Cistermiser

OUR WORLD IS WATER
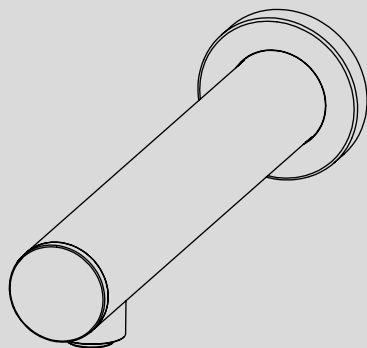
Vecta+ Sensor Taps Installation Guide

VST   VSMT   VSS

CIPHE
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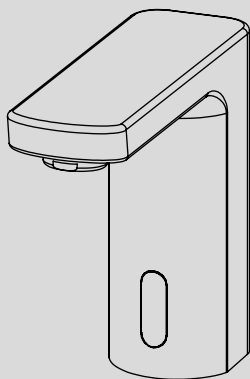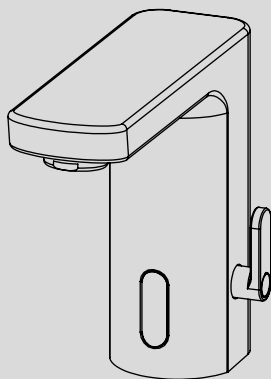
1. Introduction

Cistermiser's Vecta+ infrared tap range offers internal valve configurations with the Vecta+ Sensor Mixer Tap, and external valve configurations with the Vecta+ Sensor Spout and Vecta+ Sensor Tap. The full range uses infrared technology which ensures maximum hygiene and water efficiency.
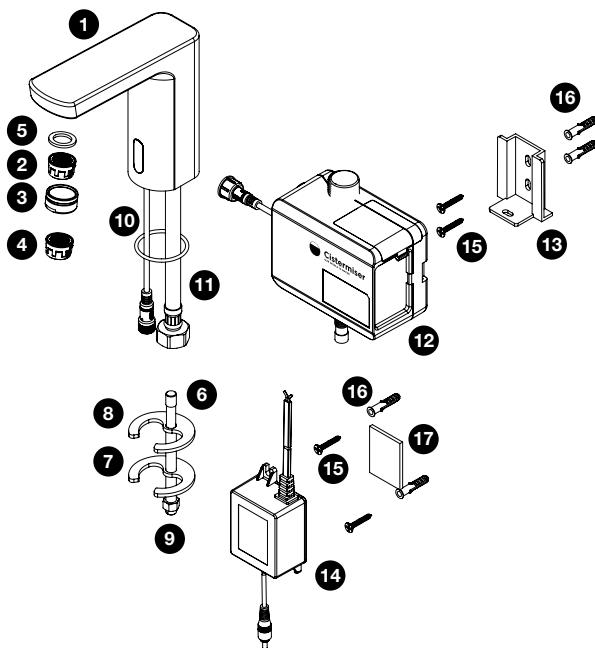
The Vecta+ Sensor Tap and Vecta+ Sensor Mixer Tap are supplied configured with the 3.5 litres per minute laminar nozzle installed but also include a 5 litres per minute aerator.

The Vecta+ Sensor Spout is supplied configured with the 3.5 litres per minute laminar nozzle installed but also includes a 5 litres per minute aerator.

Supplied parts

Vecta+ Sensor Tap

1 Tap Body
2 *3.5 lpm Nozzle - Blue (pre-fitted)
3 Aerator Housing
4 *5 lpm Nozzle - Orange
5 Aerator Gasket
6 Fixing Rod
7 Fixing Plate
8 White Fixing Gasket
9 Fixing Rod Nut
10 Tap Body O-ring
11 Inlet Hose
12 Control Box
13 Control Box mounting bracket
14 Power Transformer
15 Mounting Screw x 4
16 Wall fixing x 4
17 Sticky Pad (Power Transformer)

## Optional extras (Suitable for Cistermiser's Vecta+ Sensor Tap range)

Copper inlet tube
Multi product power supply unit (PSUC)

*Low flow rate options include one flow regulator.

