
LEAP

WAVIN HEP_{v0}



HYGIENIC SELF-SEALING WASTE VALVE

Welcome to LEAP, a new name dedicated to providing the most advanced water systems in Australasia.

LEAP aims to improve customers' lives with innovative, sustainable, environmentally responsible water systems that deliver superior performance, without costing the earth.

We take responsibility for the environment by sourcing and developing products that are more energy and water efficient – putting less strain on natural resources.

We are proud of our ability to actively design, develop and engineer new water systems to tackle and solve old problems in new ways – we call it 'challenging the status flow'.

HEPv0

HYGIENIC, SELF-SEALING WASTE VALVE



Hepv0, manufactured by Mexichem Wavin, is a unique self-sealing waste valve that prevents the escape of foul sewer air from waste discharge systems, and actively maintains the pressure equilibrium in soil and waste installations. As a dry sealing valve, Hepv0 utilises a purpose designed membrane to create an airtight seal between the living space and the drainage system. The self-sealing valve opens under the water pressure of an appliance emptying, and closes to form a tight seal after the appliance has discharged under normal atmospheric conditions.

FEATURES AND BENEFITS

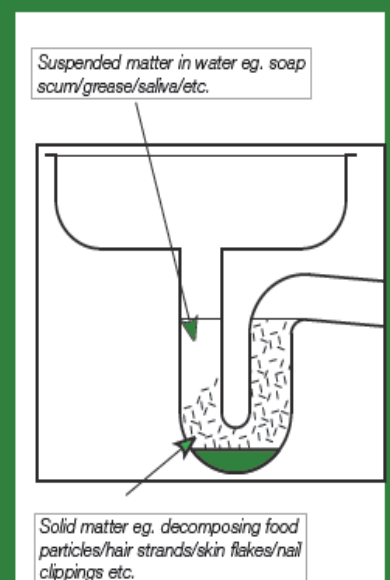
The Hepv0 dry self-sealing valve offers a number of benefits for both the professional installer and end user of the product. In addition, Hepv0 offers considerable benefits for the system designer. **See the application section of this document for further information.**

- Hepv0 actively eliminates negative pressure within the waste system by opening and allowing in fresh air until a state of equilibrium with atmosphere is reached. It subsequently closes to reseal the waste system and prevent foul air release. This means that the venting of the waste system, or the inclusion of an air admittance valve in the waste system, is no longer necessary.
- The Hepv0 valve results in enhanced plumbing design and system efficiency. Unlike water seal traps, Hepv0 is not affected by siphonage and will therefore not allow the escape of foul air into the living space from drain or sewer.
- Hepv0 allows discharge water to pass easily through, regardless of the volume.

- Hepv0 allows the placement of a greater number of appliances together on fewer discharge pipes without compromising the performance of the sanitary discharge system.
- Hepv0 operates silently and is not subject to “gurgling” noises typically associated with siphonage and indicative of a breach in the water seal barrier. Independent tests confirm that Hepv0 performs silently when subjected to a range of abnormal pressures.
- The Hepv0 valve promotes hygiene, particularly where an appliance is infrequently used. Hepv0 differs from conventional traps, which can dry out or hold water which can become stagnant causing the emission of smells and enhancing bacterial growth – see Figure 1.
- Even when hot or cold fats are released into it, a Hepv0 valve continues to perform. In comparative tests with conventional traps, a solid plug of fat forms within the trap as the fat comes into contact with the cold water held in the trap.

- The Hepv0 valve will perform under back pressures which are 10 times greater than those experienced in a typical soil and waste system.
- The flexibility of the Hepv0 valve seal prevents the accumulation of limescale.

Figure 1. Water held in conventional traps can become stagnant



WHY HEP_vO IS BETTER

PREVENTS ODOURS ESCAPING

The elastomeric one-way membrane of the HepvO valve opens to allow wastewater through, then closes, forming a tight seal to stop odours re-entering the room.

HYGIENIC

Water held in traditional traps can stagnate resulting in the build-up of waste material – particularly under less frequently used fixtures. This in turn can cause bacterial or fungal growth that can escape back into your home. Because it's water free, the HepvO valve doesn't promote this build-up.

RELIABLE, EFFECTIVE

The unique construction of the HepvO valve prevents sewer gases re-entering your home in situations where water seals are weak. It's effective against self-siphonage, compression, wind, momentum, leakage, induced siphonage, evaporation, foaming, capillary action and movement that can affect traditional systems.

