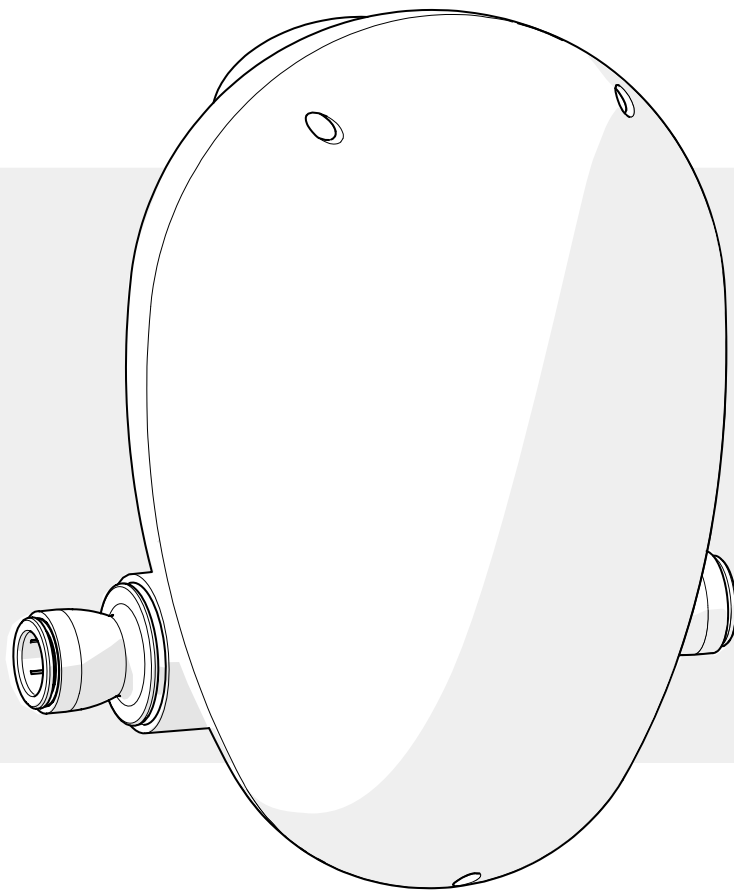


# M-Series DigiPumps

## INSTALLATION AND USER MANUAL



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# Box Contents & Specifications

## AKW M11 DigiPump










Stock Code: 25470



1x

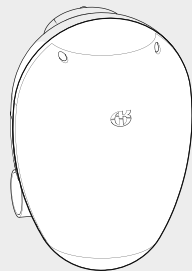
Supply: 230V AC 50Hz 100W  
 Ingress Protection: IP45  
 Duty Cycle: 50% Max 30 Mins. on  
 For use with electric & mixer showers.  
 Pump and controller enclosed in one unit.  
 Max flow rate: 11 Litres Per Minute (LPM).  
 Non-handed, selectable inlet/outlet direction.  
 Max Head: 1.0m (39in)  
 Max Lift: 0.5m (20in)

### Contents

- 1x 15mm  1x 
- 1x 22mm  1x 
- 1x 15mm  2x 
- 1x 22mm  3x 
- 3x 








## AKW M17 DigiPump

Stock Code: 25450



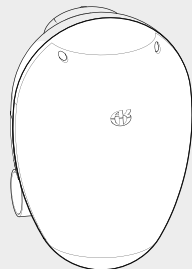
1x

Supply: 230V AC 50Hz 100W  
 Ingress Protection: IP45  
 Duty Cycle: 50% Max 30 Mins. on  
 For use with electric & mixer showers.  
 Pump and controller enclosed in one unit.  
 Max flow rate: 17 Litres Per Minute (LPM)  
 Non-handed, selectable inlet/outlet direction.  
 Max Head: 1.0m (39in)  
 Max Lift: 0.5m (20in)

- 2x 22mm  1x 
- 2x 22mm  1x 
- 3x  2x 
- 3x 








## AKW M20 DigiPump

Stock Code: 25460



1x

Supply: 230V AC 50Hz 100W  
 Ingress Protection: IP45  
 Duty Cycle: 50% Max 30 Mins. on  
 For use with electric & mixer showers.  
 Pump and controller enclosed in one unit.  
 Max flow rate: 20 Litres Per Minute (LPM)  
 Non-handed, selectable inlet/outlet direction.  
 Max Head: 1.0m (39in)  
 Max Lift: 0.5m (20in)

- 2x 22mm  1x 
- 2x 22mm  1x 
- 3x  2x 
- 3x 

Confirm you have all the correct parts required. Ensure the volume of water from the shower does not exceed the pumps drainage capacity. Note: Increased Head/Lift conditions will affect the pump's performance.

