MEA Water ® In-Line Device Installation Guide

Introduction

MEA (Magnetic, Energised and Activated) Water ® Devices produce an indefinite or **permanent negative charge** in water. This is the natural state of water in pristine, flowing water systems. The devices require **NO** maintenance once installed and will perform indefinitely.

Information about the science, measurements and testing results in the production of negatively charged water with the MEA Water ® Devices is detailed at www.meawater.com. This includes the health values of negatively charged water for soil, plants (food), animals and humans.

Below is a summary of the many benefits plus details of devices available.

MEA Water ® Device Specifications and Applications

1. **Apollo** – The bottle top device is a screw-on attachment for indoor or household conditioning of water, wine, juices, milk and any other liquids of a similar water volume or viscosity. The device is fitted with neodymium magnets.



2. **Iris** – WaterMark certified under sink, shower or sprinkler device. Half inch (½") inner copper barrel with a ½" male end fitting. The device is fitted with neodymium magnets.

3. **Rhea** – WaterMark certified in-line device. Half inch (½") inner bore (copper) with a ¾" male end fitting. For portable, fitted hose or pipe applications. This device is mostly used on a ½" copper pipe connection to most urban houses, hot water systems, air conditioning units, garden hoses for watering lawns and gardens. This device is also suitable for filling containers for animal and human use. The device is fitted with ferrite magnets.

4. **Athena** – WaterMark certified in-line device. Three quarter inch (¾") inner bore (copper) with a 1" male end fitting for a 1" or 1 ¼" plastic pipe or hose. This device is mostly used for domestic and light industrial water supply systems as an in-line device. The device is fitted with ferrite magnets.

5. **Proteus** – WaterMark certified in-line device. One inch (1") inner bore (copper) with 1 ¼" male fitting for a 1 and ¼" pipe. This device is mainly used for light agriculture and industrial applications. The device is fitted with ferrite magnets.

6. **Orion** – WaterMark certified in-line device. One and a quarter inch (1 ¼") inner bore (copper) with 1 ½" male end fitting. This device is mostly used in agricultural or industrial applications and fixed in-line to a 1 ¼"and up to 2" pipes. The device is fitted with ferrite magnets.

7. **Zeus** – WaterMark certified in-line device. Two inch (2") inner bore (copper) with 2" brass, male end fittings. This device is mostly used in agricultural or industrial applications and fixed in-line to 2"and up to 3" pipes. The device is fitted with ferrite magnets.

8. **Rollo** – Four inch (4") inner pipe bore (copper) with 2 x 215 mm rubber flange seals (8 holes) and 16 galvanised hex head (exterior) M16 x 75mm bolts with nuts and washers. This device is mostly used in commercial buildings, irrigation and groundwater bore facilities. The device is fitted with neodymium magnets. The device is fitted with the 100nb table E flange.

Choosing a Device

Generally, the choice of what device to install in-line on a pipe depends on the desired effect of treatment. For example, the Orion 1 ¼" is considerably more powerful than the Athena ¾", and the Zeus 2" is considerably more powerful than the Orion 1 ¼". In this respect, the outcome (water charge or voltage value) is a function of the magnetic capacity to generate and hold a negative charge in water. That is, it might be expected that a ¾" device will generate a negative charge of say -440 mV and a 2" device will create a charge of -880 mV. This voltage is held indefinitely (and often increase with time) in the water, even during long periods of storage. Generally, the larger the flow and pressure through the pipe, the larger the device required.

The testing of these devices has shown that there is negligible or possibly no resistance in the device to water flow. Therefore, a ¾" device can be attached to a pipe with a diameter up to 1 ¼" with little or no loss of water flow volume and pressure. There is also test evidence to show that water pressure increases at the outlet point when the device is employed.

Device Dimensions

Device	Inside Diameter	Length	Weight (+/-1%)	Outside Diameter	Thread size BSP*	Minimum voltage (-) mV
Apollo	½"	50mm	130gm	37mm	¾" (female)	-110+
Iris	½"	60mm	245gm	50mm	½" (male and female ends)	-150+
Rhea	½"	154mm	0.63kg	45mm	¾" (male)	-250+
Athena	¾"	210mm	1.27kg	60mm	1" (male)	-350+
Proteus	1"	510mm	8.1kg	90mm	1 ¼" (male)	-400+
Orion	1 ¼"	570mm	9.5kg	90mm	1 ½" (male)	-450+
Zeus	2"	530mm	9.22kg	116mm	Reduced from 2 ¼" to 2" (male)	-550+
Rollo	4"	485mm	23.2kg	216.5mm	n/a	-800+

Note: All end threads are BSP (British Standard Pipe). Some countries (eg. USA) use a NPT (National Pipe Thread) and therefore a conversion fitting (from BSP to NPT) would have to be used for pipe connection. Phi'on can supply these adapters.

