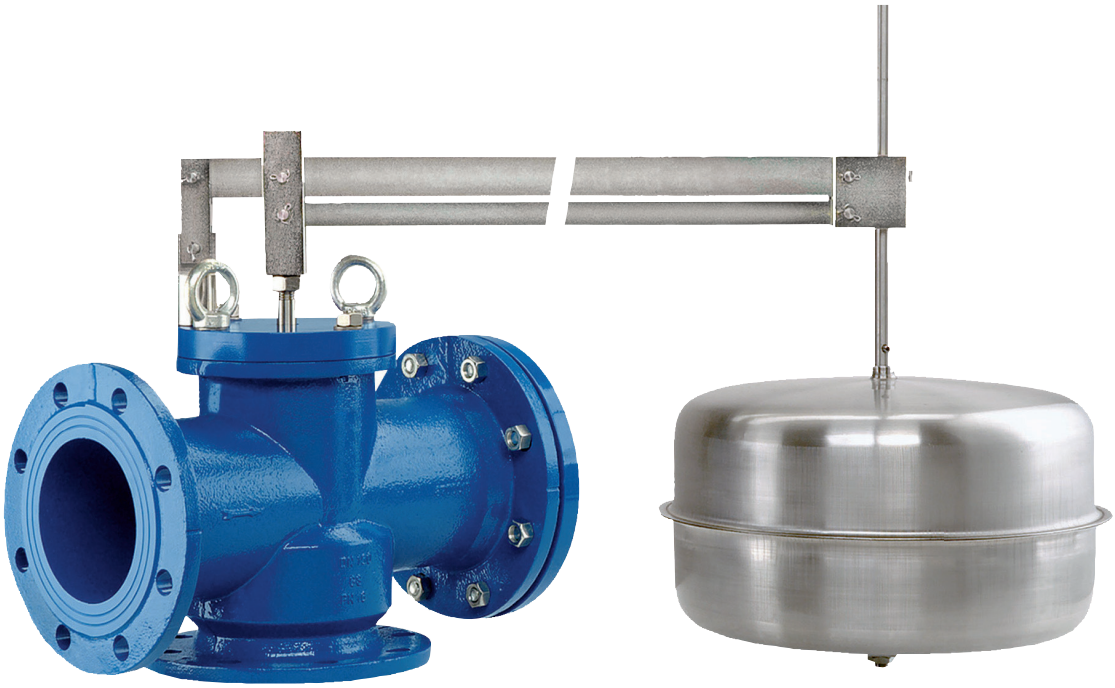
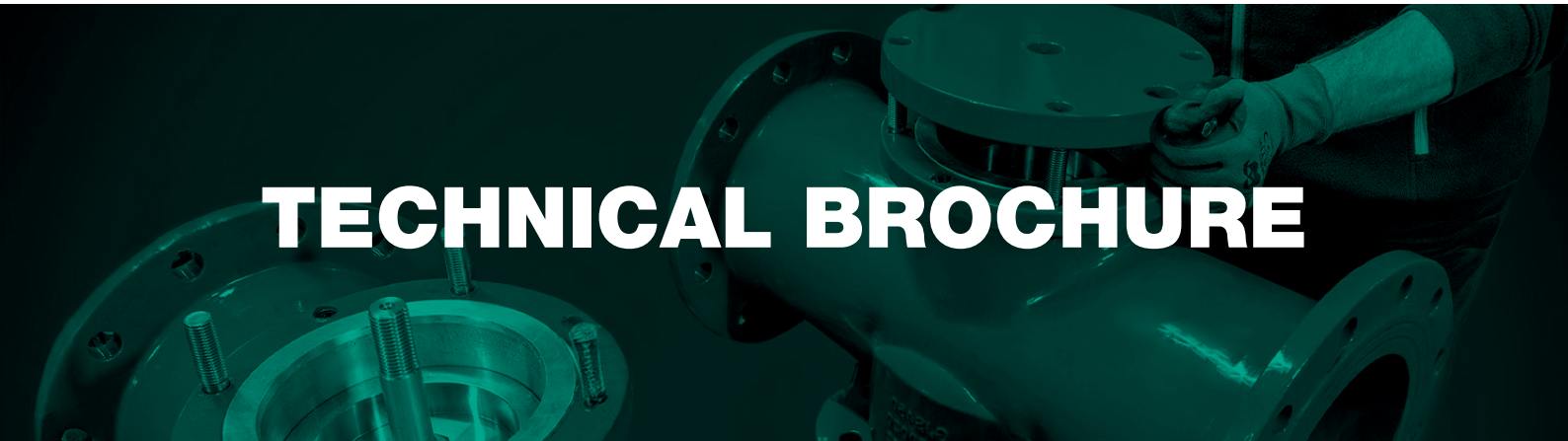
Pietro Fiorentini