# Plumbing Zone

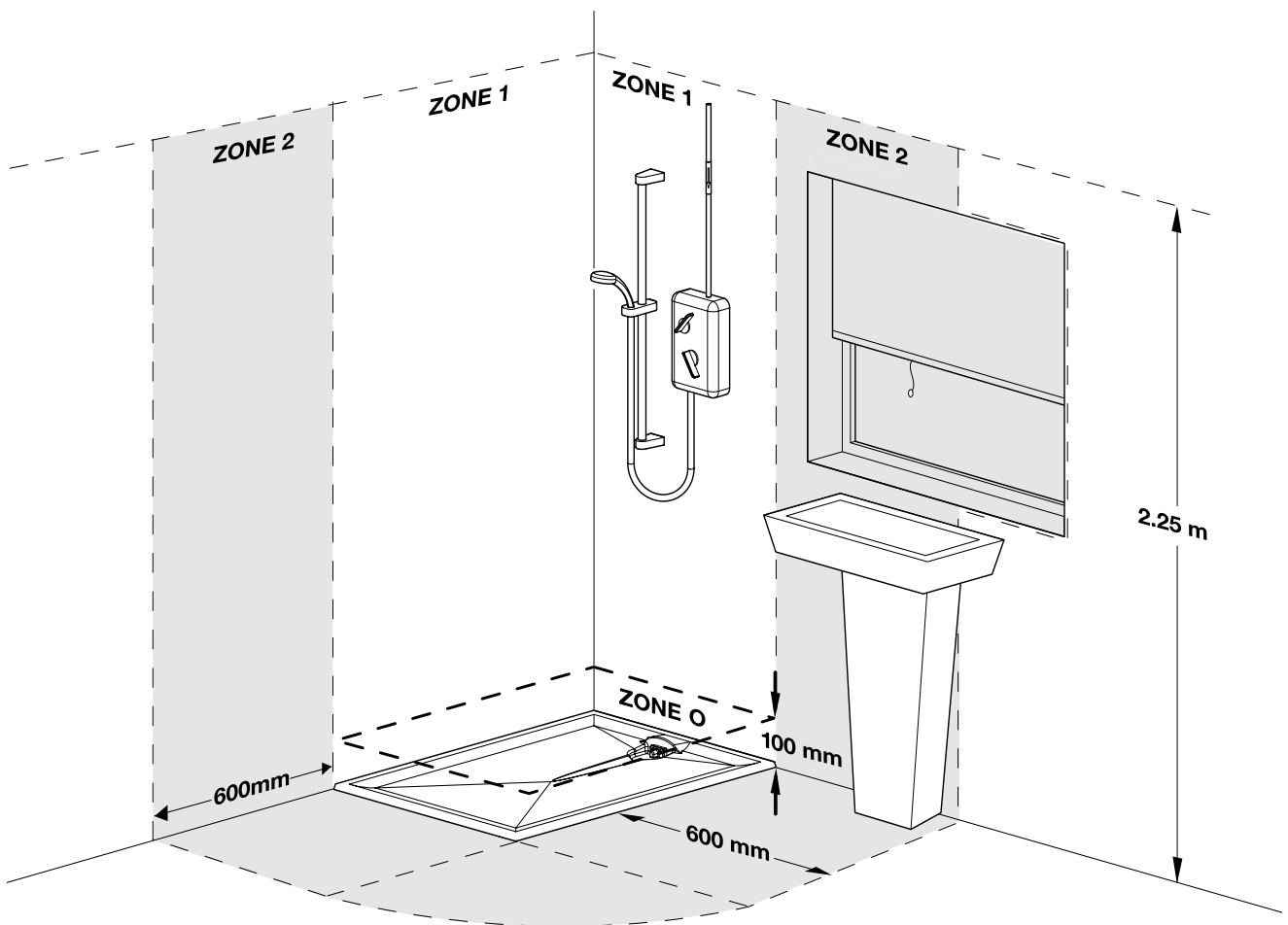
This product is rated IP45 and suitable to be installed in Zone 1, 2 or Zone 3 of a shower room only if these instructions are fully complied with.

The unit must be located away from the direct line of water jets.

Zone 1 lies above Zone 0 up to a minimum of 2.25m or to the height of the fixed shower head from the finished floor level, whichever is greater.

If the shower has no tray then zone 1 extends to 1.2m around the fixed shower head.

Zone 2 is the area extending 0.6m beyond Zone 1 and up to the same height as Zone 1.



FOR GUIDANCE ONLY- PLEASE REFER TO BS7671 FOR FURTHER DETAILS

The pump unit must be located on a vertical surface with the inlet/outlet connections at the bottom of the unit in horizontal alignment, with the AKW case logo uppermost.

The unit must be located away from the direct line of water jets whenever possible.

Cable to and from the pump must be run directly out of zone 1 by the shortest route below the unit or directly behind into the vertical surface. All such routes must be sealed to prevent water ingress.

Cables routed from above, down into the device, act as a drip path and should not be used.

Cables must be protected against mechanical damage and sealed against water ingress.

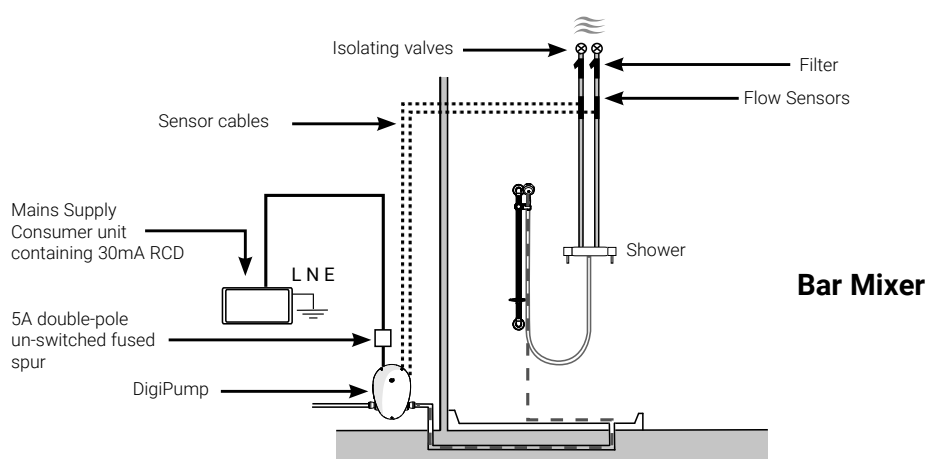
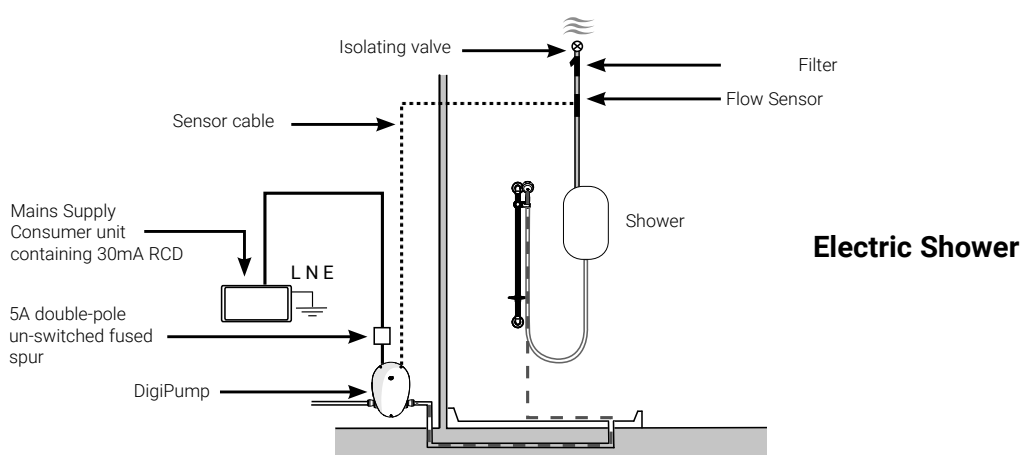
The case must not be cut except for the thin rear shroud. Do not pierce casing. Use the supplied Pump Spacers kit to route the cables behind the unit.

