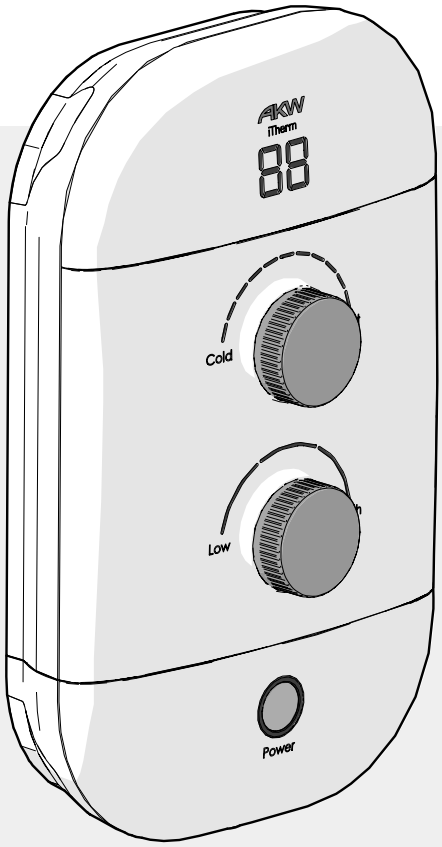
Life Made Better

iTherm Electric Shower

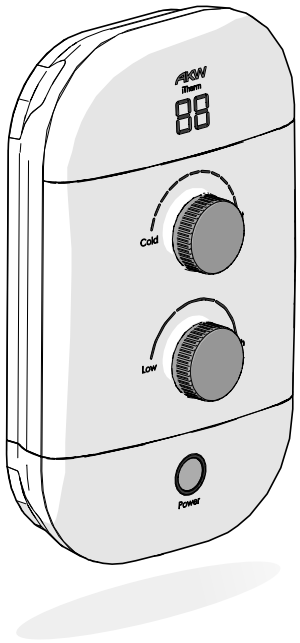
INSTRUCTIONS



Stock code
8.5 kW - **30306**
9.5 kW - **30307**

Please read all instructions before installation and leave this document
with the end user for future reference as it contains important warranty information

Product Features



Eco Setting
Optionally select 6 litres per minute maximum flow

Automatic Shut Down
The shower automatically reverts to standby - preset time can be set at 5, 10, 20 or 30 minutes

Phased Shut Down
Flushes the shower with cold water to avoid the possibility of scalding if the shower is restarted within a short period of time

Flexible Installation
6 cable entry points
8 water entry points
Dual power blocks for left or right wiring
Fitting plate retro-fit footprint

Connectivity
Wired connectivity to AKW DigiPumps and P12D shower waste pumps

Contents

Safety Information

Failure to install this AKW product in accordance with supplied instructions or the making of unauthorised modifications will invalidate any warranty and may affect product safety.

AKW does not accept any liability in connection with this information or its use. This information is provided on the condition that the installer determines its suitability for each case. None of the foregoing affects your statutory rights.

This appliance can be used by any persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge of showering, if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Do not operate shower if you suspect the water in the heater tank is frozen or the appliance has been exposed to freezing conditions.

Do not operate the shower if the spray handset or hose is damaged or blocked.

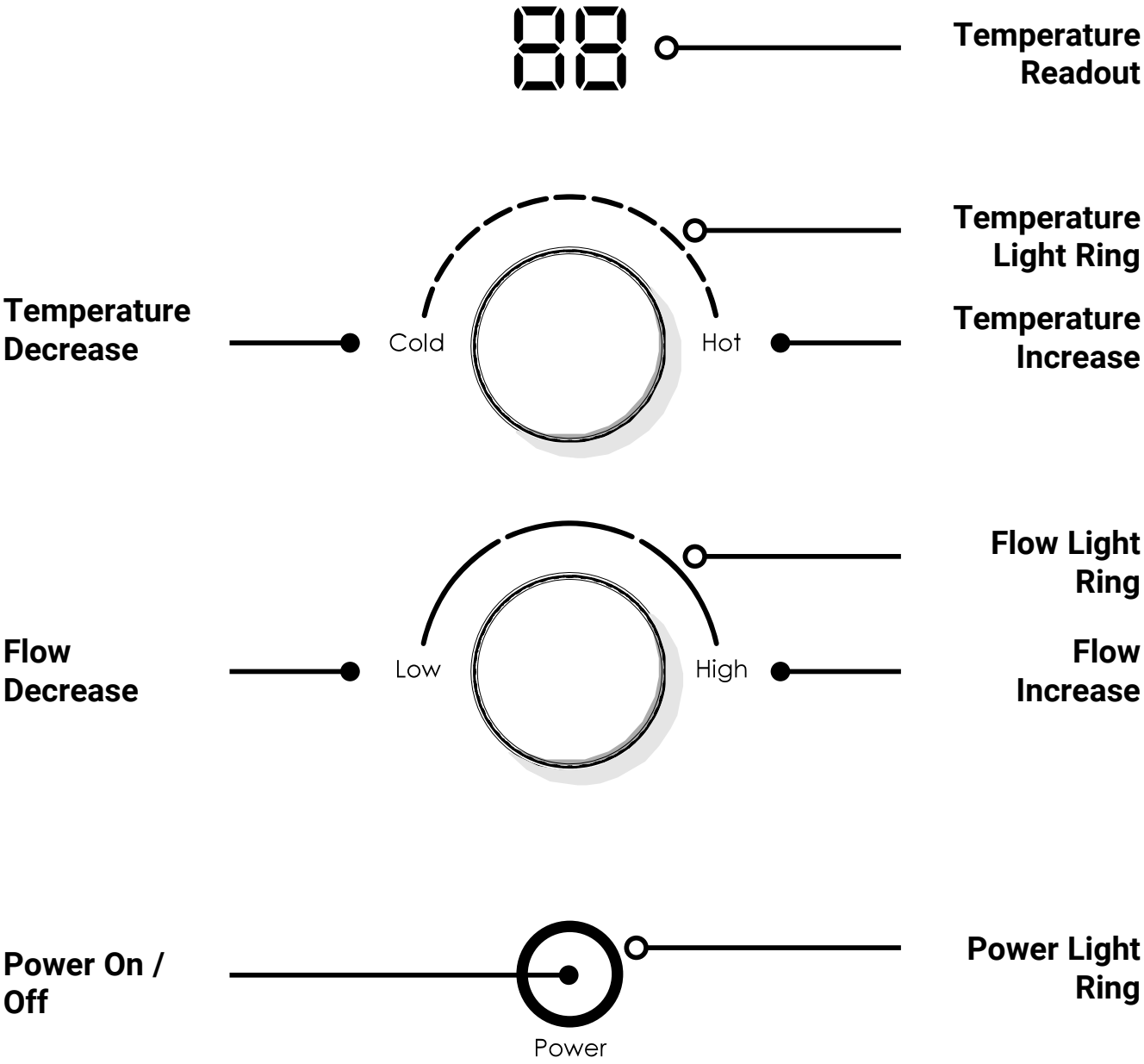
Cleaning Recommendations

Always isolate power supply before cleaning.
Clean and descale the shower head regularly.

The shower unit and surrounding areas should be cleaned periodically to remove any accumulation of dirt or other waste materials, using domestic bathroom and kitchen cleaning materials with a soft cloth.

Do not use abrasive pads or cloths. Do not use strong or concentrated acidic, alkaline or other cleaning materials as these may damage or discolour the product.

After cleaning always wash down with water then wipe thoroughly with a damp soft cloth to remove any cleaning material residue.



Starting the Shower

Switch on the mains power at the isolating switch.

When power is applied, the Power Light Ring will be dimly lit and the shower is in standby mode.

To switch on, press the Power button. The Power Light Ring will be brightly lit.

Shower Settings

Settings Mode

When in standby state, if the power button is pressed and held for > 5 seconds, then released, the shower enters settings mode (beep and bright power light ring).

Select the mode required by adjusting the temperature control.

If the temperature control is not adjusted within 5 seconds of releasing the power button then the shower will revert to standby state.

If the temperature control is adjusted within 5 seconds, the LEDs will illuminate proportionately (LEDs are initially blank entering settings mode).

The LEDs will remain lit for 5 seconds after last adjustment.

If while the LEDs are illuminated the power button is pressed and released, a corresponding mode will be entered as detailed below (beep/flash to confirm).

The LED order referred to below is numbered clockwise on the temperature display.

Cold Flush: this setting will be selected when only LED #1 is lit.

Volume Setting: this setting will be selected when LEDs #1 & 2 are lit.

