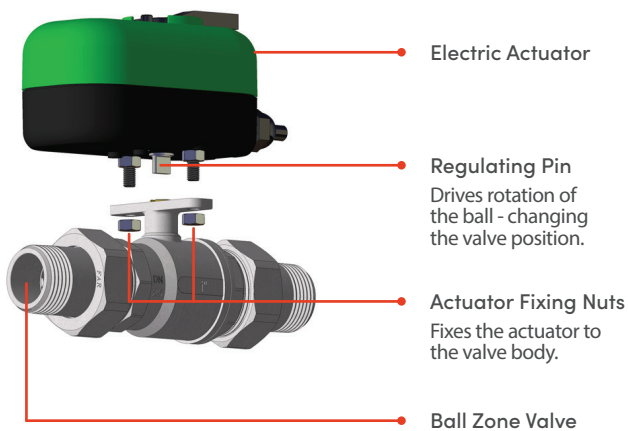


FAR Zone Valves Data Sheet

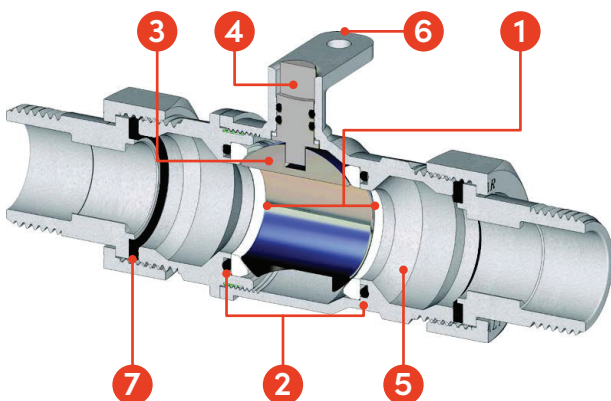
Small 2-Way Zone Valve

The FAR zone valve which is controlled by a FAR actuator, is commonly controlled by a room thermostat or external control providing a ON/OFF signal. This shuts off flow within the heating or cooling system.

The zone valve features a special internal anti-blockage system that ensures proper ball rotation, even in hard water conditions. The system comprises of two PTFE seals located on two O-rings, which operate as "shock absorbers" so that ball rotation is guaranteed - even if it has not been used for a long period.



Construction Features



- Available sizes: 1" - 1 1/4" BSPT
- Valve body and ball: UNI EN 12165:98 CW617N Brass
- Nominal working pressure: 16 bar
- Differential maximum pressure: 5 bar
- Circulating fluid temperature: -10 °C (with antifreeze) +100 °C
- Connection cable length: 1m
- Rotation Angle: 90°
- Voltage: 230VAC
- Protection level: IP54
- Working tempature range: from -10°C to + 50°C
- Usable fluids: water, water with glycol

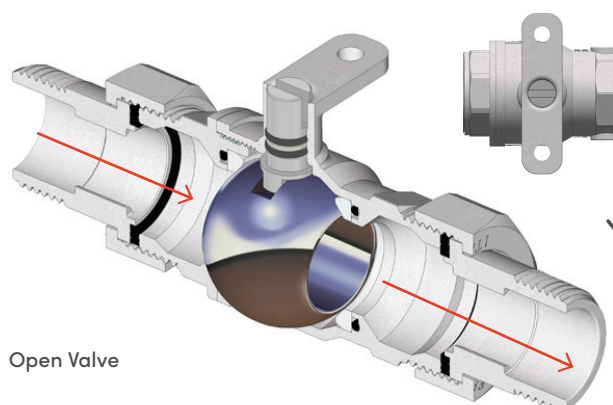
1. P.T.F.E Seals
2. Sealing O-Rings in EPDM
3. Ball in CW617N Brass
4. Control stem in CW617N Brass with O-Rings in EPDM
5. Valve body in CW617N Brass
6. Holes for screws for actuator
7. EPDM rubber gasket

Functioning

The 2-way full bore zone valve functions to shut-off the flow within the heating or cooling systems.