SAVES SPACE

Accommodating the bend of a traditional trap often requires cutting through shelves or floors. With the HepvO valve, piping can be installed in a straight line or at a neat 90° angle from the fixture's outlet.

GREATER DESIGN FLEXIBILITY

Designers enjoy greater flexibility in designing a wastewater system using the HepvO valve because they don't have to work to safety margins required to avoid the possible loss of a water seal.

TESTED AND APPROVED

The HepvO valve has been rigorously tested for most conditions that could be encountered when connected to typical fixtures. It carries the WaterMark Licence WMKT20062 and is manufactured to international standards.

HEP_v0

APPLICATION

The Hepv0 self-sealing waterless waste valve is suitable for use in the following application areas:

AS A REPLACEMENT FOR WATER TRAPS IN WASTE DRAINAGE

Hepv0 can be a more effective alternative for traditional waste traps on any waste appliance and on all types of sanitary systems such as primary ventilated systems (single stack) and secondary ventilated systems, stub stacks, and where appliances connect to a gully.

Its sleek design and ability to install vertically or horizontally delivers space saving opportunities, time saving (as system design can be simplified) and cost saving benefits.

SPACE SAVING

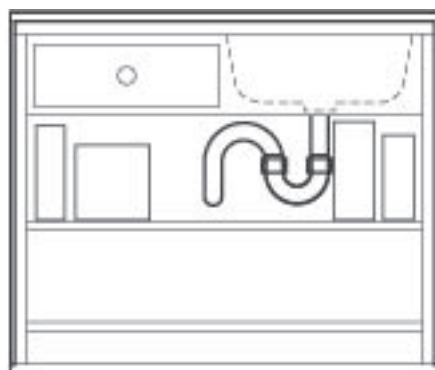
Where required, the waste pipe can drop in a straight line from the appliance outlet which means that installation access for slimline pedestals is significantly enhanced.

For kitchen sinks, installing Hepv0 can open up the cupboard space below the sink; particularly an issue when homeowners require integrated waste bins. See fig 3.

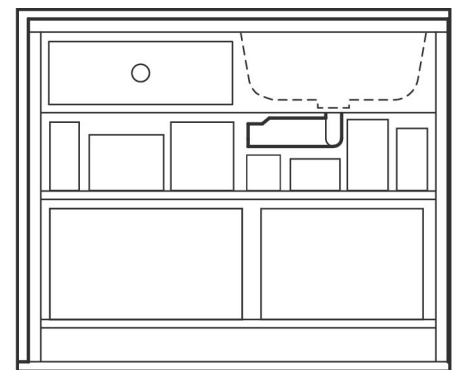
Hepv0 can be installed horizontally by using the 90° adaptor, which avoids cutting the floor under baths and showers to accommodate the 'U' bend of a trap.



Figure 3: Space saving capabilities under a kitchen sink



Sink cupboard with water seal trap



Sink cupboard with HEP_v0 installed horizontally

HEP_VO

APPLICATION - CONTINUED

FOR BRANCH PIPE VENTILATION

HepVO can act as an air admittance valve, allowing air into the drainage system when negative pressure occurs. Once equilibrium is reached the valve closes. Using the valve as an air admittance tool provides cost savings, as it eliminates the need for a traditional open vent pipe or an air admittance valve to be positioned on the stack in certain circumstances; simplifies system design, **providing space and time saving benefits.**

The use of HepvO, as it provides ventilation, can give more flexibility in pipe sizing, allowing the pipe run to be extended to 3m without needing to increase pipe size from 32mm to 40mm if going beyond 1.7m – see Figure 5.

For non-domestic situations, the use of multiple HepvO valves allows for simpler systems with less pipework & straight runs – see Figure 4.

On completion of the installation, there is no need to perform self siphonage and induced siphonage tests for branch discharge pipes from waste appliances.