# H-FLOAT

Float valves





## TECHNICAL BROCHURE

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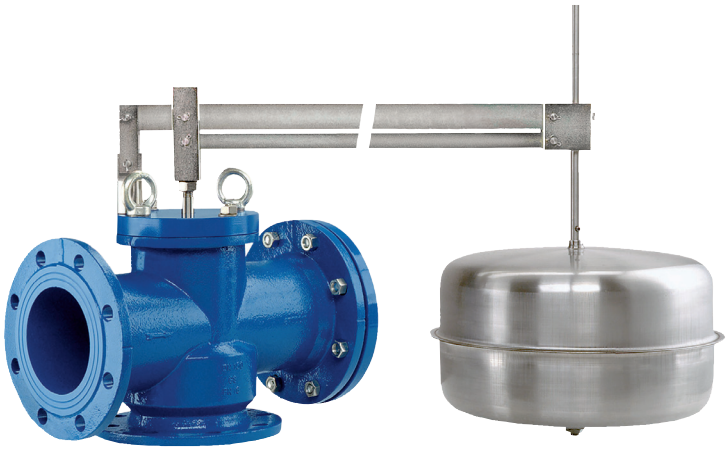
H-FLOAT_technicalbrochure_ENG_revB

**www.fiorentini.com**

# Compensated single-seated float valve

# H-FLOAT

**H-FLOAT** is a compensated single-seated float valve. It automatically maintains a constant level in a tank, irrespective of upstream pressure variations, and closes when the set maximum level is reached. It can be positioned either at an angle or in-line. Thanks to its unique technology, it achieves the highest level of reliability and performance.



## Main applications

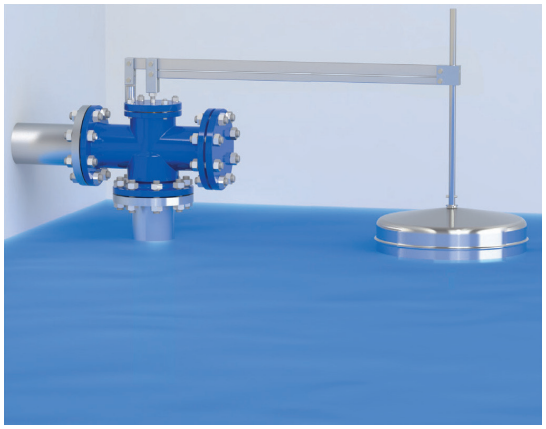
- Distribution networks
- Fire Tanks
- Irrigation systems
- In general, when constant level control is required

## Constructive features and advantages

- Three-way ductile cast iron body, allowing both angle and in-line positioning; replaceable seat and stainless steel piston; bronze sliding ring nuts.
- Mobile block consisting of: shaft, plug, seal holder and a patented self-cleaning piston (an innovative technology that reduces dirt accumulation, thus reducing maintenance)
- Galvanised or stainless steel linkage, consisting of two rods (one for DN 40, 50 and 65), joined by pins and joints that transmit the vertical movement of the float to the guide shaft of the mobile block.
- AISI 304 stainless steel float and rod.
- Single compensated seat, which guarantees high operating precision and a perfect seal even at low pressures.
- Variable motion and water hammer phenomena are avoided thanks to the autonomous movement of the plug, which opens and closes regardless of the incoming water pressure.

