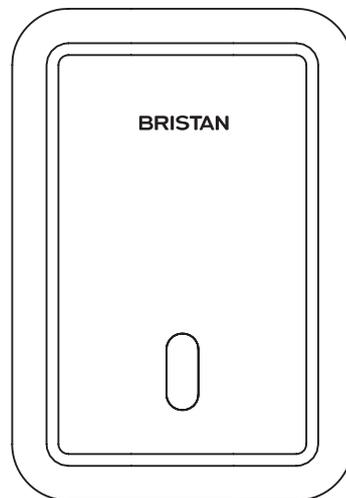
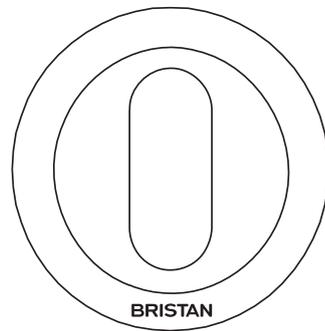


BRISTAN

Installation Instructions and User Guide

Direct Flush Urinal Control
Valve



Models covered: AUF 1 C, AUF 2 C,
AUF 3 C & AUF 4 C

Please keep this booklet for future
reference.

Installer, when you have read these
instructions please ensure you leave them
with the user.

Contents

Thank you for choosing Bristan, the UK's leading showers and taps expert. We have designed this product with your enjoyment in mind. These instructions are for your guidance to a safe and successful installation and should be left with the user. All products manufactured and supplied by Bristan are safe providing they are installed correctly and receive regular maintenance in accordance with these instructions.

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Important Safety Information

- Please read these instructions thoroughly and retain for future use.
- All products manufactured and supplied by Bristan are safe provided they are installed, used correctly and receive regular maintenance in accordance with these instructions.
- **If you are in any doubt about your ability to install this product safely you must employ the services of an experienced qualified plumber / electrically qualified person.**
- These fittings need to be installed in accordance with, and meet the requirements of the Water Supply (Water Fittings) Regulations 1999 (schedule 2 11) and current bylaws.
- Before starting any installation please consider the following:
 - Before drilling into walls, check that there are no hidden electrical wires, cables or water supply pipes. This can be checked with the aid of an electronic detector.
 - If power tools are used do not forget to:
 - Wear eye protection
 - Unplug equipment after use
- **⚠ Warning:** Before installing this product it is essential that you thoroughly flush through the pipework in order to remove any remaining swarf, solder, etc. Failure to carry out this procedure could cause problems or damage to the workings valve unit.
- Remove all packaging and check the contents for damage before starting any installation.
- An accessible isolation valve should be fitted upstream of the valve for ease of maintenance.
- This product must not be modified in any way as this will invalidate the guarantee.

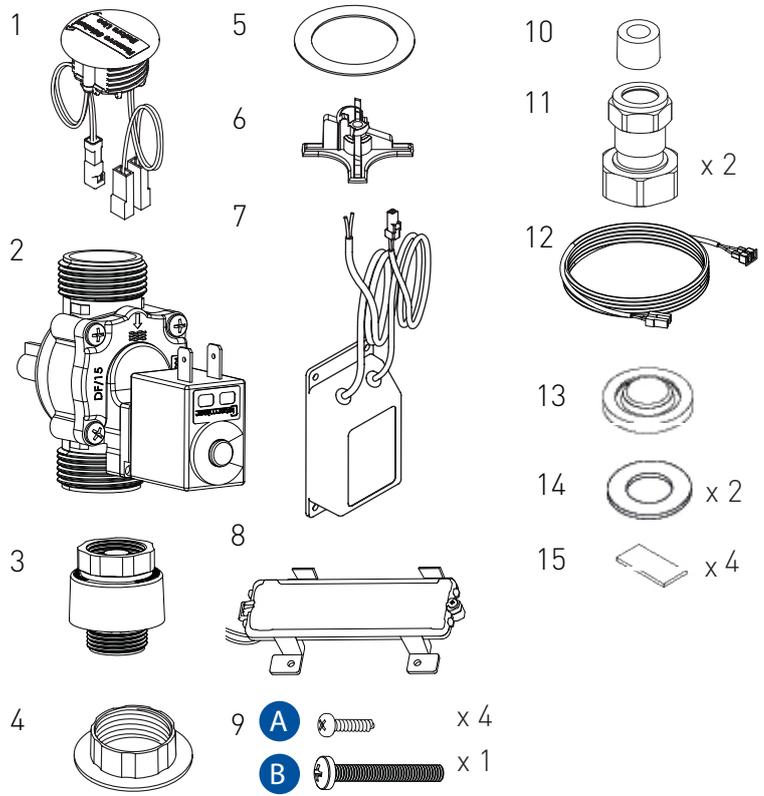
Recommended Usage			
Domestic	✓	Heavy Commercial	✓
Light Commercial	✓	Health Care	X