Figure 4: Schematic view for three basins

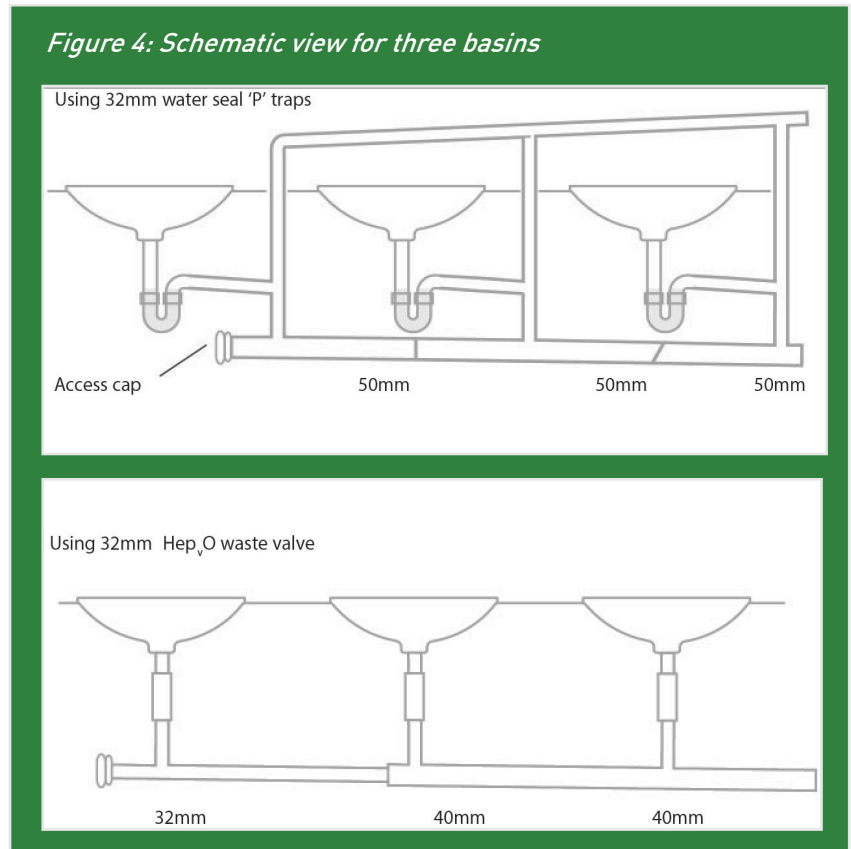
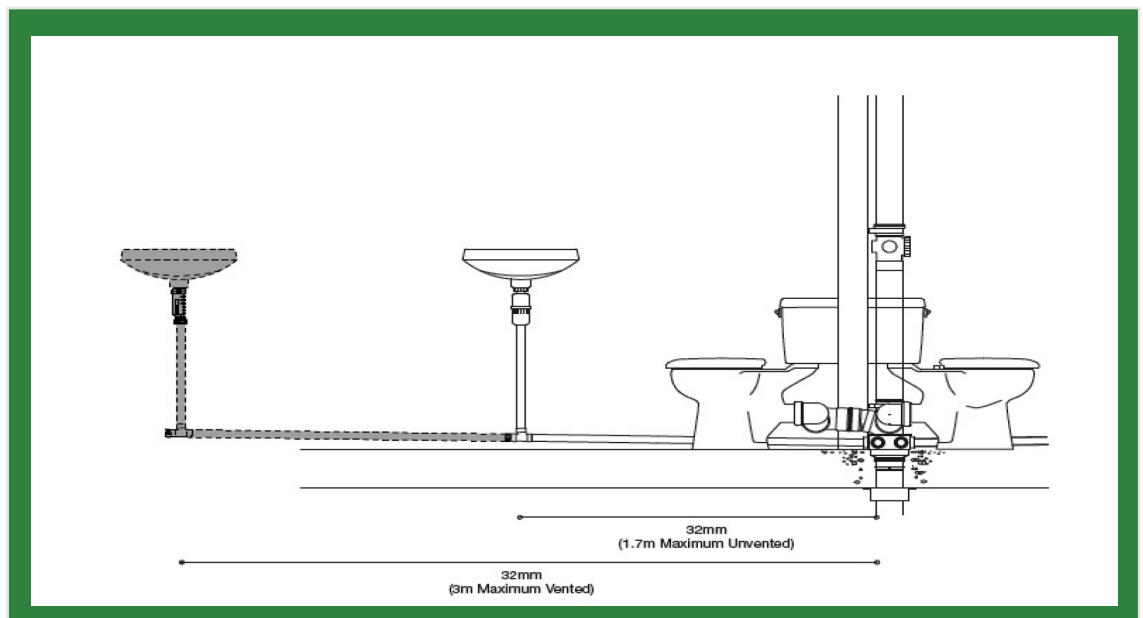


Figure 5: Schematic view for extended pipe run



HEP_v0

APPLICATION - CONTINUED

RECREATIONAL VEHICLES - SUCH AS BOATS, CARAVANS, ETC

Hepv0 works perfectly in any kind of home. Because Hepv0 is a waterless trap system, it performs successfully in motor homes and other moving vehicles - such as boats and caravans - where water traps can lose their seal through movement and vibration.

