



WATER TECHNOLOGY

Avensys

Exposed Single Lever Mixer



33 389

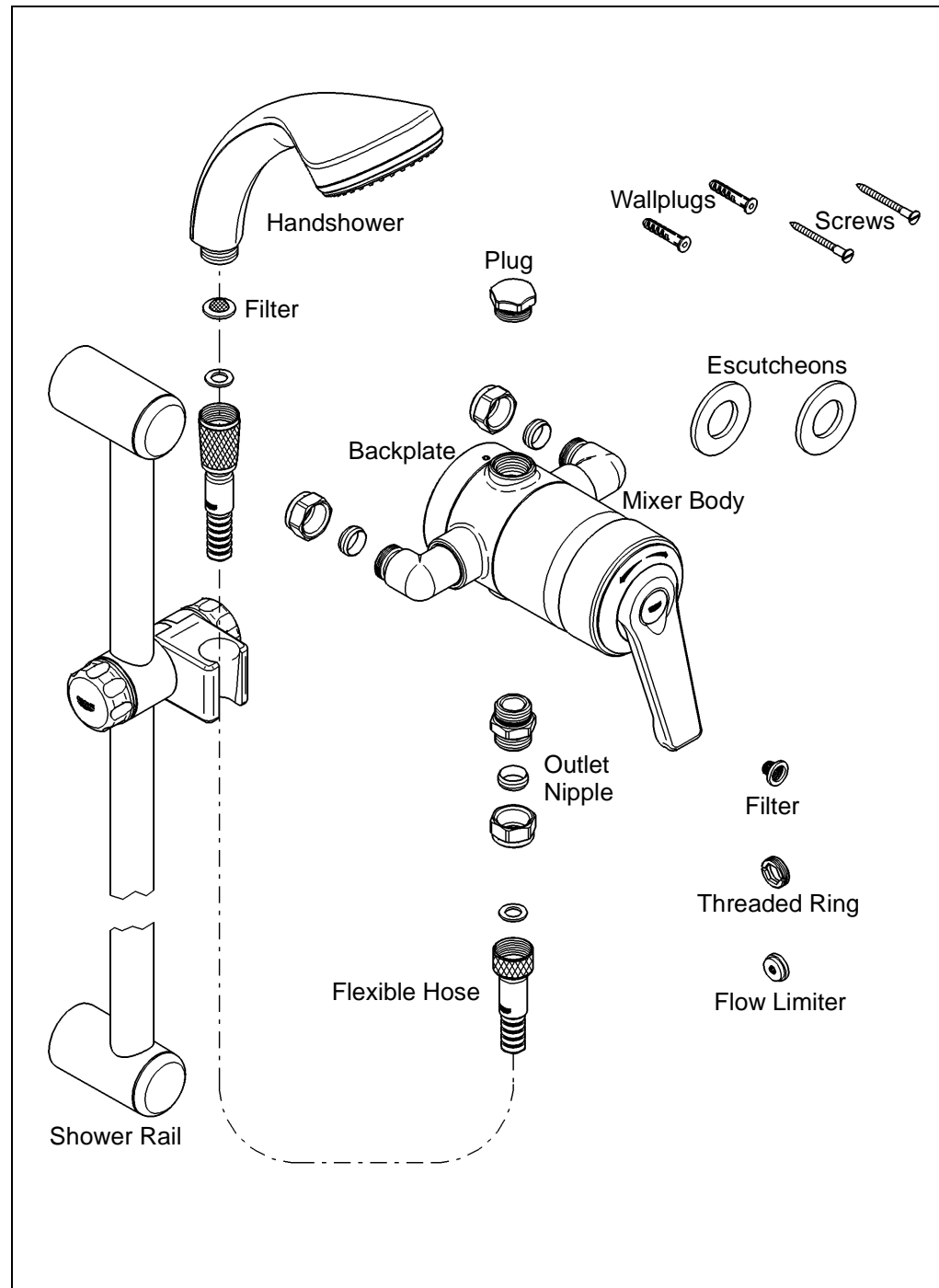


33 396