Pack Contents

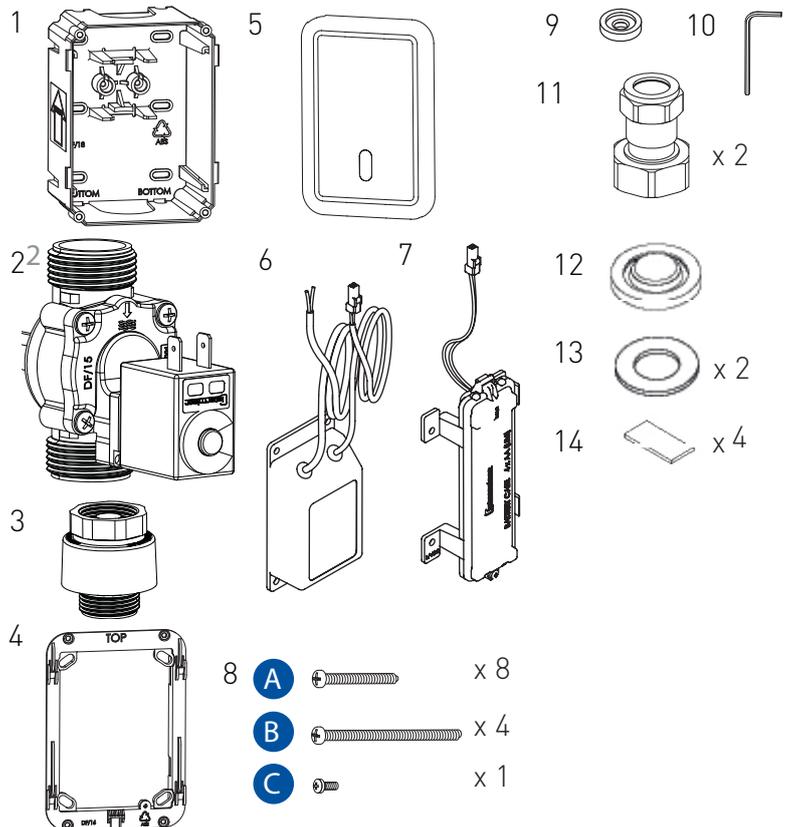
Direct flush rear access supplied parts

1. Sensor unit
2. Valve unit
3. DC pipe interrupter inc 4lpm flow regulator (grey)
4. Sensor nut
5. Rubber gasket
6. Clamp plate
7. Mains adaptor - **(AUF2 C)**
8. Battery case - **(AUF1 C)**
9. Screws
10. Screw packer
11. 15mm pipe fitting
12. 1.5m cable
13. Filter
14. Washer
15. Adhesive pads



Direct flush front access supplied parts

1. Mount box
2. Valve unit
3. DC pipe interrupter inc 4lpm flow regulator (grey)
4. Clamp frame
5. Sensor plate
6. Mains adaptor - **(AUF4 C)**
7. Battery case - **(AUF3 C)**
8. Screws
9. Shoulder washer
10. 2mm allen key
11. 15mm pipe fitting
12. Filter
13. Washer
14. Adhesive pads



Product Features

The direct flush valve provides automatic flushing of the urinal after use ensuring the highest level of hygiene from the minimum volume of water. No cistern is required.

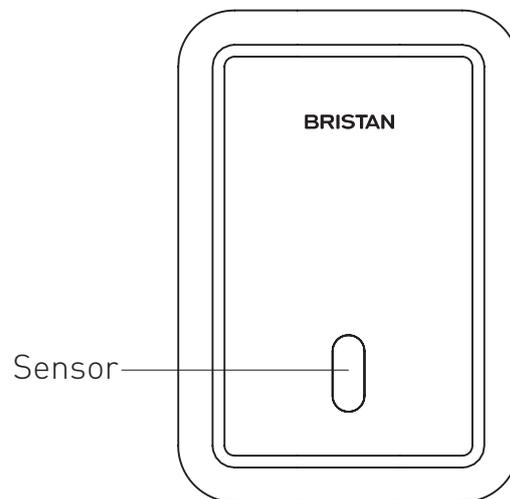
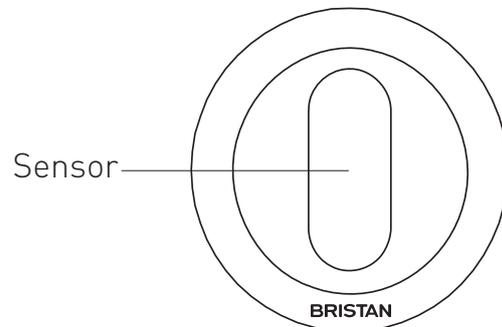
Once installed the operation is entirely automatic with continuous monitoring of user behaviour and washroom demand. One direct flush is required for each urinal.

Flush arrest function

The direct flush valve detects users at the bowl and flushes when the user departs. If a user is detected while the valve is flushing the direct flush valve will pause the flush to prevent splashing of the user and to save water.

Hygiene flush

After 12 hours without use the direct flush valve automatically runs a hygiene flush. This feature can be turned off to suit user preference.



Usage Advice & Specifications

Minimum working pressure: 0.5 bar *Working or dynamic pressure is measured when water is flowing.

A minimum working pressure of 2 bar is recommended for best performance.

Note: The minimum working pressure refers to the pressure required to operate the valve. Higher pressure may be required for an effective flush, depending on the bowl and sparge outlet design.

Maximum static pressure: 6 bar

Note: When using the direct flush valve from a mains water supply, the pressure may be higher than is suitable for the design of the sparge or bowl which may cause splashing to occur. In such cases a pressure reducing valve on the supply may be required to reduce the pressure as necessary.

Back siphonage protection: Class 5, Type DC.

Factory Settings

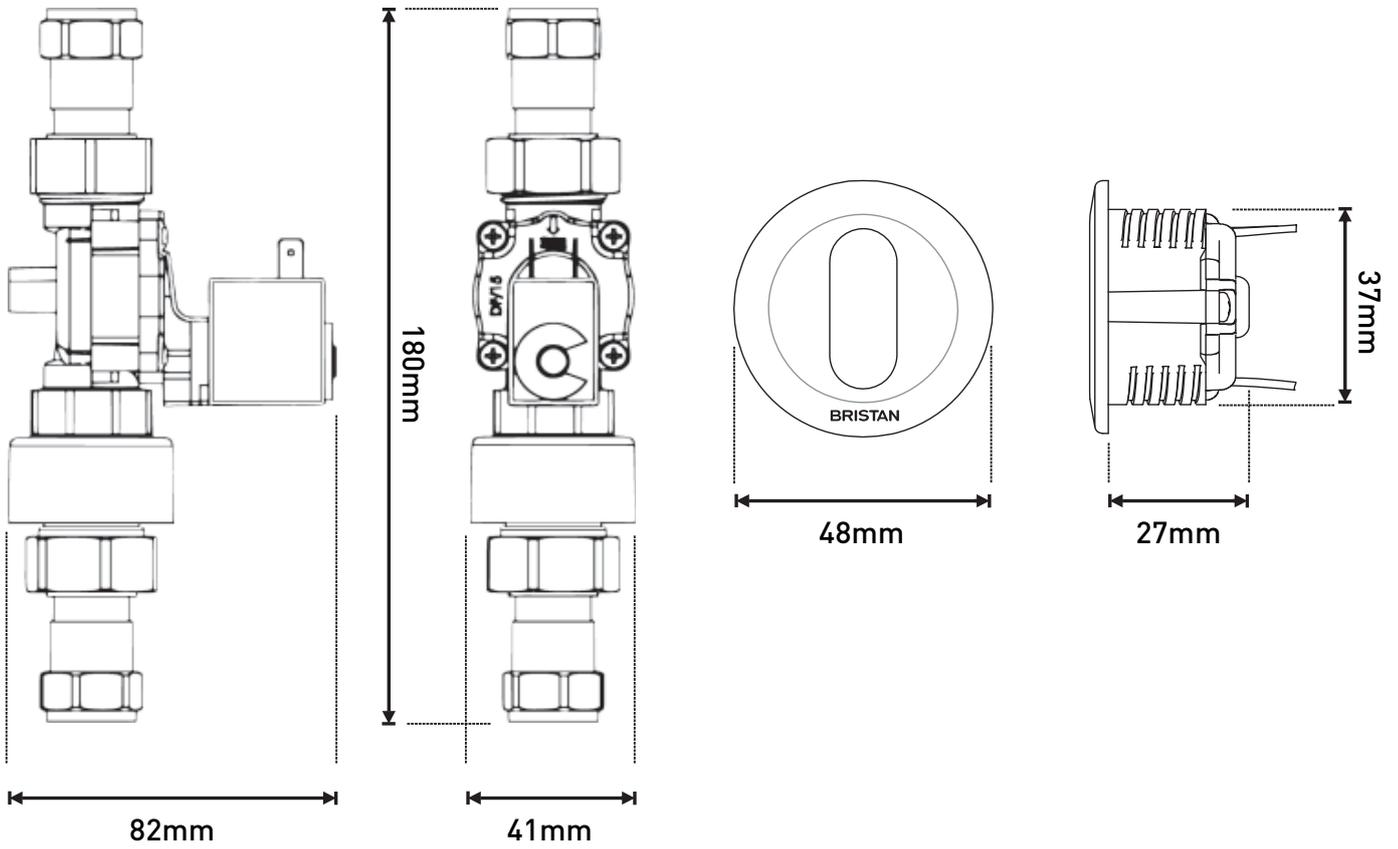
Range:	Circa 50cm
Flush time:	7 seconds
Flush delay:	2 seconds
Power requirements:	Either 6V from 4 x alkaline AA (LR6) batteries or 6V DC regulated from mains adaptor. (1A fused spur is required).
Normal battery life:	2 years under typical usage conditions. A single red flashing of the LED indicates that the batteries are low and need to be replaced.
Cleaning:	Clean with soap and water only.
Lens care:	Infrared lens can be polished with a soft cloth.