Eco Setting: this setting will be selected when LEDs #1, 2, 3, 4 & 5 are lit.

Cold Flush

Press / release power button: cold flush starts immediately.
Press / release power button: cold flush cancelled: revert to standby state.
Cold flush will continue for 60 seconds if not cancelled as above.

Volume Setting

Press / release power button: volume set mode entered.
Select volume setting by adjusting temperature control:
1 LED = no sound / 2 LED = low volume / 3 LED = high volume (default).
If temperature control is not adjusted within 5 seconds of releasing power button: revert to standby state.
Press / release power button: volume setting stored: revert to standby state.

Eco Setting

Press / release power button: Eco setting mode is entered.
Select Eco On/Off by adjusting temperature control:
1 LED = Eco Off / 2 LED = Eco On (default). Eco On = flow limited to 6 lpm.
If temperature control is not adjusted within 5 seconds of releasing power button: revert to standby state.
Press / release power button: Eco setting stored: revert to standby state.

Troubleshooting

Read and understand the user guide before commencing troubleshooting.

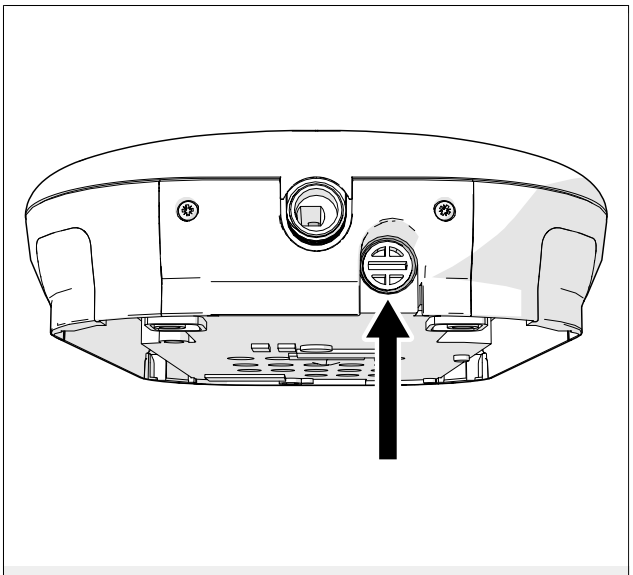
Fault	Indication	Symptoms
Low pressure	POWER BUTTON LED : dim TEMP LEDs : #1 only FLOW LEDs : none Digital Display: LP	Flow rate less than ~1.0 lpm Possible causes include low water pressure, starvation of supply or blockage in the inlet filter or outlet hose/handset.
Inlet thermistor	POWER BUTTON LED : dim TEMP LEDs : #1+2 FLOW LEDs : none	Faulty inlet thermistor. Shower continues to run, but heating elements are disabled.
Outlet thermistor	POWER BUTTON LED : dim TEMP LEDs : #1+2+3 FLOW LEDs : none	Faulty outlet thermistor. Shower continues to run, but heating elements are disabled.
Instantaneous Overtemperature	POWER BUTTON LED : Dim TEMP LEDs : #1+2+3+4+5 FLOW LEDs : None	Shower continues to run, but heating elements are displayed. Re-enabled when overtempertature is resolved when the shower is running.
Uncontrolled Overtemperature	POWER BUTTON LED : dim TEMP LEDs : #all FLOW LEDs : none	Shower shutdown immediately. i.e. no phased shutdown. Display error will persist until electricity supply has been isolated and reinstated. No operation until heater tank either cools naturally or is 'cold flushed'. Possible causes include component failure or sudden starvation of water supply.

Note: all errors flash rate 1 sec on / 1 sec off

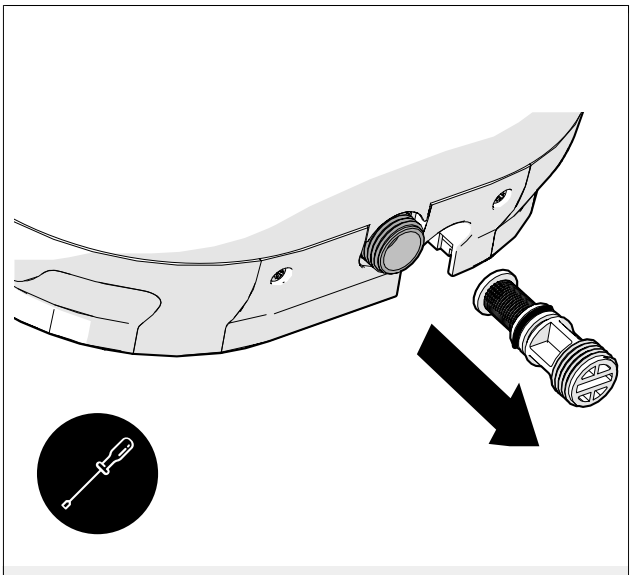
In the event that the shower fails to respond to any push-button or exhibits unusual performance characteristics during operation, turn off the electrical supply by operating the pull-cord switch or isolating switch. Wait for a few seconds for the shower to reset, then turn the power back on and press the on/off button. If the problem persists, note which fault LED is lit or flashing and contact AKW Technical Enquiries (01905 560 219 | tech@akw-ltd.co.uk).

Filter Cleaning

This should be done only if you suspect reduced flow rate or water hardness build up.



Locate the filter.



Unscrew the filter.

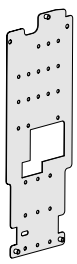
Ensure that the electrical supply is switched off at the mains.

Ensure that the water supply is turned off.

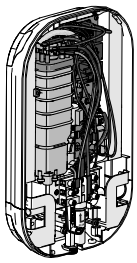
Using a flat head screwdriver, unscrew the filter.

Rinse the filter in water and once this is clean then return to the inlet housing.

