Pressure Independent Valves

VP1000

DN15...32, PN25
DN40...65, PN16

VP1000 Pressure Independent Control Valve is a combination of a differential pressure regulator and a regulating valve for flow adjustment.

VP1000 Valve allows to adjust the flow rate also in case of partial load of the system and it always ensures a stable adjustment of the supply connected to it. The differential pressure regulator corrects any differential pressure variation. This leads to a considerable reduction in temperature variations and adjustment movements and to the extension of the life of the moving devices connected to it.

VP1000 Valves offer a remarkable adjustment flexibility.
In combination with Johnson controls actuators they can be set to a specific flow rate value and they allow precise modulating control.
The valves always guarantee a suitable flow rate, therefore avoiding too high energy consumption.

Since VP1000 Valve performs the functions of two valves (balancing and adjustment), the installation costs are considerably reduced.
The automatic flow rate limitation eliminates system adjustment costs.
Since adjustment is very easy to perform, design flow rates can be modified at any time and at low costs.

Since it is not necessary to adjust the valve after its installation, the valve can work immediately after it has been assembled, for example, on the floors where works are already finished.

In order to adjust the flow rate, just set the selected value using the adjustment knob.

Since flow rate is the only parameter to be considered, choosing the suitable valve is easy and fast. VP1000 Valve maximum adjustment matches the maximum flow rate allowed by the pipe size, on the basis of the values established by international standards.

Features

- Kvs calculation in not necessary
- Valve authority calculation is not required
- Specific devices or knowledge are not necessary
- Compact design that allows installing the valve also in small spaces such as fan-coils or narrow supply spaces
- Flow rate adjustment without disassembling the actuators

VP1000 Ball Valve

VP1000 Valve

Ordering Codes

VP1	0	X	X	XX	
				AA	= 150 l/h (DN15)
				AE	= 600 l/h (DN15)
				AG	= 780 l/h (DN15)
				AJ	= 1000 l/h (DN20)
				AN	= 1500 l/h (DN20)
				AU	= 2200 l/h (DN25)
				AW	= 2700 l/h (DN25 or DN32)
				AY	= 3000 l/h (DN32)
				BC	= 9000 l/h (DN40)
				BD	= 12000 l/h (DN50)
				BF	= 18000 l/h (DN50 or DN65)
			A		= ½ " (DN15)
			B		= ¾ " (DN20)
			C		= 1" (DN25)
			D		= 1" ¼ (DN32)
			E		= 1" ½ (DN50)
			F		= 2" (DN50)
			G		= 2" ½ (DN50)
		0			= Pressure Port Included*
		1			= No Pressure Port Included*
	0				= Thread BSPP

Note

* On the DN50 Ball Valve, the pressure port are always included despite the Codes VP101xxx

Pressure Independent Valves
VP1000

Technical Specifications for Axial Models

VP1000 Axial DN15 - DN20

	VP10xAAA	VP10xAAE	VP10xAAG	VP10xBAJ	VP10xBAN
Flow rate max.	150 l/h - 0,042 l/s	600 l/h - 0,167 l/s	780 l/h - 0,217 l/s	1000 l/h - 0,278 l/s	1500 l/h - 0,417 l/s
Accuracy 0 ÷ 1 bar	± 5%				
Start-up max.	20 kPa - 0,20 bar			25 kPa - 0,25 bar	
ΔP max.	400 kPa - 4 bar				
Leakage	Class IV IEC 60534-4				
Temperature	-10 ÷ 120 °C				
Working pressure max.	2500 kPa - 25 Bar				
Fittings	Female BSPP Rp ½" EN 10226-1			Female BSPP Rp ¾" EN 10226-1	

VP1000 Axial DN25 - DN32

	VP100CAU	VP100CAW	VP100DAW	VP100DAY
Flow rate max.	2200 l/h - 0,611 l/s	2700 l/h - 0,750 l/s		3000 l/h - 0,833 l/s
Accuracy 0 ÷ 1 bar	± 5%			
Start-up max.	25 kPa - 0,25 bar			
ΔP max.	400 kPa - 4 bar			
Leakage	0,01% of Flow Rate			
Temperature	-10 ÷ 120 °C			
Working pressure max.	2500 kPa - 25 Bar			
Fittings	Female BSPP Rc 1" EN 10226-1		Female BSPP Rc 1 ¼" EN 10226-1	

Assembly Codes

Following actuators are available
VA-707x ON/OFF Thermal *;
VA-709x Thermal 0...10 VDC *;
VA-748x Floating and Proportional Electric.

