

Feature

DZR brass pressure independent control valve (PICV)
 Threaded M/M for union ends (ASME B1.20.1 - NPSM)
 Max. ΔP working pressure 60psi
 Flow accuracy: +/-5% of maximum flow or +/-10% of the set flow, whichever is greater
 With test points
 100% full stroke-independent of valve setting
 M30x1.5 threads for linear actuator

300WOG



Working conditions

Water: 15°F - 260°F

below 32°F only for water with added antifreezing fluids

over 212°F only for water with added anti-boiling fluids

(Ethylene-glycolic and propylene-glycolic mixtures up to 50% may be used)



Material

| | Part | Material | Specification |
|----|-----------------------------|------------------------|---------------|
| 1 | Allen screw | Stainless steel | AISI 304 |
| 2 | Plug | DZR brass | UNS C35330 |
| 3 | Diaphragm Assy ¹ | EPDM/SS | EPDM/AISI 303 |
| 4 | Spring | Stainless steel | AISI 302 |
| 5 | Diaphragm seat | DZR brass | UNS C35330 |
| 6 | Seat/body O-ring | EPDM Perox | - |
| 7 | Seat/cursor O-ring | EPDM Perox | - |
| 8 | Body | DZR brass | UNS C35330 |
| 9 | Washer | DZR brass | UNS C35330 |
| 10 | Disc gasket | EPDM Perox | - |
| 11 | Flow reg. assembly | DZR brass ² | UNS C35330 |
| 12 | O-ring | EPDM Perox | - |
| 13 | Spring | Stainless steel | AISI 302 |
| 14 | Dial | Polyamide | - |
| 15 | ON/OFF cap | Polyamide | - |
| 16 | Test point | DZR brass ³ | UNS C35330 |

¹ In two pieces, with EPDM Perox diaphragm

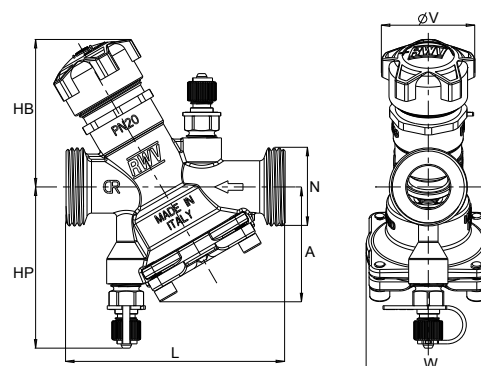
² With stainless steel spring (AISI 302) and EPDM Perox gaskets

