



## VFFG2/VFFG3

2- and 3-way DIN-standard flanged valve

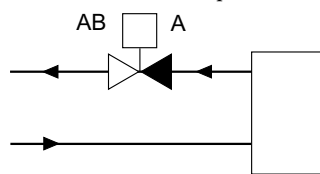
Control valves for use in heating, cooling and ventilation systems. They are intended to be used together with SE actuators. The valves have DIN-standard lengths.

- Size DN25...200
- Kvs value 6.3...550
- Rangeability 100:1 (DN50...200), > 50:1 (DN25...40)
- No leakage
- Pressure rating PN16
- Media temperature -5...+120°C
- Face-to-face dimensions as per DIN

### Function

#### 2-WAY VALVE

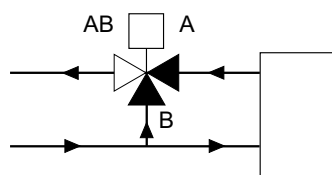
Stem in the lower position, the valve is open between the ports A - AB. Stem in the upper position, the valve is closed between the ports A - AB.



2-WAY VALVE

#### 3-WAY VALVE

Stem in the lower position, the valve is open between the A - AB and closed between the ports B - AB. Stem in the upper position, the valve is closed between the ports A - AB and open between B - AB.



3-WAY VALVE

### Installation

The 2-way valve should be mounted with port A on the inlet and port AB on the return (flow direction A in, AB out) to ensure that the plug closes tightly and to prevent any noise when closing.

The 3-way valve is of a mixing type and must therefore be mounted in the mixing point.

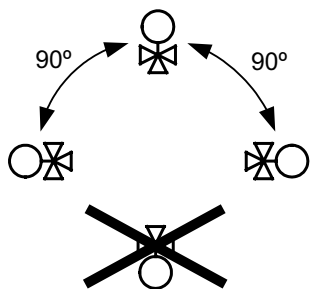
- Before installation of the control valve, ensure that the pipe is clean. Make sure that pipe scale, metal chips, welding slag and other foreign materials are removed.
- For maximum efficiency and minimum wear, install the valve in a vertical position with the stem pointing upward. If the valve is mounted with the actuator on the side, more wear is caused to the valve stuffing box. The valve should never be mounted at an angle of more than 90°.

#### MAIN OFFICE BRESSANONE

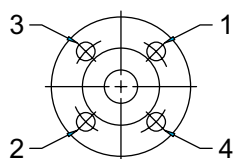
I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

VFFG2/VFFG3



- Install the valve according to the fluid direction arrow shown on the valve.
- Make sure there is ample space above the valve to facilitate easy removal of the valve actuator.
- Adjust the connection between the valve and the counter flange to minimise the tension between them.
- Tighten the bolts crosswise, as shown in the picture below. Tighten one flange at a time. After conducting a test run, the bolts should be tightened crosswise once more.



Fit a strainer/filter upstream of the valve to prolong the equipment's life span.

A water quality according to VDI 2035 is recommended.

**MAIN OFFICE BRESSANONE**

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

VFFG2/VFFG3

## Technical data

<b>Application</b>	Heating systems, cooling systems, ventilation systems
<b>Pressure rating</b>	PN16
<b>Connection</b>	Flanged according to EN 1092-2
<b>Flow characteristics</b>	A - AB = equal percentage, B - AB = linear
<b>Max. leakage</b>	0 % of Kvs
<b>Media</b>	Hot water, cold water, glycol-mixed water (max. 50 % glycol)
<b>Media temperature</b>	-5...+120 °C
<b>Rangeability</b>	100:1 (DN50...200), > 50:1 (DN25...40)
<b>Max. diff. pressure</b>	If a smaller actuator than the suggested one is used, the max. differential pressure may be different. More information is available in the product sheet.