Installation Instructions and Operating Guide

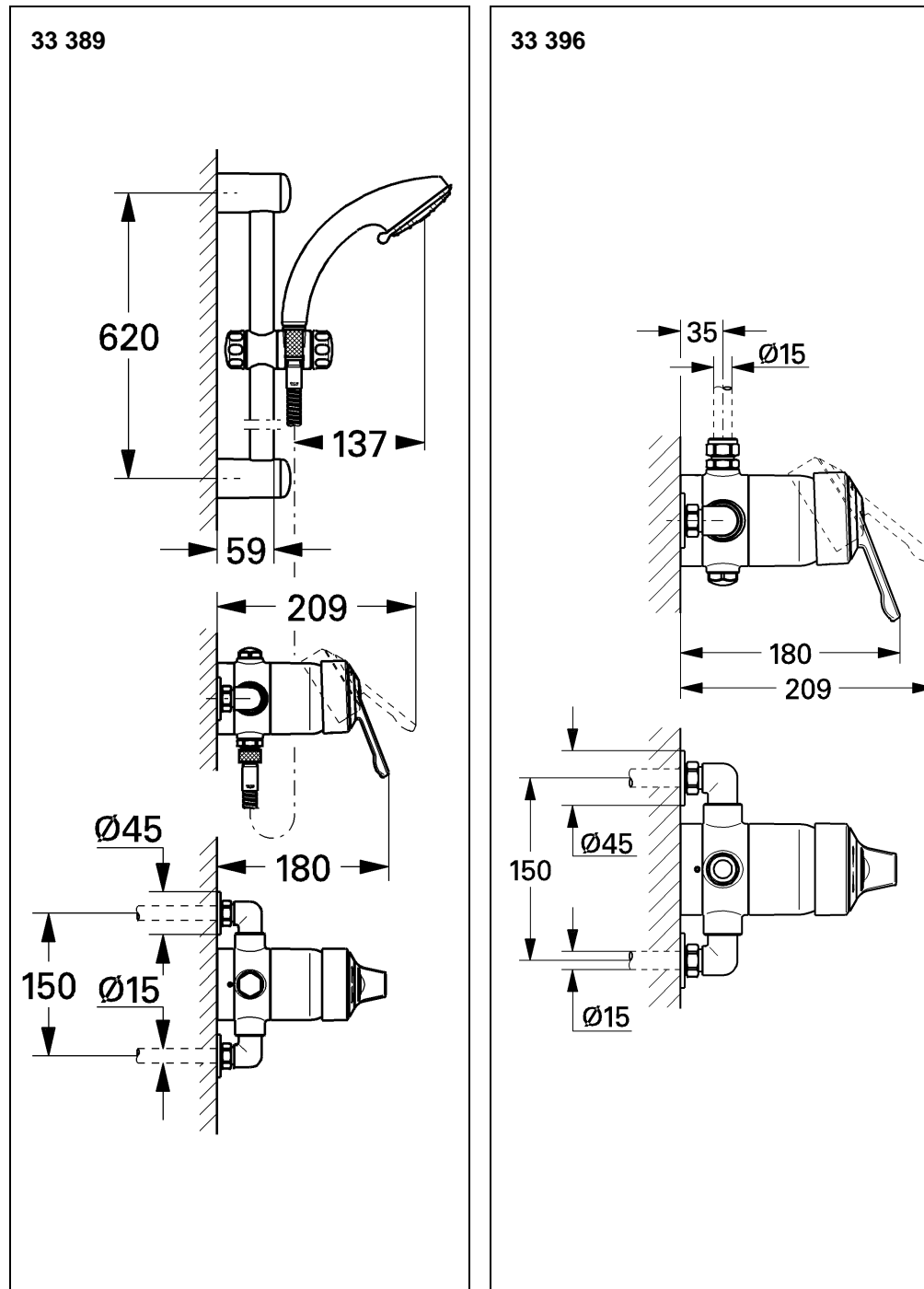
Please leave this document with the user after finishing installation!

