Flow Control

DZR Brass Pressure Independent Control Valve

A range of reliable DZR Brass Pressure Independent Control Valves developed for accurate and stable control of the water flow rate independent of circuit pressure changes.

Overview

Reliance Valves DZR Brass Pressure Independent Control Valve offers accurate and stable control of the flow rate of water determined by the operating spindle position, independent of the circuit pressure changes.

By controlling the differential pressure across the internal control device, the flow rate is kept constant. Utilising an internal flow setting device, the valve retains full stroke modulation.

Features & Benefits

- Can be used with actuator as a full pressure independent control valve or without actuation as a constant flow regulator
- Maximum operating differential pressure of 400kPa
- Full stroke modulation independent from the presetting Can be fitted on the flow and return (flow must be in direction of arrow on the body)
- Easy setting of the graduation scale
- Versions available with or without test points for easy differential pressure measurement
- Flow range between 0.008 l/s and 1.0 l/s
- DZR brass for increased strength and durability, suitable for installations in corrosive environments
- Threaded MxM for Unions
- FBSP (ISO 7-1) version

Code	Model	Size	Connection
PICV100001	Low Flow	DN15	MBSP
PICV100002	Standard Flow	DN15	MBSP
PICV100003	Standard Flow	DN20	MBSP
PICV100004	Standard Flow	DN25	MBSP
PICV100005	Standard Flow	DN32	MBSP
PICV100006	Low Flow - Test Points	DN15	MBSP
PICV100007	Standard Flow - Test Points	DN15	MBSP
PICV100008	Standard Flow - Test Points	DN20	MBSP
PICV100009	Standard Flow - Test Points	DN25	MBSP
PICV100010	Standard Flow - Test Points	DN32	MBSP
PICV100011	Low Flow - Test Points	DN15	FBSP
PICV100012	Standard Flow - Test Points	DN15	FBSP
PICV100013	Standard Flow - Test Points	DN20	FBSP
PICV100014	Standard Flow - Test Points	DN25	FBSP
PICV100015	Standard Flow - Test Points	DN32	FBSP

2 YEAR WARRANTY

Flow Control

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Working parameters

Maximum working pressure:	20 bar
Maximum working temperature:	130°C
Minimum working temperature:	-10°C
Working range:	20 bar / -10°C to 100°C 10 bar / 100°C to 130°C
Maximum differential pressure:	up to 400kPa

Flow Accuracy: +/- 5% of max flow or +/- 10% of set flow, whichever is greater.

Fluid: Water and mixtures of water/glycol up to 50%
Not suitable for steam, oil or aggressive fluids

The valve should be installed on straight pipe of the same nominal size as the valve
It is important that the flow direction matches the direction of the arrow indicated on the body of the valve

Application

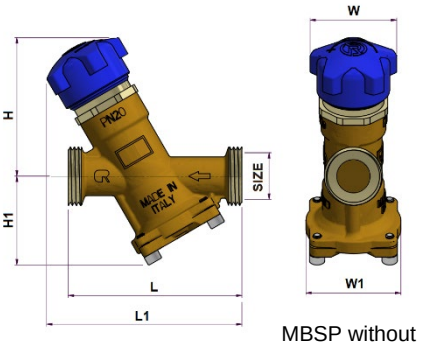
Heating
Chilled water
Not suitable for gas

Materials

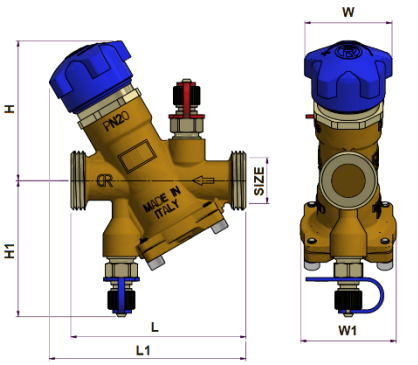
Body:	DZR brass
Stem:	DZR brass
Disc:	DZR brass
Springs:	Stainless Steel
Disc Gasket:	EPDM Perox
O Rings:	EPDM Perox
Handwheel:	Polyamide