Vecta+ Sensor Mixer Tap

1   Mixer Tap Body
2   *3.5 lpm Nozzle - Blue (pre-fitted)
3   Aerator Housing
4   *5 lpm Nozzle - Orange
5   Aerator Gasket
6   Fixing Rod
7   Fixing Plate
8   White Fixing Gasket
9   Fixing Rod Nut
10 Tap Body O-ring
11 Inlet Hose x 2
12 Inlet filter x 2
13 Check Valve & fitting x2
14 Power Junction Cable
15 Battery box
16 Battery box bracket
17 Power Transformer
18 Mounting Screw x 4
19 Wall fixing x 4
20 Sticky Pad (Power Transformer)
21 Sticky Pad (Battery box)
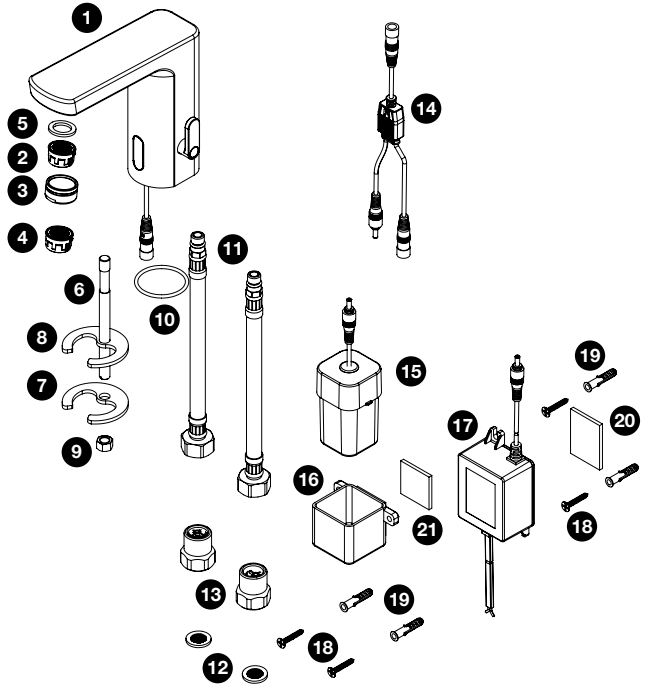
Vecta+ Sensor Spout

1   Spout Body
2   3.5 lpm Nozzle - Blue (pre-fitted)
3   Aerator Key
4   5 lpm Nozzle - Orange
5   Fixing Flange
6   Fixing Cover
7   Spout Fixing Screw x 3
8   Inlet Hose
9   Control Box
10 Control Box mounting bracket
11 Power Transformer
12 Mounting Screw x 4
13 Wall fixing x 7
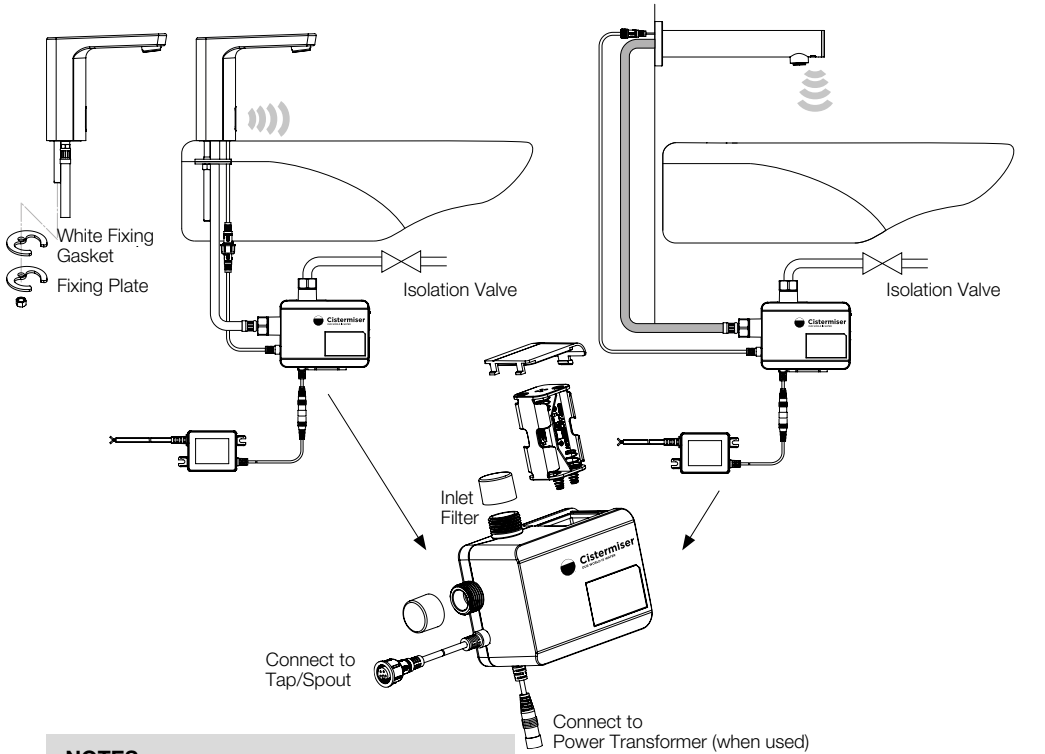14 Sticky Pad (Power Transformer)
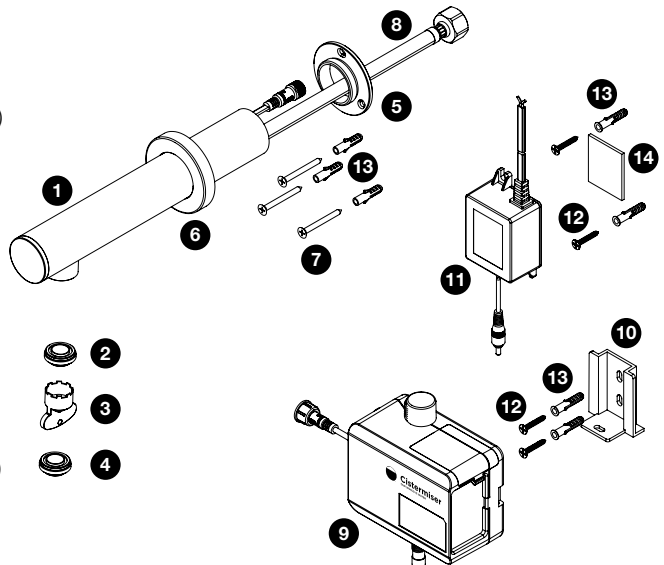
2. Installation

