

# Modulating Zone Valve

**cim690.1**

Characterized Ball - FIPT x FIPT

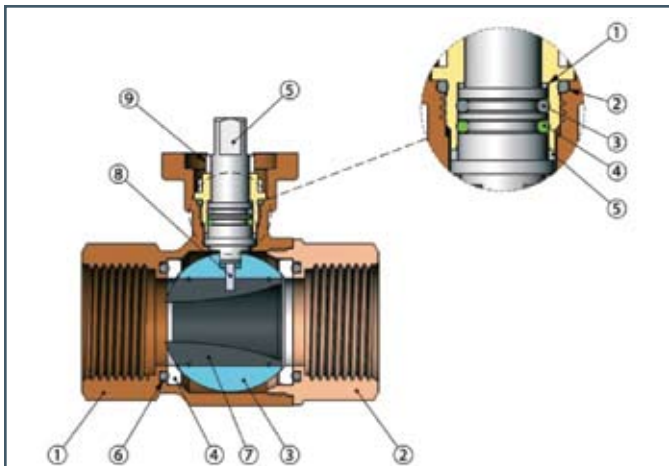


## Applications:

The CIM 690.1 Modulating Zone Valve is a two-way zone valve with a characterized ball to provide either a linear or modified equal percentage flow. Cimberio's zone valves are specifically designed for use with an actuator, making assembly and maintenance easy. All actuators feature a visual indicator on the cover and a manual override. Applications include baseboard, fan coils, radiators, convectors, air handlers, heat pumps, radiant systems.

## Features:

- Characterized ball provides a linear or modified equal percentage flow that allows the valve to be tuned to your system's needs
- Inline repairable double o-ring seal
- Ball's specialty insert designed to reduce turbulence
- Ball insert is recessed to minimize wear on valve seats
- Innovative seat design reduces breakaway torque and increases life of seats
- Slow speed actuator reduces water hammer
- Easy-to-read visual indicator of valve position
- Easy selection and automation of actuator duties
- Mounting of actuator done by ISO mounting pad — no more odd mounting kits
- Easy button activated manual override
- Switch from normally open to normally closed through the actuator — no need to remove the actuator to turn ball
- 0-10V DC or 4-20mA control signal



## Ball Valve

- 1 **Body:** EN 12165 CW617N Brass
- 2 **Adapter:** EN 12165 CW617N Brass
- 3 **Ball:** EN 12165 CW617N Brass
- 4 **Ball Seats:** PTFE
- 5 **Stem:** EN 12164 CW617N Brass
- 6 **O-Ring:** HNBR
- 7 **Ball Specialty Insert:** PPS
- 8 **Spine:** AISI 304 Stainless Steel
- 9 **Gland Packing:** PTFE

## Stem

- 1 **Anti-Friction Rung:** PTFE
- 2 **O-Ring:** EPDM
- 3 **O-Ring:** EPDM 70
- 4 **O-Ring:** FPM
- 5 **Protection Ring:** PTFE

## Threading:

NPT threads

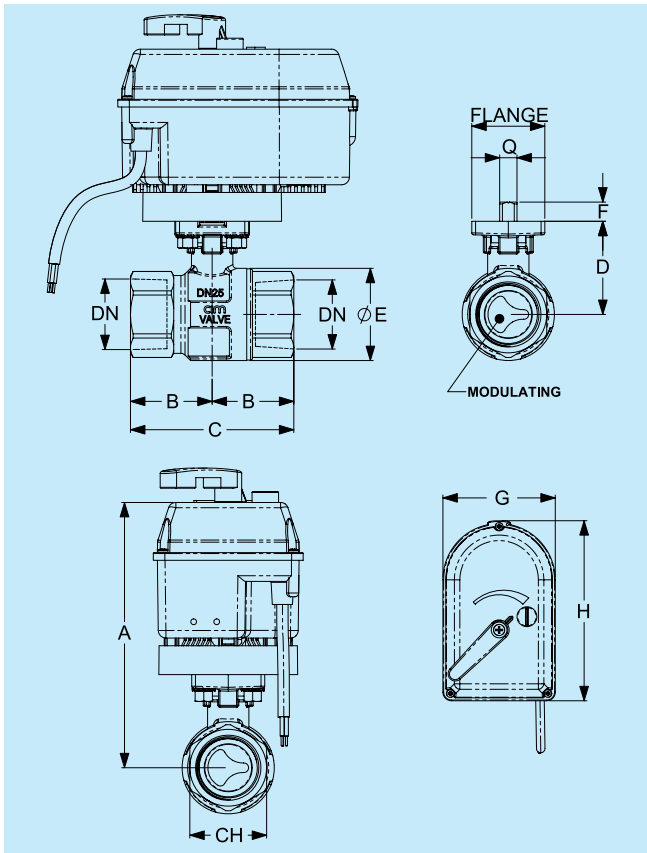
Size	Fast Order No.
1/2"	690-04
3/4"	690-06
1"	690-07
1-1/4"	690-08
1-1/2"	690-09
2"	690-10

All Cimberio valves qualify for the American Recovery and Reinvestment Act and the Buy American Act.