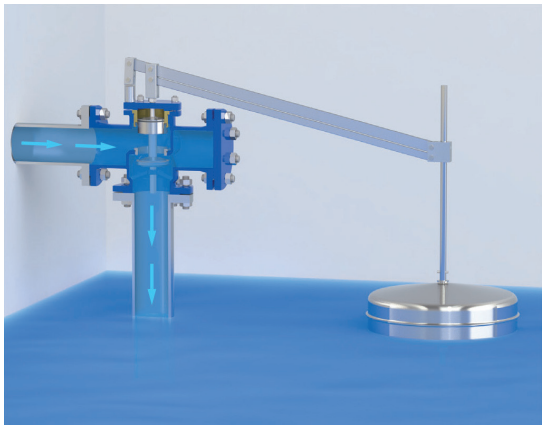
## Operating principle

Installed on the supply line and controlled by a large stainless steel float, the valve automatically regulates the filling of the tank, shutting off the flow when the free surface of the water reaches the maximum level and opening instead when it drops.



### Valve closed

When the free surface of the water reaches the maximum level, the float closes the plug via the lever, stopping the flow.

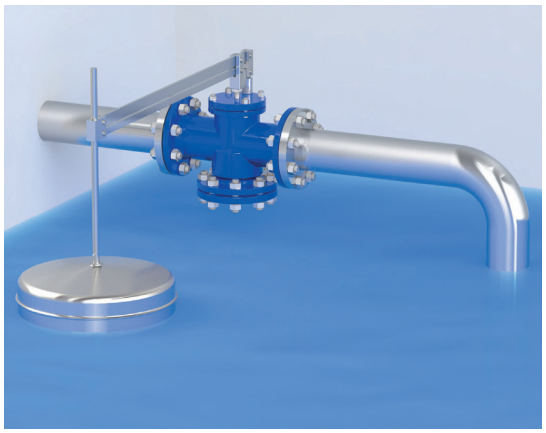


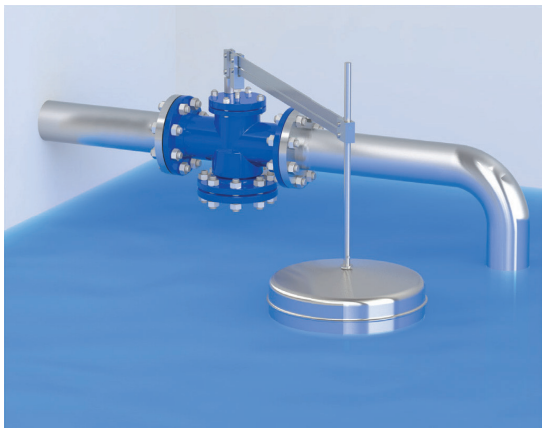
### Valve open

As soon as the water level in the tank drops, the lever to which the float is attached pulls the mobile block downwards, positioning it in the open position and thus allowing flow through the valve.

## In-line and angle installation

The three-way body allows for both angle and in-linet installation, simply by adjusting the levers and the blind flange. The levers, normally aligned with the valve axis, can be rotated 45° or 90°, depending on installation requirements.





