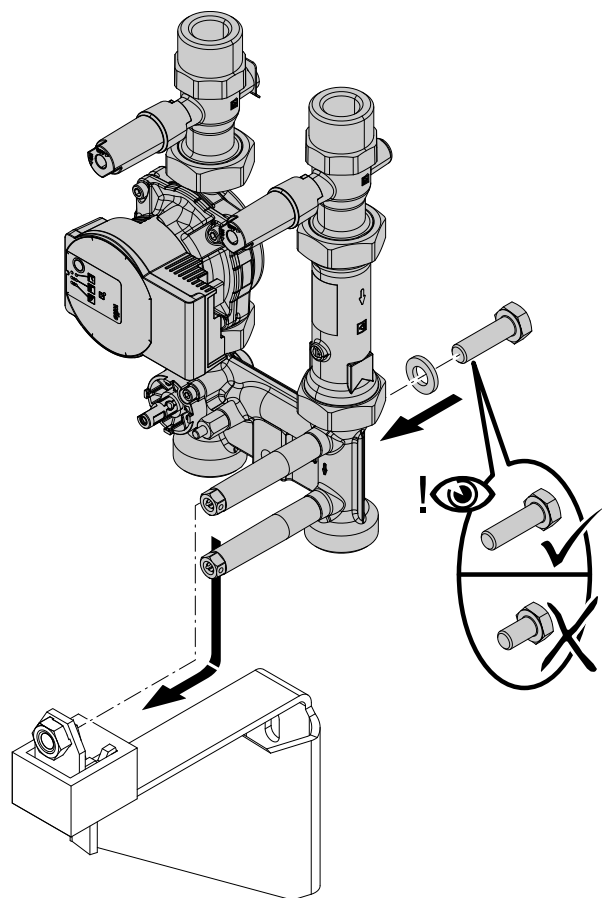


Fig. 12

Fitting the Divicon to the manifold

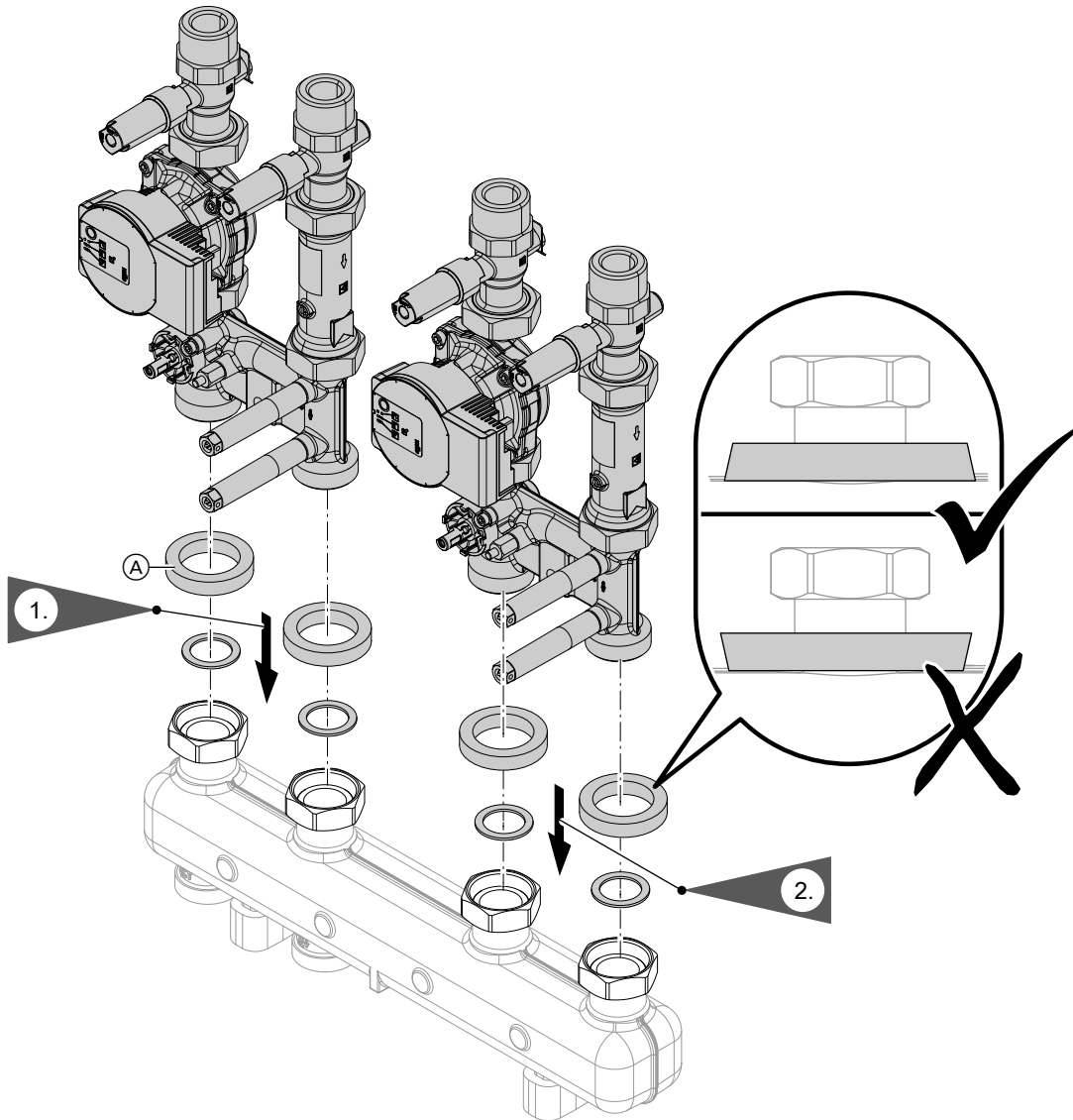


Fig. 13

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

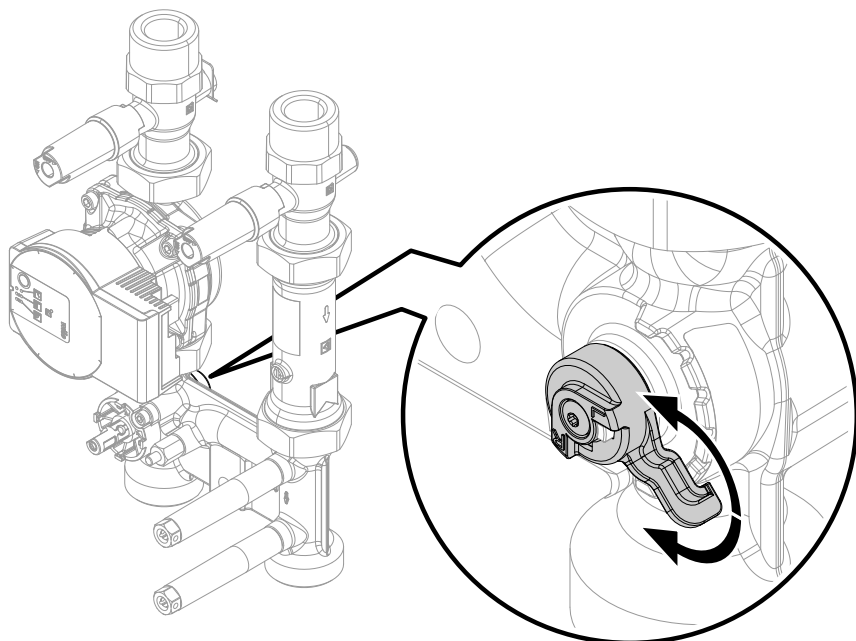


Fig. 14

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.)

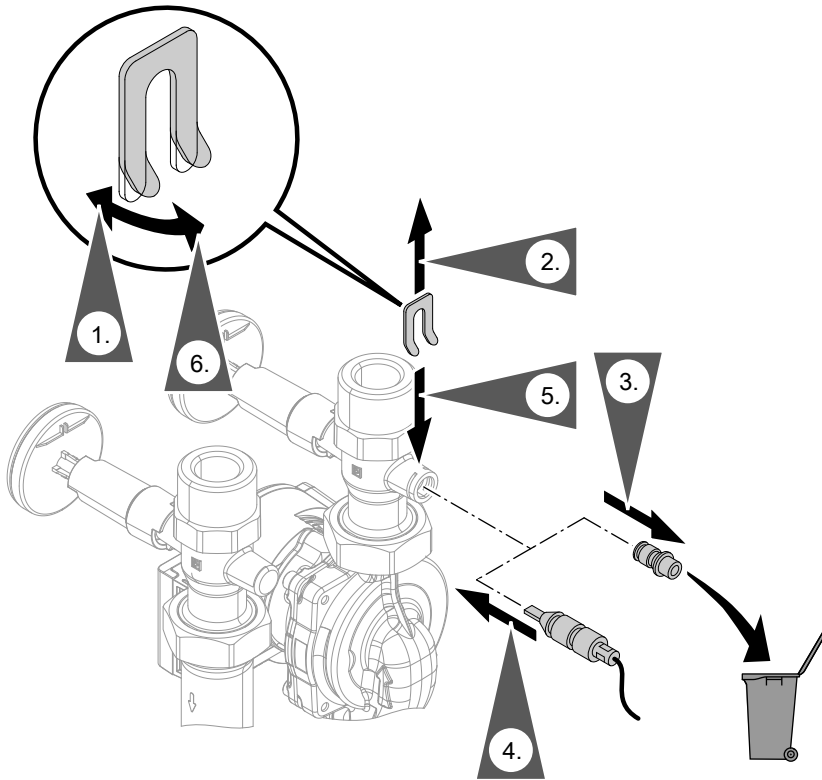


Fig. 15

Connecting the heating/cooling circuit

Connecting the heating/cooling circuit to 1 Divicon

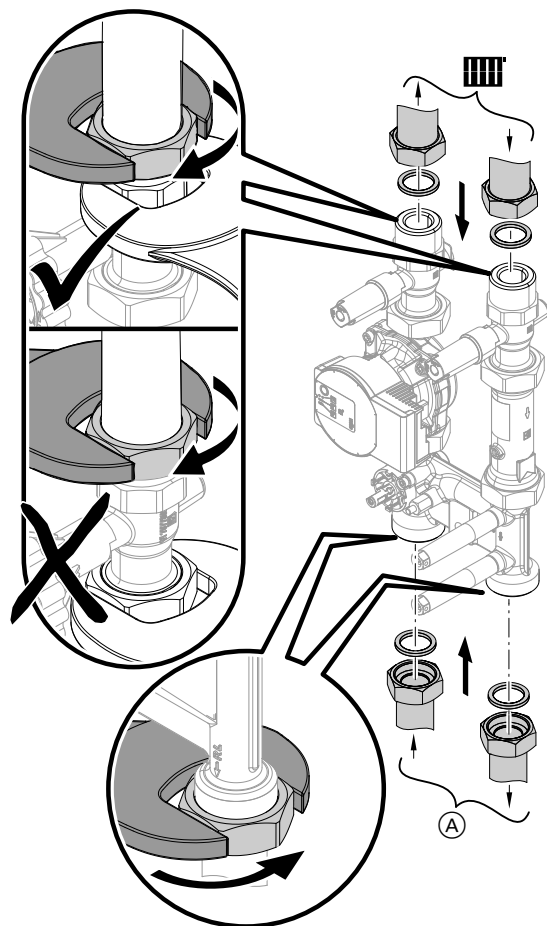


Fig. 16

Ⓐ Heat generator

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

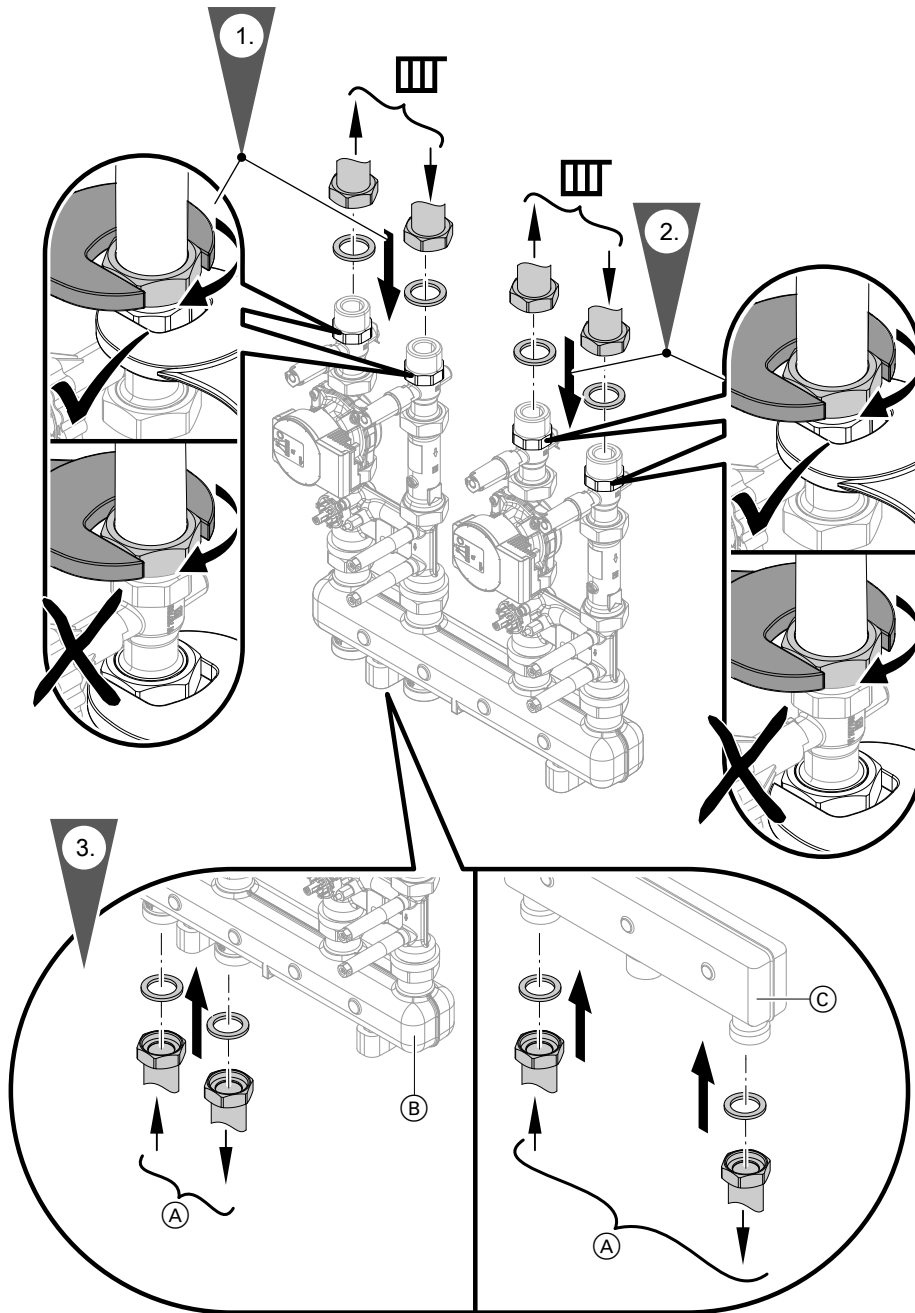


Fig. 17

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.)