The clearance behind the unit and separation from the wall must be minimal and the gap must not be sealed.

All casing cable glands must be visually checked for presence of the elastomeric centre sealing grommet and tightness checked and confirmed before installing against the wall.

No cable joints may be made in zone 1.

The unit inner cover must not be disturbed and the outer cover must be correctly fitted.



# Important Safety & Electrical Information

THIS CLASS II APPLIANCE DOES NOT REQUIRE AN EARTH



CAUTION: 230V AC  
Lethal Voltage present on the AC supply



Ensure mains power supply is switched OFF before starting wiring



DO NOT take risks with plumbing or electrical installation. This product must be installed and serviced by a competent person in accordance with the current edition of the Wiring Regulations (BS7671), local by-laws and the current building regulations.



This product must be installed, used and maintained in good working order in accordance with these instructions and recommendations.



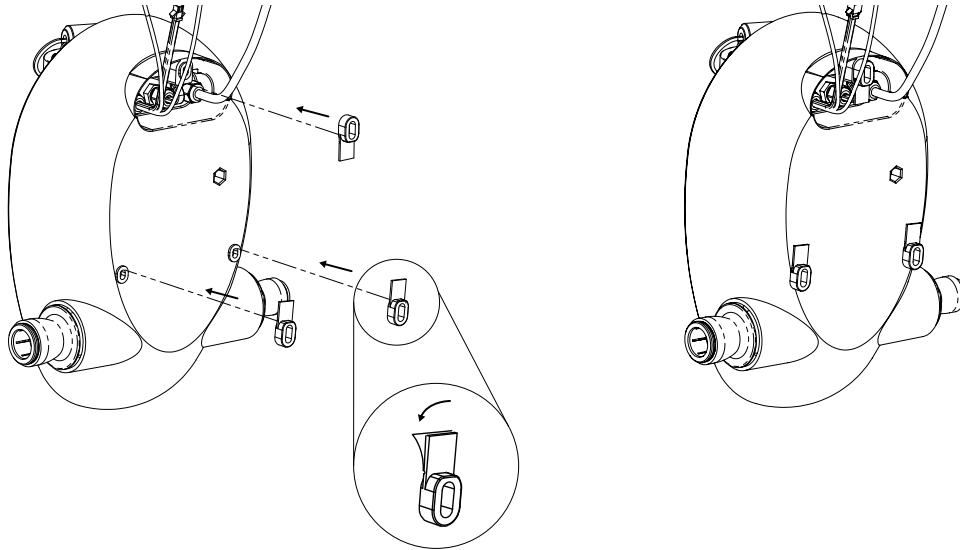
If the supply cord is damaged, it MUST be replaced in order to avoid hazard.

The 230V AC power supply to this unit must be provided via a two-pole isolator switch and a dedicated circuit with a 30mA RCD device installed in accordance with the latest revision of the Wiring Regulations BS7671. It must be wired into a fused, un-switched, fixed wiring connector fitted with a 5 amp fuse.

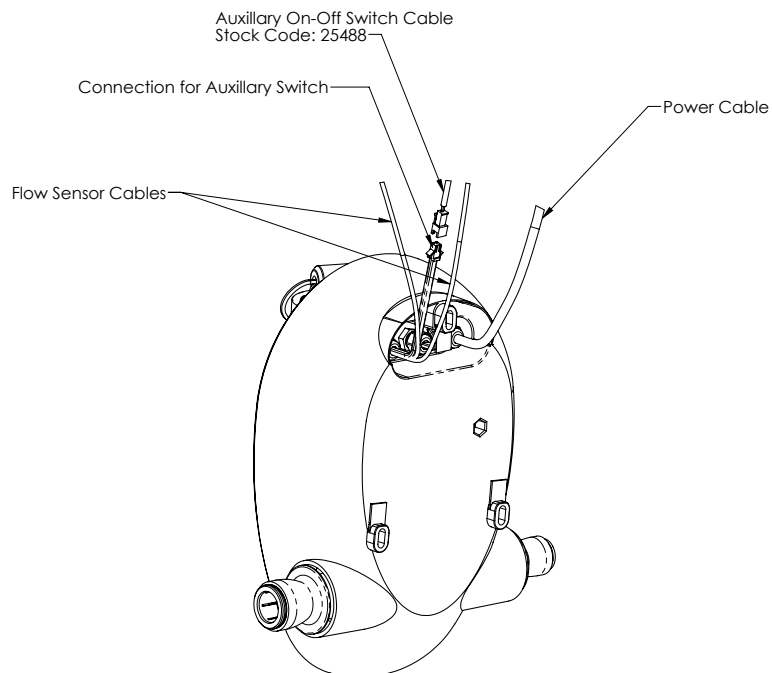
The IP45 rating of the AKW pump product refers to the inner casing containing the electrical control gear. The pump motor which operates at SELV is located within the outer cover.

## Fitting Pump Spacers

Use the Pump Spacers to prevent the cables being trapped.  
Separate the spacers, remove the adhesive backing and snap lock into position

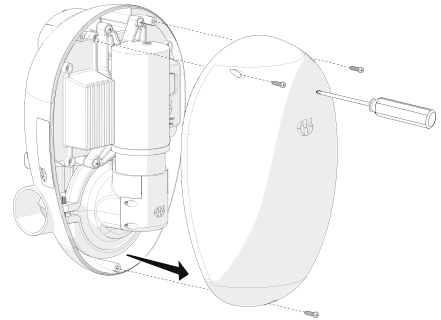


## Connecting Auxiliary On/Off Switch to Pump (optional)

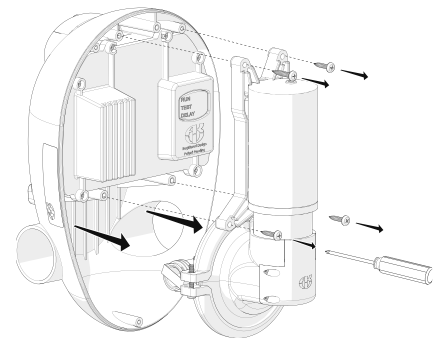


# Fixing Pump to Surface

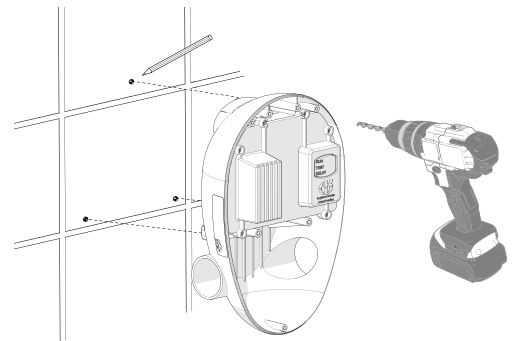
- 1 Remove front cover with a Phillips no.2 screwdriver.