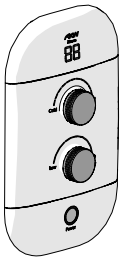
Main Components



Fitting Plate



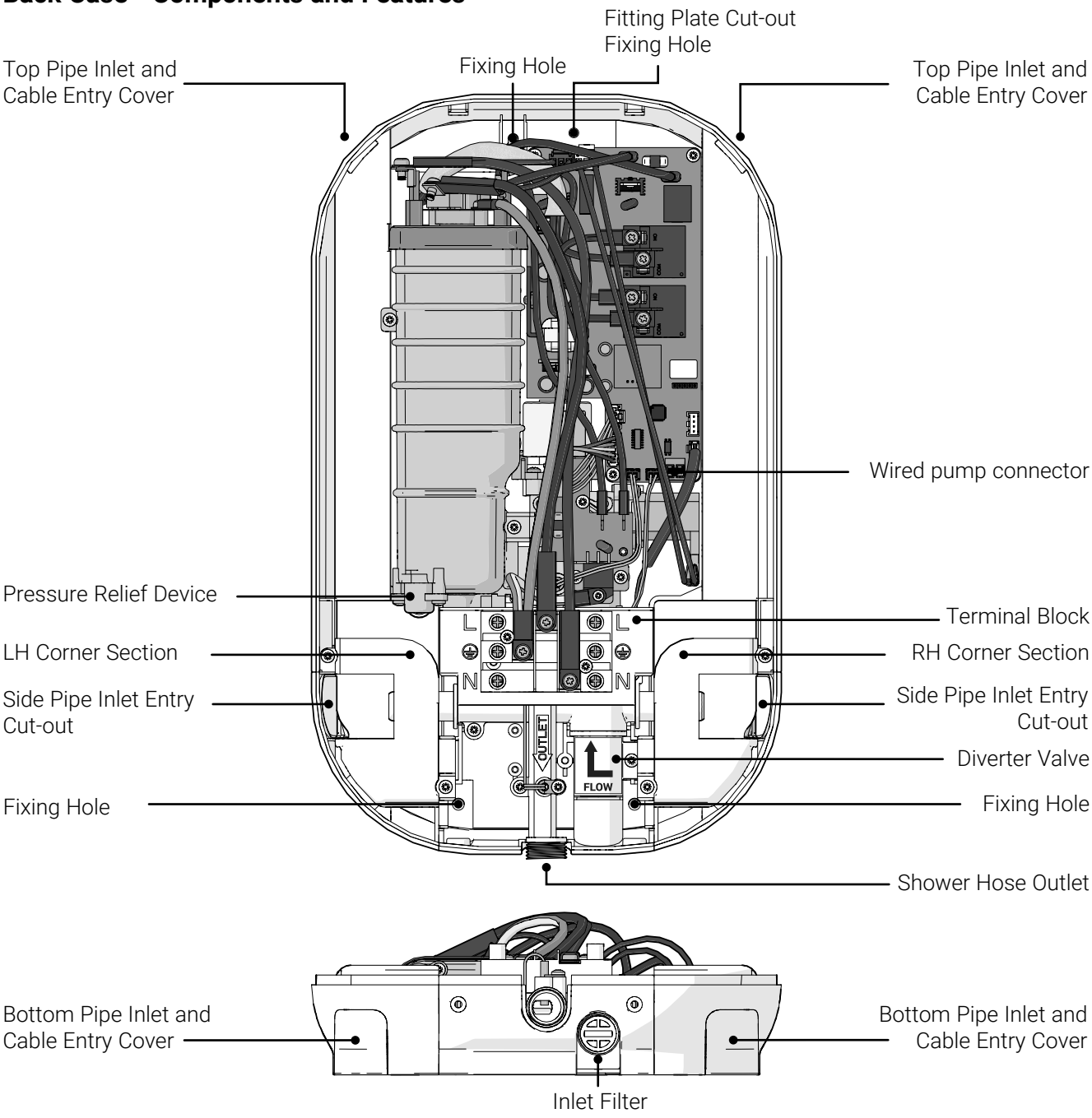
Back Case



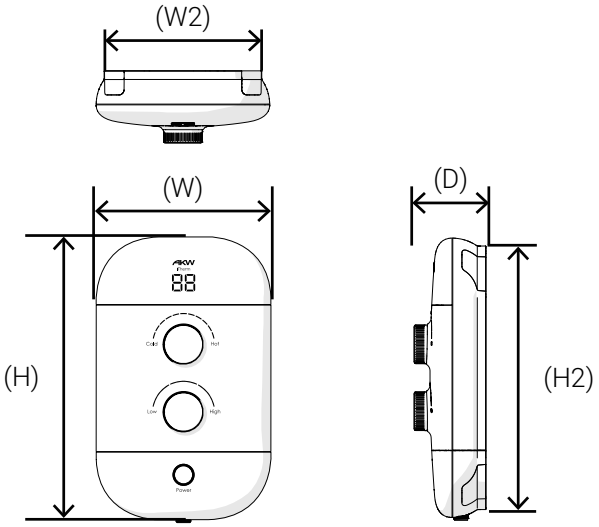
Front Cover

Fixings

Back Case - Components and Features



Specifications



PLUMBING SUPPLY	Supply Source	Mains pressure cold water only
	Minimum Dynamic Pressure	50 kPa (0.5 Bar)
	Recommended Minimum Dynamic Pressure	100 kPa (1 Bar)
	Maximum Static Pressure	1000 kPa (10 Bar)
	Maximum Inlet Temperature	28°C
	Minimum Inlet Temperature	3°C
	Inlet Connection	15 mm pipe
	Outlet Connection	1/2" BSP Male Thread Fitting
ELECTRICITY SUPPLY	Nominal Rating at 240 V	9.5 kW & 8.5 kW
	Supply Fuse / Circuit Breaker	(9.5 kW 40/45 A) & (8.5 kW 35/40 A)
	Residual Current Device (RCD)	30 mA (must be fitted)
	Supply Cable	Refer to current wiring regulations and BS 7671 to determine minimum cable size. No larger than 10 mm^2
	Isolation Switch (e.g. Pull Cord)	50 Amp Double Pole with 3 mm contact separation.
PHYSICAL	Height	(H) 388 mm
	Width	(W) 240 mm
	Depth	(D) 100 mm
	Footprint Height	(H2) 365 mm
	Footprint Width	(W2) 218 mm
	Water Ingress Rating	IPX4
	Cable Entry Points	6 - Top, bottom or rear.
	Water Entry Points	8 - Top, bottom, rear or side.

ACCREDITATIONS & CERTIFICATIONS

BEAB Approved Intertek

WRAS APPROVED PRODUCT CERTIFICATION MARK

CE UKCA

Installation Requirements

The shower must be connected only to the mains cold water supply.

DO

- Mount on a finished flat, waterproof surface.
- Position the shower unit vertically.
- Ensure that the shower unit is positioned over a bath, shower tray, or wet floor.
- Direct the shower head away from the shower unit. During normal use the shower head must not spray directly on to the shower unit.

DO NOT

- Use a shower handset with an intergrated on/off button or switch.
- Block, restrict or connect the water outlet pipe to any parts other than those AKW specifically state for use with this electric shower, as it acts as a vent.
- Position the shower where it will be subjected to freezing conditions.
- Tile up to the shower unit.
- Seal the shower to the wall with silicone or other sealant.
- Use fittings which cannot be removed.

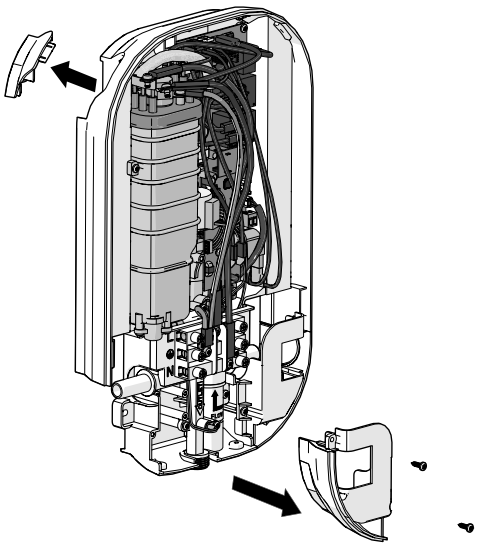
Before you start work:

Check that there are no pipes or electrical cables inside the wall before drilling.
Check for cracks or loose tiles or grout. Make sure that all surfaces are clean, dry and free from loose debris or dust.

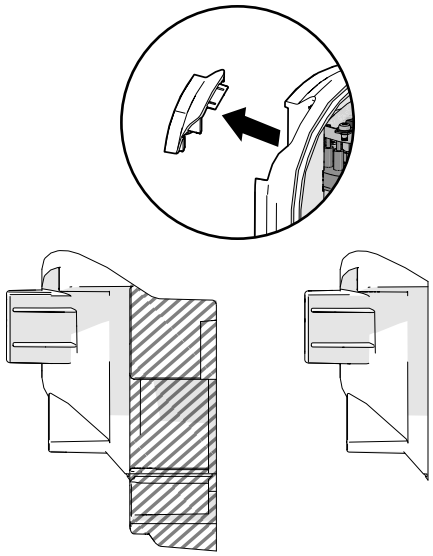
This product is not suitable for mounting into steam rooms or steam cubicles.

Note - If it is intended to operate the shower in areas of hard water (above 200 ppm temporary hardness), a scale inhibitor may have to be fitted.

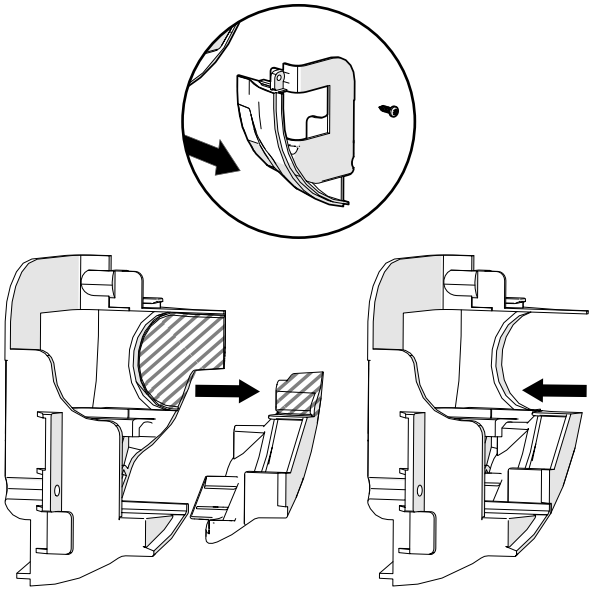
Ensure that the electrical supply is switched off at the mains.
Ensure that the water supply is turned off.



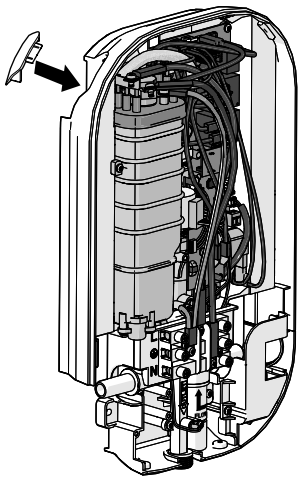
Remove desired entry covers and corner section.