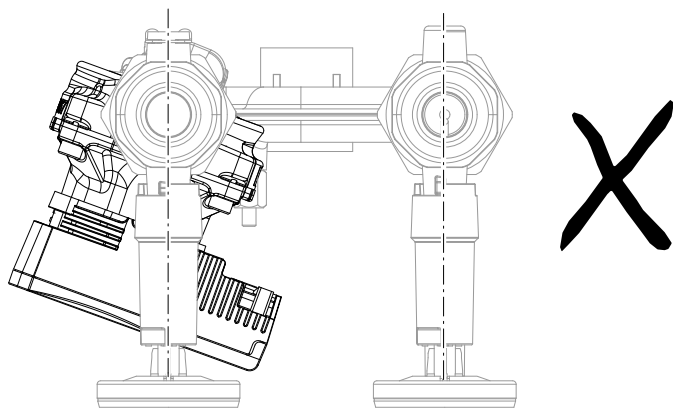
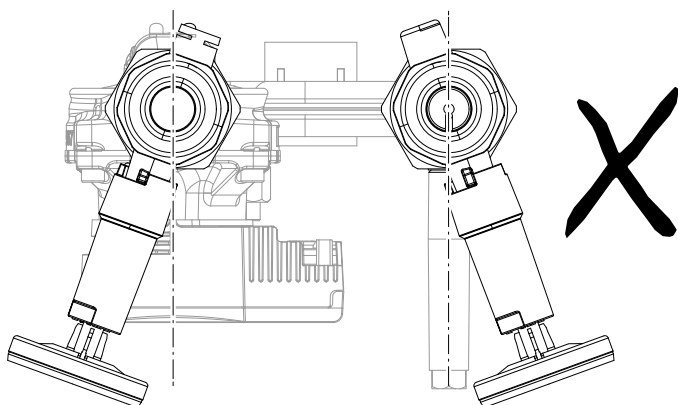
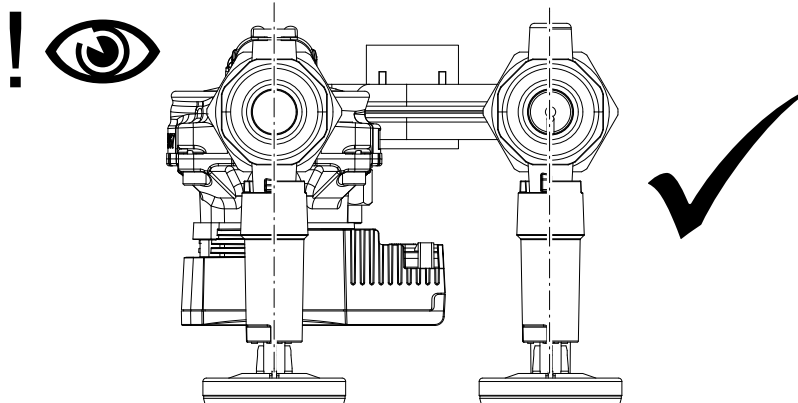