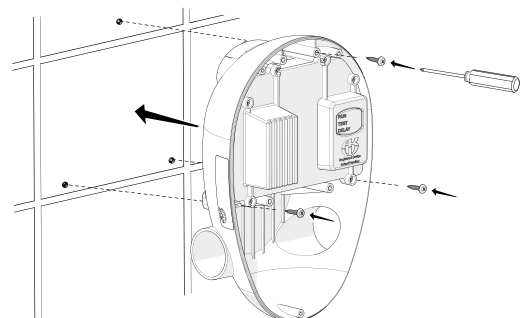
- 2 Disconnect pump motor cable. Remove pump assembly from the back plate to access the fixing holes.



- 3 Fit to a finished surface. Pipe connections must be easily accessible and a clearance of 100mm around the base and sides is recommended. Using the back plate as a template mark the fixing holes. Drill and plug the wall taking care there are no hidden cables or pipes. Use all the screw fixing positions.

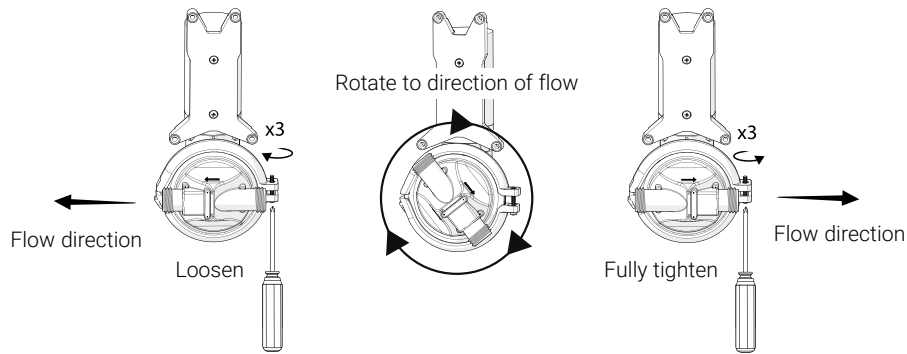


- 4 Mount the pump to the finished surface using all the wall fixings. Use the Pump Spacers to prevent the cables being trapped. See Fitting Pump Spacers.

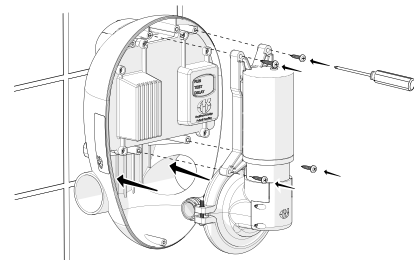




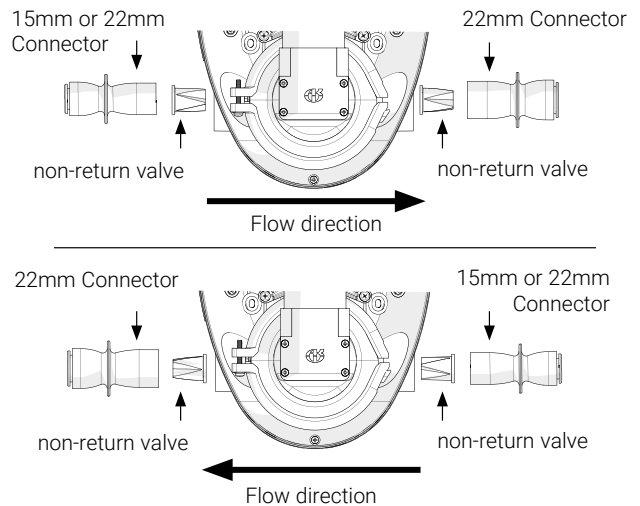
- 5 Check that the flow is in the required direction, reverse as required. Loosen the pump head housing, rotate and fully tighten home. The pipework to this high performance pump must be clamped down effectively. AKW advise and recommend you clamp pipework either side of joints, junctions or connections and at a maximum of 500mm between other supports.



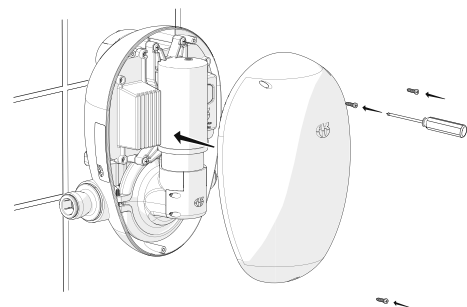
- 6 Remove shipping tapes from pump inlet and outlet. Refit the pump to the back plate. Reconnect pump motor cable.



- 7 Fit the non-return valves as shown. Fit the pump connectors to the pump. Note 15mm connector (M11) and 22mm connector (M17 & M20) for the inlet. Screw both connectors into place. No thread sealant needed, firmly hand tighten only - do not use mechanical tighteners as the product is liable to split.



