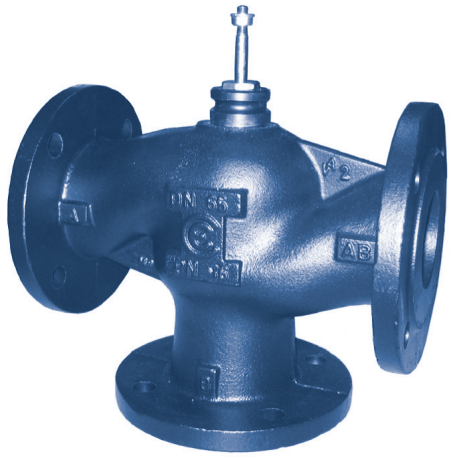
SpaceLogic VG311F 65-150C

Flanged Three-way Globe Valve, PN16



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% .

Specifications

Design	Three-way globe mixing valve Stem up closed (A-AB)
Pressure class	PN 16
ΔPm	200 kPa, water
Connection	Flange according ISO 7005-2
Flow Characteristics	
A - AB	EQ%
B - AB	Linear
Max Fluid Velocity	2 m/s
Stroke	
DN65	25 mm
DN80…150	45 mm
Rangeability	
Kvs / Kv_{min} (EN 60534-1)	>50
Leakage	
A – AB DN65…DN150	<0.03% of Kvs
B – AB DN65…DN150	<2% of Kvs
Medium Temperature	
Maximum	150 °C
Minimum*	-10 °C

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

Main Construction Materials	
Body	Grey cast iron (EN JL1040)
Stem	Stainless steel (AISI 303)
Plug DN65, 80…100	Brass (CW617N EN 12164)
Plug DN125…150	Bronze (CB491K UNI EN 1982)
Seat	Grey cast iron (EN JL1040)
Gland Seals	EPDM
Standards/Directives	CE Marked to PED 2014/68/EU, Module A

Accessories and Spare Parts

Description	Part No.
Stem packing gland (all sizes)	1 001 0810 0
SpaceLogic Yoke Heater (-8°C Media)	FYH050

Ordering Table

Size DN	Kvs m^3/h	Part Number	Type Designation
65	63	VG311F-65C	VG311F 65C 63M SU00
80	100	VG311F-80F	VG311F 80C 100M SU00
100	130	VG311F-100C	VG311F 100C 130M SU00
125	200	VG311F-125C	VG311F 125C 200M SU00
150	300	VG311F-150C	VG311F 150C 300M SU00

- The rangability is the ratio of Kvs and Kv_{min}.
- Kvs is the flow capacity of a fully open valve, measured in m^3/h at a pressure drop of 100 kPa.
- Kv_{min} is the minimum controllable flow at a pressure drop of 100 kPa, within the flow range where the characteristic meets the requirements on characteristic slope according to EN 60534-1.
- ΔP_m is the max. pressure differential across a fully open valve.

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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 .

Pressure Drop Performance vs Actuator

Mixing Application

Size	Kvs	M700	MG900 SR	M800	M1500/ MV15B	M3000
DN	ΔP_C (kPa)					
65	63	220	241	240	400	850
80	100	140		160	240	570
100	130	80		100	150	370
125	200	50		60	90	230
150	300	35		40	50	160

ΔP_C = Maximum allowed pressure drop across a closed valve (that the nominal force of the actuator will open or close against).

Diverting Application

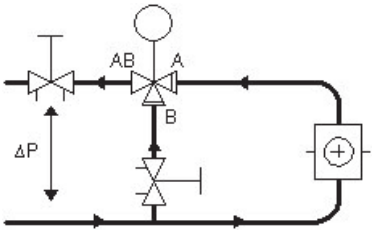
Size	Kvs	M700	MG900 SR	M800	M1500/ MV15B	M3000
DN	ΔP_C (kPa)					
65	63	75	85	80	135	285
80	100	45		53	80	190
100	130	25		33	50	125
125	200	16		20	30	76
150	300	12		13	16	55

ΔP_C = Maximum allowed pressure drop across a closed valve (that the nominal force of the actuator will open or close against).