³ Test points with EPDM gaskets and polypropylene ties



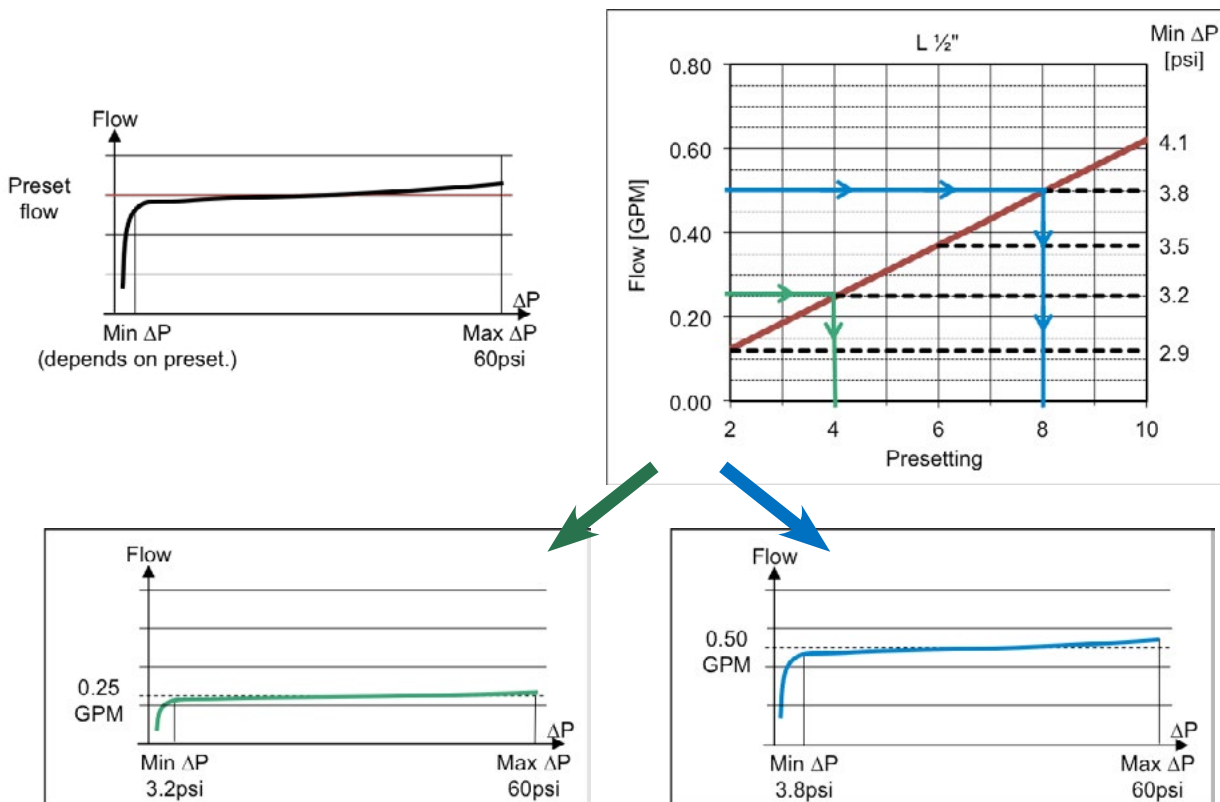
Dimension, Weight, Flow range

| Size | N | L | A | HP | HB | W | ØV | Wt | Flow |
|--------|--------|------|------|------|------|------|------|------|-----------|
| | | [in] | [in] | [in] | [in] | [in] | [in] | [lb] | [GPM] |
| L 1/2" | 3/4" | 3.09 | 1.53 | 2.40 | 2.44 | 1.7 | 1.6 | 0.93 | 0.12-0.62 |
| 1/2" | 3/4" | 3.09 | 1.53 | 2.40 | 2.44 | 1.7 | 1.6 | 0.93 | 0.48-2.38 |
| 3/4" | 1" | 3.62 | 1.87 | 2.73 | 2.44 | 2.0 | 1.6 | 1.32 | 0.99-4.93 |
| 1" | 1 1/4" | 4.53 | 2.21 | 3.08 | 2.96 | 2.3 | 1.6 | 2.49 | 1.90-9.51 |
| 1 1/4" | 1 1/2" | 5.51 | 3.07 | 3.61 | 2.99 | 3.2 | 1.6 | 4.44 | 3.18-15.9 |

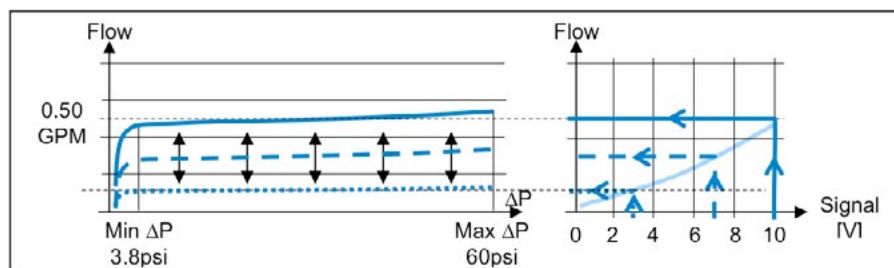


Presetting

Valve presetting ensures the maximum flow is constant (by means of dynamic balancing).
Presetting also determines the minimum working differential pressure of the valve.



The flow regulating assembly determines the stroke length. When coupled with a modulating actuator, the control signal and the actual output flow is proportional (example for a RWV actuator with control signal 0-10V).
In the above example, at 0.5 GPM a presetting of 8 is determined on a L 1/2" valve. The valve will start to operate at a ΔP of 3.8 psi.

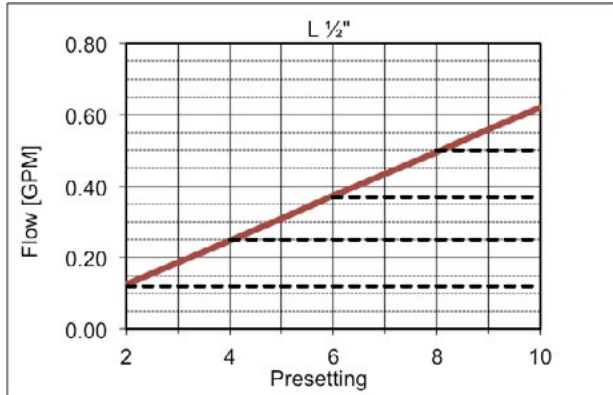


To set the flow rate:

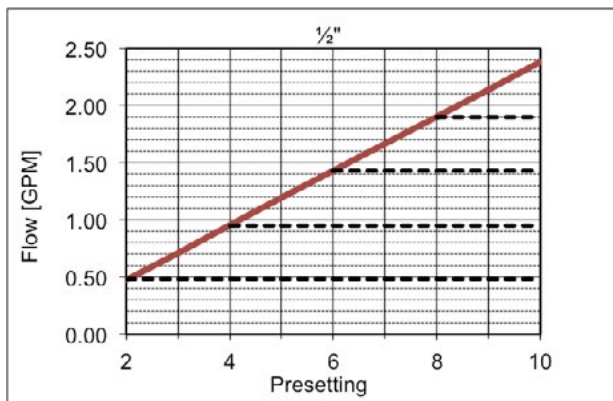
- a) push down the dial
- b) rotate the scale until the desired value aligns with the mark on the bonnet
- c) release the dial, this will automatically lock in the preset position



