

# H-FLOAT

Float valves



## **TECHNICAL BROCHURE**

#### Pietro Fiorentini S.p.A.

Via E.Fermi, 8/10 | 36057 Arcugnano, Italy | +39 0444 968 511 sales@fiorentini.com

The data are not binding. We reserve the right to make changes without prior notice.

H-FLOAT\_technicalbrochure\_ENG\_revA

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 open

#### Valve closed

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

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 (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	Øź	220	145	525	21
50	230	82,5	183	165	600	Ø2	220	145	525	21
65	290	92.5	197	185	600	Øź	220	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	Сар	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.





#### **TB0197ENG**



The data are not binding. We reserve the right to make changes without prior notice.

H-FLOAT\_technicalbrochure\_ENG\_revA

www.fiorentini.com

