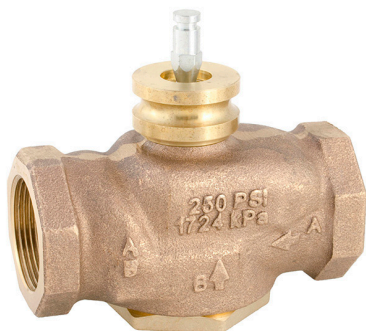


VG310R 15-50B



SPECIFICATIONS

Design Three Way Plug Valve,
Stem up closed. A-AB, (B-AB open)
Pressure Class PN 16
Flow Characteristic Equal percentage,
modified (for finer opening control)
Stroke 11 mm
Rangeability > 100:1
Leakage, A-AB...<0.005% Kvs (EN60534-4 Class IV-S1)
B-AB...<0.1% Kvs (EN60534-4 Class III)
 ΔP_m^a 400 kPa, water
Media Compatibility Chilled or hot water,
60% glycol concentration, low pressure conditioned steam.
Media Temperature -7° to +150° C
Maximum Steam Pressure 241 kPa
Connection Rp to ISO 7-1/BS21
Rg to ISO228-1

a. ΔP_m : Maximum allowable pressure drop across a fully open valve.

Suitable Actuator

Direct fit MG600C, MG600C SR
With AV-823 Long Stem adaptor . . . M400, M800,
M1500 and MG900 SR

Materials

Body . . Bronze; ASTM B584; CDA 83450 Oshallow
Bonnet/Packing Cartridge . . . Brass; UNS C36000
and PTFE/EPDM chevrons
Stem AISI 316 SS
Plug Brass; UNS C36000
Slotted Stem Adapter RoHS compliant
Zinc-plated steel
Seat/Plug Seal,
A-AB DN15-20: PTFE, DN25-50: EPDM
B-AB DN15-50: Brass

Three Way Bronze Globe Valves

The New Venta VG310R 15-50B is a new range of precision bronze globe valves, suitable for a wide range of fluid control applications, including heating, cooling, air handling and domestic hot water systems. The VG310R 15-50B series works reliably under a wide variety of conditions, including fluids with high glycol concentrations and very high temperature bands.

The valve utilises precision plugs for improved rangeability and fine fluid control on small opening degrees.

The VG310R 15-50B range of valves is designed to be used in conjunction with the new short yoke Forta, providing one of the most compact plant room globe valves on the market. This enables the product to be fitted within conventional ceiling voids.

KEY FEATURES

- U-bolt bonnet and slotted stem adaptor provides quick and simple mounting with the short yoke Forta actuator
- RoHS compliant
- High rangeability provides fine accurate fluid control for more efficient, responsive and comfortable regulation
- Compact Space envelope

The installer/product specifier must verify media compatibility of the valves construction materials with the water treatment/heat transfer solution supplier.

A strainer should be fitted upstream of the valve to increase valve reliability and protection of gland and seat seals.

Adherence to water treatment guidelines as detailed in VDI 2035 must be followed. Valves should be installed in the return pipe to reduce exposure to media temperature extremes.

PRODUCT SELECTION / CLOSE-OFF PRESSURE RATINGS

ΔP_c Close-off performance with MG600C (-SR) Actuator

Size (DN)	Kvs	Connection	Part Number	Type Designation	Rangeability	ΔP_c Close Off
15	1.6	Rp 1/2	VG310R-15B05	VG310R 15B 1.6T SU00	100:1	1600
15	2.5	Rp 1/2	VG310R-15B07	VG310R 15B 2.5T SU00		
15	4.0	Rp 1/2	VG310R-15B08	VG310R 15B 4T SU00		
20	6.3	Rp 3/4	VG310R-20B	VG310R 20B 6.3T SU00		
25	10	Rp 1	VG310R-25B	VG310R 25B 10E SU00		1200
32	17	Rp 1-1/4	VG310R-32B	VG310R 32B 17E SU00		700
40	24	Rp 1-1/2	VG310R-40B	VG310R 40B 24E SU00		450
50	35	Rp 2	VG310R-50B	VG310R 50B 35E SU00		240