Fig. 18

Filling the system

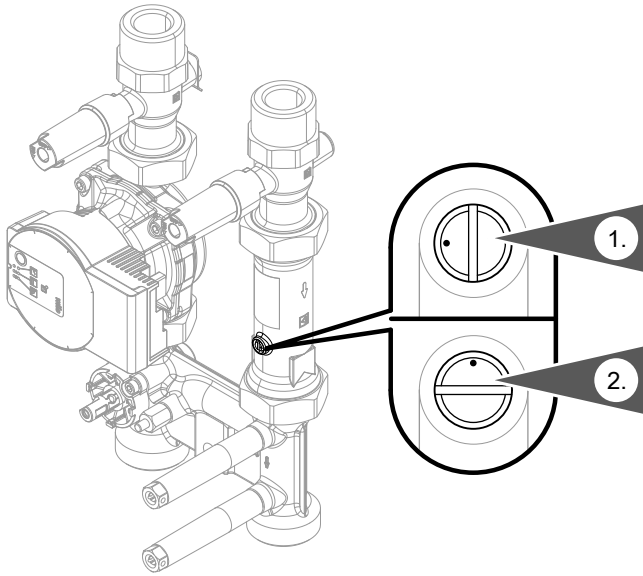


Fig. 19

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

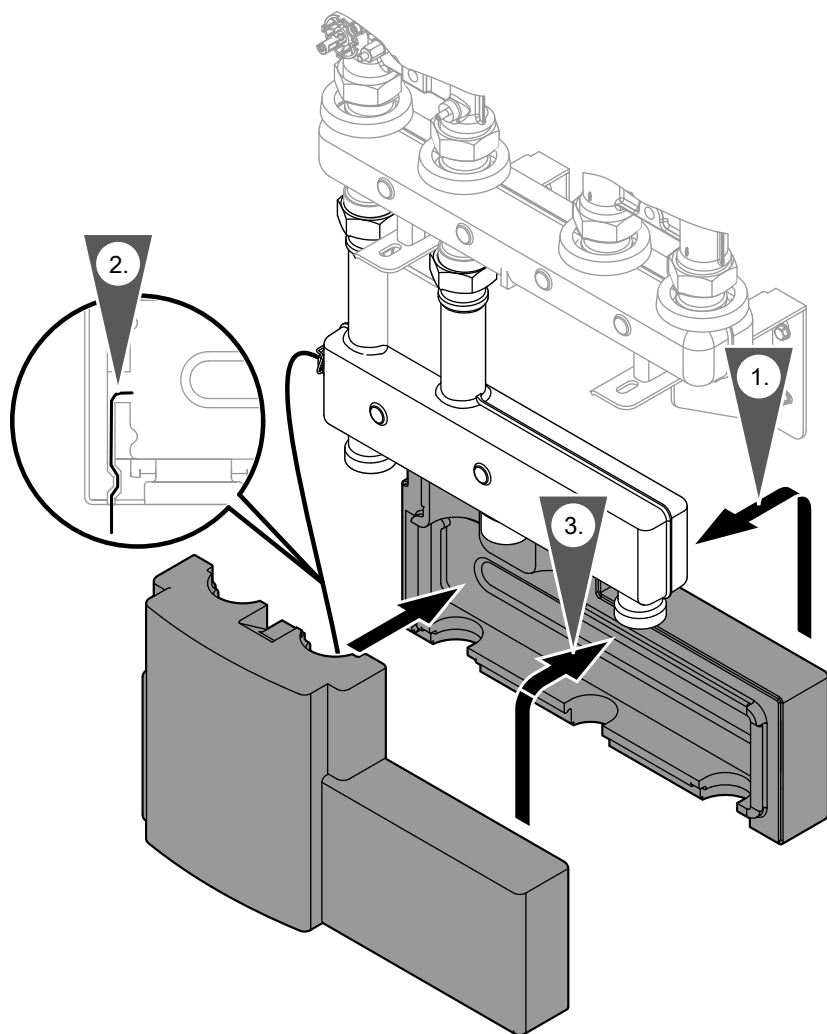


Fig. 20

Fitting the thermal insulation to the manifold

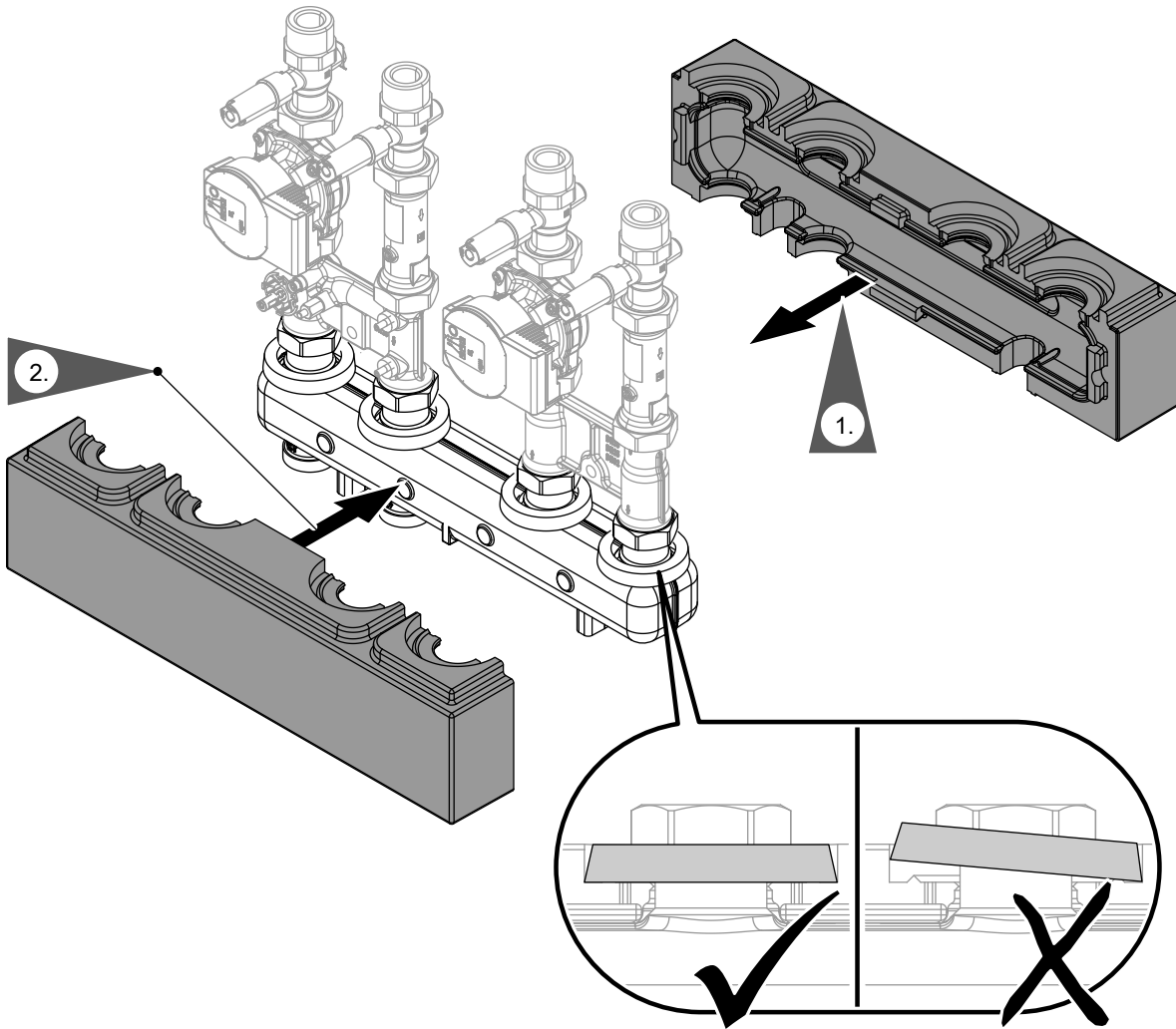


Fig. 21

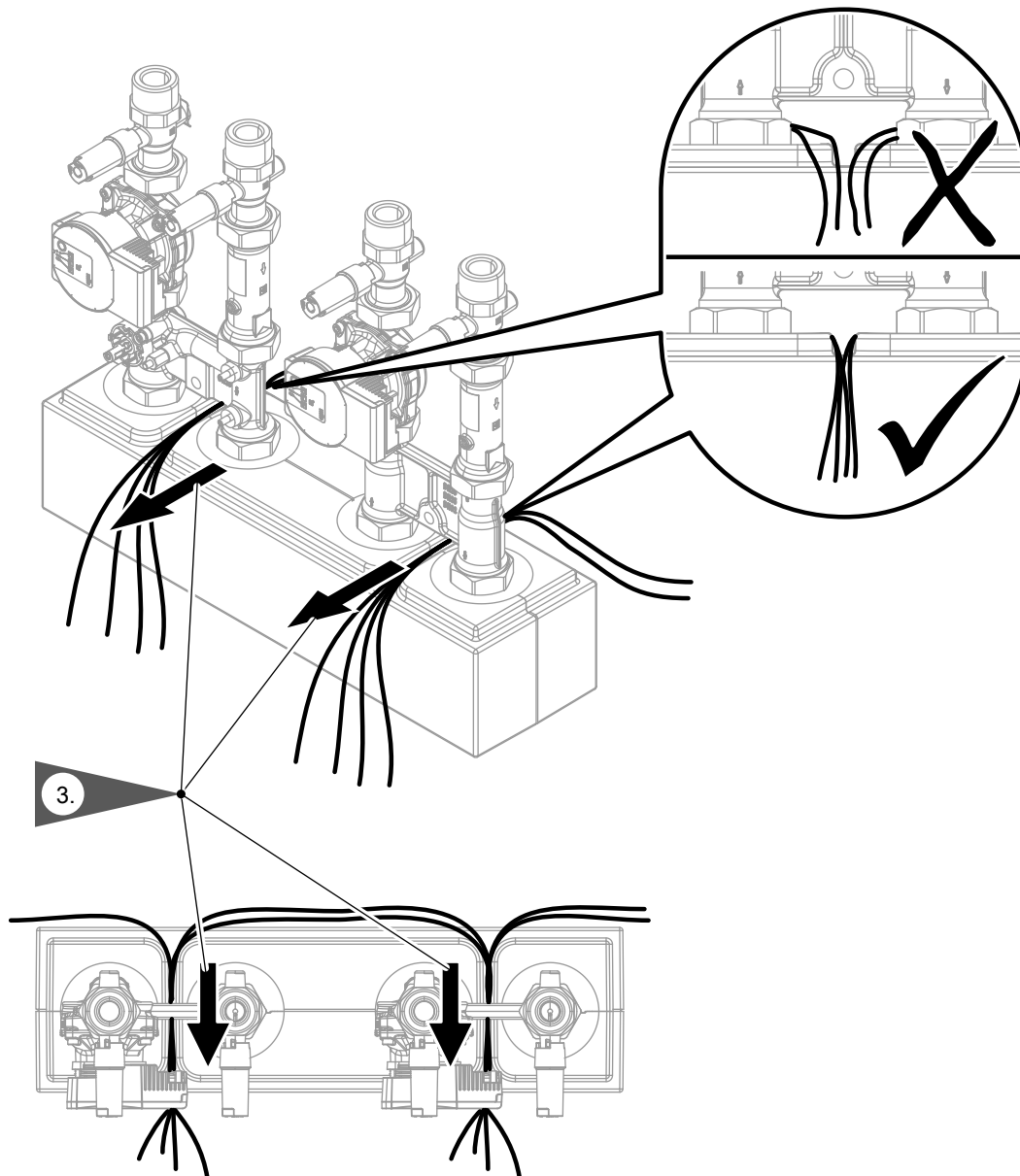


Fig. 22

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

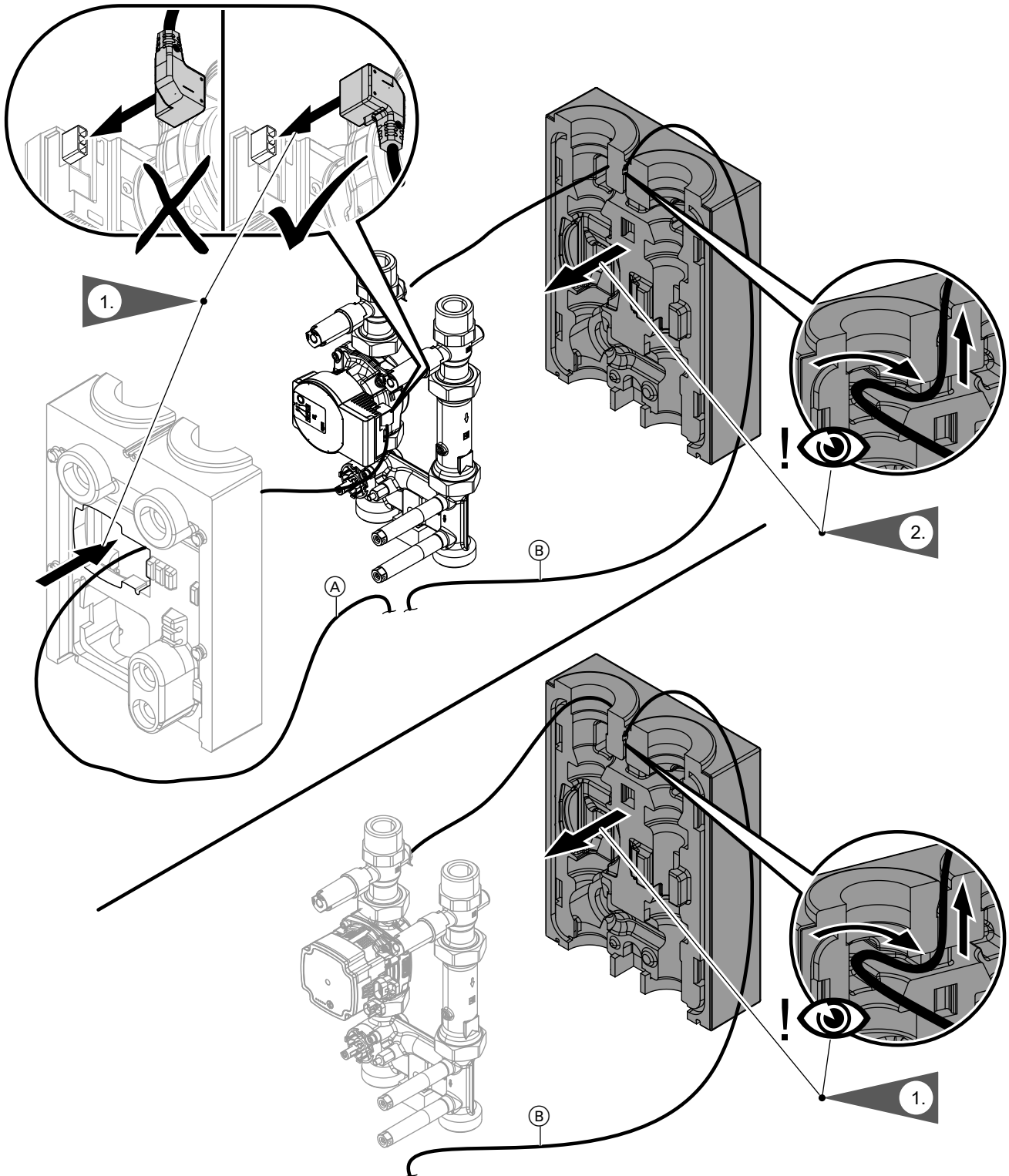


Fig. 23

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

Note

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

Fitting the thermal insulation (cont.)

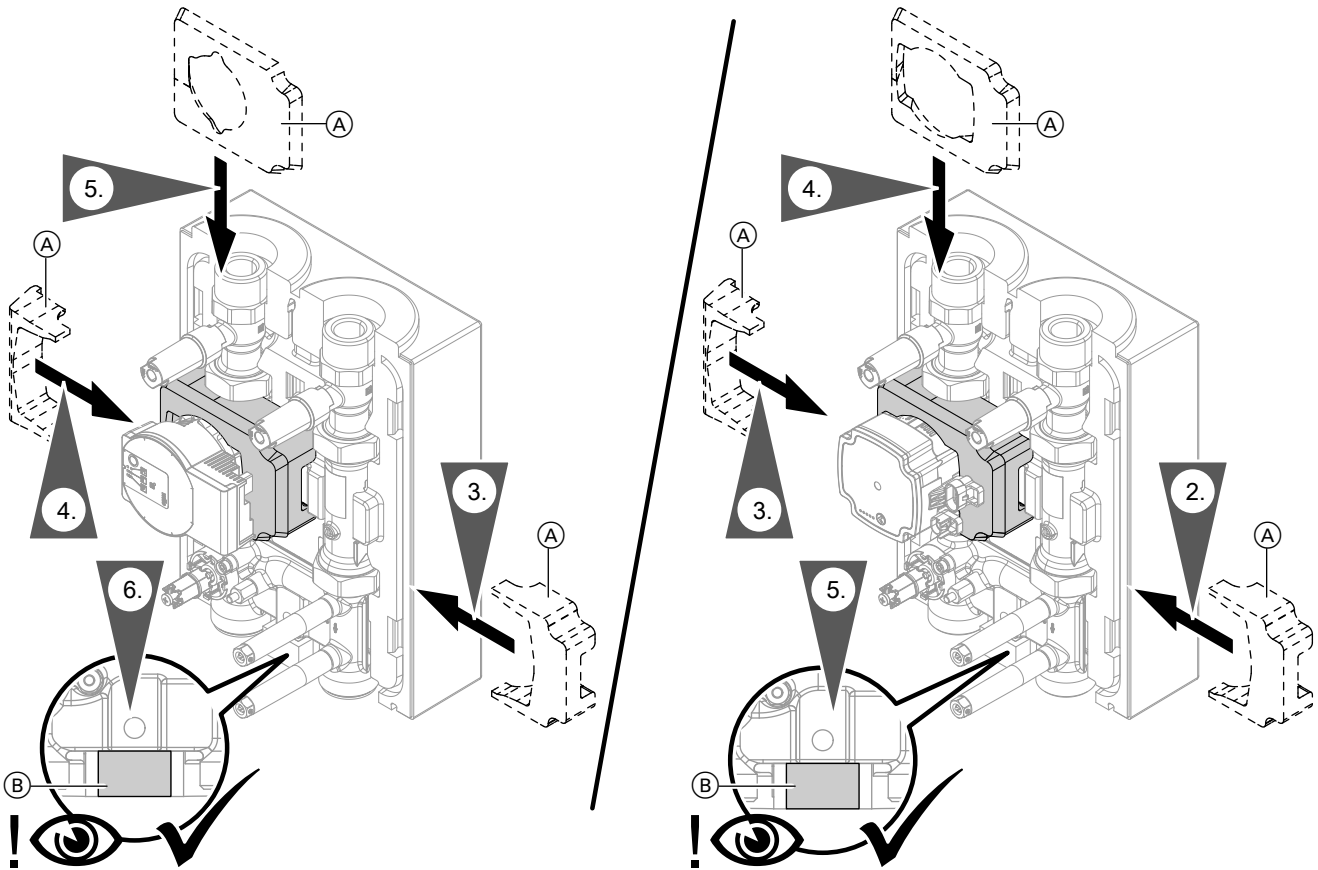


Fig. 24

- Ⓐ 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.)

