



WATER TECHNOLOGY

# Avensys

## Concealed Single Lever Mixer



33 398

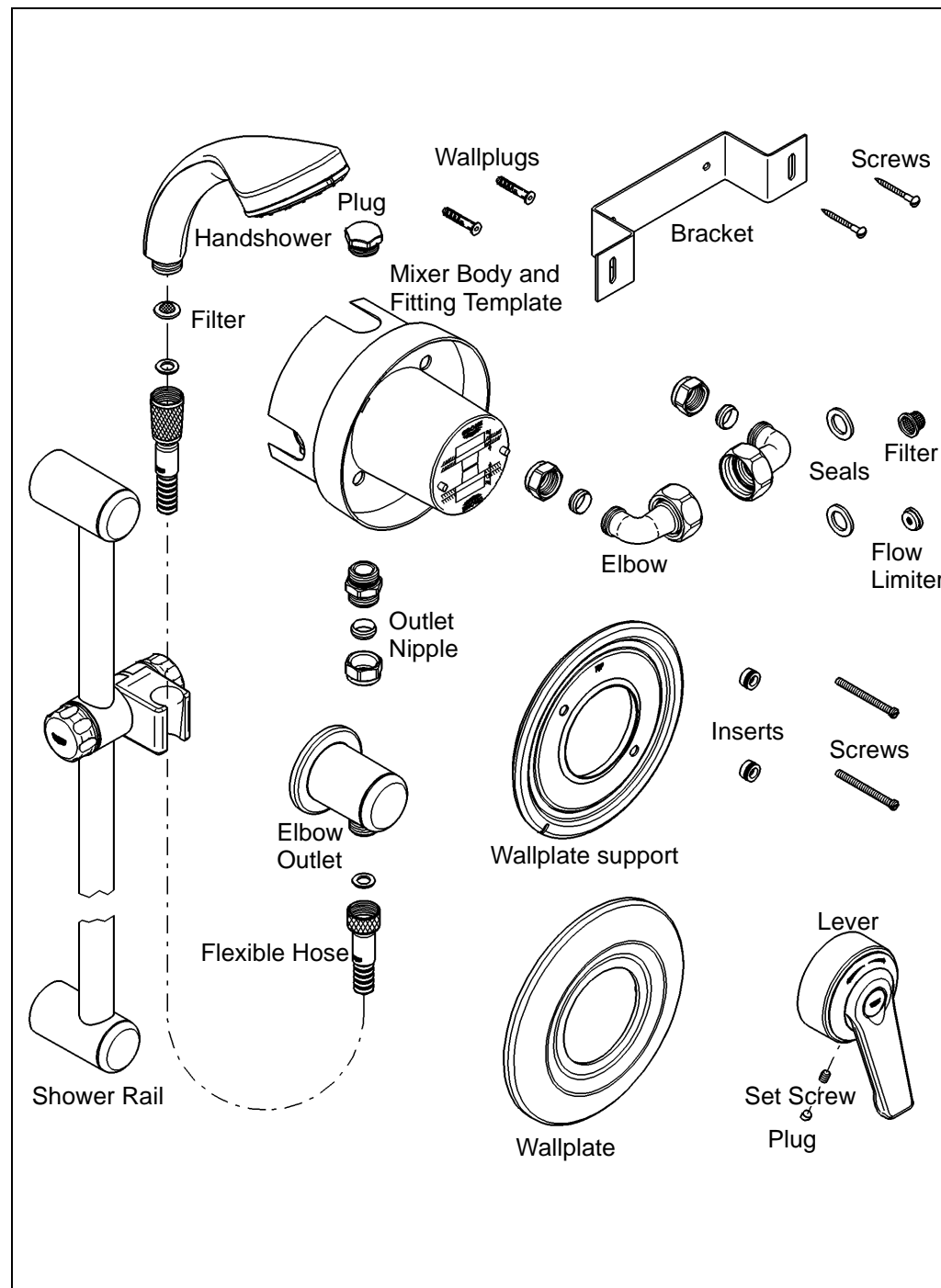


33 399

### Installation Instructions and Operating Guide

Please leave this document with the user after finishing installation!

