

## Installation Manual

### Commercial Shower Panel – High Efficiency - Stainless Steel

Fixed Head	- Timed Flow .....	93001000
Fixed Head	- Timed Flow Thermostatic .....	93002000
Flex Head	- Timed Flow .....	93003000
Flex Head	- Timed Flow Thermostatic .....	93004000

**Important**

Installer — This product manual is the property of the customer and must be retained with the product for maintenance and operational purposes



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## FLOW VOLUME REGULATION

Flow volume l/m is controlled via a flow regulator (see system diagram)

The last digit of the product code will designate the flow regulator pre-fitted E.g.

93001004:  
High Efficiency - Fixed Head - Timed Flow - 4 l/m

93001005:  
High Efficiency - Fixed Head - Timed Flow - 5 l/m

93001006:  
High Efficiency - Fixed Head - Timed Flow - 6 l/m

## SYSTEM DESCRIPTION

High Efficiency - Fixed Head - Stainless Steel - Timed Flow: 93001000

Surface mounted stainless steel panel shower with a chrome plated fixed shower head and Kelda's patented water saving technology within. Runs from a blended water supply (mixer not included), adjustable timed flow is activated by a digital push button.

High Efficiency - Fixed Head - Stainless Steel - Timed Flow Thermostatic : 93002000

Surface mounted stainless steel panel shower with a chrome plated fixed shower head and Kelda's patented water saving technology within. Includes TMV3 thermostatic temperature control, adjustable timed flow is activated by a digital push button.

High efficiency - Flex Head - Stainless Steel - Timed Flow: 93003000

Surface mounted stainless steel panel shower with a chrome plated adjustable shower head and Kelda's patented water saving technology within. Runs from a blended water supply (mixer not included), adjustable timed flow is activated by a digital push button.

High efficiency - Flex Head - Stainless Steel - Timed Flow Thermostatic: 93004000

Surface mounted stainless steel panel shower with a chrome plated adjustable shower head and Kelda's patented water saving technology within. Includes TMV3 thermostatic temperature control, adjustable timed flow is activated by a digital push button.

# Important Safety Information

This product is not a substitute for a shower control (Mixer/valve) unless TMV3 Mixer model is specified.

This product is not an electric shower.

Products manufactured by Kelda Technology are safe and without risk provided they are installed, used and maintained in good working order in accordance with our instructions and recommendations.

DO NOT operate the unit if the shower head becomes damaged.

DO NOT restrict flow out of shower by placing an obstruction in front of the shower head nozzles.

## GENERAL

1. Read all of these instructions and retain them for later use.
2. DO NOT take risks with plumbing or electrical equipment.
3. Isolate electrical and water supplies before proceeding with the installation.
4. The shower panel unit must be mounted onto the finished wall surface (on top of the tiles). DO NOT tile up to or seal around ANY PART of the shower panel after installation.
5. The shower head must be cleaned regularly with descalent to remove scale and debris. The Air hoses must be cleaned periodically to maintain performance and hygiene. PLEASE SEE MAINTENANCE SECTION.
6. This product is not suitable for mounting into steam rooms or steam cubicles.
7. The shower panel should not be installed in an outdoor environment, including sheltered areas.

## PLUMBING

1. The plumbing installation must comply with water regulations, building regulations or any particular regulations as specified by local water company or water undertakers and should be in accordance with BS EN 806 (Specifications for installations inside buildings conveying water for human consumption. Operation and maintenance).
2. **IMPORTANT! The supply pipe must be flushed to clear debris before connecting to the shower head water inlet.**
3. DO NOT solder pipes or fittings within 300mm of the supplied hoses, as heat can transfer along the pipework and damage components.

4. DO NOT use excessive force when making connections to the flexible hose, solenoid or mixer.
5. All plumbing connections must be completed before making the electrical connections.
6. Water pressure. Kelda products are designed to operate between 1 bar and 5 bar, if you wish to operate outside of this please discuss with a Kelda Engineer.

## ELECTRICAL

1. The installation must comply with BS 7671 'Requirements for electrical installations' (IEE wiring regulations), building regulations or any particular regulations as specified by the local electrical supply company.
2. In accordance with 'The Plugs and Sockets etc. (Safety) Regulations 1994', this appliance is intended to be permanently connected to the fixed wiring of the electrical mains system.
3. Make sure all electrical connections are tight to prevent overheating.
4. A 32A 30 mA Residual Current Breaker Operator (RCBO) MUST be installed in all UK electric and pumped shower circuits. This may be part of the consumer unit or a separate unit.
5. Other electrical equipment i.e. extractor fans, pumps must not be connected to the circuits within the unit.
6. Each shower must be connected to a 3A switched fused spur which is easily accessible by maintenance staff. Switch off at fused spur for maintenance or if not in use for extended periods. This is a safety procedure recommended with all electrical appliances.
7. As with all electrical appliances it is recommended to have the shower and installation checked at least every two years by a competent electrician to ensure there is no deterioration due to age and usage.

Contact Customer Service (see back page), if any of the following occur:

- a) If it is intended to operate the shower at pressures above the maximum or below the minimum stated.
- b) If the unit shows a distinct change in performance.

