

Halo Single Lever Bathroom Fittings



- A3270** Halo Basin Mixer with Pop-up Waste
- A3273** Halo Basin Mixer without Pop-up Waste
- A3271** Halo Bidet Mixer
- A3272** Halo Bath Filler - One Hole
- S7703** Halo Bath Filler - Two Hole
- S7704** Halo Bath Shower Mixer - Two Hole
- A3274** Halo Built-in Shower Valve

*Armitage
Shanks*

INSTALLER:

After installation please pass this instruction booklet to user

The fittings covered by this installation and maintenance instruction should be installed in accordance with the water regulations published in 1999*, therefore American Standard would strongly recommend that these fittings are installed by a professional installer

Connections

Basin & Bidet monoblock fittings

Flexible tails 15mm (screw in)

Bath monoblock fittings

15 mm copper tails (screw in)

Bath mixer & fillers - 2 hole G $\frac{3}{4}$

Built-in shower mixer G $\frac{1}{2}$

IMPORTANT NOTE

With the exception of the single lever bath filler, it is recommended that these fittings have the cold water supply connected on the right and the hot supply on the left when facing the fitting.

Water Supplies

All Halo fittings are designed for installation on normal UK low pressure storage tank fed systems or unvented high pressure systems. With mixers, it is a requirement that hot and cold supply pressures be reasonably balanced and from a common source. i.e. both from a low pressure gravity fed system or both from a high pressure unvented system.

Basin and 2 hole bath fittings are designed to operate in the pressure range 0.1 bar to 5.0 bar. Bath single lever fittings should not be installed on pressures greater than 2.0 bar. In order to achieve this on a high pressure system (above 2 Bar), pressure reducing valves will need to be fitted on the hot and cold water supplies.

Bidet fittings are designed to operate in the

pressure range 0.2 bar to 5.0 bar.

To ensure safety with bath, bidet and shower mixers installed on low pressure tank fed systems it is strongly recommended that the cold water feed from the storage tank is connected below the feed to the hot water storage cylinder.

When installing the Halo Built-in Shower Valve on conventional UK tank fed hot water storage systems (low pressure vented) it is important to consider the following factors.

1. A minimum head of one metre is required between the bottom of the storage tank and the operating position of the showerhead.
2. Both hot and cold supplies should be fed from the storage tank.
3. Supplies to the shower should be led under the floor if possible, otherwise air locking could occur. If supplies must be led above the shower valve, the pipes must be vented at the highest point.

Aerators

All mixer fittings are supplied with a flow straightener fitted in the spout. When fitting on pressures in excess of 1.0 bar improved performance will be experienced by substituting an aerator (not supplied).

These are available from Armitage Shanks stockists:

	Part Nos:
Basin / Bidet	A960932AA
Bath fittings	A960309AA

*A guide to the Water Supply (Water Fittings) Regulations 1999 and the Water Byelaws 2000, Scotland, is published by WRAS (Water Regulations Advisory Scheme) Fern Close, Pen-y-Fan Industrial Estate, Oakdale, Newport, NP11 3EH. ISBN 0-9539708-0-9

It is a requirement of the Water Regulations for the installer to assess the back siphonage risk should the flexible shower be capable of coming within 25mm of the spill-over level of any adjacent bathroom fixture.

Shower trays, basins and baths

Water in a shower tray, basin or bathtub is considered to be a fluid risk category 3. This is a fluid which represents a slight health hazard if it were to find it's way back into the supply pipe. For this reason it must not be possible for a flexible shower head to be able to enter any adjacent washbasin, bath or shower tray unless the inlets to the shower valve are protected by double check valves. If such protection is not present the shower hose must be restrained or shortened. Fig 1

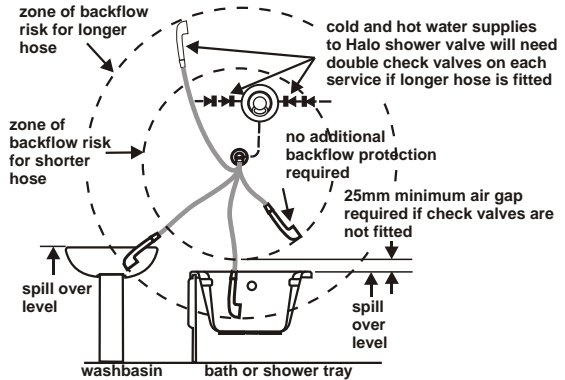


Figure 1 Backflow risk from a fluid category 3

WC's, sinks, and bidets

Water in a sink, WC or bidet is considered to be a fluid risk category 5. This is a fluid which represents a serious health hazard if it were to find it's way back into the supply pipe. For this reason it must not be possible for any flexible shower head to be able to enter any adjacent sink, WC or bidet.