The use of Hepv0 waterless trap also avoids a problem of the water seal freezing, and evaporation of water seal in warm weather or extended periods of non-use which would lead to odours escaping into the vehicle.



Hygienic self-sealing waste valve - for when you're on the move.

FOR HOT CLIMATES OR WHERE APPLIANCES ARE USED INFREQUENTLY

Because Hepv0 is a waterless trap system, it's great to use in situations of infrequent use, including holiday lets; guest bathrooms, park homes and recreational vehicles.

If the appliance is not used for an extended period, evaporation of water in the traditional water trap will lead to a loss of the water seal. In hot climates, with a higher risk of rapid water evaporation, this can be a particular problem, leading to odours escaping into the buildings after a relatively short period of time. Deeper water seals traps could be used, but they would require more space close to the appliance, so the Hepv0 waterless trap with its slimline design, is an ideal alternative in this situation.



Conventional waste traps can loose their seal if not used on a regular basis.

HEP_v0

APPLICATION - CONTINUED

DRAINAGE FROM UNVENTED BOILER SYSTEMS AND CONDENSATE DISCHARGE

Hepv0 can be used with an unvented hot water storage system to connect a tundish outlet pipe to a drainage stack. This stops the omission of foul air from drainage systems into premises.

Using the Hepv0 tundish adaptor kit, the connection from unvented hot water discharge appliances to soil stacks is simplified in systems with a

temperature and pressure valve of no more than 22mm. The kit reduces the number of fittings required, eliminating the need for a running adaptor.

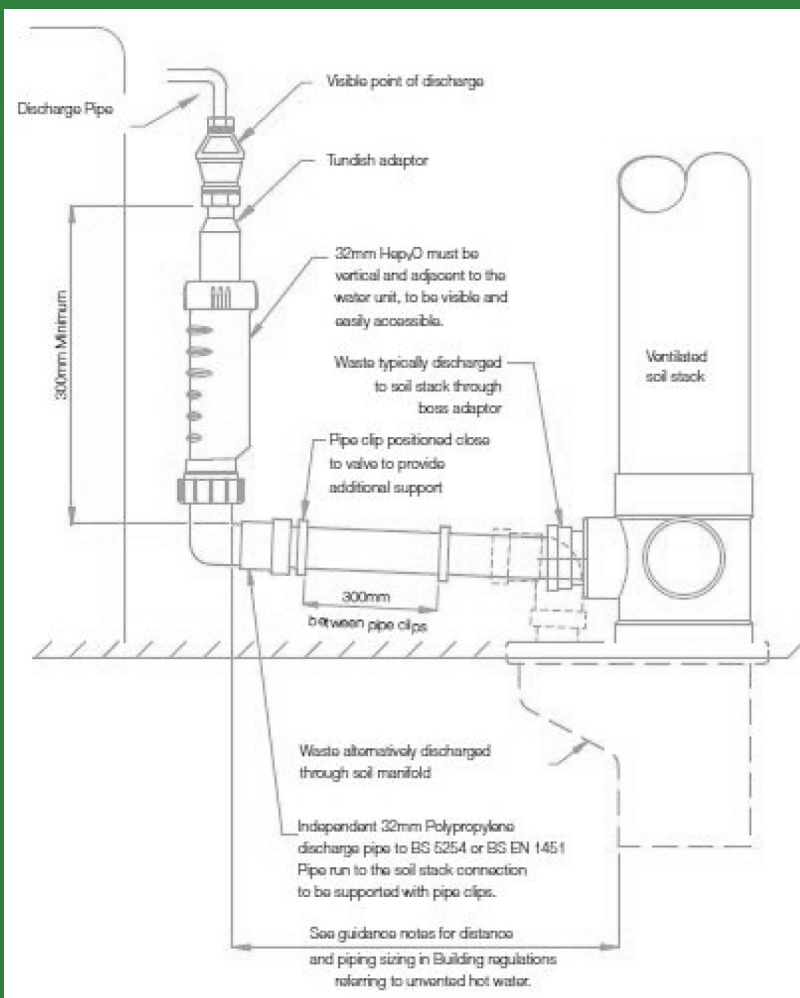
The Hepv0 valve may also be used in condensate piping from high efficiency boilers and air conditioning units discharging to sanitary pipework.

