



Two-port valves, male threaded, PN25

VVG55...

Two-port valves, externally threaded, PN25

- Bronze Rg5
- DN15 ... 25 mm (1/2" ... 1")
- k_{vs} 0.25 ... 6.3 m³/h
- Stroke 5.5 mm
- Suitable for type SQS35... or SQS65... actuators
- Screwed fittings supplied separately

Use

For use as a control, safety or isolating valve to DIN 32730 in district heating systems and systems with media temperatures up to a maximum of +130 °C.
For closed hydraulic circuits.

Media

Standard version for:

Chilled water Low temperature hot water Hot temperature hot water Water with glycol Water with oxygen-binding additives Water with additives as specified in VDI 2035	+ 2 ... +130 °C
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Standard version

Type	DN		k_{vs} [m ³ /h]	S_v	Δp_{vmax} [kPa]	Δp_s [kPa]
	[mm]	[Inches]				
VVG55.15-0.25	15	3/4"	0.25	> 50	1200	2500
VVG55.15-0.4	15	3/4"	0.4	> 50	1200	2500
VVG55.15-0.63	15	3/4"	0.63	> 50	1200	2500
VVG55.15-1	15	3/4"	1.0	> 50	1200	2300
VVG55.15-1.6	15	3/4"	1.6	> 100	1200	2300
VVG55.15-2.5	15	3/4"	2.5	> 100	1200	2300
VVG55.20-4	20	1"	4.0	> 100	1000	1000
VVG55.25-6.3	25	1 1/4"	6.3	> 100	800	800

DN Nominal diameter

k_{vs} Nominal flow rate to VDI / VDE 2173

S_v Rangeability to VDI / VDE 2173

Δp_{vmax} Max. admissible differential pressure across the full positioning range of the valve actuator unit.

Δp_s Max. admissible differential pressure (closing pressure), at which the valve actuator unit closes reliably against the pressure.

Accessories

The VVG55... valves are installed in the pipework by means of either screwed fittings (type ALG) or welded fittings (type ALS...).

Type	For valves	Valve thread	...for pipes
<i>Screwed versions:</i>			
ALG12	VVG55.15-...	G3/4B	3/8"
ALG15	VVG55.20-4	G1B	1/2"
ALG20	VVG55.25-6.3	G1 1/4B	3/4"
<i>Weldable versions:</i>			
ALS15	VVG55.15-...	G3/4B	DN15
ALS20	VVG55.20-4	G1B	DN20
ALS25	VVG55.25-6.3	G1 1/4B	DN25

Ordering

Please specify the type.

Ordering example: **VVG55.20-4**

The fittings must be ordered separately.

Delivery

The valves, actuators and fittings are packed and delivered separately.

Equipment combinations

Important: A positioning force of **400 N** is required to operate these valves.
The D-series motorised actuators, types SQS35... and SQS65... are the only suitable actuators for this purpose.

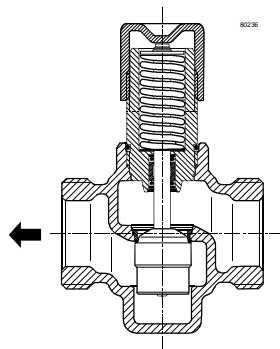
Valves	Actuators ¹⁾ (with a positioning force of 400 N)					Fittings	
	SQS35...	SQS35.5...	SQS65...	SQS65.5	SQS65.2		
VVG55.15-0.25	✓	✓	✓	✓	✓	ALG12	ALS15
VVG55.15-0.4	✓	✓	✓	✓	✓	ALG12	ALS15
VVG55.15-0.63	✓	✓	✓	✓	✓	ALG12	ALS15
VVG55.15-1	✓	✓	✓	✓	✓	ALG12	ALS15
VVG55.15-1.6	✓	✓	✓	✓	✓	ALG12	ALS15
VVG55.15-2.5	✓	✓	✓	✓	✓	ALG12	ALS15
VVG55.20-4	✓	✓	✓	✓	✓	ALG15	ALS20
VVG55.25-6.3	✓	✓	✓	✓	✓	ALG20	ALS25
Data sheet	4573	4573	4573	4573	4573		

- 1) Available actuators:
- AC 24 V with a proportional DC 0 ...10 V control signal, with or without spring return.
 - AC 24 V with a proportional DC 2 ...10 V control signal, non-spring return, with manual adjuster and position indicator.
 - AC 230 V with 3-position control signal, with or without spring-return and with or without auxiliary switches.