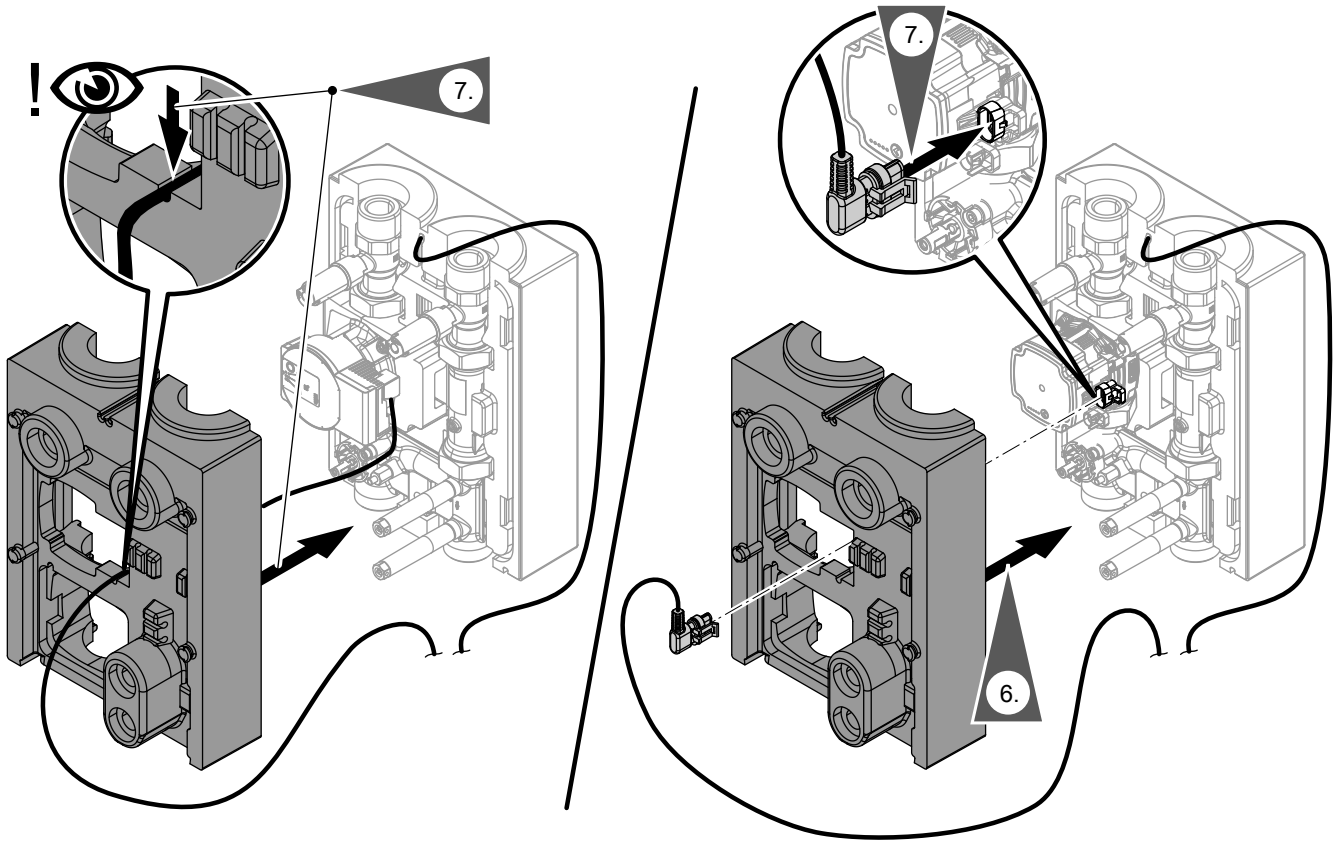


Fig. 25

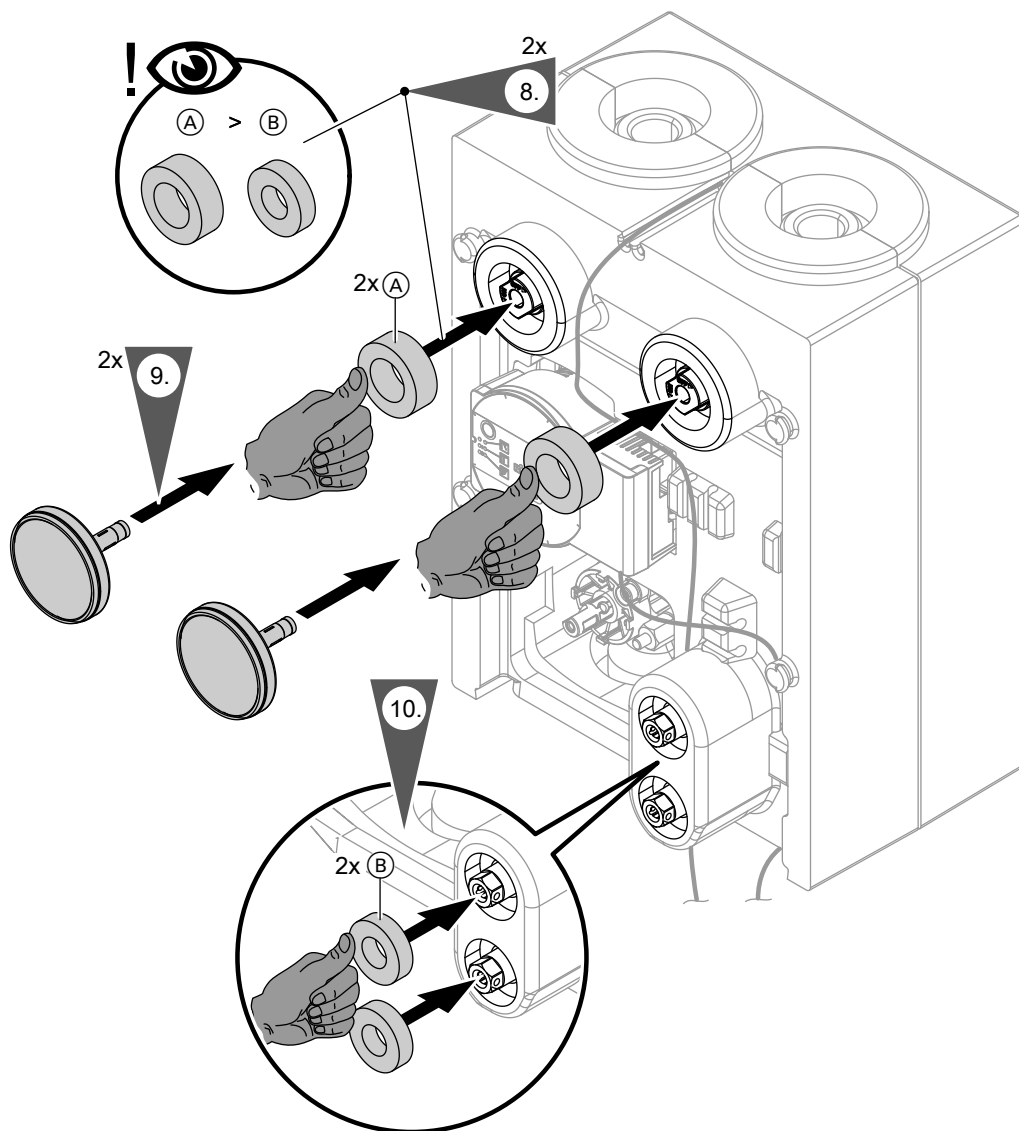


Fig. 26

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

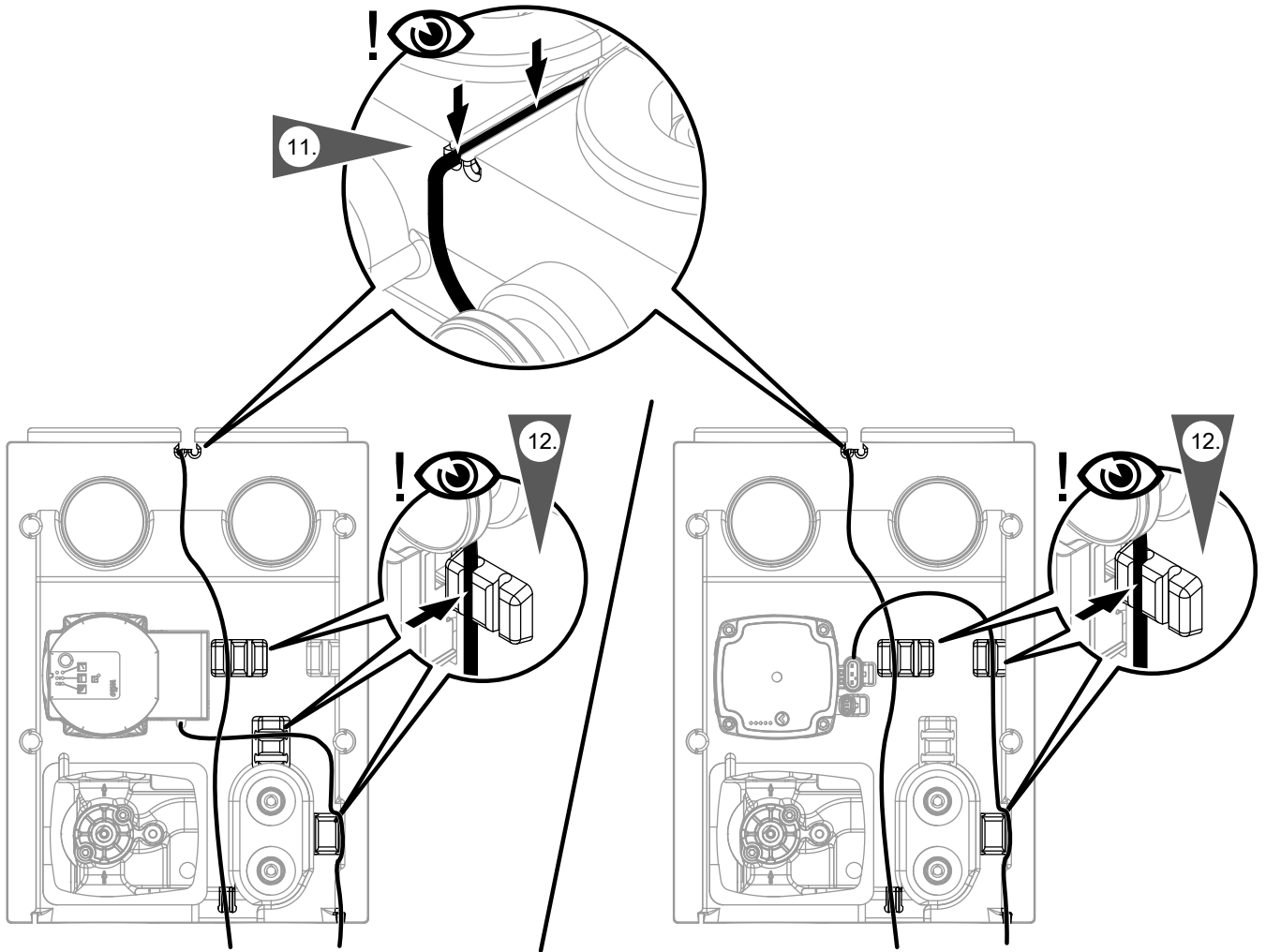


Fig. 27

Note

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

Installing the mixer motor

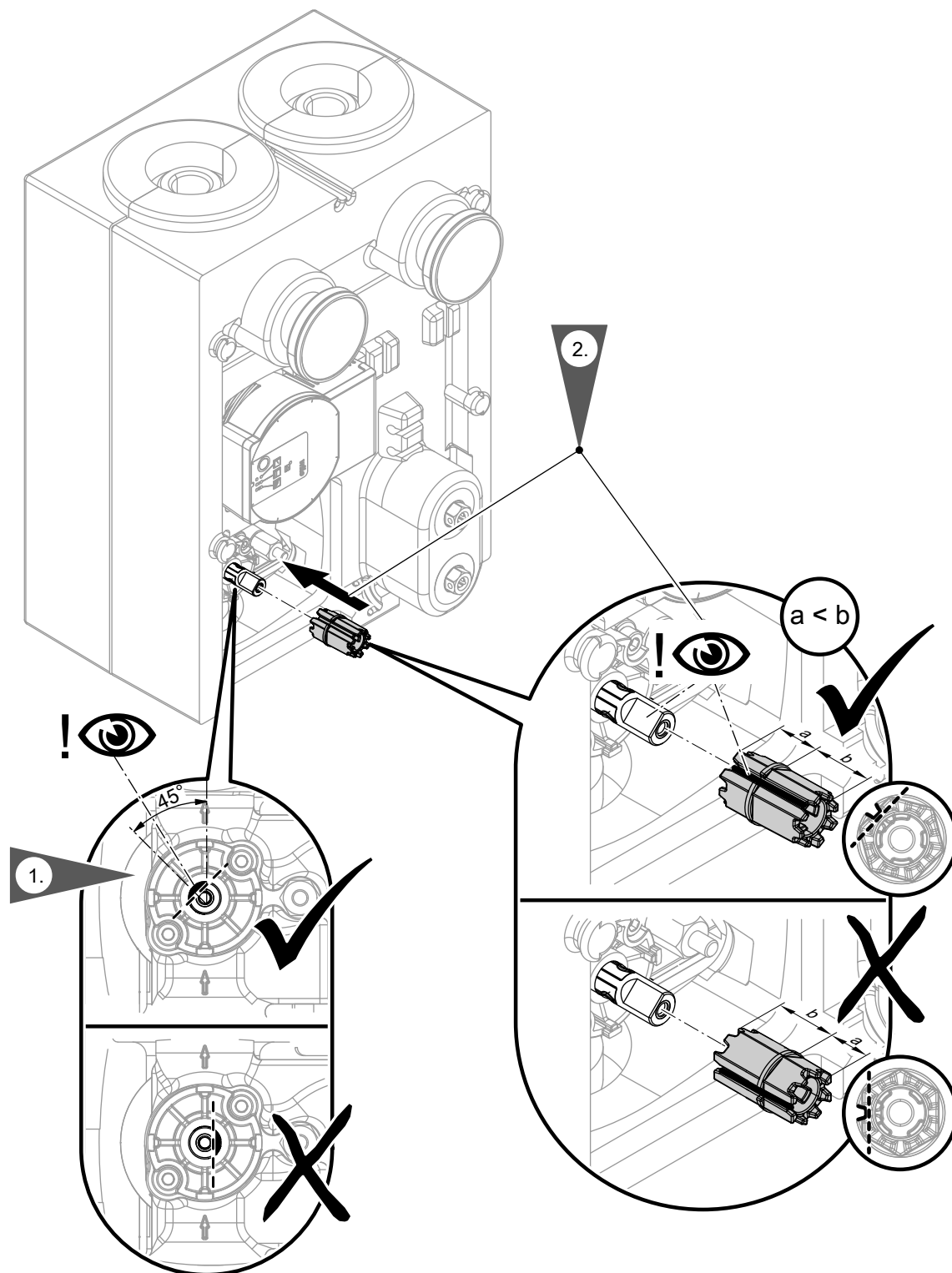


Fig. 28

Installing the mixer motor (cont.)

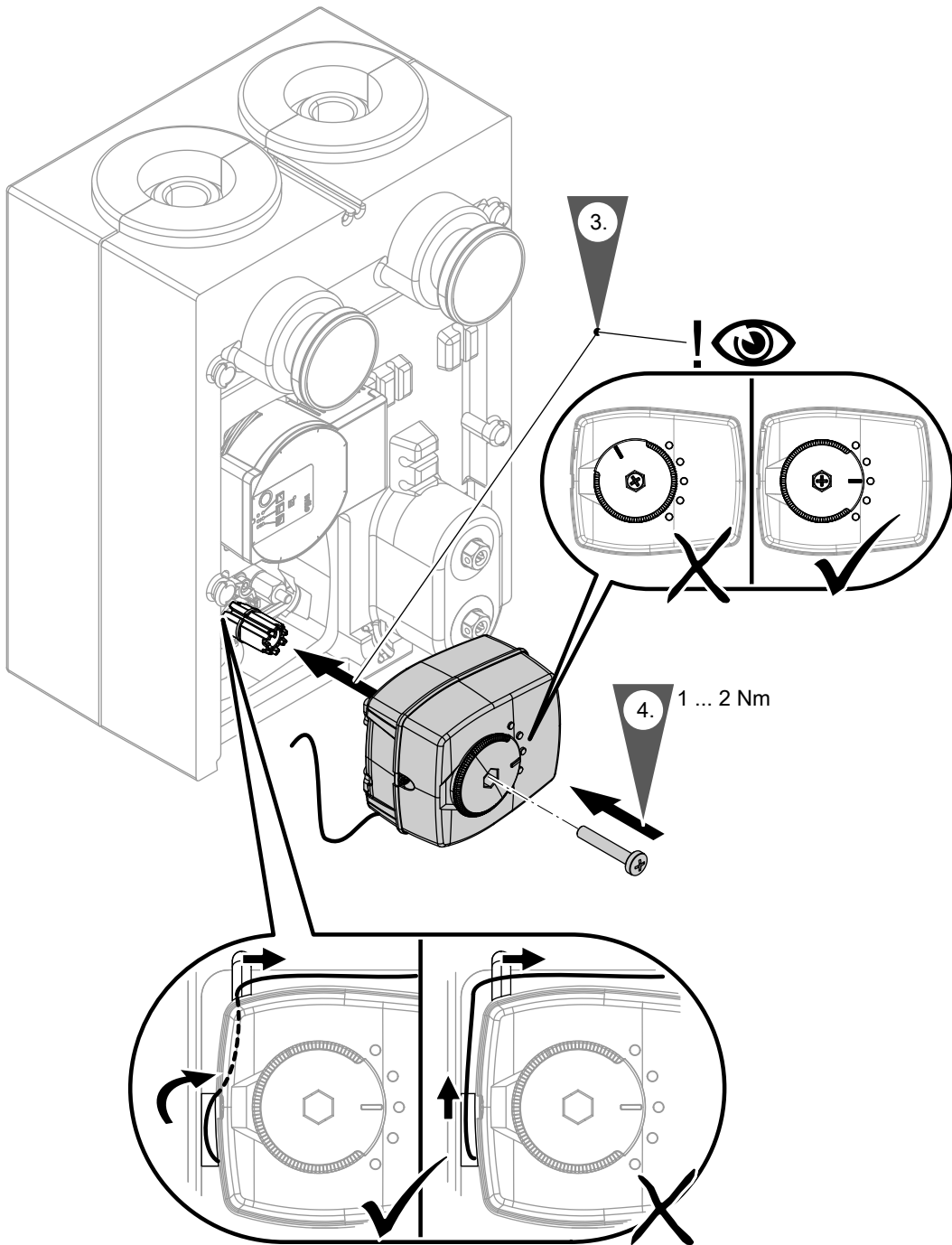


Fig. 29

Installing the mixer motor (cont.)