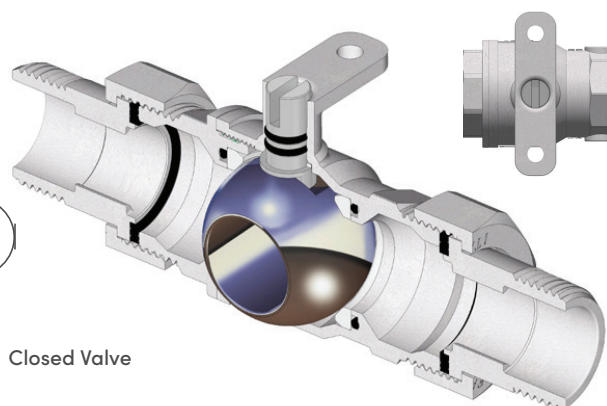
The actuator opens or closes off the flow of fluid in response to signals received from the thermostat or external control.

Open Position



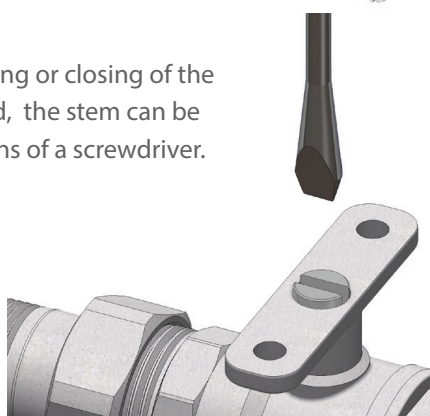
Open Valve

Closed Position



Closed Valve

If manual opening or closing of the valve is required, the stem can be rotated by means of a screwdriver.



Small Actuators

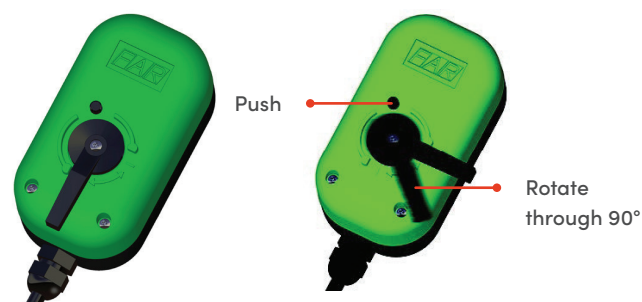
The actuators incorporate two servomotors, one for opening and the other for closing.

In this way, wear on gears and servomotors can be reduced, ensuring long life of the component.

Each actuator is equipped with an auxiliary micro-switch, which makes it possible to achieve parallel connections of zone valves and links to control pumps and boilers.

All actuators are 230VAC

The Actuators Art.3005-3006 and Art.3007-3008 are equipped with a manual release, which allows manual

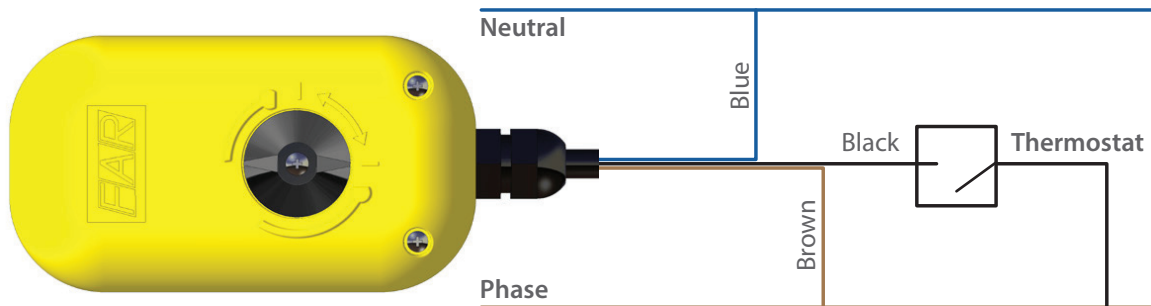


opening or closing of the zone valve in the event of power failure.

In order to carry out the opening or closing, push and hold the release button and then turn the lever, as shown in the illustration. The actuator will automatically close once the button is released.