Note If VVG55... valves are controlled by SQS65... valve actuators, the valve characteristic jumper in the actuator must be set to "Linear".

Mechanical design

Valve cross-section



- Valve housing and valve neck for fitting actuator (screwed connection, G $\frac{3}{4}$ B).
- Sealing gland with double O-rings and dirt protection strip.
- The valves are supplied in a series with a manual adjuster.
- No special tools or adjustments are required to mount the actuator on the valve.

Manual adjustment

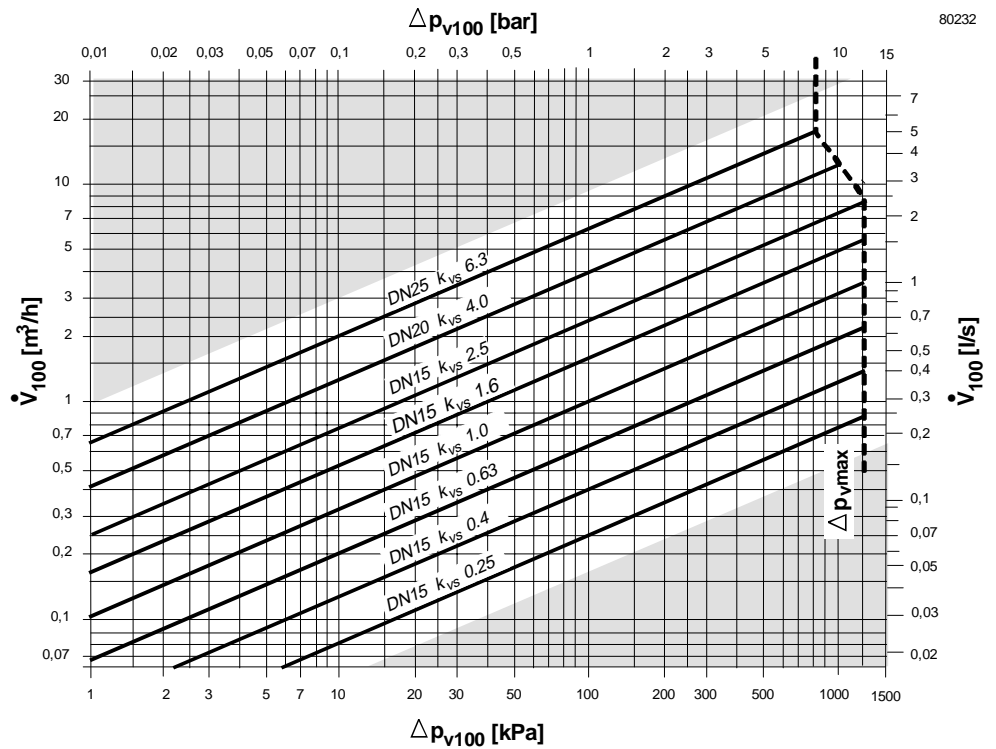
The valve can be adjusted manually from 0...100 % by use of the plastic manual adjuster (which also acts as a protective cover during transport).

- Clockwise rotation of manual adjuster, causing the spindle to retract:
→ *Increasing flow*
- Anti-clockwise rotation of manual adjuster, causing the spindle to extend:
→ *Increasing flow*

Disposal

Owing to the variety of materials used, the valve and actuator components must be dismantled and sorted prior to disposal.

Flow diagram



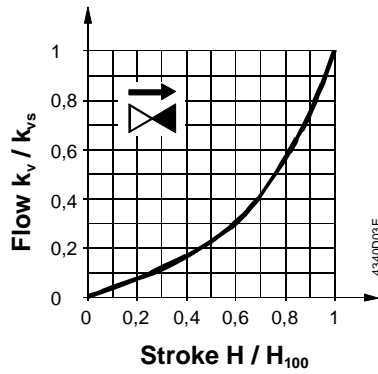
$\Delta p_{V,max}$ Maximum admissible differential pressure across the valve control path A → AB in relation to the full stroke H_{100}

$\Delta p_{V,100}$ Differential pressure (kPa or bar) across the fully opened valve across control path A → AB at V_{100}

V_{100} Flow rate in m^3/h or l/s .

