WASTEWATER TREATMENT

AVV 100 VACUUM INTERFACE VALVE

Hamworthy®

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Hamworthy has supplied wastewater treatment systems to the marine & offshore market for over 50 years.

Our operational experience and market-led innovation and technology means that we can deliver a range of unrivalled wastewater treatment products.

Mindful of the environment, we work to ensure that all our products meet the highest standards of compliance.

The Vacuum Interface Valve (VIV) is the interface between a sewage collection system and conventional greywater drains and urinals. The VIV makes it easy for showers, wash basins, laundry and galley drains to enjoy the cost savings and benefits of vacuum system piping.

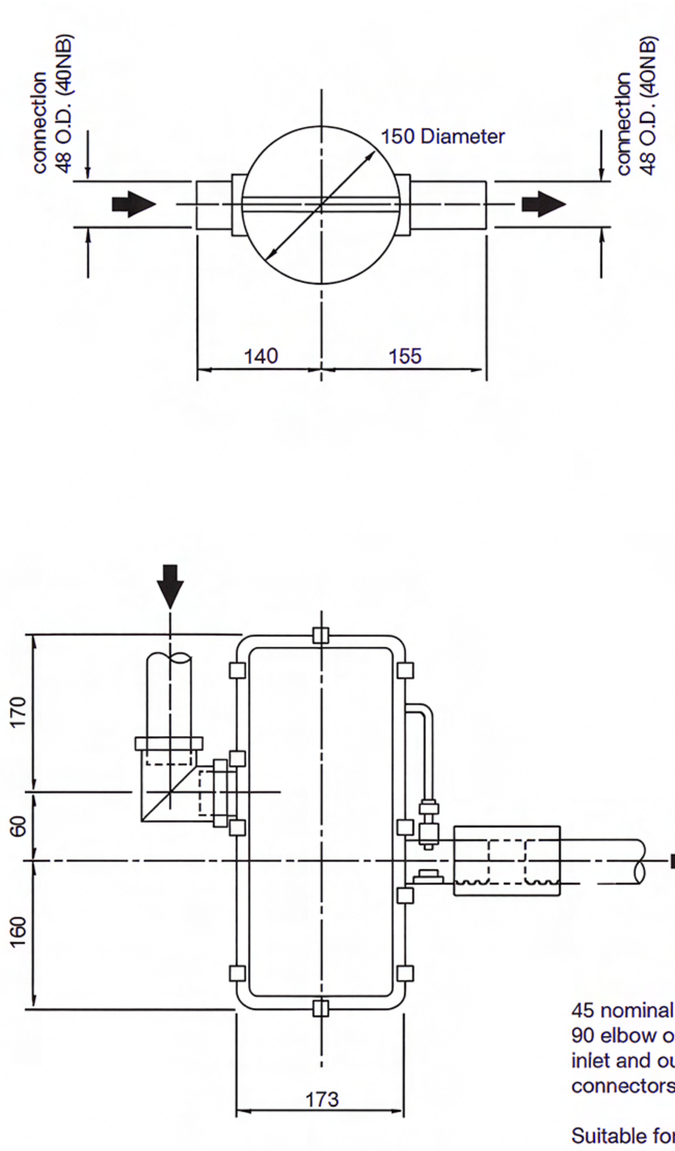
Vacuum system piping is smaller and lighter than conventional gravity pipework, and can be run in any convenient orientation and around obstacles. This means lower material cost, installation labour savings, considerable design flexibility, and water savings of up to 85%. In addition, the performance of a vacuum system is unaffected by the ship motions.



STANDARD FEATURES

- IMO & MED Certified
- Modular construction
- Single power supply input point
- Minimal maintenance requirement
- Solids handling Hamworthy centrifugal discharge pump

Fig 1: Installation data & interface requirements



INSTALLATION

Installation is simple. The unit is light enough to be suspended from the adjacent plumbing and may be rotated from the vertical position shown to facilitate installation in restricted spaces. The units are readily accessible for servicing, and may be maintained in place.

Typically, a single VIV can service a number of urinals or conventional greywater fixtures; for example, six urinals or wash basins, or three galley sinks or showers.

OPERATION

The VIV is installed next to a drain or bank of drains. Waste gravity flows to the inlet of the VIV. The AVV 100 operates automatically by sensing the water pressure on the inlet side of the valve (300mm H2O) and opening. The differential air pressure (atmospheric on one side, vacuum on the other) drives the waste water through the valve to the vacuum collection system.

The initial water pressure is relieved, and the valve closes. The cycle repeats when waste water has again filled the inlet. In the case of a urinal operation, the VIV will normally operate once with each flush. For a larger quantity of waste water, from a shower or galley sink, the valve will cycle open and closed continually until the flow is passed.