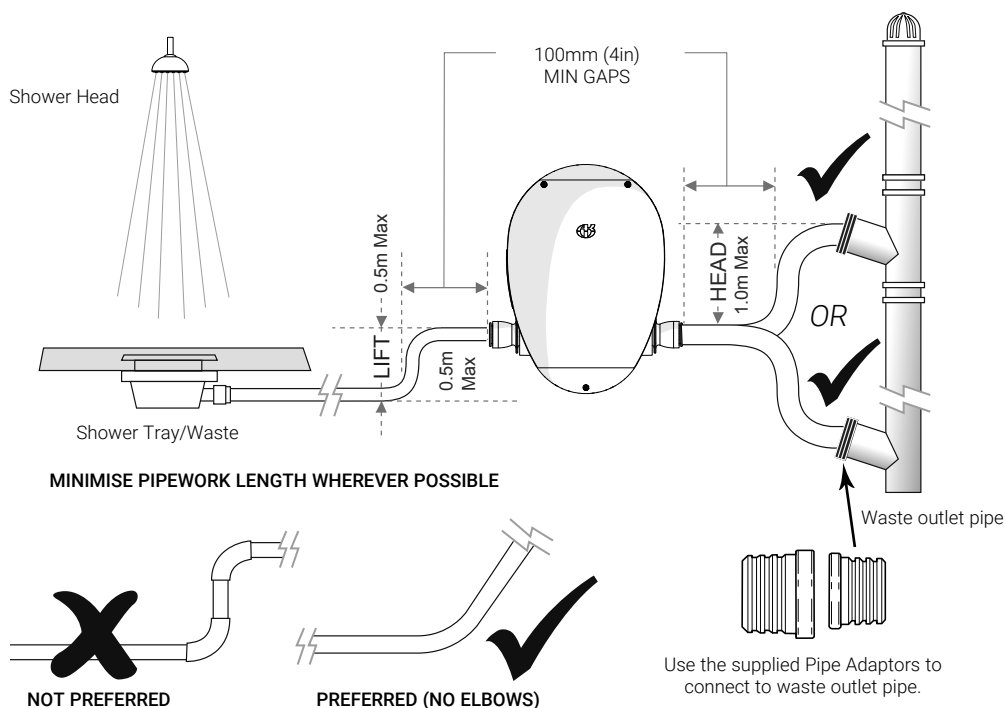
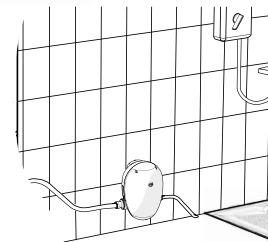
- 8 Check that you have not overtightened and distorted the non-return valves before connecting the pipework.



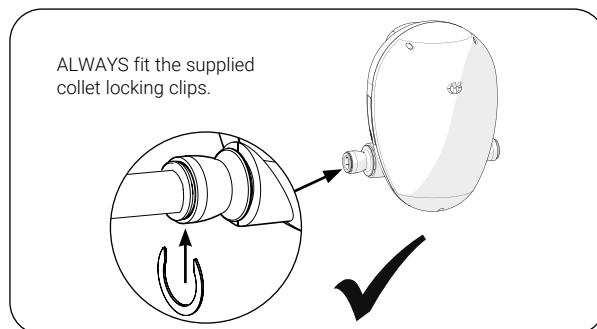
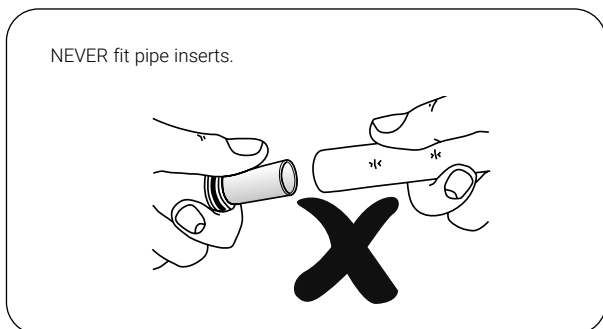
# Plumbing Connections

For best performance locate within 1m (39in) of shower and minimise the number of lifts, bends and the length of all pipes connecting the pump to the waste outlet pipe.

Note: Increased Head/Lift conditions will affect the pump's performance. See product specifications.



**Important: Pipe connections must be easily accessed and pipework must be secured to prevent vibration and noise.**

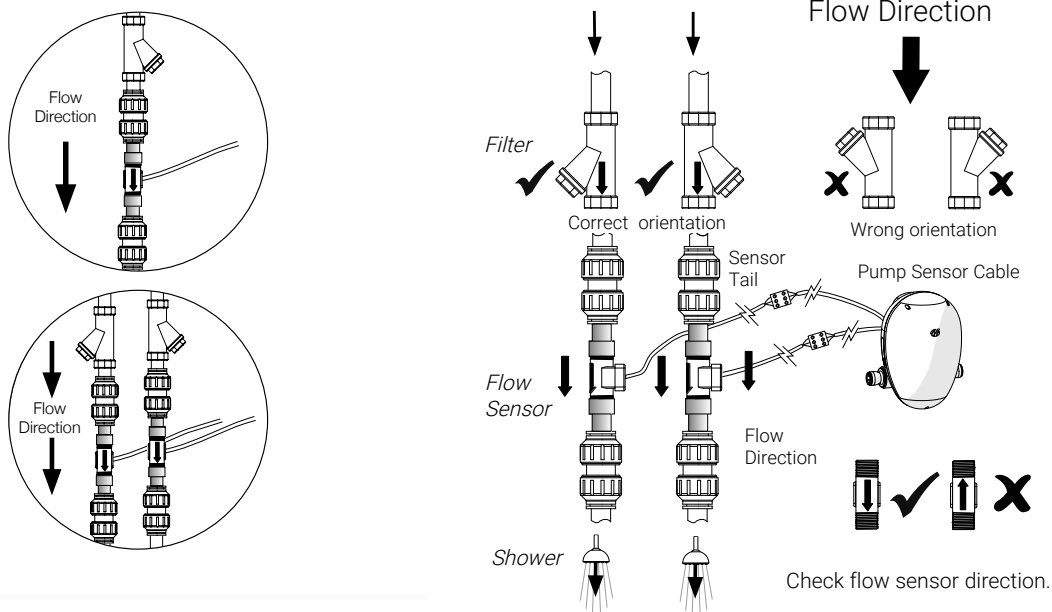


Depending on the installation install 1 or 2 filters and sensors to the shower water feed. Install the filter (Y-Pattern filter) in the correct flow orientation to the shower water supply line and then fit the flow sensor between the filter and the shower.

