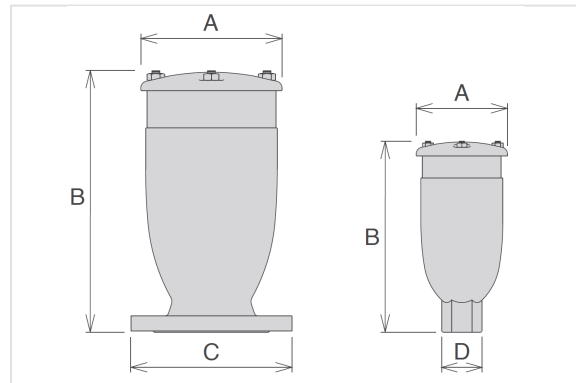


Air Valve Triple Functions TYPE FBR with quick anti-fill device



3 FUNCTIONS + QUICK ANTI-FILL AIR VALVE — MODEL FBR

The 3-function combined air valve with quick anti-fill device Model FBR will ensure the proper operation of the pipeline network by allowing the release of air during working conditions, the evacuation and entrance of large volumes during filling and draining operations, to prevent damage caused by water hammer associated with high air release velocities.

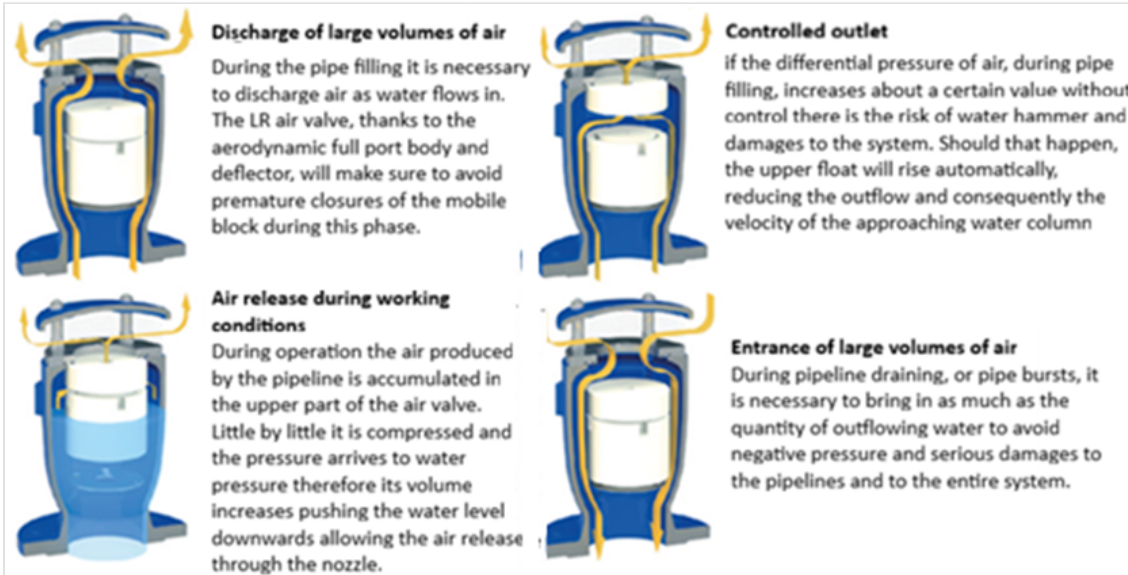
APPLICATION

- Supply, treatment and distribution ductile iron pipes
- Water distribution networks
- Irrigation networks

In general, this model is used at upward slope changes and at high points for overpressure protection.

| DN | A (mm) | B (mm) | C (mm) | D (mm) | PN 10 | | PN 16 | | PN 25 | | PN 40 | |
|--------|--------|--------|---------|--------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| | | | | | Mass (kg) | References | Mass (kg) | References | Mass (kg) | References | Mass (kg) | References |
| 1 " | 117 | 240 | - | CH45 | 4.00 | FBRA2510 | 4.00 | FBRA2510 | 134.00 | FBRB2525 | 134.00 | FBRB2540 |
| 2 " | 141 | 295 | - | CH70 | 8.00 | FBRA5110 | 8.00 | FBRA5110 | 8.00 | FBRA5125 | 8.00 | FBRA5140 |
| 50 mm | 141 | 305 | 165 | - | 10.00 | FBRA5010 | 10.00 | FBRA5010 | 10.00 | FBRA5025 | 10.00 | FBRA5040 |
| 80 mm | 172 | 322 | 210-205 | - | 14.00 | FBRA8010 | 14.00 | FBRA8010 | 14.00 | FBRA8025 | 14.00 | FBRA8040 |
| 100 mm | 206 | 370 | 235-220 | - | 22.00 | FBRB1010 | 22.00 | FBRB1010 | 22.00 | FBRB1025 | 22.00 | FBRB1040 |
| 150 mm | 285 | 555 | 305-285 | - | 45.00 | FBRB1510 | 45.00 | FBRB1510 | 45.00 | FBRB1525 | 45.00 | FBRB1540 |
| 200 mm | 380 | 625 | 375-340 | - | 85.00 | FBRB2010 | 85.00 | FBRB2016 | 85.00 | FBRB2025 | 85.00 | FBRB2040 |
| 250 mm | 440 | 785 | 450-405 | - | 134.00 | FBRB2510 | 134.00 | FBRB2516 | 4.00 | FBRA2525 | 4.00 | FBRA2540 |