ΔP_c Close-off performance (kPa) with other Forta actuators (Long Stem extension required)

Actuator ² :		M400	M800	M1500	MG900 SR
Long Stem Extension:		AV-823	AV-823	AV-823	AV-823
Part Number	DN	1600	1600	1600	1600
VG310R-15B	15				
VG310R-20B	20				
VG310R-25B	25	760	1000	1280	1120
VG310R-32B	32	440			750
VG310R-40B	40	280	660	1280	750
VG310R-50B	50	140	350	700	400

²M700, MV15B and M3000 will not connect to the VG310R venta valve

LEAKAGE NOTES

Close off performance in the tables above are to leakage rate Class IV on port A and Class III on port B. Close off performance on port A to Class IV is reduced from published figures above, significantly on sizes DN40 and DN50.

The VG310R valves will provide tight shut from factory delivery, meeting EN60534-4 / VDI2173 to Class IV or Class III depending on applicable port and system pressure.

Application usage and system water quality can degrade O-ring performance against seat leakage over time.

RECOMMENDED ACTUATORS

This series of valves mounts directly on to the new short yoke Forta Actuators with U-Bolt Connection.

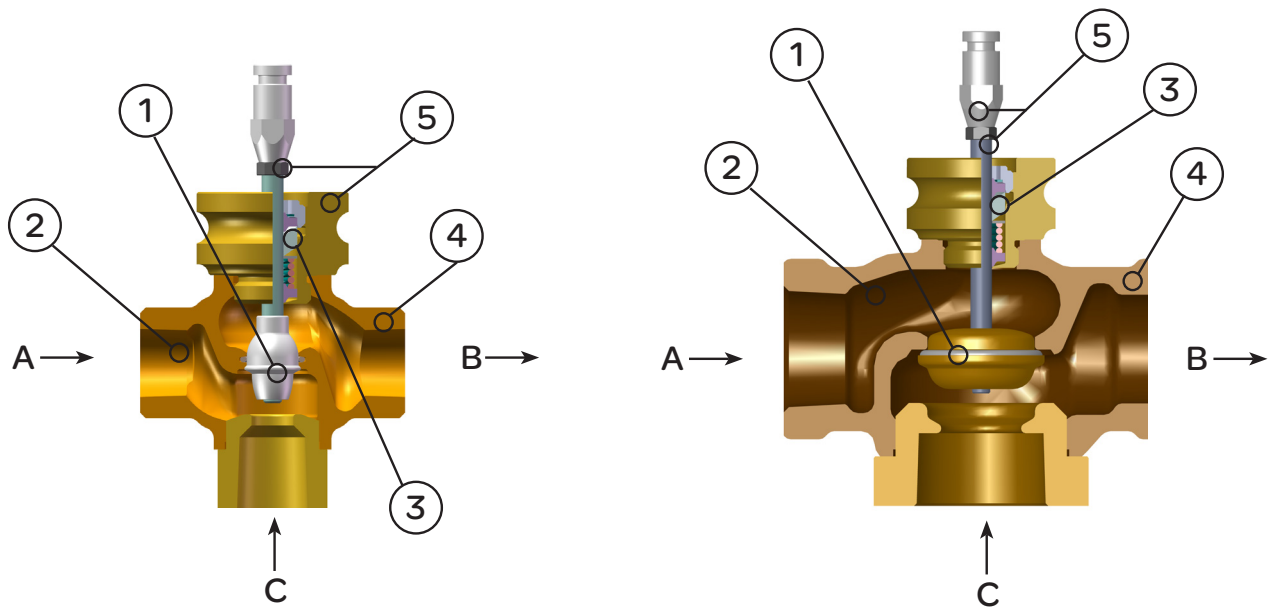


MG600C
Non Spring Return



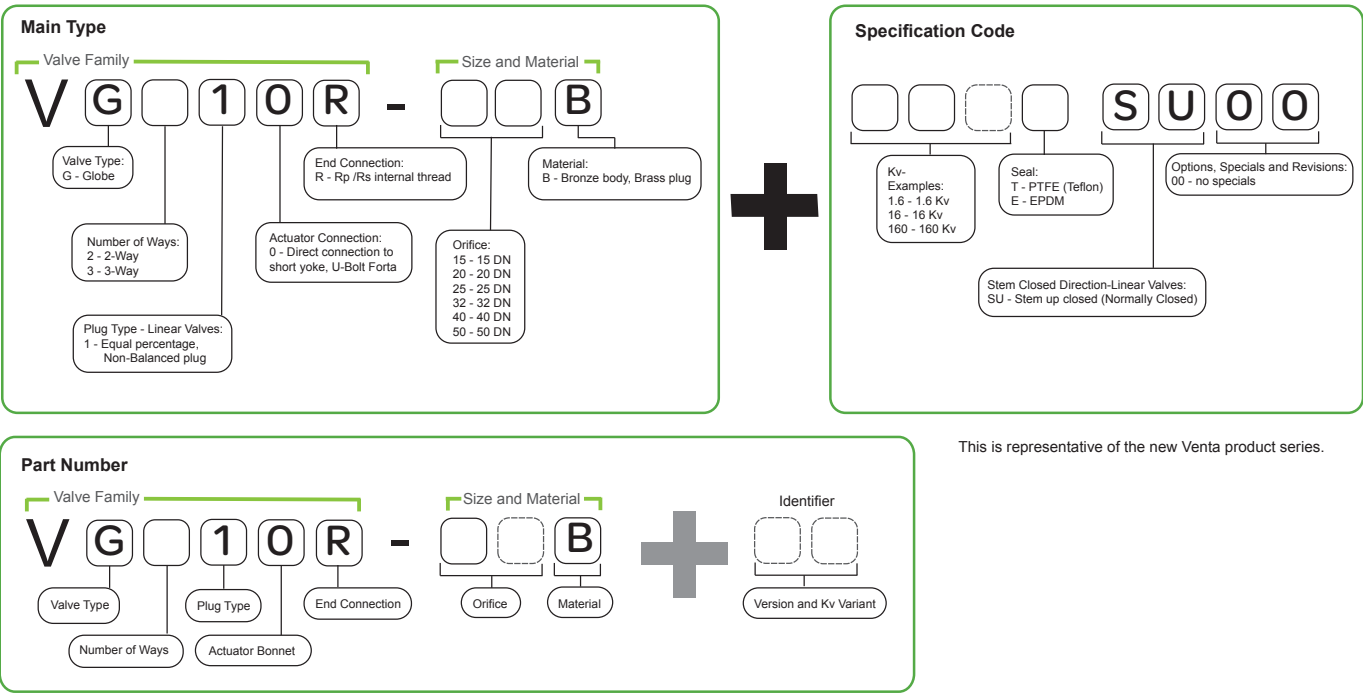
MG600C SR
Spring Return

KEY FEATURES



#	Part	Description
1	Precision Plug	Designed for high rangeability and accurate flow control.
2	Internal Cavity	Carefully charted fluid dynamics to ensure low pressure drop and high flow capacity.
3	Packing	Triple-temp packing for use in cold water, hot water, and steam applications.
4	Body	Made from RoHS compliant materials.
5	Bonnet and Slotted Stem Adapter	Quick and simple mounting with the short yoke MG600C and MG600C-SR Actuators.

