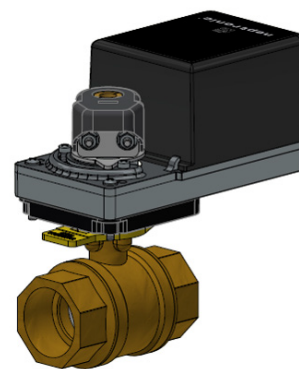


## Models

CPAxxxxYP1: 2-way, 1/2" (DN15), standard NPT  
 CPBxxxxYP1: 2-way, 3/4" (DN20), standard NPT  
 CPCxxxxYP1: 2-way, 1" (DN25), standard NPT  
 CPDxxxxYP1: 2-way, 1 1/4" (DN32), standard NPT  
 CPExxxxYP1: 2-way, 1 1/2" (DN40), standard NPT  
 CPFxxxxYP1: 2-way, 2" (DN50), standard NPT  
 CPGxxxxYP1: 2-way, 2 1/2" (DN65), standard NPT  
 CPHxxxxYP1: 2-way, 3" (DN80), standard NPT



With B Series Actuators

## Features

- 2-way valves available in 1/2" (DN15), 3/4" (DN20), 1" (DN25), 1 1/4" (DN32), 1 1/2" (DN40), 2" (DN50), 2 1/2" (DN65) and 3" (DN80)
- Compatible with Neptronic B series (50 in.lb [5.6 Nm]) actuators
- Close-off pressure of **100psig-130psig**
- Small dimensions allow for easier installation
- Cv range from 0.4 to 124 (Kv 0.3 to 107)
- 2 Way control of hot water or chilled water up to 50%Glycol

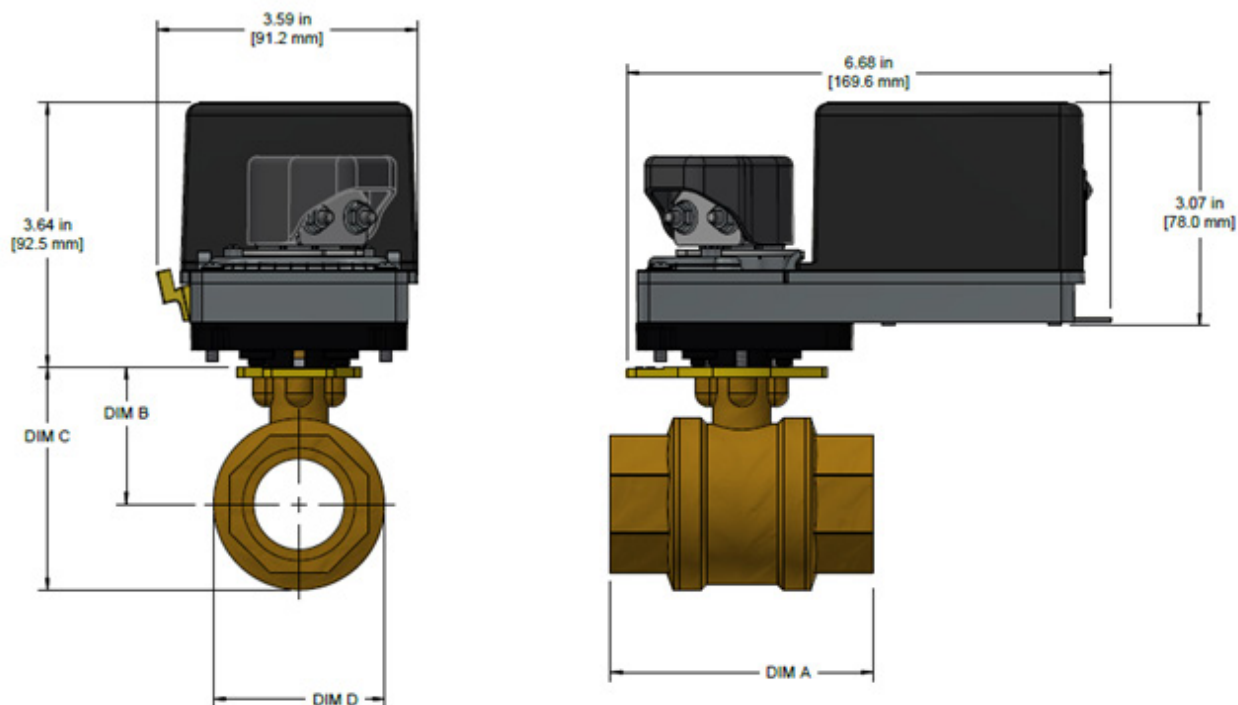
## Models

| Size          | 2-Way Models | Cv    | Kv    | Close Off PSI |
|---------------|--------------|-------|-------|---------------|
| 1/2" [DN15]   | CP A0004YP1  | 0.4   | 0.3   | 130           |
|               | CP A0007YP1  | 0.7   | 0.6   | 130           |
|               | CP A0014YP1  | 1.4   | 1.2   | 130           |
|               | CP A0026YP1  | 2.6   | 2.2   | 130           |
|               | CP A0050YP1  | 5.0   | 4.0   | 130           |
| 3/4" [DN20]   | CP B0100YP1  | 10.0  | 8.0   | 130           |
| 1" [DN25]     | CP C0160YP1  | 16.0  | 13.0  | 100           |
| 1-1/4" [DN32] | CP D0260YP1  | 26.0  | 22.0  | 100           |
| 1-1/2" [DN40] | CP E0410YP1  | 41.0  | 35.0  | 100           |
| 2" [DN50]     | CP F0710YP1  | 71.0  | 61.0  | 100           |
| 2-1/2" [DN65] | CP G1010YP1  | 101.0 | 87.0  | 100           |
| 3" [DN80]     | CP H1240YP1  | 124.0 | 107.0 | 100           |