Note:

This application is not recommended for combi or sealed boiler systems.

Hepv0 should not be used for uncontrolled high temperature discharges such as from pressure-only relief valves (ie not incorporating a temperature relief valve).

Figure 6 - Self-sealing valve when used with a combined temperature and pressure relief valve for unvented hot water storage system

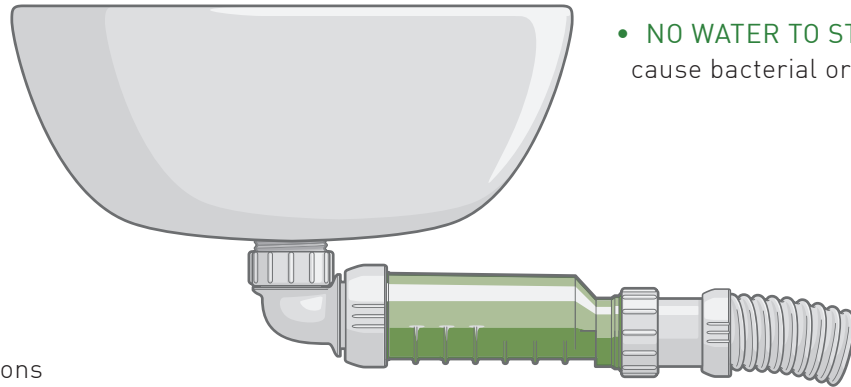


HEP_v0

AT A GLANCE

- **ELASTOMERIC MEMBRANE**

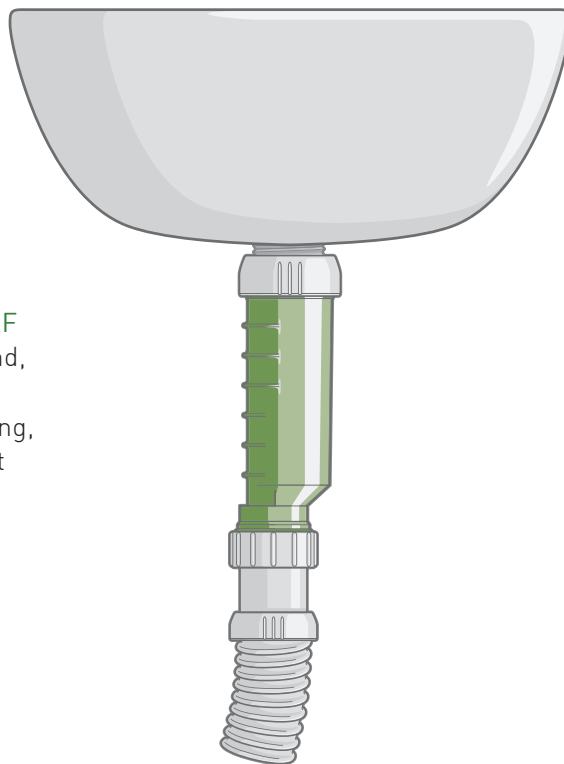
forms an odour-proof seal to keep rooms smelling fresh



- **NO WATER TO STAGNATE** and cause bacterial or fungal growth

- **QUICK AND EASY** connections

even in difficult circumstances



- **STRAIGHT-LINE DESIGN** gives more space, more options in placing fittings – even in cramped installs

- **IT'S EFFECTIVE AGAINST SELF**

SIPHONAGE compression, wind, momentum, leakage, induced siphonage, evaporation, foaming, capillary action and movement that can affect traditional systems.

- **FEWER FITTINGS AND CONNECTIONS** saves time consuming solvent-welding

TECHNICAL DETAILS

HEPvO HYGENIC WASTE VALVE

PRODUCTS

32MM	
BV1 WH	Waste Valve, 32mm
BV3 WH	Running Adaptor, 32mm
BV11 WH	Knuckle Bend Adaptor, 32mm
40MM	
CV1 WH	Waste Valve, 40mm
CV3 WH	Running Adaptor, 40mm
CV11 WH	Knuckle Bend Adaptor, 40mm
50MM	
CV4	Adaptor, HepvO, 50mm-40mm

APPLICATIONS

Can be used on the outlet of a fixture or appliance as an alternative to a standard trap, as per AS/NZS 3500 – dependant on site conditions and local authority requirements.

It provides a permanent seal when connected downstream to a tundish, accepting condensate lines from air conditioning or other intermittent discharge systems, and does not require a trap primer.