Electronic Specification

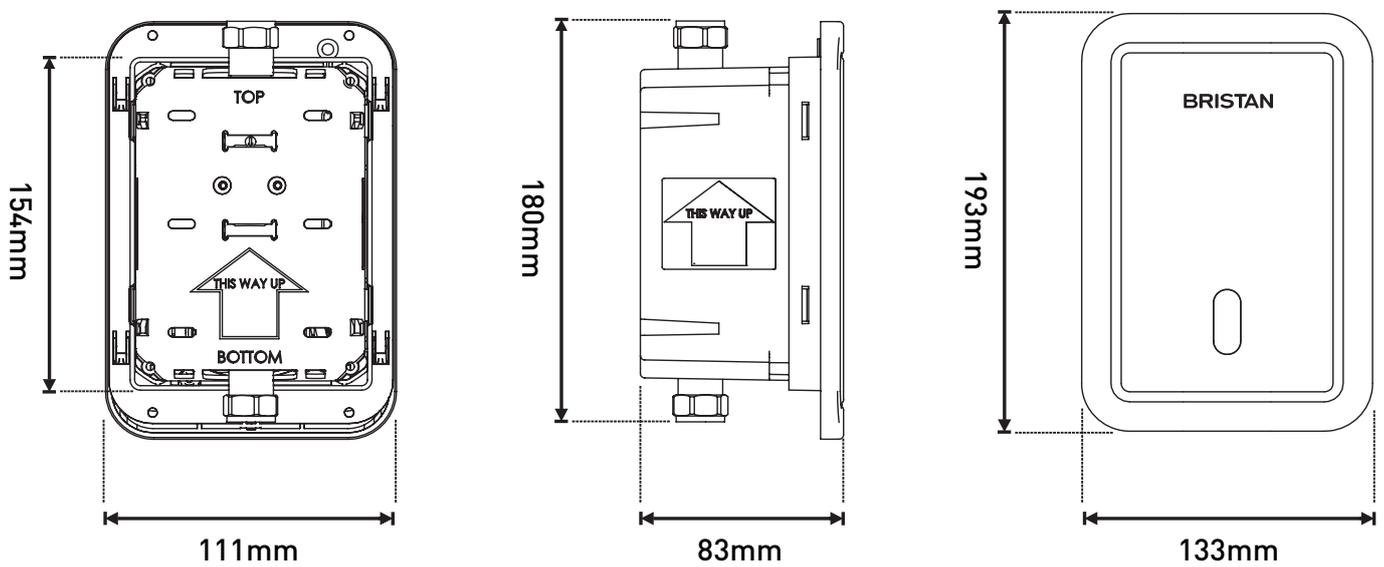
Control classification: AUF1 C & AUF2 C	Independant.
Control classification: AUF3 C & AUF4 C	Independant.
Maximum load:	2W 0.33A.
Rated temperature range:	0-40 deg C.
Action classification:	Type 1.Y.
Pollution Classification:	Degree 1.
Ingress Protection:	IP65.

Dimensions

AUF 1 C & AUF 2 C



AUF 3 C & AUF 4 C



Installation Requirements

Important notes and guidelines: read this before fitting the urinal valve when flushing directly from the mains supply

Why is a DC pipe interrupter supplied?

When urinals are flushed directly from the mains water supply, the Water Regulations require that the water supply be protected by a suitable category 5 protection method or device.

In the case of urinals, this can be achieved in three ways:

1. The use of a WRAS approved type DC pipe interrupter (supplied with Bristan Direct Flush Valves).
2. The use of a dedicated supply for flushing use only, supplied from a break tank that protects the mains supply with a type AA, AB or AD air gap.
3. The use of a specific type of urinal which has been tested and shown to incorporate the equivalent of a type AB air gap.

what are the possible implications of fitting a DC pipe interrupter?

1. Water may overflow from the DC pipe interrupter if the sparge or pipe run leading to the sparge is too restrictive. (See diagram  on page 10). This may also occur if there are too many bends in the pipework.
2. If the feed to the urinal is coming directly from the mains water supply, the pressure may be too high for the sparge and bowl and splashing may occur in the urinal bowl.
3. System pressure is lost when a DC pipe interrupter is fitted, therefore the flush performance may change after installing a DC pipe interrupter.