Operating principle



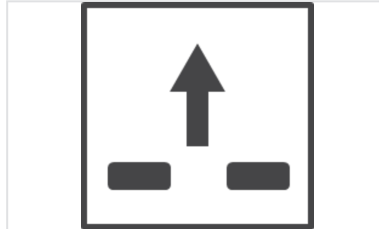
Technical features

- Single chamber body in ductile iron PN40, fitted with ribs for uniform and precise guidance of the moving assembly.
- Blue epoxy coating RAL 5005.
- Drainage valve, for chamber control and pressure relief during maintenance.
- Mobile block composed of a cylindrical float and an upper disk in solid polypropylene, joined together by the stainless steel air exhaust system. The solid cylindrical floats, obtained by CNC machining; avoid deformations and ensure great sliding precision inside the body processed ribs and a perfectly vertical thrust.
- Nozzle and seal holder, part of the exhaust system, entirely made of stainless steel AISI 316.
- Maintenance can be performed from the top without removing the air valve from the pipe
- Anti-water hammer system, never in contact with water, achieved by the combination of a stainless steel spring and shaft and a disc with adjustable nozzles to control the air flow.
- Ductile iron cover and stainless steel screen as a standard execution to prevent insect entrance, with other air outlet options available (for submerged applications, air inlet only, air outlet only).

Optional



Breather version



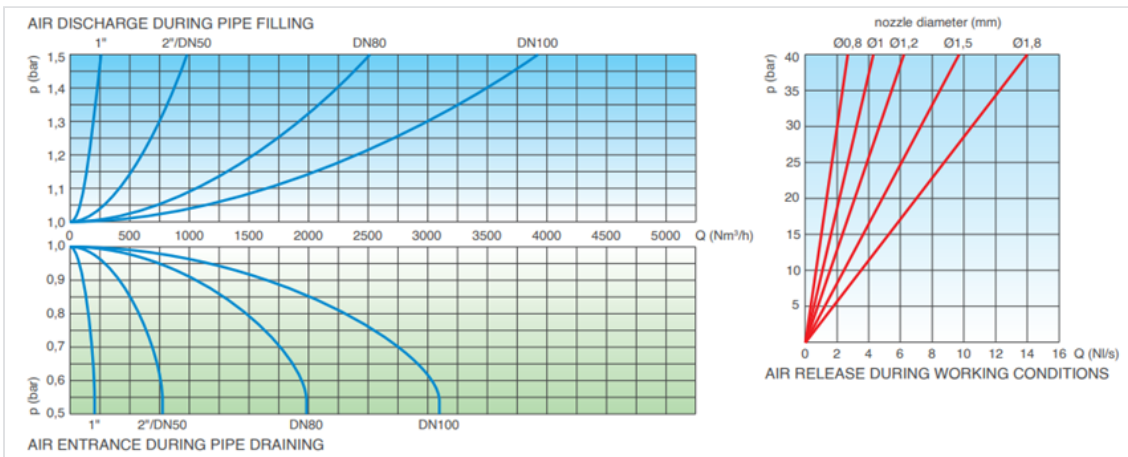
Air outlet only version



Version for Submerged application

1. **The breather version:** allows only for high-flow air intake and air release. This model is recommended for upward slope changes, long ascending sections and wherever degassing is not required
2. **The air discharge only version:** The air discharge only version allows the air valve to be installed at locations where the piezometric line may fall below the pipeline profile and where, for project requirements, air intake must be avoided.
3. **The submerged application version:** allows for operation even in the event of flooding of the chamber. It enables channel jets caused by fast closure of the air valve.

Air flow performances - Aeraulic technical features



Technical data

Working conditions

- Fluid: treated water. Max. temp.: 60°C.
- Maximum pressure: 40 bar.
- Min. pressure: 0.2 bar, lower on request.

