DYN Series

Dynamic balancing valve

Technical Data Sheet

WattsWater.eu

WATTS®

Description

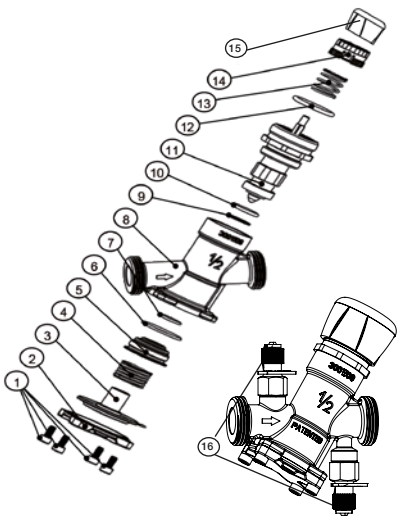
Dynamic balancing valve, DZR brass, works as pressure independent control valve.

DYN

Independently from presetting, flow modulation always use the whole valve stroke.
PN20. Equipped with regulation cartridge for Δp up to 400kPa.
Threaded M/M for union ends (ISO228/1). Threaded M30x1,5 connection, compliant with linear actuator **22C ,22CX, 22CX5, 26LC Series** and proportional EMUJC Series.
The valve 3/4“ can receive only actuators **22CX5 Series** or **EMUJC Series**.
Working conditions:
- Water: -10°÷130°C. T < 0°C only with anti-freezing fluids added to water, T >100°C only with anti-boiling fluids added to water
- Not suitable for gases group 1 and 2, liquids group 1 (Dir.2014/68/UE).

Part No.	Dn	Valve body	Flow l/s	Kvs	Weight (g)	Actuator ON/OFF	Proportional actuator
213112DYN	15	without testpoints	0,030-0,150	0,9	380	22C, 22CX, 26LC	EMUJC
213134DYN	20	without testpoints	0,062-0,311	1,86	570	22CX5	EMUJC
21311DYN	25	without testpoints	0,120-0,600	3,8	1100	22CX5	EMUJC
2131114DYN	32	without testpoints	0,200-1.000	6,4	1960	22CX5	EMUJC
213112DYN-P	15	with testpoints	0,030-0,150	0,9	420	22C, 22CX, 26LC	EMUJC
213134DYN-P	20	with testpoints	0,062-0,311	1,86	600	22CX5	EMUJC
21311DYN-P	25	with testpoints	0.120-0.600	3,8	1130	22CX5	EMUJC
2131114DYN-P	32	with testpoints	0.200-1.000	6,4	2015	22CX5	EMUJC

