VG311F 65-150C

Three-way Globe Valve, Flanged PN 16

The VG311F 65-150C valve range can be used in a wide range of applications, such as heating, cooling and air handling.

The valve can handle the following types of media:

- Hot and chilled water.
- Water with antifreeze additives such as glycol, up to 50%.

If the valve is used for media at temperatures below 0 °C (32 °F), it should be equipped with a stem heater in order to prevent ice formation on the valve stem.

SPECIFICATIONS

Design. . . . . three-way globe mixing valve
Valve closed position. . . . . stem up closed (A-AB)
Pressure class . . . . . PN 16
Connection . . . . . Flange according ISO 7005-2
Rangeability (Kvs/Kvmin) . . . . . >50
Flow characteristics A – AB . . . . . EQ%
Flow characteristics B - AB . . . . . Linear
Stroke
DN65 . . . . . 25 mm
DN80-150 . . . . . 45mm
Leakage A – AB DN65 – DN150 . . . . . < 0.03% of Kv
Leakage B - AB DN65 – DN150 . . . . . < 2% of Kv
ΔPm . . . . . 200 kPa (28 psi), water
Max. temperature of medium . . . . . 150 °C
Min. temperature of medium . . . . . -10 °C

Materials

Body . . . . . Grey Cast iron
Stem . . . . . Stainless steel
Plug . . . . . Brass
Seat . . . . . Grey cast iron (EN JL1040)
Stem Sealing. . . . . Viton O-ring

Size		Kv	Part number	Type Designation	Stroke
in.	DN	m^3/h			(mm)
2½"	65	63	VG311F-65C	VG311F-65C 63M SU00	25
3"	80	100	VG311F-80F	VG311F-80C 100M SU00	45
4"	100	130	VG311F-100C	VG311F-100C- 130M SU00	
5"	125	200	VG311F-125C	VG311F-125C 200M SU00	
6"	150	300	VG311F-150C	VG311F-150C 300M SU00	

Key to Technical specification

- The rangability is the ratio of Kvs and Kv_{min}
- Kv is the flow through the valve in m^3/h at the specified valve lift and at a pressure drop of 100 kPa across the valve.
- Kv_{min} is the minimum controllable flow (m^3/h) at a pressure drop of 100 kPa.
- ΔPm is the maximum allowable pressure drop across the fully open valve.
  ΔPc is the maximum close off pressure the actuator will allow

Approvals / Standards:
CE marked to PED 97/23/EC, Cat. 1

NOTE:

It is the responsibility of the end user/ installer to check valve material compatibility against any media containing anti-freeze or anti-rust additives or water conditioners with the manufacturer or supplier of such solutions.

Schneider Electric

FUNCTION AND FLOW CHARACTERISTIC

The flow characteristic (A-AB) of the VG311F is equal percentage (EQ%, also called logarithmic), giving an equal-percentage change in flow.

The flow characteristics on B-AB is linear.

The valve closes the A-AB way (and opens the B-AB way) with the stem up. When the stem is down, the A-AB way is opened and the B-AB way is closed.

INSTALLATION

The VG311F valve should, if possible, be installed in the return line in order to avoid exposing the actuator to high temperatures.

The valve must not be installed with the actuator mounted below the valve.

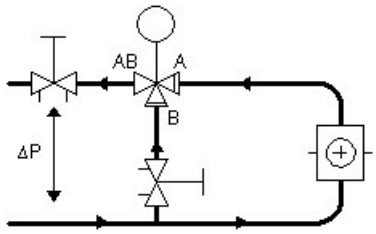
To ensure that suspended solids will not become jammed between the valve plug and seat, a filter should, if possible, be installed upstream of the valve, and the pipe system should be flushed before the valve is installed.

ACTUATOR

Size		M700 Δpc	MG900 SR Δpc	M800 Δpc	M1500/ MV15B Δpc	M3000 Δpc
DN	in.	kPa				
65	2½	170	241	200	380	--
80	3	110	--	120	250	570
100	4	70		80	160	370
125	5	40		40	100	230
150	6	30		30	70	160

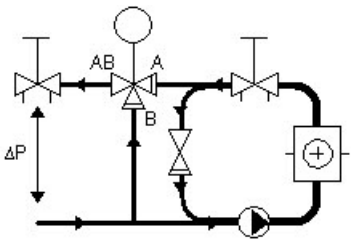
ΔP_C = Max. close-off pressure drop across the valve.