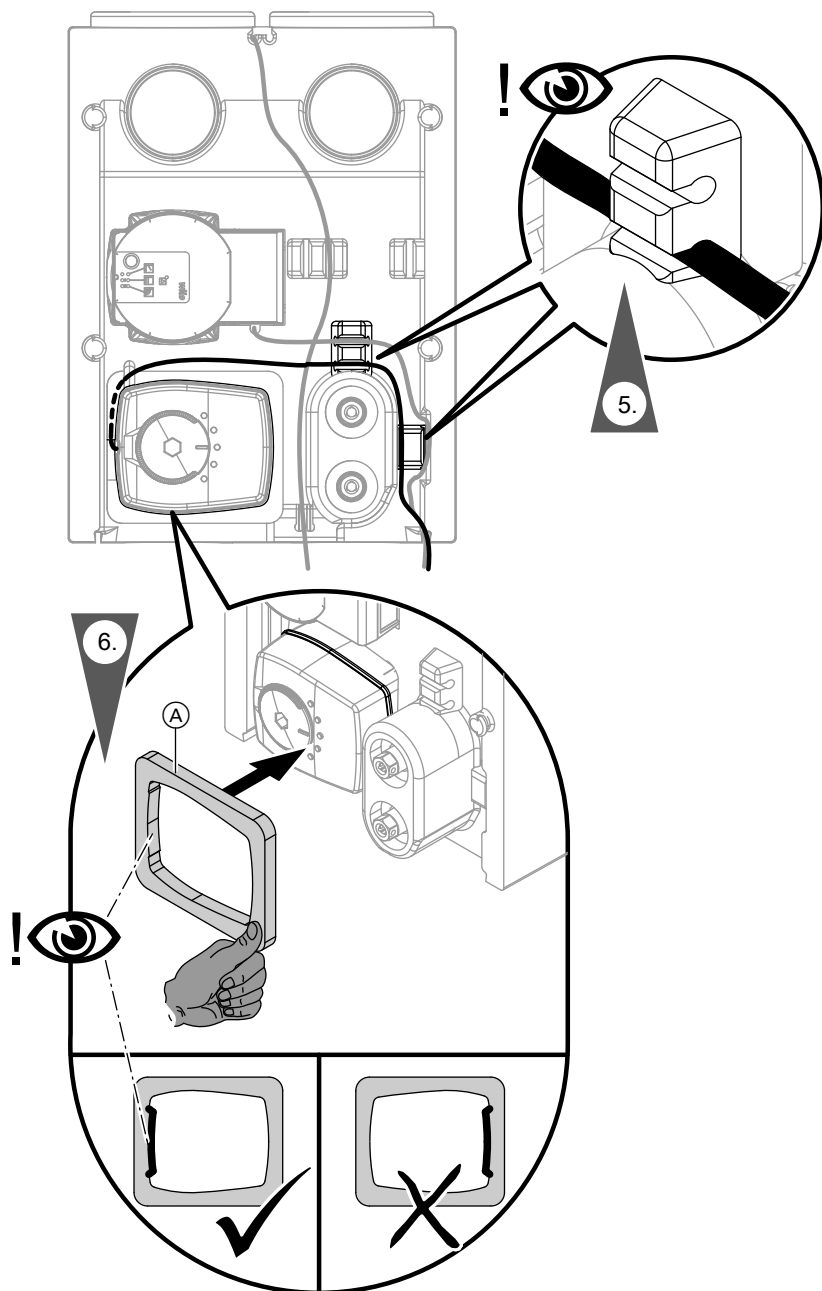


Fig. 30

- Ⓐ 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

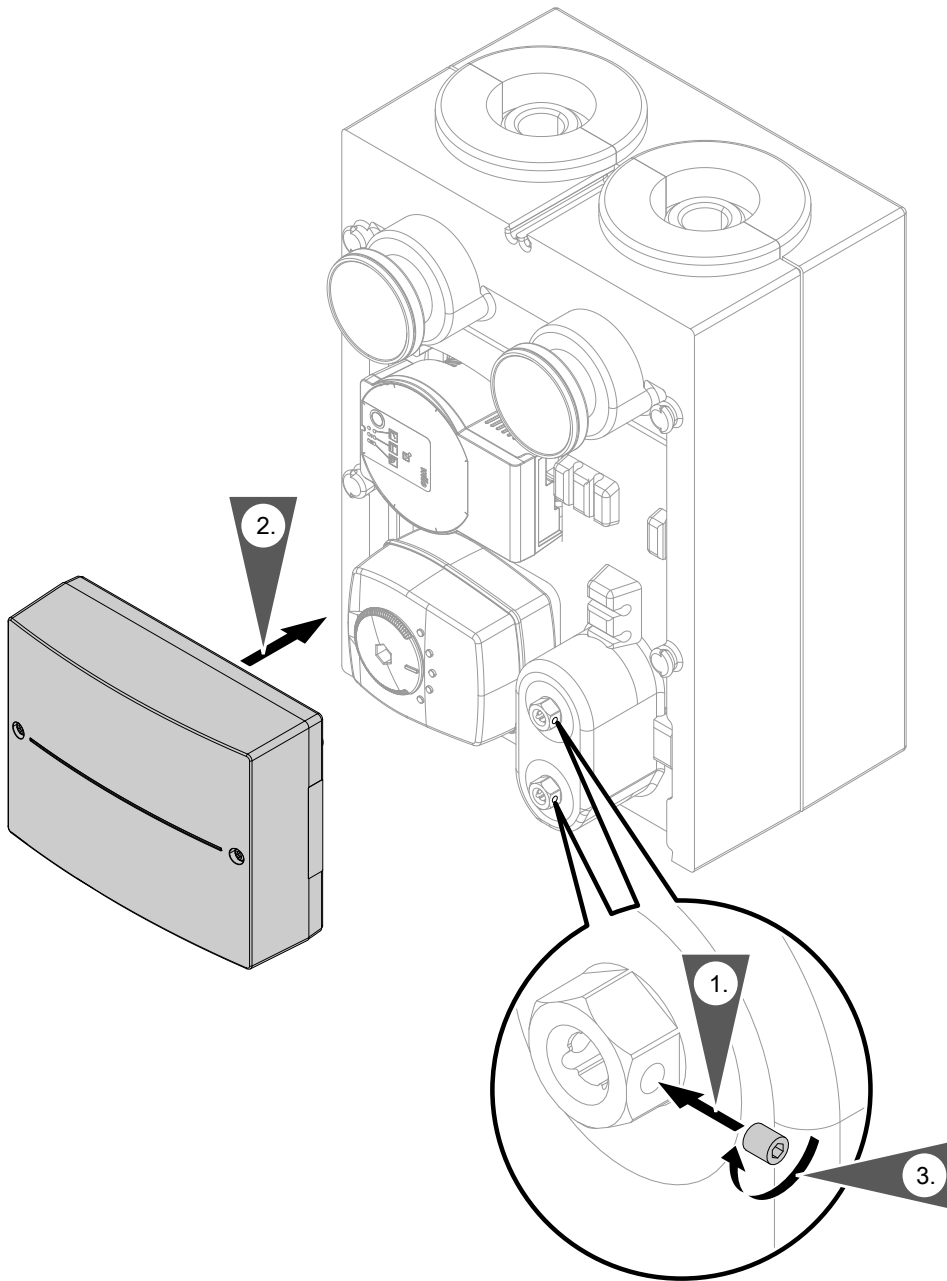


Fig. 31

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

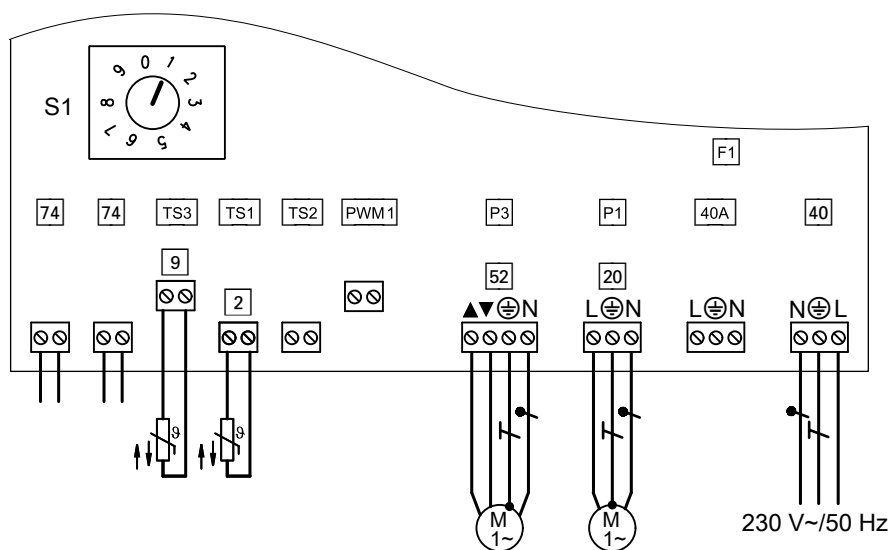


Fig. 32

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

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)

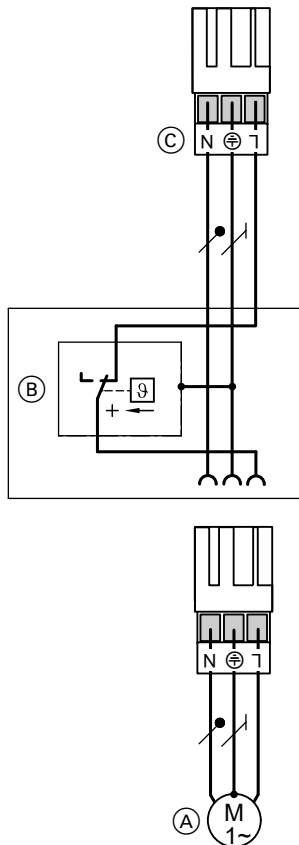


Fig. 33

- (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 mm²

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

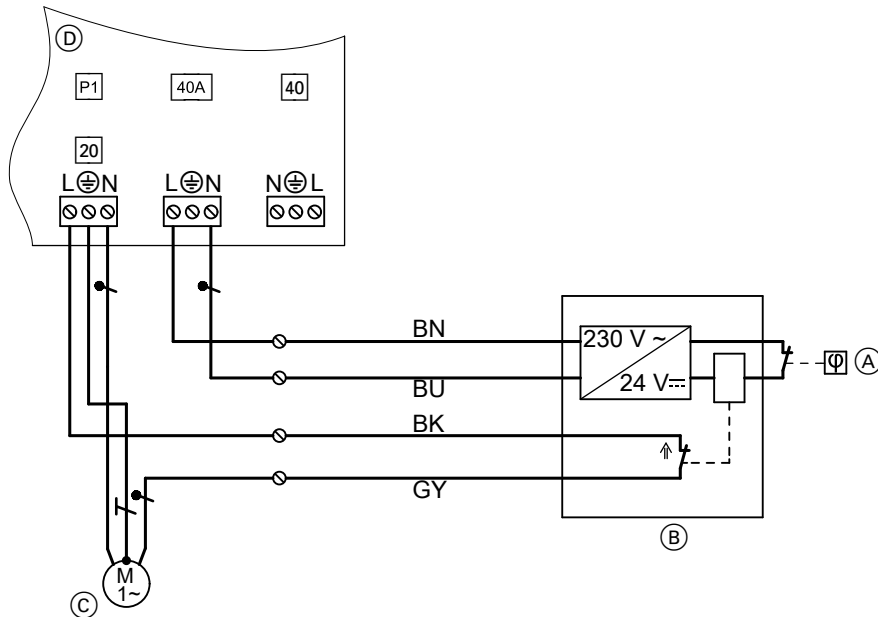


Fig. 34

- Ⓐ 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

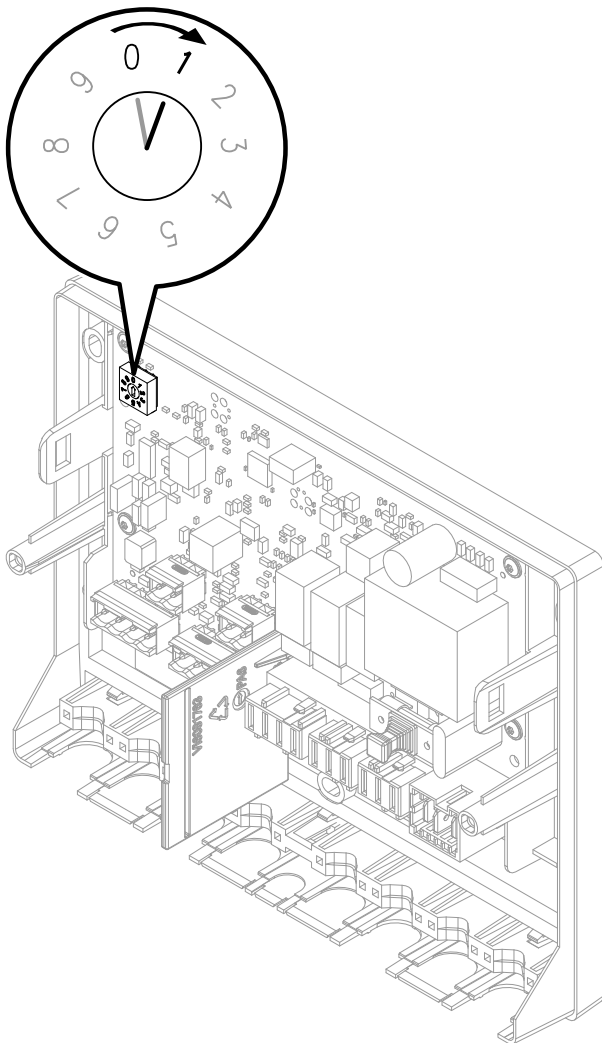


Fig. 35

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

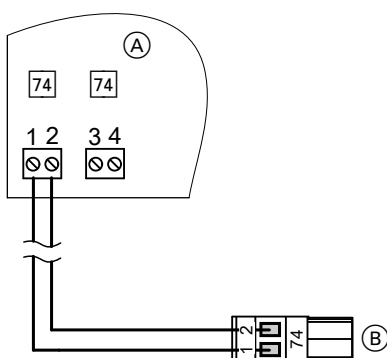


Fig. 36

- (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

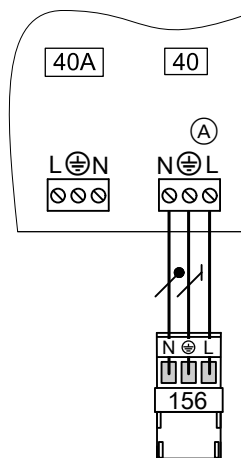




Fig. 37 Example: Power supply with plug 156


- Ⓐ 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.)

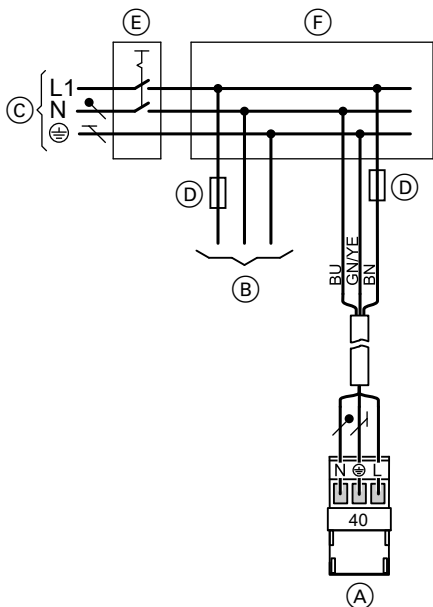


Fig. 38

- (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

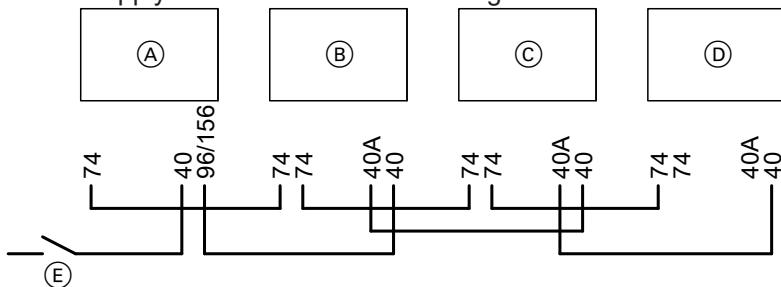


Fig. 39

Some accessories with direct power supply

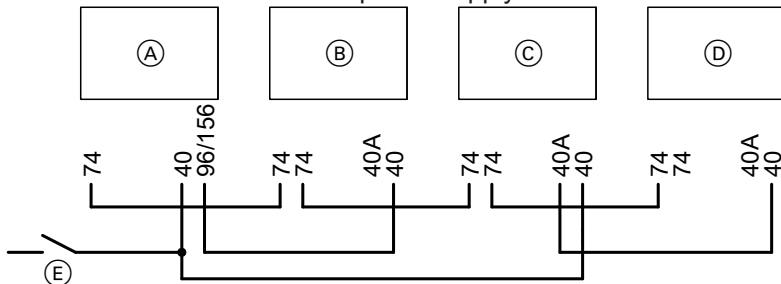


Fig. 40

- (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

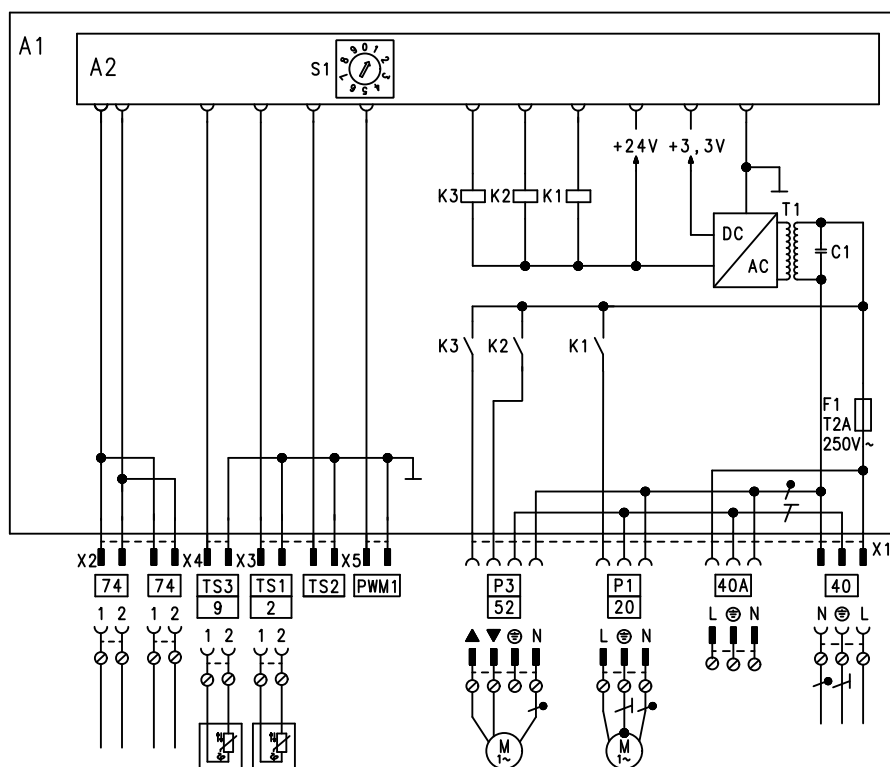


Fig. 41

- 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

- 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

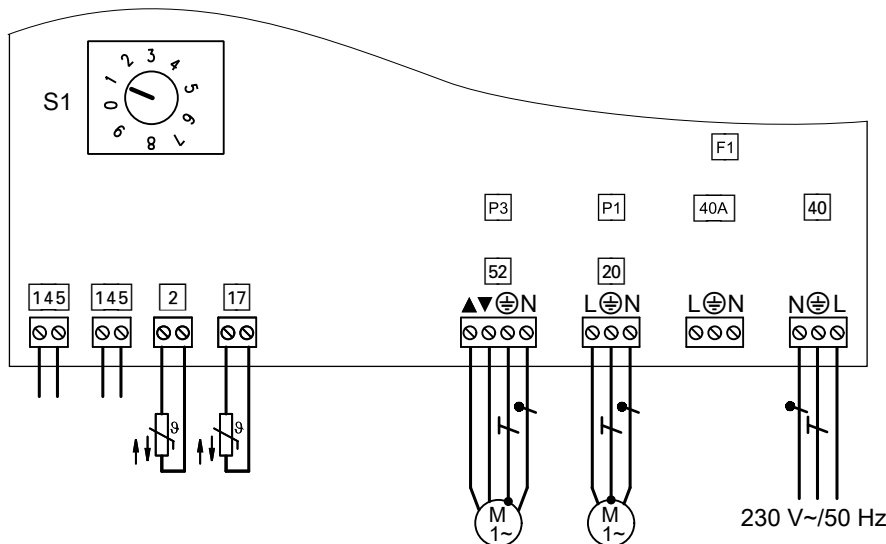


Fig. 42

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)