Standards & Approvals

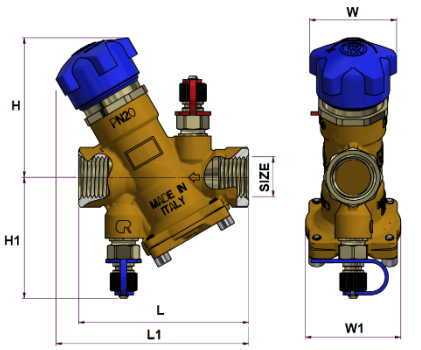
Exempt from CE marking



MBSP without test points



MBSP with test points



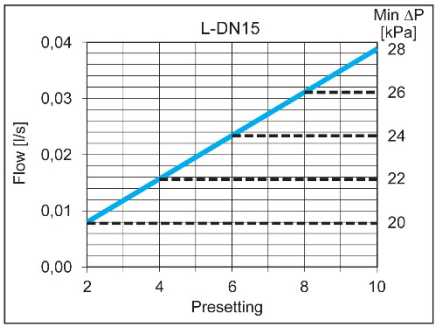
FBSP with test points

Product Code	Model	Test Points	Size	L	L1	H	H1	W	W1	Connection	Weight (g)
PICV100001	Low Flow	Without	DN15	77	90	62	39	40	43	MBSP	380
PICV100002	Standard Flow	Without	DN15	77	90	62	39	40	43	MBSP	380
PICV100003	Standard Flow	Without	DN20	92	110	62	47	40	52	MBSP	380
PICV100004	Standard Flow	Without	DN25	115	120	75	57	40	60	MBSP	1100
PICV100005	Standard Flow	Without	DN32	140	120	76	78	40	82	MBSP	1960
PICV100006	Low Flow	With	DN15	79	90	62	61	40	43	MBSP	420
PICV100007	Standard Flow	With	DN15	79	90	62	61	40	43	MBSP	420
PICV100008	Standard Flow	With	DN20	92	110	62	70	40	52	MBSP	600
PICV100009	Standard Flow	With	DN25	115	120	75	78	40	60	MBSP	1130
PICV100010	Standard Flow	With	DN32	140	130	76	92	40	82	MBSP	2015
PICV100011	Low Flow	With	DN15	77	90	62	54	40	43	FBSP	410
PICV100012	Standard Flow	With	DN15	77	90	62	54	40	43	FBSP	410
PICV100013	Standard Flow	With	DN20	94	110	62	57	40	52	FBSP	605
PICV100014	Standard Flow	With	DN25	133	120	75	90	40	60	FBSP	1059

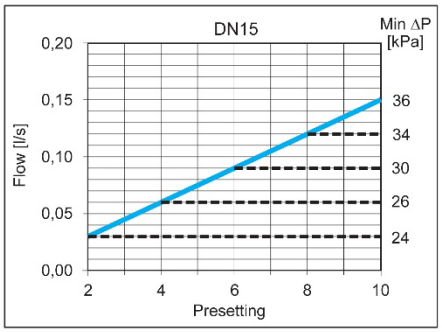
All dimensions in mm unless otherwise stated

Flow Measurement Chart and Settings

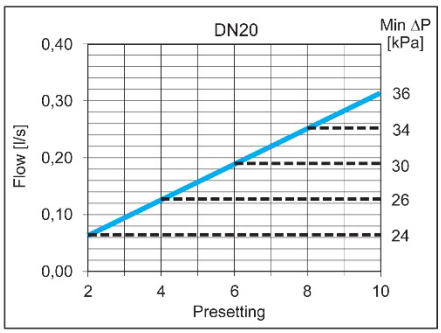
The test points (where fitted) should be used to ensure that the generated headloss is above the minimum working differential pressures as shown below