Table Of Contents



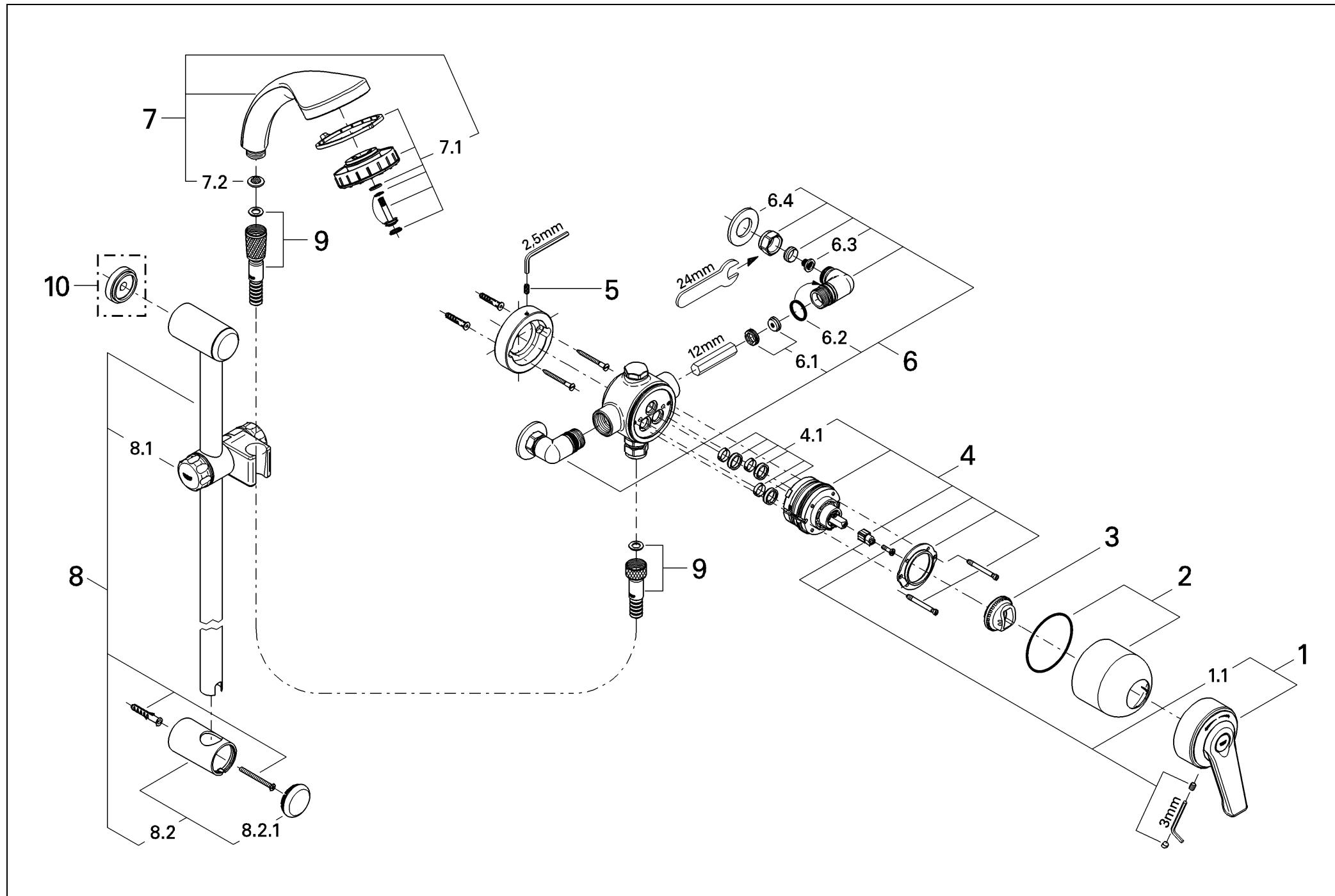
1

Installation Dimensions (mm)



2

Spare Parts



3

4

Index

Table Of Contents	1
Installation Dimensions	2
Spare Parts Drawing	3 + 4
Spare Parts List	5
Technical Data	6
Installation	7
Exposed Installation	7
Pipe And Shower Hose Connection . . .	9
Maximum Hot Water Limit Setting . . .	10
Maintenance	11
Care	12
Trouble Shooting	12
Guarantee	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	7	Hand shower	28 216	1
1.1	Fixing set	46 372	1	7.1	Adjustment ring	45 794	1
2	Cap	46 363	1	7.2	Filter	07 002	2
3	Temperature limiter	46 308	1	8	Shower rail	28 666	1
4	Ceramic cartridge	46 386	1	8.1	Sliding shower holder	07 659	1
4.1	Seal kit	46 387	1	8.2	Shower rail holder	45 362	1
5	Set screw	02 125	5	8.2.1	Cover cap	45 363	1
6	Connection elbow	12 109	2	9	Flexible hose	28 161	1
6.1	Flow limiter set	46 428	1				
6.2	O-ring seal	01 287	10				
6.3	Filter	06 768	5		Optional accessory		
6.4	Escutcheon	00 197	2	10	Compensation ring	45 406	1

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. The product is preassembled.

