

H-PVS TH

Safety valves



TECHNICAL BROCHURE

Pietro Fiorentini S.p.A.

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

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www.fiorentini.com

Stainless steel anti-water hammer safety valve **H-PVS TH**

The **H-PVS TH** valve, made entirely of stainless steel, is designed to avoid the effects of water hammer on pipelines. When the pressure reaches a preset maximum threshold, it acts immediately, discharging the necessary amount of water to avoid overpressure.

Constructive features and advantages

- Entirely made of stainless steel.
- Small dimensions and robust components.
- Negligible sliding friction of internal moving parts, ensuring consistent performance over time.
- Perfect tightness and excellent resistance to cavitation.
- High-frequency springs specially treated to avoid hysteresis effects; available in 3 different calibration values.
- Threaded discharge allowing connection to an external pipe to convey water spillage generated during opening.

Main applications

- Water distribution networks
- Fire-fighting systems
- Irrigation systems
- Buildings and installations for civil use, particularly where the use of stainless steel is required or recommended
- Demineralised water and bottling plants
- Cooling systems and industrial plants





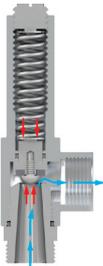
Operating principle

The operation of the H-PVS TH safety valve is based on the movement of a piston that slides inside the body and a sealing gasket.



Normally closed valve

In the absence of pressure or flow inside, the valve is normally closed; the piston is pushed down by the force of the spring.



Valve fully open in operation

When the upstream pressure rises above the spring calibration, the piston moves upwards and the valve moves to the fully open position.



Modulating valve

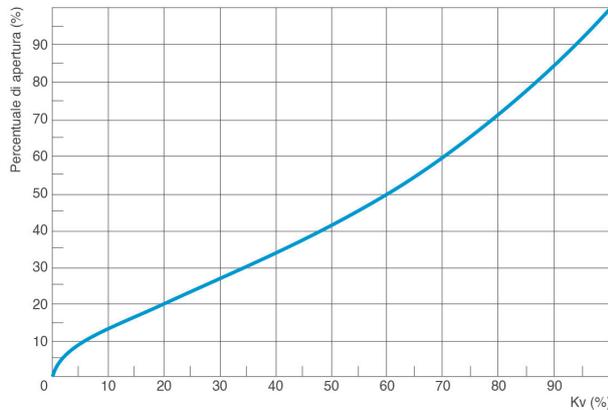
When the incoming pressure from upstream falls below the calibration value, the plug is pushed down, reducing the passage. The result is a pressure drop to restore the upstream pressure to the required value.



Valve closed (static conditions)

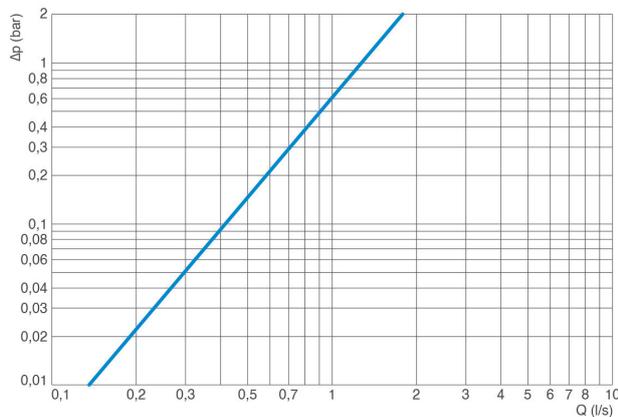
If the downstream withdrawal increases, and the upstream pressure falls below the spring setting, the valve moves to the fully closed position, maintaining the required pressure. This also occurs under static conditions.

Technical data



Valve-Kv opening diagram

The graph opposite shows the Kv in relation to the plug stroke (both values are expressed as percentages).



Pressure drops chart

The graph shows the pressure drop of the valve in the fully open position depending on the flow rate expressed in l/s.

Operating conditions

Treated water	maximum 70°C (solutions for higher temperatures on request)
Inlet pressure	maximum 25 bar

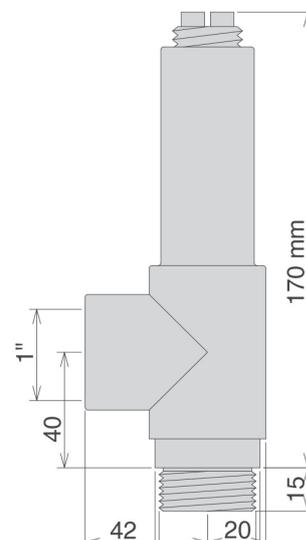
Technical data

- Kv 6.3 m³/h
- Maximum recommended flow rate: 5 m³/h
- Spring adjustment ranges: 1-8 bar, 2-16 bar, 4-24 bar
- Weight 2.3 kg