If the flexible shower can reach within 25mm of the spill-over level of any sink, WC or bidet a design change must be made such as restraining the hose or using a shorter one.

Installers and users must comply with this requirement when a replacement shower hose is being fitted.

Check valve protection is not permitted for category 5 fluids.

See Figure 2

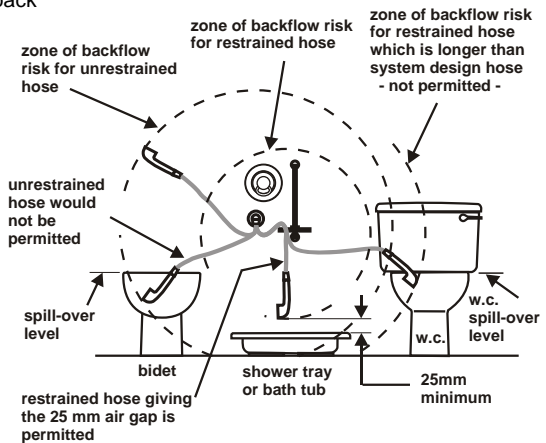


Figure 2 Backflow risk from a fluid category 5

Installation

Flush water through the pipework before connecting the fittings.

Insert the fitting through the tap hole ensuring the o-ring seal or gasket is positioned above the tap platform and is seated evenly on the top surface.

Tighten the backnuts, sleeve nuts or top fixation Allen key: Figures 6 - 8.

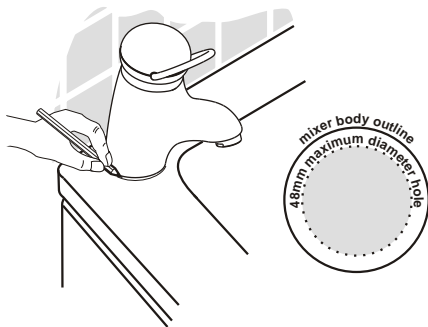


Fig 3 Drilling the bath tub

IMPORTANT NOTE

The one hole bath filler is designed for a corner installation (see Fig 3) or a position along the front side rim of the bath. Do not fit in line with the overflow assembly.

Ensure the sealing 'O' ring (a) is seated correctly on top of the bath and the friction washer (b) and clamping plate (c) are placed against the underneath surface of the bath tap deck. Tighten the sleeve fixation nuts (d) until the fitting is secure. See Figure 4

Fixation - One hole bath filler

The Halo one hole bath filler requires a bath supplied without tap holes. The installer will have to drill a 48mm diameter hole in the rim. Before this is done the following will have to be considered. If a shower screen is to be fitted it could foul the fitting.

Before fitting the tails place the monoblock in the intended location, check for free movement of the lever handle and draw a pencil line around the base (Fig 3).

In the centre of the of the outline, drill a 48mm hole. (Figure 3).

Fit the supply tails (35) ensuring the o-rings (34) are correctly located in the groove below the M18 threads. Place the sealing o-ring (a) in the groove on the underside of the fitting base.

Place the fitting in the new tap hole.

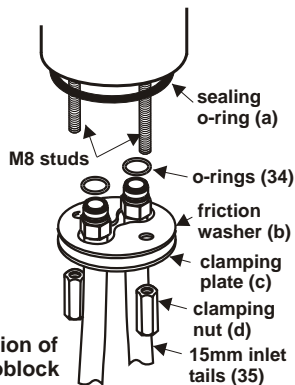


Fig 4 Fixation of bath monoblock



The Halo single lever bath filler does not follow the plumbing convention in that it has its cold connection on the left when facing the fitting

Figure 5 S/L bath filler inlet tails

Fixation - Basin / Bidet one hole mixers with pop-up

Connect fixation bracket stud to the underside of the mixer body by 2 - 3 threads.