## Material

<b>Body</b>	Cast iron Grade 250
<b>Plug</b>	Gunmetal 1400 LG2 (DN50...200), Brass CW614N (DN25...40)
<b>Seat</b>	Gunmetal 1400 LG2 (DN50...200), Cast iron Grade 250 (DN25...40)
<b>Stem</b>	Stainless steel 1.4305
<b>Packing box</b>	Brass CW614N
<b>Bonnet</b>	Brass CW614N
<b>O-rings</b>	EPDM
<b>Packing</b>	Aramid reinforced rubber

## 2-way valves

Article	Kvs	Nominal diameter
VFFG225-6,3	6.3 m <sup>3</sup> /h	DN25
VFFG225-10	10 m <sup>3</sup> /h	DN25
VFFG232-10	10 m <sup>3</sup> /h	DN32
VFFG232-16	16 m <sup>3</sup> /h	DN32
VFFG240-16	16 m <sup>3</sup> /h	DN40
VFFG240-25	25 m <sup>3</sup> /h	DN40
VFFG250-31,5	31.5 m <sup>3</sup> /h	DN50
VFFG250-40	40 m <sup>3</sup> /h	DN50
VFFG265-50	50 m <sup>3</sup> /h	DN65
VFFG265-63	63 m <sup>3</sup> /h	DN65
VFFG280-80	80 m <sup>3</sup> /h	DN80
VFFG280-100	100 m <sup>3</sup> /h	DN80
VFFG2100-125	125 m <sup>3</sup> /h	DN100
VFFG2100-160	160 m <sup>3</sup> /h	DN100
VFFG2125-215	215 m <sup>3</sup> /h	DN125
VFFG2150-310	310 m <sup>3</sup> /h	DN150
VFFG2200-550	550 m <sup>3</sup> /h	DN200

### MAIN OFFICE BRESSANONE

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

VFFG2/VFFG3

## Combination options (valves and actuators) and differential pressure

Type	$\Delta P_s$ (SE5...)	$\Delta P_{max}$ (SE5...)	$\Delta P_s$ (SE10...)	$\Delta P_{max}$ (SE10...)	$\Delta P_s$ (SE18...)	$\Delta P_{max}$ (SE18...)	$\Delta P_s$ (SE25...)	$\Delta P_{max}$ (SE25...)
VFFG225-6.3	700 kPa	400 kPa	1300 kPa	400 kPa	N/A	N/A	N/A	N/A
VFFG225-10	700 kPa	400 kPa	1300 kPa	400 kPa	N/A	N/A	N/A	N/A
VFFG232-10	450 kPa	350 kPa	800 kPa	350 kPa	N/A	N/A	N/A	N/A
VFFG232-16	450 kPa	350 kPa	800 kPa	350 kPa	N/A	N/A	N/A	N/A
VFFG240-16	300 kPa	300 kPa	550 kPa	300 kPa	N/A	N/A	N/A	N/A
VFFG240-25	300 kPa	300 kPa	550 kPa	300 kPa	N/A	N/A	N/A	N/A
VFFG250-31,5	200 kPa*	200 kPa*	350 kPa*	350 kPa*	700 kPa	450 kPa	1000 kPa	450 kPa
VFFG250-40	200 kPa*	200 kPa*	350 kPa*	350 kPa*	700 kPa	450 kPa	1000 kPa	450 kPa
VFFG265-50	100 kPa*	100 kPa*	200 kPa*	200 kPa*	350 kPa	350 kPa	700 kPa	400 kPa
VFFG265-63	100 kPa*	100 kPa*	200 kPa*	200 kPa*	350 kPa	350 kPa	700 kPa	400 kPa
VFFG280-80	N/A	N/A	N/A	N/A	300 kPa	300 kPa	400 kPa	350 kPa
VFFG280-100	N/A	N/A	N/A	N/A	300 kPa	300 kPa	400 kPa	350 kPa
VFFG2100-125	N/A	N/A	N/A	N/A	200 kPa	200 kPa	250 kPa	200 kPa
VFFG2100-160	N/A	N/A	N/A	N/A	200 kPa	200 kPa	250 kPa	200 kPa
VFFG2125-215	N/A	N/A	N/A	N/A	100 kPa	100 kPa	150 kPa	120 kPa
VFFG2150-310	N/A	N/A	N/A	N/A	80 kPa	80 kPa	120 kPa	100 kPa
VFFG2200-550	N/A	N/A	N/A	N/A	150 kPa	150 kPa	200 kPa	200 kPa

Item 02133005 is required in order to use the SE5... or SE10... actuators. Actuators together with the DN50 or DN65 valves. The washer must be ordered separately

$\Delta P_s$  constitutes the closing pressure at which the linear actuator can still seal the fitting tightly, with reference to the particular leakage class.

$\Delta P_{max}$  constitutes the maximum permitted pressure difference for long service life across control path A – AB, with reference to the whole range of opening.

VFFG2200-550 has a balanced plug in order to achieve a higher max. differential pressure.