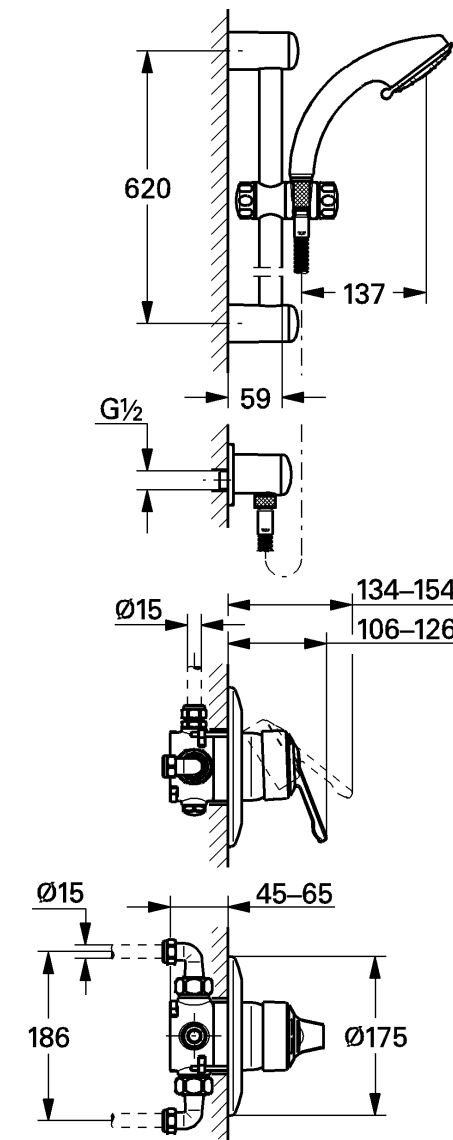
Table Of Contents



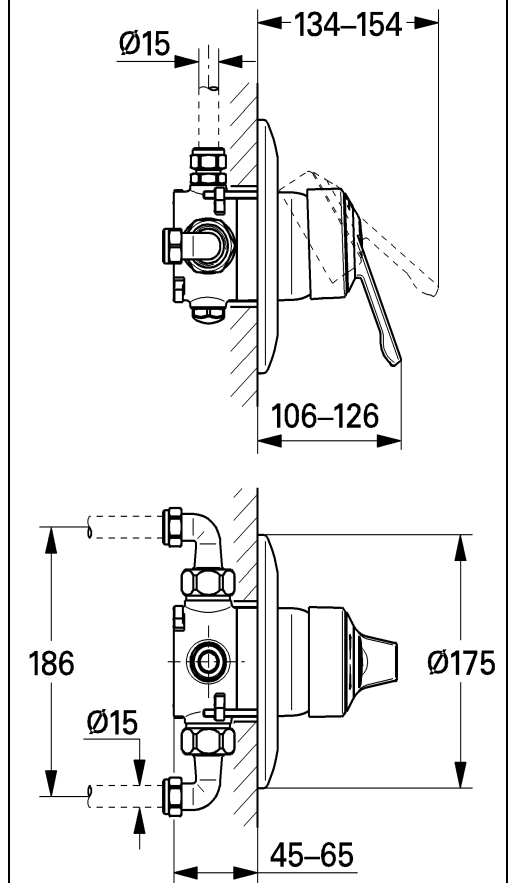
1

Installation Dimensions (mm)