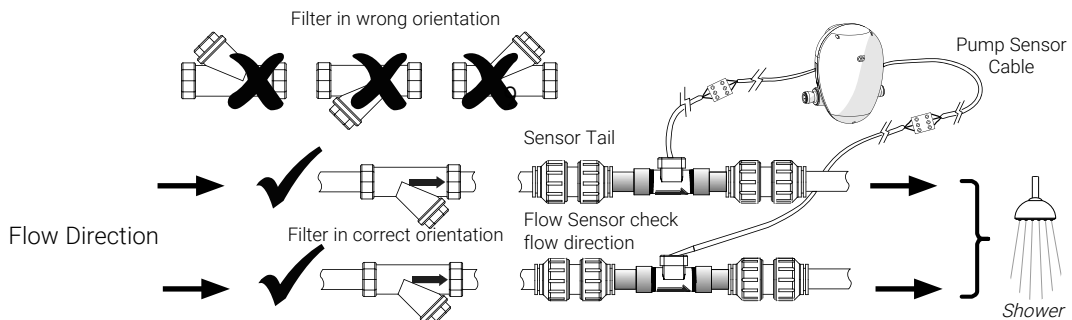
Confirm shower water supply pipework is flushed before connecting to the flow sensor via the filter. Electric showers have one water supply line, cold water. Fit one Filter and Flow Sensor to this line. Mixer showers have two supply lines, hot and cold water. Fit one Filter and Flow Sensor to each supply line.

Double check direction of the flow arrow moulded on the sensor casing is in the correct orientation with the flow of water. Allow enough distance so that the sensors are easily accessible. Ensure all cable connections are accessible and in a dry location. Fit sensor using an approved liquid based thread sealant suitable for nylon threads. Connect the sensor tail cable from the flow sensor to the pump sensor cable (see page 12). Do not tile over the flow sensors and filters and ensure they are accessible for service and maintenance purposes. If possible, avoid installing in a loft space.

## Vertical Water Feed Installation



## Horizontal Water Feed Installation



# Connecting Flow Sensor(s)

Ensure sensor and filter are in an easily accessible location. If possible, avoid installing in a loft space.

Ensure all cables and pipes are behind water resistant surfaces.

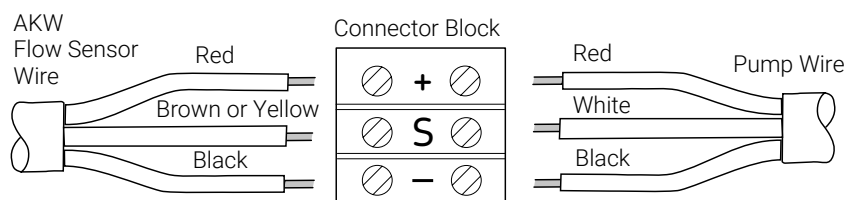
The pump has two flow sensor cables. For mixer showers with two water feeds, connect both flow sensors. Fit one flow sensor to cold water feed pipe and one to the hot water feed pipe.

For electric showers only connect one sensor, the other sensor wire must be terminated in a connector block and insulated using electrical insulation tape at a dry location.

Failure to do this may damage the pump.

Note: To connect the pump directly to a compatible electric shower please see the instructions supplied with your electric shower.

All cable connections must be in a dry location.



Ensure the pump spacers are used to prevent the cables from being trapped.

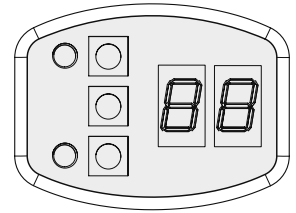
## Control Button Description

Top Button = **RUN** (Sets shower stop run-on time)

Centre Button = **TEST** (Calibration)

Bottom Button = **DELAY** (Sets shower start delay to run)

RUN  
TEST  
DELAY



## Sensor Type

The DigiPump accepts two sensor types. Either flow switch (on/off) or flow sensor (proportional).

The proportional rate can be set to 600, 1000, 2200 pulses per litre.

## Calibration

Run the shower at the expected normal flow rate. The pump must run at a speed which removes the same amount of water as is flowing in.

Adjust the calibration value so the water level stays approximately the same. If the water level drops, decrease the value on the display so the pump runs slower. If the water level rises, increase the value on the display so the pump runs faster.

## Auxiliary Switch Type

The DigiPump accepts two switch types - latching or momentary. This function manually starts/stops the pump. The pump will stop automatically after 30 minutes, if not stopped manually. This is an optional extra - AKW Stock Code: 25488.

## Start Delay

The time before the pump starts after the shower the shower starts. This is to allow the pipe work to prime with water.

## Run on time

The time the pump will run after the shower has stopped. This is to ensure complete clearing of water from the shower tray.

# Pump Settings

When power is applied to the pump, the display will briefly indicate the model and software version of the pump, the pump will then enter standby mode.

**00** M11

**01** M17

**02** M20

## Standby Mode

The 'RUN' led will be lit, indicating mains voltage present.

The display will indicate the 'run-on timer' setting in seconds (factory default 20)

## Adjusting the Settings

SENSOR TYPE
From Standby, hold and release TEST button until RUN and DELAY LED's flash
TYPE:
<b>00</b> On/off (Grounded input)
<b>01</b> 600 pulses per litre
<b>02</b> 1000 pulses per litre (Default)
<b>03</b> 2200 pulses per litre
Up - Press and release RUN button
Down - Press and release DELAY button
Exit to calibration - Press and release TEST button
CALIBRATION
Default setting: <b>50</b>
Range adjustment: <b>00 - 99</b>
To change the value:
Up - Press and release RUN button
Down - Press and release DELAY button
Exit to Auxiliary switch type - press and release TEST button
AUXILIARY SWITCH TYPE
TYPE:
<b>00</b> Latching
<b>01</b> Momentary
Up - Press and release RUN button
Down - Press and release DELAY button
Exit to standby - Press and release TEST button

