

### DZR Brass Pressure Independent Control Valve (PICV) with Isolation Ball Valve

#### Feature

DZR brass pressure independent control valve (PICV)  
 Max.  $\Delta P$  working pressure 60psi  
 Flow accuracy:  $\pm 5\%$  of maximum flow or  
 $\pm 10\%$  of the set flow, whichever is greater  
 FNPT, MNPT, and Solder tailpieces available  
 Isolation ball valve with union nut for ON/OFF operation  
 FNPT, Solder and EzPress version available for ball valve  
 Blow-out proof stem, adjustable packing  
 100% full stroke-independent of valve setting  
 M30x1.5 threads for linear actuator

Meet BAA requirement

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)

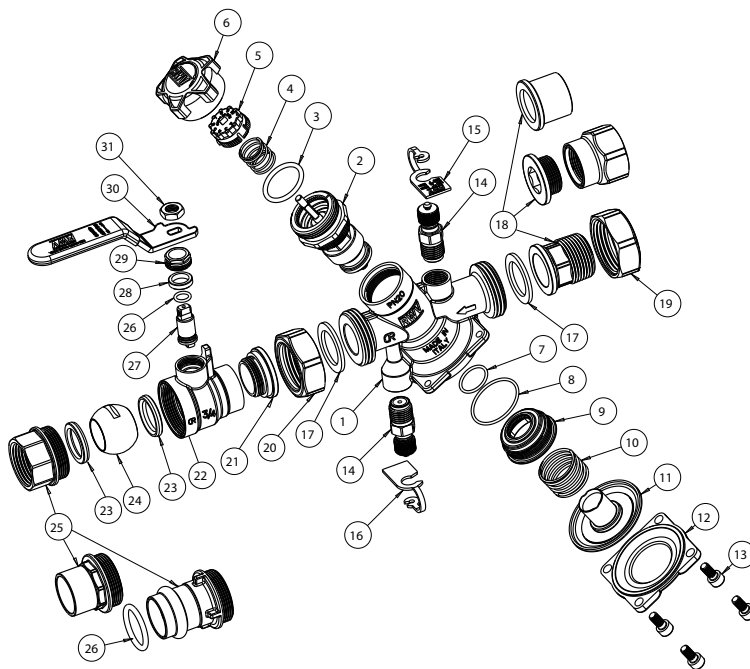


#### Material

	Part	Material	Specification
1	Body	DZR brass	UNS C35330
2	Flow reg. assembly	DZR brass <sup>1</sup>	UNS C35330
3	O-ring	EPDM Perox	NSF approved
4	Spring	Stainless steel	AISI 302
5	Dial	Polyamide	-
6	ON/OFF cap	Polyamide	-
7	Seat/cursor O-ring	EPDM Perox	-
8	Seat/body O-ring	EPDM Perox	NSF approved
9	Diaphragm seat	DZR brass	UNS C35330
10	Spring	Stainless steel	AISI 302
11	Diaphragm Assy <sup>2</sup>	EPDM/SS	EPDM/AISI 303
12	Base plate	DZR brass	UNS C35330
13	Allen screw	Stainless steel	AISI 304
14	Test point	DZR brass	UNS C35330
15	Tie (Red)	Polyamide	-
16	Tie (Blue)	Polyamide	-
17	Gasket	EPDM Perox	-
18	Tailpiece	DZR brass	UNS C35330
19	Union nut	Brass	ASTM B283 C37700
20	Union nut	Brass	ASTM B283 C37700
21	Joint for nut	DZR brass	UNS C35330
22	Body	DZR brass	UNS C35330
23	Seat	PTFE	-
24	Ball	DZR brass/Cr plated	UNS C35330
25	Fixed end	DZR brass	UNS C35330
26	O-ring	EPDM Perox	NSF approved
27	Stem	DZR brass	UNS C35330
28	Packing ring	PTFE	-
29	Packing nut	Brass	ASTM B283 C37700
30	Handle	Steel / Dc plated	
31	Nut	Steel / Zn plated	ASTM A36

<sup>1</sup> With stainless steel spring (AISI 302) and EPDM Perox gaskets

<sup>2</sup> In two pieces, with EPDM Perox diaphragm



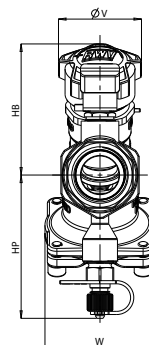
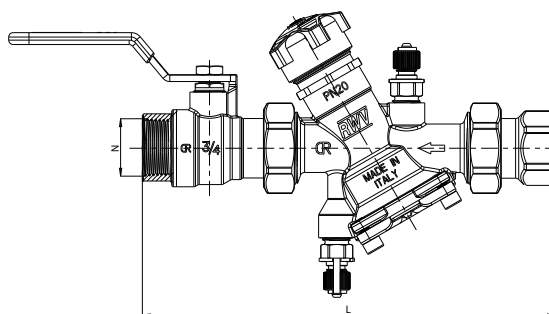
## DZR Brass Pressure Independent Control Valve (PICV) with Isolation Ball Valve

