

Series W-DPBV-16Q

W-DPBV-16Q-EN-202501

Differential Pressure Balancing Valve

Size: DN65-DN150

The Series W-DPBV differential pressure-balancing valve is designed to keep constant differential pressure between supply pipes and return pipes of a bypass, control valve or terminal equipment in air-conditioning or heating system. It avoids hydraulic disturbances resulting from variations in system differential pressure.

Features

- Self-acting differential pressure control, no external power needed
- Able to do on-site setting of differential pressure
- Wide controllable range of differential pressure
- Self-sealing measuring points to protect against leakage
- Equipped with a three-way measuring connector

Pressure-Temperature

- Maximum Pressure: PN16
- Temperature Range: -10 °C ~95 °C
- Maximum Working Differential Pressure: $\leq 400\text{KPa}$

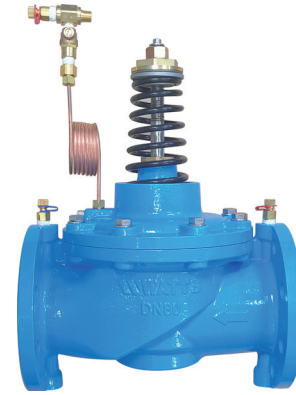
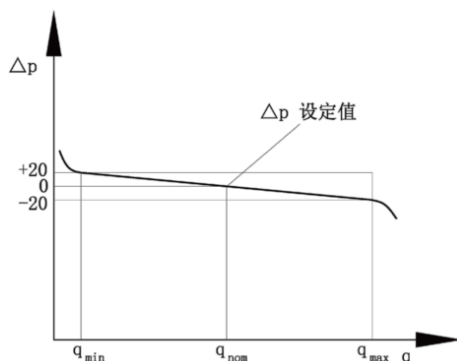
Material

No.	Component	Material
1	Body	Ductile Iron QT450-10
2	Core	Stainless Steel 304
3	Measuring Points	CW602N
4	Diaphragm	HNBR
5	Stem	Stainless Steel 304
6	Spring	Stainless Steel 304
7	Sealant	EPDM
8	Pressure Sealing	T2M

Product Model

Type	Size	ΔP kPa	Kvs	EDP
W-DPBV065S-16Q	DN65	20-80	80	61180028
W-DPBV080S-16Q	DN80	20-80	115	61180030
W-DPBV100S-16Q	DN100	20-80	150	61180032
W-DPBV125S-16Q	DN125	20-80	230	61180034
W-DPBV150S-16Q	DN150	20-80	360	61180036
W-DPBV065L-16Q	DN65	40-150	80	61180029
W-DPBV080L-16Q	DN80	40-150	115	61180031
W-DPBV100L-16Q	DN100	40-150	150	61180033
W-DPBV125L-16Q	DN125	40-150	230	61180035
W-DPBV150L-16Q	DN150	40-150	360	61180037

Differential pressure range



Specification

- Connection Standard: ISO 7005
- Working Medium: Cold And Hot Water/ethylene Glycol

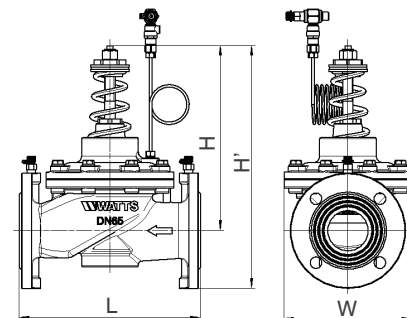
Working Principle

When the service pressure difference of the system pipe increases, relying on the pressure change of its high and low pressure, the dynamic differential pressure balancing valve's chambers re-balance the forces acting on both sides of the diaphragm, at the same time, it drives the valve stem to move, reduces the valve opening, absorbs the increased utility pressure difference, and ensures the constant pressure difference at the controlled side.

Model Description

W	WATTS	W-	DPBV	065	S-	16	Q
DPBV	Differential Pressure Balancing Valve						
Size							
065-DN65	080-DN80						
100-DN100	125-DN125						
150-DN150							
ΔP Control:							
S: 20-80kPa	L: 40-150kPa						
Nominal Pressure							
PN16							
Material	Ductile Iron						