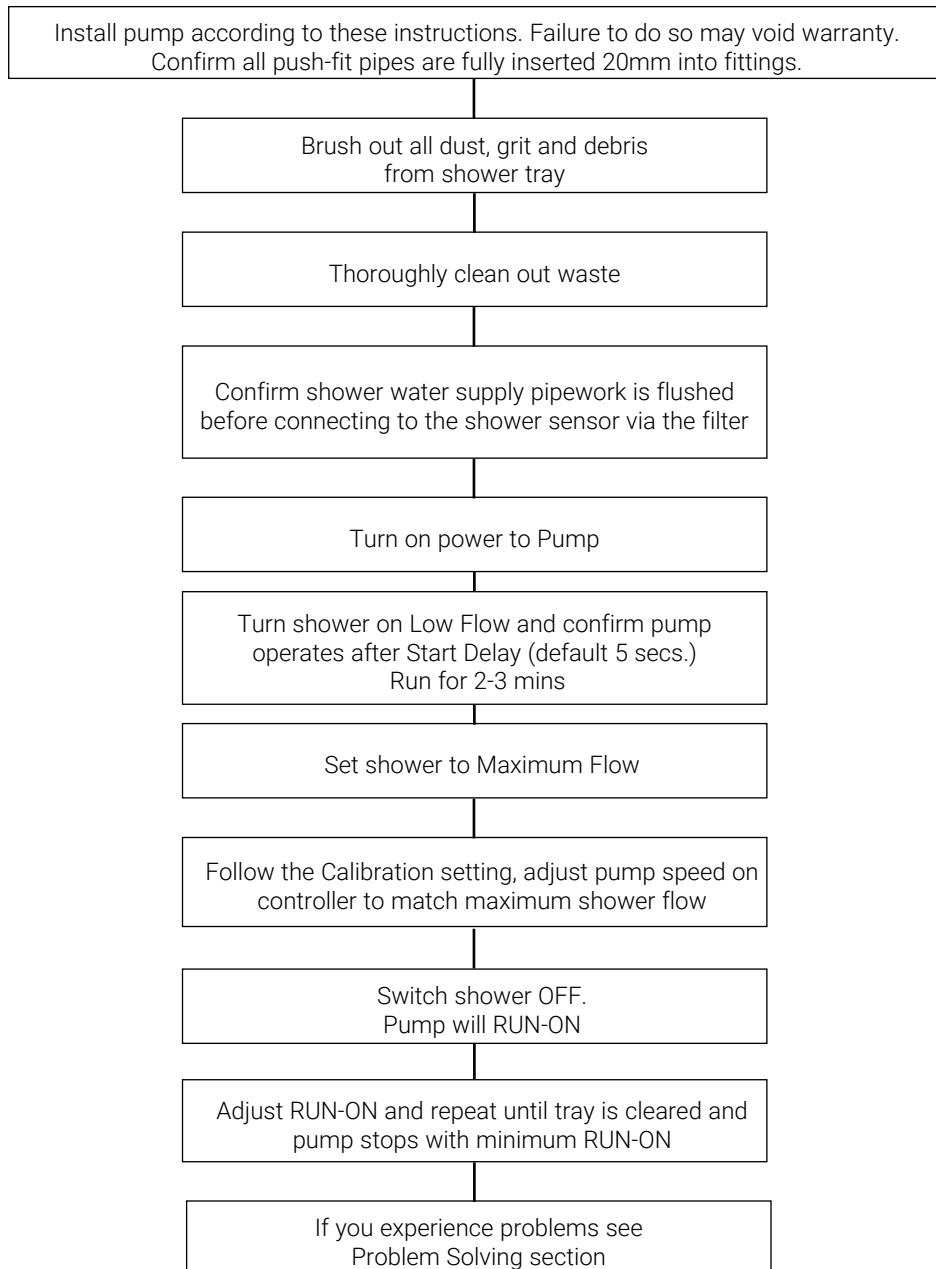
START DELAY
From Standby, press and release DELAY button to increment value
Default setting: <b>05</b>
Range adjustment: <b>01 - 99</b>
Exit to standby - press and release RUN button

RUN-ON TIME
From Standby, press and release RUN button to increment value
Default setting: <b>20</b>
Range adjustment: <b>01 - 99</b>

## Testing the Pump

TEST MODE
From Standby, press and release TEST button
Test Mode sequence will start:
1. The start delay value will count down to <b>0</b>
2. Pump will start
3. The run value will count down to <b>0</b>
4. Pump will stop
5. Test completed - the Pump will revert to Standby mode
This test can be carried out with or without water present and the sensor fitted or not

As a general precaution and check before installation, always ensure the supply pipework to the shower has been fully purged with at least 20 litres (2 buckets) of water through it **before the flow sensor is installed**. Any building debris in the water supply will adversely affect the sensor function and may also damage the shower heater/mixer.



# Care and Maintenance

The integrity of the case and the RCD device operation should be checked quarterly as part of a routine safety and maintenance activity on the installation.

If the case shows any mechanical damage the unit must be isolated electrically and the entire unit replaced.

Pipework connections must be made to the unit with sufficient clearance (100mm minimum separation to any pipe bend or fitting adjacent to the inlet/outlet connections) to permit removal of the pump/head for routine maintenance and replacement.

The unit must be regularly cleaned using normal bathroom cleaning materials and rinsed down with clean water and wiped dry with a soft cloth to remove any cleaning residue.

Do not use strong or concentrated acidic or alkaline cleaning materials as these may discolour or otherwise damage the product. Do not use an abrasive cloth.



<b>Reported fault</b>	<b>Possible causes</b>	<b>Checks and work to be undertaken</b>
<b>No lights on the pump display</b>	<ul style="list-style-type: none"> <li>Fuse/fuse board turned off</li> <li>Isolation switch is turned off</li> <li>Break in the supply cable to the pump</li> <li>Not wired in correctly</li> </ul>	<ul style="list-style-type: none"> <li>Check power supply to the unit</li> <li>Check the wiring to the pump</li> <li>Check the cable to the pump</li> </ul>
<b>Pump does not activate when shower is turned on</b>	<ul style="list-style-type: none"> <li>Flow sensor or sensors if a mixer shower not connected properly</li> <li>Flow sensor incorrectly wired up</li> <li>Flow sensor faulty</li> <li>Pump is not paired correctly if no flow sensor if has a wireless connection</li> <li>Pump is calibrated too low to activate from the water pressure</li> <li>Insufficient water pressure to activate the flow sensor</li> <li>Flow sensor is blocked</li> </ul>	<ul style="list-style-type: none"> <li>Check water pressure to the shower is sufficient to activate the flow sensor, check the flow sensor is fitted in the correct orientation</li> <li>Check flow sensors wired correctly</li> <li>Re-pair the pump and the shower if a wireless connection</li> <li>Check calibration settings – should be over 50</li> <li>Test flow sensor under running tap while connected to the pump to see if activates it</li> <li>Check flow rate to flow sensor is a minimum of 2 litres a minute</li> <li>Check the filter is fitted before the flow sensor in the supply pipe and that the flow sensor is clear</li> </ul>
<b>Pump comes on but does not draw water</b>	<ul style="list-style-type: none"> <li>Possible ingress of air in the pipework to the pump</li> <li>Possible blockage in the pipework to the pump</li> <li>Pump not calibrated correctly to draw water away sufficiently</li> <li>Possible blockage in the non return valves</li> <li>Possible blockage in the pump head</li> </ul>	<ul style="list-style-type: none"> <li>Attach temporary pipework to the inlet side of the pump and get it to discharge water from a bucket when shower turned on and sprayed into the bucket</li> <li>Attach temporary pipework to the inlet and outlet sides of the pump and get it to discharge water from one bucket to another bucket when shower turned on and sprayed into the bucket</li> <li>Check the calibration of the pump</li> <li>Remove the pump head and check for blockages to pump head and non-return valves</li> <li>Remove the pump head and check for blockages to pump head and non-return valves</li> </ul>