Nozzle

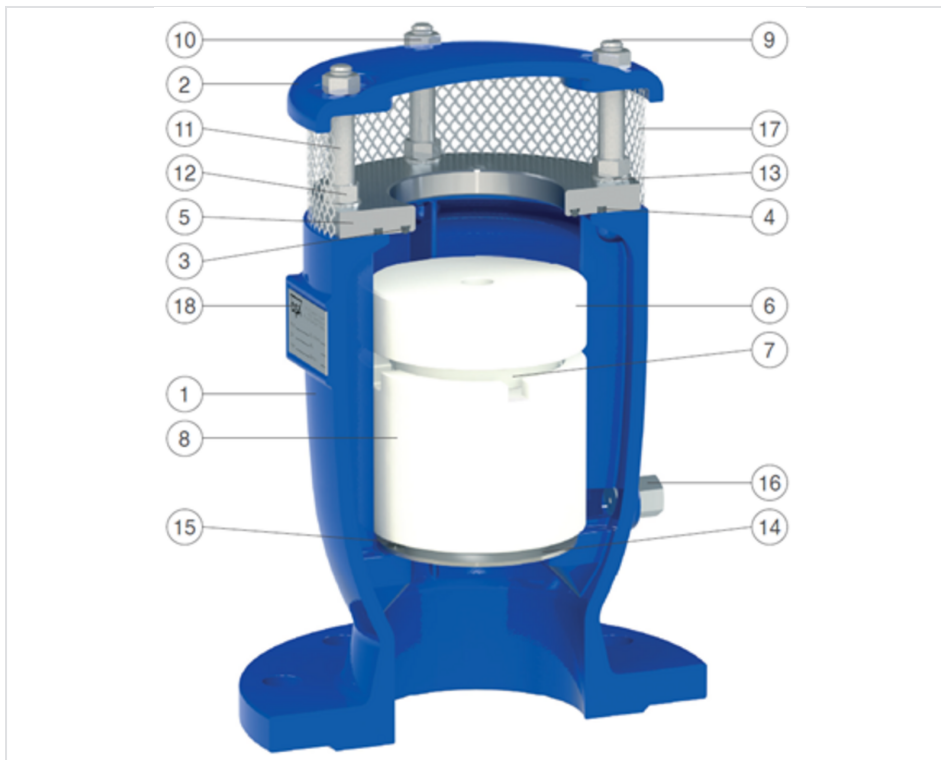
Nozzle diameter according to the size of the air valve and the pressure.

| | PN10 | PN16 | PN25 | PN40 |
|---------|------|------|------|------|
| 1" | 1,5 | 1,2 | 1 | 0,8 |
| 2" DN50 | 1,8 | 1,5 | 1,2 | 1 |
| DN80 | 1,8 | 1,5 | 1,2 | 1 |
| DN100 | 3 | 2,4 | 1,8 | 1,2 |
| DN150 | 4 | 3 | 2,4 | 1,8 |
| DN200 | 4 | 4 | 4 | 3 |
| DN250 | 4 | 4 | 4 | 3 |

Standards

- In compliance with EN-1074/4 and AWWA C-512.
- Flange drilling according to EN 1092/2 or ANSI 150.

Other drillings and coatings on request.



| N° | Composant | Matériau Standard | Option |
|----|-------------------------|--|--------------------------|
| 1 | Body | Ductile iron GJS 450-10 | |
| 2 | Cap | Ductile iron GJS 450-10 | |
| 3 | O-ring | NBR | EPDM/Viton/Silicone |
| 4 | O-ring | NBR | EPDM/Viton/Silicone |
| 5 | Seat | Polypropylene and NBR | Stainless steel AISI 316 |
| 6 | RPF plate with O-ring | Polypropylene and stainless steel AISI 316 | EPDM/Viton/Silicone |
| 7 | Upper plate with nozzle | Polypropylene | |
| 8 | Float | Stainless steel AISI 304 | |
| 9 | Studs | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 10 | Nuts | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 11 | Spacer | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 12 | Nuts | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 13 | Washer | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 14 | Deflector (not in 1") | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 15 | Screw | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 16 | Drain valve | Stainless steel AISI 304 | Stainless steel AISI 316 |
| 17 | Grate | Stainless steel AISI 304 | |
| 18 | Sticker | Stainless steel AISI 304 | |

The list of materials and components is subject to change without notice in accordance with technical developments.

The information on this sketch is, to the best of our knowledge correct at the time of printing. However Saint-Gobain are constantly looking at ways of improving their products and services therefore reserve the right to change without prior notice, any of the data shown. Any orders placed will be subject to our Standard Conditions of Sale, available on request.