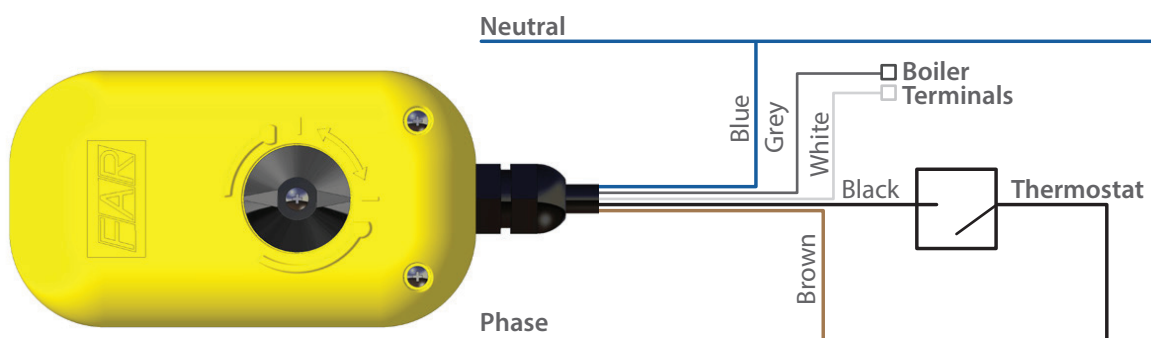
Electrical Connections

3-Wire Connection - Room Thermostat



The brown wire must be connected directly to phase, the blue to neutral and the black to the thermostat.

5-Wire Connection - Room Thermostat



An inner auxiliary microswitch connected to the grey and white wires (volt free contacts), independent from the actuator circuit, permits connection in parallel of more than one actuator to control a single device, such as a pump or boiler.



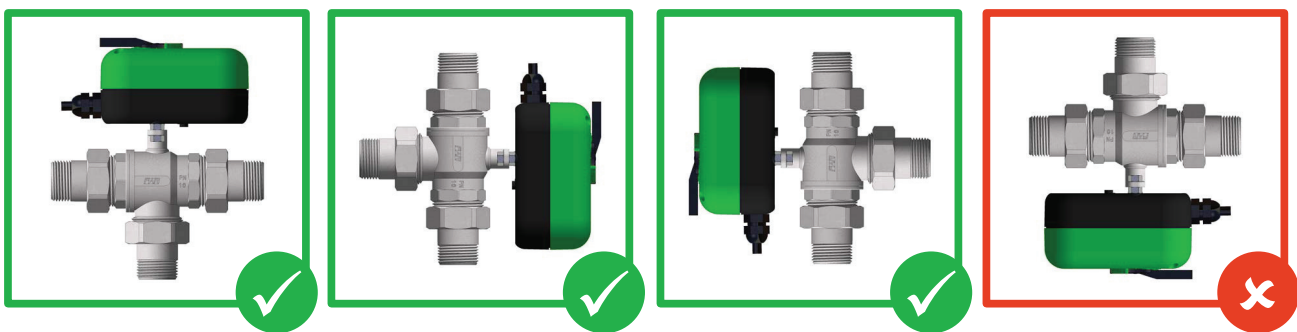
For proper operation it is essential that a permanent 230VAC supply is applied to the brown cable.

Presence of 230VAC on black wire: 2-Way Zone Valve: the flow is shut off.

Absence of 230VAC on black wire: 2-Way Zone Valve: the flow is open.

Colour	Connection	Description
Grey	Microswitch common contact	Connected to the common contact of the microswitch
White	N.O. contact of the microswitch	Connected to the normally open contact of the microswitch
Blue	Neutral	Connection to neutral of the 230VAC circuit
Brown	Phase	Permanent 230VAC supply
Black	Open	With 230VAC on the black the valve is open
	Closed	In absence of 230VAC on the black, the valve is closed

Installation



Don't install the acuator upside-down, as any dripping due to condensation could cause damages to the electrical part