How to install a DC pipe Interrupter correctly

NOTE: When using flexible pipes: Flexible pipes typically have a smaller internal diameter than copper pipes. A greater distance between the valve and sparge may therefore be required. Ensure there are no kinks in the flexible pipe.

1. To avoid overflowing:

- Install a free-flowing, low restriction sparge.
- Install the DC pipe interrupter and valve as high as possible and use as long a pipe run between the pipe interrupter and the sparge as possible. (See diagram  on page 10).
- Use a large pipe size in the pipework between the DC pipe interrupter and the sparge.
- Minimise pipe bends between the DC pipe interrupter and the sparge.

2. To avoid splashing:

- Fit a sparge and urinal bowl to accommodate the pressure.

NOTE: For grey water/rain water harvesting. Ensure adequate filtering is fitted, a 10µm filter is recommended. For chemical water treatment. If the water system has been treated with chemicals, ensure the system is thoroughly flushed before fitting any Bristan products. Concentrated chemicals in dead legs can damage the product and result in failure. If the water is treated with Chlorine Dioxide (ClO₂), concentration levels must be maintained below 5ppm.

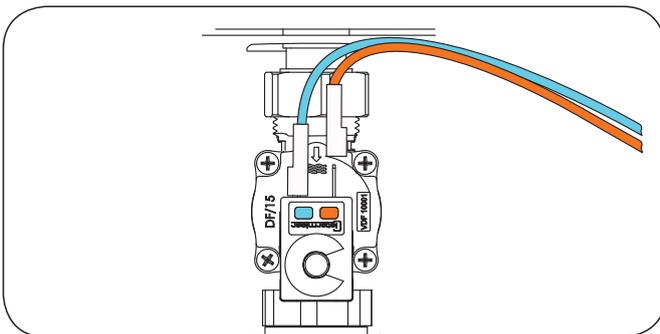
NOTE: As with all water containing products, limescale in hard water areas can affect the products performance. This can result in maintenance to remove the limescale as and when required.

Power Connections

NOTE: Only one power source should be connected at any time, either mains or batteries. It is not possible to connect both simultaneously.

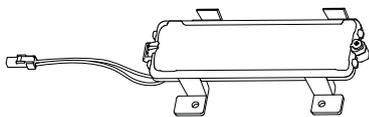
Batteries: Open the battery case and fit 4 Alkaline AA (LR-6) batteries as indicated. Reseal and fasten into place on the panel using screws **A** or with the tape pads (for AUF 3&4 C installations slide into the mount box).

If using the mains adaptor, fasten into place on the panel in a dry location using screws **A** or with the sticky pads (for AUF 3&4 C installations slide into the mount box) and connect the unterminated mains cable to a 50Hz 230V AC single phase supply via a 1A fused spur (not supplied).

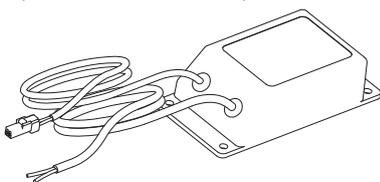


Power options

Battery case
requires 4 x AA (LR6) alkaline
batteries



Mains adaptor
requires 1A fused spur

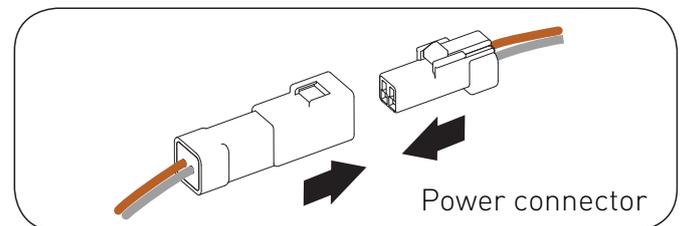


Connect the spade connectors from the sensor (AUF 1&2 C) or sensor plate (AUF 3&4 C) to the solenoid terminals – take care to connect the wires according to the colour coding on the label. If these are not long enough they can be extended by up to 1.5 metres. (Extension cable supplied with AUF 1&2 C).

Electrical connection

Connect the power connector from the sensor (AUF 1&2 C) or sensor plate (AUF 3&4 C) to the mains adaptor, or in the case of a battery powered installation, the battery case.

NOTE: Remove the label from the sensor BEFORE connecting to the power. When the power is first connected the LED in the sensor flashes amber. This is normal and lasts only a few seconds.



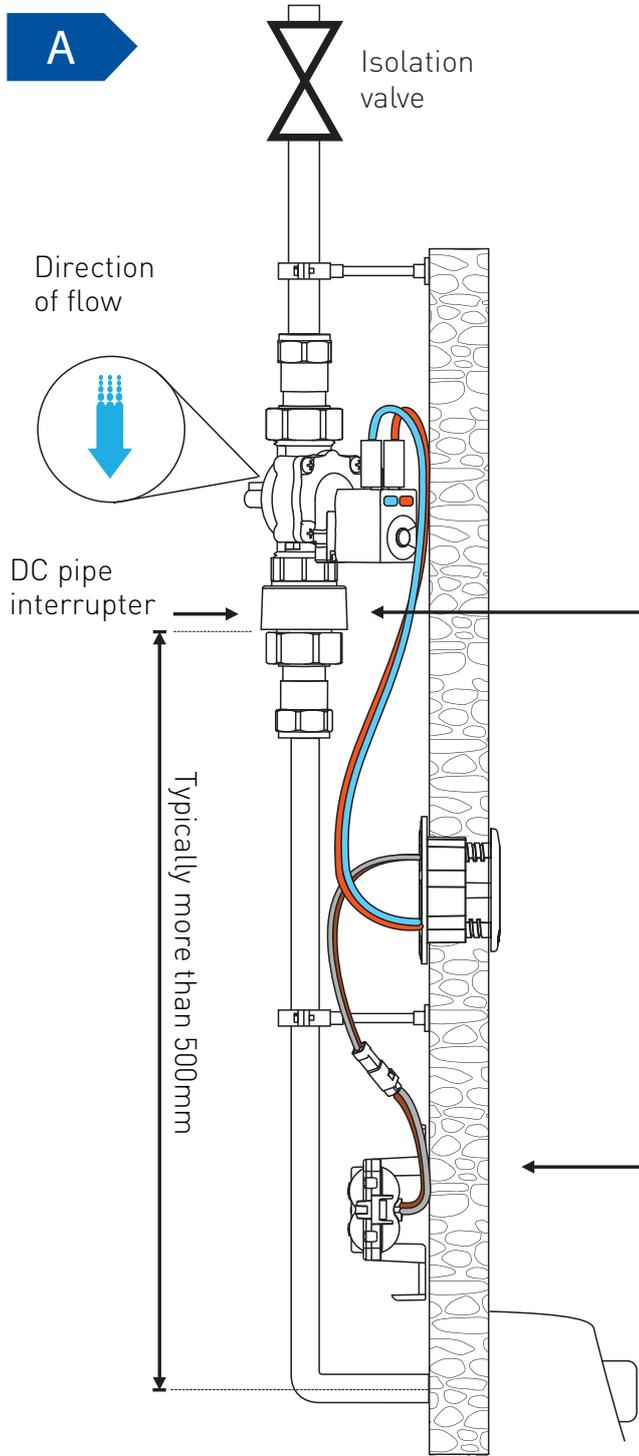
Installation

AUF 1&2 C installation (rear access)

IMPORTANT: Read Installation Requirements on page 8.