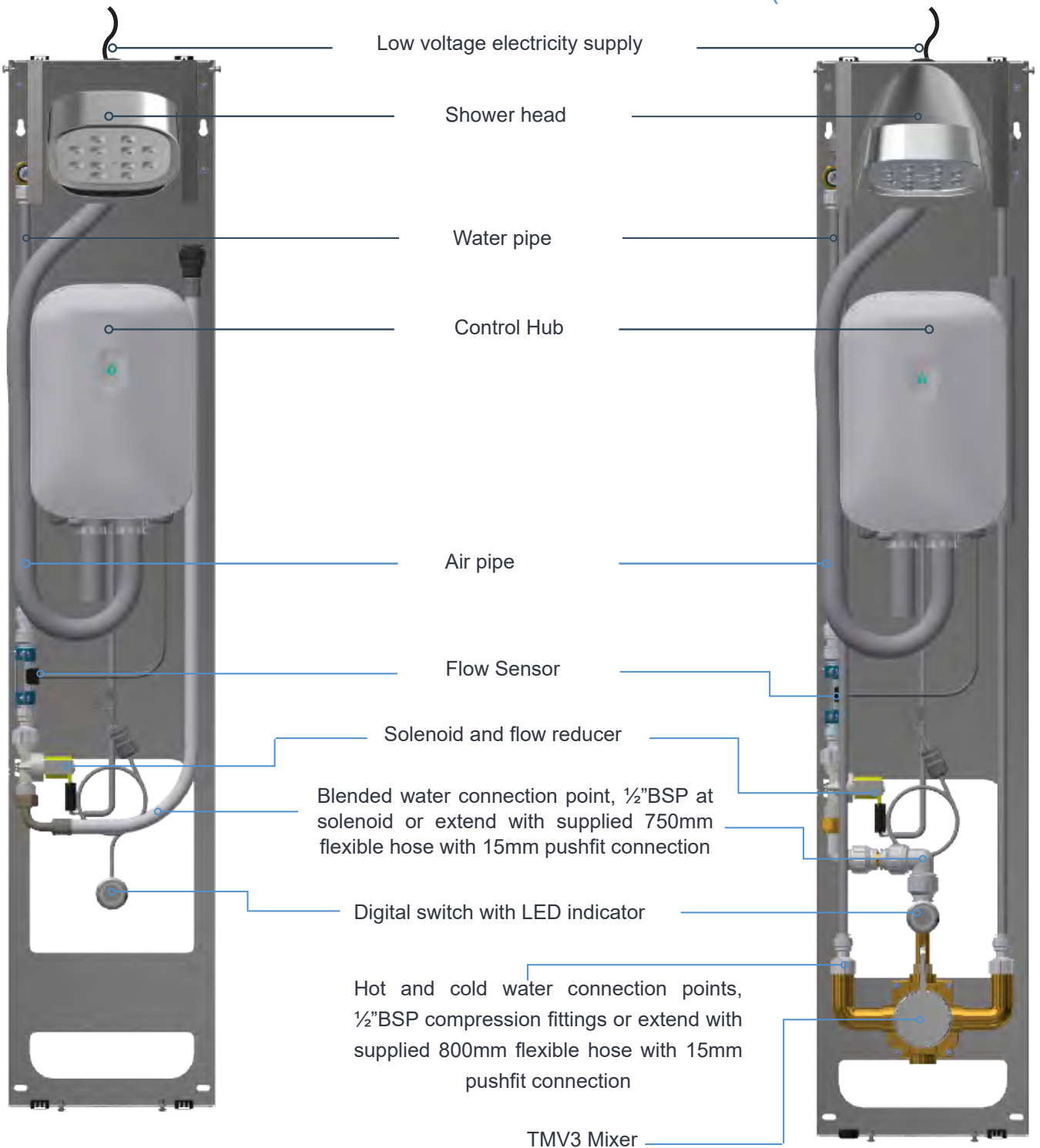
# Description

Timed Flow

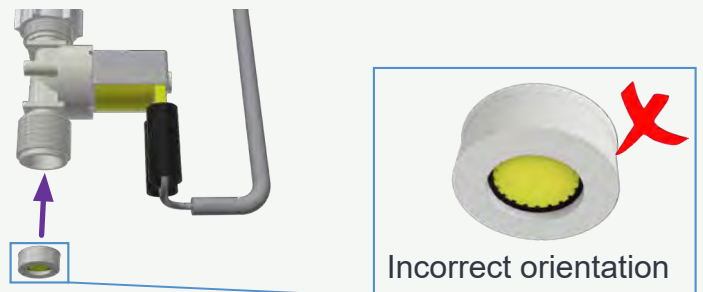
(93001000 / 93003000)

Timed FlowThermostatic

(93002000/ 93004000)

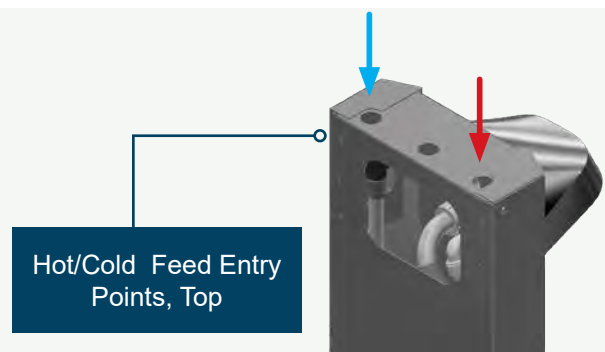
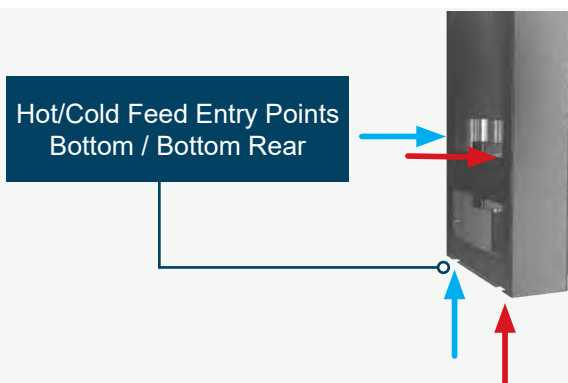
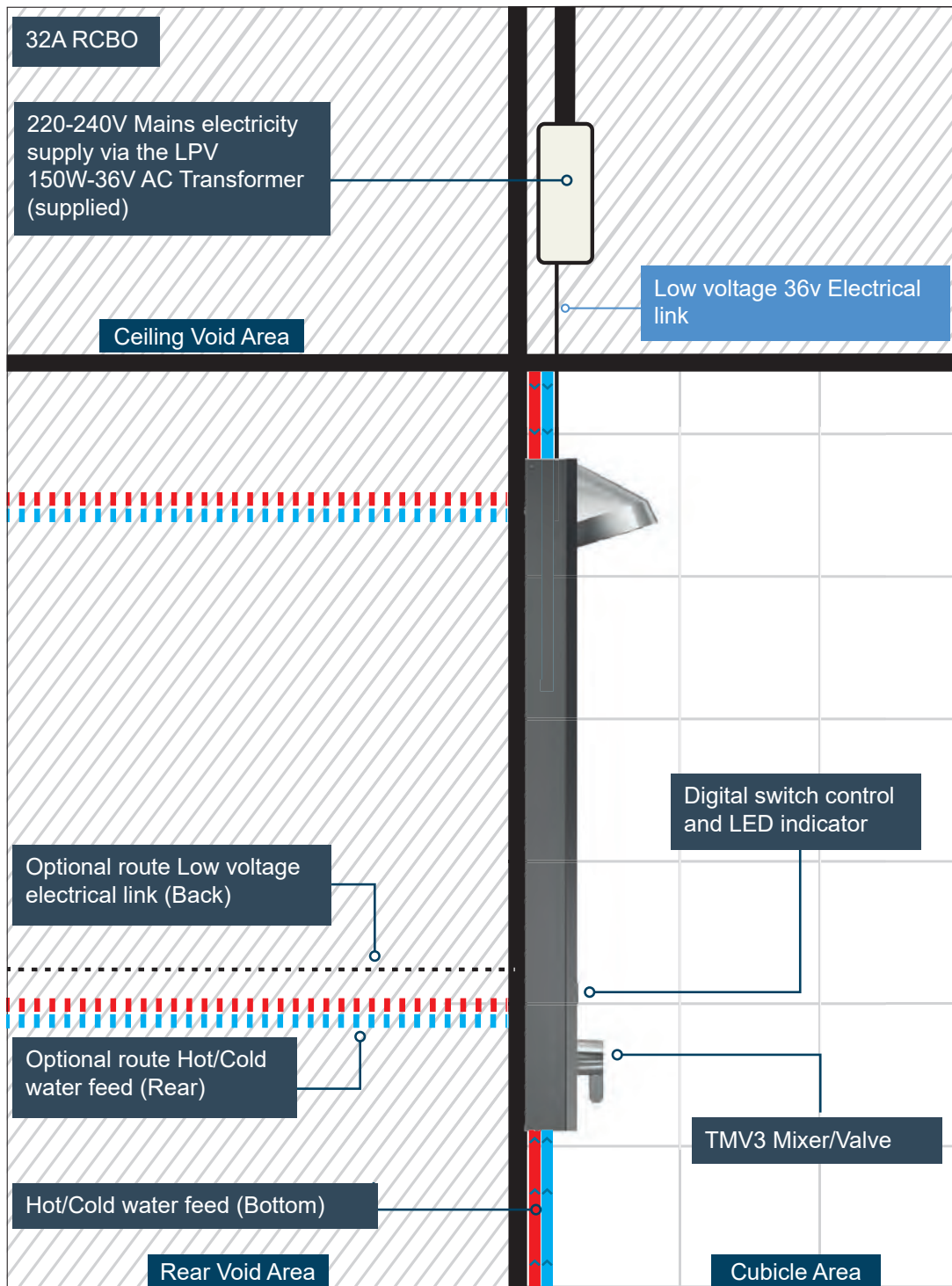