Single Vecta+ Sensor Tap

The tap can be mounted on any horizontal surface 10-40mm thick. It requires a hole of 28-32mm diameter.

Single Vecta+ Sensor Spout

A spout can be mounted on a secure vertical surface. It requires a hole of 26-32mm diameter.

Ensure brass flange is fitted to body and spout aligned before fitting

White Fixing Gasket

Fixing Plate

Isolation Valve

Isolation Valve

Inlet Filter

Connect to Tap/Spout

Connect to Power Transformer (when used)

NOTES:
- Flush pipework prior to installation
- Ensure filter in Control Box is clean
- Do not install opposite a mirror
- Minimum 0.5 Bar dynamic pressure
- Install an accessible isolating valve and TMV upstream of the tap
- IMPORTANT. Prior to marking and drilling fixing holes for the Vecta+ Sensor Spout, installers must Assemble 'Fixing Flange' (5) and 'Fixing Cover' (6) to the spout to ensure the Spout is aligned when secured to a wall.

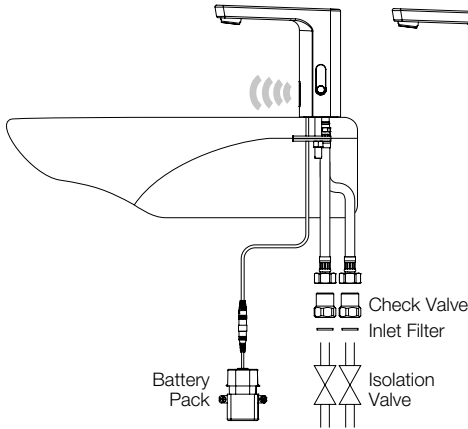**How to change the nozzle**
Use the nozzle tool (Vecta+ Sensor Spout) or a 22mm spanner (Vecta+ Sensor Tap) to unscrew the 3.5 litre (blue) nozzle. Insert the 5 litre (orange) nozzle and tighten until flush with tap body; no part should be protruding from the end of the tap. Ensure the nozzle is not over-tightened as this may pinch the "O" ring and cause the tap to leak.

Single Vecta+ Sensor MixerTap

The tap can be mounted on any horizontal surface 10-40mm thick. It requires a hole of 28-32mm diameter.