Fluid Dynamics Features

2-Way Zone Valves

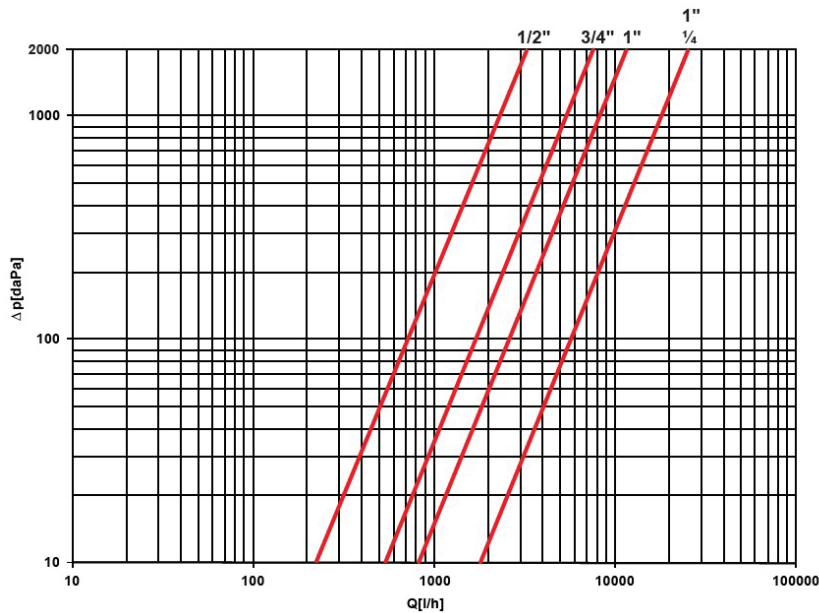


Figure 1

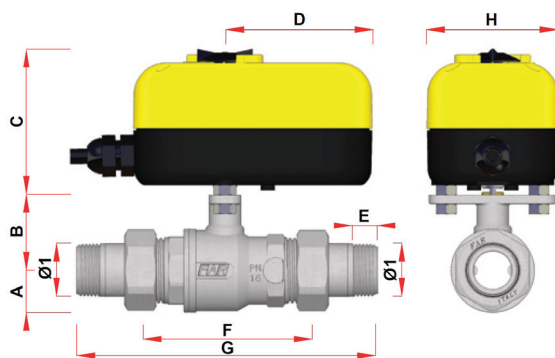


Size	1"	1" 1/4
Kv (m ³ /h)	25,6	55,2

The diagram on the left shows the pressure drops of the 2-way zone valves **Art.3015 - 3016 - 3017: 1/2", 3/4", 1", 1"1/4 (Fig.1)**

The diagram is valid also for the full bore zone valves **Art.3025 - 3030 - 3031 - 3032: 1/2", 3/4", 1" e 1"1/4 (Fig.2).**

Dimensions



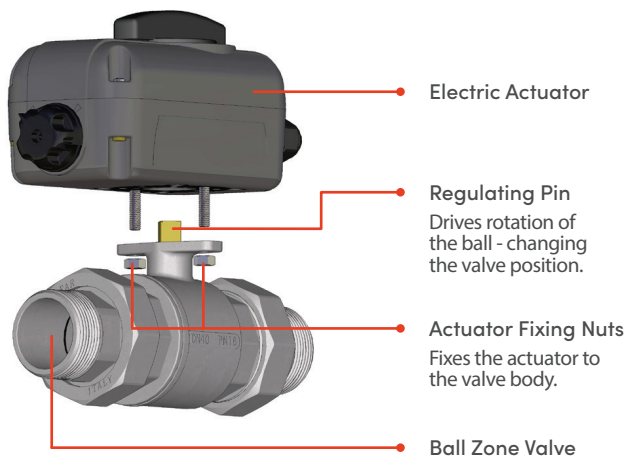
Code	$\varnothing 1$	A	B	C	D	E	F	G
300115 140	G1	26	42	73	74	94	171	66
300115 11440	G1 1/4	31	47	73	74	107	190	66

FAR Large Zone Valves

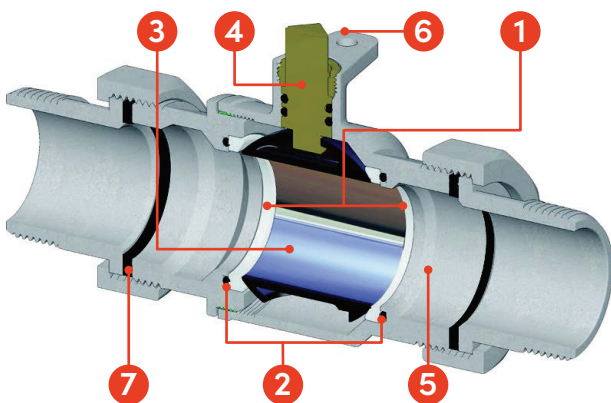
1 1/2" & 2" 2-Way Zone Valve

The FAR zone valve which is controlled by a FAR actuator, is commonly controlled by a room thermostat or external control providing a ON/OFF signal. This shuts off flow within the heating or cooling system.