## Dimension

## 9707IBV-FF

Size	N	L [in]	HP [in]	HB [in]	W [in]	ØV [in]	Wt. [lb]	Flow [GPM]
L ½"	½ - 14NPT	6.60	2.40	2.44	1.7	1.6	1.65	0.12-0.62
½"	½ - 14NPT	6.60	2.40	2.44	1.7	1.6	1.65	0.48-2.38
H ½"	½ - 14NPT	6.73	2.67	2.44	2.0	1.6	2.15	0.99-4.93
¾"	¾ - 14NPT	7.39	2.67	2.44	2.0	1.6	2.39	0.99-4.93
H ¾"	¾ - 14NPT	7.94	2.93	2.96	2.4	1.6	3.45	1.90-9.51
1"	1 - 11.5NPT	9.13	2.93	2.96	2.4	1.6	4.10	1.90-9.51
H 1"	1 - 11.5NPT	9.69	3.65	2.99	3.2	1.6	6.16	3.18-15.9
1¼"	1¼ - 11.5 NPT	10.69	3.65	2.99	3.2	1.6	6.77	3.18-15.9

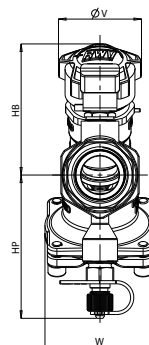
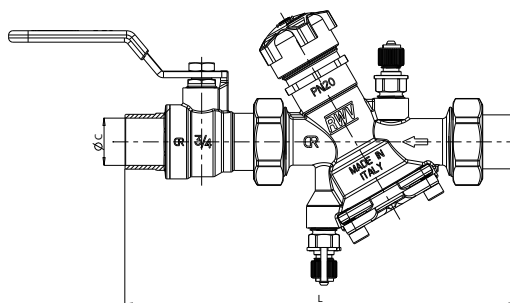
\* Option for mail tailpiece available



## 9707IBV-SS

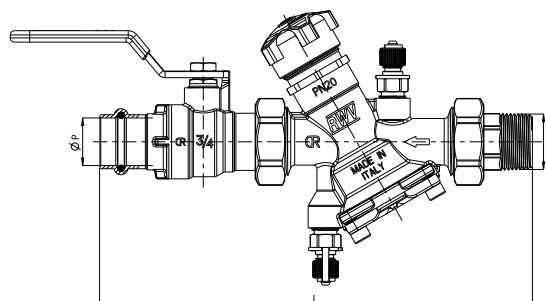
Size	ØC	L [in]	HP [in]	HB [in]	W [in]	ØV [in]	Wt. [lb]	Flow [GPM]
L ½"	0.627-0.631	6.04	2.40	2.44	1.7	1.6	1.51	0.12-0.62
½"	0.627-0.631	6.04	2.40	2.44	1.7	1.6	1.51	0.48-2.38
H ½"	0.627-0.631	6.57	2.67	2.44	2.0	1.6	2.05	0.99-4.93
¾"	0.877-0.881	7.29	2.67	2.44	2.0	1.6	2.24	0.99-4.93
H ¾"	0.877-0.881	8.19	2.93	2.96	2.4	1.6	3.37	1.90-9.51
1"	1.128-1.131	9.20	2.93	2.96	2.4	1.6	3.87	1.90-9.51
H 1"	1.128-1.131	10.19	3.65	2.99	3.2	1.6	6.08	3.18-15.9
1¼"	1.378-1.381	10.74	3.65	2.99	3.2	1.6	6.40	3.18-15.9