## Flow Regulator Installation



# System Diagram

Timed Flow Thermostatic (93002000 / 93004000)



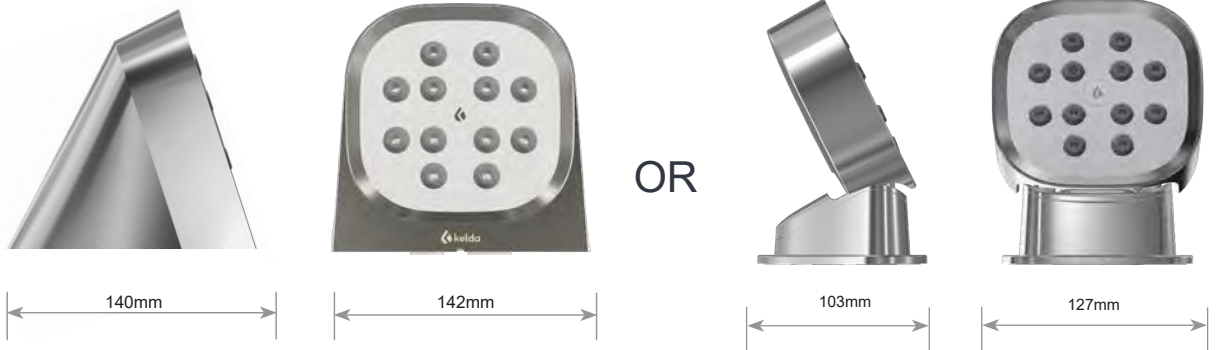
# Specification

## Timed Flow Thermostatic (93002000 / 93004000)

You should have the following assemblies within your High efficiency Commercial Panel order:

### 1 Shower Head

x1 Bright chrome shower head



### 2 Panel



### 3 Installation

x1 LPV 150-36v Power Supply

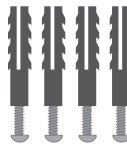


x1 Mixer Allen Key (5mm)

x1 Torx Allen Key (T25)



x1 Fixing Kit: (x4 Screws, x4 Rawl plugs)

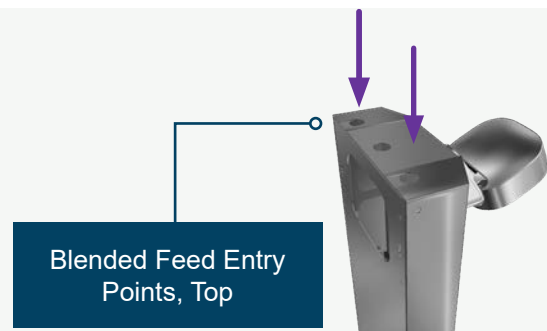
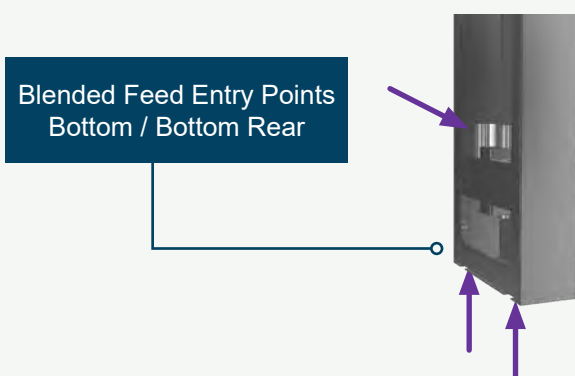
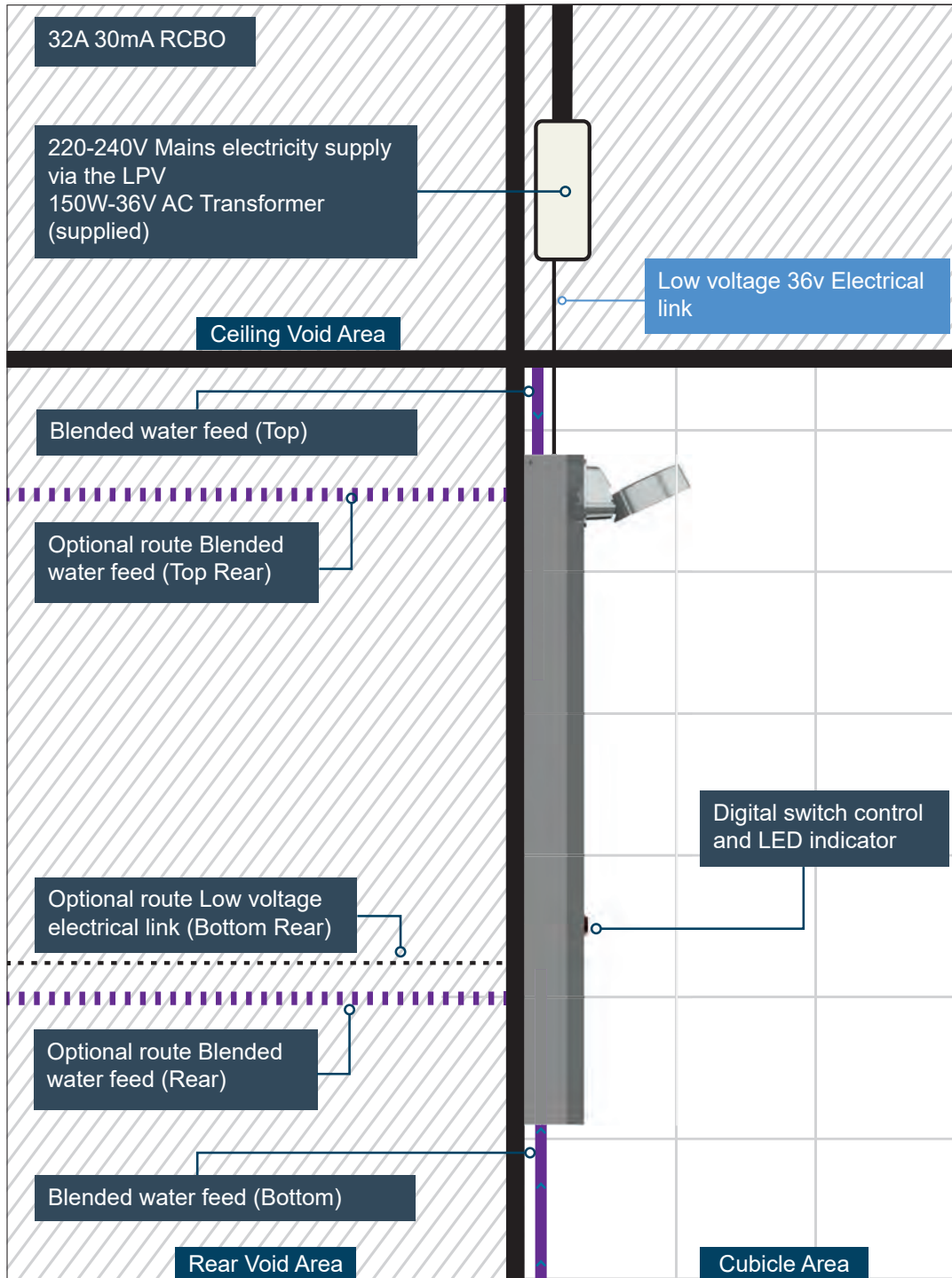


x1 Grommet selection



# System Diagram

Timed Flow (93001000 / 93003000)