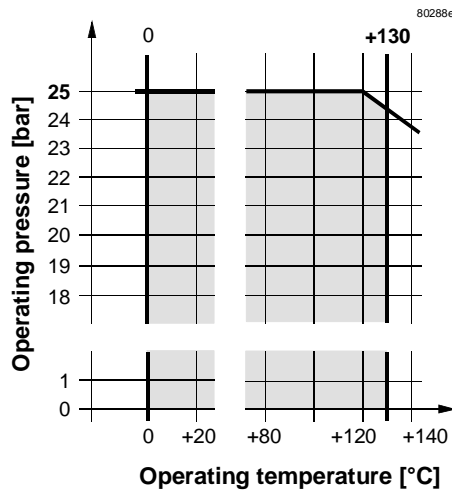
Conversion: 1 bar = 10 m WS $1m^3/h = 0.278 l/s$

Valve characteristic



Valve characteristic
 0 % ... 30 % → Linear
 30 % ... 100 % → $n_{gl} = 3$
 to VDI / VDE 2173

Operating pressure / operating temperature



Operating pressure to ISO 7268 and EN 1333 at operating temperatures of + 2 ... +130 °C to DIN 4747 and DIN 3158

Notes

Engineering

The valves should preferably be installed in the return water, since in heating applications, this is where the lower temperatures prevail. This will help extend the life of the spindle seal.

Water quality specifications in accordance with VDI 2035.

Recommendation

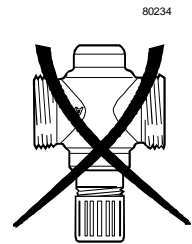
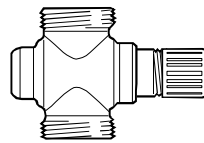
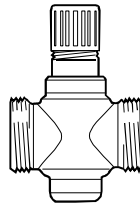
To ensure reliable functioning of the valve, the installation of a **strainer** on the inlet side of the valve is required.

Mounting

The valve and actuator can be assembled directly on site. No special tools or adjustments are required for this purpose.

Mounting instructions are enclosed with the valve.

Orientation



Permissible

NOT permissible

Direction of flow

Before installation, check the **flow indication** \longrightarrow on the valve.

Commissioning

The valve can be commissioned with the actuator fitted in accordance with instructions, or by fitting the manual adjuster.

Spindle retracted: Increasing flow

Spindle extended: Decreasing flow

Maintenance

When servicing the valve/actuator:

Switch off the pump, and isolate it. Isolate the actuator and pipe-work. Allow the pipe-work to cool down and de-pressurise the system.

The valve can be re-commissioned with the actuator fitted in accordance with instructions, or by fitting the manual adjuster.

Guarantee

The use of third-party actuators renders the guarantee null and void.

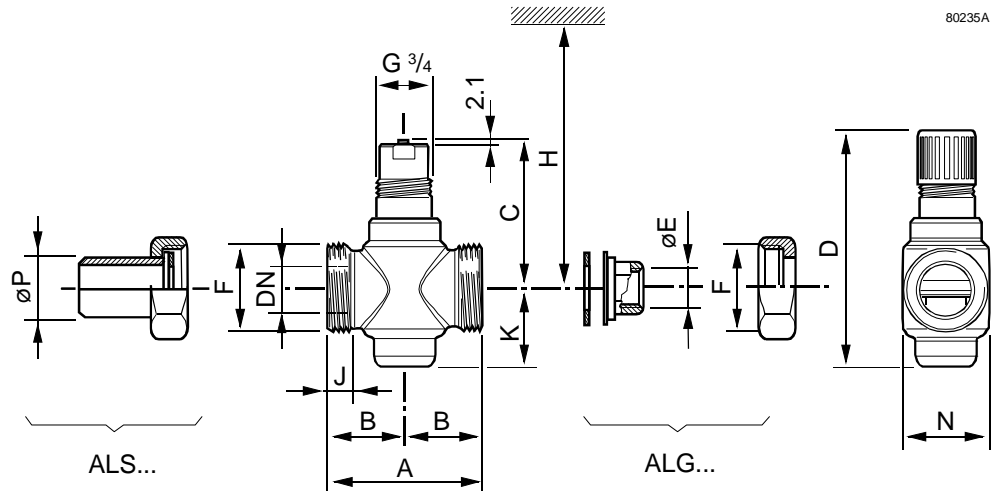
The Δp_{\max} , Δp_s , leakage, noise and service life data are guaranteed only where the valve is used in conjunction with the Landis & Staefa actuators listed under "Equipment combinations" in this data sheet.