# Modulating Zone Valve

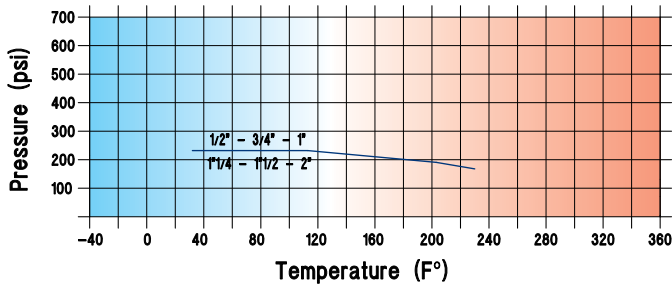
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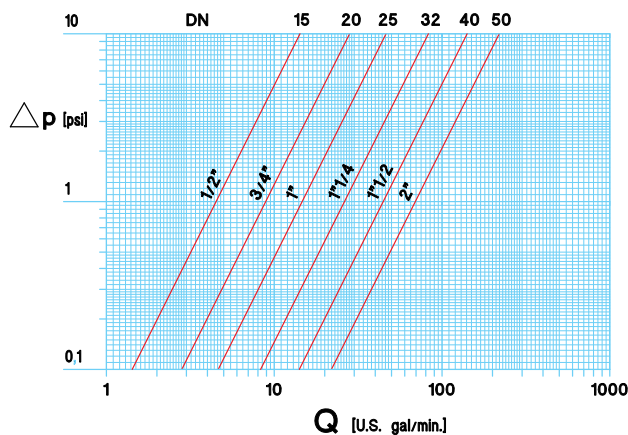


Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
A	5-1/8" 130mm	5-1/4" 133mm	5-7/16" 138mm	5-3/4" 146mm	6-3/16" 157mm	6-7/16" 164mm
B	1-1/4" 31.5mm	1-3/8" 35mm	1-11/16" 42.5mm	1-7/8" 47mm	2-1/8" 54mm	2-1/2" 63.5mm
C	2-1/2" 63mm	2-3/4" 70mm	3-3/8" 85mm	3-3/4" 94.5mm	4-1/4" 108mm	5" 127.5mm
D	1-5/8" 41mm	1-3/4" 44.5mm	1-15/16" 48.5mm	2-1/4" 56.5mm	2-5/8" 67mm	2-15/16" 74.5mm
ØE	1-3/16" 30mm	1-9/16" 39mm	1-7/8" 48mm	2-1/4" 56.5mm	2-13/16" 71mm	3-7/16" 87mm
F	3/8" 10mm	3/8" 10mm	3/8" 10mm	3/8" 10mm	3/8" 10mm	3/8" 10mm
Q	3/8" 9mm	3/8" 9mm	3/8" 9mm	3/8" 9mm	7/16" 11mm	7/16" 11mm
Flange Type	F03	F03	F03	F03	F05	F05
CH	1" 25mm	1-1/4" 31mm	1-9/16" 40mm	1-15/16" 49mm	2-3/16" 55mm	2-3/4" 69mm
G	3-1/16" 78mm	3-1/16" 78mm	3-1/16" 78mm	3-1/16" 78mm	3-1/16" 78mm	3-1/16" 78mm
H	4-15/16" 125mm	4-15/16" 125mm	4-15/16" 125mm	4-15/16" 125mm	4-15/16" 125mm	4-15/16" 125mm
Pounds	2.152	2.417	2.980	3.620	4.547	6.181
Grams	976	1096	1352	1642	2062	2804
Cv	4.5	8.9	14.7	26.2	44.6	69.4
Gal/min						

## PRESSURE/TEMPERATURE RATINGS



## FLOW AND PRESSURE DROP



## 690.1 Technical Data

Medium Temperature	32° - 230° F
Max. Operating Pressure	232 PSI
Applications	Water, Non-aggressive Fluids, Air
Nominal Voltage	24 VAC, 50hz
Control Signal	voltage (V) / current (A)
Power Consumption in Operation	6VA
Connection Cable Length	6'6"
Type of Control	Modulating
Nominal Torque	Max. 12Nm
Rotation Time	73s/90°, 147s/90°
Manual Override	Gearing Latch Disengaged with Button
Position Indication	Mechanical, Handle Position on the Cover
Installation Position	All Positions Except Actuator Upside Down
Actuator Weight	1.05 lbs (480 g)