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

- Exposed single lever shower mixer, concealed or exposed supplies
- 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 without downstream resistance:

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 - LH
cold - RH
- Non reversible cartridge

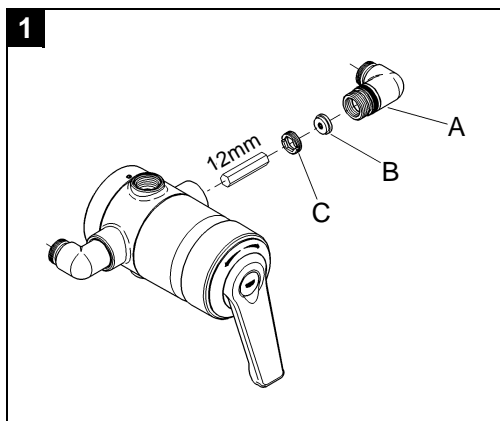
Installation

Exposed 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.

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, see Fig. [1].

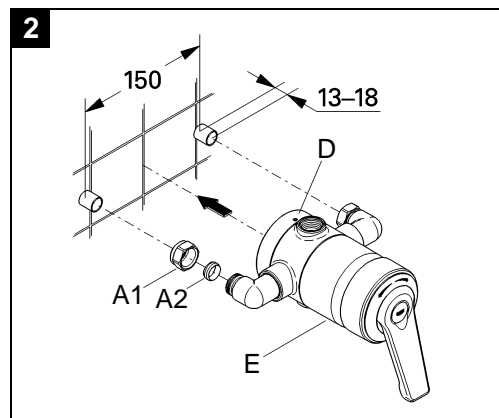
- Screw out connection elbow (A).
- Install green flow limiter (B) with threaded ring (C) by using a 12mm socket spanner.



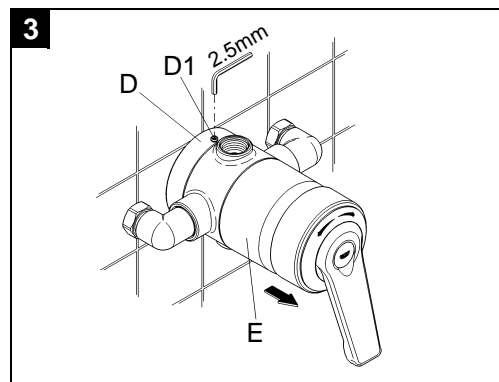
The Single Lever Mixer is fixed to the wall via the backplate and connected to the supply pipes by a pair of elbows. The elbows are preassembled to the valve body. The mixer body is fixed to the backplate by a set screw.

In case of exposed installation with supply pipes from above or below rotate inlet elbows 90° and connect to 15mm supply pipes.

1. Loosely screw on nut (A1) with compression ring (A2), see Fig. [2].



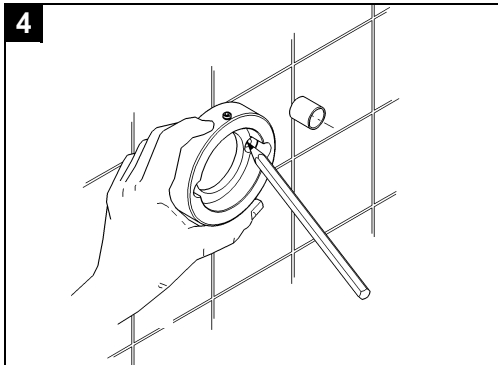
2. Ensure that the projections of the supply pipes, (i.e. exposed beyond the wall surface) have the correct length (13 - 18mm) and distance (150mm).
3. Place the mixer body (E) with the elbows and backplate (D) to the supply pipes.
4. Loosen set screw (D1), see Fig. [3].



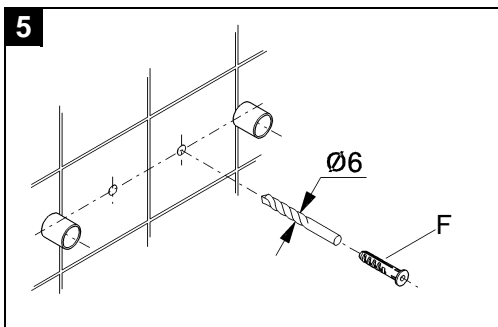
5. Remove mixer body (E) from supply pipes and hold backplate (D) in position.