\* Option for mail tailpiece available



## 9707T-MP

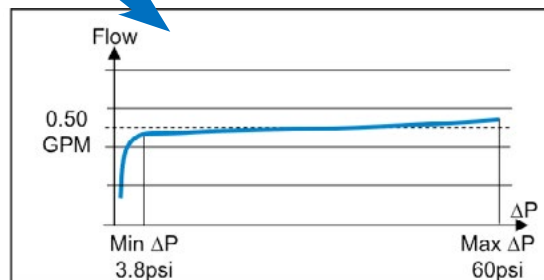
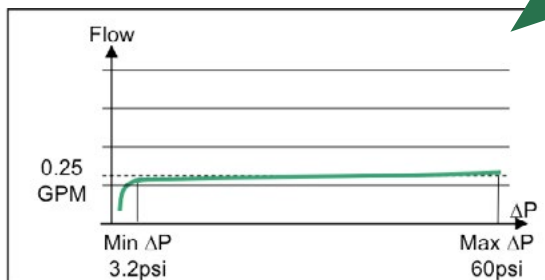
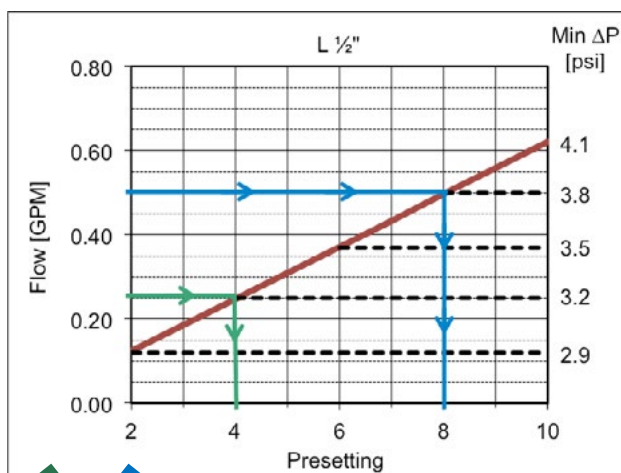
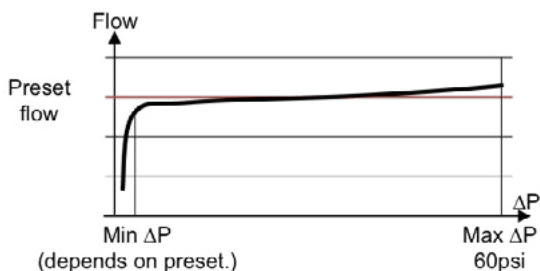
Size	N	ØP	L [in]	HP [in]	HB [in]	W [in]	ØV [in]	Wt. [lb]	Flow [GPM]
L ½"	½ - 14NPT	0.638	7.07	2.40	2.44	1.7	1.6	1.58	0.12-0.62
½"	½ - 14NPT	0.638	7.07	2.40	2.44	1.7	1.6	1.58	0.48-2.38
H ½"	½ - 14NPT	0.638	7.60	2.67	2.44	2.0	1.6	2.15	0.99-4.93
¾"	¾ - 14NPT	0.886	8.05	2.67	2.44	2.0	1.6	2.34	0.99-4.93
H ¾"	¾ - 14NPT	0.886	8.92	2.93	2.96	2.4	1.6	3.49	1.90-9.51
1"	1 - 11.5NPT	1.138	9.78	2.93	2.96	2.4	1.6	3.93	1.90-9.51
H 1"	1 - 11.5NPT	1.138	10.77	3.65	2.99	3.2	1.6	6.16	3.18-15.9
1¼"	1¼ - 11.5 NPT	1.390	11.22	3.65	2.99	3.2	1.6	6.53	3.18-15.9



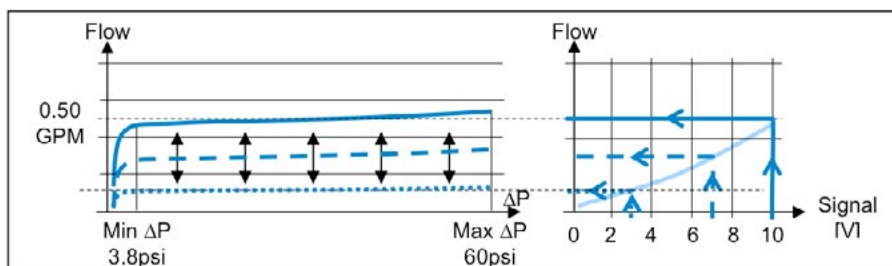
### DZR Brass Pressure Independent Control Valve (PICV) with Isolation Ball Valve

#### 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.

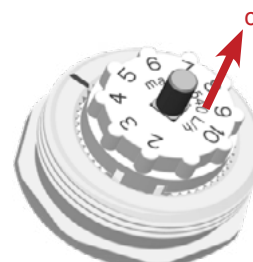
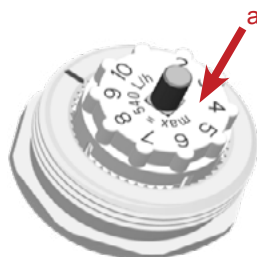


The flow regulating assembly determines the stroke length. When coupled with a modulating actuator, the control signal and the actual output flow is proportional (example for a RWV actuator with control signal 0-10V).  
In the above example, at 0.5 GPM a presetting of 8 is determined on a  $L \frac{1}{2}"$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