Technical features

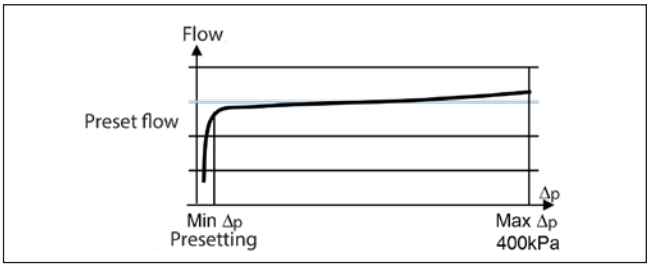


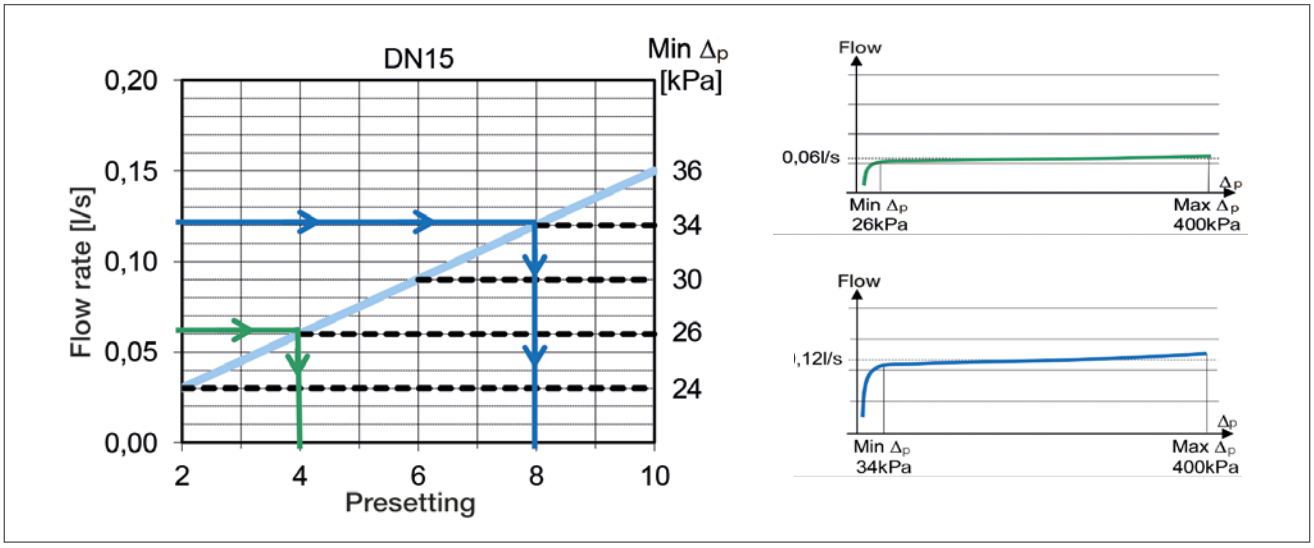
N.	Component	Material	Regulation
1	Allen screw	Stainless steel	AISI 304
2	Plug	DZR brass	EN12164 CW602N
3	Cursor[1]	Stainless steel	AISI 303
4	Spring	Stainless steel	AISI 302
5	Cursor seat	DZR brass	EN12164 CW602N
6	Seat/body O-Rng	EPDM Perox	-
7	Seat/cursor O-Ring E	PDM Perox	-
8	Body	DZR brass	EN12165 CW602N
9	Washer	DZR brass	EN12164 CW602N
10	Disc gasket	EPDM Perox	-
11	Flow reg. group	DZR brass[2]	EN12164 CW602N
12	O-ring	EPDM Perox	-
13	Spring	Stainless steel	AISI 302
14	Graduated scale	Polyamide	-
15	Flyer	ABS	-
16	Plug	DZR brass[3]	EN12164 CW602N

[1] In two pieces, with EPDM Perox diaphragm.
[2] With stainless steel spring (AISI 302) and EPDM Perox gaskets.
[3] Pressure plug with EPDM gaskets and polypropylene labels.

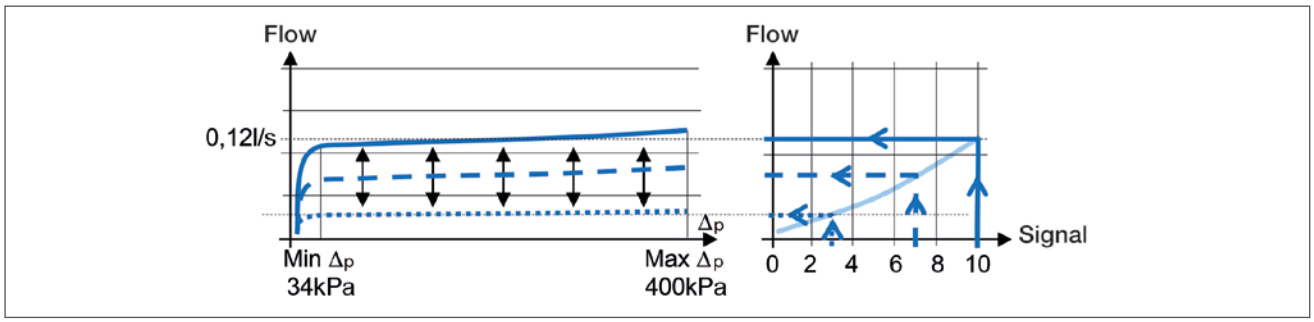
Presetting

According to dynamic balancing, presetting allows to define the maximum flow that will be kept constant, while the valve is used in fully opened condition in its working differential pressure range.
Presetting determines also the minimum working differential pressure of the valve.