33 398

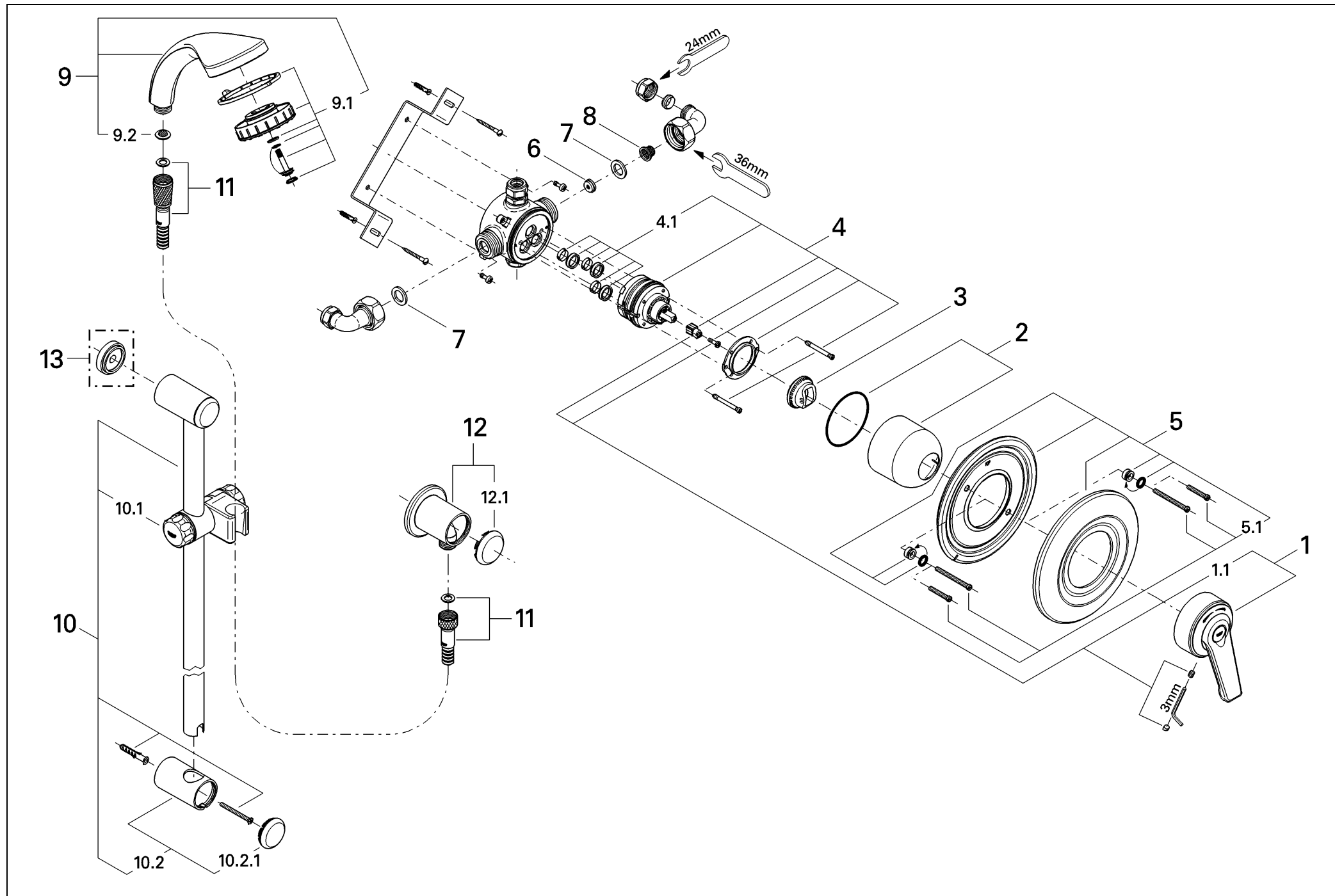


33 399



2

Spare Parts



3

4

## Index

<b>Table Of Contents</b> .....	1
<b>Installation Dimensions</b> .....	2
<b>Spare Parts Drawing</b> .....	3 + 4
<b>Spare Parts List</b> .....	5
<b>Technical Data</b> .....	6
<b>Installation</b> .....	7
Rough Installation .....	7
Preassemble Mixer .....	8
Connect Mixer .....	9
Maximum Hot Water Limit Setting . . .	10
Wallplate Installation .....	11
<b>Maintenance</b> .....	12
<b>Care</b> .....	13
<b>Trouble Shooting</b> .....	13
<b>Guarantee</b> .....	15

### Dear Customer,

Thank you for choosing a GROHE product. Please follow these instructions carefully and you will enjoy many years of reliable service from this fitting.

## Spare Parts

No.	Description	Cat.-No.	Pack- ing unit	No.	Description	Cat.-No.	Pack- ing unit
1	Lever	46 349	1	10	Shower rail	28 666	1
1.1	Fixing set	46 372	1	10.1	Sliding shower holder	07 659	1
2	Cap	46 363	1	10.2	Shower rail holder	45 362	1
3	Temperature limiter	46 308	1	10.2.1	Cover cap	45 363	1
4	Ceramic cartridge	46 386	1	11	Flexible hose	28 161	1
4.1	Seal kit	46 387	1	12	Elbow outlet	28 671	1
5	Wallplate complete	46 455	1	12.1	Cover cap	45 364	1
5.1	Screw	09 361	2				
6	Flow limiter set	46 428	1		<b>Optional accessory</b>		
7	Seal	01 386	10	13	Compensation ring	45 406	1
8	Filter	06 995	2				
9	Hand shower	28 216	1				
9.1	Shower spray plate	45 794	1				
9.2	Filter	07 002	2				

## Technical Data

### Functioning Principle

This **Avensys** mixing valve is a single lever mixer with ceramic cartridge. Lifting the lever opens water flow. Turning to the left increases temperature and to the right decreases temperature. Shutting off the single lever mixer is possible in any temperature position.

Hot water limitation is possible by installing the attached temperature limiter.

This product is supplied with connectors to fit  $\varnothing$  15mm pipework. Connection should be hot left, cold right as viewed from the operating position.

### Plumbing Systems

This single lever mixer is suitable for installation with:

- Gravity-fed plumbing systems with an open vented hot water cylinder
- Cold water storage cistern
- Mains pressure unvented and instantaneous thermal hot water storage systems
- Multi-point gas water heaters
- Combination boilers with a modulating hot water output

To maintain sufficient hot water output ensure the combination boiler temperature setting is on **high**.

### Supply Pipework

Ensure the supply pipework is thoroughly flushed before installing the mixing valve. GROHE recommends installing isolating valves upstream of the mixing valve for servicing purposes.