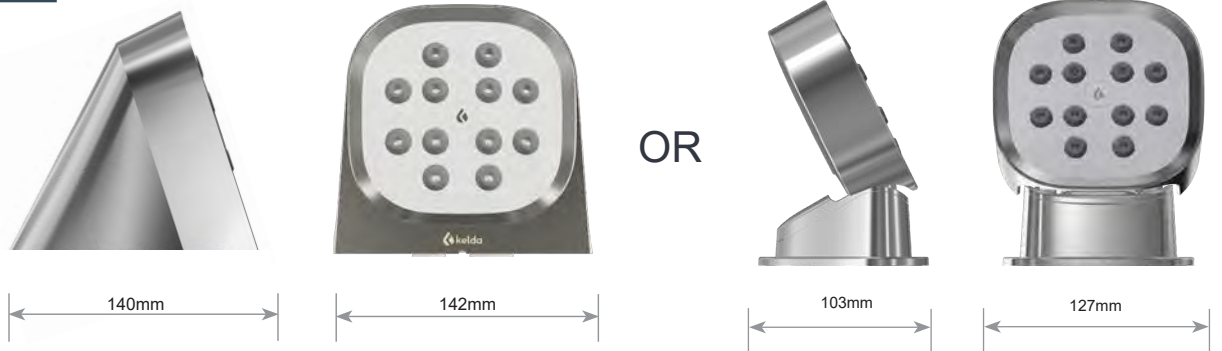
# Specification

## Timed Flow (93001000 / 93003000)

You should have the following assemblies within your High efficiency Commercial Panel order:

### 1 Shower Head

x1 Bright chrom. shower head



### 2 Panel

218mm



x4 TX20 Fixing Points

222mm



### 3 Installation

x1 LPV 150-36v Power Supply



x1 Torx Allen Key (T25)



x1 Fixing Kit: (x4 Screws, x4 Rawl plugs)



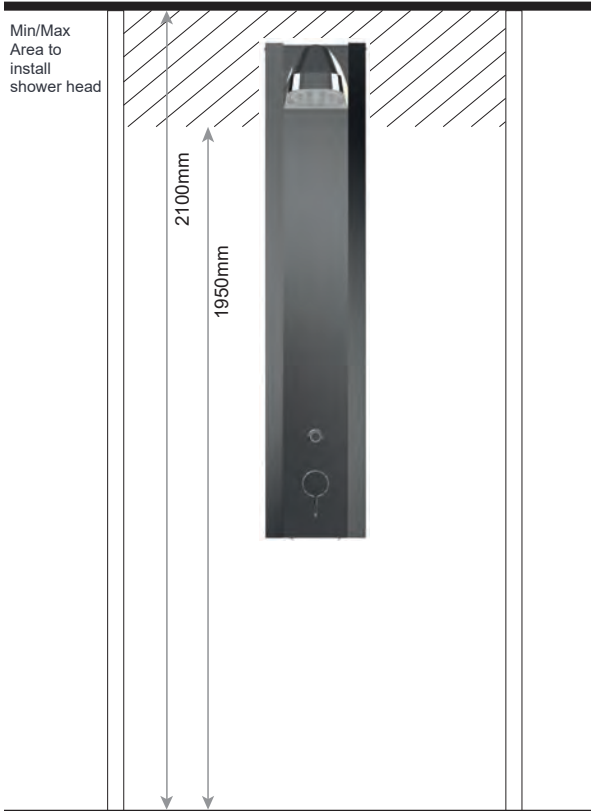
x1 Grommet selection





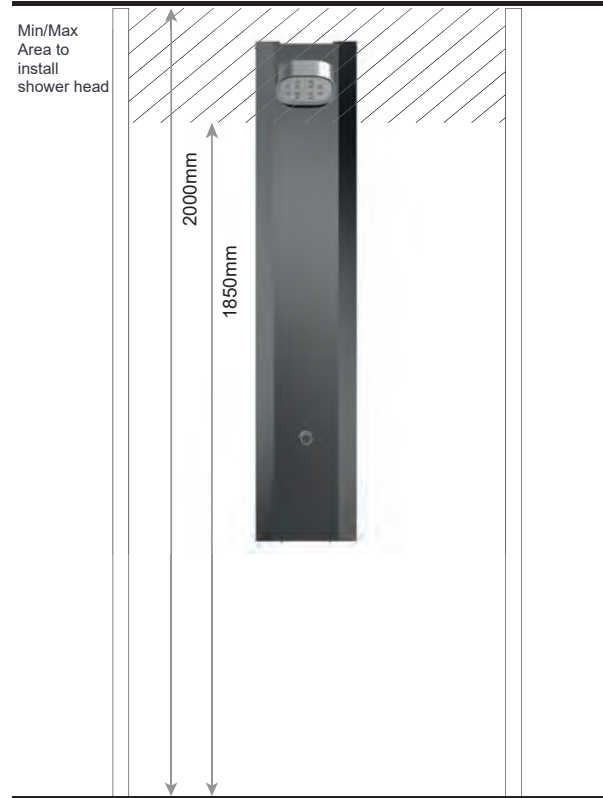
# Siting the Shower

## Fixed Head 93001000/93002000



Installation should be completed to suit the user's requirements.

## Flex Head 93003000/93004000



Installation should be completed to suit the user's requirements.



T25 Security Torx  
(Pin Torx)

## Tools needed for the job



### Warning!

- When the Control Hub is installed, the RCBO switch must be within easy reach.
- Do not use extensions or multiple sockets
- The power supply cable must never be bent or dangerously compressed

# Installation

## Panel

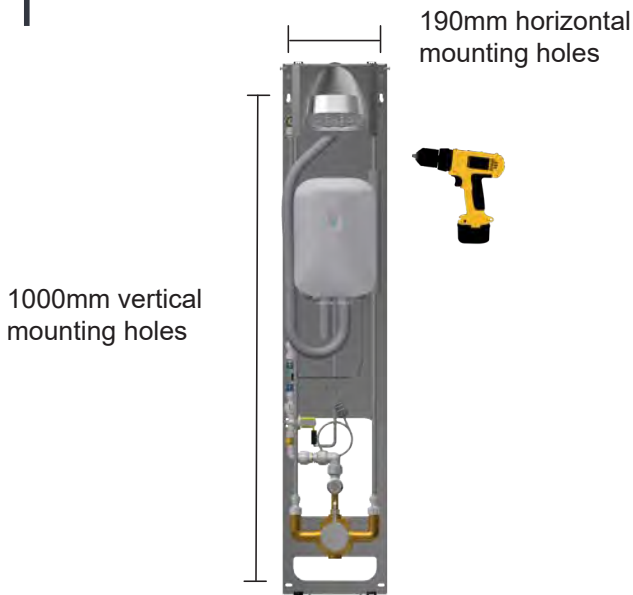


Remember!

Always check for hidden pipes + cables before drilling.