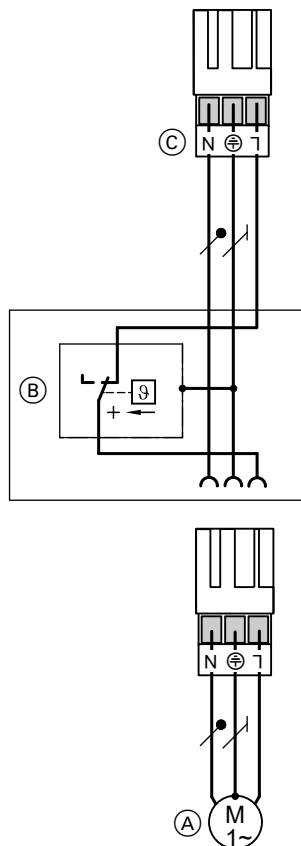


Fig. 43

- (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 mm²

Specification

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

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

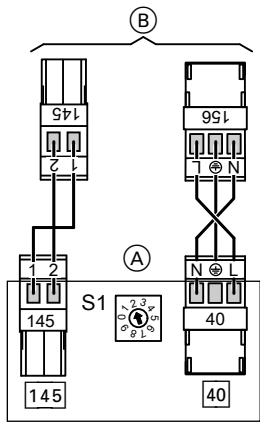


Fig. 44



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:

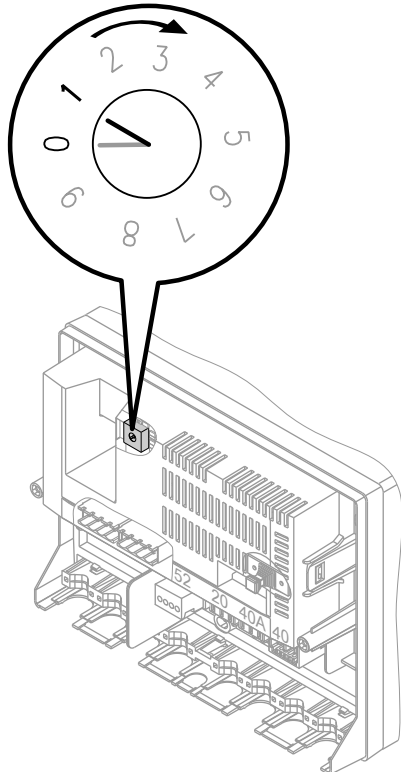


Fig. 45

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

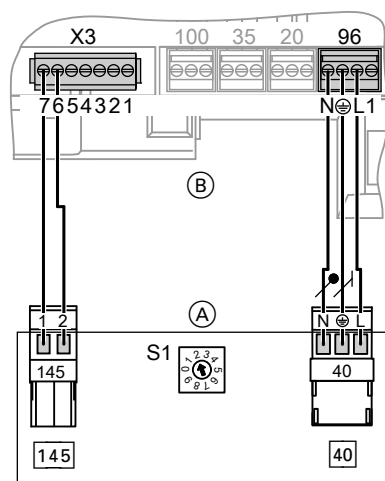


Fig. 46

- (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.)

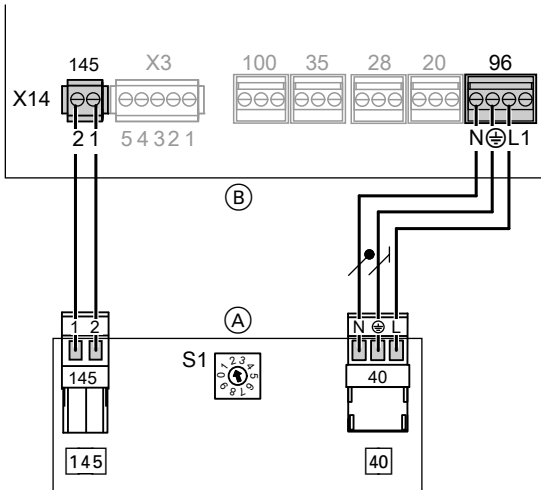


Fig. 47

- (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

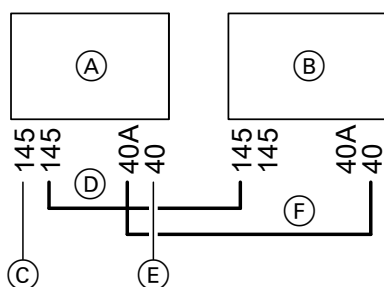


Fig. 48

- (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.

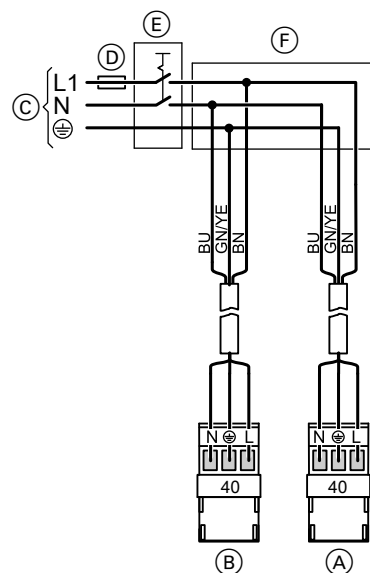



Fig. 49

- (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

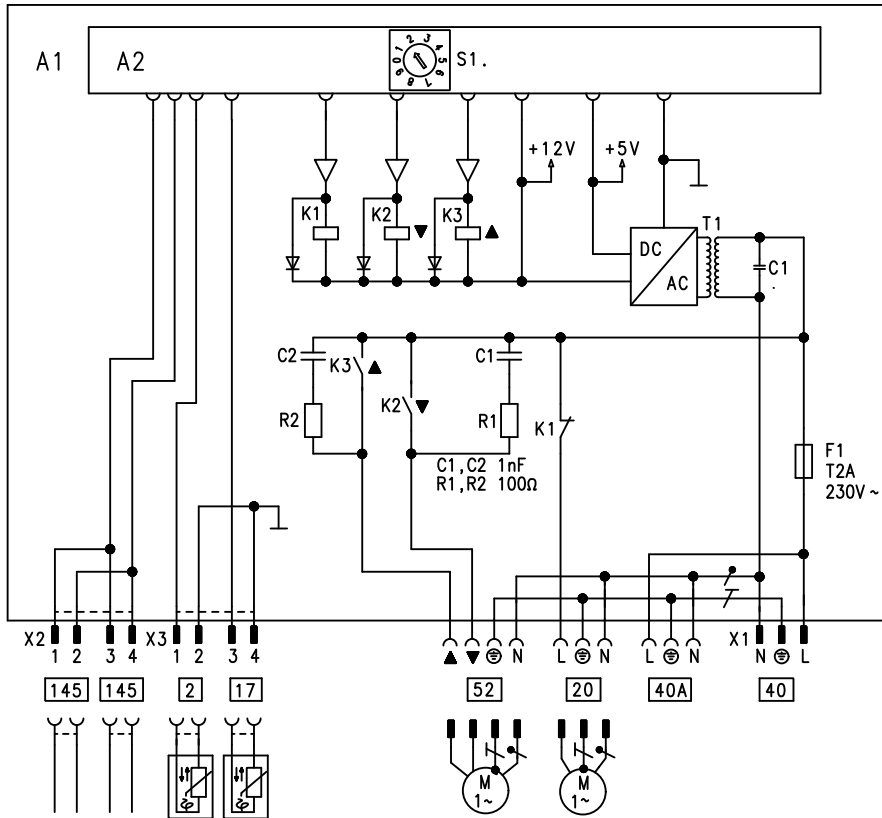


Fig. 50

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

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

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

Power supply 230 V~

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

Cable routing for mixer extension kit

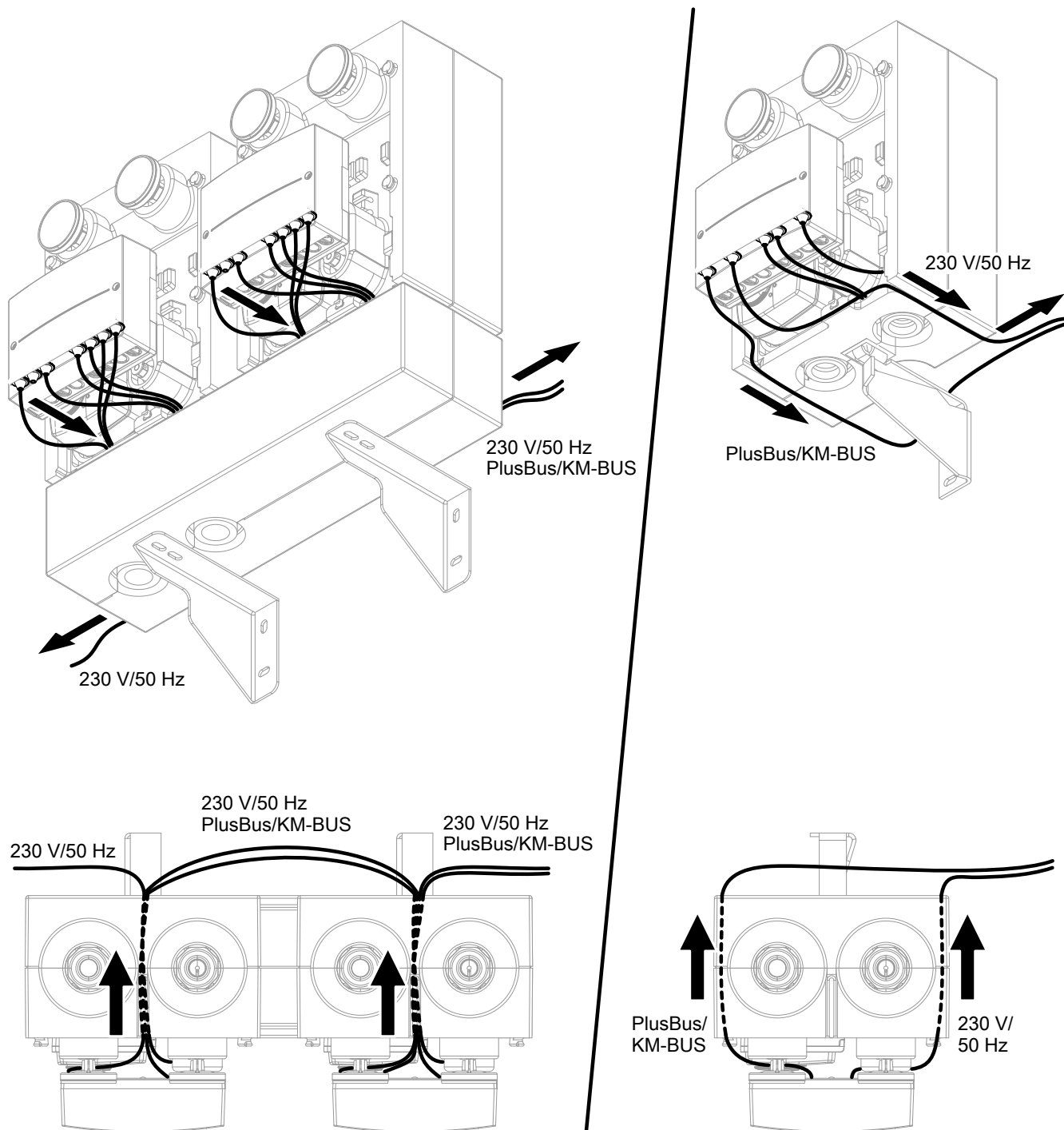


Fig. 51

Sealing the thermal insulation

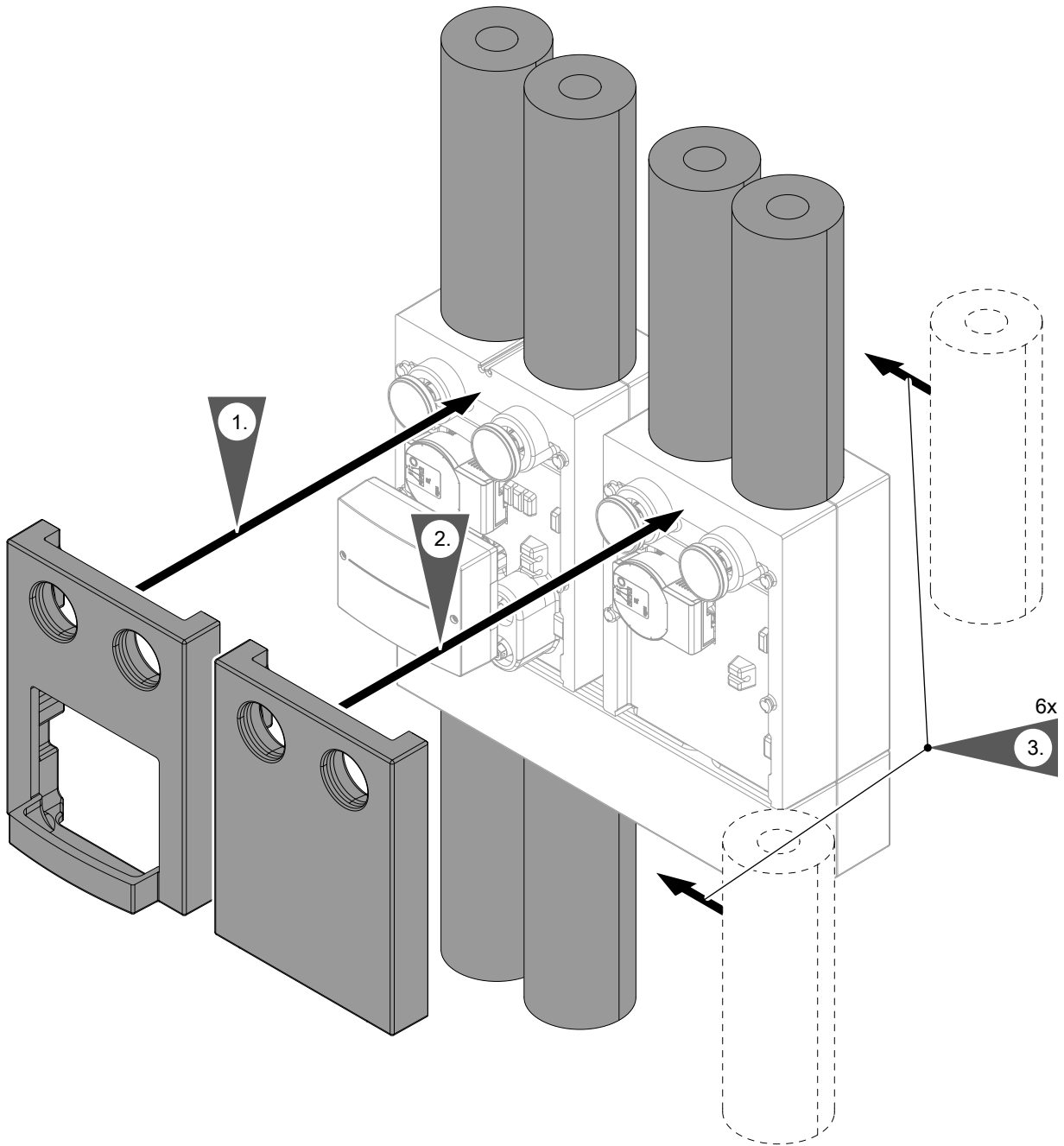


Fig. 52


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.