### New Water Regulations

This GROHE-product should be installed to comply with the New Water Regulations covering backflow prevention. It must also be installed in accordance with local bye-law requirements.

### Specification

- Concealed single lever shower mixer
- Flow pressure
  - Low pressure 0.1 - 1 bar
  - High pressure 1 - 5 bar
  - Greater than 5 bar, fit pressure reducing valve
- Avoid major pressure differences between hot and cold water supply
  - If the pressure difference between hot and cold water supply is higher than 1 bar install attached green flow limiter (7 l/min) in the cold water connection elbow

- Max. operating pressure 10 bar
- Max. test pressure 16 bar

- Mixed water flow rate:

Pressure	0.1	0.2	0.3	0.4	0.5	0.6	bar
Flow rate	10.2	14.4	17.7	20.4	22.8	25	l/min

- Temperature
  - Max. (hot water inlet) 80 °C
  - Recommended (for economy) 60 °C
  - Max. outlet temperature can be pre-set using the adjustable temperature limiter.
- Water connection
  - Hot water: red marking = left
  - Cold water: blue marking = right
- Non reversible cartridge

## Installation

### Rough Installation

The single lever shower mixer can be installed in two different ways. The mixing outlet can be at the bottom for use with a handshower or at the top for use with a headshower.

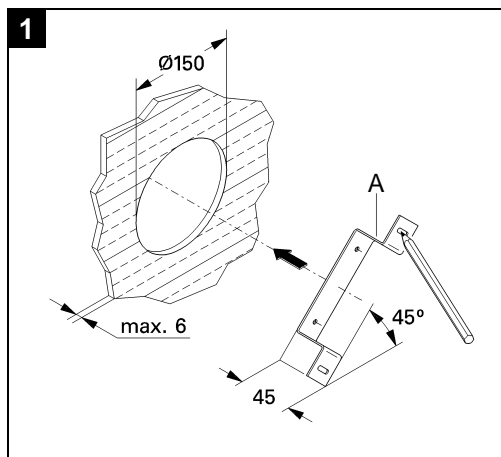
The concealed single lever shower mixer is supplied with a bracket.

- With bracket mounted from the front the mixer can be used for installation into solid and dry-lined walls.
- With bracket mounted from behind the wall the mixer can be used for installation into the front face of a stud partition wall structure or the rear face of a shower cubicle or laminated panel.

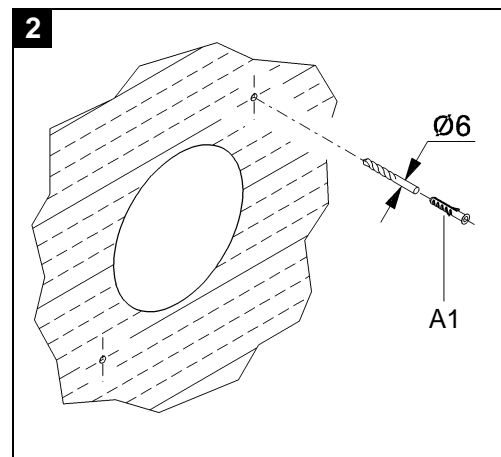
### Solid and dry-lined walls

Determine the route for the incoming hot and cold water supply and for the outlet pipe-work in accordance with the single lever shower mixer.

1. Mark a 150mm diameter hole for the mixer and mark the fixing hole positions for the bracket (A), see Fig. [1].



2. Drill 6mm diameter holes and insert the supplied wallplugs (A1), see Fig. [2].

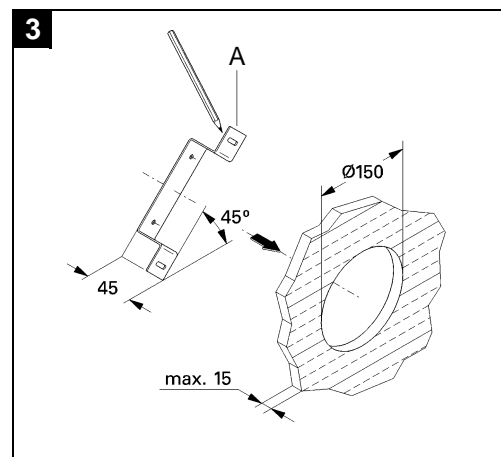


3. Remove the plaster and brick or block.

### Laminated panel walls

Determine the route for the incoming hot and cold water supply and for the outlet pipe-work in accordance with the single lever shower mixer.