Battery Powered

Check Valve
Inlet Filter

Battery Pack

Isolation Valve

Mains Powered

White Fixing Gasket

Fixing Plate

Check Valve
Inlet Filter

Power Transformer

Isolation Valve

Power Junction Cable

NOTES:
• Flush pipework prior to installation
• Ensure filters in hoses are fitted and clean
• Do not install opposite a mirror
• Minimum 0.5 Bar dynamic pressure
• Install an accessible isolating valve and TMV upstream of the tap
• Ensure electrical connections correlate to their matching colours. i.e. black to black or red to red
• Ensure pre-fitted filter is retained within flexible hose - the tap's perfmance will be reduced without the filter

How to change the nozzle

Use a 22mm spanner to unscrew the 3.5 litre (blue) nozzle. Insert the 5 litre (orange) nozzle and tighten until flush with tap body; no part should be protruding from the end of the tap. Ensure the nozzle is not over-tightened as this may pinch the "O" ring and cause the tap to leak.
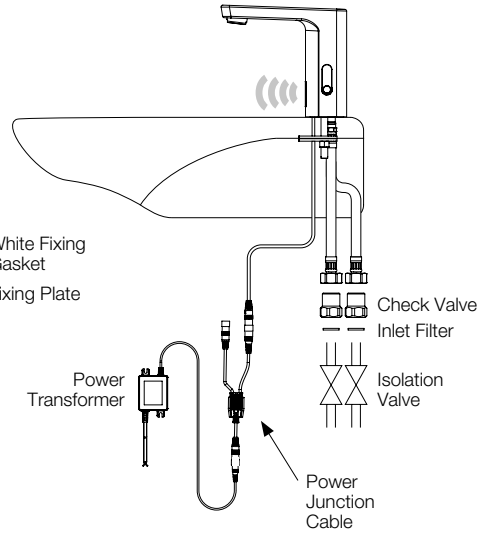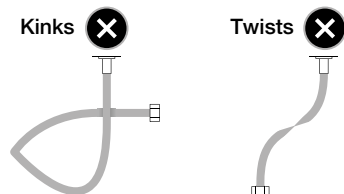
Kinks ❌   Twists ❌

3. Power connections

Vecta+ Sensor Tap and Vecta+ Sensor Spout

If using the battery case, remove battery lid and battery compartment from the control box. Fit 4 Alkaline AA (LR-6) batteries as indicated. Replace the battery compartment in the control box and replace the lid.

If using the mains power, connect the power transformer to the control box. Secure the power transformer in a dry location using screws or sticky pad provided and connect the un-terminated mains cable to a 230V AC supply via a fused spur.

Both batteries and mains power can be connected at the same time to provide battery backup in the event of loss of power.

Connect to Tap/Spout

Connect to Power Transformer
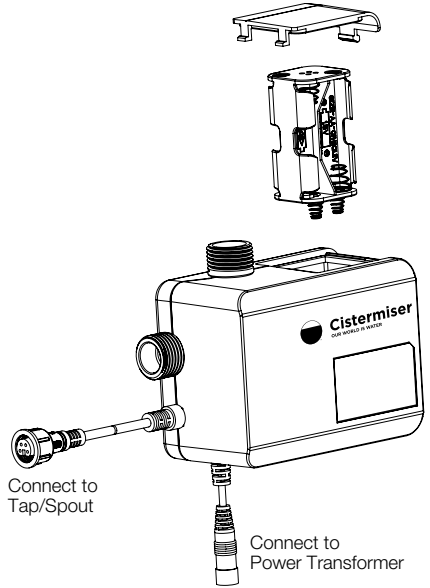
Vecta+ Sensor Mixer Tap

If using the battery case, remove battery compartment lid and fit 4 Alkaline AA (LR-6) batteries as indicated and replace the lid. Mount the battery case in the bracket and secure with the screws or sticky pad provided.

If using the mains power, secure the power transformer in a dry location using screws or sticky pad provided and connect the un-terminated mains cable to a 230V supply via a fused spur.

Use the Power Junction Cable to connect the power source to the tap. Ensure the colours match red to red and black to black. Both batteries and mains power can be connected at the same time to provide battery backup in the event of loss of power.

Power Transformer

Black to Black

Power Junction Cable

Connect to Mixer Tap

Red to Red

Battery Box

Battery Box and Power Transformer can be connected at the same time
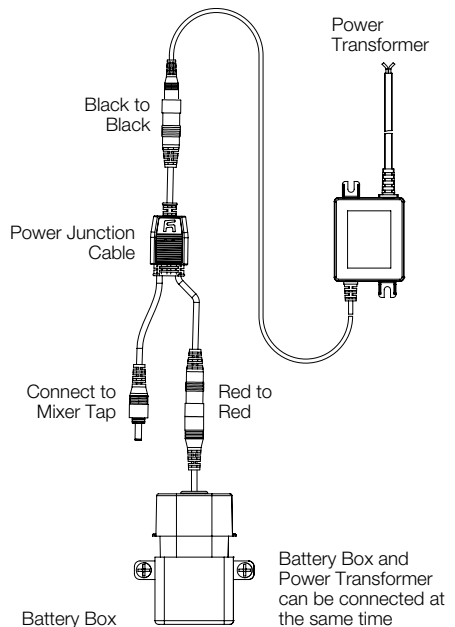
Multiple power connections for Vecta+ Sensor Taps & Spouts