The length of the in-line devices needs to be considered in respect of its placement. There needs to be adequate space within the water pipe line for installation of the device and allowance for a straight run of water before the inlet end and after the outlet end of the device of at least 0.5m, but preferably 1m.

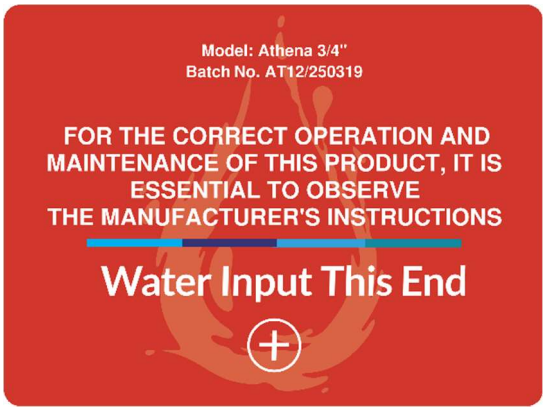
In-line Device Labels

Each in-line device will have 3 labels:

A black label at the top of the device that identifies the water output end. It confirms the device has been researched and developed in Australia by Resonate Research and has been tested to 300 psi. (pounds per square inch). By way of comparison most urban (town/city) water pressure is about 110 psi.

A blue label in the middle of the device which provides website addresses and contact details for Phi'on.

A red input label that identifies the water input end. The input end has a positive charge and the output end has a negative charge. These charges are identified during testing of the device.



Installation

All devices (except the bottle top device) are installed in-line within a water supply pipe and are WaterMark certified. The ½", ¾", 1", 1 ¼", 2" and 4" in-line devices can be installed below ground or above ground. The devices are manufactured to be watertight.

The device can be installed by a competent handyman or a plumber. A plumber could install the device in about 15 to 20 minutes. It is always best to check the proposed location or position for the device before proceeding. For example, it may be difficult to locate the inlet copper pipe for the supply of water to a house, or there may be space restrictions for connection of the device. Sometimes, professional advice is required before proceeding with the choice or installation of a device. Ideally, this device should be installed at the time of new or upgraded water supply systems.

Once the device is chosen, the main requirement is the selection of the correct connection parts between the device and the pipe. All devices except for Rollo 4" have male end fittings (see photographs on pages 2 and 3).

Location of the Device In-line

The location of the device in relation to its final point of application and its position within the line are critical to optimal performance. It is recommended that:

1. **Allow at least 0.5 to 1m of straight water flow at the input end of the pipe.** The inlet end of the device is marked with a label that identifies the positive (+) end of the device where water must enter.

2. **Allow at least 0.5 to1m of straight flow after the water exits the device at the output end.** This space is required to allow the water to complete a vortex cycle and completely finalise or lock-in the negative voltage into the water. Do not place a tap on the outlet end or place a T pipe intersection within 0.5 metres of the outlet end.

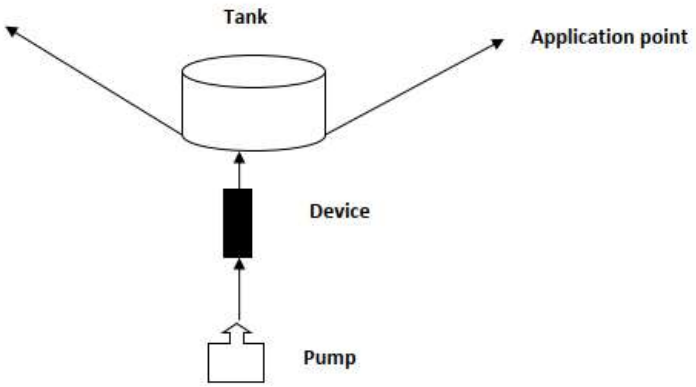
3. The device should be kept at least 1 to 3 metres away from electrical motors due to potential electro-magnetic interference by motors close to the device.

4. The device can be installed in horizontal or vertical positions. A horizontal position would be the best option in most cases, if this is practicable.

5. The pipe should be checked for any leakages at the points of connection with the device before any infill of the device underground.

Holding Charged Water Permanently In-line within the Device

When the device is installed in a pipeline that is under constant pressure (eg. between a pump and a tap) then the device will be constantly holding charged water and will perform at maximum efficiency. However, if this is not the case and the device is installed, for example in a diversion line, that is not under constant pressure and holding water, then ball valves may be required at either end of the device as shown below.