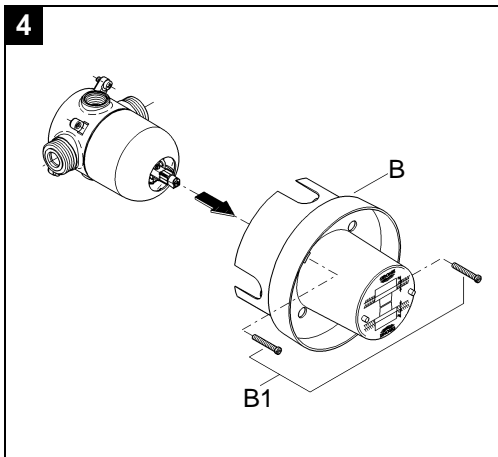
- Mark a 150mm diameter hole for the mixer and mark the fixing hole positions for the bracket (A), see Fig. [3].



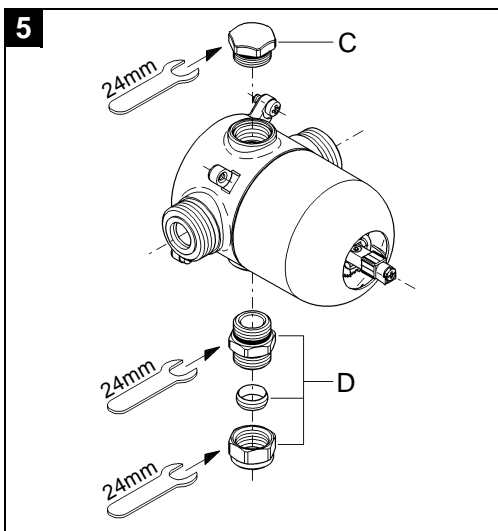
## Installation

### Preassemble Mixer

1. Remove the two screws (B1) from the fitting template (B), then remove the template, see Fig. [4].

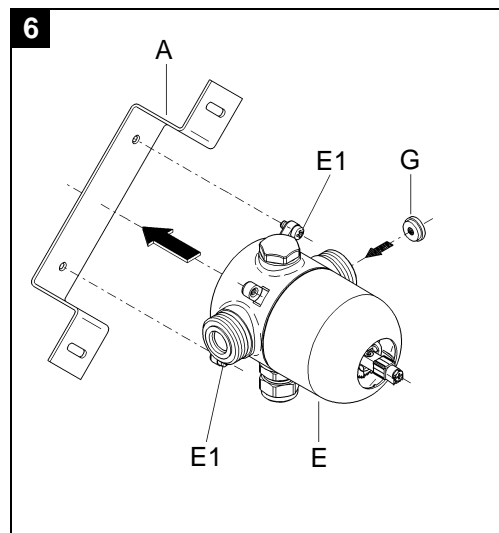


2. Close free outlet with plug (C), see Fig. [5].



3. Thread the outlet nipple (D) with the O-ring seal into the mixer body outlet.

4. Screw mixer body (F) to bracket (A) with screws (E1), see Fig. [6].

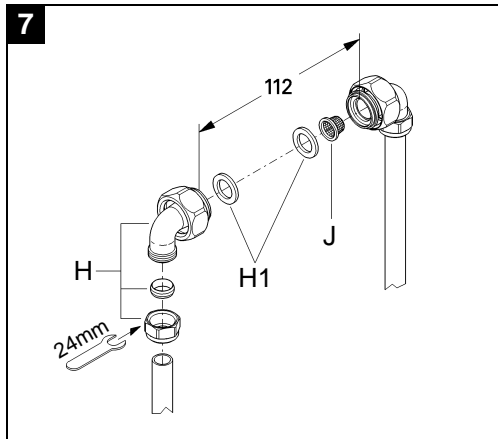


5. If the pressure difference between hot and cold water supply is higher than 1 bar install attached green flow limiter (G) (7 l/min) in the cold water inlet.

## Installation

### Connect Mixer

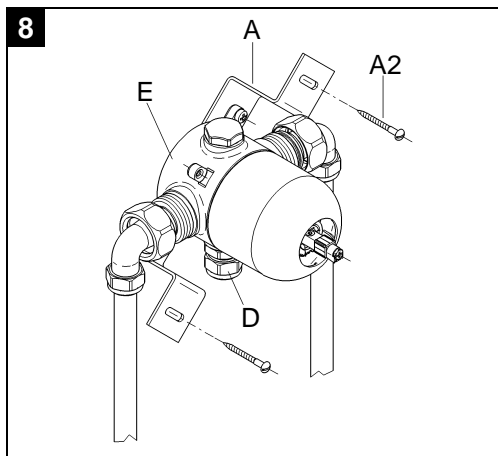
1. Connect elbows (H) onto the supply pipes, see Fig. [7].



