



Product Overview

The H-Series 22 mm 2-Port Shoe Valve is a durable brass valve designed for heating, hot water, and chilled-water applications. Its carbon-filled PTFE shoe mechanism ensures smooth operation and long service life under high temperatures and fluctuating system pressures.

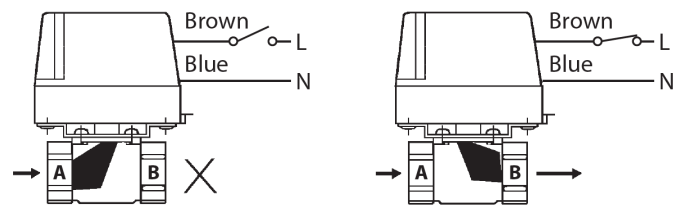
With a Kv of 8.2 m³/h and a maximum differential pressure of 1.0 bar, the 22mm model provides accurate flow regulation and dependable shut-off performance. Leakage through the closed port is tightly controlled at 1 L/hr @ 1 bar, supporting reliable zoning in modern systems.

The valve pairs with the HPA2 spring-return actuator, enabling fast actuation and an SPST auxiliary switch for control interlocking. Rated to 10 bar and 95°C, and suitable for 60/40 glycol chilled-water, the 22mm external-compression version offers a straightforward, robust installation across standard pipework.

Key Benefits

- **Heating & Cooling Ready** - Works efficiently in both heating and chilled-water applications, including systems using a 60/40 glycol mix.
- **Reliable Operation** - Engineered to operate under high temperatures, rapid pressure changes, and demanding system conditions.
- **Long Service Life** - Brass construction, carbon-filled PTFE shoe, and high-quality elastomer seals ensure long-term durability.
- **Simple Wiring** - Industry-standard wiring colours and actuator compatibility simplify installation and reduce setup errors.
- **Robust Design** - High test-pressure tolerance and reinforced spindle support deliver robust, dependable operation over time.

Valve Configuration



Valve Body & Actuator

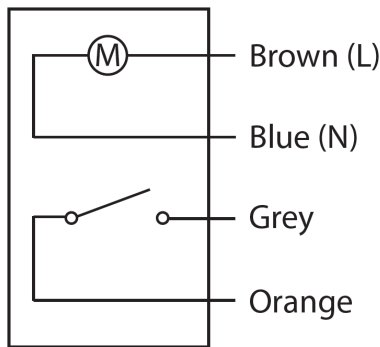
Technical Data	
Type	HP22
Size	22mm
Description	External compression
Kv (m ³ /hr)	8.2
Max Differential Pressure	1.0

Specifications

Valve Body Specifications	
Body and trims	Hot stamped or die cast brass
Top Seal Gasket	THK-Ethylene propylene
Spindle O Ring Seals	Flurobon Fluro-elastomer
Shoe Material	Carbon filled PTFE
Maximum Working Pressure (Bar)	10.0
Maximum Operating Temperature (°C)	95
Maximum bypass/leakage through closed port	1 L/hr @ 1 bar differential pressure

Valve Actuator Specifications	
Voltage Rating*	220/240 Vac, 50/60Hz
Maximum Power Consumption	6 watts
Maximum Ambient Temperature	45°C
Opening Time	< 35 seconds
Closing Time	< 20 seconds
Auxiliary Switch Rating (if fitted)	3 (1) A, 220/240 Vac, 50/60Hz
Enclosure Rating	IP40

Actuator Wiring Detail



(Standard)

Sizing

The pressure drop across an H-Series valve can be determined from this Kv diagram.

The chart, which shows the Kv values of all H Series valves as diagonal lines, can be used to determine pressure drop when the flow rate is known (m³/h). It can also be used to read off pressure drop values when the heating load (kW) is known.

A vertical axis, scaled in kW for systems working at temperature differences of either 11°C or 20°C, is included in the chart.

Alternatively, pressure drop values can be calculated using the formula:

$$\Delta P = (Q/Kv)^2$$

Where:

Q = Flow rate (m³/h)

Kv = Co-efficient of Flow (m³/h)

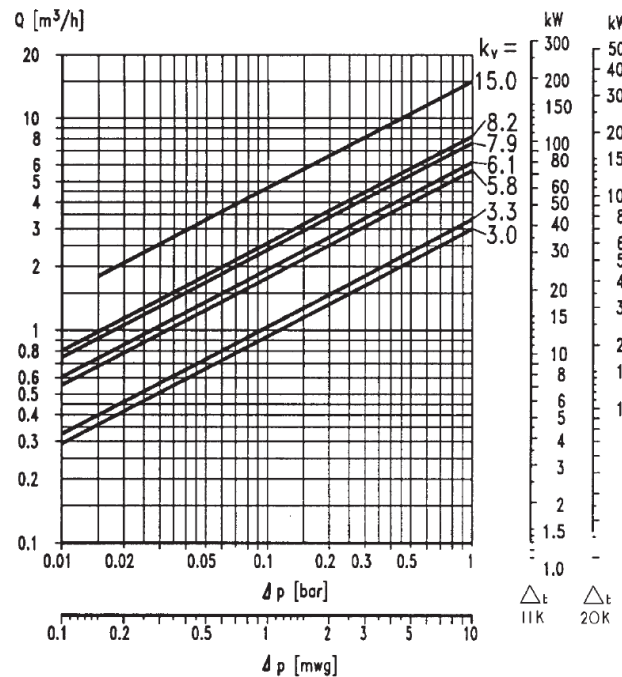
ΔP = Pressure Drop across the valve (bar)

Kv values of each valve type and size are shown in the table opposite.

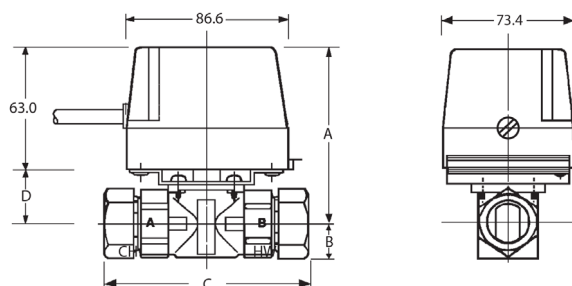
Examples of chart use:

To determine the pressure drop across a 22mm 2-port paddle valve (Kv = 5.8), for a 20 kW heating load in a system working at an 11°C temperature difference, follow the horizontal line from the 20 kW point on the appropriate right-hand vertical axis until it crosses the diagonal 5.8 Kv line.

By following a vertical line downwards from this point, a pressure drop of 0.072 bar can be read off the horizontal axis at the base of the chart.



Dimensions



Valve Body	Connections	A	B	C	D
HPV22	22mm Ext. Comp.	90.4	17.5	110.0	27.4