Installation

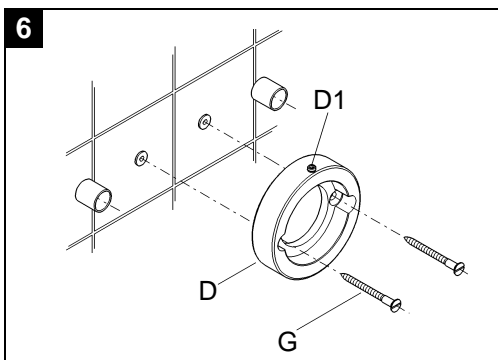
6. Mark the holes in the backplate for wall-plugs, see Fig. [4].



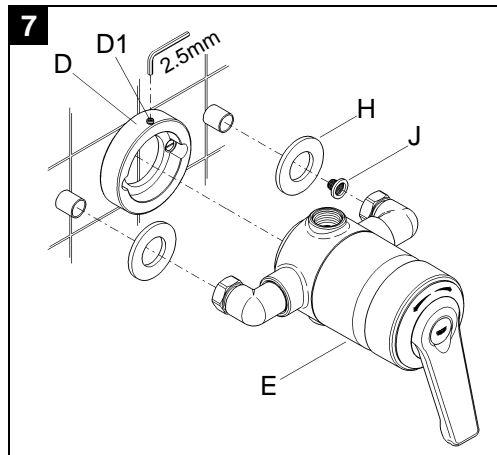
7. Drill the holes (6mm) for the wallplugs (F) and fit them into the wall, see Fig. [5].



8. Fix the backplate (D) with set screw (D1) on top or bottom to the wall with screws (G), see Fig. [6].



9. Slide the escutcheons (H) over the supply pipes, see Fig. [7].



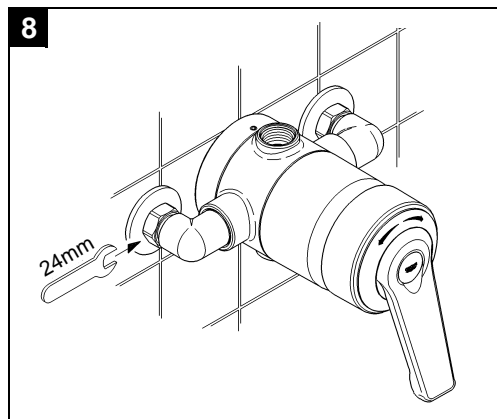
10. If flow limiter is mounted in the cold water connection elbow install filter (J).

11. Slide the mixer body (E) with elbows and compression nuts loosely over the supply pipes.

The body must touch the backplate. If not, check pipes for length again.

12. Fix the mixer body (E) to the backplate (D) by tightening set screw (D1). **Do not** use excessive force to tighten the set screw (D1).

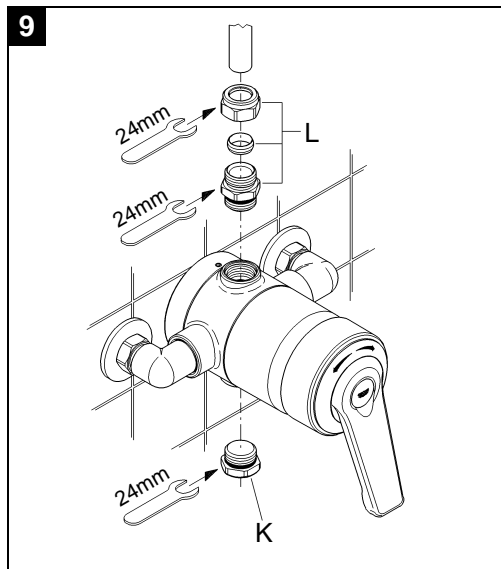
13. Tighten the compression nuts (torque min. 20 Nm), see Fig. [8].



Installation

Pipe Connection

1. Close free outlet with plug (K), see Fig. [9].



2. Thread the outlet nipple (L) with the O-ring seal into the mixer body outlet.
3. Insert pipe and tighten outlet nipple (L).