The zone valve features a special internal anti-blockage system that ensures proper ball rotation, even in hard water conditions. The system comprises of two PTFE seals located on two O-rings, which operate as "shock absorbers" so that ball rotation is guaranteed - even if it has not been used for a long period.



Construction Features



- Available sizes: 1 1/2" - 2" BSPT
- Valve body and ball: UNI EN 12165:98 CW617N Brass
- Nominal working pressure: 16 bar
- Differential maximum pressure: 5 bar
- Circulating fluid temperature: -10 °C (with antifreeze) +100 °C
- Connection cable length: 1m
- Rotation Angle: 90°
- Voltage: 230VAC
- Protection level: IP54
- Working temperature range: from -10°C to + 50°C
- Usable fluids: water, water with glycol

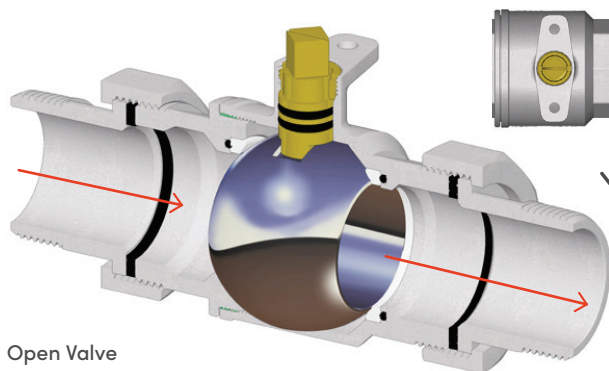
1. P.T.F.E Seals
2. Sealing O-Rings in EPDM
3. Ball in CW617N Brass
4. Control steam in CW617N Brass with O-Rings in EPDM
5. Valve body in CW617N Brass
6. Holes for screws for actuator
7. EPDM rubber gasket

Functioning

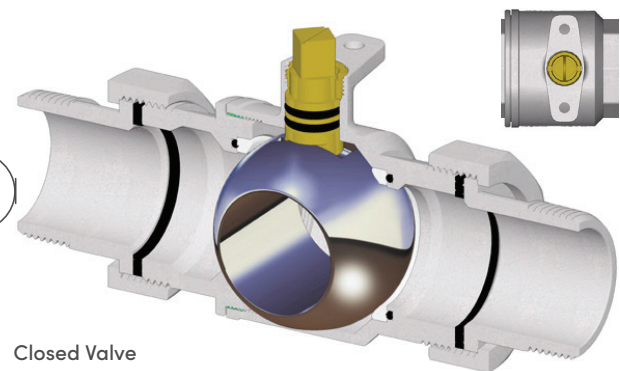
The 2-way full bore zone valve functions to shut-off the flow within the heating or cooling systems.

The actuator opens or closes off the flow of fluid in response to signals received from the thermostat or external control.

Open Position



Close Position



Small Actuators

The actuators incorporate two servomotors, one for opening and the other for closing.

In this way, wear on gears and servomotors can be reduced, ensuring a long life of the component.

Each actuator is equipped with an auxiliary micro-switch, which makes it possible to achieve parallel connections of zone valves and links to control pumps and boilers.