Technical data

Operating data	Nominal pressure	PN25
	Valve characteristic	Linear
	0 ... 30 %	$n_{gl} = 3$ to VDI / VDE 2173
	30 ...100 %	
	Leakage rate	0 ... 0.02 % of k_{vs} value, VDE / VDI 2173
	Admissible pressure	2500 kPa (25 bar), ISO 7268 / EN 1333 ANSI Class 250 psi
	Operating pressure	DIN 4747 / DIN 3158 in the range + 2 ... + 130 °C
	Screwed connection	
	Valve	G...B according to ISO 228/1
	Screwed fittings	Rp... according to ISO 7/1
Stroke	5.5 mm	
Manual adjustment	Using manual adjuster, without actuator: 0 ...100 %	
Materials	Valve body	Bronze G-CuSn5ZnPb (Rg5) as per EN 1982
	Seat, plug, spindle and spring	Stainless steel
	Gland	Brass
	Sealing materials	EPDM (O-ring)
	Screwed fittings	ALG... Malleable black cast iron ALS... Weldable steel St37-2 DIN 17100

Dimensions

80235A



Valve type	A	B	C	D	DN	F	H	J	K	N	G
VVG55.15-0.25	65	32.5	66.5	105	15	G ^{3/4} B	220	11.5	31.5	33	0.48
VVG55.15-0.4	65	32.5	66.5	105	15	G ^{3/4} B	220	11.5	31.5	33	0.48
VVG55.15-0.63	65	32.5	66.5	105	15	G ^{3/4} B	220	11.5	31.5	33	0.48
VVG55.15-1	65	32.5	66.5	105	15	G ^{3/4} B	220	11.5	31.5	33	0.48
VVG55.15-1.6	65	32.5	66.5	105	15	G ^{3/4} B	220	11.5	31.5	33	0.48
VVG55.15-2.5	65	32.5	66.5	105	15	G ^{3/4} B	220	11.5	31.5	33	0.48
VVG55.20-4	70	35	71.5	116	20	G1B	225	12	37.5	37	0.63
VVG55.25-6.3	75	37.5	71.5	116	25	G1 ^{1/4} B	225	12	37.5	42	0.72

Screw fittings

Valve type	Screw fittings			
	Type	F	ø E	G *
VVG55.15-0.25	ALG12	G ^{3/4} B	Rp ^{3/8}	0.08
VVG55.15-0.4	ALG12	G ^{3/4} B	Rp ^{3/8}	0.08
VVG55.15-0.63	ALG12	G ^{3/4} B	Rp ^{3/8}	0.08
VVG55.15-1	ALG12	G ^{3/4} B	Rp ^{3/8}	0.08
VVG55.15-1.6	ALG12	G ^{3/4} B	Rp ^{3/8}	0.08
VVG55.15-2.5	ALG12	G ^{3/4} B	Rp ^{3/8}	0.08
VVG55.20-4	ALG15	G1B	Rp ^{1/2}	0.10
VVG55.25-6.3	ALG20	G1 ^{1/4} B	Rp ^{3/4}	0.16

Soldered fittings			
Type	F	ø P	G *
ALS15	G ^{3/4} B	21.3	0.08
ALS15	G ^{3/4} B	21.3	0.08
ALS15	G ^{3/4} B	21.3	0.08
ALS15	G ^{3/4} B	21.3	0.08
ALS15	G ^{3/4} B	21.3	0.08
ALS15	G ^{3/4} B	21.3	0.08
ALS20	G1B	26.8	0.10
ALS25	G1 ^{1/4} B	33.7	0.16

H = Total height of valve and actuator including minimum clearance from wall or ceiling for mounting, connection, operation, maintenance etc.

G = Weight of valve in kg, excluding screwed fittings and packaging

G * = Weight in kg, excluding packaging

ø E = Diameter of threaded pipe Rp... to ISO 7/1

ø P = External diameter of pipe [mm]

Dimensions in mm