THIS IS A LEFTHAND THREAD

- Ensure fixation bracket is also only engaged on the stud by 2 - 3 threads.
- Connect the two inlet tails to the underside of the mixer body.
- Hold the fixation bracket in the vertical

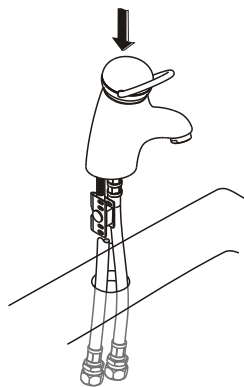


Figure 6
Top fixation mixers A3270/1

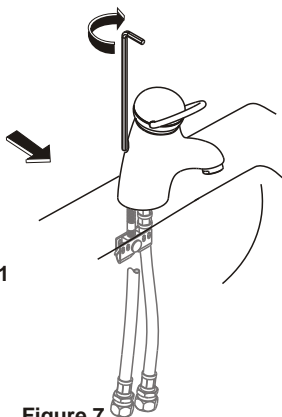


Figure 7

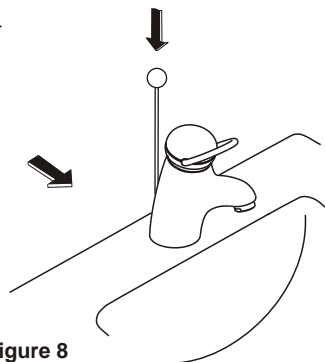


Figure 8

position and place through the tap hole ensuring that the 'O' ring remains above the platform as this acts as a watertight seal between the two surfaces, (Figure 6).

- When positioned correctly, tighten the fitting using the Allen key provided. (Retain the Allen key for future use).
- Once tightened, position the vertical pop-up rod through the same vertical hole and connect this to the horizontal rod using the connector provided. (Figures 7 & 8)

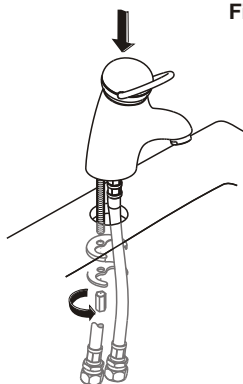


Figure 6a
Bottom clamping mixer A3273

Fixation - one hole Basin mixer without pop-up

The basin mixer without pop-up can not utilise the top fixation method and is therefore clamped to the tap deck using a friction gasket and backing plate. Figure 6a

Installation Built-in Shower Valve

Before connecting the shower valve the pipework should be flushed to ensure it is clear of any plumbing debris

Refer to Figure 16 on page 10

1. Fit inlet connector elbows (not supplied) to the G $\frac{1}{2}$ connections in the orientation required. Thread tape or plumbers compound will have to be used to seal them into the brass body casting.
2. Check the sealing o-rings (61) are present then fit the blanking plug (60) and outlet nipple (59) in the positions required. Ensure both are tight.

For solid walls

3. Cut a recess to allow the fitting to be recessed to a depth of between 46mm and 58mm from the finished wall surface. Secure valve body to back of the recess using the fixing lugs.

For cavity walls

4. The normal method of installing in a cavity wall is to fit a wooden noggin between the wooden studs at a suitable depth to permit the back surface of the valve body to be screwed to its surface. The noggin should be set at a depth of 46mm - 58mm from the finished, tiled wall surface.
5. However, a metal mounting bracket may be the best method of mounting when installing built-in valves into walls of timber construction with large cavities and plasterboard facing. The bracket (70), which is an optional extra, will provide stability and ensure that the body is installed at the correct depth. (Fig's 9 & 10) The bracket is available from stockists or directly from Armitage Shanks - contact Customer Care (see back cover) quoting part number: # L6714NU
6. Complete the in-wall plumbing.
7. Turn on water supplies and test for leaks. (Blank off spray head connection to ensure outlet pipe work is tested under pressure).
8. Before attaching the shower head, open the shower valve flow control and flush any debris from the system.