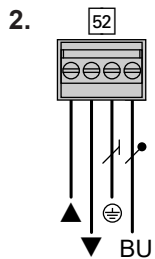


Fig. 53

Interchange cores BK ▲ and BK ▼ at plug 52.

Setting the mixer motor manually

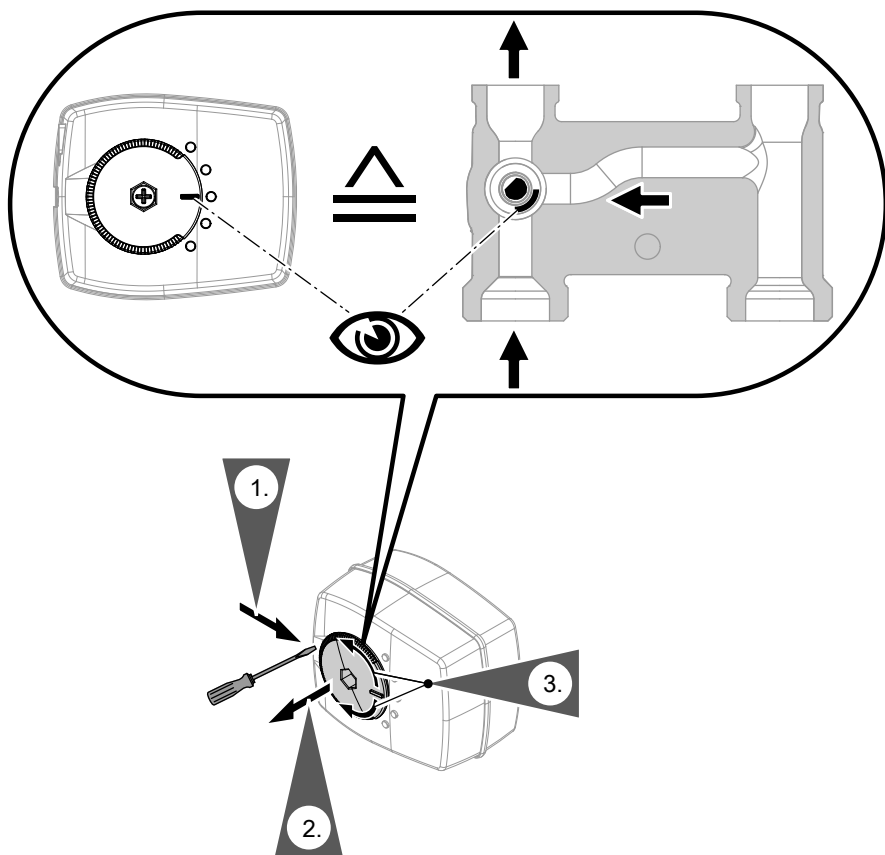


Fig. 54

Specification

Divicon heating/cooling circuit distributor with mixer and extension kit

Connection to heating circuit (nominal diameter)		DN 20	DN 25	DN 32
High efficiency circulation pump				
▪ 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		
Electrical values				
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.		
Mixer				
Mixer motor	Type	ESBE ARA561		
Mixer travel time (from end-stop to end-stop)	s	120		
Connections				
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		
Max. operating pressure		bar		
		3		
Max. operating temperature (at 40 °C ambient temperature)		°C		
		80		
Permissible ambient temperature				
▪ Operation	°C	0 to 40		
▪ Storage and transport	°C	-20 to +65		
K_v value		l/h		
		3.1 - 4.9	4.0 - 5.6	4.7 - 5.9
Non-return valve		mbar		
		20		
Dimensions				
Height x width x depth		mm		
		356 x 260 x 261		
Weight				
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
High efficiency circulation pump				
▪ Wilo	Type	PARA 25/6 UPM3S 25-60		PARA 25/8 UPM3K 25-70
▪ Grundfos	Type			
Energy efficiency index EEI				
▪ Wilo		≤ 0.2		
▪ Grundfos		≤ 0.2		
Electrical values				
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.		
Mixer				
Mixer motor	Type	ESBE ARA561		
Mixer travel time (from end-stop to end-stop)	s	120		
Connections				
Heating/cooling circuit connections		R ¾	R 1	R 1¼
▪ Indoor		Rp ¾	Rp 1	Rp 1¼
▪ Outdoor		G 1¼		G 2
Connections to the heat generator		G 1½		
Max. operating pressure	bar	3		
Max. operating temperature (at 40 °C ambient temperature)	°C	80		
Permissible ambient temperature				
▪ Operation	°C	0 to 40		
▪ Storage and transport	°C	-20 to +65		
K_V value	l/h	3.1 - 4.9	4.0 - 5.6	4.7 - 5.9
Non-return valve	mbar	20		
Dimensions				
Height x width x depth	mm	356 x 260 x 210		
Weight				
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
High efficiency circulation pump				
▪ 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		
Electrical values				
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.				
Connections				
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				
G 2				
Max. operating pressure	bar	3		
Max. operating temperature (at 40 °C ambient temperature)	°C	80		
Permissible ambient temperature				
▪ Operation	°C	0 to 40		
▪ Storage and transport	°C	-20 to +65		
K_v value	l/h	3.1 - 4.9	4.0 - 5.6	4.7 - 5.9
Non-return valve	mbar	20		
Dimensions				
Height x width x depth	mm	356 x 260 x 210		
Weight				
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 kΩ, 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

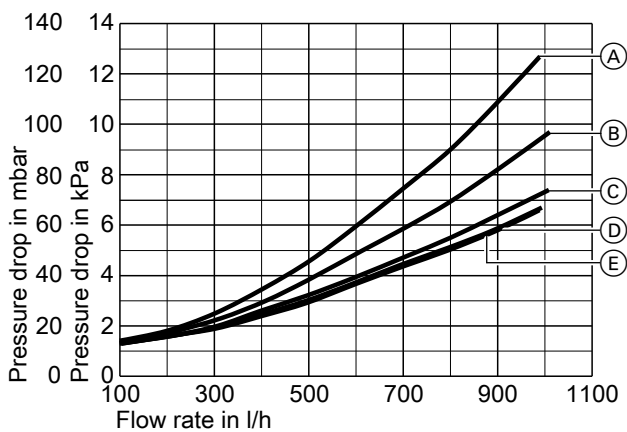


Fig. 55 With circulation pump Wilo PARA 25/6

- (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

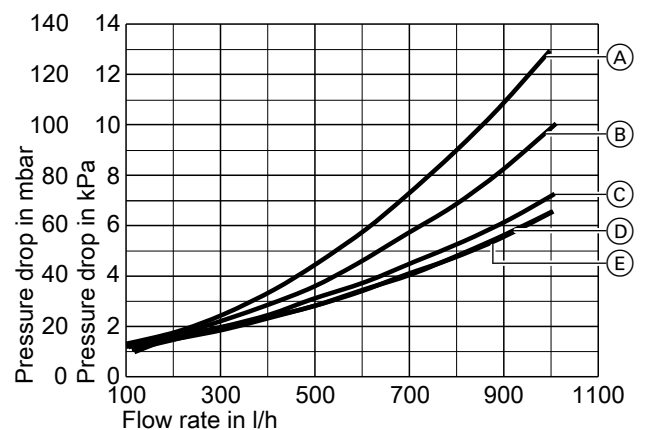


Fig. 56 With circulation pump Grundfos UPM3S 25-60

- (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

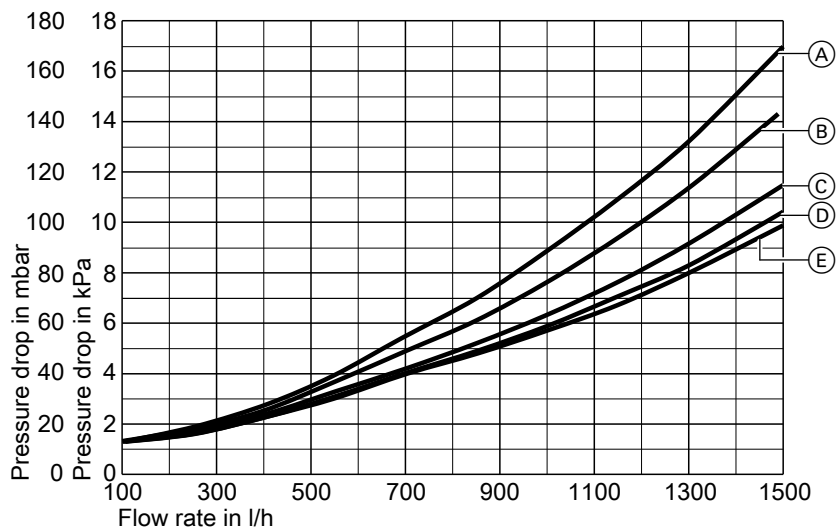


Fig. 57 With circulation pump Wilo PARA 25/6

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

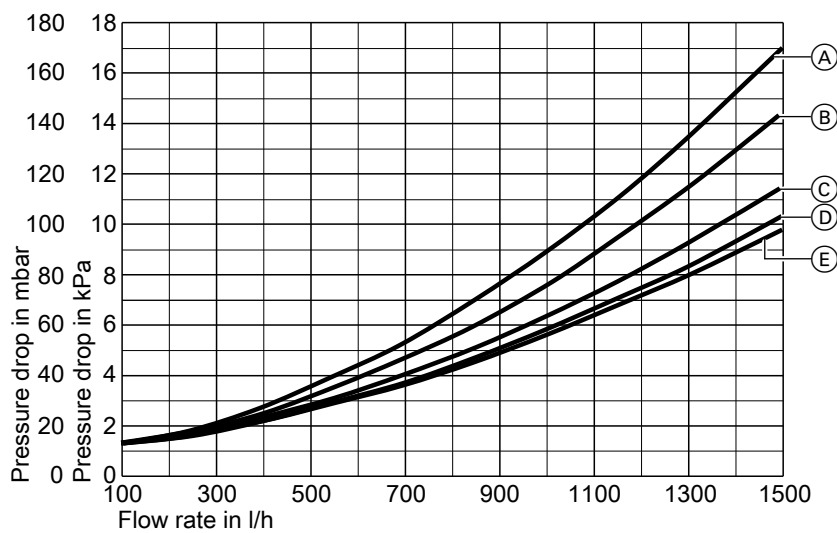


Fig. 58 With circulation pump Grundfos UPM3S 25-60

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

Divicon with mixer DN 32

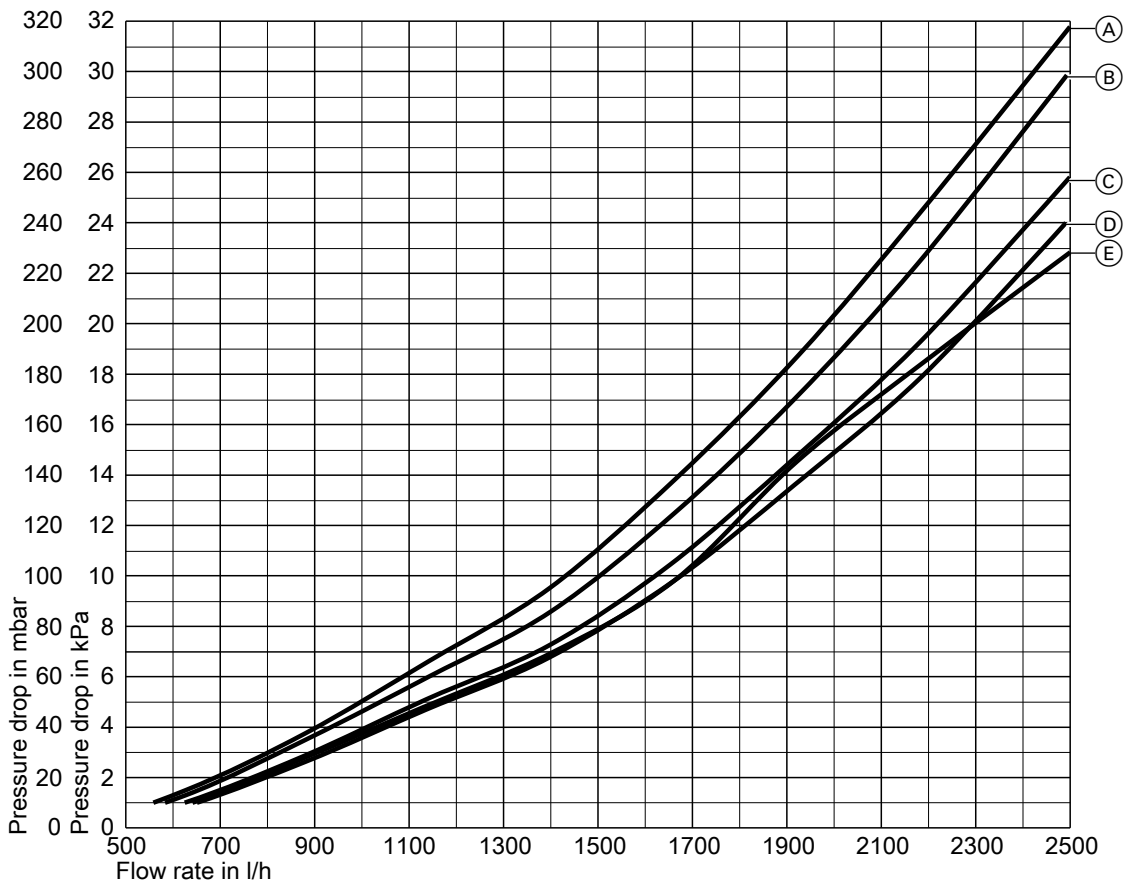


Fig. 59 With circulation pump Wilo PARA 25/8

- (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.)

