

Gillies Air Release Valves

Technical Guide W4.6

Gillies Metaltech manufacture a selection of high quality air valves to suit a range of water main applications.



01.23 | W4.6 GILLIES AIR VALVES

Applications

Water trunk mains
Potable water lines

Product Attributes

New Zealand made
Field replaceable orifices

316 Stainless Steel float

All floats individually tested

Approvals/Standards

Flanges to AS4087 Fig. B5 PN16 or
BS4504 PN16

Coating complies with AS/NZS 4158
and 4020

Quality

ISO 9001:2008 Quality
Management Systems

ISO 45001 Health & Safety
Management Systems

We are the supply partner of choice for New Zealand's civil construction industry, specialising in water and infrastructure based solutions.

When air is trapped in a water pipeline it can create some serious issues. The Gillies Air Release Valve allows entrained air to escape during normal operation and prevents pipe collapse by allowing air in if the pipeline is drained.

Gillies Air Valves are used in water mains for the following purposes:

1. To release air when the main is being filled, and to close and remain closed when the pipe line is full to prevent loss of water. To open and admit air when the main is being emptied.
2. To release air accumulated under pressure during normal working of the main, again without escape of water.

Operation is effected automatically by means of a ball float, working in conjunction with an orifice of appropriate type for the duty.

Double air valves incorporate the two types of orifice in one unit, with a common connection to the main.

Large Orifice

- When the main is empty, the ball float is at the bottom of its travel and the orifice open.
- As filling proceeds, air is discharged until the rising water level floats the ball to its seating, where it is subsequently held by line pressure, sealing the outlet.
- On emptying the main, when the pressure falls to near-atmospheric the ball drops and allows admission of air.

Small Orifice

- When the main is in operation, the ball is normally held up, activating lever arrangement and sealing off the orifice.
- As air accumulates in the valve chamber the water level is depressed until loss of buoyancy lowers the ball, opening the orifice.
- Air is then discharged, and the consequent rise in water level brings the ball up to re-seal again.
- For the ball to leave its seat on a drop-in water level, it must be of sufficient weight to overcome the lifting force, due to the mains pressure on an area equal to that of the orifice.
- With conventional valves, a practical compromise is necessary between size of ball, maximum operating pressure, and orifice diameter.

Combination Air Valve

- A built-in isolation valve for inspection and maintenance purposes eliminates the need to install a separate valve
- Orifice change is possible without replacing the valve
- DN80 and DN150 sizes available

Single Air Valve

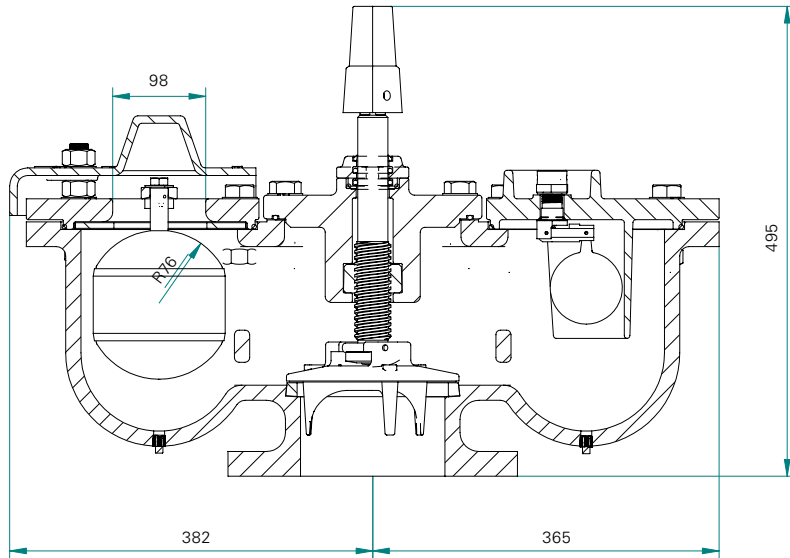
- The small orifice air valves incorporate a lever-action type sealing arrangement, which enables a wider operating range and positive sealing.
- Seals at low pressures.
- Small and large orifice models available.
- DN25 and DN50 sizes available.



FIG. 1 Combination Air Valve



Combination Valve Technical Specifications



- Maximum working pressure: 16 Bar
- Body test pressure: 24 Bar
- Seat test pressure:
 - High: 17.6 Bar
 - Low: 0.098 Bar

FIG. 2

Code	Description
VAG025LO	Air Valve DI Ø25 LO Plascoated AS4087 Table D
VADLS080TD-C	Air Valve DI Ø80 Large/Small Plascoated AS4087 Table D
VADLS080-C	Air Valve DI Ø80 Large/Small Plascoated BS4504
VADLS150-C	Air Valve DI Ø150 Large/Small Plascoated BS4504
Spare parts	
VAGBALL02580	Orifice Ball SS Ø25-Ø80 GMT
VAGBALL150	Ball SS Ø150 GMT
VASK080	Air Valve Seal Kit 80NB
VASK150	Air Valve Seal Kit 150NB

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