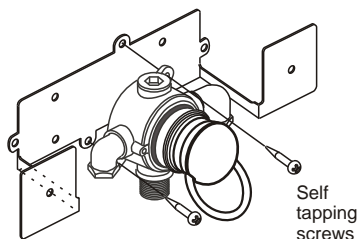


Figure 9

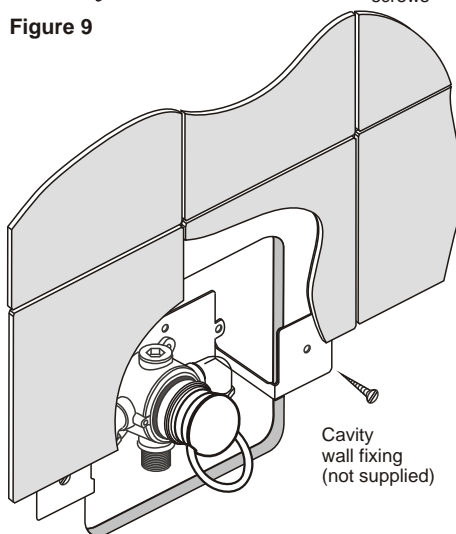


Figure 10

9. Fit the plaster guard (56) and check wall levels agree with those marked on the guard.
10. Complete the plastering and tiling. When the bracket is used, tile directly over the wall mounting flanges as the bracket material is thin enough to be accommodated in the adhesive layer. (Figure 10)
11. Ensure the small drainage hole in shroud (53) is located at the bottom.
13. Fit cover plate and trim (55).
14. Fit operating handle (52) and secure using washer and nut. (A 10 mm A/F box spanner (62) is supplied with the fitting for this purpose).
15. Snap on dome cover (51)

Cartridge Replacement - Single Lever

- Shut off the water supplies.
- Pull off the dome cover from the lever handle. (Wear a rubber kitchen glove to increase friction if this should prove difficult).
- Remove the nut & washer.
- Pull off handle and shroud.
- Unscrew cartridge retaining nut.
- Lift out the multiport cartridge.
- Position replacement cartridge ensuring that the moulded location pin engages in the location hole and not in one of the inlet ports.
- Refit locking nut (6, 29 or 57) and tighten. The ideal torque is 4Nm. This is only a little more than hand tight - indeed it is possible to tighten the nut sufficiently wearing stout gloves. If over-tightened the cartridge will be stiff to operate and will have a limited life.
- The lever handle is located correctly by the key on the cartridge spindle.

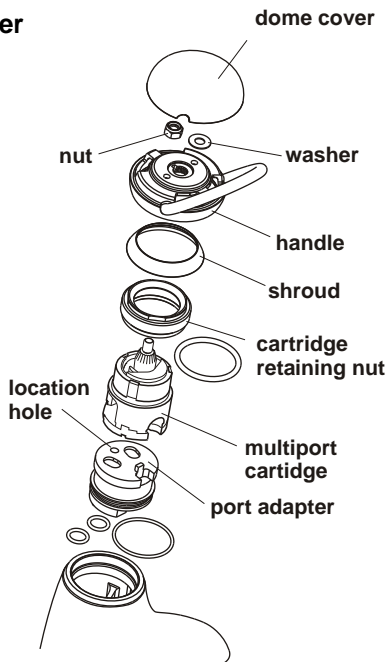


Figure 11 Single lever cartridge assembly

SAFETY FOR THE USER

Halo fittings are not thermostatically controlled and outlet temperatures depend on the position of the control handle, the hot and cold temperatures and pressures.

If the cold water supply fails for any reason, only hot water at its maximum temperature will be delivered.

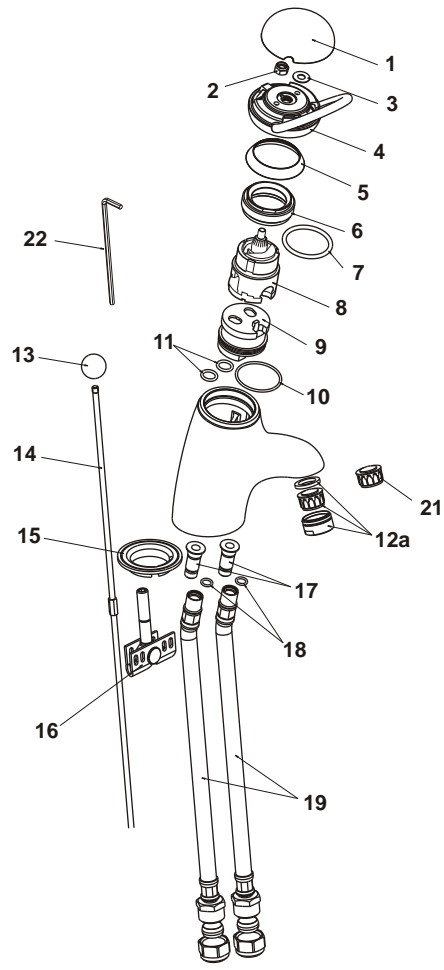
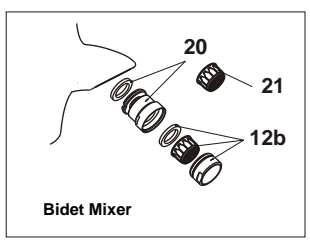
Before using the handspray check that the temperature of the mixed water is satisfactory.