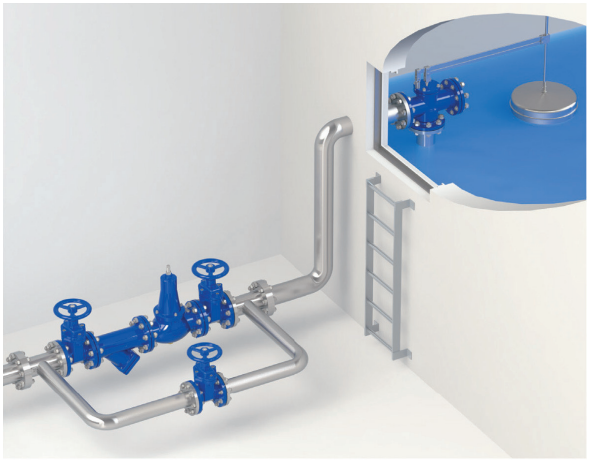
## Accessory functions

**Antifreeze device.** Upon request, the H-FLOAT model is equipped with a 3/8 "G threaded socket, into which a drain valve can be inserted to drain directly into the tank. In colder periods, the drainage opening ensures the necessary flow to prevent water freezing and subsequent damage to internal components.

# Technical data

## Installation

- Ensure that the drilling of the supply pipe flanges matches that of the H-FLOAT valve and that horizontal installation is possible with appropriate fasteners.
- Provide shut-off devices to allow maintenance operations, and a filter to collect impurities upstream of the valve.
- Place the valve in an easily accessible location for maintenance operations



- The outlet must be above the overflow level to avoid possible backflow.
- In the case of high operating Δp, the use of a W-VAL HP direct action reducer is recommended in order to avoid possible damage due to cavitation.

## Operating conditions

| | |
|---|---|
| Fluid | treated water |
| Maximum temperature | 70°C |
| Maximum pressure | 16 bar<br>(more on request) |

## Pressure drops - Angle installation

| DN mm | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|---|---|---|---|
| Kv (m3/h)/bar | 21,6 | 21,6 | 46.8 | 68,4 | 108 | 155 | 245 | 360 | 648 | 1008 |

## Pressure drops - In-line installation

| DN mm | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|---|---|---|---|
| Kv (m3/h)/bar | 18,4 | 18,4 | 39.6 | 59,4 | 90 | 133 | 209 | 313 | 576 | 864 |

The Kv coefficient represents the flow rate that produces a pressure drop of 1 bar in the fully open valve.

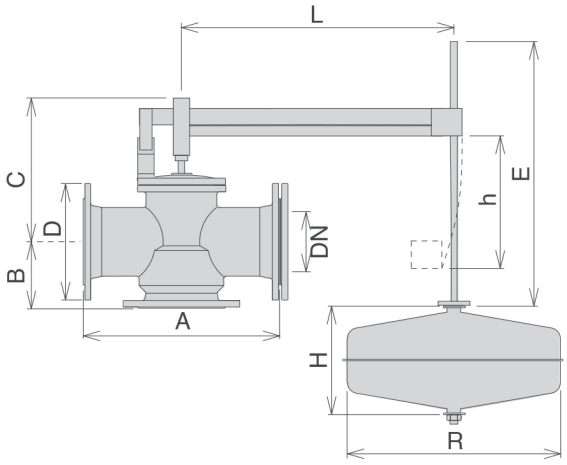
## Standard

- Certification and testing according to EN 1074/5
- Flanges with drilling according to EN 1092-2
- RAL 5005 blue epoxy paint applied with fluid bed technique