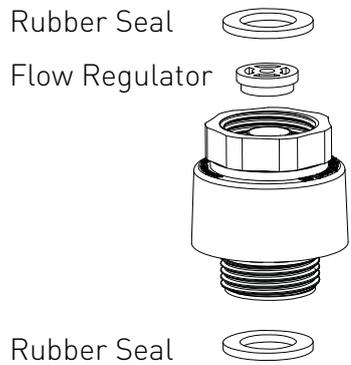
The valve should always be installed as high as possible on the vertical pipe feeding the sparge outlet to prevent water backing up and leaking from the DC pipe interrupter. A 1.5m extension cable is supplied with AUF 1&2 C.

When installing the valve it is good practice to ensure there is an accessible isolation valve upstream of the valve.

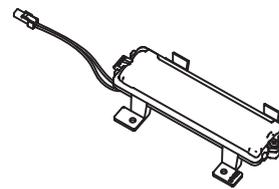


The DC pipe interrupter is supplied with a 4 lpm flow regulator pre fitted.

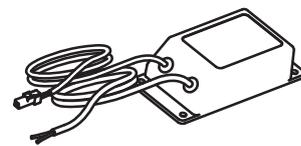
DC pipe interrupter is supplied with:



Power options



Requires 4 x AA (LR6) alkaline batteries

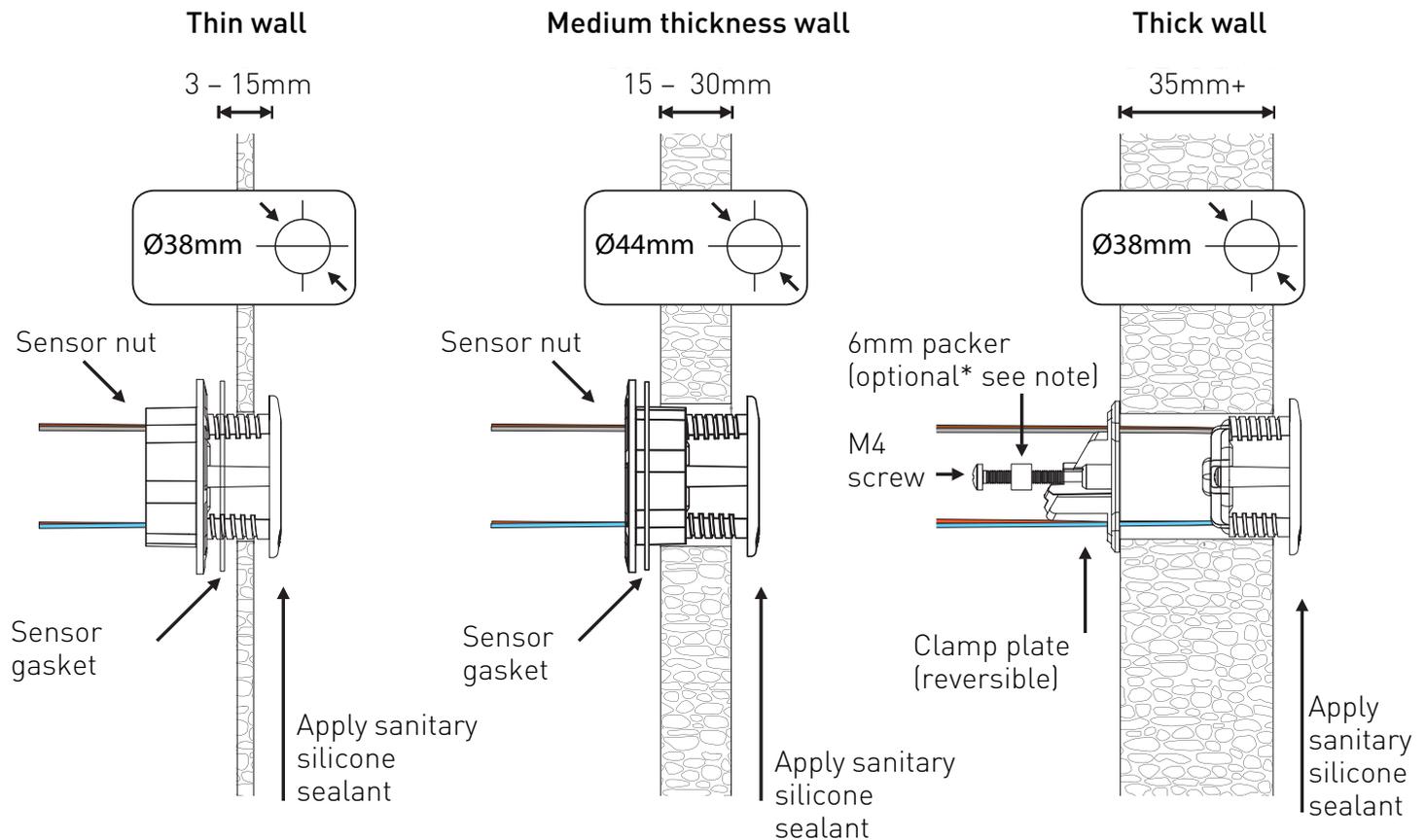


Requires 1A fused spur

Installation

AUF 1&2 C Sensor Installation (rear access)