If using 25 x 16 cable trunking, cut out the area shown.



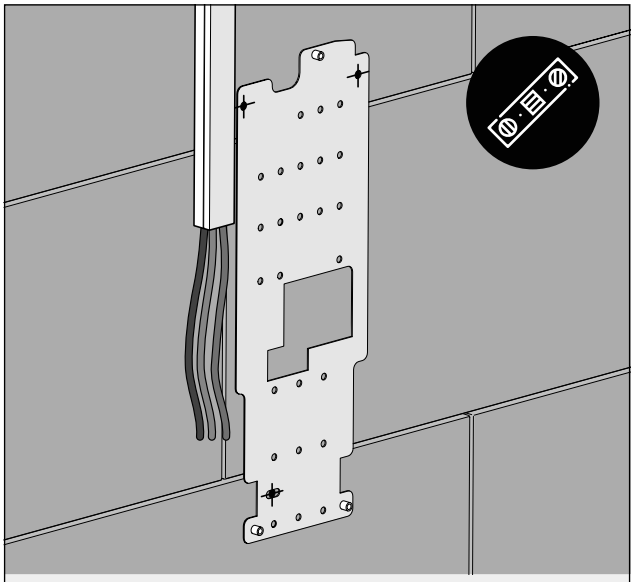
If using side pipe entry, cut out the area on the two parts shown.



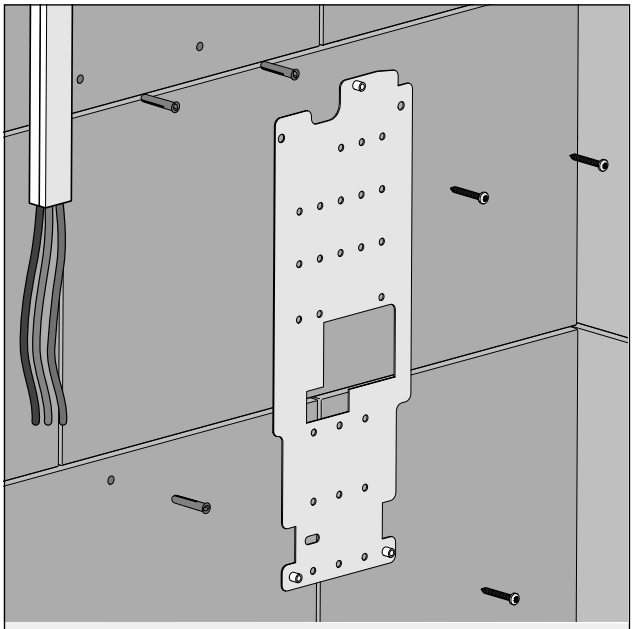
Reinsert the cover shown before mounting to the wall. Leave the corner section to one side until pipe installation is complete.

Fitting to Wall - With Fitting Plate

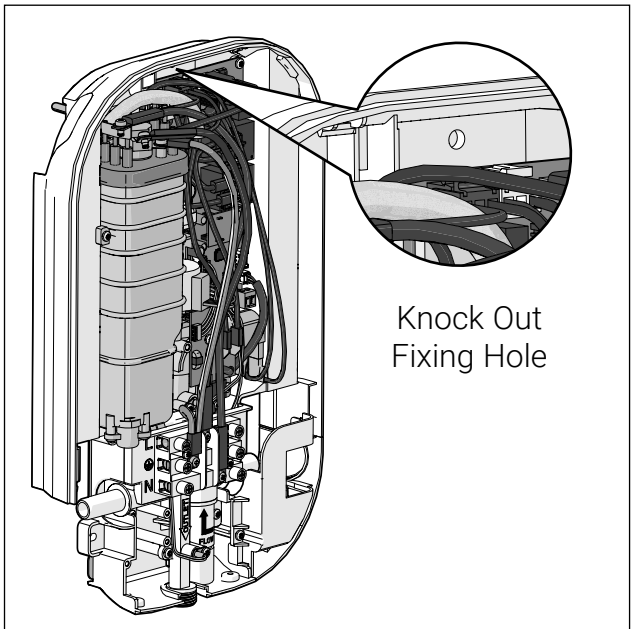
The Fitting Plate is an option if you cannot drill into certain areas due to existing pipes or cables in/on the wall. You can also use this if you want to use existing screw positions from an existing shower.



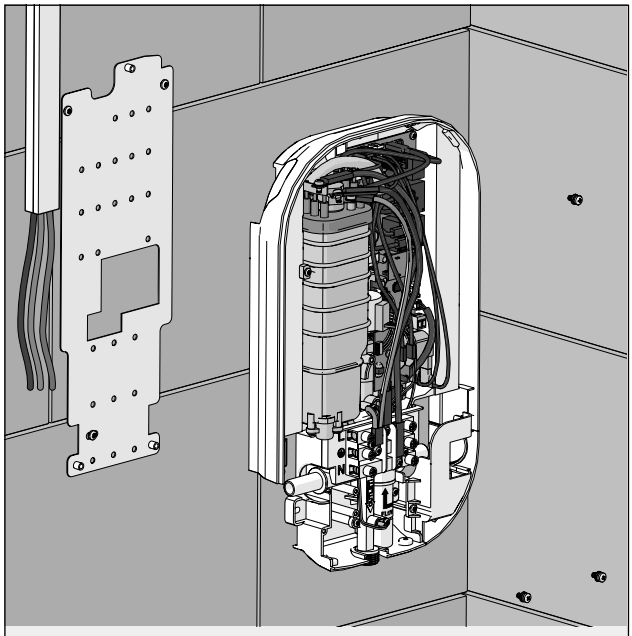
Ensure the plate is level and mark a minimum of 3 out of the 28 available fixing points on the wall. Note: the 3 marked holes match AKW electric showers within the stock code range 29010 to 29092.



Before drilling, check for any buried cables or pipework. Drill, insert wall plugs and screw to wall.



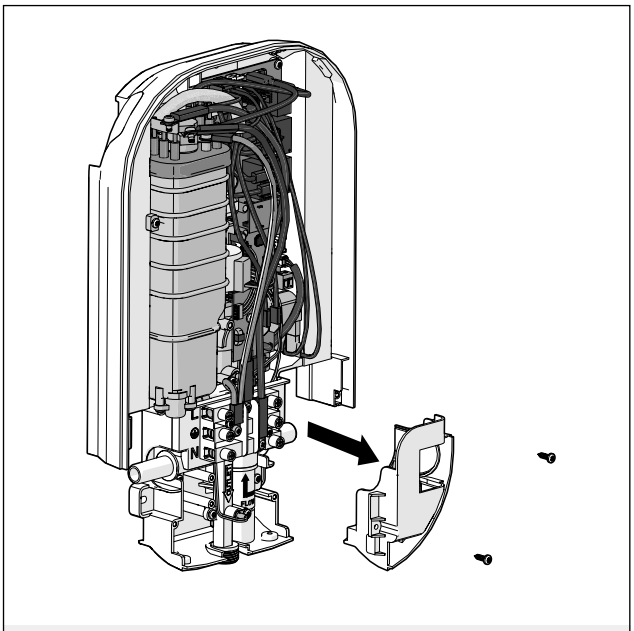
Knock out the fixing hole at the top of the back case with a screwdriver.



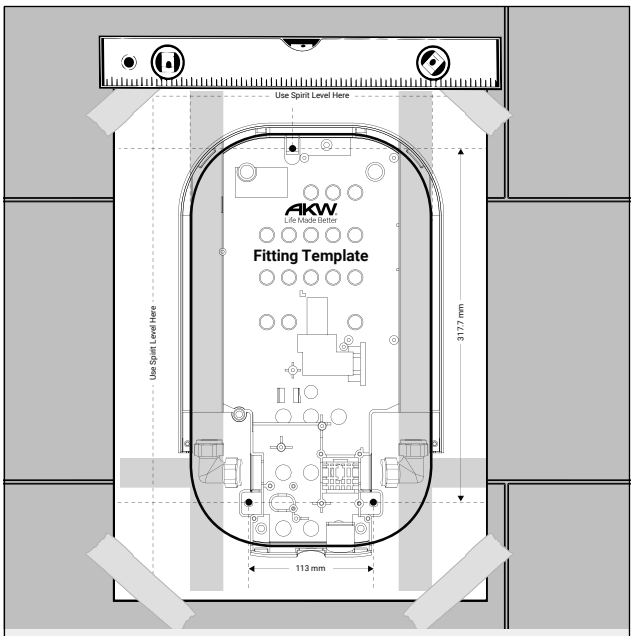
Screw back case to plate using the provided 3x M4 machine screws with spring washer.