Warning: Run water through plumbing to clear debris from pipework before connecting to Kelda panel. **Take caution when removing the front cover as the Digital push button is attached to the Control Hub with a cable.**

1



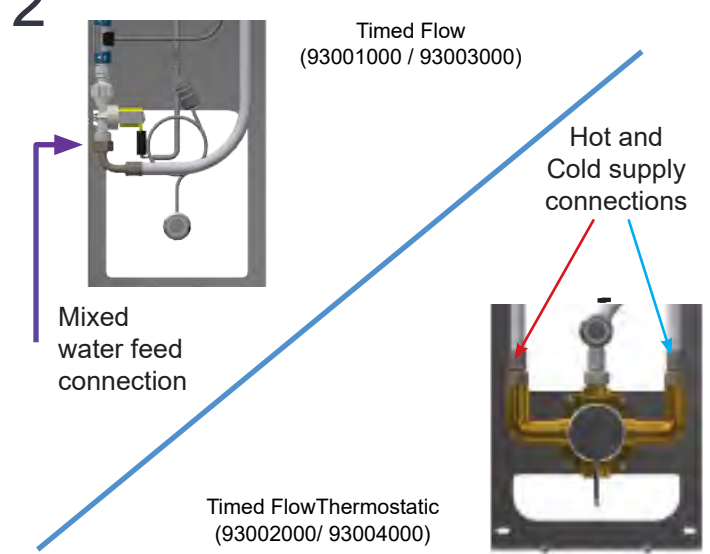
Remove the front cover by unscrewing the 4 M3 TX20 screws. Using the shower fixing bracket, mark and drill holes for shower fixing bracket on the back of the shower cubicle and secure bracket using the rawl plugs and screws supplied.

3



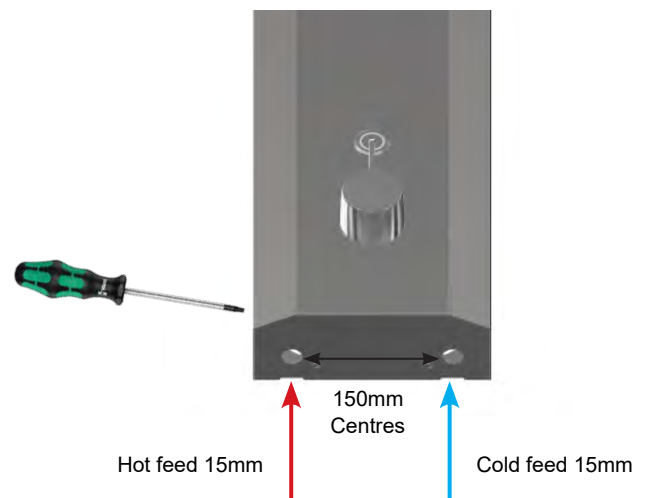
Run the low electrical power cable from the power supply, protected by 32A 30mA RCBO and 3A switched fused spur in compliance with all IEEE standards and local building standards and regulations, to the control hub. See ELECTRICAL INSTALLATION for connecting power supply cable to hub.

2



Connect blended water feed either directly to 1/2" BSP Solenoid connection, or use flex hose provided with 15mm push fit connection. For thermostatic panel connect hot and cold feeds to TMV3 mixer 1/2" BSP compression fittings, flex hose extensions are supplied with 15mm push fit connections. See TMV3 mixer instructions for commissioning and servicing details.

4

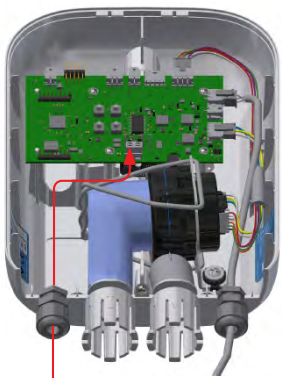
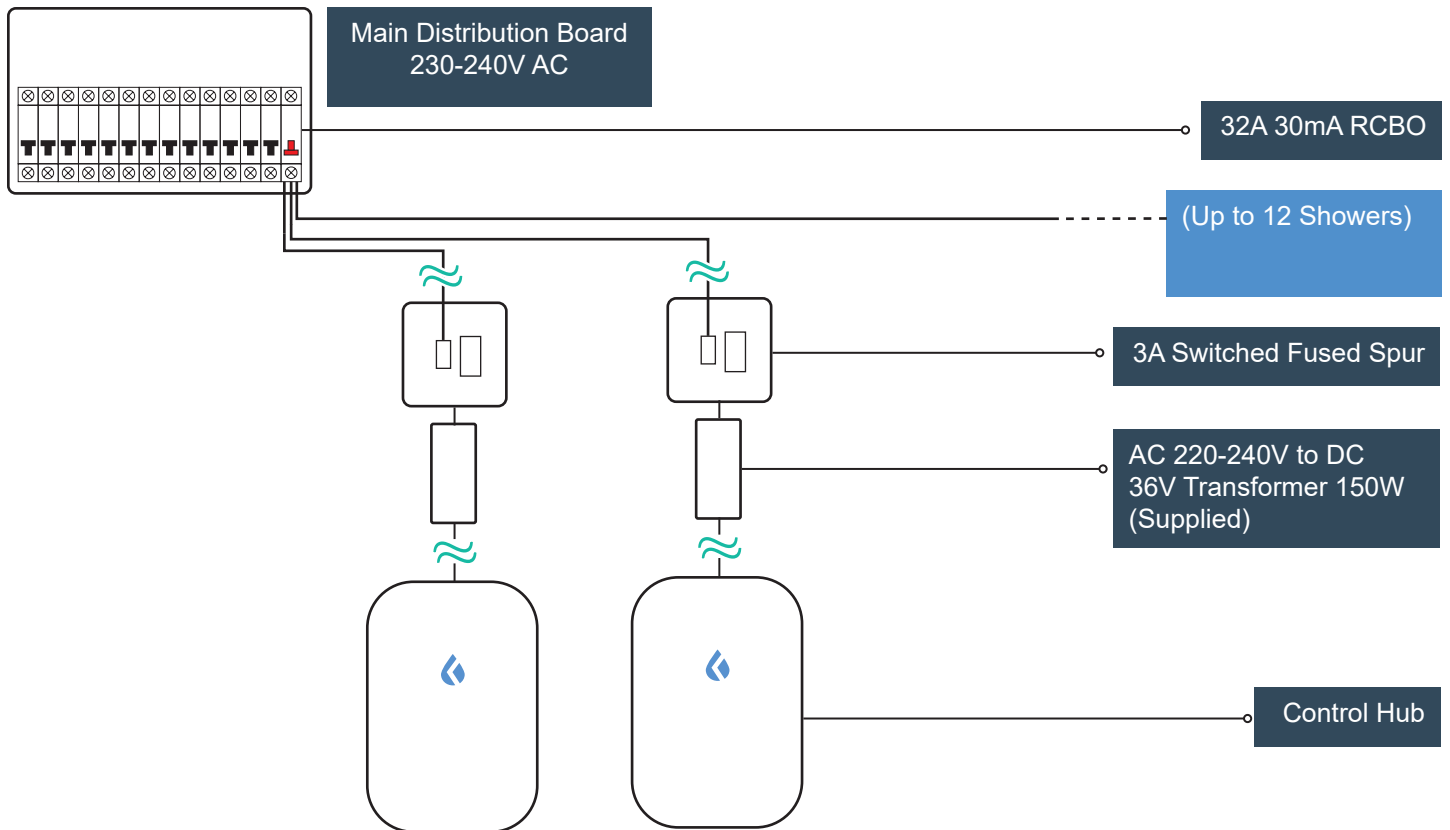


Take care to ensure cables and pipes are not pinched when front panel is fitted. Secure front panel with 4 x Tx25 screws (supplied Tx25 Allen key can be used). For thermostatic panel fit control handle with Allen key provided.

# Electrical Installation

This shower requires a 230-240 VAC, 47 ~ 63Hz single phase supply. A single 3 Amp switched fused spur should be used for each Panel. Upto 12 Kelda showers can run from a single 32A 30mA RCBO.