Standard

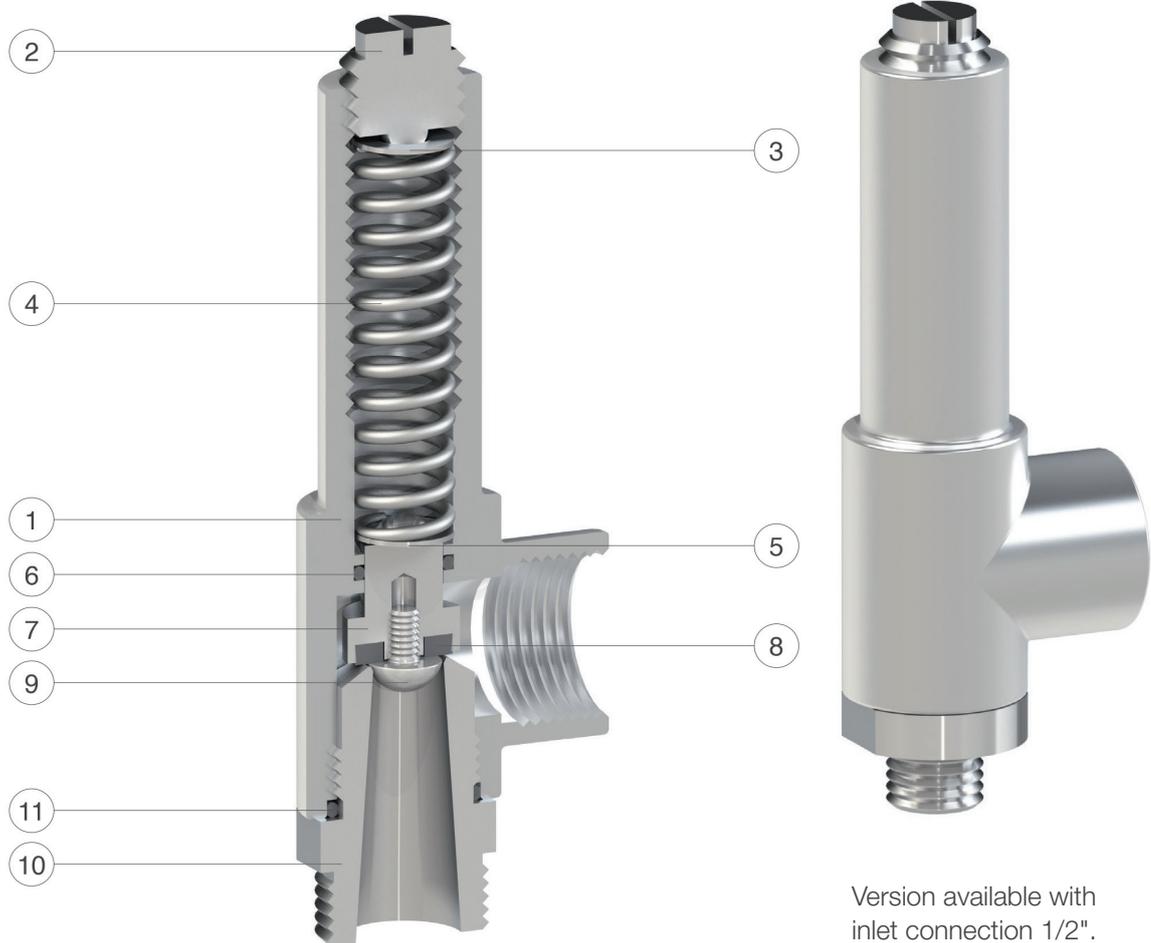
- Certification and testing according to EN 1074/5
- BSP threaded fittings

Modifications to inlet connection threads on request.





Construction details



No.	Component	Standard material	Optional
1	Body	AISI 316 stainless steel	
2	Control screw	AISI 304 stainless steel	AISI 316 stainless steel
3	Upper plate seat spring	AISI 304 stainless steel	
4	Spring	AISI 302 stainless steel	
5	O-ring	NBR	EPDM/Viton
6	Bottom plate seat spring	AISI 304 stainless steel	
7	Plug	AISI 304 stainless steel	AISI 316 stainless steel
8	Flat gasket	polyurethane	
9	Screw	AISI 304 stainless steel	
10	Seal seat	AISI 304 stainless steel	AISI 316 stainless steel
11	O-ring	NBR	EPDM/Viton

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



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.

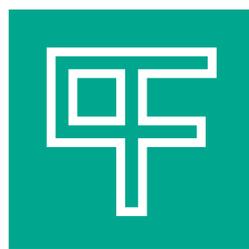


Our commitment to the world of tomorrow

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.





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