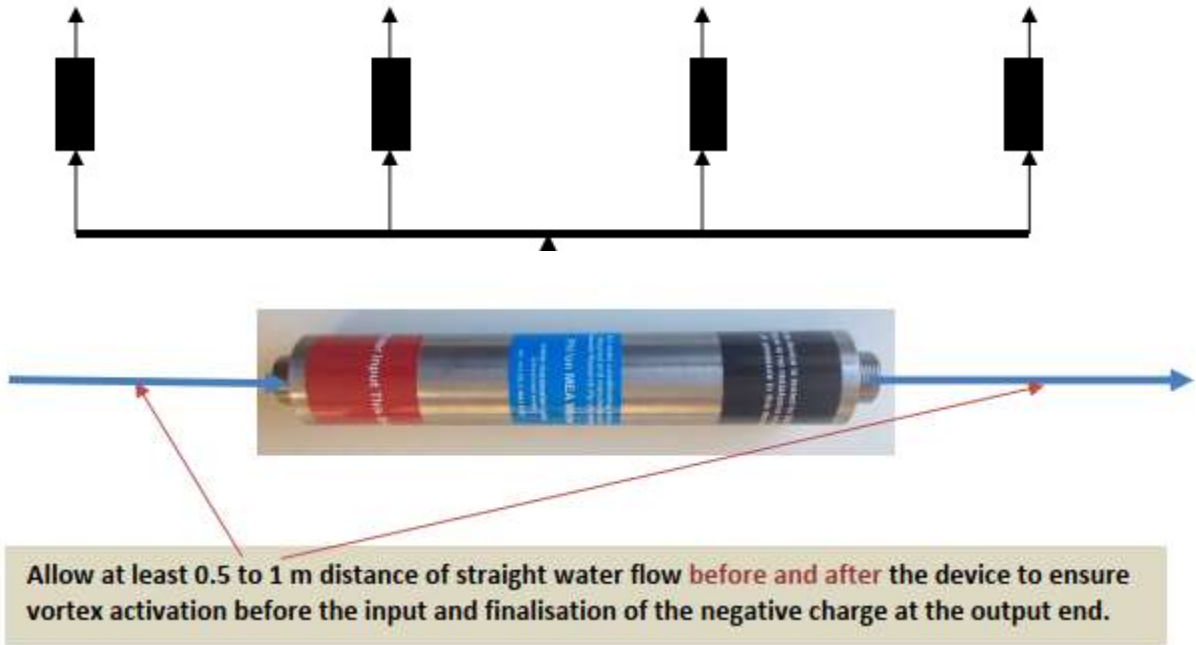


During operation and when water flow is turned off, firstly close the ball valve at the output point and then at the input point before turning off the pump. The water in the device will then sustain the higher negative charge and it is then portable for connection to another water system.

Installation Options for Medium to Large-Scale Applications

There are several options for installation depending on the type of application and distance the treated or conditioned water travels before use or storage. A typical application is to install the device after it leaves a pumping point or a major distribution point and where the water flow is further diverted through outlets, or to a storage tank for diversion to several application points.

A manifold application may be required where large volumes of water are diverted through a pipe system, ie. devices in an array for the irrigation of fruit trees, plantations, water channels, etc.



Rhea ½" device can be used as an attachment to a tap and hose, as follows:

There are numerous configurations for connecting an in-line device to a water system. The necessary connectors or adapters for the device can be obtained from a hardware store. The use of a ball value, in line and at the outlet (black label) end of the device allows for the structured water to be retained within the device and this sustains a higher negative charge for the next water flow. In the diagram above, the ball value has a fitting to allow for the hose to snap on (right of image), however the ball value may not be necessary in most cases.

Connection of a Device to a Pipe

When the device is buried in the ground, always check the device for leakages at connection points before covering over with soil. Also, mark the location of the device so that it can be either recovered, or not damaged in trenching works.

Always use plumber's tape to seal a thread. In the case of Zeus 2" device (right image above) the unit is supplied with a brass end cap that converts the 2 ¼" thread on the device to a 2" thread and this brass cap needs to be securely taped and tightened before connection to a pipe. A stainless steel end cap is also available for food grade processing, eg, drinking water, wine, juices etc.

In the case of Rollo 4" device, installation is simple and requires 2 x 215 mm rubber flange seals (8 holes) and 16 galvanised hex head (exterior) M16 x 75mm bolts with nuts and washers. These components are supplied. The ends of the device are not threaded.