MOUNTING OPTIONS

Can be installed at any angle from vertical to horizontal. Discharge pipes should have sufficient grade to convey the design flow but should be no flatter than 2.5% or 1 in 40.

MATERIALS

Body: Polypropylene
Sealing mechanism: Various
Sealing rings: EPDM
Washer: Nylon

FLOW CAPACITY

Based on 50mm head of flat-based receptacle.

Horizontal: BV1: 40 l/m
CV1: 50 l/m

Vertical: BV1: 60 l/m
CV1: 70 l/m

TEMPERATURE RANGES

Maximum operating temperature 75°C. Based on testing over 10,000 cycles.

MAINTENANCE

Resistant to standard caustic-based drain cleaners. Drain-cleaning solutions containing high concentrations of sulphuric acid must not be used.

When rodding or flushing with a sulphuric acid solution, the valve must be removed before the operation.

END CONNECTIONS

Universal threaded BS 32mm or 40mm.

Universal Compression Outlet 32mm or 40mm.

The inlet has a loose nut and seal ring to connect with the threaded outlets of fixtures. It may also be adapted to a pipe using a running adaptor BV3 WH or CV3 WH.

The outlet has a universal connection comprising seal ring, washer and compression nut.

Connection to 50mm outlet can be achieved using CV4 50mm-40mm adaptor.



TECHNICAL DETAILS

HEPvO PRODUCT SELECTOR

HepvO can be installed vertically or horizontally, and is available in 32mm and 40mm diameters.

Hygienic Seal Sealing Waste Valve

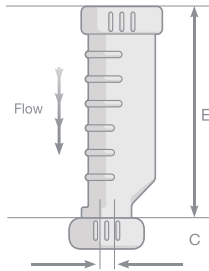
32mm = BV1 WH

40mm = CV1 WH



DIMENSIONS

Fixed vertically or horizontally to fixture outlet.



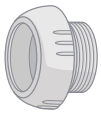
HEPvO RUNNING ADAPTOR

Use with the HepvO waste valve when installing in a pipe run

32mm = BV3 WH

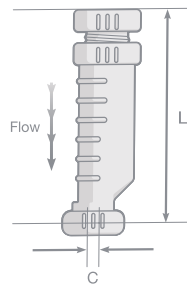
40mm = CV3 WH

50mm - 40mm = CV4



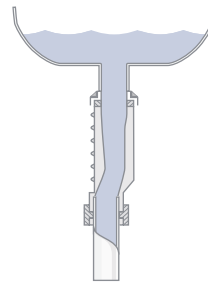
DIMENSIONS

Fixed on a discharge using a running adaptor.

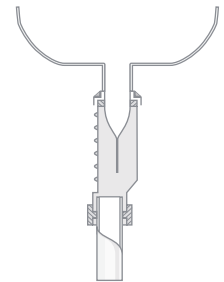


OPERATION OF THE HEPvO

VERTICAL OPEN



VERTICAL CLOSED

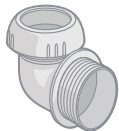


HEPvO KNUCKLE BEND

Use with the HepvO valve for horizontal applications

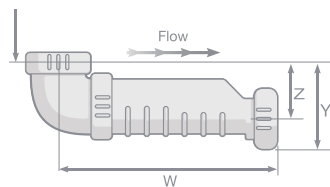
32mm = BV11 WH

40mm = CV11 WH



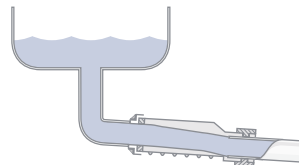
DIMENSIONS

Fixed horizontally using knuckle bend.

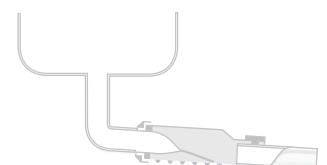


OPERATION OF THE HEPvO

HORIZONTAL OPEN



HORIZONTAL CLOSED



DIMENSIONS

SIZE	C	E	L	W	Z	Y
32mm	8mm	173mm	215mm	215mm	35mm	68mm
40mm	6mm	173mm	215mm	215mm	35mm	68mm

NOTES:

1. These dimensions are taken from the face of the seal at the base of the female thread in the nut.
2. Dimensions are nominal and may vary slightly due to compression of rubber seals.
3. It is recommended that HepvO be accessible in all installations.

FOR MORE INFORMATION ABOUT HEP_vO CALL

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