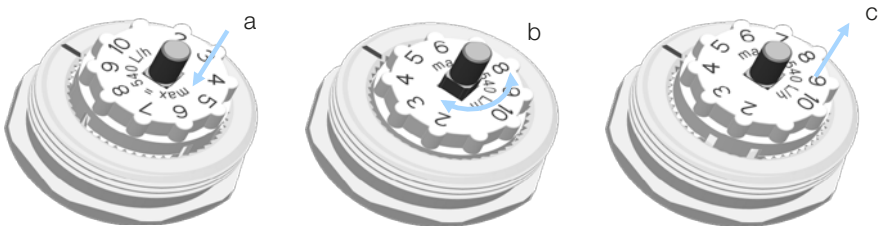




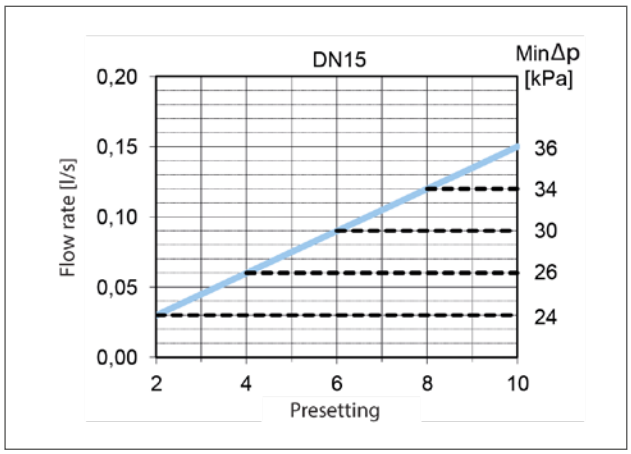
The flow regulating group has the authority on all its full linear stroke. By using a modulating actuator, this allows to maintain proportionality between the control signal and the actual output flow (example for a WATTS actuator with control signal 0-10V type EMUJC). In the example above, for a maximum flow of 0,12l/s a presetting of 8 is determined on a DN15 valve. The valve will start to operate at a Δp of 34kPa.



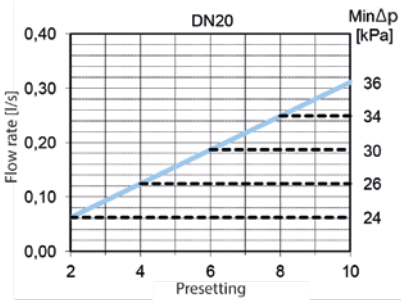
It's possible to preset the valve by operating directly on the graduated scale, without the need for any additional tool:
a) push down the graduated scale;
b) rotate the scale until the desired value aligns with the mark on the bonnet;
c) release the graduated scale, this will automatically lock in the preset position.

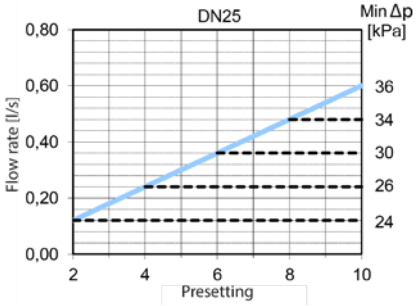


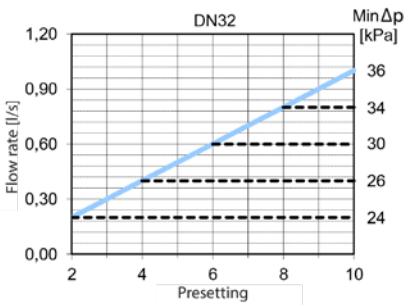
Charts



DN15 Preset.	Flow l/s	Flow l/h	Δp kPa	Kv
2	0,030	108	24	0,220
3	0,045	162	25	0,324
4	0,060	216	26	0,424
5	0,075	270	28	0,510
6	0,090	324	30	0,592
7	0,105	378	32	0,668
8	0,120	432	34	0,741
9	0,135	486	35	0,821
10	0,150	540	36	0,900







