

Works with

- * ATI
- * Barber coleman
- * Honeywell
- * Johnson
- * Landis & Gyr
- * Satchwell
- * Sauter
- * Staefa
- * T/A
- * TEG
- * Others

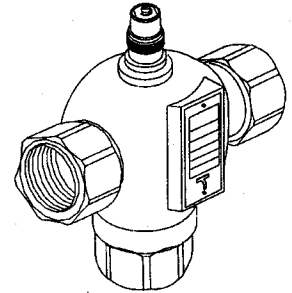
Three port seat valves

 Cast bronze, thread connections PN16
 for Liquids, Steam & Gas

VDG43.8

VDG43.825L Standard type

- Type of fluid; L or None = Liquid S= Steam O = Oil G= Gas R= Refrigerant
- Options are also available
- Flow Characteristics; L=Linear, E =Equal per centage, S=Special
- Size of Ports (mm)
05,06,07,08,09,10,11,12,13,14,15, 20,25,32,40,50,65, Options are also available
- Type of neck for actuator
1= ATI, TEG, L/G 7 = Thread M28, 8 = Threaded for nut M30, 9= Optns
- Version No. of valve body.
1= Self seated + External threads, 2 = Seat insert + External threads
3= Self seated + Internal threads, 4 = Seat insert + Internal threads 9= Options
- Nominal Pressure/Bar : 4 =16
- Type of connection : G=Thread type ,
- Type of port : T=Through way, D= Divert, S= Special
- Product group : V=Valve



Description

The valves are made of cast bronze and machined by computer aided machining equipment under strict quality control, and every valve are under going hydro-test for leakage and pressure allowances. The range of valves is from size DN15...65mm.

Nominal stroke 5mm for DN 15 ...65mm

For use with Electric, Pneumatic or Hydraulic actuators.
 Suitable for actuator type AQS31,....,AQS81,....,AQS61,....

Permissible fluids

- Hot water :max.120° C
- Chilled water :-15° C max. in closed circuit only
- Water with following additives;
 - Hydrazine, Phosphate, for water treatment
 - Glycol, max.50%, for frost protection
 - Saturated steam, superheated steam abs. press.1.5bar 120° C
 - Refrigerant R12, R22, R502 (spindle heating element required for this application)

Application

Suitable for use a proportional control of mixing or diverting flow control in heating ventilating air conditioning, District heating system and other industrial applications.

Operating pressure

16Bar(1600kPa)

Leakage rate; through by-pass

0%

0%

Connection port

ISO ,BSBP,internal

Summary of Types

Valves

Actuators, TYPE:AQS,....

DN size mm	Type reference	Kvs Value m ³ /h	Rangeability K _{vs} /K _{vr}	max.ΔP _{v100} in kPa		Nominal stroke mm	Force (N) at max.ΔP _{v100} in kPa (close-off ratings)						
				Mix.	Div.		200N	300N	400N	600N	800N		
15	VDG43.807	0.25	> 50	600	600	5	300	450	600				
15	VDG43.809	0.40	> 50	600	600	5	300	450	600				
15	VDG43.810	0.50	> 50	600	600	5	300	450	600				
15	VDG43.811	0.63	> 50	600	600	5	300	450	600				
15	VDG43.812	1.0	> 50	600	600	5	300	450	600				
15	VDG43.813	1.6	> 50	600	600	5	300	450	600				
15	VDG43.814	2.5	> 50	600	600	5	300	450	600				
15	VDG43.815	4.0	> 50	600	600	5	300	450	600				
20	VDG43.820	6.3	>100	600	600	5	200	300	400	600			
25	VDG43.825	10	>100	600	600	5	200	300	400	600			
32	VDG43.832	16	>100	400	400	5	100	150	200	300			
40	VDG43.840	25	>100	400	400	5	100	150	200	300			
50	VDG43.850	40	>100	320	320	5	80	120	160	240	320		
65	VDG43.865	60	>100	240	240	5	60	90	120	180	240		

**Notes; 100 kPa = 1Bar =10mWG
 max.ΔP_{v100} =Max.permmissible differential pressure across open valve
 ΔP_{v100} =differential pressure across fully open valve in installation in full load.
 ΔPmax =max. permmissible differential pressure across closed valve

K_{vs} =nominal flow value of valve in m³/h at nominal stroke and a pressure drop of 1 Bar
 K_{vr} =smallest flow value in m³/h for pressure drop of 1 bar at which the flow characteristic tolerance are still maintained

Accessories

Electric heating element for sub zero temp. applications

Design Features

Valves are supplied as a separate unit. The assembly is straightforward, neither special tools nor adjustments are required.