2. Use filter (J) for the cold water elbow if flow limiter is assembled.

3. Install seals (H1) into the elbows (H).

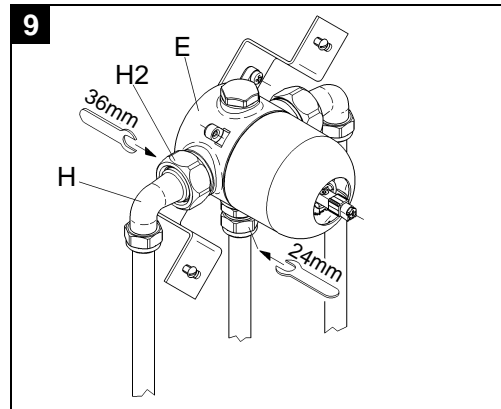
4. Fix bracket (A) and mixer (E) with screws (A2) between the elbows to the wall, see Fig. [8].



5. Connect mixed water supply to the outlet nipple (D).

The hot water supply must be connected on the left and the cold water supply on the right.

6. Connect elbows (H) to mixer body (E) and tighten nuts (H2) [torque min. 20 Nm], see Fig. [9].

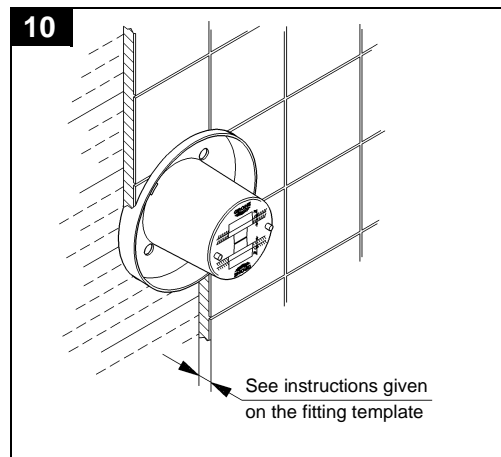


### Open hot and cold water supply.

Check the pipework and connections to the single lever mixer for leaks.

7. Reinstall fitting template for finishing wall surface as described in Fig. [4] in reversed direction.

8. Observe the installation depth in accordance with the instructions given on the fitting template, see Fig. [10].



### Plaster and tile the wall.

Do not remove fitting template before installation is completed.



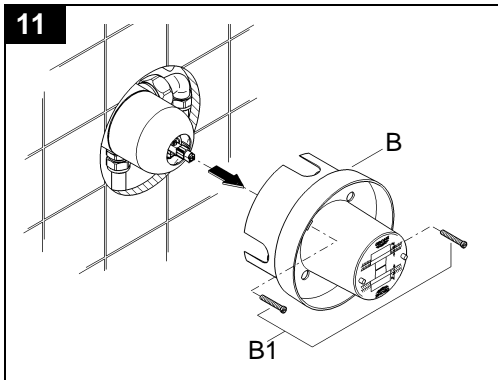
## Installation

### Maximum Hot Water Limit Setting

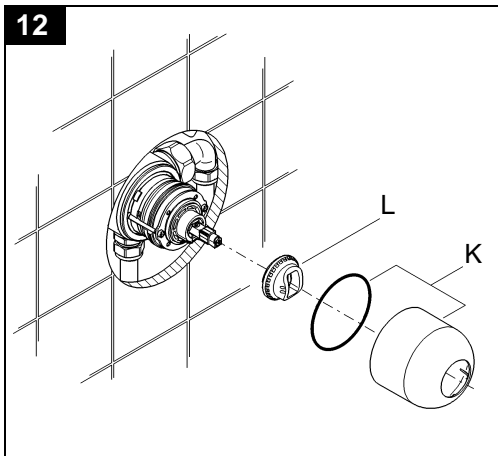
On delivery, the adjustable temperature limiter (fitted as standard) is inoperative.

On applications requiring limiting the mixer opening from full hot position, the adjustable temperature limiter must be reset as described below.

1. Remove the two screws (B1) from the fitting template (B), then remove the template, see Fig. [11].

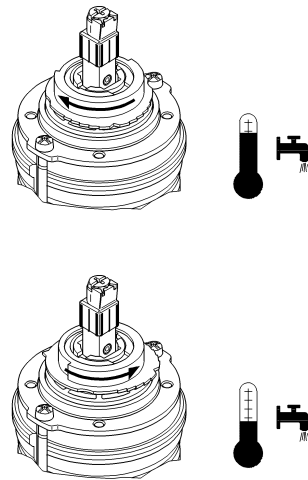


2. Unscrew cap (K), see Fig. [12].



3. Remove temperature limiter (L) and, depending on the maximum water temperature required, turn clockwise (to increase temperature) or anticlockwise (to reduce temperature) and refit, see Figs. [12] and [13].

13



4. Screw on cap (K), see Fig. [12] again.
5. For installation wallplate, see chapter "Wallplate Installation" on page 11.