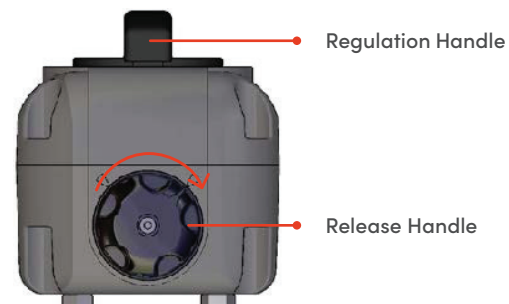
Automatic Operating Position



Manual Release

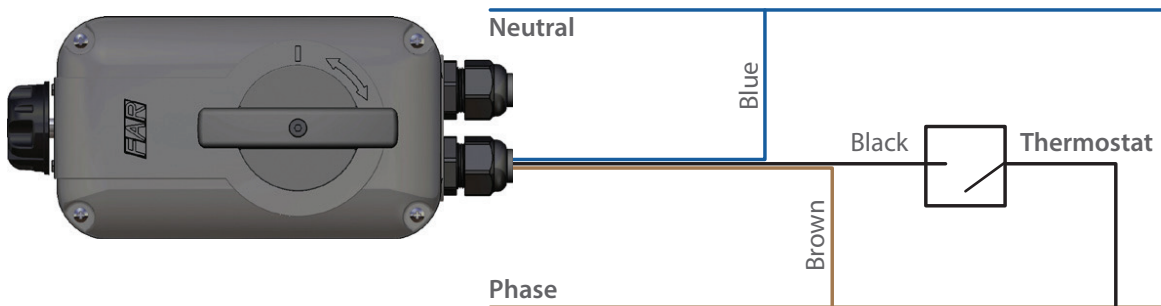
The manual release system is carried out by turning the handle clockwise until it reaches the position shown (position of manual release). Once this position has been reached, you can rotate - by means of the regulation handle - the valve on which the actuator is installed.

Manual Release Position



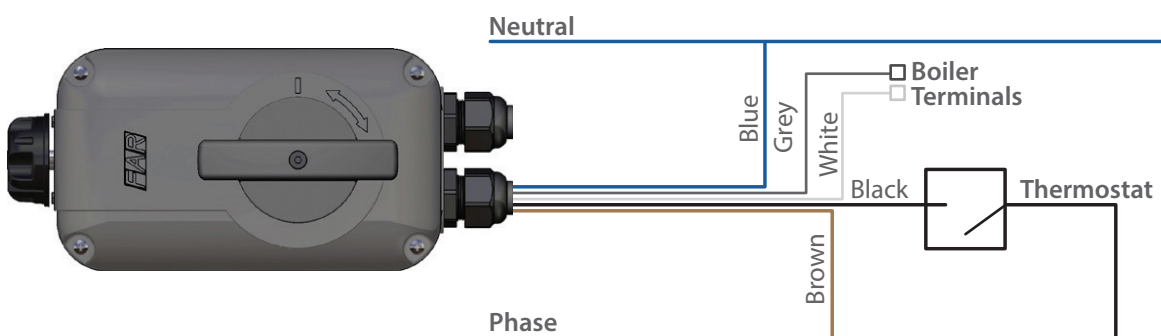
Electrical Connections

3-Wire Connection - Room Thermostat



The brown wire must be connected directly to phase, the blue to neutral and the black to the thermostat. Brown wire: Terminal 7. Black wire: Terminal 8. Blue wire: Terminal 9. The choice of wiring colours is indicative.

5-Wire Connection - Room Thermostat



An inner auxiliary microswitch connected to the grey and white wires (volt free contacts), which comes into operation when the valve is open, permits connection in parallel of more than one actuator to control a single device, such as a pump or boiler. A microswitch which comes into operation when the valve is closed is also available (terminals 4 and 6).



For proper operation it is essential that a permanent 230VAC supply is applied to the brown cable.

Presence of 230VAC on black wire: 2-Way Zone Valve: the flow is shut off.

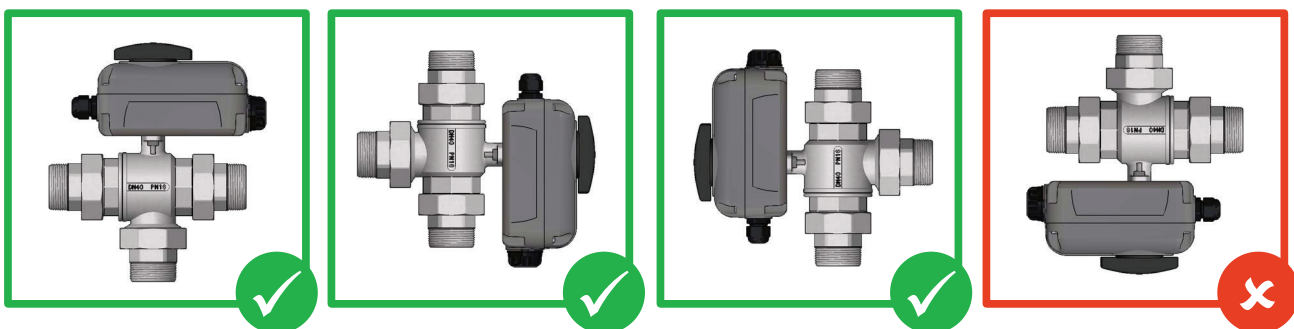
Absence of 230VAC on black wire: 2-Way Zone Valve: the flow is open.