If installing multiple Cistermiser products the PSUC Multi Product Power Supply Unit is available as an accessory. Contact Cistermiser for more details.

Isolation Valve

Isolation Valve

Isolation Valve

230V Supply

Multi-Product Power Supply Unit (PSUC)

Supply up to 10 Vecta+ outlets
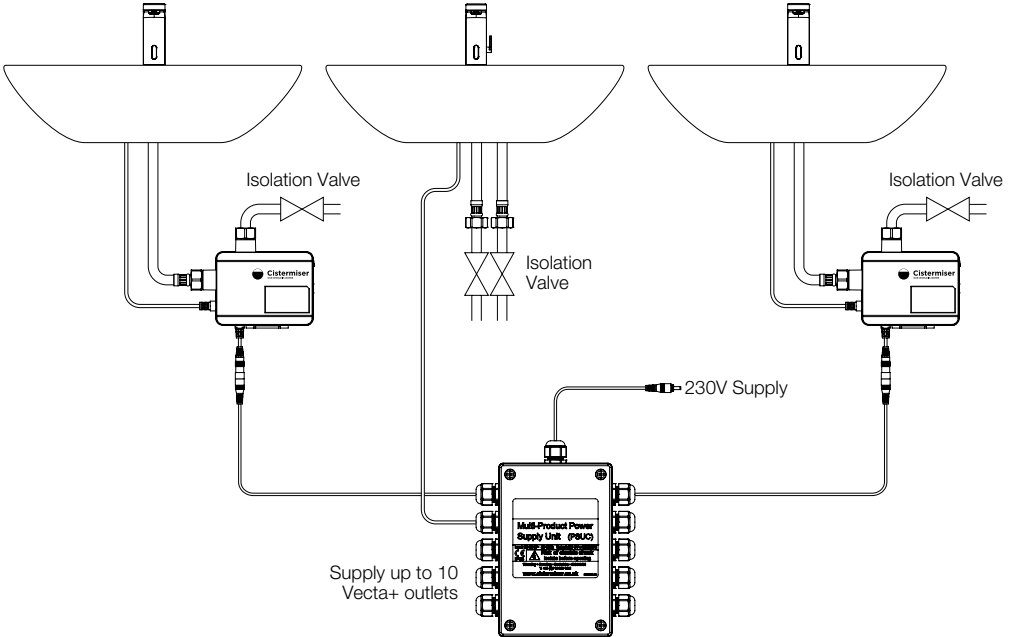
4. Usage advice & specification

Minimum operating pressure:	0.5 bar (dynamic)
Maximum operating pressure:	6 bar (dynamic or static – whichever is highest)

Factory settings

Range:	~18cm
Run-on time:	2 sec
Battery life:	2 years in normal conditions with recommended batteries. A single red flashing of the LED indicates that the batteries are low and need to be replaced.
Cleaning:	Clean with non-abrasive cleaner and water only.
Lens care:	Infrared lens can be polished with a soft cloth.

Electronic specification

Power transformer:	100-250V AC 50/60Hz 0.2A MAX
Control Box / Mixer Tap:	Supply: 6VDC 1A MAX (batteries or power transformer)
Ambient temperature range:	Operating: 0 to 40°C
Storage:	-25 to 40°C