INSTALLATION



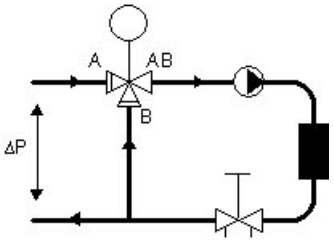
A. Circuit without local circulation pump. To ensure satisfactory performance, the pressure drop across the valve should be at least half the available pressure differential (ΔP). This corresponds to a valve authority of 50%.

Fig 1



B. Circuit with local circulation pump. The Kv (Cv) value of the valve should be selected so that the entire available pressure differential (ΔP) will be across the valve.

Fig 2



C. Circuit with local circulation pump. The Kv (Cv) value of the valve should be selected so that the pressure drop across the valve will be at least as high as (ΔP).

Fig 3

PRESSURE DROP CHART

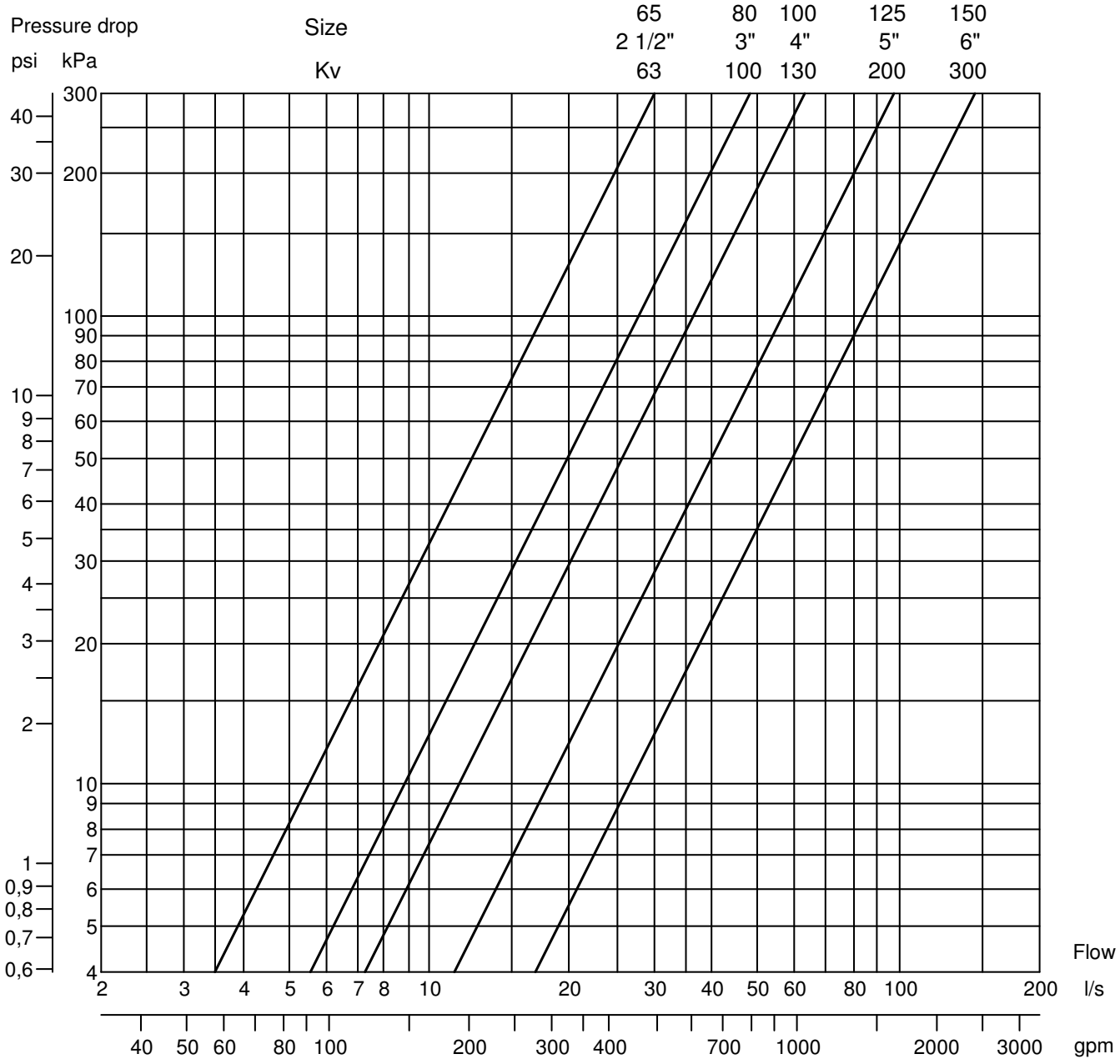


Fig 4

REPLACEMENTE STEM PACKING KIT

Stuffing box

VG311F 65-150C (all sizes)..... max 150 °C (302 °F)

Item number 1-001-0810-0

DIMENSIONS AND WEIGHT

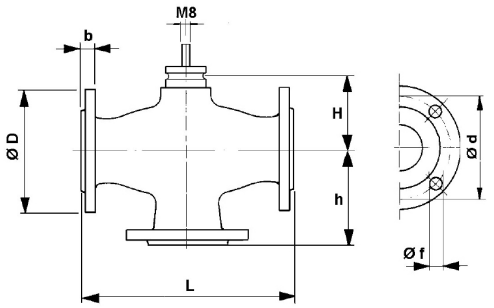


Fig 5

Size	Stroke	Dimensions							Weight
		L	H	h	f	D	d	b	
DN	mm	mm							Kg
65	25	290	115	145	18	185	145	20	18
80	45	310	125	155		200	160	22	28
100		350	137	175		220	180	24	32
125		400	159	200		250	210	26	45
150		480	177	240	22	285	240	26	60

Type Designation & Part Numbering System

Main Type

Valve Family — Size and Material

V □ □ □ □ □ - □ □ □ □

- Valve Type: G - Globe; GS - Globe (Steam Service); B - Ball; F - Butterfly; S - Shoe; Z - Zone-Linear
- Number of Ways: 2 - 2-Way; 3 - 3-Way; 4 - 3-way, 4-port
- Plug Type - Linear Valves: 1 - Equal percentage, Non-Balanced plug; 2 - Equal percentage, Balanced plug; 5 - Standard linear; 6 - 3-way diverting