Colour	Connection	Description
Grey	Microswitch common contact	Connected to the common contact of the microswitch
White	N.O. contact of the microswitch	Connected to the normally open contact of the microswitch
Blue	Neutral	Connection to neutral of the 230VAC circuit
Brown	Phase	Permanent 230VAC supply
Black	Open	With 230VAC on the black the valve is open
	Closed	In absence of 230VAC on the black, the valve is closed

Other Features

- Voltage: 230V (art. 3039)
- Torque: 20Nm (30s)
- Rotation time: 30s
- Rotation angle: 90°
- Absorbed power: 6,5 VA
- Max. room temperature: -10°C a + 50°C
- Protection level: IP65 (dust and water jets)
- Galvanized gearbox
- Double safety O-ring on the end shaft
- Synchronous actuator with low consumption and duty cycle of 100%
- Contact rating aux (opening and closing) 1A resistive

Installation



Don't install the acuator upside-down

Fluid Dynamics Features

2-Way Zone Valves

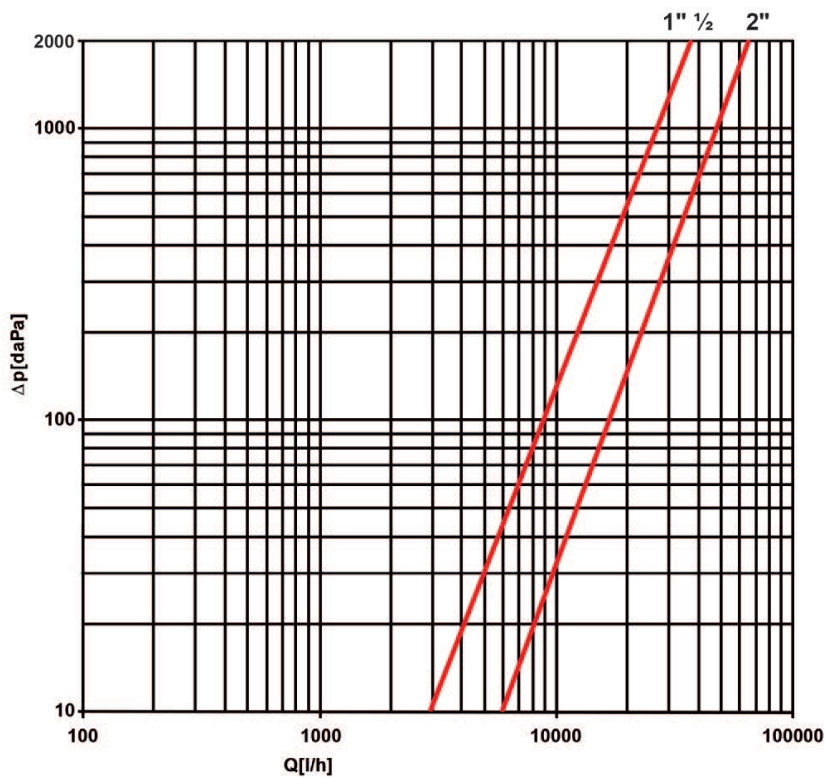
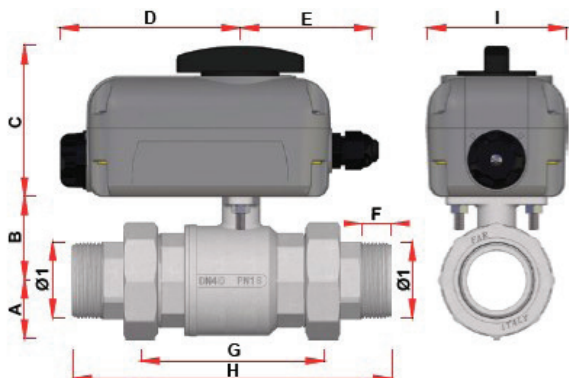


Figure 1



Size	1" 1/2	2"
Kv (m³/h)	79,42	136,22

Dimensions



Code	Ø1	A	B	C	D	E	F	G	H
303915 112	1" 1/2	35	53	95	116	84	113	202	88
303915 2	2"	43	61	95	116	84	130	232	88