Fitting to Wall - Without Fitting Plate

It is essential to remove any debris and/or brick dust that could otherwise damage the unit. Do not drill any alternative holes in the case – as this may compromise safety and will invalidate the warranty. Check for hidden cables and water pipes.

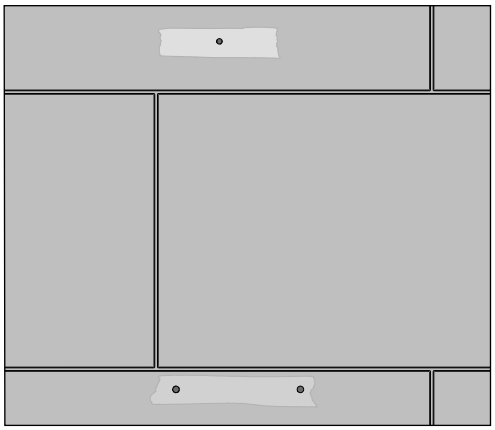


If fitting without plate, remove the other corner section to gain access to mounting holes.

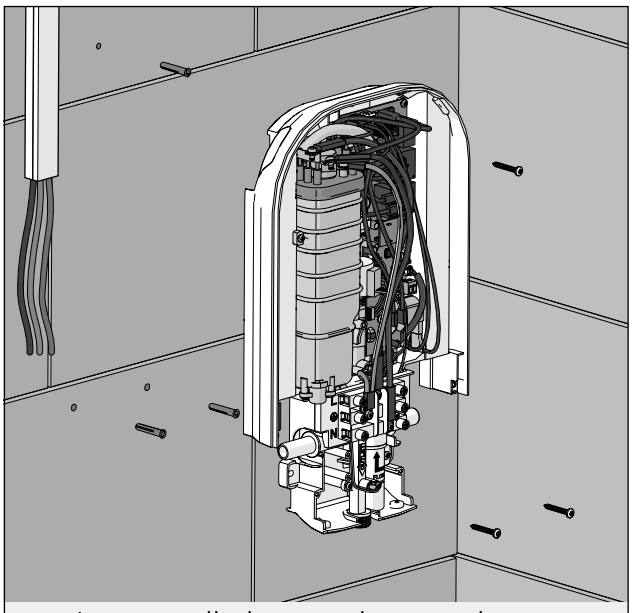


Use the fitting template provided. Ensure that the template is level and temporarily hold in position with tape.

Tip: use masking tape on tiled walls to prevent slipping and tile splintering. Always use a tile drill bit when drilling tiles.



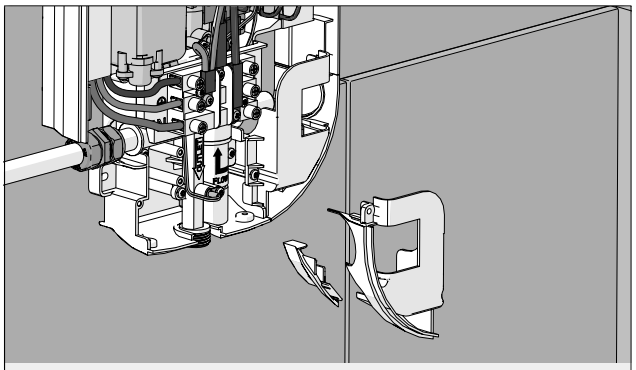
Before drilling, check for any buried cables or pipework. Remove the fitting template from the wall and drill the marked fixing points.



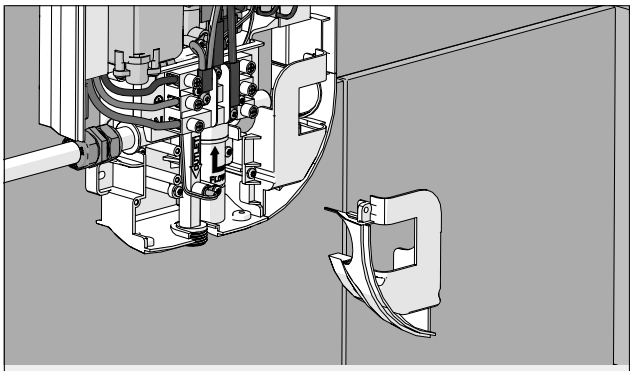
Insert wall plugs and screw the top screw to the wall first and then bottom screws should be fitted only during final installation.

Reassembly - Corner Section

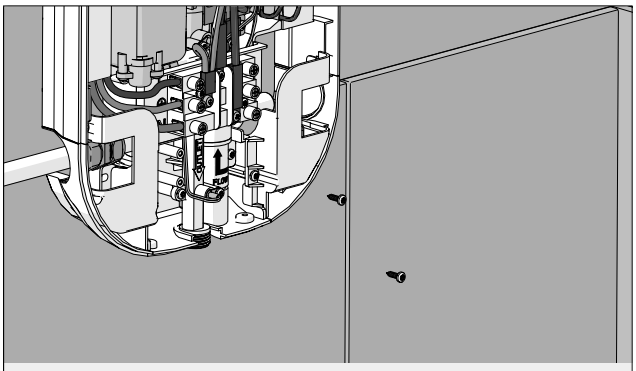
Once the cable and pipe connections have been made, reassemble the corner section.



If using side entry, slide the entry covers in.



Slide the corner section in to the unit.



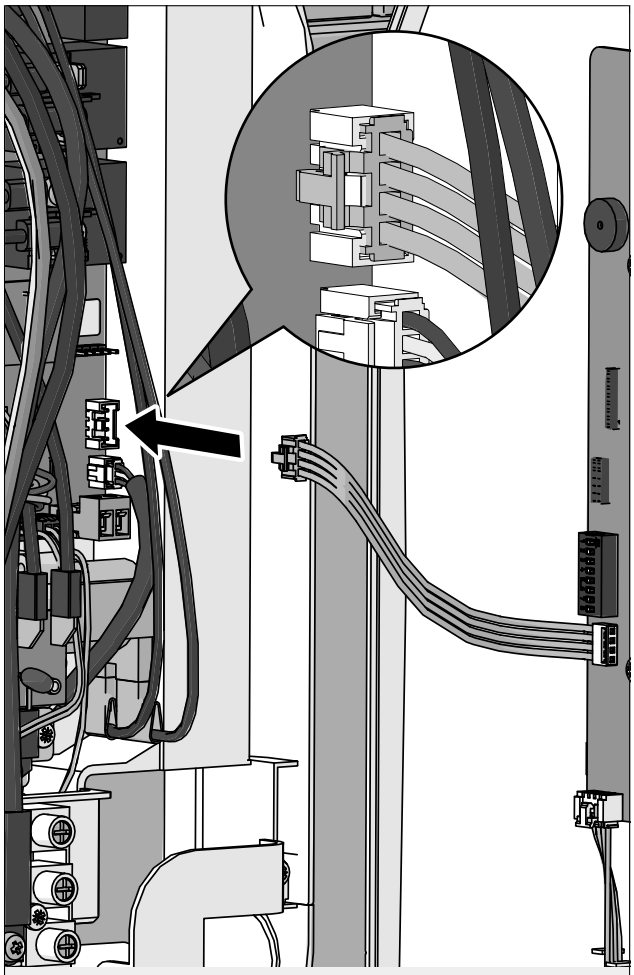
Fasten the screws holding
the corner section.

Reassembly - Front Cover

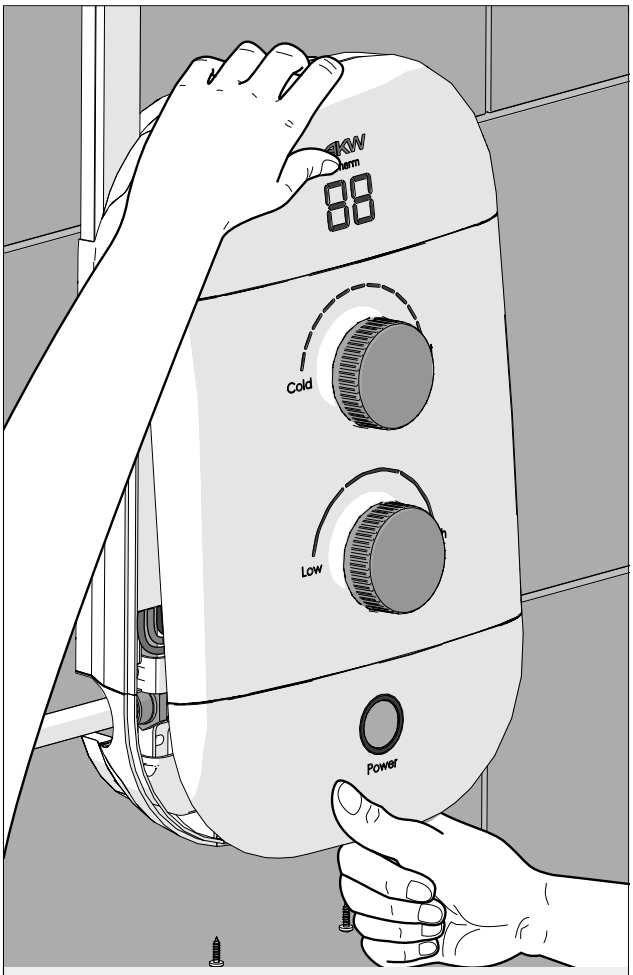
Ensure that all connectors are correctly inserted before the cover is refitted.