Before connecting to power supply, make sure that the mains terminal is able to sustain 240V and 3A. All electrical installation to be carried out by an approved electrician in accordance with Part "P" U.K. Building Regulations and to the latest IEEE standards, or the appropriate regulations in the country of installation.



## Electrical connection

1. Thread the power supply cable through the 16mm cable gland in the bottom left of the Control Hub.
2. Connect the cable to the 36V power terminal shown. (polarity of connections is not important)
3. Using a 3mm flat screwdriver, tighten the connections down and tighten gland nut onto cable.

# Factory Settings

## Air volume

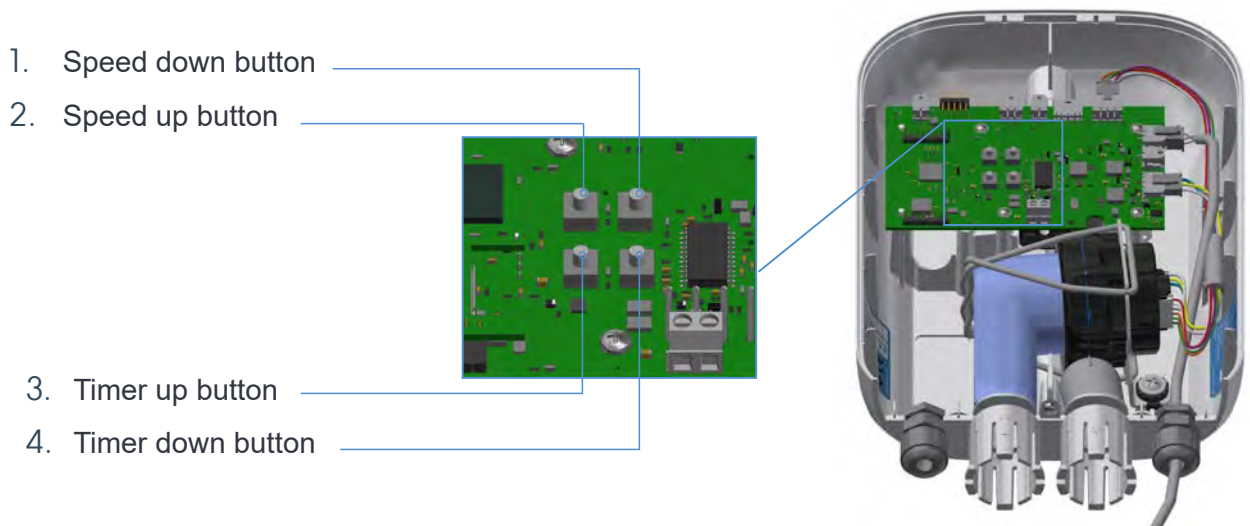
Your Kelda shower will have a different fan speed setting depending on what shower head and water flow rate your product has. This will be set at the factory.

The hub will automatically adjust fan speed to match minor changes in flow rate which may result from changes in water pressure.

However the fan speed can be manually changed if for example the flow regulator is changed to a different value or for other site specific reasons.

## Changing the fan speed (10 settings)

- The fan settings are pre-set by the factory.
- To change the fan speed settings, press speed DWN once, the number of LED flashes next to the button indicate what fan speed setting the Control Hub is currently set at. (There are 10 speed settings: 1-10)



## Time Delay Feature

- This is only if shower is being used with a digital push button or PIR control
- The factory setting is set at **30 seconds (3 LED Flashes)**
- Press Timer DWN once, the number of LED flashes next to the button indicate what timer setting the Control Hub is currently set at. (There are 5 timer settings: 10s,15s,30s,45s,60s)

## Air overrun function

The system has an air overrun function which allows the air to continue to operate for approximately 1 second after the water flow stops. This function purges the water from the shower head, reducing the build up of lime-scale.

## Fan Test Function

Press and hold both up and down fan speed buttons simultaneously to run the fan independently of full shower operation.

## Fan overheat protection

In the unlikely event of the fan overheating from being jammed with debris or being continuously run in a hot environment, then a protection mode will be triggered with reduced fan speed and fast LED flash on Hub. The fan will return to normal operation once debris is cleared or the temperature returns to operational level.

# Troubleshooting

Symptom	Likely cause	Action/Remedy
System does not operate fully (reduced or no water flow):	Hot or cold water supply isolation valve closed	Check and open valve
	Debris has caused blockage in mixer	Isolate mixer and service strainers and cartridge see mixer instructions to service
	Pressure difference between hot and cold supplies is too high	Adjust screws on mixer to balance. Or fit pressure reducer on high pressure supply.
	Shower mixer/valve not functioning.	Check valve, replace if necessary.
Water flows from shower head but no air:	Does the fan run?	if so check seal of air hose connections and that hose is kink free.
	Is the LED on the front of the Control Hub illuminated?	If no check electricity supply
		Conduct hard reset by switching off electrical supply and waiting 10 seconds before turning on.
	Debris in fan	Clear any debris from fan and follow Fan Test Function p.12.
		If fan runs then check flow sensor is not jammed or faulty.
Temperature fluctuating:	Thermostatic control/Boiler issue.	Check thermostatic mixer valve/boiler for an issue, call a specialist if necessary.
Poor/no water flow:	Blocked water filter/strainer.	Isolate water supply and service strainers in mixer or group mixer.
Water flow too strong:	Flow restrictor not installed.	Check if the flow restrictor is properly installed (in the back of the head).

## Operation

1. Turn on the water isolation valve.
2. Turn on the electricity supply.
3. Check the Control Hub for power. (The Kelda Logo power indicator should be illuminated).
4. The Kelda Technology system operates by detecting water flow. It starts when water flow is detected and stops when the water flow ceases.
5. Open the shower mixer/valve. Water should start to flow from the shower head, followed very quickly by the air flow. Once the water valve times out, the water will cease to flow and the air will continue to operate briefly. This purges water from the shower head.

Congratulations, you're now ready to experience the greenest shower in the world and start saving water and energy costs.

# Maintenance

Kelda Technology products are designed for easy maintenance and should give continued superior and safe performance, provided:

1. Kelda Technology products are installed, commissioned, operated and maintained in accordance with this installation guide.
2. Periodic attention is given as necessary to maintain the product in good functional order.

Guidelines for frequency are given below. Maintenance must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel. Kelda showers are built with the highest quality components which are designed for a long life, but due care must be taken during maintenance to avoid damage.

## Daily/Weekly hygiene

External surfaces of the chrome plated showerhead wiped clean with soft cloth and a mild detergent. Take care not to get detergents on to stainless steel. Stainless steel should be regularly cleaned with warm water and soft cloth, taking care to remove any dirt and remnants of shampoo or soap. See Stainless Steel Care for more details.

## Quarterly hygiene\*

Shower heads to be dismantled to clean, de-scale and sanitise main shower head components. Please see instructions for dismantling and reassembling head for cleaning.

Unlike a conventional showerhead a Kelda showerhead is highly unlikely to block due to limescale and so service timings can set purely for hygiene.

\*This service point can be adjusted to suit site specific maintenance regime and shower usage levels.

## Bi-annual visual & hygiene

Check internal component condition of the shower head and hoses. Inspect for debris, scale deposition, deformation, damage, etc. Maintain or renew if necessary. Instructions for cleaning and disinfecting air hoses are given in this booklet.

Shut off water supply, check stop valves then remove and clear filters of debris. These may be located in thermostatic mixer if an one is fitted.

If a mixer is fitted into panel then please follow maintenance guide which is specific to that model of mixer.

