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CATALOG KỸ THUẬT · JOHNSON CONTROLS

Van cân bằng chênh áp VPPN

DN25–DN250 · PN16 / PN25

VPPN Johnson Controls – van cân bằng chênh áp DN25–DN250, PN16/PN25, ΔPL cài đặt 5–160 kPa bằng tay quay, giữ chênh áp ổn định cho nhánh nước lạnh.

Mã: VPPN · Hãng: Johnson Controls · Hotline: 093 797 2339

dlk.com.vn/vppn-johnson-controls-van-can-bang-chenh-ap.html



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Balancing Valve

VPPN Series Differential Pressure Balancing Valves

Overview

DN25...250, PN16/PN25

VPPN series differential pressure balancing valve is designed to control constant pressure differential on both ends of the equipment to improve the control stability and accuracy, lower noise level of control valve and also to make balancing commissioning easy.



Features

- Pressure port integrated inside the low-pressure chamber, no risk of clash or damage on site
- Pressure port on high-pressure chamber equipped with lock valve
- Integrated design of balancing diaphragm, enabling higher reliability
- ΔPL is set by hand wheel with convenient installation

Order Information

Table1: PN16 Pressure Rating

△PL			
Model	Size		△P Range
	DN	Inch.	kPa
VPP025LN-C	25	1"	5~30
VPP032LN-C	32	1-1/4"	5~30
VPP040LN-C	40	1-1/2"	5~30
VPP050LN-C	50	2"	5~30
VPP065LN-C	65	2-1/2"	20~80
VPP080LN-C	80	3"	20~80
VPP100LN-C	100	4"	20~80
VPP125LN-C	125	5"	20~80
VPP150LN-C	150	6"	20~80
VPP200LN-C	200	8"	20~80
VPP250LN-C	250	10"	20~80

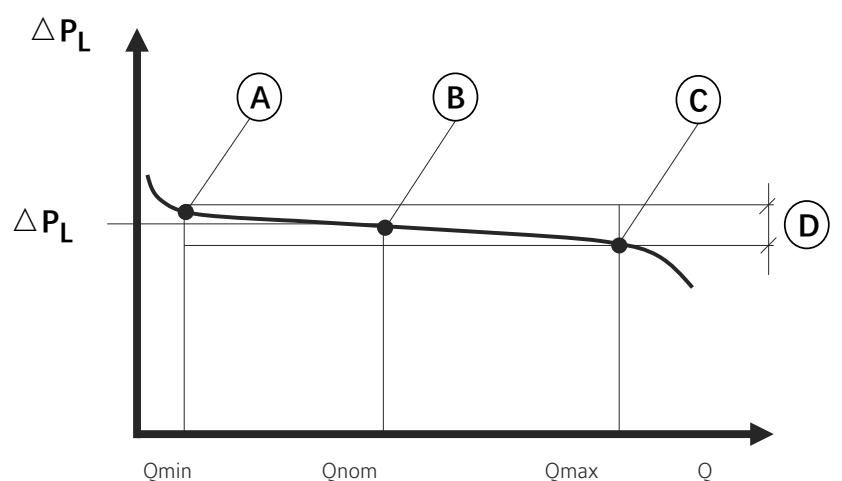
△PL			
Model	Size		△P Range
	DN	Inch.	kPa
VPP025HN-C	25	1"	25~70
VPP032HN-C	32	1-1/4"	25~70
VPP040HN-C	40	1-1/2"	25~70
VPP050HN-C	50	2"	25~70
VPP065HN-C	65	2-1/2"	40~160
VPP080HN-C	80	3"	40~160
VPP100HN-C	100	4"	40~160
VPP125HN-C	125	5"	40~160
VPP150HN-C	150	6"	40~160
VPP200HN-C	200	8"	40~160
VPP250HN-C	250	10"	40~160

Table 2: PN25 Pressure Rating

△PL			
Model	Size		△P Range
	DN	Inch.	kPa
VPP025LN-25-C	25	1"	5-30
VPP032LN-25-C	32	1-1/4"	5-30
VPP040LN-25-C	40	1-1/2"	5-30
VPP050LN-25-C	50	2"	5-30
VPP065LN-25-C	65	2-1/2"	20-80
VPP080LN-25-C	80	3"	20-80
VPP100LN-25-C	100	4"	20-80
VPP125LN-25-C	125	5"	20-80
VPP150LN-25-C	150	6"	20-80
VPP200LN-25-C	200	8"	20-80
VPP250LN-25-C	250	10"	20-80