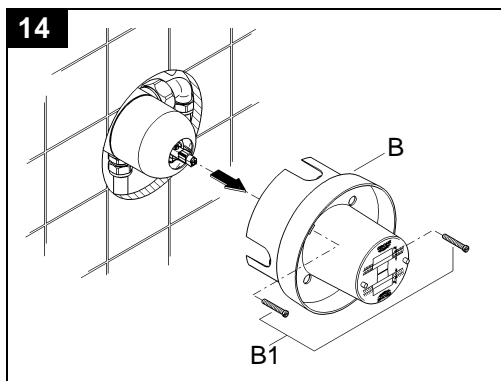
#### Note:

A maximum temperature setting accurate to the degree is not possible since differences in hot and cold water flow temperatures, pressure differences and installation conditions all affect the temperature of mixed water delivered at the outlet.

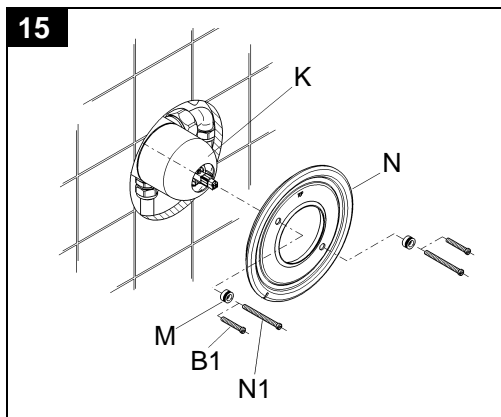
## Installation

### Wallplate Installation

1. Remove the two screws (B1) from the fitting template (B), then remove the template, see Fig. [14].



2. Place inserts (M) in the wallplate support (N), see Fig. [15].



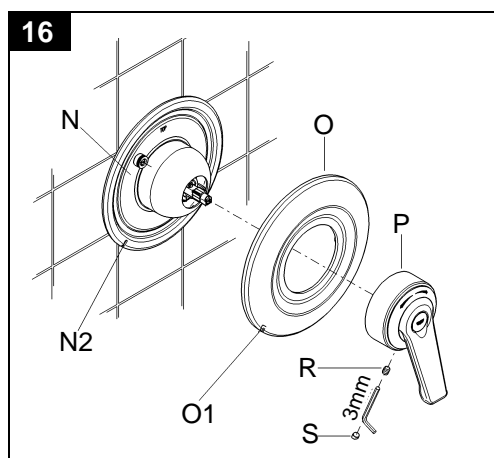
3. Slide the wallplate support (N) over the cap (K) in position **TOP**.

Additionally seal the top edge of the wallplate support with silicone if it is fitted against a particularly rough surface (deep tile joints, highly textured tile).

4. Tighten wallplate support (N) with two of the four screws [(B1) = template screws or (N1)] into the mixer body. These screws allow for variation in wall thickness when mounting the wallplate.

Check correct position of the seal in the wallplate support.

5. Snap wallplate (O) into the wallplate support (N), see Fig. [16].



To ensure that the wallplate is correctly seated, lug (O1) must engage in the recess (N2) on the wallplate support.

6. Fit lever (P), secure by tightening the loosely fitted set screw (R) with 3mm socket spanner and insert plug (S).

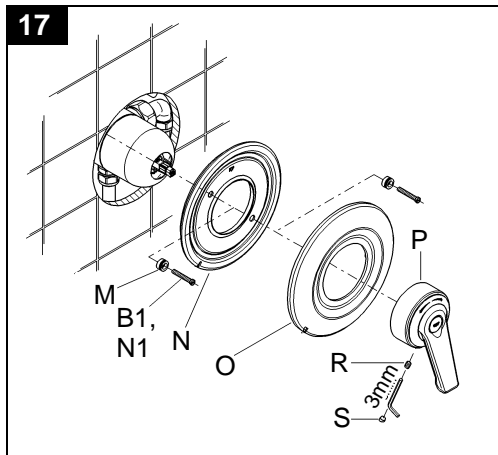
Please refer to chapter "**Maximum Hot Water Limit Setting**" on page 10 for limiting maximum outlet temperature.

The single lever mixer is now ready for use.

## Maintenance

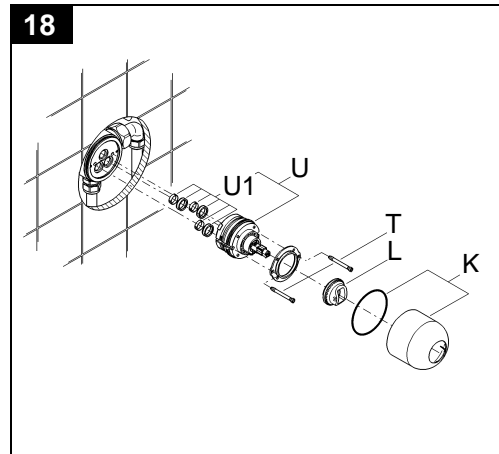
### Ceramic Cartridge

1. Shut off hot and cold water supply!
2. Lever out plug (S), see Fig. [17].



3. Remove set screw (R) with 3mm socket spanner
4. Pull off lever (P).
5. Pull off wallplate (O).
6. Unscrew screws (B1 or N1) and take out inserts (M).
7. Remove wallplate support (N).