# Trouble Shooting

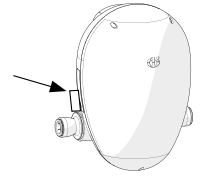
<b>Reported fault</b>	<b>Possible causes</b>	<b>Checks and work to be undertaken</b>
<b>Pump comes on but does not draw water (cont.)</b>	Non-return valves are damaged	Check for damage to the non-return valves
	Split diaphragm	Check diaphragm for damage
	C' clips not installed so causing air ingress	Check 'C' clips are installed to the inlet and outlet pipework
	Pump heads direction of flow incorrect	Check the direction of flow of the pump head
	Non-return valves are not fitted or incorrectly fitted	Check the non-return valves are correctly fitted
<b>Pump does not remove enough water</b>	Pump not calibrated correctly to suit the installation	Adjust the calibration and settings
	Ingress of air in the pipe work	Attach temporary pipework to the inlet side of the pump and get it to discharge water from a bucket when shower turned on and sprayed into the bucket
	Blockage or debris in pipework	Attach temporary pipework to the inlet and outlet sides of the pump and get it to discharge water from one bucket to another bucket when shower turned on and sprayed into the bucket
	Damage to non-return valves	Remove pump head to check for damage or debris
	Debris in pump head	Remove pump head to check for damage or debris
	Split diaphragm	Check diaphragm for damage
	C' clips not installed so causing air ingress	Check 'C' clips are installed to the inlet and outlet pipework

<b>Reported fault</b>	<b>Possible causes</b>	<b>Checks and work to be undertaken</b>
<b>Pump is noisy</b>	Pump not set up and calibrated correctly	Adjust the settings and calibration on the pump
	Ingress of air in the pipe work	Check 'C' clips are installed to the inlet and outlet pipework
	Pump not fixed correctly	Make sure is firmly fixed to a wall and ideally a solid wall
	Pump fixed on a stud wall	Make sure is firmly fixed to a wall and ideally a solid wall
<b>Water is left in the tray when shower is turned off</b>	Delay, run on and calibration not set up to suit installation	Settings should be changed from factory setting which are: Delay: 5 seconds Run on: 20 seconds Calibration: 50 seconds
	Shower volume too great for the size of the pump	Check shower flow volumes at different settings
	Debris or blockage in the waste or pipework	Attach temporary pipework to the inlet side of the pump and get it to discharge water from a bucket when shower turned on and sprayed into the bucket
	Ingress of air in the pipe work	Attach temporary pipework to the inlet and outlet sides of the pump and get it to discharge water from one bucket to another bucket when shower turned on and sprayed into the bucket
<b>Water in tray after while</b>	Possible shower leak	Check shower for leaks
	Pump not set up correctly	Set run on to a longer time
	Water not gone through pump due to short run on, has gone back to its lowest level via gravity	Set run on to a longer time





Warranty is in addition to your statutory and other legal rights. Warranty becomes effective from date of installation. To validate and start the warranty, you must return your completed warranty registration card and return it in the prepaid envelope or alternatively visit the AKW website and complete the online registration form for your product.



Locate the product identification label

Refer to the product identification label on the outer case of the product or the outer packaging for product details.

Warranty applies to all moving and serviceable parts against any manufacturing defects, faulty materials or poor workmanship.

Warranty covers your shower waste water pump against any defect in materials or workmanship for 5 years from the date of installation. Within this period we will resolve defects free of charge by repairing or replacing as we may choose.

To be free of charge work must only be undertaken by AKW or our approved agents in the UK or the Republic of Ireland and with prior agreement.

Any action taken under this warranty does not extend the stated 5-year expiry date.

## **NOT COVERED BY THIS WARRANTY**

Warranty excludes general wear and tear through usage and this does not apply to inappropriate use, inappropriate cleaning, damage or defects that result from unauthorised modifications or repairs, accidental damage, lack of maintenance including the build up of grime, dirt, hair, lime-scale, water-borne debris or from water freezing damage. Damage caused by the use of other products with the M-Series DigiPumps that are not shown in this manual.

This does not cover components that are subject to general wear and tear such as filters, seals, O-rings and washers or non-return valves.

Servicing should be carried out at regular intervals of no more than 12 months and more frequently in hard water areas (heavy lime scale areas). In the unlikely event that any problems are encountered with the product's performance on installation, you must obtain guidance/authorisation from AKW Technical Enquiries and be able to supply proof and date of purchase before any action is taken.

## ACTIVATE WARRANTY

Select 1 of 3 ways to activate your warranty

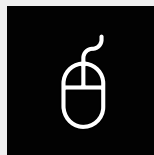


### 1. Warranty Card

Fill and complete warranty card and post using the envelope supplied



### 2. Scan using your Smart Device



### 3. Visit Online

[akw-ltd.co.uk/online-warranty-submission](http://akw-ltd.co.uk/online-warranty-submission)

These instructions are provided to advise the minimum standards of installation and recommends what the best practice for the installation is.

Due to the very wide variability of possible installation conditions, AKW cannot provide all circumstances for the installation. AKW cannot accept any liability in connection with this information or its use. This information is provided on the condition that the person receiving it shall make his/her own tests to determine the suitability for the particular purpose. 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. None of the foregoing affects your statutory rights.

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## **General Enquiries**

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

## **Technical Enquiries**

01905 560 219  
technicalenquiries@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

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