△PL			
Model	Size		△P Range
	DN	Inch.	kPa
VPP025HN-25-C	25	1"	25~70
VPP032HN-25-C	32	1-1/4"	25~70
VPP040HN-25-C	40	1-1/2"	25~70
VPP050HN-25-C	50	2"	25~70
VPP065HN-25-C	65	2-1/2"	40~160
VPP080HN-25-C	80	3"	40~160
VPP100HN-25-C	100	4"	40~160
VPP125HN-25-C	125	5"	40~160
VPP150HN-25-C	150	6"	40~160
VPP200HN-25-C	200	8"	40~160
VPP250HN-25-C	250	10"	40~160

Operation Range



A. Kv.min B. Kv.nom C. Kv.max D. $\Delta PL \leq 40 \text{ kPa} \pm 25\%$; $\Delta PL > 40 \text{ kPa} \pm 20\%$

1. Select the required ΔPL in below table
2. Select the valve size which is the same as pipeline
3. Confirm the flow rate is below q_{max} , if not, please select the larger size or larger ΔPL

Balancing Valve

ΔP : 5-30kPa	ΔPL (kPa)				
	5	15	20	25	30
Size	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}
DN25	1.38	2.25	2.74	3.24	3.53
DN32	2.53	4.06	4.86	5.42	6.14
DN40	4.03	7.23	8.42	9.14	10.23
DN50	6.32	11.42	13.16	14.86	16.23

ΔP : 25-70kPa	ΔPL (kPa)					
	25	30	40	50	60	70
Size	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}
DN25	3.27	3.57	4.18	4.72	5.12	5.52
DN32	5.46	6.24	7.16	8.06	8.93	9.45
DN40	9.75	10.35	12.19	13.86	14.86	15.87
DN50	14.86	16.32	19.13	20.96	22.86	24.83

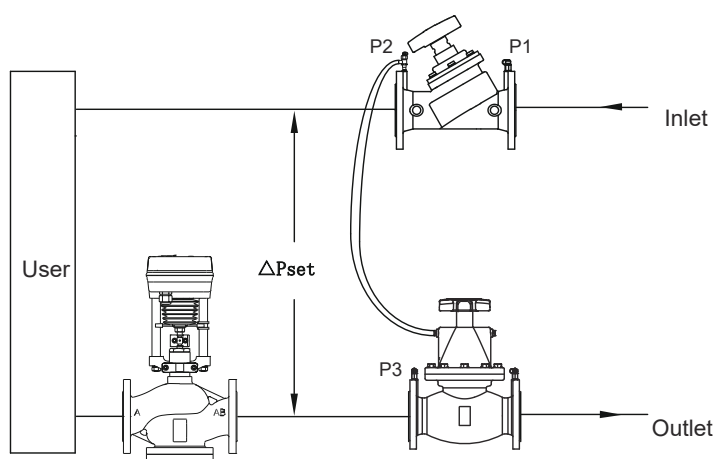
ΔP : 20-80kPa	ΔPL (kPa)						
	20	30	40	50	60	70	80
Size	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}
DN65	26.4	31.5	37.6	37.2	41.6	45.3	48.4
DN80	32.6	39.6	44.2	48.2	55.2	58.3	61.2
DN100	67.2	73.6	77.3	82.3	86.3	90.4	93.5
DN125	88.6	96.4	102.3	114.5	129.5	131.5	140.2
DN150	108.6	123.5	131.2	142.3	151.3	162.3	170.3
DN200	90.5	114.17	144.7	170.2	191.3	221.6	236.6
DN250	134.2	169.3	214.5	252.3	283.6	328.6	350.8

ΔP : 40-160kPa	ΔPL (kPa)												
	40	50	60	70	80	90	100	110	120	130	140	150	160
Size	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}	Q _{max}
DN65	34.2	38.4	42.3	46.4	49.3	52.3	56.4	69.3	64.5	66.8	68.3	70.2	72.3
DN80	45.2	50.2	53.2	57.3	61.4	64.3	70.3	73.2	76.2	78.3	82.3	85.2	88.2
DN100	76.8	86.4	87.4	93.2	98.6	107.5	114.7	125.6	128.6	137.6	143.2	150.2	156.3
DN125	106.3	116.3	127.6	136.4	143.5	152.6	161.3	168.3	174.3	180.3	188.6	196.3	202.5
DN150	134.6	146.3	188.4	182.3	192.5	208.6	214.6	220.3	228.6	236.4	242.3	248.6	254.3
DN200	152.6	181.1	210.8	226.9	238.3	261.3	279.4	295.7	305.6	315.9	328.1	338.8	345.5
DN250	226.3	268.5	312.6	336.4	353.4	387.5	414.3	438.4	453.2	468.4	486.5	502.4	512.3