Refit the front cover taking care not to trap the ribbon cable or any other wires.

Use only the supplied screws to secure the front cover. Failure to do so may cause internal damage to the appliance.



Carefully connect the ribbon cable.



Place top of the cover against the shower making sure the retaining clips are in the correct position and press the bottom of the cover to clip. Screw in place.

Plumbing

COLD WATER FEED ONLY - Never fit the appliance to the hot water supply.

There are 8 water inlet points for easy installation.

Plumbing work should be completed before any electrical connections are made.

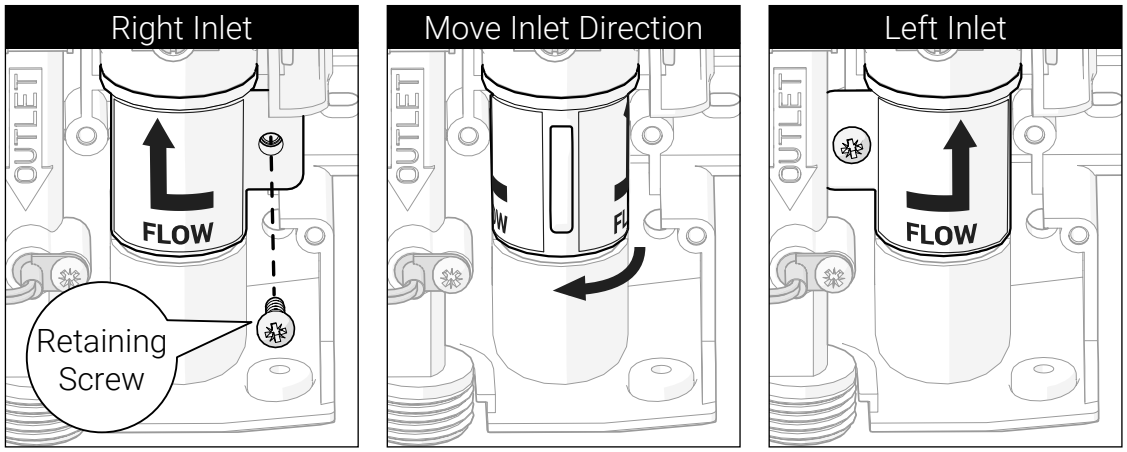
Before assembly, flush the water supply pipes thoroughly to remove debris in the pipework (allow the water to run with the main stopcock open for about 3 mins), to prevent debris and dirt particles from blocking the filter which might affect the function of the shower.

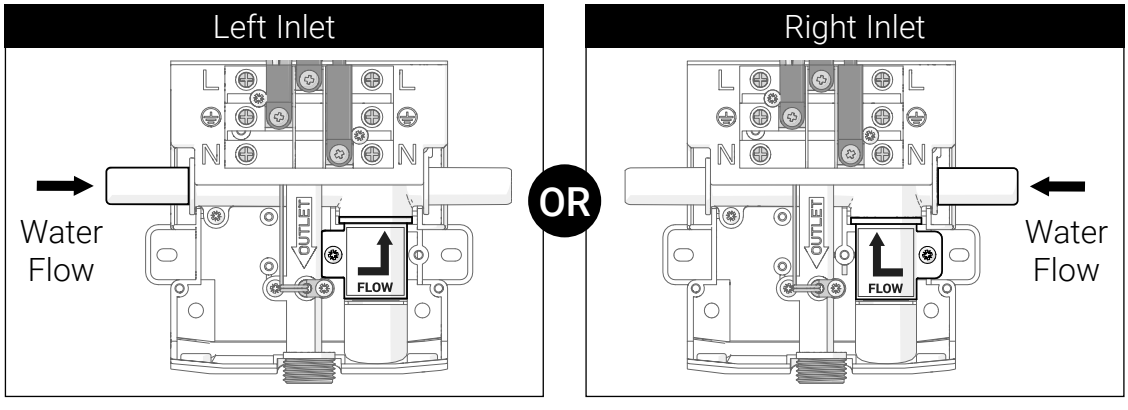
DO NOT fit any form of outlet flow control to the water heater.

Note: An isolating stop valve must be installed on the cold water feed before connecting to the shower. The isolation valve (not supplied) should be fitted as close as is practicable to the water supply inlet of the shower heater whilst being accessible for maintenance and servicing purposes.

Determining Water Inlet Direction
Remove retaining screw and rotate diverter valve to left or right as desired. Reinsert screw to secure before connecting water supply.

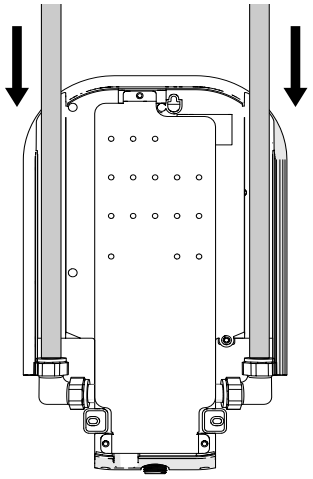
Note: If valve is tight when rotating, use a flat head screwdriver under tab to free it.





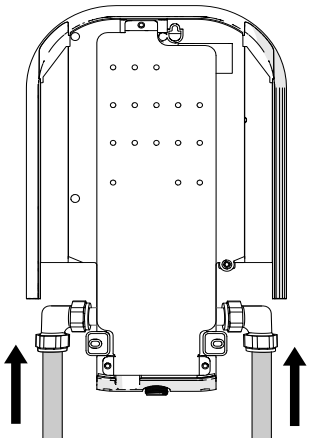
Determine pipework position and select the inlet option most suited to your situation.
Always prime pipework and flush clear of debris.

Top Entry



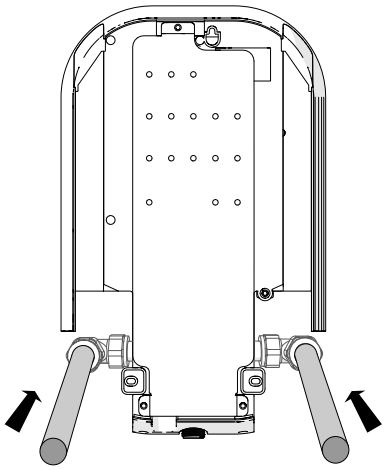
Left or right top inlet.

Bottom Entry



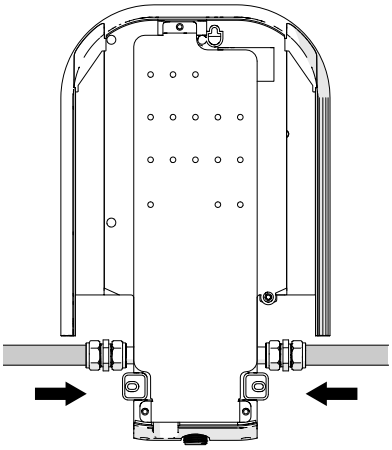
Left or right bottom inlet.

Rear Entry



Left or right rear inlet.