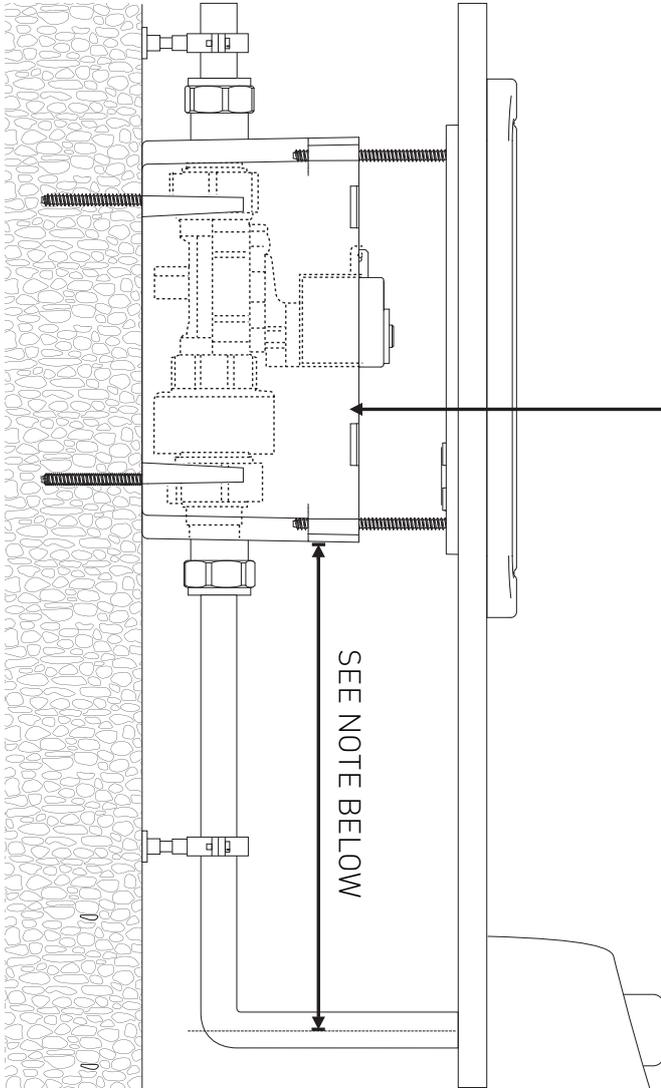
Install sensor vertically above the urinal.



NOTE: *If wall thickness is under 35mm use packer to prevent screw causing damage to sensor

Installation

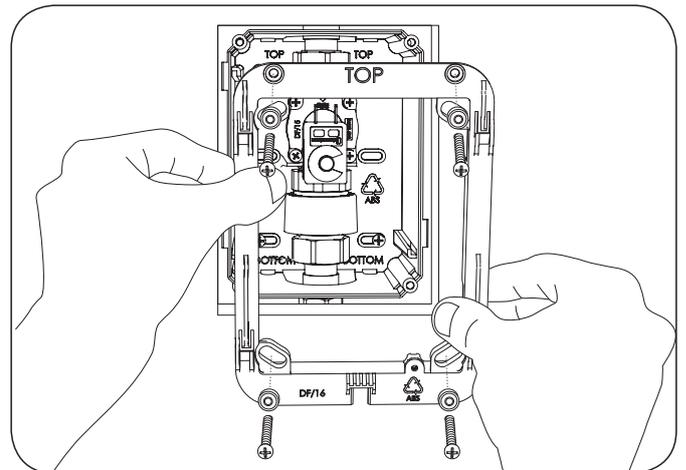
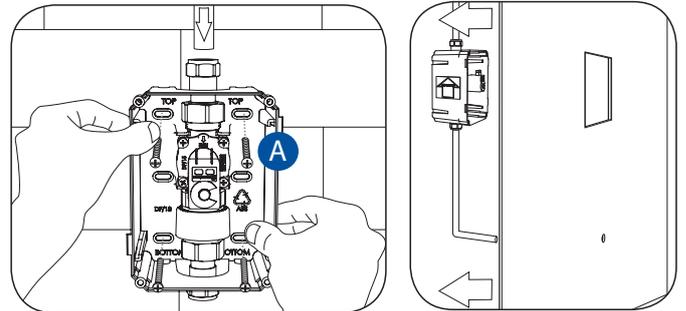
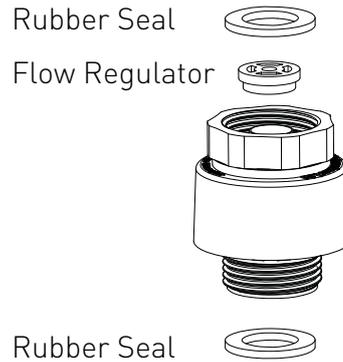
AUF 3&4 C (front access) – option 1 wall mounted



The DC pipe interrupter is supplied with a 4 lpm flow regulator pre fitted.

NOTE: The bottom of the mount box should always be installed as high as possible on the vertical pipe feeding the sparge outlet to prevent water backing up and leaking from the DC pipe interrupter.

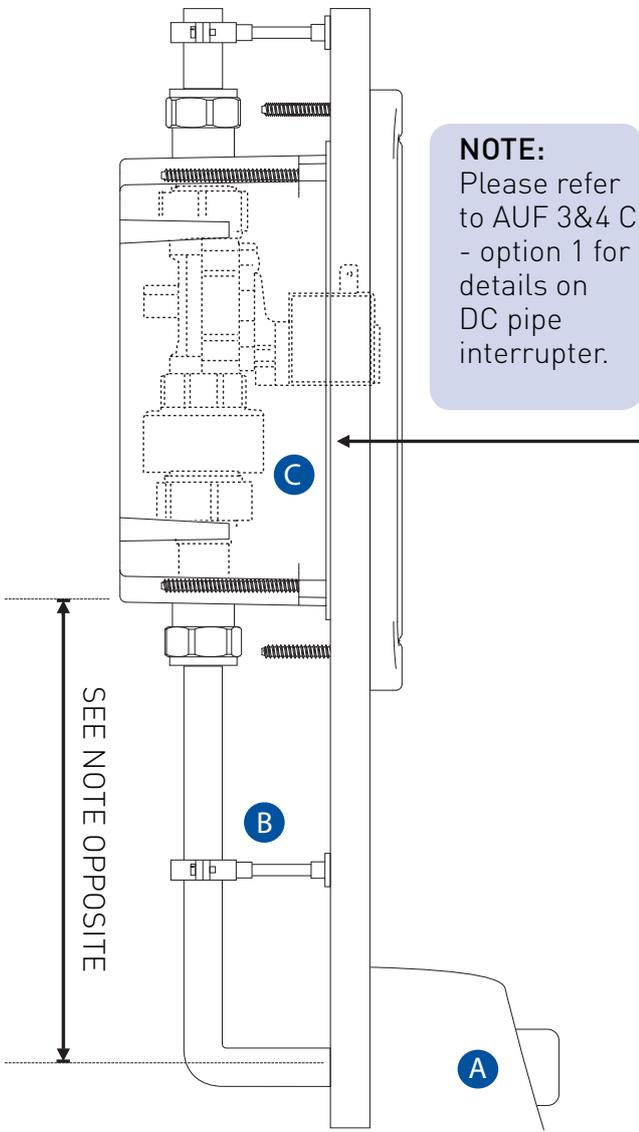
DC pipe interrupter is supplied with:



NOTE: 4 long screws **B** are provided to allow for flexible fixing of the mount box and clamp frame, if required.