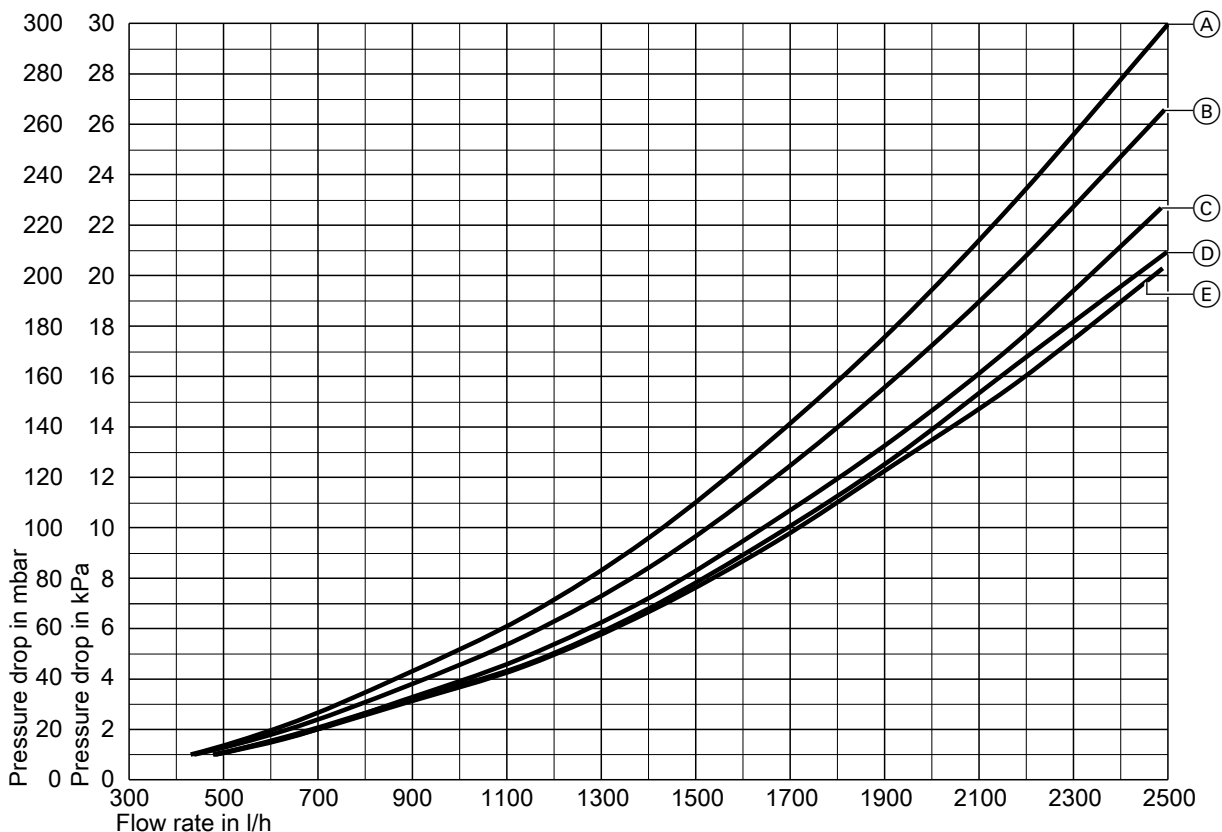


Fig. 60 With circulation pump Grundfos UPM3K 25-70

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

Residual heads

Note

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

Divicon with mixer DN 20

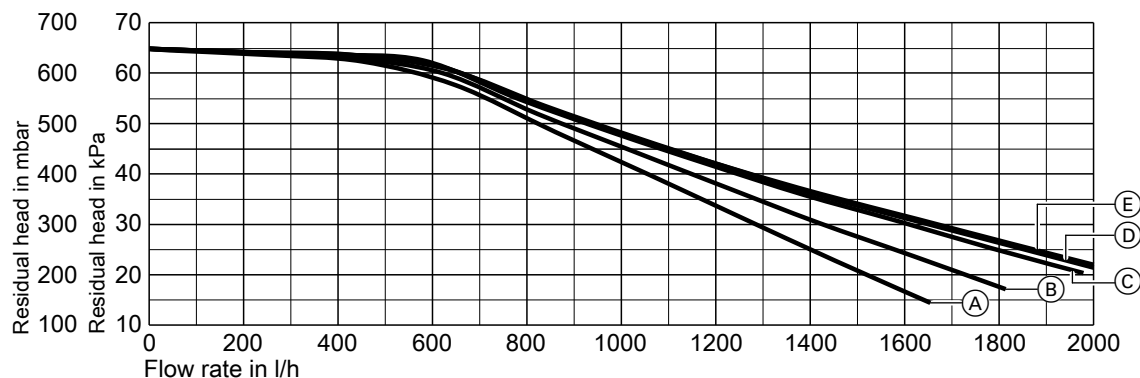


Fig. 61 With circulation pump Wilo PARA 25/6

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

Specification (cont.)

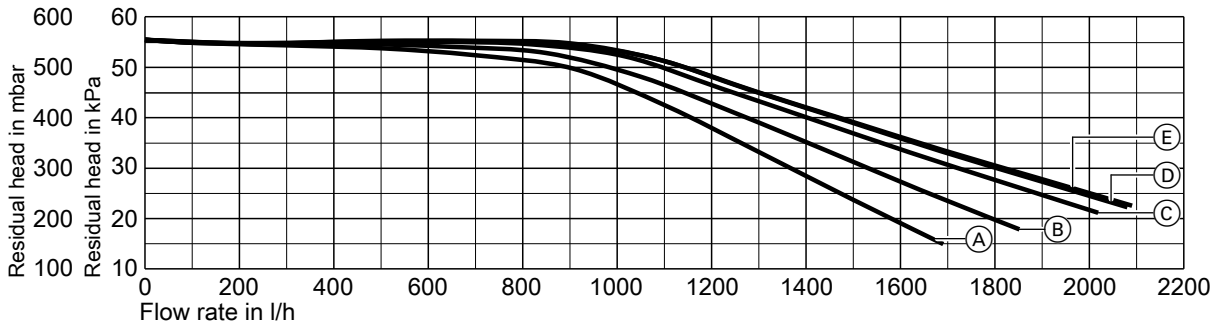


Fig. 62 With circulation pump Grundfos UPM3S 25-60

- (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

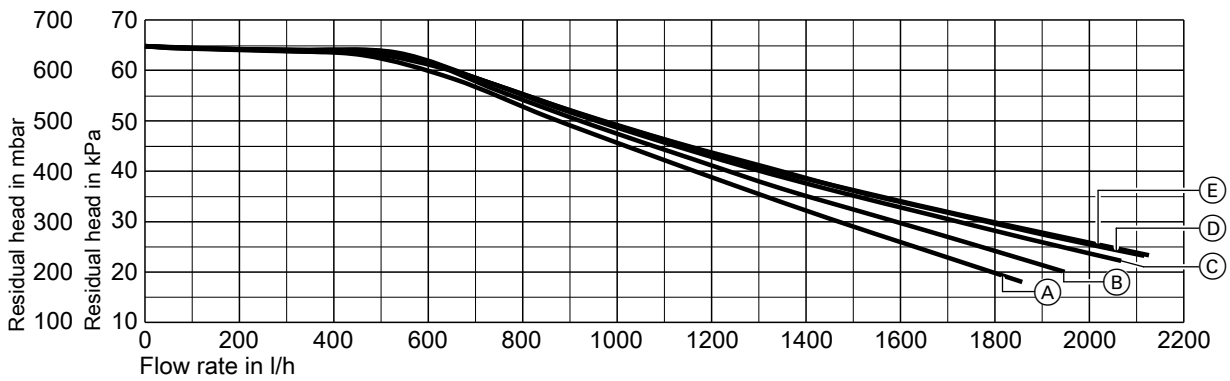


Fig. 63 With circulation pump Wilo PARA 25/6

- (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

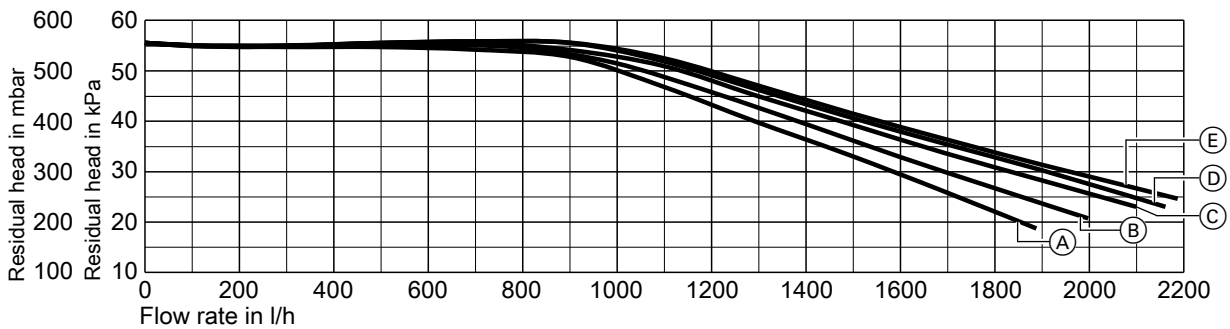


Fig. 64 With circulation pump Grundfos UPM3S 25-60

- (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

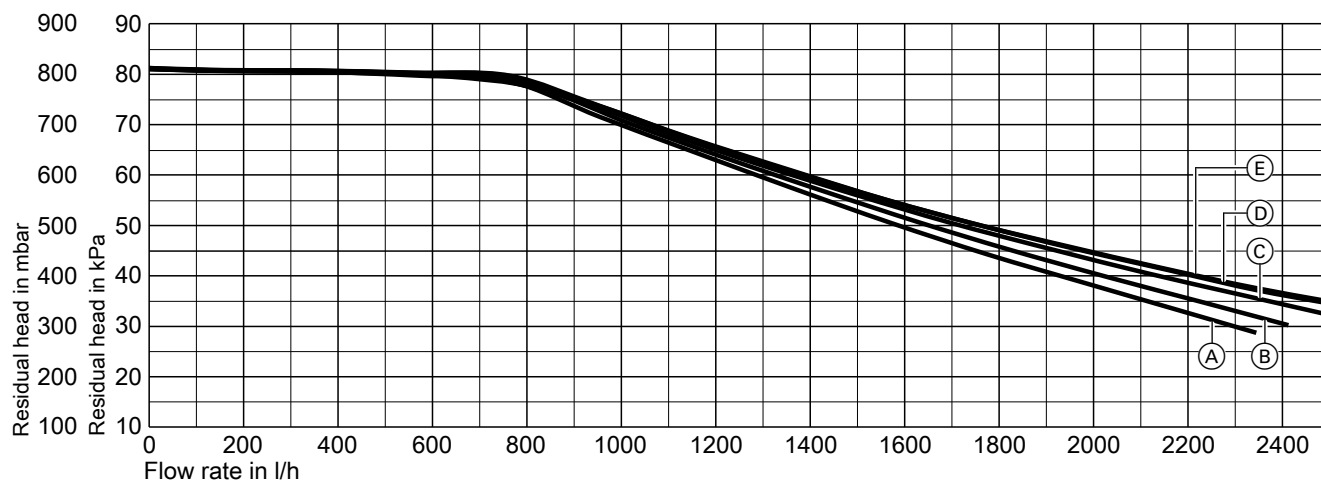


Fig. 65 With circulation pump Wilo PARA 25/8

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

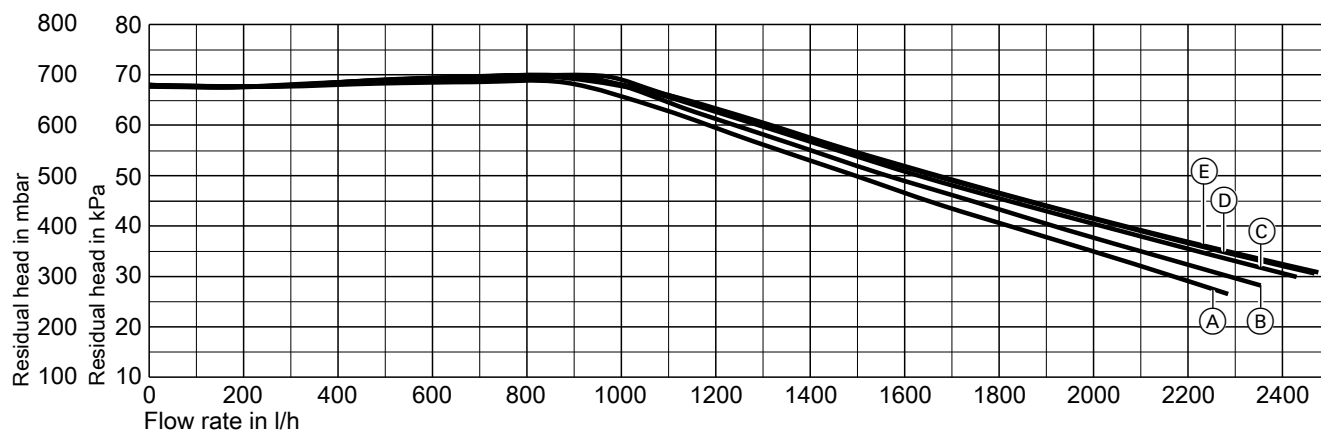


Fig. 66 With circulation pump Grundfos UPM3K 25-70

- Ⓐ 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

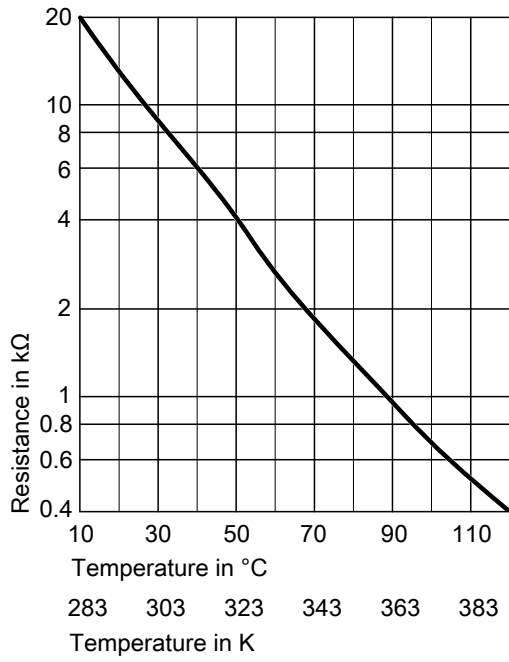


Fig. 67

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

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