Note
*** :** (VA-707x and VA-709x are suitable for valves DN15 and DN20 only)

Pressure Independent Valves
VP1000

Technical Specifications for Ball Valves Models

VP1000 Ball Valves DN40 - DN65

	VP101EBC	VP101FBD	VP101FBF	VP101GBF
Flow rate max.	9000 l/h - 2,5 l/s	12000 l/h - 3,33 l/s	18000 l/h - 5,00 l/s	
Accuracy 0 ÷ 1 bar	± 5%			
Start-up max.	25 kPa - 0,25 bar	30 kPa - 0,30 bar	35 kPa - 0,35 bar	
ΔP max.	400 kPa - 4 bar			
Leakage	Class VI IEC 60534-4			
Temperature	-10 ÷ 120 °C			
Working pressure max.	1600 kPa - 16 bar			
Fittings	Female BSPP Rc 1 ½" EN 10226-1	Female BSPP Rc 2" EN 10226-1		Male BSPP Rc 2 ½" EN 10226-1

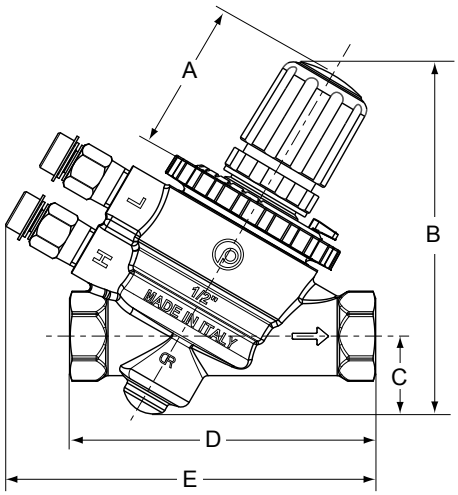
Assembly Codes

Valves Codes	Description
+5A8GGA *	M9108-GGA-5, 8 Nm Non Spring Return Actuator, 24 V AC/DC, Proportional Control
+5A8GGC *	M9108-GGA-5, 8 Nm Non Spring Return Actuator, 24 V AC/DC, Proportional Control, two auxiliary switches
+538GGA	VA9208-GGA-1, 8 Nm Spring Return Actuator, 24 V AC/DC, Proportional Control, assembled in Spring Open Valve configuration.
+538GGC	VA9208-GGA-1, 8 Nm Spring Return Actuator, 24 V AC/DC, Proportional Control, two auxiliary switches, assembled in Spring Open Valve configuration.
+558GGA	VA9208-GGA-1, 8 Nm Spring Return Actuator, 24 V AC/DC, Proportional Control, assembled in Spring Close Valve configuration.
+558GGC	VA9208-GGA-1, 8 Nm Spring Return Actuator, 24 V AC/DC, Proportional Control, two auxiliary switches, assembled in Spring Close Valve configuration.

Note
*** :** The M9000-525-5 linkage is part of the assembly.

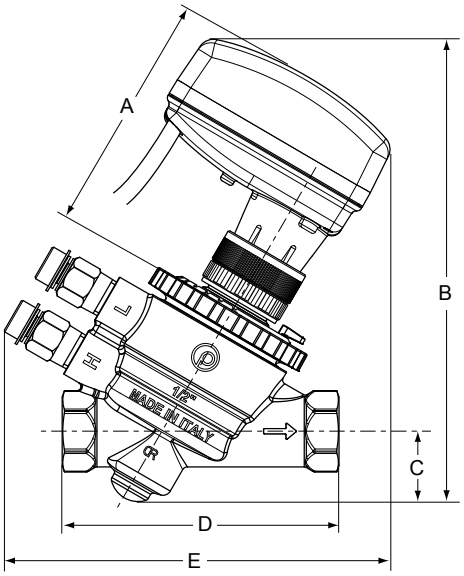
Pressure Independent Valves
VP1000

Dimensional data DN15 - DN20 (in mm)