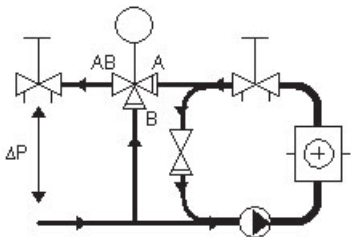
Fluid diverting Valve applications are not common and not detailed in the schematics below.

Installation

The VG311F valve should, if possible, be installed in the return line in order to avoid exposing the valve and actuator to high temperatures which can shorten working life. 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.



A. Diverting circuit (Mixing Valve application) 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%.



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

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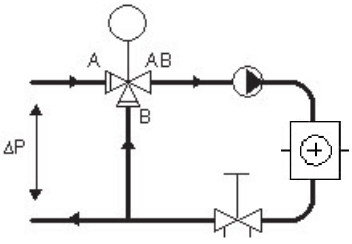

C. Mixing circuit with local circulation pump. The Kvs value of the valve should be selected so that the pressure drop across the valve will be at least as high as (ΔP.)

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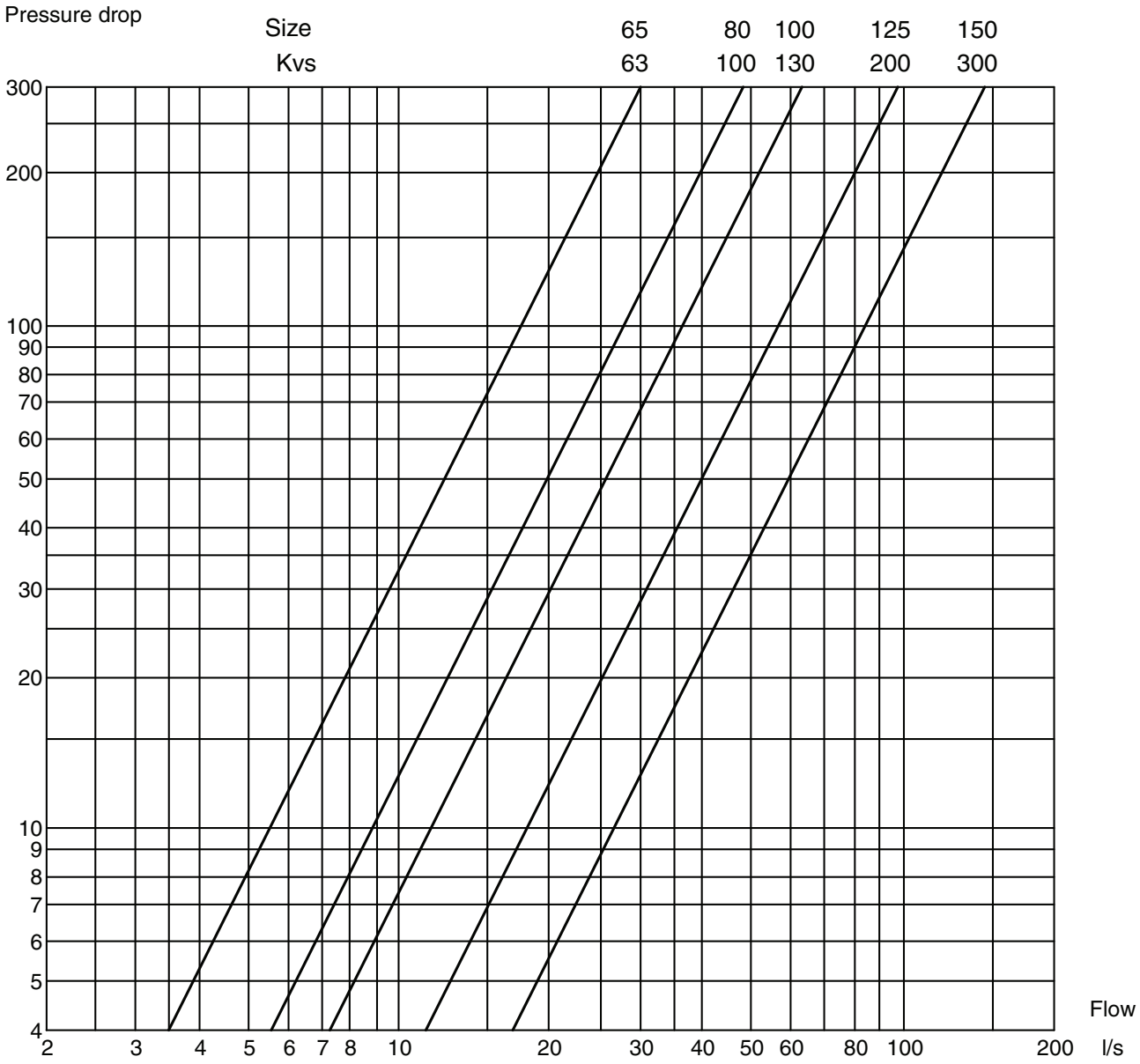
Flow Capacity / Pressure Drop Charts Fully Open Valve