TYPE DESIGNATION

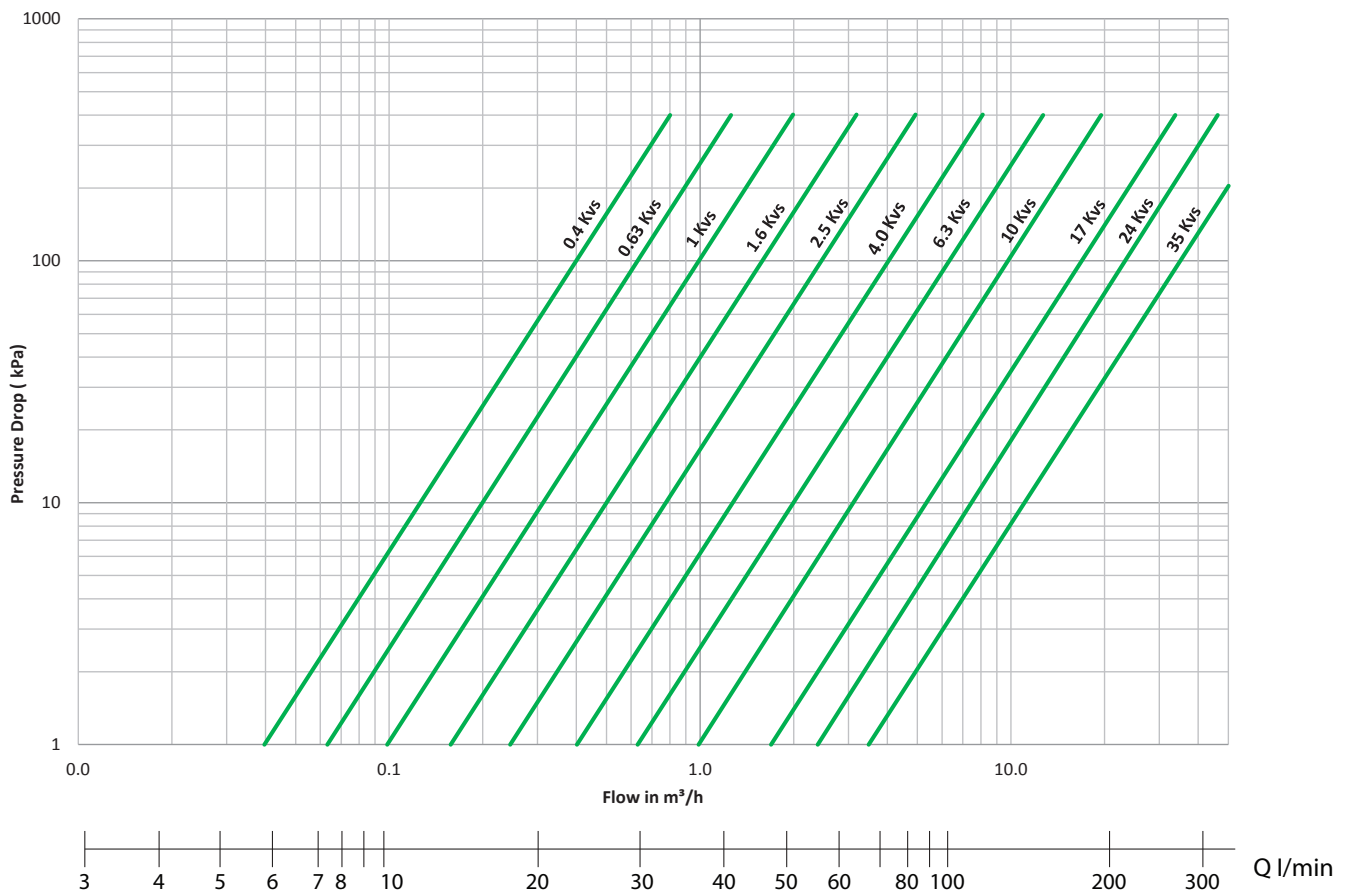


This is representative of the new Venta product series.

VALVE SIZING

Capacity Chart, Kvs

N.B. Capacity chart based on water with a Specific Gravity of 1.0



To size the ideal Kv, calculate pressure drops or refine selection sizing based on a glycol of density different to water, the following equations can be used.

For good fluid control and authority, the pressure drop through the valve should be as near as practicable equal to the pressure drop through the rest of the circuit which it controls.

$$Kv = Q \times \sqrt{\rho / \Delta P}$$

$$Q = Kv \times \sqrt{\Delta P / \rho}$$

$$\Delta P = \rho \times (Q / Kv)^2$$

Kv = Valve Capacity (m³/h)
Q = Volume flow (m³/h)
ΔP = Pressure drop across valve (bar)
ρ = Specific Gravity of fluid (kg/m³)

1 Bar = 100 kPa = 14.5 psi

1m³/h = 0.278 l/s = 0.167 l/min = 4.403 gpm (US)

DIMENSIONS mm

Size	L	H¹	H²
DN15	78	30	29
DN20	92		
DN25	118	44	30
DN32			37
DN40	137	46	40
DN50	156	57	57

Valve assembled onto MG600C actuator.