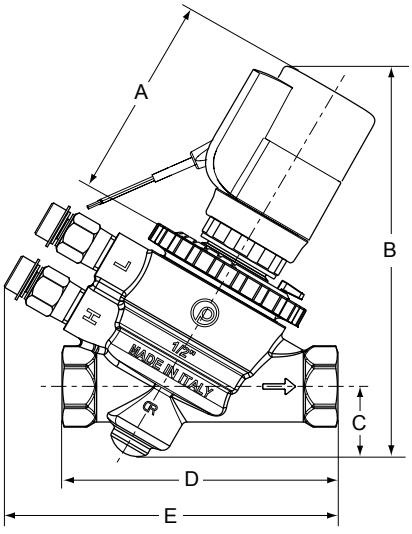
Manual Valve

Size	A	B	C	D	E
DN15	47	115	25	99	120
DN20	47	115	25	108	120



Valve with Motorized Actuator VA-748x

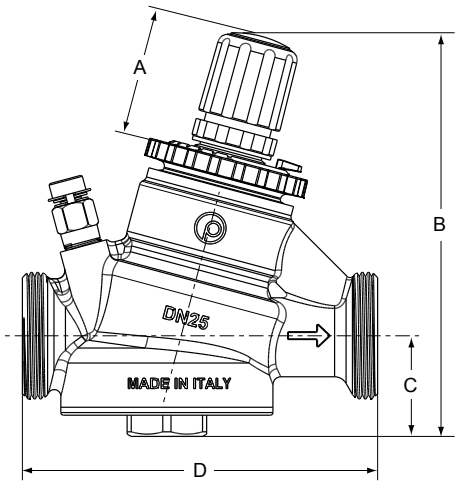
Size	A	B	C	D	E
DN15	80	166	25	99	130
DN20	80	166	25	108	130



Valve with Thermal Actuator VA-707x / VA-709x

Size	A	B	C	D	E
DN15	75	143	25	99	127
DN20	75	143	25	108	127

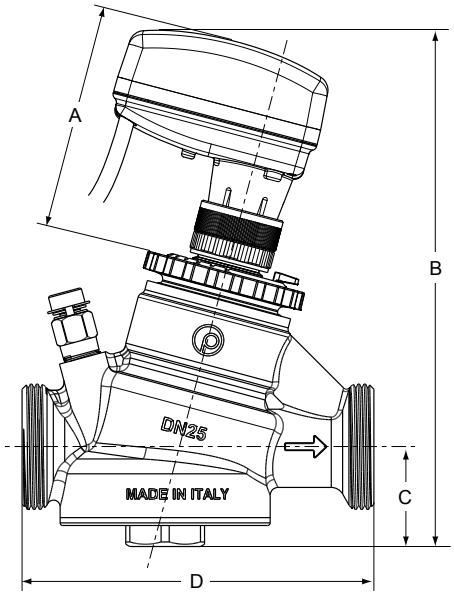
Dimensional data DN25 - DN32 (in mm)



Manual Valve

Size	A	B	C	D *
DN25	47	152	38	134
DN32	47	152	38	134

* Dimensional data without fittings

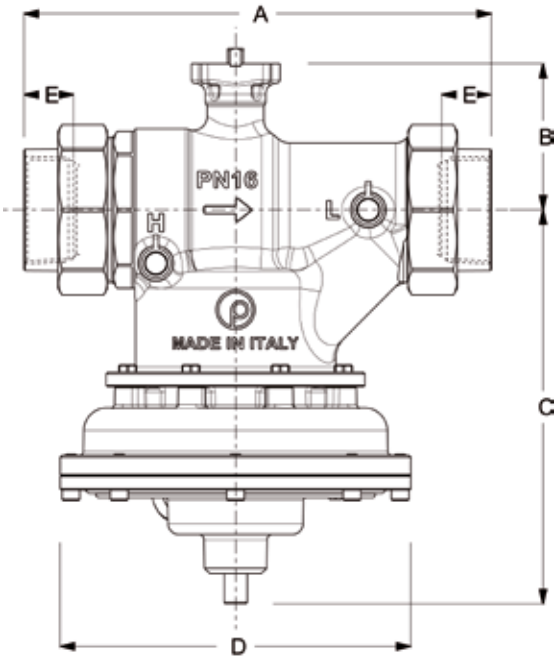


Valve with Motorized Actuator VA-748x

Size	A	B	C	D *
DN25	80	193	38	134
DN32	80	193	38	134

* Dimensional data without fittings

Dimensional data DN40 - DN65 (in mm)