Side Entry



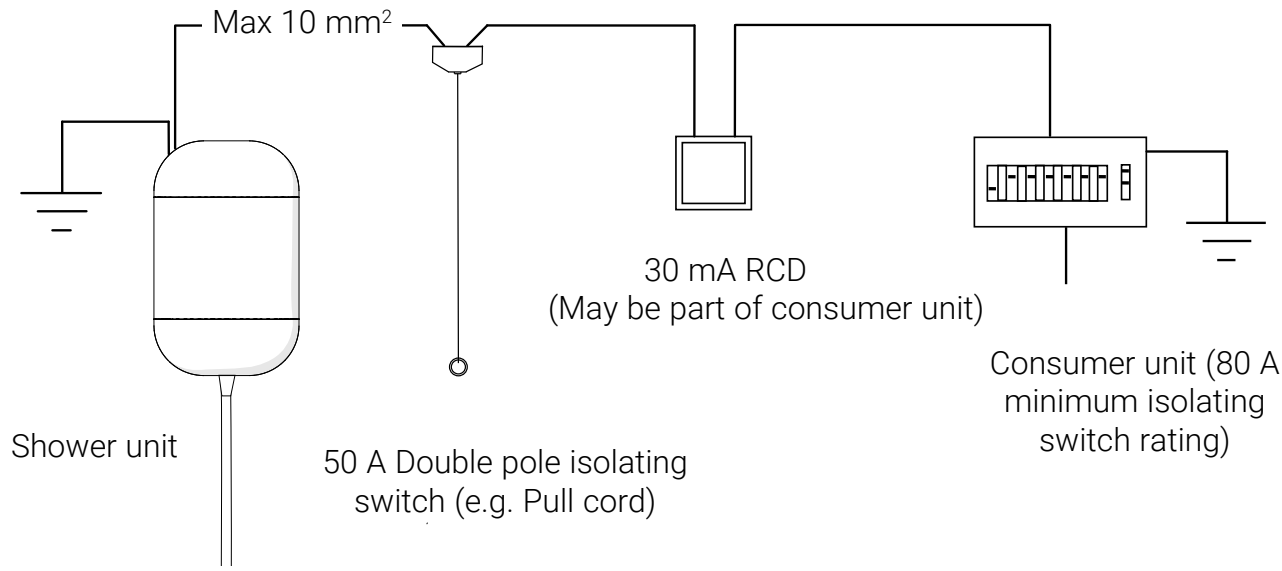
Left or right side inlet.

Electrical

Caution - Danger of Death 230 V AC
Lethal Voltage present on the AC supply.

WARNING - THIS APPLIANCE MUST BE EARTHED

ALL COMPONENTS MUST BE RATED AND INSTALLED IN ACCORDANCE WITH WIRING REGULATIONS.



For adequate circuit protection DO NOT use a rewireable fuse. Instead use a suitably rated miniature circuit breaker or cartridge fuse.

A 30 mA residual current device (RCD) must be installed.

A 50 amp double pole isolating switch with a minimum contact gap of 3 mm in both poles must be incorporated in the circuit.

The isolating switch must have a mechanical indicator showing when the switch is in the OFF position, and the wiring must be directly connected to the switch.

The isolating switch must be accessible and clearly identifiable, although out of reach of a person using a fixed bath or shower. The cord of a cord-operated switch should be placed so that it is not possible to touch the switch body whilst standing in a bath or shower cubicle.

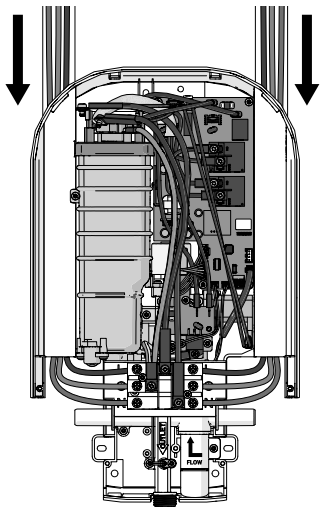
Where shower cubicles are located outside of a bathroom, all socket outlets in the room must be protected by a 30 mA RCD. Consult the wiring regulations.

It is recommended to use the shortest cable route possible from the consumer unit to the shower.

Determine cable position and select the inlet option most suited to your situation.

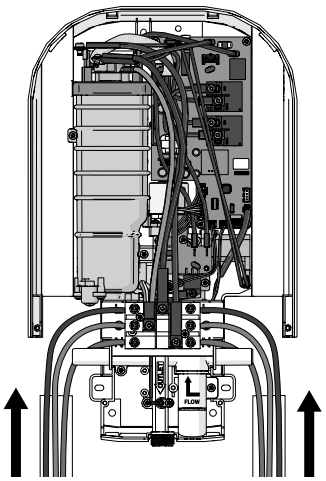
Note: Depending on cable size and entry point used, it may be necessary to strip back the outer cable sheath sufficiently to allow cables to be directed to the terminal connection block within the unit.

Top Entry



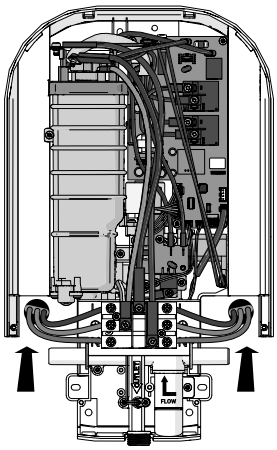
Left or right side top cable entry.

Bottom Entry



Left or right side bottom cable entry.

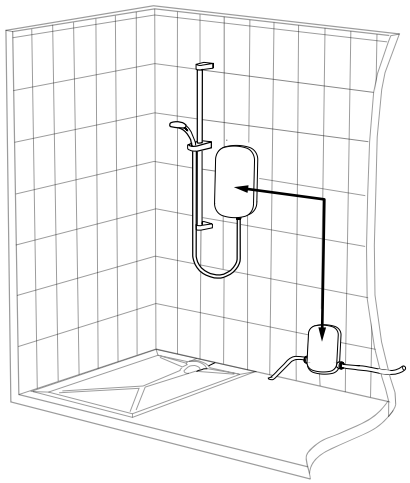
Rear Entry



Left or right side rear cable entry.

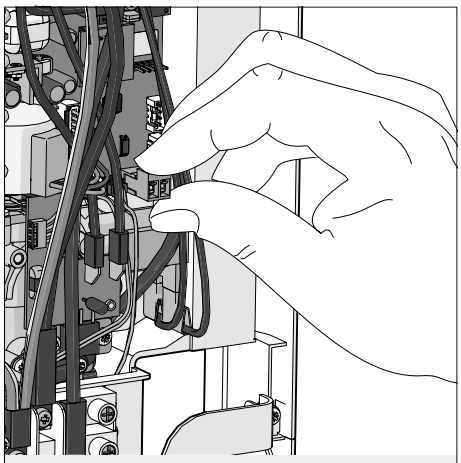
IMPORTANT - Connect to only the left OR right terminal blocks. Never make a simultaneous connection to both left and right terminal blocks.

Connecting Waste Pump

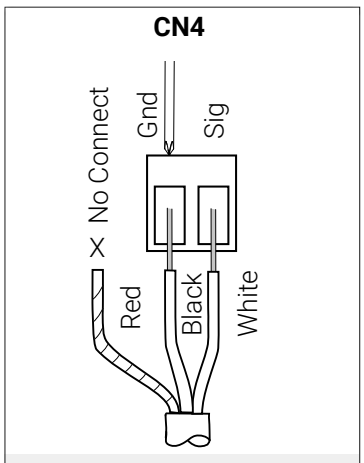


A connection can be made with an AKW DigiPump or P12D waste pump to the shower. The pump automatically responds to the shower when operated and can be connected with a wired connection.

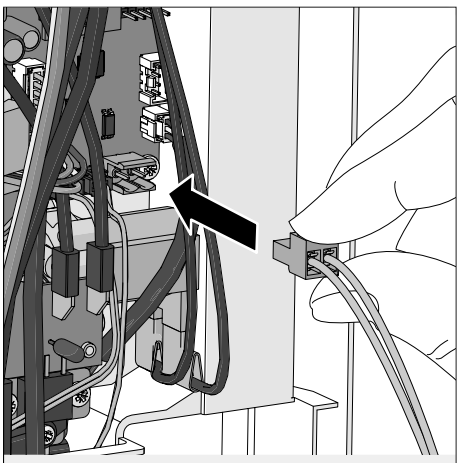
Wired Pump Connection



Locate the wired pump connector on the shower back case PCB.



Remove for easier installation and connect as shown.



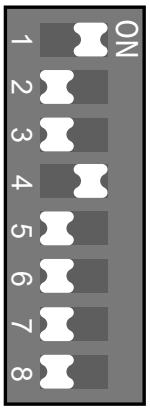
Re-connect wired pump connector to shower PCB.

See next page to set output at either pulsed or switched as desired.

Temperature & Mode Settings

The DIP switch is located on the front cover PCB.