Young children, the elderly and infirm should be supervised when using the bath or handspray.

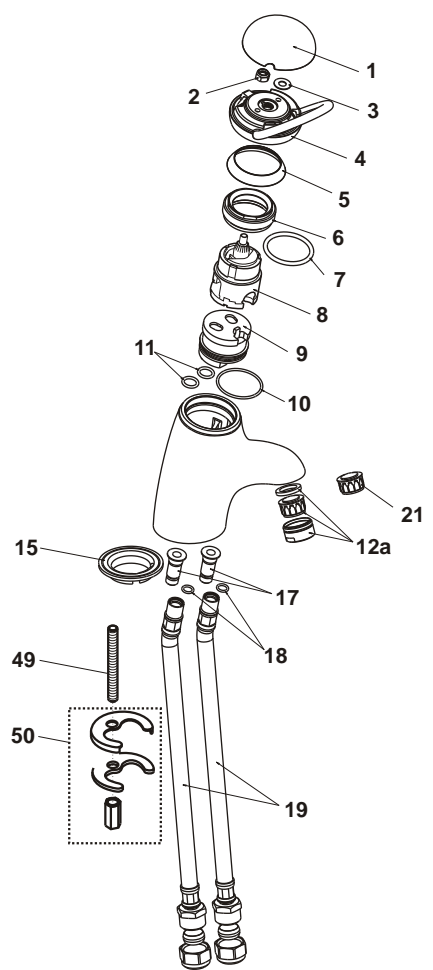
A limit stop known as the Blend Control, located under the handle, can be set to add additional user protection - see page 12 for details.

CLEANING

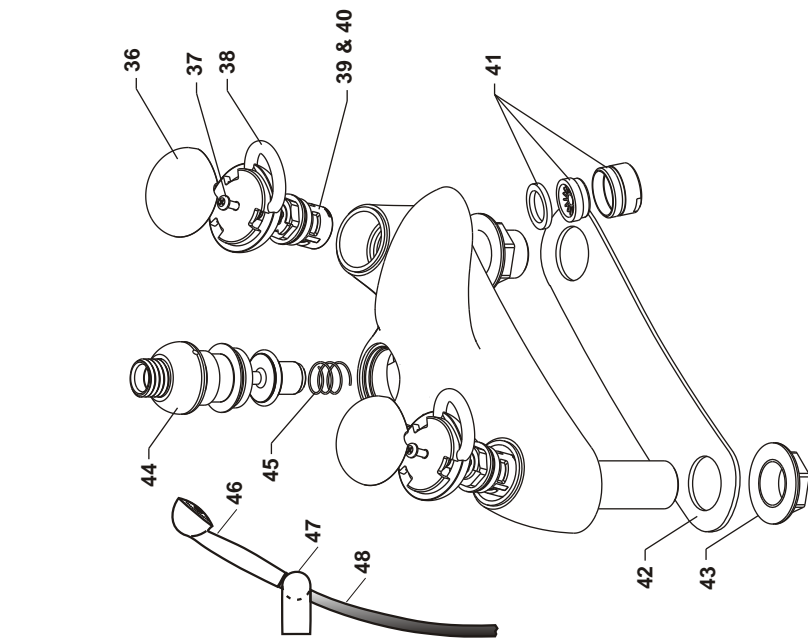
When cleaning the fittings always use soap based cleaners. Never use abrasive or scouring powders and never use cleaners containing alcohol, ammonia, nitric acid, phosphoric acid or disinfectants.