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

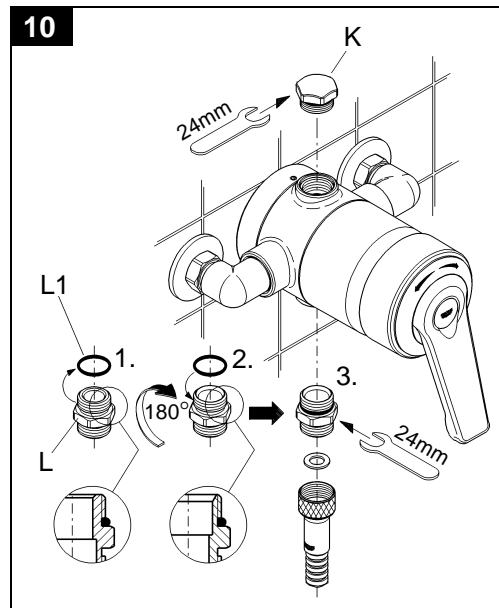
Open hot and cold water supply.

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

The single lever mixer is now ready for use.

Shower Hose Connection

1. Close free outlet with plug (K), see Fig. [10].



2. Remove O-ring seal (L1).
3. Turn outlet nipple (L) 180° and fit O-ring seal (L1).
4. Thread the outlet nipple with the O-ring seal into the mixer body outlet.
5. Connect flexible shower hose.

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

Open hot and cold water supply.

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

The single lever mixer is now ready for use.

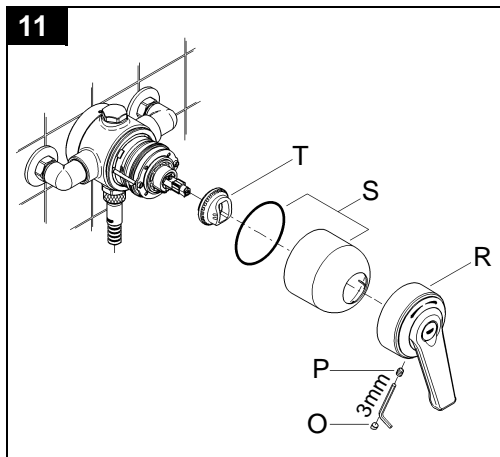
Installation

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. Lever out plug (O), see Fig. [11].



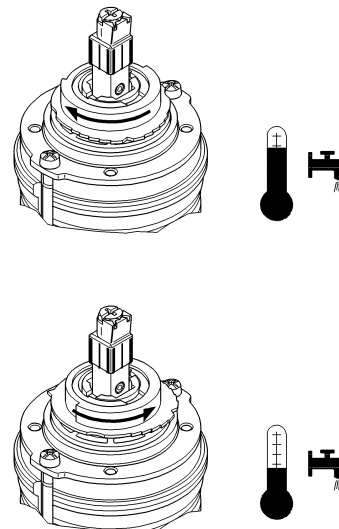
2. Remove set screw (P) with 3mm socket spanner.

3. Pull off lever (R).

4. Unscrew cap (S).

5. Remove temperature limiter (M) and, depending on the maximum water temperature required, turn clockwise (to increase temperature) or anticlockwise (to reduce temperature) and refit, see Figs. [11] and [12].

12



6. Reinstall lever as described in Fig. [11] in reversed direction.

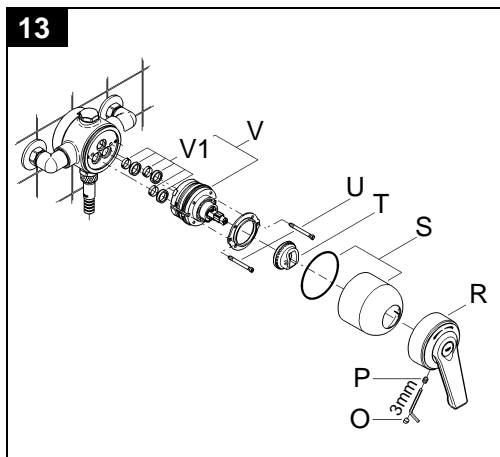
Note:

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.

Maintenance

Ceramic Cartridge

1. Shut off hot and cold water supply!
2. Lever out plug (O), see Fig. [13].



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

3. Remove set screw (P) with 3mm socket spanner
4. Pull off lever (R).
5. Unscrew cap (S).
6. Pull off temperature limiter (T) and note position.
7. Remove screws (U) and detach complete cartridge (V).
8. Change either the complete cartridge (V) or seals (V1).

Assemble in reverse order.

Make sure that the cartridge seals (V1) engage in the grooves on the housing.
Fit screws (U) and tighten **evenly and alternately**.

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 not 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 Exposed Installation
Shower insufficiently hot	Adjustable temperature limiter incorrectly set Hot water supply temperature too low	Refer to the instructions in chapter Maximum Hot Water Limit Setting 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