## Stainless Steel Care

Stainless steel requires regular cleaning for to keep its anti-corrosion properties, this can be done just with a soft cloth and warm water. Glass cleaner can be used to remove fingerprints (we advise you spot test the use of any cleaner first).

Chlorine, bleach, detergents, shampoos and soaps can all strip stainless steel of its anti-corrosion properties and if left uncleaned this can result in rust spotting. If you believe any of these substances have been in contact with the stainless steel or if the panels need cleaning following a period of neglect, then use a stainless-steel cleaner – these are widely available but stop test any cleaner first.

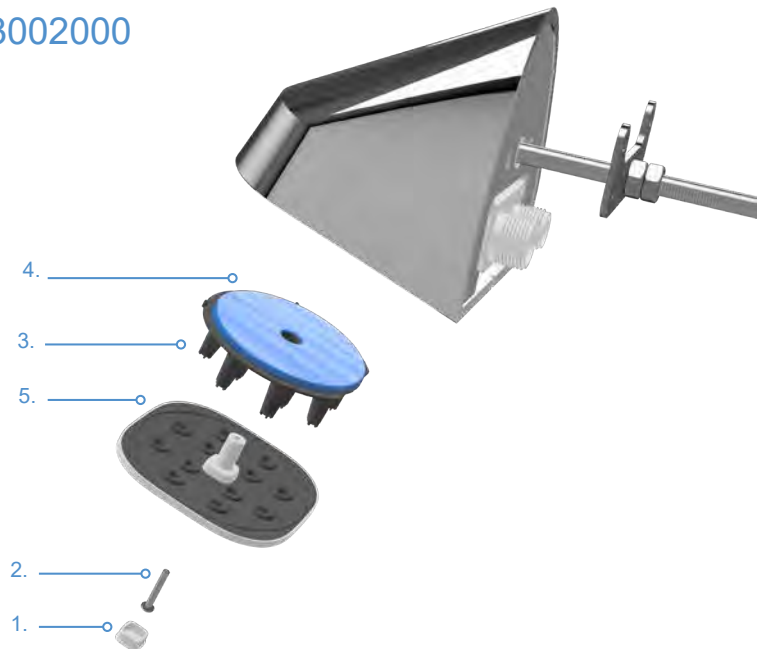
If cleaning has been missed and rust spotting has occurred, then vigorous cleaning with stainless-steel cleaner can bring back original anti-corrosion properties.

## Instructions for dismantling and reassembling head for cleaning

1. Remove the fascia plate screw cap with a small flat head screwdriver (1).
2. Remove centre screw using a posi-drive PZ2 screwdriver ensuring the fascia plate (2) and atomisation engine (3) are held until screw removed.
3. Slowly lower fascia plate and atomisation engine.
4. Carefully detach the rubber hose from the water chamber (4) ensuring not to remove the hose from the other end.
5. Carry out clean, de-scale and sanitisation of shower head components using industry standard cleaning products.
6. To reassemble, follow steps in reverse. Take care to correctly align nozzles (5).

Fixed Head Timed Flow: 93001000

Fixed Head Timed Flow Thermostatic: 93002000



Flex Head Timed Flow: 93003000

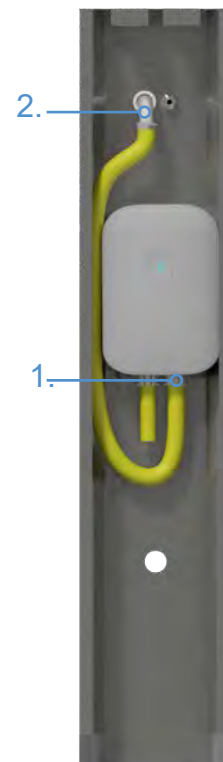
Flex Head Timed Flow Thermostatic: 93004000



# Maintenance

## Cleaning and disinfection of air hoses

- Isolate power supply to panel shower.
- Remove the shroud covering the internal parts of the panel.
- Remove air supply hose by gently easing hose off the air outlet adapter. (1)
- Remove 90° elbow connector by unscrewing  $\frac{3}{4}$ " Air nut and gently pulling apart. (2)
- Put aside all hose clips in a safe place.
- Whilst wearing the correct safety equipment, dip hoses into a disinfectant solution so all the hoses are submerged.
- Remove from solution and clean out hoses using a pipe cleaning brush.
- Dip hoses into disinfectant solution and flush through, continue this until hoses are clean.
- Once hoses are clean, flush hoses through with fresh water.
- Shake out any excess water and wipe dry.
- Replace air supply hose by gently inserting into air outlet adapter.
- Replace 90 degrees elbow connector by gently inserting into hose, screwing  $\frac{3}{4}$ " Air nut onto shower head hose pipes.
- Reinstall power supply to Control Hub and reinstall shroud cover onto panel.
- Run shower for 2-3 minutes to dry any moisture in the hoses.
- Check for air leaks from hose connections and adjust accordingly.