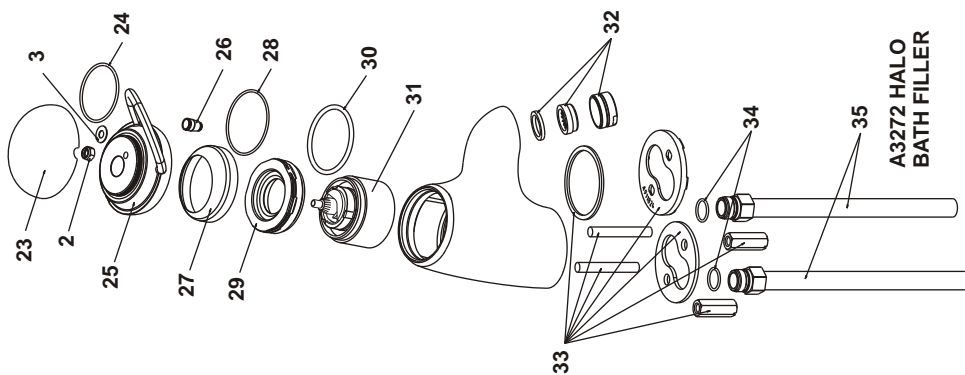
A3270 & A3271 HALO BASIN & BIDET MIXERS



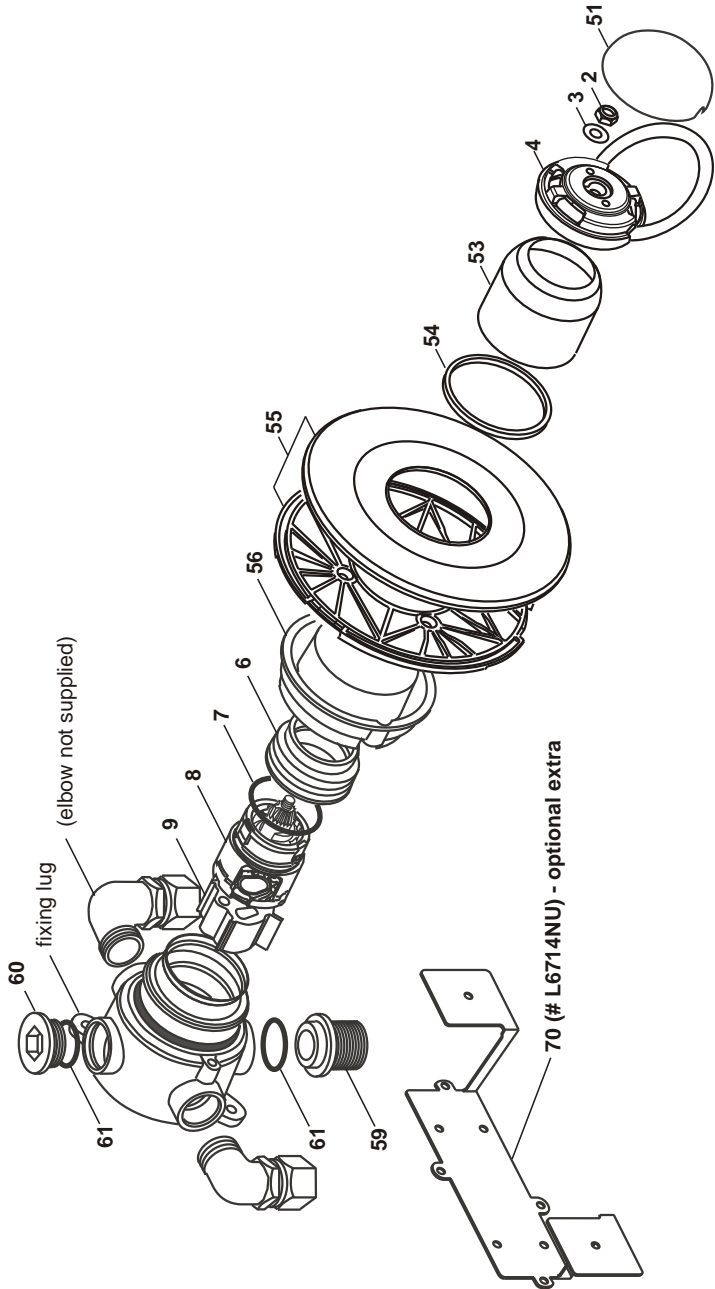
A3273 HALO BASIN MIXER WITHOUT POP-UP



S7703 & S7704 HALO TWO HOLE BATH FILLER AND BATH / SHOWER MIXER



A3272 HALO BATH FILLER



A3274 HALO BUILT-IN SHOWER VALVE

Figure 16

Ref.	Description
1	Domed handle cover
2	Handle securing nut
3	Handle securing washer
4	Handle body
4a	Basin/Bidet lever complete
5	Shroud
6	Cartridge retaining nut
7	Cartridge securing ring seal
8	Multiport cartridge (small)
9	Port adaptor
10	Port adaptor seal
11	Port adaptor inlet seals
12a	Flow straightener - basin
12b	Flow straightener - bidet
13	Pop-up knob
14	Pop-up rod
15	Fixing pack plate
16	Top fixing toggle
16a	Fixing kit - basin & bidet 1-hole
17	Inlet connectors
18	Flexible inlet tail seals
19	Flexible inlet tails
20	Nozzle swivel
21	Aerator
22	Top fixing Allen key 5mm A/F long
23	Handle dome
24	Handle dome retaining o-ring
25	Handle body
25a	Bath single lever complete
26	Dash pot (handle damper)
27	Shroud
28	Shroud retaining o-ring
29	Cartridge retaining nut (bath)

Ref.	Description
30	Cartridge sealing o-ring (bath)
31	Multiport cartridge (large)
32	Flow straightener
33	Fixing kit - bath 1 hole
34	Inlet tail sealing washers
35	Inlet tails 15mm copper
36	Domed handle cover
37	Screw
38	Handle body bath 2-hole
38a	Handles complete 2H bath (pair)
39	3/4 SE cartridge hot CI close
40	3/4 SE cartridge cold A/CI close
41	Flow straightener
42	Deck sealing gasket
43	Plastic tap backnut - G $\frac{3}{4}$
44	Divertor
45	Divertor spring
46	Handspray
47	Showering station
48	Flexible hose
49	M8 threaded tail