Installation Dimensions

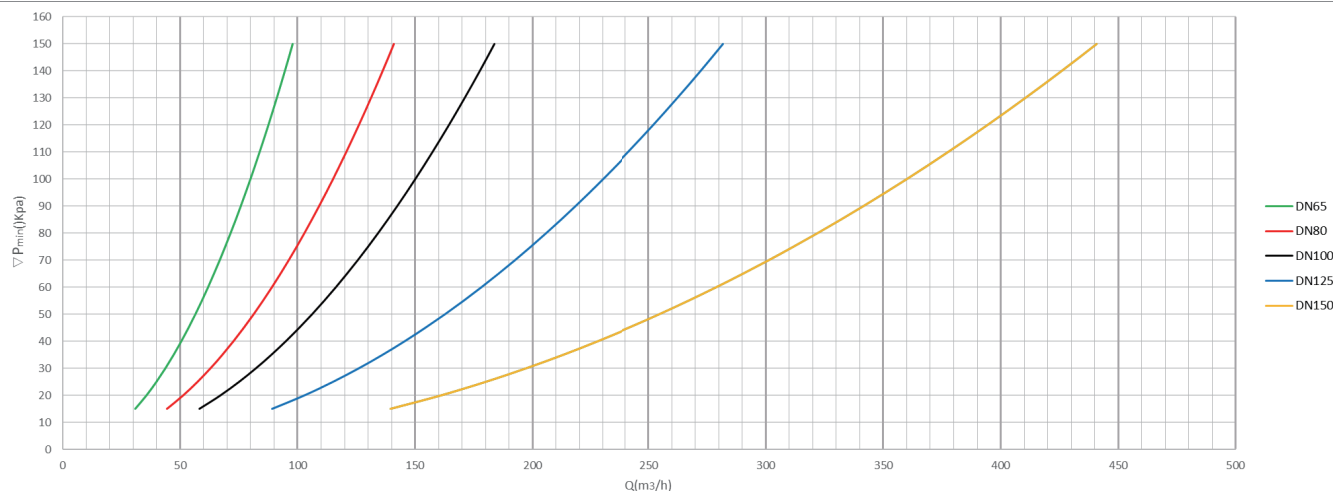


Size	L(mm)	H(mm)	H'(mm)	W(mm)	Weight(Kg)
DN65	290	312	405	205	22
DN80	310	311	411	225	26.5
DN100	350	366	476	255	36
DN125	400	427	552	293	54.5
DN150	480	523	666	371	64.5

Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



Characteristic Curve



△P Setting Instruction

Turns (mm)	DN65		DN80		DN100		DN125		DN150	
	20-80Kpa	40-150Kpa	20-80Kpa	40-150Kpa	20-80Kpa	40-150Kpa	20-80Kpa	40-150Kpa	20-80Kpa	40-150Kpa
0	18		19		19		22		24	42
2	21.8	40	22.7	40	22.4	35	25.1	36	26.8	47.0
4	25.6	47.1	26.4	47.1	25.7	41.6	28.2	42.4	29.5	52.1
6	29.5	54.3	30.1	54.1	29.1	48.2	31.3	48.9	32.3	57.1
8	33.3	61.4	33.8	61.2	32.5	54.8	34.4	55.3	35.0	62.2
10	37.1	68.5	37.5	68.3	35.8	61.4	37.5	61.8	37.8	67.2
12	40.9	75.6	41.2	75.3	39.2	68.1	40.6	68.2	40.6	72.3
14	44.8	82.8	44.9	82.4	42.6	74.7	43.7	74.7	43.3	77.3
16	48.6	89.9	48.6	89.4	45.9	81.3	46.8	81.1	46.1	82.4
18	52.4	97.0	52.4	96.5	49.3	87.9	49.9	87.6	48.9	87.4
20	56.2	104.1	56.1	103.6	52.7	94.5	53.1	94.0	51.6	92.5
22	60.1	111.3	59.8	110.6	56.1	101.1	56.2	100.4	54.4	97.5
24	63.9	118.4	63.5	117.7	59.4	107.7	59.3	106.9	57.1	102.6
26	67.7	125.5	67.2	124.8	62.8	114.3	62.4	113.3	59.9	107.6
28	71.5	132.6	70.9	131.8	66.2	120.9	65.5	119.8	62.7	112.7
30	75.4	139.8	74.6	138.9	69.5	127.6	68.6	126.2	65.4	117.7
32	79.2	146.9	78.3	145.9	72.9	134.2	71.7	132.7	68.2	122.8
34	83	154	82	153	76.3	140.8	74.8	139.1	71.0	127.8
36					79.6	147.4	77.9	145.6	73.7	132.9
38					83	154	81	152	76.5	137.9
40									79.2	143.0
42									82	148

Installation Instructions

The dynamic differential pressure balancing valve can be used alone or in combination with the static balancing valve. The dynamic differential pressure balancing valve is always installed on the return pipe. When it is used with the static balance valve, the static balancing valve is installed on supply pipe. Please see as follows.

- ①—DPBV
- ②—STBV
- ③—ECV