## 3-way valves

Article	Kvs	Nominal diameter
VFFG325-6,3	6.3 m <sup>3</sup> /h	DN25
VFFG325-10	10 m <sup>3</sup> /h	DN25
VFFG332-10	10 m <sup>3</sup> /h	DN32
VFFG332-16	16 m <sup>3</sup> /h	DN32
VFFG340-16	16 m <sup>3</sup> /h	DN40
VFFG340-25	25 m <sup>3</sup> /h	DN40
VFFG350-31,5	31.5 m <sup>3</sup> /h	DN50
VFFG350-40	40 m <sup>3</sup> /h	DN50
VFFG365-50	50 m <sup>3</sup> /h	DN65
VFFG365-63	63 m <sup>3</sup> /h	DN65
VFFG380-80	80 m <sup>3</sup> /h	DN80
VFFG380-100	100 m <sup>3</sup> /h	DN80
VFFG3100-125	125 m <sup>3</sup> /h	DN100
VFFG3100-160	160 m <sup>3</sup> /h	DN100
VFFG3125-215	215 m <sup>3</sup> /h	DN125
VFFG3150-310	310 m <sup>3</sup> /h	DN150
VFFG3200-550	550 m <sup>3</sup> /h	DN200

### MAIN OFFICE BRESSANONE

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

VFFG2/VFFG3

## Combination options (valves and actuators) and differential pressure

Type	$\Delta P_s$ (SE5...)	$\Delta P_{max}$ (SE5...)	$\Delta P_s$ (SE10...)	$\Delta P_{max}$ (SE10...)	$\Delta P_s$ (SE18...)	$\Delta P_{max}$ (SE18...)	$\Delta P_s$ (SE25...)	$\Delta P_{max}$ (SE25...)
VFFG325-6.3	700 kPa	400 kPa	1300 kPa	400 kPa	N/A	N/A	N/A	N/A
VFFG325-10	700 kPa	400 kPa	1300 kPa	400 kPa	N/A	N/A	N/A	N/A
VFFG332-10	450 kPa	350 kPa	800 kPa	350 kPa	N/A	N/A	N/A	N/A
VFFG332-16	450 kPa	350 kPa	800 kPa	350 kPa	N/A	N/A	N/A	N/A
VFFG340-16	300 kPa	300 kPa	550 kPa	300 kPa	N/A	N/A	N/A	N/A
VFFG340-25	300 kPa	300 kPa	550 kPa	300 kPa	N/A	N/A	N/A	N/A
VFFG350-31,5	200 kPa*	200 kPa*	350 kPa*	350 kPa*	700 kPa	450 kPa	1000 kPa	450 kPa
VFFG350-40	200 kPa*	200 kPa*	350 kPa*	350 kPa*	700 kPa	450 kPa	1000 kPa	450 kPa
VFFG365-50	100 kPa*	100 kPa*	200 kPa*	200 kPa*	350 kPa	350 kPa	700 kPa	400 kPa
VFFG365-63	100 kPa*	100 kPa*	200 kPa*	200 kPa*	350 kPa	350 kPa	700 kPa	400 kPa
VFFG380-80	N/A	N/A	N/A	N/A	300 kPa	300 kPa	400 kPa	350 kPa
VFFG380-100	N/A	N/A	N/A	N/A	300 kPa	300 kPa	400 kPa	350 kPa
VFFG3100-125	N/A	N/A	N/A	N/A	200 kPa	200 kPa	250 kPa	200 kPa
VFFG3100-160	N/A	N/A	N/A	N/A	200 kPa	200 kPa	250 kPa	200 kPa
VFFG3125-215	N/A	N/A	N/A	N/A	100 kPa	100 kPa	150 kPa	120 kPa
VFFG3150-310	N/A	N/A	N/A	N/A	80 kPa	80 kPa	120 kPa	100 kPa
VFFG3200-550	N/A	N/A	N/A	N/A	50 kPa	50 kPa	70 kPa	70 kPa

Item 02133005 is required in order to use the SE5... or SE10... actuators. Actuators together with the DN50 or DN65 valves. The washer must be ordered separately

$\Delta P_s$  constitutes the closing pressure at which the linear actuator can still seal the fitting tightly, with reference to the particular leakage class.

$\Delta P_{max}$  constitutes the maximum permitted pressure difference for long service life across control path A – AB, with reference to the whole range of opening.