### Technical Data

| Specification                   |               | All Models  |
|---------------------------------|---------------|---|
| Actuator Compatibility          |               | All Neptronic B series actuators                              |
| Sizes                           |               | 1/2" to 3" [DN15 to DN80]                                     |
| Range Cv [Kv]                   |               | 0.4 to 124 [0.3 to 107]                                       |
| Static Pressure and Temperature |               | 360 PSI, -22°F to +250°F (-30°C to +121°C)                    |
| Pressure                        | Close-Off     | 100 PSIG Maximum (130 PSIG max. for 1/2" and 3/4")            |
|                                 | Differential  | 35 PSIG Maximum   |
| Materials                       | Body          | Forged Brass ASTM B283  |
|                                 | Ball and Stem | Nickel Plated Brass & Brass, Respectively, or Stainless Steel |
|                                 | Seats         | Reinforced Teflon Seals with EPDM "O" Rings                   |
| Flow Contoured Insert           |               | Glass Filled Polymer  |
| Stem Seals                      |               | EPDM  |
| End Connections                 |               | Standard NPT  |

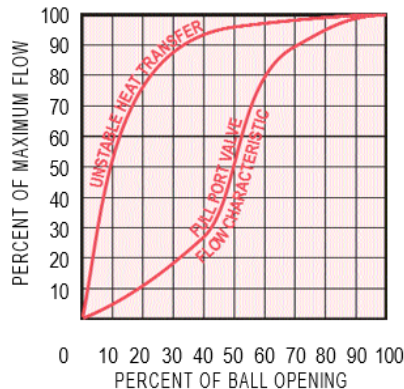
### Dimensions



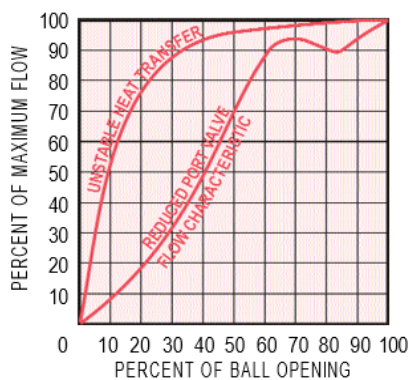
| Valve Size | 1/2" [DN15]  | 3/4" [DN20]  | 1" [DN25]    | 1-1/4" [DN32] | 1-1/2" [DN40] | 2" [DN50]     | 2-1/2" [DN65] | 3" [DN80]     |
|------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| A          | 2.37" [60mm] | 2.76" [70mm] | 3.04" [77mm] | 3.62" [92mm]  | 4.06" [103mm] | 4.90" [125mm] | 5.35" [136mm] | 5.73" [146mm] |
| B          | 1.33" [34mm] | 1.47" [37mm] | 1.67" [42mm] | 1.89" [48mm]  | 2.22" [56mm]  | 2.51" [64mm]  | 2.51" [64mm]  | 2.51" [64mm]  |
| C          | 1.94" [49mm] | 2.23" [57mm] | 2.57" [65mm] | 3.07" [80mm]  | 3.63" [92mm]  | 4.26" [108mm] | 4.26" [108mm] | 4.52" [115mm] |
| D          | 1.71" [43mm] | 1.71" [43mm] | 1.81" [46mm] | 2.36" [60mm]  | 2.83" [72mm]  | 3.50" [89mm]  | 3.50" [89mm]  | 4.02" [102mm] |



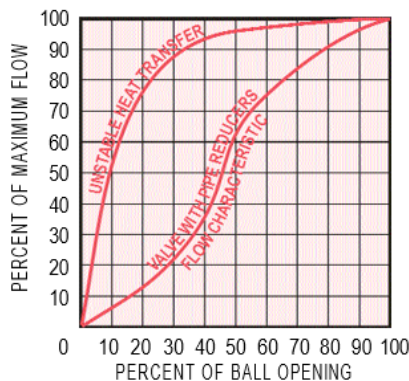
## Benefits of Contoured Port Valves



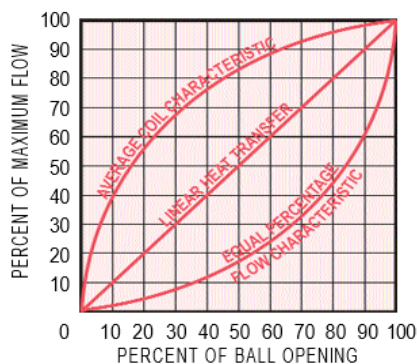
The large Cv rating of **FULL PORT VALVES** is caused by the shape and size of the orifice and results in a distorted flow characteristic, an unstable heat transfer and an “all or nothing” flow. The valve opens quickly and has an exceedingly small pressure drop. This is used for 2 position control where a low-pressure drop is desirable. It is not recommended for proportional control.



Using the **REDUCED PORT VALVE** results in a smaller opening through the ball and gives a smaller Cv with a higher-pressure differential yet the flow characteristic is still distorted. A stable control under these conditions will be difficult to achieve.



**PIPE REDUCERS** reduce the Cv due to the piping geometry, but this also distorts the characteristic. As in the full and reduced port ball valves, pipe reducers cause unstable heat output that increases far too quickly as the valve opens.



The **NEPTRONIC SOLUTION** is the **CONTOURED PORT BALL VALVE**. The characterized “V” style port allows for a more gradual equal percentage curve that is controllable for the full stroke of the valve. This results in a high rangeability and a greater turn down ratio for more accurate flow control.

As you can see in the graph on the left, the equal percentage characteristic of the **CONTOURED PORT BALL VALVE** mirrors the average coil characteristic resulting in linear heat transfer.