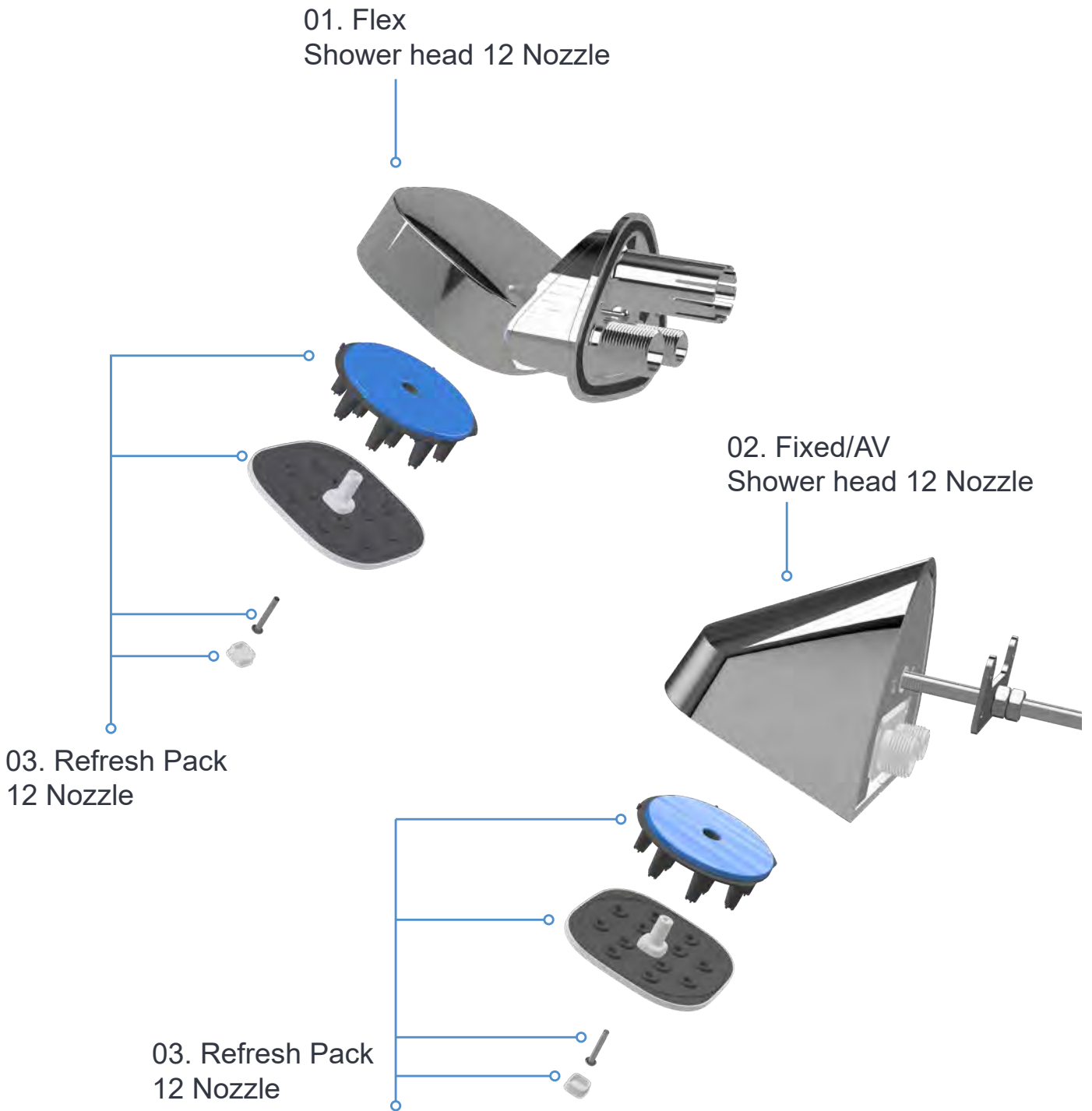


### Warning!

During regular cleaning of the shower area, do not direct a water hose at the shower head while it is functioning. Many household and industrial cleaning products contain mild abrasives and chemical concentrates and should not be used on this product.

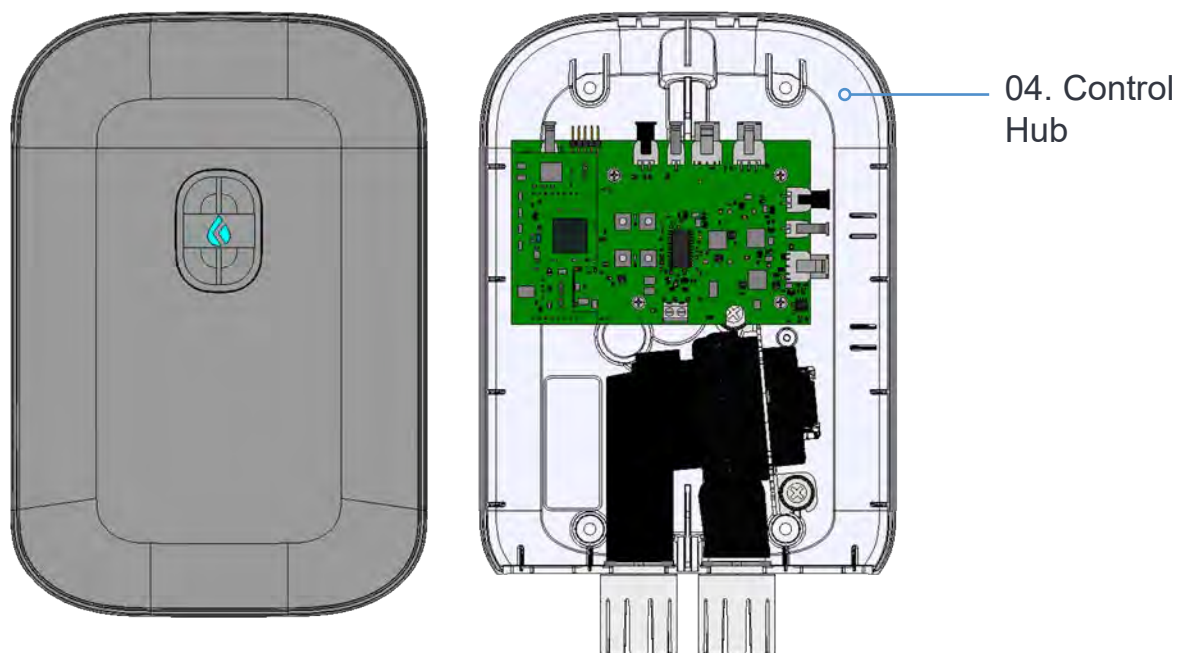


# Spare Parts



No.	Part No.	Description	Parts List
01	81004100	Flex Head 12 Nozzle Mounted	Body, Body trim, Head chassis, Head top cover, Water connector, Air connector
02	81006100	AV Head 12 Nozzle Mounted	Backplate vent, Shower head chassis, Water connector, Air connector, Water chamber, (E3 Fixed) Atomiser engine, (E3 Fixed) Fascia plate, (E3 Fixed) Screw cap
03	80047	E3 Flex Re-fresh replacement pack	Water chamber,(E3 Flex) Atomiser engine, (E3 Flex) Fascia plate, (E3 Flex) Screw cap

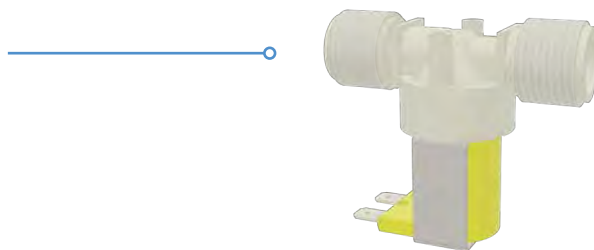
# Spare Parts



05. 19mm Air  
Hose



06. Solenoid



No.	Part No.	Description
04	82002000	Kelda Hub - No LED
05	35017	19mm 1000mm Air hose
06	37004	24V 1/2" BSP Valve Silicone Diaphragm

# Customer Care

## Guarantee

Kelda Technology guarantees this product against any defect in materials or workmanship for the period of two years from the date of purchase. To be covered by this guarantee, service work must only be undertaken by Kelda Technology or by its approved agents.

## Not covered by this guarantee

Damage or defects arising from incorrect installation, improper use or failure to maintain in accordance with the instructions in this product manual, including the build-up of lime-scale. Defects or damage if the product is taken apart, repaired or modified by a person not authorised by Kelda Technology or by their approved agents.

## After-sales service

Our fully trained staff are ready to provide assistance, should you experience any difficulty operating your Kelda Technology equipment.

## Spare parts

All functional parts of Kelda Technology products are available.

All spares are guaranteed for 12 months from date of purchase.

Spares that have been supplied directly from us can be returned within one month from date of purchase, providing that they are in good order and the packaging is unopened.

Note: returned spares will be subject to a 15% restocking charge and authorisation must be obtained from Kelda Technology before return.

## Customer care policy

If within a short space of time of installation the product does not function correctly, first check with the operation and maintenance advice provided in this installation guide to see if the difficulty can be overcome. Failing this, contact your installer to make sure that the product has been installed and commissioned in full accord with our detailed installation instructions. If this does not resolve the difficulty, please contact Kelda Technology, who will give you every assistance.

### Warning!



- The shower panel should not be installed in an outdoor environment, including sheltered areas, as it may be very dangerous to leave it exposed to damp.
- Do not use extensions or multiple sockets
- The power cable must never be bent or dangerously compressed

## Patents:

	MX352860B	GB2492113B
Patents granted and pending:	US9855569B2	GB2553110A
AU2012216911B2	ZA201306157	WO2018037210A1
CN103379964B	GB2492114B	US2019176173A1
EP2675568A1	CN103608121B	GB2454228B
GB2488144B	EP2723503A1	US9173809B2
JP6026435B2	US9751095B2	



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#### DISPOSAL

Do not dispose of with household waste. Please recycle where facilities exist.  
Check with your local authority for recycling advice.