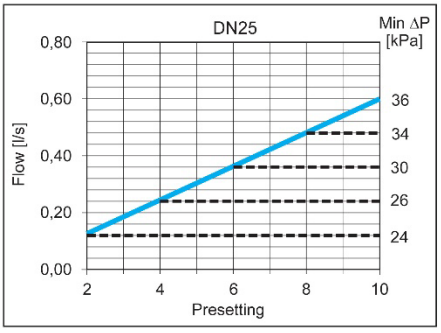
L-DN15 Preset	Flow [l/s]	Flow [l/h]	ΔPmin [kPa]
2	0,008	28	20
3	0,012	42	21
4	0,016	56	22
5	0,019	70	23
6	0,023	84	24
7	0,027	98	25
8	0,031	112	26
9	0,035	126	27
10	0,039	140	28



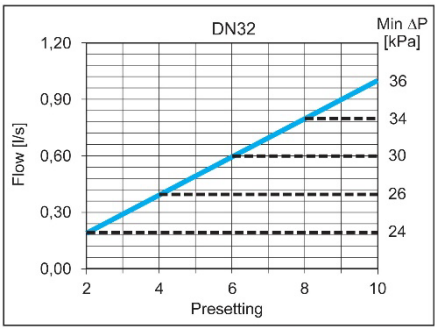
DN15 Preset	Flow [l/s]	Flow [l/h]	ΔPmin [kPa]
2	0,030	108	24
3	0,045	162	25
4	0,060	216	26
5	0,075	270	28
6	0,090	324	30
7	0,105	378	32
8	0,120	432	34
9	0,135	486	35
10	0,150	540	36



DN20 Preset	Flow [l/s]	Flow [l/h]	ΔPmin [kPa]
2	0,062	224	24
3	0,093	336	25
4	0,124	448	26
5	0,156	560	28
6	0,187	672	30
7	0,218	784	32
8	0,249	896	34
9	0,280	1008	35
10	0,311	1120	36



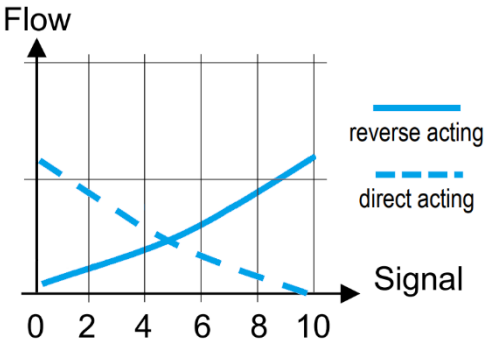
DN25 Preset	Flow [l/s]	Flow [l/h]	ΔPmin [kPa]
2	0,120	432	24
3	0,180	648	25
4	0,240	864	26
5	0,300	1080	28
6	0,360	1296	30
7	0,420	1512	32
8	0,480	1728	34
9	0,540	1944	35
10	0,600	2160	36

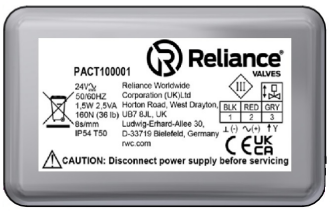


DN32 Preset	Flow [l/s]	Flow [l/h]	ΔPmin [kPa]
2	0,200	720	24
3	0,300	1080	25
4	0,400	1440	26
5	0,500	1800	28
6	0,600	2160	30
7	0,700	2520	32
8	0,800	2880	34
9	0,900	3240	35
10	1,000	3600	36

Actuation

The valve can be used with Reliance Valves Proportional or Modulating Actuators as a full pressure independent control valve.
Utilising an internal flow setting device, the valve retains full stroke modulation, independent from the presetting





PACT100001	24V Proportional (0-10V) Actuator	M30 x 1.5 Thread
PACT100002	24V Modulating (3 point) Actuator	M30 x 1.5 Thread

Accessories

TAIL400001	Union nut and tail (pair)	1/2" MBSP for DN15 MBSP PICV
TAIL400002	Union nut and tail (pair)	3/4" MBSP for DN20 MBSP PICV
TAIL400003	Union nut and tail (pair)	1" MBSP for DN25 MBSP PICV
TAIL400004	Union nut and tail (pair)	1 1/4" MBSP for DN32 MBSP PICV