Manual Valve

Art.	A	B	C	D	E
VP101EBC	257	82	221	198	23.6
VP101FBD	264	82	221	198	28
VP101FBF	264	82	221	198	28
VP101GBF	---	82	221	198	---

Pressure Independent Valves

VPA

DN50...150, PN16

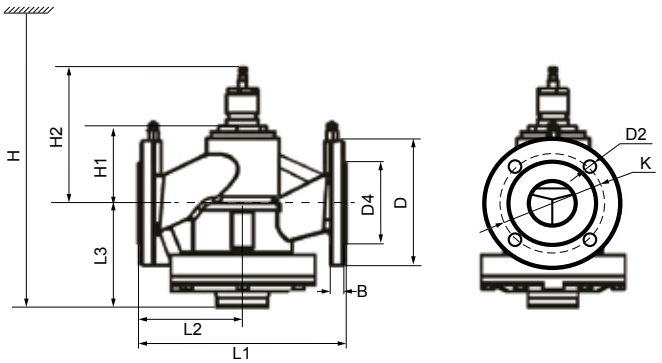
VPA Pressure Independent Control Valve is a combination of a differential pressure regulator and a regulating valve for flow adjustment.

VPA Valves offer a remarkable adjustment flexibility. In combination with VAP actuators they can be set to a specific flow rate value and they allow precise modulating control. The valves always guarantee a suitable flow rate, therefore avoiding too high energy consumption.

Since VPA Valve performs the functions of two valves (balancing and adjustment), the installation costs are considerably reduced.
The automatic flow rate limitation eliminates system adjustment costs.
Since adjustment is very easy to perform, design flow rates can be modified at any time and at low costs.

Features

- The max. flow of VPA valve could be set according to the requirement. The flow can be set easily by the actuator potentiometer.
- The built-in balancing tube has more compact structure and can avoid damages during shipping and installation compared to the external tube.
- Valve body is made of ductile iron material, with anticorrosion treatment on the surface
- High close-off pressure with very low leakage rate
- Linear actuator with high control accuracy provides the equal percentage flow curve



Dimensions in mm

DN	B	D	D2	D4	K	L1	L2	L3	H1	H	Weight kg
50	20	Ø165	4-Ø18	Ø99	Ø125	230	115	136	95	461	19
65	20	Ø185	4-Ø18	Ø118	Ø145	290	145	155	115	500	28
80	20	Ø200	8-Ø18	Ø132	Ø160	310	155	167	148	698	36
100	22	Ø220	8-Ø18	Ø156	Ø180	350	181	181	150	710	54
125	22	Ø250	8-Ø18	Ø184	Ø210	400	200	197	158	745	68
150	24	Ø285	8-Ø22	Ø211	Ø240	480	240	222	198	810	89

Pressure Independent Valves
VPA

Ordering Codes VPA Series balancing Valve

Valve Model	DN (mm)	in.	PN	Closing pressure (bar)	Flow Rate			Stroke (mm)	Actuator	ΔP Range (kPa)
					m³/h	l/s	GPM			
VPA050-C	50	2″	16	16	13	3.64	57	20	**VAP1000-24-C**	35~400
VPA065-C	65	2-½″	16	16	21	5.8	92	20	**VAP1000-24-C**	35~400
VPA080-C	80	3″	16	16	28	7.8	123	40	**VAP3000-24-C**	35~400
VPA100-C	100	4″	16	16	50	13.9	219	40	**VAP3000-24-C**	35~400
VPA125-C	125	5″	16	16	90	25.0	396	40	**VAP3000-24-C**	35~400
VPA150-C	150	6″	16	16	145	40.3	638	40	**VAP3000-24-C**	35~400

Note
Valve closes when valve stem retracts.