Conditions for Performance

1. The device is installed with the water inlet at the end prescribed by the label (Water input this end) attached to the device.
2. The device is installed as close as possible to the application (usage) point.
3. Adequate straight water flow of 0.5 to 1m is provided before and after the device and no taps or T intersections are installed at the immediate outlet end of the device.
4. The device is not subjected to close emissions of electro-magnetic energy (eg. pumps).
5. The device is not dropped or damaged in any way before and after installation.
6. The device is tested for leakages at connection points prior to operation.
7. Water is always kept within the device when set in-line. Where a device is used in a mobile manner, the full activation (magnetic charge) of water flow within the device can take at least 5 minutes, and possibly longer depending on flow rates or pressure.

Additional Notes

1. It may be observed after the installation of these devices that residues (eg. calcium or iron deposits) from inside water pipes will be released from the outlet end of the device.
2. Water will become clearer and softer due to the separation from the treated (structured) water from the organic and other larger fractions (eg. salt, iron, calcium, etc.) that may be held (as colloids) within untreated water.
3. If you require your water to be tested for the negative charge, please send to Phi'on (PO Box 132, Braidwood NSW 2622) a 700ml water sample labelled either pre or post install sample. The results will be emailed to you at no cost.

Braidfern Pty Ltd ATF has an Innovation Patent (No 2016100017) granted by the Australian Government: IP Australia for the core IP and the claims (ie. the water holds a permanent negative charge) for MEA Water ® Devices, along with 3 other Innovation Patents.

Read More about MEA Water ® Devices and Structured Water

MEA Water ® Devices Produce Water with a Permanent and Negative (-) Charge

The diagram below shows the difference in the liquid crystalline structure of all urban water before and after being treated by an MEA structured water device.

MEA structured water matches with the natural, negatively charged, six-sided structure of the water in cells of the human body, plants and beneficial microorganisms. This means that when this living water is consumed, or used in domestic or commercial agriculture, it is quickly assimilated and passes through cell membranes, effectively hydrating and improving the cells' capacity for regulation, growth and healing.

Animals and humans can spend a huge amount of energy on the transformation of liquid from a positive-charge, unstructured state, to a negative-charge structured state.

The use of a MEA Water ® Device for water that we consume and use on our gardens, removes the need for our body to expend additional energy on transforming the water to a structured state. No body processes, starting with digestion, can proceed without our body processing positive-charge water and food, to a negative charge.

It follows that usually about half of the body's energy expenditure is wasted in the transformation of positive (+) charge liquids (including liquids in food). Theoretically it is possible to almost halve the food intake by animals and humans, provided that negative (-) charge structured water is consumed instead of normal (urban) water.

Structured Water and Fluoridation

The way the MEA Water ® Device transforms fluoridation in water back to its elemental form (ie fluoride, silica and sodium) is addressed by the **1st Law of Thermodynamics** which states, **energy and matter cannot be destroyed however they can be transformed**.

Fluoridation is a **toxic compound** that is in water in both the form of matter and its toxic energy signature. A filter does not remove the toxic energetic form of fluoridation. MEA Water ® Devices create a permanent six-sided crystalline structure in water that has a permanent negative charge (-mV). This unique crystalline structure of water transforms toxic compounds back to their natural elemental forms.

The basic water tests from a laboratory measure fluorine (the mineral described on the periodic table of minerals) or Fluoride. **They do not measure the compound that is fluoridation and the compound that is added to urban water in Australia**. It is important to understand the differences below between Fluorine (F), Fluoride (F^-), Fluorite (CaF_2) and fluoridation (**Na_2SiF_6**). Fluoride (F^-) is not the fluoridation compound that is put into urban water systems.

When the natural mineral rock fluorite (ie. calcium fluoride, CaF_2) breaks down (as Ca^{2+} and $2F^-$) through natural erosion and dissolves into water as a colloidal mineral, this process is nature's way of providing Flouride (F^-) in natural water systems. Therefore, F^- is the natural fluoride provided from water to soil to food that supports teeth health, along with many other minerals critical to the health of teeth, eg. silica (Si). Fluoridation is mainly Sodium fluorosilicate (Na_2SiF_6) and is the sodium salt of fluorosilicic acid. It is a powder or very fine crystal that is easier to ship than fluorosilicic acid. It is also known as sodium silico-fluoride. That is, **Fluoridation (as Na_2SiF_6) is a man-made chemical and is toxic in water and to human health**. If you want to measure fluoridation in water, then you must measure Na_2SiF_6 and not F^- (Flouride).

In the case of fluoridation, MEA Water ® Devices transforms Na_2SiF_6 back to Na, Si and F^-. These natural elements in water are non-toxic and harmless.

More Information

Phone – 02 4842 8182 Email – info@phion.com.au

Websites – www.meawater.com and www.phion.com.au

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