Features

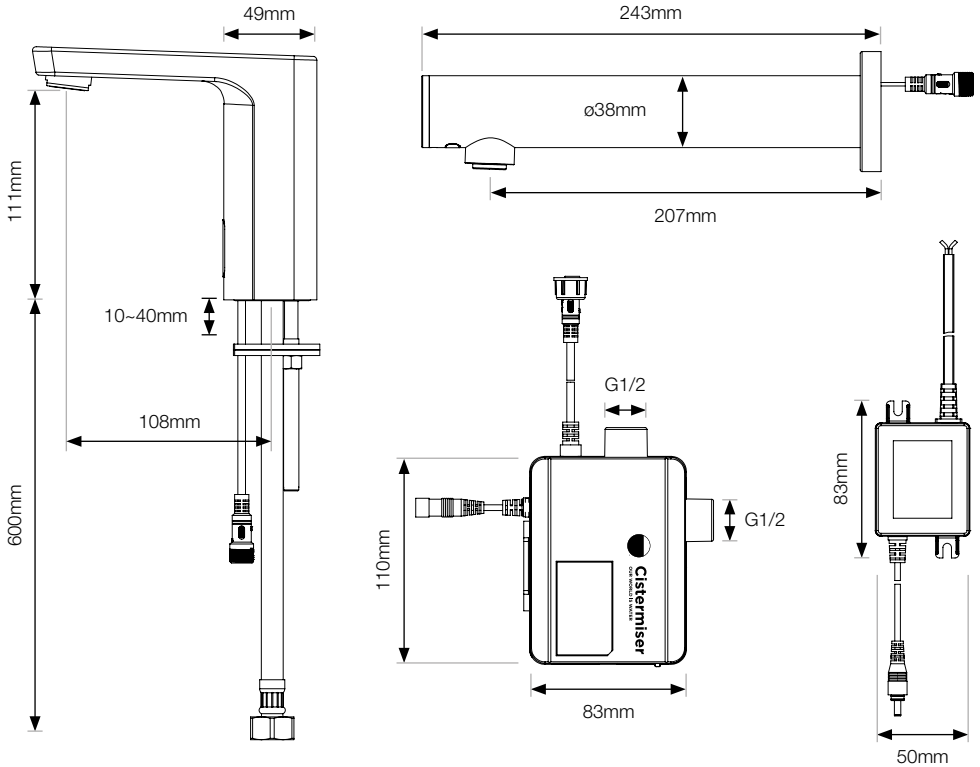|	
Non touch:	The water is activated when hands are presented in front of the infrared sensor.
Safety shutoff:	After 60 seconds of continuous water activation via sensor detection, the tap will automatically stop to reduce the risk of flooding.
Smart shutoff:	During a power cut, the device will automatically switch off the water flow to reduce the risk of a flooding event.

5. Component dimensions

Vecta+ Sensor Tap & Vecta+ Sensor Spout

49mm

243mm

ø38mm

207mm

111mm

10~40mm

108mm

600mm

G1/2

G1/2

110mm

83mm

83mm

50mm

Flow rate chart

8
7
6
5
4
3
2
1
0

Flow Rate (litre/min)

0   1   2   3   4   5

Supply pressure (bar)

——— 5 litres per minute aerated (orange)

- - - - 3.5 litres per minute non-aerated (blue)
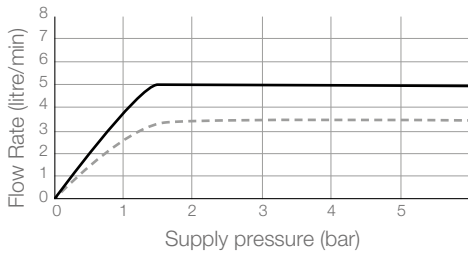
NOTE:
• Valve may fail to operate at under 0.5 bar dynamic pressure.

Vecta+ Sensor Mixer Tap
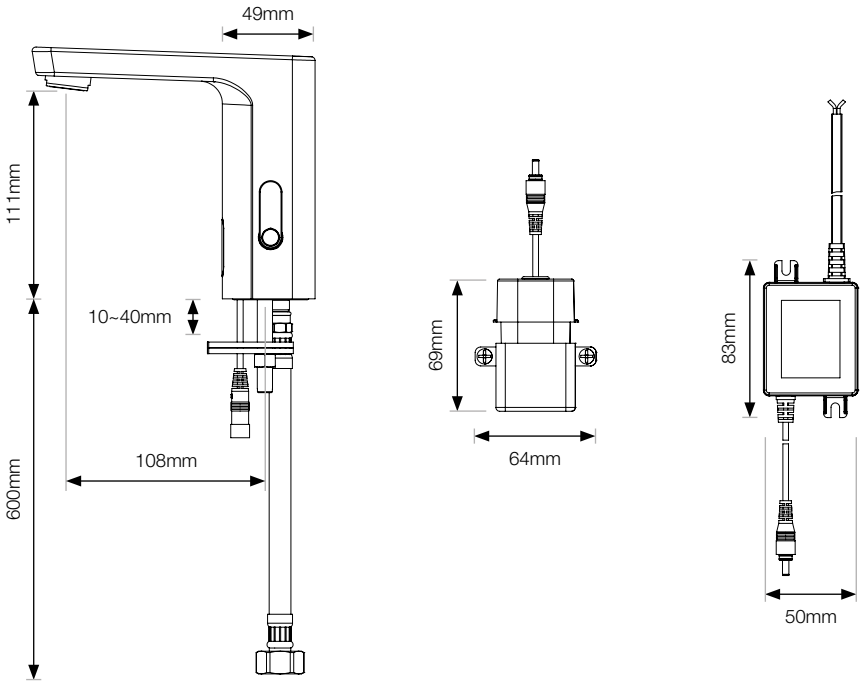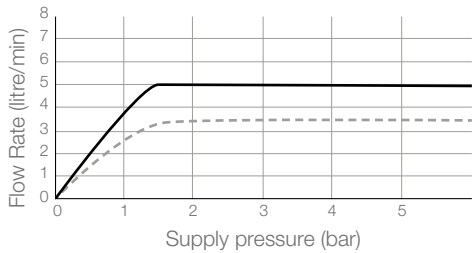
49mm