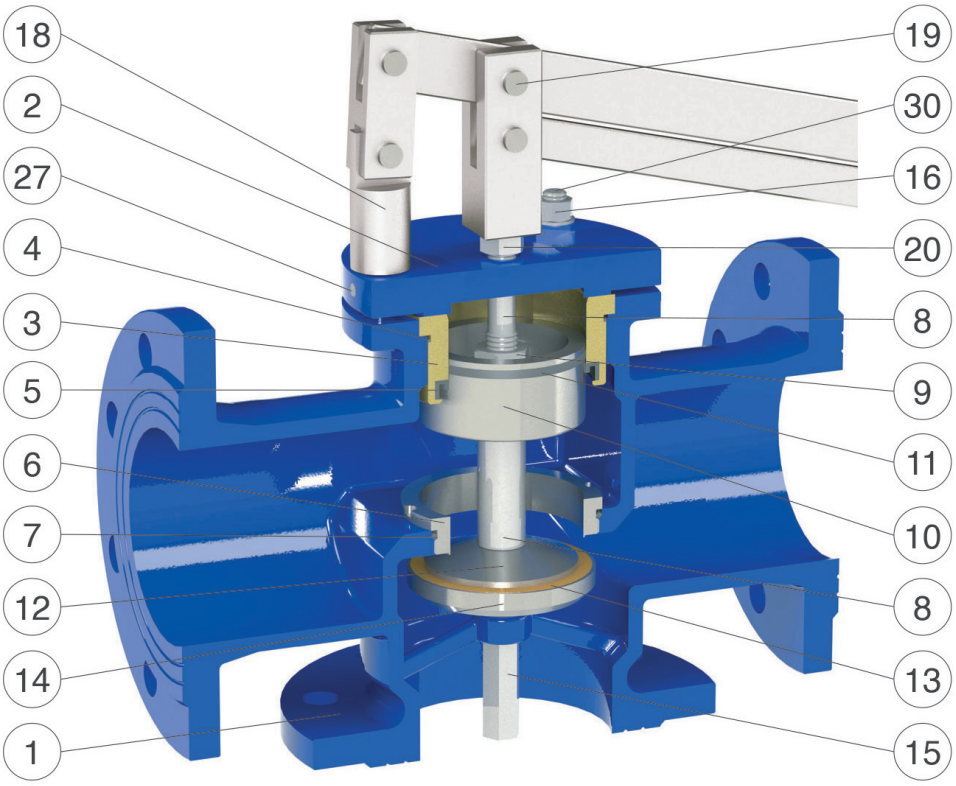
Modifications to flanges and painting on request.

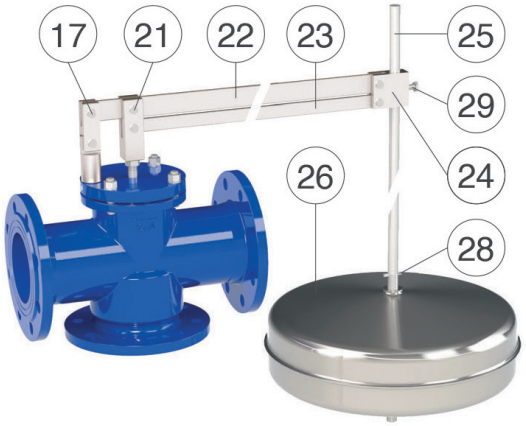
## Dimensions and weights

| DN mm | A mm | B mm | C mm | D mm | L mm | H mm | R mm | h mm | E mm | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | 230 | 82,5 | 183 | 165 | 600 | Ø220 | | 145 | 525 | 21 |
| 50 | 230 | 82,5 | 183 | 165 | 600 | Ø220 | | 145 | 525 | 21 |
| 65 | 290 | 92.5 | 197 | 185 | 600 | Ø220 | | 205 | 525 | 26 |
| 80 | 310 | 100 | 230 | 200 | 830 | 200 | 300 | 250 | 600 | 33 |
| 100 | 350 | 125 | 250 | 220 | 830 | 180 | 400 | 220 | 600 | 41 |
| 125 | 400 | 125 | 250 | 250 | 830 | 180 | 400 | 221 | 600 | 49 |
| 150 | 480 | 162 | 371 | 285 | 1000 | 250 | 400 | 400 | 540 | 79 |
| 200 | 600 | 183 | 420 | 340 | 1000 | 250 | 400 | 300 | 540 | 118 |
| 250 | 730 | 273 | 540 | 405 | 1220 | 300 | 500 | 510 | 945 | 215 |
| 300 | 850 | 300 | 620 | 460 | 1400 | 400 | 500 | 615 | 1042 | 250 |