Dimensions and Weight

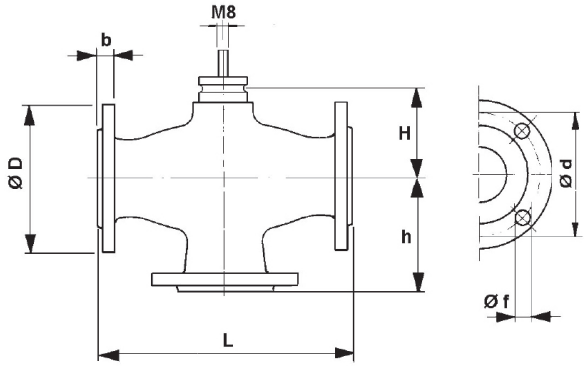
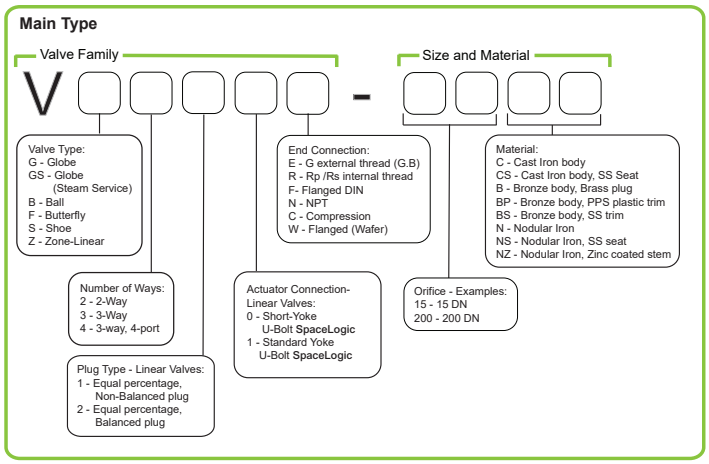
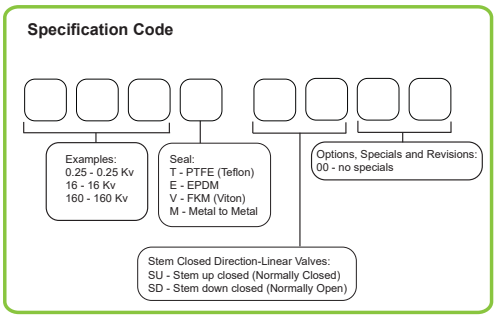


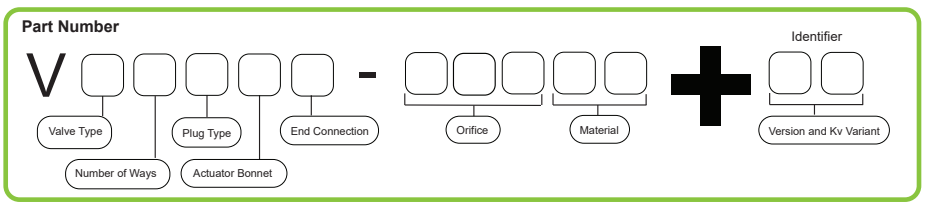
Fig 5

Size DN	Stroke (mm)	Dimensions (mm)							Weight (Kg)
		L	H	h	f	D	d	b	
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 and Part number construction







Construction Guide:

The updated designation covering the changes in one of the large 3 way cast iron valves are:

Full Type Designation:
VG311F-65C 63M SU00

Family:
VG311F 65-150C

Part Number:
VG311F-65C

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