50	Fixing kit
51	Handle dome
53	Shroud S/L shower
54	Faceplate seal
55	Faceplate (2 part)
56	Plaster guard
59	Outlet nipple
60	Blanking plug
61	Sealing o ring
62	10 mm A/F box spanner
70	Cavity wall mounting bracket # L6714NU

Shower valve connecting dimensions

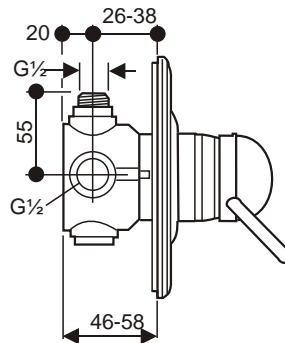
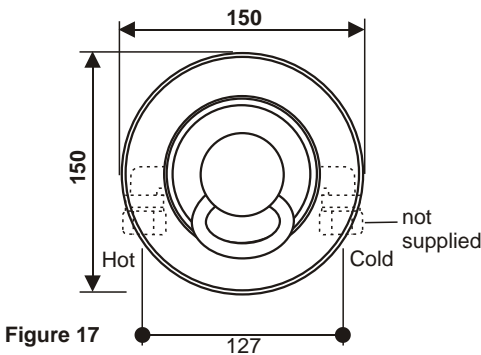


Figure 17

The blend control is a simple mechanical limit stop. Located under the single lever handle, it restricts the angle to which the handle can be rotated towards the full hot position. To set it, the hot water system should be on and the hot water up to normal working temperature. A thermometer will be required to measure the maximum blend temperature. Remove the handle as previously described. Pull off shroud (5 & 27)

The blend control stop (white crescent shaped plastic moulding - shown shaded) can then be removed. In it's factory set position "0" - shown dotted in Figure (18) - it does not limit the lever handle movement and the highest possible temperature will be possible.

Insert the limit stop in position 4 - shown shaded in Figure (18)

Operate the fitting and measure the

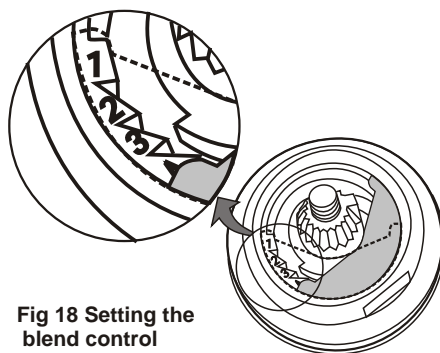


Fig 18 Setting the blend control

temperature at the maximum setting.

If not high enough, reposition the stop in position 3 and check the temperature again. Repeat the process until the temperature at the maximum setting is satisfactory.

Refit the shield (5 & 27) and handle (4 & 25) and check that the maximum blend temperature is still satisfactory.

See safety note on Page 7

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