8. Unscrew cap (K), see Fig. [18].



9. Pull off temperature limiter (L) and note position.
10. Remove screws (T) and detach complete cartridge (U).
11. Change either the complete cartridge (U) or seals (U1).

Assemble in reverse order.

Make sure that the cartridge seals (U1) engage in the grooves on the housing. Fit screws (T) and tighten **evenly and alternately**.

Check, clean and if necessary replace parts. Only genuine GROHE replacement parts must be used.

## Care

We want to ensure that you get long-lasting satisfaction and pleasure from your GROHE fitting. Therefore, please read the following care instructions because damage to the surface and underlying material resulting from improper treatment is not covered by our guarantee.

Do not use any abrasive sponges or scouring agents for cleaning. We also advise not to use cleaning agents containing solvent or acid, limescale removers, household vinegar and cleaning agents with acetic acid. They are aggressive to the surface and will leave

your fitting dull and scratched. As the formulations of commercially available cleaning agents frequently change, we cannot guarantee they will provide the gentle care our fitting deserves.

Clean the fitting with a little soap and a moist cloth only, then simply rinse off and wipe dry. You can avoid lime spots by drying the fitting each time it is used. If lime deposits do occur, remove them with **Grohclean** (ref. no. 18 078), our environment-friendly cleaning liquid. **Grohclean** is specially formulated to gently clean the surface of our fittings.

## Trouble Shooting

Problem	Cause	Remedy
Cold water on position hot and vice versa	Hot and cold water supplies have been connected in reverse	Rotating ceramic cartridge <b>not</b> possible, change installation
Range of temperature adjustment restricted	High pressure difference between hot and cold water supply	Greater than 5 bar, fit pressure reducing valve More than 1 bar between cold and hot water supply install flow limiter see chapter <b>Preassemble mixer</b>
Shower insufficiently hot	Adjustable temperature limiter incorrectly set  Hot water supply temperature too low	Refer to the instructions in chapter <b>Maximum Hot Water Limit Setting</b> Check hot water source temperature setting
No flow of hot or cold water	Either the hot or cold side is not fully pressurized  Debris caught inside the inlet of the cartridge	Be sure the system is fully pressurized  Remove cartridge and flush out or remove any debris lodged inside the hot or cold inlets

## Guarantee

### Guarantee declaration

Our products correspond to the valid technical and water supply standards as well as the relevant approvals requirements. We guarantee them to be free of design and production faults at the time of delivery and that with correct use and care in accordance with our printed instructions they will function reliably.

### Guarantee period

- The guarantee is valid in private homes for 5 years from the purchase date. Proof of purchase has to be provided when making a guarantee claim.
- By use in commercial or institutional applications the guarantee is valid for 1 year after first use. An extension of the guarantee up to 5 years can be achieved by showing that the product is professionally maintained each year.

To make a guarantee claim, proof of purchase or, the beginning of use is required. The guarantee period is not renewed or increased through supply of spare parts or repair during the guarantee period. The guarantee period for purchased spare parts is the same as for original products.

### Guarantee performance

- A) During the whole guarantee period we will correct all functional defects for which we are responsible (limitations see E + F).
- B) It is our option if we correct the defects by repair or replacement.
- C) During the above guarantee period we will not charge for the cost of parts, travel, working time, freight and packaging needed to effect the correction of defects.
- D) If we are not able to correct the defect we are prepared to supply a replacement product.
- E) Deliberate or careless damage is not covered by this guarantee. If the installation, assembly or care instructions that were valid at the time of installation are not followed or the product is used for a purpose other than that given in the written information the guarantee declaration does not apply. Problems caused by dirt, lime-scale or aggressive cleaners are not covered by the guarantee.
- F) The guarantee becomes void if repairs are not carried out competently or spare parts of non GROHE origin are used.
- G) Replaced parts become the property of GROHE and are to be surrendered to our service personnel or sent to our registered offices.

Please enter date of purchase and installation here.

### Our address

GROHE Limited  
1, River Road  
Barking,  
Essex, IG11 OHD  
GB  
Tel.: 0208 / 594 72 92  
Fax: 0208 / 594 88 98



© 2000 Friedrich Grohe AG & Co. KG

Friedrich Grohe AG & Co. KG · P.O. Box 1361 · 58653 Hemer/Germany  
Tel. (0) 23 72 / 93 - 0 · Fax: (0) 23 72 / 93 13 22