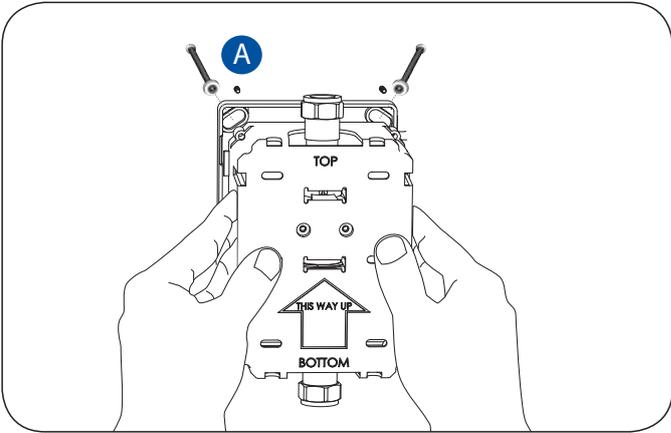
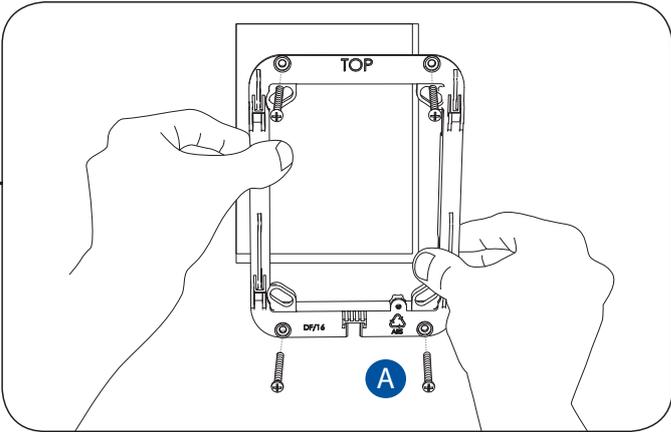
Installation

AUF 3&4 C (front access)- option 2 panel mounted



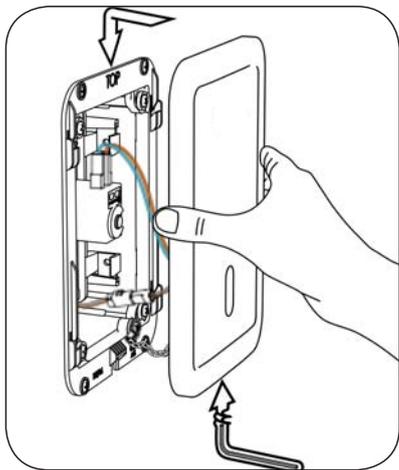
NOTE:
Please refer to AUF 3&4 C - option 1 for details on DC pipe interrupter.

NOTE: The bottom of the mount box should always be installed as high as possible on the vertical pipe feeding the sparge outlet to prevent water backing up and leaking from the DC pipe interrupter.



AUF 3&4 C fitting sensor plate

NOTE:
See power connections section.

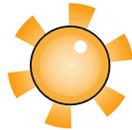


Advanced Setting Guide

Direct flush exposed and concealed Carry out only if settings need to be changed

1 Disconnect power, wait for 5 seconds and reconnect.

2 When flashing amber.



Place hand 4-6cm from sensor until constant green. Then remove hand.



3 **You are now in configuration mode**

If a hand is not placed over the sensor, it will go into normal operation mode.

Sensing range of adjustment

A Wait for single red flashing LED to enter sensing range mode.



B Briefly place your hand in front of the sensor until the green LED flashes slowly. Range configuration mode will then be ready.



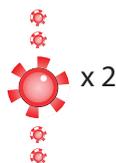
C Stand at the distance from the sensor you would like to set at maximum range. Wait 8 seconds until constant green LED shows.



Sensor distance is now set.

Flush time adjustment

A Wait for double red flashing LED to enter flush time.

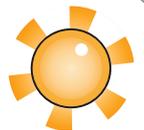


B During double red flashing briefly place your hand in front of the sensor. The valve will open and start the flush. A green flashing will be seen.



C When the water has run for the desired flush time, move your hand out of the line of sight of the sensor. The water will cease and the flush time will be set. It is recommended that this be set to a time that allows the trap to be refilled.

4 After configuration the unit will flash amber giving opportunity to re-enter configuration mode.



Troubleshooting

Symptom	Cause	Remedy
No water.	Stop / service valve closed.	Open any stop or service valves.
	Inlet filter in top of valve blocked.	Isolate water supply and remove top connection, remove inlet filter, clean and replace.
	No power.	Check power supply, ensure 6 volts are present using a multimeter.
	Insufficient water pressure.	Refer to specification on page 6.
	Sensor range set incorrectly.	Re-set sensor range. Refer to Advanced setting guide on page 14.
	The sensor is not flashing at all when the user's body is in the sensing range.	Ensure the power is connected. If the mains power is being used through the mains adaptor check that the mains adaptor is working by reverting to the battery pack. Remove the mains adaptor when using batteries. Sensor has been deactivated by the anti-vandal feature. (Sensor detect presence for more than 30 minutes). Disconnect power for 2 minutes.
	Red flash once every second. (Low or no battery power).	Change batteries. If operated by mains power contact Bristan Customer Services.
	The sensor is flashing green twice a second after the user activates sensor.	Ensure the water supply is reaching the valve and you have a good working pressure (min 0.5 - max 6 bar). Possible blockage. Ensure the filter on the inlet side of the valve is clear.
Continuous flow of water from the outlet or dripping.	Insufficient water pressure.	Water pressure below 0.5 bar will cause the valve to stay open. Water pressure above 6 bar will tear the diaphragm.
	No power.	If power fails while valve is flushing, the solenoid will stay open.
	Valve installed incorrectly.	Check the valve has been installed correctly with the arrow facing down.
	Solenoid connections on backwards. Valve will flush while user is in front of urinal instead of flushing when user leaves.	Swap connections over so that they are the correct way around.
	The sensor is not flashing at all when in the sensing range.	Ensure the power supply is functioning. Check all electrical connections.