111mm

10~40mm

600mm

108mm

69mm

64mm

83mm

50mm

Flow rate chart

Flow Rate (litre/min)

8
7
6
5
4
3
2
1
0

0   1   2   3   4   5

Supply pressure (bar)

—————— 5 litres per minute aerated (orange)

------------ 3.5 litres per minute non-aerated (blue)

NOTE:
• Valve may fail to operate at under 0.5 bar dynamic pressure.

6. Frequently asked questions

Normal operation

During normal operation, when the user brings their hand within 18cm of the sensor it will flash red once and water will flow from the nozzle. When the user removes their hand from the sensing distance, the water flow will stop.

Fault	Observation	Action
No water from tap	**The sensor is flashing red continuously after hand is placed in sensing range**	Low battery. Change batteries.
	The sensor is not flashing at all when hands are in sensing range	Battery power: Low battery. Change batteries. Mains power: Poor DC contact. Check power transformer connection.
	The sensor flashes red once when hands are in sensing range	Water supply. Ensure water supply has been turned on and there is good working pressure. Minimum dynamic pressure 0.5 bar. Filter blockage **Vecta+ Sensor Tap or Vecta+ Sensor Spout:** Check filter in flexible hose. **Vecta+ Sensor Mixer Tap:** Check filter in inlet to solenoid valve.
	The sensor is covered	Anti-vandal mode has been triggered. The object/debris needs to be removed and the tap will resume normal functionality.
Continuous flow of water or dripping from the tap	**Water is flowing when no user is present**	Water supply. Ensure water pressure is between 0.5 bar and 6 bar. Filters: Ensure filters are clear, clean if required. Vecta+ Sensor Tap and Spout filter is in inlet to control box. Vectra+ Mixer Tap filter is in flexi-hose fitting. Debris in solenoid valve: Contact Cistermiser.

Fault	Observation	Action
Water flow diminishes	**The sensor flashes red once when hands are in sensing range**	Filter is blocked with scale or debris. **Vecta+ Sensor Tap or Vecta+ Sensor Spout:** Check filter in the inlet to the solenoid. **Vecta+ Sensor Mixer Tap:** Check filter within the flexible connector. Aerator is blocked with scale or debris. **Vecta+ Sensor Spout:** Remove aerator from the tap using the key supplied, clean and reinstall. **Vecta+ Sensor Tap or Vecta+ Sensor Mixer Tap:** Remove aerator with appropriate tools, clean and reinstall.
Inconsistent flow rate	**The sensor flashes red once when hands are in sensing range**	TMV / water pressure issue: Ensure water supply to TMV is balanced and pressure is suitable for TMV specification.
Water is always cold	**The sensor flashes red once when hands are in sensing range**	TMV / water pressure issue: Ensure water supply to TMV is balanced and pressure is suitable for TMV specification. Ensure hot water pipes are insulated to minimise cold dead legs.

Cistermiser product warranty and extended warranty

Cistermiser products are guaranteed for 12 months from the date of manufacture. The guarantee is for faulty products and parts only: there is no labour warranty. If you believe your product is faulty, please either contact Cistermiser directly on **0118 969 1611** or at **support@cistermiser.co.uk**, with a photograph and the serial number, to help diagnose the cause of the problem.