Default Settings



TEMP. 43ºC
TEMP. 47ºC
WIRED PUMP
S-P (Switched/Pulsed)
RES (Not Used)
AS (Auto-Shutdown)
AS (Auto-Shutdown)
RES (Not Used)

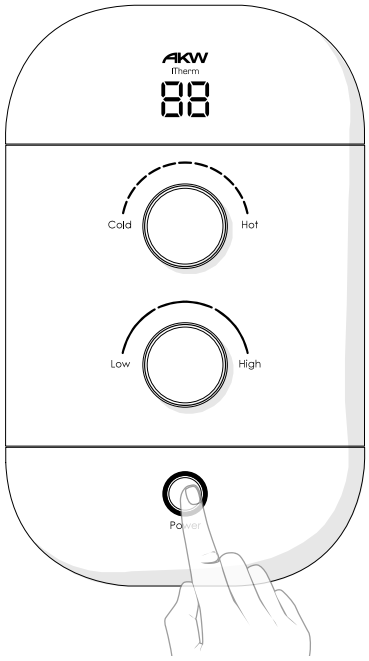
OFF ON

Temperature	**Switch 1**	**Switch 2**	**Range**
	OFF	OFF	30 - 41°C
	ON	OFF	30 - 43°C (Default Setting)
	OFF	ON	30 - 47°C
	ON	ON	30 - 41°C
Pump Connection	**Switch 3**	**Switch 4**	**Instruction**
	OFF	OFF	Wired pump on: switched
	OFF	ON	Wired pump on: pulsed
	ON	OFF	Wired pump off
	ON	ON	Wired pump off
Auto-Shutdown	**Switch 6**	**Switch 7**	**Duration**
	OFF	OFF	30 Minutes
	ON	OFF	20 Minutes
	OFF	ON	10 Minutes
	ON	ON	5 Minutes

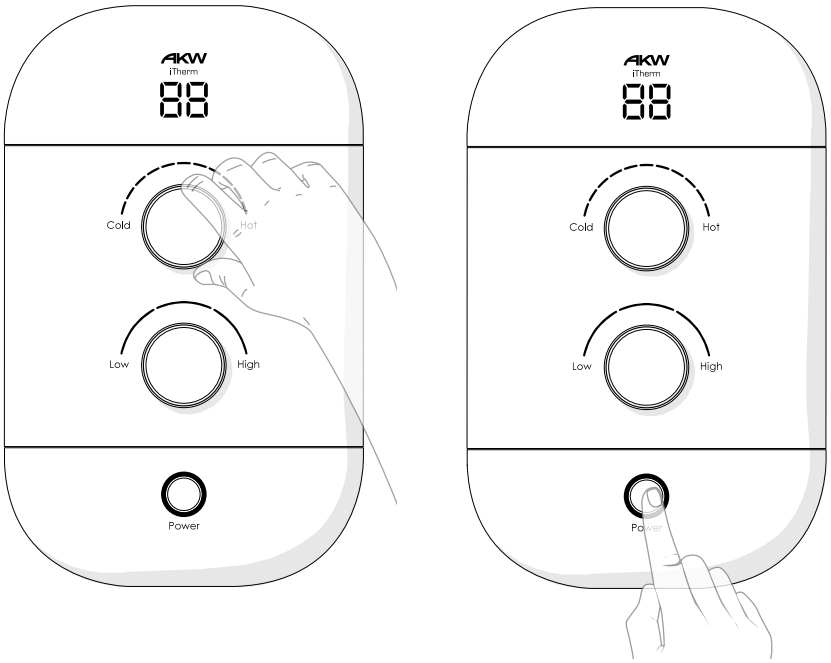
If 30 - 41°C Range is selected, the shower will ‘beep’ once when the isolator is switched on.

Functional Checks

Switch on the shower by pressing the power button.



Confirm the Temperature and Flow operations by rotating the knobs, whilst ensuring all LEDs are functioning.



Press the Power button to revert to standby mode.

It is important to complete the installation and record the commissioning tests to provide a performance reference point for future tests.

Commissioning Procedure

With the shower electrical supply isolated, remove front cover and check that the maximum temperature switch (see page 23) matches the intended use.

With power applied to the shower:
Check that the terminal voltage at the shower is within the range 230 V +/- 10%.

With the shower electrical supply isolated, refit front cover.

With power applied to the shower:
Turn on the shower and enter 'Cold Water Flushing' mode (see page 6/7);
Check that inlet water supply temperature is within the range, 3 to 28°C;
Exit cold water flushing when completed.

Turn on the shower and use the temperature control to set the outlet water temperature to maximum, and the flow control to set the flow rate to maximum. Then carry out the following sequence:

1. Record the outlet water temperature and flow rate;
2. Reduce the water supply flow rate at the inlet of the shower to 2.5 lpm;
3. Record the outlet water temperature at the reduced flow rate;
4. The outlet water temperature should not exceed the maximum temperature switch setting (see page 23).
5. Record details of test equipment (thermometer, voltmeter, flow meter etc.) used for the measurements.

In-Service Tests

The purpose of in-service tests is regularly to monitor and record the performance of the shower. Deterioration in performance can indicate the need for service work on the shower and/or the water supplies.

Procedure
Using measuring equipment to the same specification as used in commissioning the shower, check that:

- The water supply temperature is within the range; 3 to 28°C
- The terminal voltage at the appliance is within the range 230V +/- 10%

If the maximum outlet water temperature has changed by more than 1°C from the previous test results, record the change and check:

- For any damage/blockage to the shower, inlet filter, hose and handset
- Any in-line or integral check valves or other backflow prevention devices are in good working order
- Any isolating valves are fully open

With an acceptable outlet water temperature, complete the following procedure:

- Record the outlet water temperature and the flow rate at maximum settings
- Reduce the water supply flow rate at the inlet of the shower to 2.5 lpm
- Record the outlet water temperature
- Record details of test equipment (thermometer, voltmeter etc.) used for the measurements

If an acceptable outlet water temperature cannot be achieved i.e. temperature is greater than the maximum temperature switch setting (see page 23) by +1° or more then service work is required

Measuring flow rate
With the shower handset connected, using a measuring jug, collect 1 litre of water and time how long this takes.

60 Divided by the time taken = Flow Rate LPM
E.g. 60 Divided by 20 seconds = 3 LPM

Frequency of in-service tests
Following the commissioning of the shower, or any significant repair, the installation should be re-tested within a 6-8 week period.

If no significant changes (e.g. less than 1°C) in outlet water temperatures are recorded between tests, then the next in-service test can be deferred to 24-28 weeks.

If there is a significant change then contact AKW Technical Enquiries.

Installer Name and Company		Date	DD/MM/YY
Serial Number	**Address**	**Location**	

Test Number		1	2	3	4	5	6	7
Max.Temp. DIP Switch Setting								
Condition (Pass/Fail)	Shower							
	Filter							
	Hose							
	Handset							
Supply Voltage (VAC)								
Water Temperature (°C)	Inlet							
	Outlet (normal flow)							
	Outlet (reduced flow)							
Flow Rate (lpm)								
Test Equipment Detail								
Date (DD/MM/YY)								
Signature								

This page may be reproduced for continued recording of in-service testing for the future

Contact Us

Orders & Quotes
01905 823 299
orders@akw-ltd.co.uk

General Enquiries
01905 823 298
sales@akw-ltd.co.uk

Technical Enquiries
01905 560 219
tech@akw-ltd.co.uk

Kitchen Enquiries
01905 823 262
kitchens@akw-ltd.co.uk

Fax
01905 823 297

AKW
Pointon Way, Hampton Lovett
Droitwich Spa, WR9 0LR

www.akw-ltd.co.uk
orders.akw-ltd.co.uk

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Warranty

Warranty applies only to manufacturing or material defects, conditional on the one-time correct installation of the product. It does not apply to:

- Inappropriate use or accidental damage.
- Damage or defects that result from incorrect installation.
- Lack of maintenance including the build up of grime or damage resulting from inappropriate cleaning.
- Damage or defects that result from repairs or modifications undertaken by unauthorised persons.
- General wear and tear through usage and does not apply to surface finishes.

Warranty period starts from the date of installation.
To activate your warranty, you must register your product within 30 days of installation. See the T&Cs on our website for further information.

Select 1 of 2 ways to activate your warranty

1. Scan using your Smart Device

2. Visit Online
akw-ltd.co.uk/warranty-information

What to do if something goes wrong?
In the event that you encounter a problem with this product, follow the trouble shooting guide if applicable, then contact your local installer. If the issue is still unresolved, contact AKW Technical Enquiries who will provide further advice and arrange for a maintenance engineer to visit if necessary. None of the foregoing affects your statutory rights.