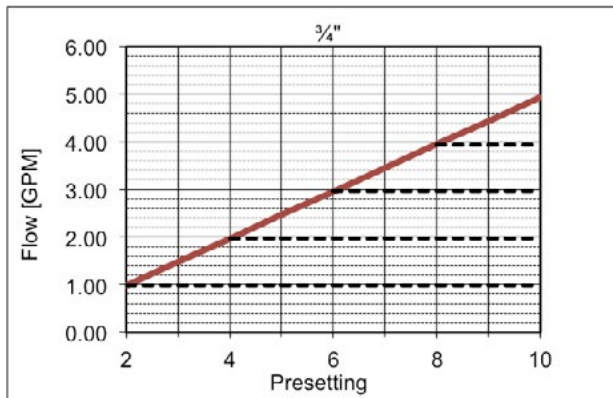
DZR Brass Pressure Independent Control Valve (PICV)



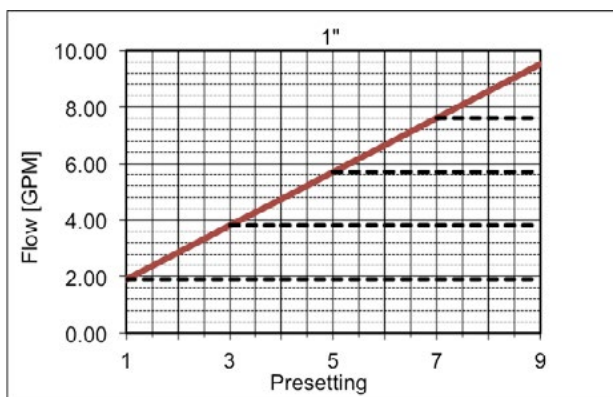
| L 1/2" | Flow | ΔP min. |
|--------|-------|-----------------|
| Preset | [GPM] | [psi] |
| 2 | 0.12 | 2.9 |
| 3 | 0.19 | 3.0 |
| 4 | 0.25 | 3.2 |
| 5 | 0.31 | 3.3 |
| 6 | 0.37 | 3.5 |
| 7 | 0.43 | 3.6 |
| 8 | 0.50 | 3.8 |
| 9 | 0.56 | 3.9 |
| 10 | 0.62 | 4.1 |



| 1/2" | Flow | ΔP min. |
|--------|-------|-----------------|
| Preset | [GPM] | [psi] |
| 2 | 0.48 | 3.5 |
| 3 | 0.71 | 3.6 |
| 4 | 0.95 | 3.8 |
| 5 | 1.19 | 4.1 |
| 6 | 1.43 | 4.4 |
| 7 | 1.67 | 4.6 |
| 8 | 1.90 | 4.9 |
| 9 | 2.14 | 5.1 |
| 10 | 2.38 | 5.2 |

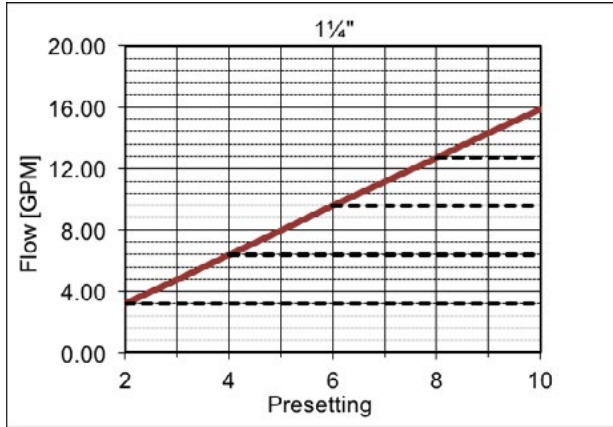


| 3/4" | Flow | ΔP min. |
|--------|-------|-----------------|
| Preset | [GPM] | [psi] |
| 2 | 0.99 | 3.5 |
| 3 | 1.48 | 3.6 |
| 4 | 1.97 | 3.8 |
| 5 | 2.47 | 4.1 |
| 6 | 2.96 | 4.4 |
| 7 | 3.45 | 4.6 |
| 8 | 3.94 | 4.9 |
| 9 | 4.44 | 5.1 |
| 10 | 4.93 | 5.2 |



| 1" | Flow | ΔP min. |
|--------|-------|-----------------|
| Preset | [GPM] | [psi] |
| 2 | 1.90 | 3.5 |
| 3 | 2.85 | 3.6 |
| 4 | 3.80 | 3.8 |
| 5 | 4.75 | 4.1 |
| 6 | 5.70 | 4.4 |
| 7 | 6.65 | 4.6 |
| 8 | 7.60 | 4.9 |
| 9 | 8.55 | 5.1 |
| 10 | 9.50 | 5.2 |

DZR Brass Pressure Independent Control Valve (PICV)



| 1 1/4" | Flow | ΔP min. |
|--------|-------|-----------------|
| Preset | [GPM] | [psi] |
| 2 | 3.17 | 3.5 |
| 3 | 4.76 | 3.6 |
| 4 | 6.34 | 3.8 |
| 5 | 7.93 | 4.1 |
| 6 | 9.51 | 4.4 |
| 7 | 11.1 | 4.6 |
| 8 | 12.7 | 4.9 |
| 9 | 14.3 | 5.1 |
| 10 | 15.9 | 5.2 |