Technical Features

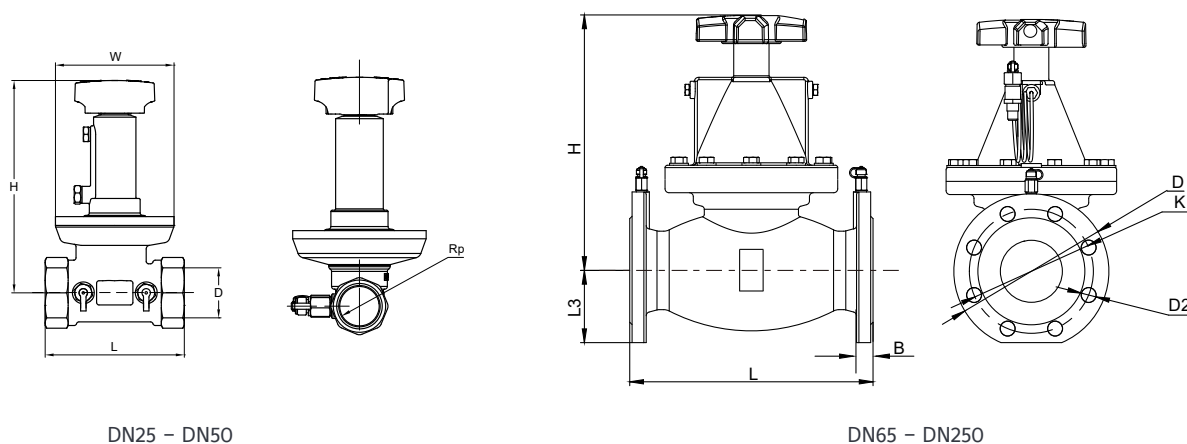
• Pressure Rating: PN16 or PN25	Valve Body: Brass HPB59-1 (DN25 ~ DN50) Ductile Iron QT450-10 (DN65 ~ DN250)
• Medium: Regulation of hot / chilled water with glycol up to max. 50% vol. in HVAC system	
• Medium temperature: -10 ~ 120 °C	Stem: Brass HPB59-1 (DN25 ~ DN50)
• Environment temperature: 0 ~ 65 °C, ≤ 95%RH	Stainless steel S304 (DN65 ~ N250)
• Connection: DN25-DN50: Threaded connection ISO7-1 Rp DN65-DN150: Flanged connection ISO7005-2	Diaphragm: EPDM

Installation Diagram



Attention: VPPN shall be installed on return pipe with correct flow direction.

Dimension (mm)



Balancing Valve

PN16

Size		Dimension (mm)								Weight
mm	inch	B	D	D2	K	W	H	L	L3	kg
25	1		/	/	/	98	168	100	/	2.1
32	1-1/4		/	/	/	98	172	102	/	2.3
40	1-1/2		/	/	/	98	176	115	/	2.7
50	2		/	/	/	98	182	125	/	3.1
65	2-1/2	19	Φ185	4-Φ19	Φ145	/	299	290	86	24
80	3	19	Φ200	8-Φ19	Φ160	/	325.5	310	92	31
100	4	19	Φ220	8-Φ19	Φ180	/	358	350	102	42
125	5	19	Φ250	8-Φ19	Φ210	/	394	400	116	58
150	6	19	Φ285	8-Φ23	Φ240	/	425	480	132	83
200	8	20	Φ340	12-Φ23	Φ295	/	498	500	162	113
250	10	22	Φ405	12-Φ28	Φ355	/	555	600	195	162

PN25

Size		Dimension (mm)								Weight
mm	inch	B	D	D2	K	W	H	L	L3	kg
25	1		/	/	/	98	168	100	/	2.1
32	1-1/4		/	/	/	98	172	102	/	2.3
40	1-1/2		/	/	/	98	176	115	/	2.7
50	2		/	/	/	98	182	125	/	3.1
65	2-1/2	19	Φ185	8-Φ19	Φ145	/	299	290	86	24
80	3	19	Φ220	8-Φ19	Φ160	/	325.5	310	92	31
100	4	19	Φ235	8-Φ23	Φ190	/	358	350	102	42
125	5	19	Φ270	8-Φ28	Φ220	/	394	400	116	58
150	6	19	Φ300	8-Φ28	Φ250	/	425	480	132	83
200	8	20	Φ360	12-Φ28	Φ310	/	498	500	162	113
250	10	24.5	Φ425	12-Φ31	Φ370	/	555	600	195	162



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