DN20 Preset	Flow l/s	Flow l/h	Δp kPa	kv
2	0,062	223	24	0,456
3	0,093	335	25	0,670
4	0,124	446	26	0,875
5	0,156	562	28	1,061
6	0,187	673	30	1,229
7	0,218	785	32	1,387
8	0,249	896	34	1,537
9	0,280	1008	35	1,704
10	0,311	1120	36	1,866

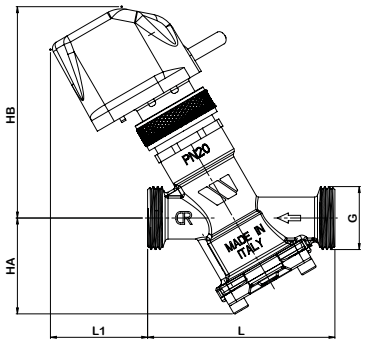
DN25 Preset	Flow l/s	Flow l/h	Δp kPa	kv
2	0,120	432	24	0,882
3	0,180	648	25	1,296
4	0,240	864	26	1,694
5	0,300	1080	28	2,041
6	0,360	1296	30	2,366
7	0,420	1512	32	2,673
8	0,480	1728	34	2,963
9	0,540	1944	35	3,286
10	0,600	2160	36	3,600

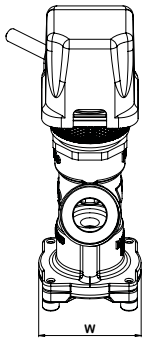
DN32 Preset	Flow l/s	Flow l/h	Δp kPa	kv
2	0,200	720	24	1,470
3	0,300	1080	25	2,160
4	0,400	1440	26	2,824
5	0,500	1800	28	3,402
6	0,600	2160	30	3,944
7	0,700	2520	32	4,455
8	0,800	2880	34	4,939
9	0,900	3240	35	5,477
10	1,000	3600	36	6,000

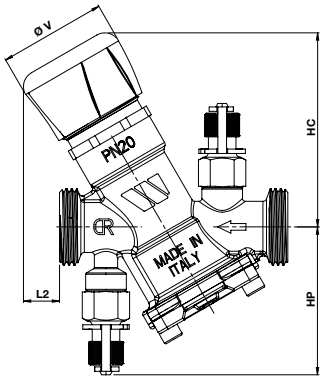
Installation

The valves WATTS **Series DYN**, can be installed in supply or return line. It's usual to install a filter in the supply line and the valve in the return line in order to get the valve with clean fluid. It is important to install the valve so that the flow direction matches the direction of the arrow indicated on the body of the valve. It's advisable to flush the line before its start or after eventual maintenance on the system. Valves with test points should be installed in such a way as to leave enough space around the test points to connect the manometer probes.

Overall dimensions (mm)







DN	G	L	L1	L2	HA	HB	HC	HP	ØV	W	Portata (l/s)
15	3/4"	78,6	41	12,5	38,9	87,8	66,8	60,9	36,8	43	0,030-0,15
20	1"	92	45	16,5	47,4	87,8	66,8	69,4	36,8	52	0,062-0,311
25	1 1/4"	115	27,8	0	56,2	99,7	79,2	73,3	36,8	62,32	0,12/0,6
32	1 1/2"	140	20	-7,3	77,8	98,3	77,8	91,6	36,8	81,5	0,2/1

Specification text

DYN Series

Dynamic Balancing Valve **DYN Series**, brand WATTS. Brass body DZR. PN20 nominal pressure. Equipped with regulation cartridge for Δp up to 400kPa. Threaded M / M Thread (ISO228 / 1). Threaded connection M30x1,5, to be coupled with linear actuators WATTS ON / OFF 22C, 22CX, 22CX5 (only version 3/4 "), 26LC and modulating actuators **EMUJC Series**.

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