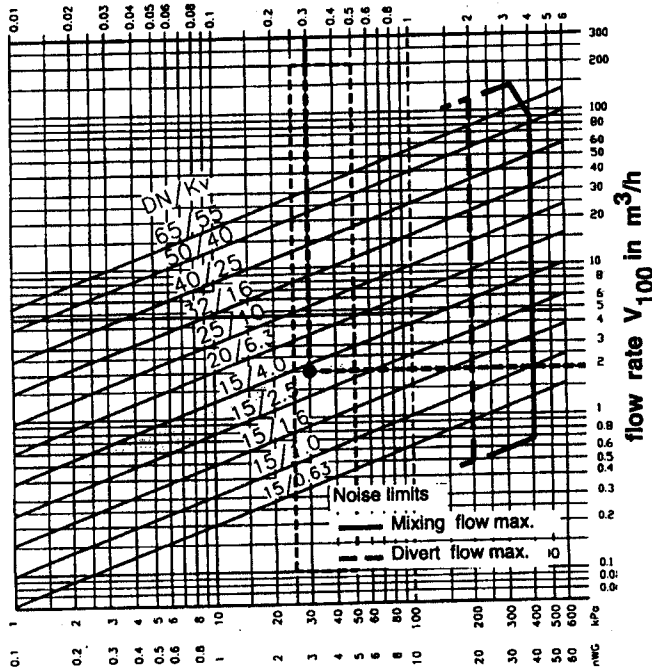
- Sealing gland assembly is easily interchangeable on site
- Spindle is made of stainless steel
- Plug materials can be of any for various applications to meet accurate performances.
- Size from 15mm to 65mm
- Kv value from 0.10 to 60.00
- Internally threaded connection make easy installation
- Protective Plastic cover for threads

Hints for correct valve sizing

Example: Given data: $\Delta P = 0.3 \text{ Bar}$ and $K_v = 2.2$

- Trace down the vertical line of 0.3 Bar of ΔP to an intersecting point with horizontal line of K_v flow rate at $2.2 \text{ m}^3/\text{h}$
- Select $K_v = 2.5$ of DN15 between the line of $K_v = 2.5$ and the line of $K_v = 4.0$. The answer is TYPE: VDG44.814

TYPE: VDG44... Pressure drop ΔP_{v100} in Bar



Recommended selection in $\Delta P_{v100} = 0.3 \text{ Bar}$
 $1 \text{ m}^3/\text{h} = 0.278 \text{ kg/s}$ water at 20°C

Application Advice

For basic information and further details on valve selection and sizing refer to data sheets 4001..4019.

The valve can be installed either in the supply or the return pipe work. The latter is given preference since return side temperature is lower. Strainer is recommended for correct control and long life.

For steam applications: The valves are only suitable for saturated or superheated steam; the steam pipes must be properly drained or blow off the dirt inside the pipe.

Selecting actuator is also very important since it is not properly matched control valve does not work correctly. For correct selection of actuators also refer to the Data Sheet of various actuators, 4300... 4499.

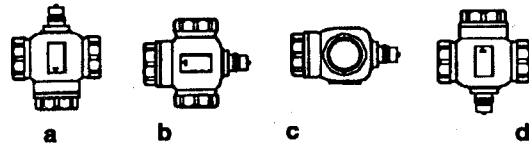
Observe the permissible temperatures. For more details refer to <Application> and <Technical Data>

Data Sheet 3401 contains basic system data on POLYTEK. All hints and explanations given in this sheet must be observed.

Mounting and Installation Advice

Do not remove the protection cap of the valves by tearing off the finger tap before mounting actuators.

Mounting positions



a. b. c. = permitted d = not recommended

Pressure application & Flow direction

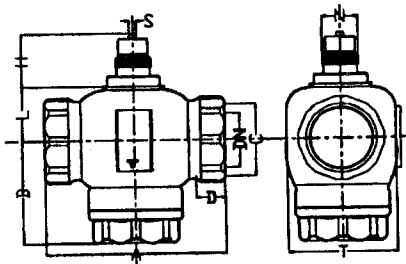


The actuator's mounting instructions are supplied in the protection cap of the valves.

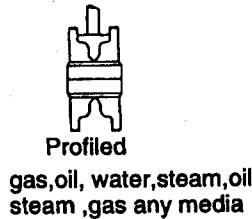
Commissioning Advice

- Remove the protection cap of the valves by turning clockwise.
- Check the valve neck thread type whether it fits to the nut of the actuator.
 Pushing valve spindle : valve opens (inlet II to I)
 Pulling valve spindle : valve closes (inlet II to I)

Dimension



Various type of valve plug for functional controls in wide range of applications



Various type of sealing gland assemblies for different media and wide range of temperature and pressure.



DN mm	Inch	A	B	C	D	H	L	T	N		S	Wgt kg	Suitable actuators		
									ATI	L/G			ATI	L/G	H/W
15	1/2"	100	50	Rp 1/2"	12	5	26	41	M30	M28	6	1.2	AQS.	SQS	SQY
20	3/4"	100	50	Rp 3/4"	12	5	26	50	M30	M28	6	1.2			
25	1"	105	70	Rp 1"	16	5	34	55	M30	M28	6	1.6			
32	1 1/4"	105	70	Rp 1 1/4"	16	5	34	70	M30	M28	6	1.8			
40	1 1/2"	130	80	Rp 1 1/2"	18	5	46	75	M30	M28	6	3.0			
50	2"	150	88	Rp 2"	20	5	46	90	M30	M28	6	4.8			
65	2 1/2"	195	114	Rp 2 1/2"	22	5	60	120	M30	M28	6	7.3			

Dimensions in mm