Troubleshooting

Symptom	Cause	Remedy
Continuous flow of water from the outlet or dripping.	The sensor is flashing green once a second.	Ensure the arrow on the valve is pointing in the direction of water flow.
		Ensure the water pressure is not above the maximum working pressure of 6 bar.
Continuous flow of water from the outlet or dripping.	The sensor is flashing green once a second.	Debris or scale in the diaphragm. Isolate water supply to the valve and remove wires attached to the solenoid. Undo the 4x screws and remove. This will give you access to the diaphragm, (note orientation of diaphragm when reinstalling), flush under cold water and visually inspect. Re-install. Do not open too many times and discard any plastic swarf.
		Diaphragm has been damaged by debris. Carry out procedure for 'Debris or scale in diaphragm', visually inspect then call Bristan Customer Services for further instructions.
Water is flowing from the DC pipe interrupter.	Restrictive pipework and / or spreader.	Restrictive pipework and / or spreader will cause the water to back up in the sparge pipe and overflow from the DC pipe interrupter.
	Valve height.	The valve should be installed a minimum of 500mm above the spreader.
	Incorrect water pressure.	Low water pressure will cause splashing from the interrupter when valve closes. Excessive water pressure may need reducing before the valve, to ensure the flow rate through the valve matches the flow rate through the spreader.
	Flush time needs adjusting.	Adjust flush time, refer to Advanced setting guide on page 14.

Notes

Symptom	Cause	Remedy
Water is flowing from the DC pipe interrupter.	The sensor is flashing green twice a second after the user activates sensor.	The DC interrupter is in backflow condition or there is a blockage or restriction downstream of the valve. See key design and installation on page 10. A 4 lpm flow regulator is pre fitted to control the flow of water into the urinal system (see page 10).
Splashing.	Urinal bowls design / shape.	Some urinals are not designed for the high pressures of a mains water supply and splashing may occur. In such cases a pressure reducing valve (not supplied) is required on the supply side of the Bristan valve to reduce the pressure as necessary. A 4 lpm flow regulator is pre fitted to control the flow of water into the urinal system (see page 10).
Other alarms.	Double red flash.	Faulty wiring. Check wiring carefully.
		Faulty solenoid. Call Bristan Customer Services for advice.
	Red flash once a second.	Low or no battery power. Charge batteries. If operated by mains power, Contact Bristan Customer Services.
	Red flash twice every three seconds.	Sensor covered or heavily scratched. Uncover or polish out scratches.
	Constantly flashing green.	Sensor range requires to be re-set. Refer to Advanced setting guide on page 14.

Guarantee

At Bristan, we want to make things as easy as possible for our customers. That's why we design products that are easy to fit and use, and that are quality tested to make sure they won't let you down. It's also why we offer solid guarantees on all products, effective from the date of purchase, to give you peace of mind.

All Bristan Direct Flush Urinal Valves are covered by a 1 year guarantee. This also includes 1 year labour cover which means that, in the unlikely event that there is a problem in the first year after purchase, we'll send one of our expert engineers to fix it.

*Labour is provided by an approved Bristan Care engineer or appointed representative. The guarantee only applies to products with a manufacturing fault. There will be a call out charge for any incidents where no fault has been found with the product, or if the issue is due to poor installation or maintenance.

Guarantee Terms and Conditions

This guarantee is in addition to your statutory and other legal rights and is subject to the following conditions:

- The product was purchased within the United Kingdom or Republic of Ireland.
- The guarantee applies solely to the original purchaser with proof of purchase.
- The installation must allow ready access to all products for the purpose of inspection, maintenance or replacement.

- Repair under this guarantee does not extend the original expiry date. The guarantee on any replacement parts or product ends at the original expiry date
- Any part found to be defective during the guarantee period will be replaced without charge, providing that the product has been installed in accordance with the instructions given in this guide and used as the manufacturer intended.

The guarantee does not cover

- Damage or defects caused by:
 - general wear and tear (including special non-chrome finishes;
 - components such as filters, seals, 'O' rings and washers)
 - incorrect installation
 - repair using non-Bristan part
 - accidental or wilful misuse
 - corrosion and the use of inappropriate cleaning products.
 - system debris including the build up of limescale (which can be controlled through regular servicing and maintenance)
- Compensation for loss of use of the product or consequential loss of any kind.

In the interests of continuous product improvement, Bristan reserves the right to alter product specifications without notice.

Guarantee

The Bristan Product Guarantee does not affect your statutory rights as a consumer.

Need help?

If this product does not function correctly when first used, contact Bristan Care Customer Service on 0844 701 6273 where our expert team of advisors will be able to offer you help and advice.

Problems during the guarantee period

In the unlikely event that you encounter any problems with the product during the guarantee period, contact Bristan Care Customer Service on 0844 701 6273 with your proof of purchase and we will work to resolve the problem quickly.

Bristan Care Customer Support

Bristan customers also benefit from the support of Bristan Care, our comprehensive customer support package which offers:

Technical support hotline

(Tel: 0844 701 6273) with access to fully trained advisors who can offer installation advice, talk you through quick maintenance checks, or recommend the best course of action to fix any problems with a product

Expert advice

Find easy to follow 'how to' video guides and technical FAQs online at www.bristan.com. Our guides take you step-by-step through many product installations and you can find plenty of easy guides to quick product fixes and servicing.

Spare parts

We hold thousands of spares and we keep them for discontinued products for over seven years. Spares can easily be ordered online at www.bristan.com and are dispatched the same day.

Expert plumbing engineers

If we can't solve the problem over the 'phone or with a spare part, then we'll send out one of our Bristan Care engineers to take a look. Bristan Care engineers provide free support for products that are within guarantee, but are also available to service products that are out of guarantee for a small charge. For details, please call customer services on 0844 701 6273.

Part Number: FI: AUF
Issue: D1

BRISTAN

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