The warranty on Cistermiser products can be extended within one year of date of manufacture, at no cost, to three years from the date of installation. Please make a note of the serial number and take a photograph of the installation before you leave site.

Commissioning check-list

3 YEAR extended warranty

The warranty on Cistermiser products can be extended within one year of date of manufacture, at no cost, to three years from the date of installation. Once the valve has been installed, complete the product commissioning checklist below to demonstrate compliance with the installation instructions. Email a photograph of this completed form to **warranty@cistermiser.co.uk** or post to **Cistermiser, Unit 1, Woodley Park Estate, 59-69 Reading Road, Woodley, Berks, RG5 3AN.**

Product serial number ....

Installation address ....

Installer's name ....

Telephone number ....

Email address ....

No.	Activity	Checked	Date
1.	Flush pipework prior to installation.		
2.	Ensure filters are fitted to the supplied pipe work.		
3.	Ensure water supply working/dynamic pressure is between 0.5 – 6 bar.		
4.	Check product flow-rate suitability to application.		
5.	Check all connections for leaks; ensure isolation valve is installed.		
6.	Check flexible hose is not kinked/twisted.		
7.	Vecta+ Sensor Mixer Tap and Vecta+ Sensor Spout: check flow direction of solenoid valve.		
8.	Check electrical connections. Ensure either mains or battery power or multi product power supply unit is connected.		

Cistermiser range

Urinal flushing
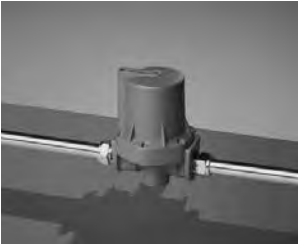
Hydraulic Control Valve

An automatic urinal flush control valve which reduces water consumption. The valve uses a simple patented mechanism which prevents water waste by ensuring that the auto-flush cistern is only filled, and can only flush, when the washroom is used.

Infrared Control (IRC™) Valve

This valve automatically manages the water supply to the urinal cistern and reduces water consumption by up to 80%. The PIR sensor detects movement and activates the solenoid valve, allowing water into a urinal cistern.

Direct Flush Valve

An infrared sensor controlled urinal valve. It automatically flushes individual urinals after use, ensuring the highest level of hygiene from the minimum volume of water.

WC flushing

Easyflush Wave

An infrared, hands-free and water-conserving WC cistern flush valve suitable for concealed or exposed cisterns. Easy to install in retrofits or new installations, its no-touch dual flush WC cistern valve promotes water economy and hygiene in domestic and commercial washrooms.

Easyflush Direct

An infrared electronic flushing system that removes the need for a WC cistern by taking its water feed straight from the mains supply. Ideal for high traffic areas as the system allows for a second flush without a delay.

Infrared Taps

Novatap

A contemporary deck-mounted chrome tap. The infrared control reduces water and energy usage and eliminates the risk that the tap may be left running.

Vectatap

An elegantly designed infrared tap with the benefit of hygienic hands-free operation. Vectatap improves water and energy efficiency and includes auto-shut off and hygiene flush features.

Washroom control systems

Sensazone

An innovative system to conserve water and energy. Occupancy is monitored by sensors; when someone enters the washroom all services controlled by Sensazone are activated – the hot and cold water, lighting and extractor fans.

LinkThru

LinkThru TMU delivers remote real-time monitoring of water temperatures on a 24/7 basis. LinkThru TMU harnesses the power of the Internet of Things to monitor water temperatures and helps to ensure Building Owner compliance with HSG274, reducing the risk of Legionella.

Davidson Holdings' brands

Salamander Pumps

Salamander is one of the UK's leading manufacturers of pumps for boosting water pressure for showers, bathrooms and whole house supply in domestic and small commercial tank-fed systems.

salamanderpumps.co.uk

Talon.

Talon is the UK market leader in the manufacture and supply of plastic pipe clips, pipe collars and fixing plugs, plus a range of cover profiles for concealing pipework.

talon.co.uk

Keraflo
OUR WORLD IS WATER

Keraflo manufacture delayed action float valves, which provide an accurate and effective method of controlling the level of stored cold water in tanks both with and without raised float valve chambers. The range is used in domestic, commercial and industrial applications worldwide.

keraflo.co.uk

Combimate
GUARANTEED LIMESCALE PREVENTION

Combimate is a domestic limescale prevention device that prevents limescale build-up and soft water corrosion in combination boilers and other domestic hot water appliances.

combimate.co.uk

IRT/145 Rev3