# Construction details




VRCD DN 40/50-65

| No. | Component | Standard material | Optional |
|---|---|---|---|
| 1 | Body | ductile cast iron GJS 450-10 | |
| 2 | Cap | painted steel Fe 37 | |
| 3 | Guide bushing | bronze CuSn5Zn5Pb5 (Fe 37 painted for DN 250-300) | AISI 304/316 stainless steel |
| 4 | O-ring | NBR | EPDM/Viton |
| 5 | Lip seal | NBR | EPDM/Viton |
| 6 | Plug seat | AISI 304 stainless steel | AISI 316 stainless steel |
| 7 | O-ring | NBR | EPDM/Viton |
| 8 | Guide shaft | AISI 303 stainless steel | AISI 316 stainless steel |
| 9 | Locking nut | AISI 304 stainless steel | AISI 316 stainless steel |
| 10 | Piston | AISI 303 stainless steel | AISI 316 stainless steel |
| 11 | Slip ring | PTFE | |
| 12 | Gasket support | AISI 303 stainless steel (painted steel Fe 37 for DN 250-300) | stainless steel AISI 304/316 |
| 13 | Flat gasket | NBR | polyurethane |
| 14 | Plug plate | AISI 303 stainless steel (AISI 304 for DN 200-250-300)200) | AISI 316 stainless steel |
| 15 | Clamping nut | AISI 303 stainless steel | AISI 316 stainless steel |
| 16 | Nuts (screws up to DN 125) and washers | AISI 304 stainless steel | AISI 316 stainless steel |
| 17 | Upper joint | galvanised steel Fe 37 | AISI 304/316 stainless steel |
| 18 | Fixed lower joint | galvanised steel Fe 37 | AISI 304/316 stainless steel |
| 19 | Joint pins | AISI 303 stainless steel | AISI 316 stainless steel |
| 20 | Locking nut | AISI 304 stainless steel | AISI 316 stainless steel |

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

| No. | Component | Standard material | Optional |
|---|---|---|---|
| 21 | Shaft joint | galvanised steel Fe 37 | AISI 304/316 stainless steel |
| 22 | Upper rod | galvanised steel Fe 37 | AISI 304/316 stainless steel |
| 23 | Lower rod (from DN 80) | galvanised steel Fe 37 | AISI 304/316 stainless steel |
| 24 | Floating joint (from DN 80) | galvanised steel Fe 37 | AISI 304/316 stainless steel |
| 25 | Float rod | AISI 304 stainless steel | AISI 316 stainless steel |
| 26 | Float | AISI 304 stainless steel | AISI 316 stainless steel |
| 27 | Grub screw (HH screw DN 150 to 300) | AISI 304 stainless steel | AISI 316 stainless steel |
| 28 | Spring plug (from DN 80) | AISI 304 stainless steel | |
| 29 | Hex head screw | AISI 304 stainless steel | AISI 316 stainless steel |
| 30 | Studs (DN 150 to 300) | AISI 304 stainless steel | AISI 316 stainless steel |

# Customer Centricity

Pietro Fiorentini is one of the main Italian international company with high focus on product and service quality.

The main strategy is to create a stable long-term oriented relationship, putting the customer's needs first. Lean management and thinking and customer centricity are used to improve and maintain the highest level of customer experience.

**Support**
One of Pietro Fiorentini's top priorities is to provide support to the client in all phases of project development, during installation, commissioning and operation. Pietro Fiorentini has developed a highly standardized intervention management system, which helps to facilitate the entire process and effectively archive all the interventions carried out, drawing on valuable information to improve the product and service. Many services are available remotely, avoiding long waiting times or expensive interventions.

**Training**
Pietro Fiorentini offers training services available for both experienced operators and new users. The training is composed of the theoretical and the practical parts, and is designed, selected and prepared according to the level of use and the customer's need.

**Customer Relation Management (CRM)**
The centrality of customer is one of the main missions and vision of Pietro Fiorentini. For this reason, Pietro Fiorentini has enhanced the customer relation management system. This enables us to track every opportunity and request from our customers into one single information point.

# 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.

Pietro Fiorentini

**TB0197ENG**



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Product designed and manufactured by **CSA S.r.l.** and distributed by **Pietro Fiorentini S.p.A.**