- Plug Type - Rotary Valves: 0 - Uncharacterised; 1. Equal percentage, Characterised flow; 2. Linear flow
- Actuator Connection- Linear Valves: 0 - U-Bolt Forta; 2 - DuraDrive, Threaded Yoke; 3 - M30 x 1.5, short stroke; 4 - M30 x 1.5, long stroke
- Actuator Connection - Rotary Valves: 0 - Poptop; 1 - Duradrive Damper; 8 - MF Butterfly Actuators
- End Connection: E - G external thread (G.B); R - Rp /Rs internal thread; F- Flanged DIN; N - NPT; C - Compression; W - Flanged (Wafer)
- Orifice - Examples: 15 - 15 DN; 200 - 200 DN
- Material: C - Cast Iron body; CS - Cast Iron body, SS Seat; B - Bronze body, Brass plug; BP - Bronze body, PPS plastic trim; BS - Bronze body, SS trim; N - Nodular Iron; NS - Nodular Iron, SS seat; NZ - Nodular Iron, Zinc coated stem

Specification Code

□ □ □ □ □ □ □ □

- Kv- Examples: 0.25 - 0.25 Kv; 16 - 16 Kv; 160 - 160 Kv
- Seal: T - PTFE (Teflon); E - EPDM; V - FKM (Viton); M - Metal to Metal
- Options, Specials and Revisions: 00 - no specials
- Stem Closed Direction-Linear Valves: SU - Stem up closed (Normally Closed); SD - Stem down closed (Normally Open)
- Handwheel-Rotary valves: H - Handwheel; B - Bare; G - Gearbox

Construction Guide:

The new bronze, Forta-ready globe valves would look as follows:

Full Type Designation:
VG310R 15B 1.6T SU00

Family:
VG310R...B

Part Number:
VG310R-15B05

Part Number

V □ □ □ □ □ - □ □ □ □ + □ □ Identifier

- Valve Type
- Number of Ways
- Plug Type
- Actuator Bonnet
- End Connection
- Orifice
- Material
- Version and Kv Variant

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