





TECHNICAL BROCHURE

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Single-acting automatic air valve **VNT HP**

VNT series air valves are automatic devices that allow the release of air pockets formed in pipelines during operation.

The VNT HP model, with its compass construction and only one moving part, guarantees automatic degassing with a pressure of 0.1 to 40 bar. Its technical characteristics place it at the highest level of quality on the market.

Constructive features and advantages

- Body and cap made of ductile cast iron GJS 450-10, class PN 40.
- AISI 304 or 316 stainless steel float.
- AISI 303 or 316 stainless steel joint and pins.
- AISI 303 or 316 stainless steel nozzle.
- Compass construction to facilitate degassing through the nozzle.
- Double O-ring to ensure a perfect water tightness during operation.
- Adjustable nozzle to control gasket compression.
- AISI 304 or 316 stainless steel nuts and bolts.
- Minimum operating pressure 0.1 bar.

Main applications

- Water distribution networks, irrigation, buildings
- Pumps
- Control valves and regulation systems
- In general, where only the degassing of pressurised air is necessary. It can be installed in combination with WAVE series automatic air valves, which ensure the entrance and discharge of large quantities of air

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Technical data

Air flow characteristic charts





AIR FLOW RATE DURING DEGASSING

The air flow rate charts were obtained in Kg/s, from laboratory tests and numerical analysis, and converted to NI/s by applying a safety factor.

Operating conditions

| Maximum treated water | 60°C (Higher temperatures on request) |
|-----------------------|------------------------------------------|
| Maximum pressure | 40 bar |
| Minimum pressure | 0.1 bar (lower on request) |

Standard

- Design according to EN 1074/4
- 1" thread as standard, flanges on request with drilling according to EN 1092/2
- Fluid bed coating RAL 5005 blue

Modifications to painting and flanging standards on request.



Construction details





| No. | Component | Standard material | Optional |
|-----|------------------------------|------------------------------|--------------------------|
| 1 | Body | ductile cast iron GJS 450-10 | |
| 2 | Сар | ductile cast iron GJS 450-10 | |
| 3 | O-ring | NBR | EPDM/Viton/silicone |
| 4 | Nozzle | AISI 303 stainless steel | AISI 316 stainless steel |
| 5 | Nut | AISI 304 stainless steel | AISI 316 stainless steel |
| 6 | Nozzle O-ring | NBR | EPDM/Viton/silicone |
| 7 | Upper joint | AISI 303 stainless steel | AISI 316 stainless steel |
| 8 | Joint pin | AISI 303 stainless steel | AISI 316 stainless steel |
| 9 | Lower joint | AISI 303 stainless steel | AISI 316 stainless steel |
| 10 | Nozzle gasket | silicone | |
| 11 | Float | AISI 304 stainless steel | AISI 316 stainless steel |
| 12 | Nut | AISI 304 stainless steel | AISI 316 stainless steel |
| 13 | Screws | AISI 304 stainless steel | AISI 316 stainless steel |
| 14 | Ball valve (on request) | nickel-plated brass OT58 | AISI 316 stainless steel |
| 15 | Multiple flange (on request) | ductile cast iron GJS 450-10 | Fe 37 coated/AISI304/316 |

The table of materials and components is subject to change without notice.



Single-acting automatic air valve **VNT LP**

VNT series air valves are automatic devices that allow the release of air pockets formed in pipelines during operation.

The VNT LP model ensures automatic degassing with a pressure of 0.1 to 25 bar.

Technical features and advantages

- Upper and lower body of ductile cast iron GJS 450-10, class PN 25.
- AISI 304 stainless steel float coated with vulcanised NBR or EPDM rubber.
- AISI 303 or 316 stainless steel nozzle.
- Screws and nuts made of AISI 304 or 316 stainless steel.
- Easy maintenance and compact size.

Main applications

- Water distribution networks
- Irrigation, heating systems
- Buildings

Note

The air valve is equipped with a 1" threaded connection; on request it is supplied with a ball valve and flange.



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Technical data

Air flow characteristic charts





AIR FLOW RATE DURING DEGASSING

The air flow rate charts were obtained in Kg/s, from laboratory tests and numerical analysis, and converted to NI/s by applying a safety factor.

Operating conditions

| Maximum treated water | 60°C Higher temperatures on request |
|-----------------------|----------------------------------------|
| Maximum pressure | 25 bar. |
| Minimum pressure | 0.1 bar |

Standard

- Design according to EN 1074/4
- Thread 1" BSP as standard, flanges on request with drilling according to EN 1092/2
- Fluid bed coating RAL 5005 blue

Modifications to painting and flanging standards on request.



Construction details





| No. | Component | Standard material | Optional |
|-----|------------------------------|----------------------------------------------------|------------------------------|
| 1 | Lower half-body | ductile cast iron GJS 450-10 | |
| 2 | Upper half-body | ductile cast iron GJS 450-10 | |
| 3 | O-ring | NBR | EPDM/Viton/silicone |
| 4 | Float | AISI 304 stainless steel rubberised NBR or EPDM | |
| 5 | Nozzle | AISI 303 stainless steel | AISI 316 stainless steel |
| 6 | O-ring | NBR | EPDM/Viton/silicone |
| 7 | Nozzle cap | AISI 303 stainless steel | AISI 316 stainless steel |
| 8 | Screws | AISI 304 stainless steel | AISI 316 stainless steel |
| 9 | Washers | AISI 304 stainless steel | AISI 316 stainless steel |
| 10 | Nuts | AISI 304 stainless steel | AISI 316 stainless steel |
| 11 | Ball valve (on request) | nickel-plated brass OT58 | AISI 316 stainless steel |
| 12 | Multiple flange (on request) | ductile cast iron GJS 450-10 | Fe 37 coated/ AISI304/316 |

The table of materials and components is subject to change without notice.



Sustainability

Here at Pietro Fiorentini, we believe in a world capable of improvement through technologies and solutions that can shape a more sustainable future. That is why respect for people, society and the environment form the cornerstones of our strategy.



Our commitment to the world of tomorrow

While in the past we limited ourselves to providing products, systems and services for the oil & gas sector, today we want to broaden our horizons and create technologies and solutions for a digital and sustainable world, with a particular focus on renewable energy projects to help make the most of our planet's resources and create a future in which the younger generations can grow and prosper.

The time has come to put the why we operate before the what and how we do it.





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