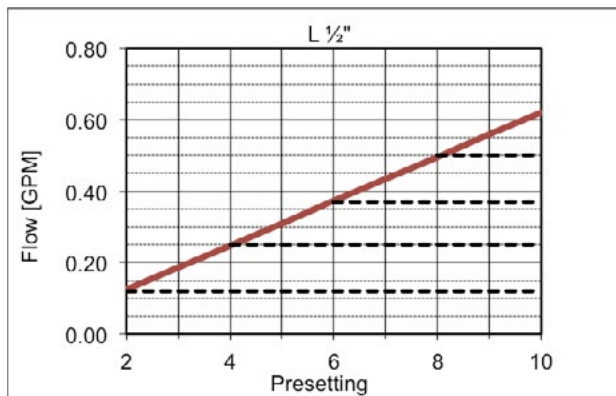


To set the flow rate:

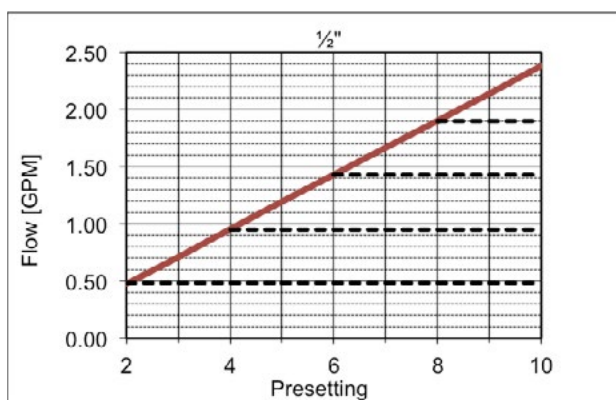
- push down the dial
- rotate the scale until the desired value aligns with the mark on the bonnet
- release the dial, this will automatically lock in the preset position



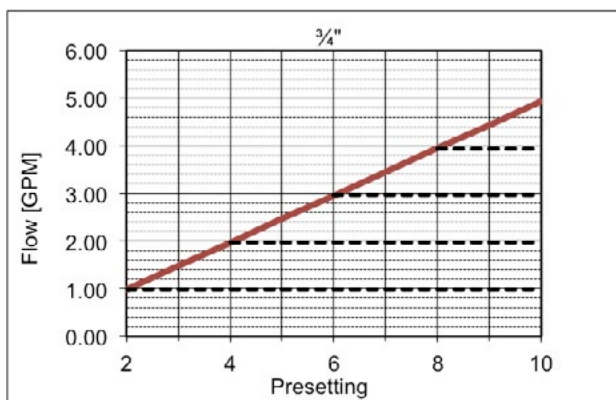
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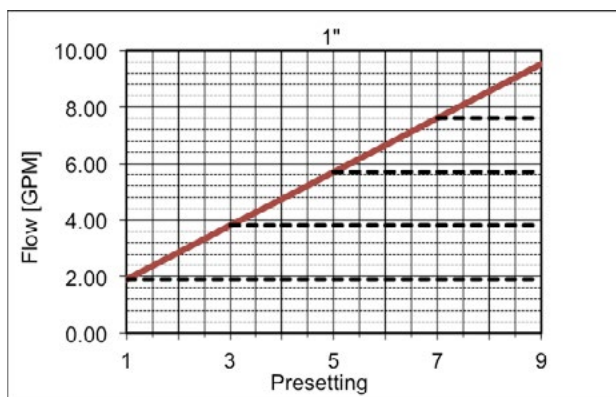
L 1/2"	Flow	ΔP min.
Preset	[GPM]	[psi]
2	0.12	2.9
3	0.19	3.0
4	0.25	3.2
5	0.31	3.3
6	0.37	3.5
7	0.43	3.6
8	0.50	3.8
9	0.56	3.9
10	0.62	4.1



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



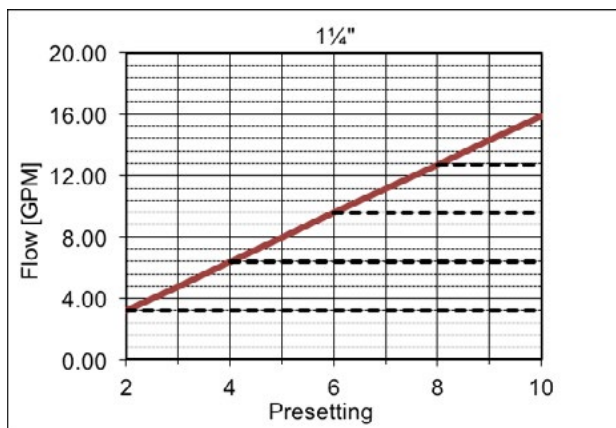
3/4"	Flow	ΔP min.
Preset	[GPM]	[psi]
2	0.99	3.5
3	1.48	3.6
4	1.97	3.8
5	2.47	4.1
6	2.96	4.4
7	3.45	4.6
8	3.94	4.9
9	4.44	5.1
10	4.93	5.2



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) with Isolation Ball Valve



1 1/4"	Flow	$\Delta P$ 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