---

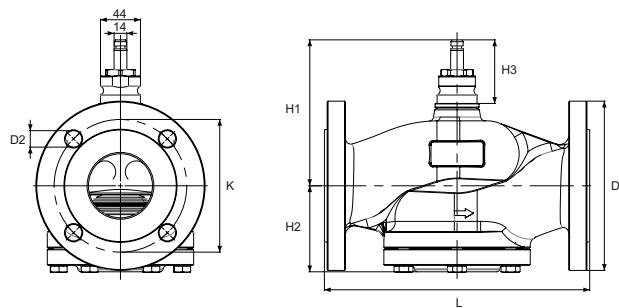
**MAIN OFFICE BRESSANONE**

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

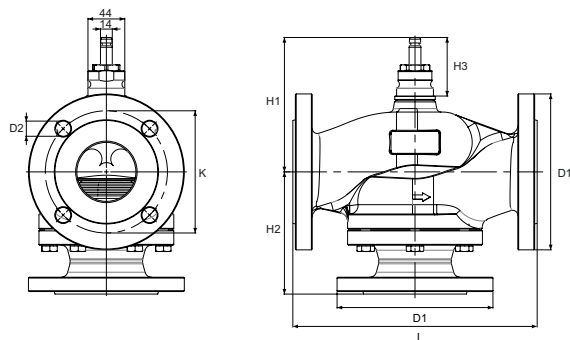
VFFG2/VFFG3

## Dimensions



Measurements in mm unless otherwise specified.

Type	DN	L	H1	H2	H3 <sup>1</sup>	Stroke <sup>2</sup>	ØD1	ØD2	ØK
VFFG225-6.3	25	160	125	106	70	20	115	14 (x4)	85
VFFG225-10	25	160	125	106	70	20	115	14 (x4)	85
VFFG232-10	32	180	130	118	70	20	140	18 (x4)	100
VFFG232-16	32	180	130	118	70	20	140	18 (x4)	100
VFFG240-16	40	200	135	130	70	20	150	18 (x4)	110
VFFG250-31,5	50	230	155	71	70	20	165	18 (x4)	125
GF240-25	40	200	135	130	70	20	150	18 (x4)	110
VFFG250-40	50	230	155	71	70	20	165	18 (x4)	125
VFFG265-50	65	290	160	94	70	20	185	18 (x4)	145
VFFG265-63	65	290	160	94	70	20	185	18 (x4)	145
VFFG280-80	80	310	168	94	70	40	200	18 (x8)	160
VFFG280-100	80	310	168	94	70	40	200	18 (x8)	160
VFFG2100-125	100	350	179	134	70	40	220	18 (x8)	180
VFFG2100-160	100	350	179	134	70	40	220	18 (x8)	180
VFFG2125-215	125	400	180	147	70	40	250	18 (x8)	210
VFFG2150-310	150	480	205	155	70	40	285	22 (x8)	240
VFFG2200-550	200	600	255	176	70	40	340	22 (x12)	295



Measurements in mm unless otherwise specified.

Type	DN	L	H1	H2	H3 <sup>1</sup>	Stroke <sup>2</sup>	ØD1	ØD2	ØK
VFFG325-6.3	25	160	125	106	70	20	115	14 (x4)	85
VFFG325-10	25	160	125	106	70	20	115	14 (x4)	85
VFFG332-10	32	180	130	118	70	20	140	18 (x4)	100
VFFG332-16	32	180	130	118	70	20	140	18 (x4)	100
VFFG340-16	40	200	135	130	70	20	150	18 (x4)	110
VFFG340-25	40	200	135	130	70	20	150	18 (x4)	110
VFFG350-31,5	50	230	155	115	70	20	165	18 (x4)	125
VFFG350-40	50	230	155	115	70	20	165	18 (x4)	125
VFFG365-50	65	290	160	145	70	20	185	18 (x4)	145
VFFG365-63	65	290	160	145	70	20	185	18 (x4)	145
VFFG380-80	80	310	168	155	70	40	200	18 (x8)	160
VFFG380-100	80	310	168	155	70	40	200	18 (x8)	160
VFFG3100-125	100	350	179	175	70	40	220	18 (x8)	180
VFFG3100-160	100	350	179	175	70	40	220	18 (x8)	180
VFFG3125-215	125	400	180	200	70	40	250	18 (x8)	210
VFFG3150-310	150	480	205	240	70	40	285	22 (x8)	240
VFFG3200-550	200	600	255	300	70	40	340	22 (x12)	295

<sup>1</sup> Stem at depressed position

<sup>2</sup>  $H3_{max} - H3_{min} = \text{stroke}$

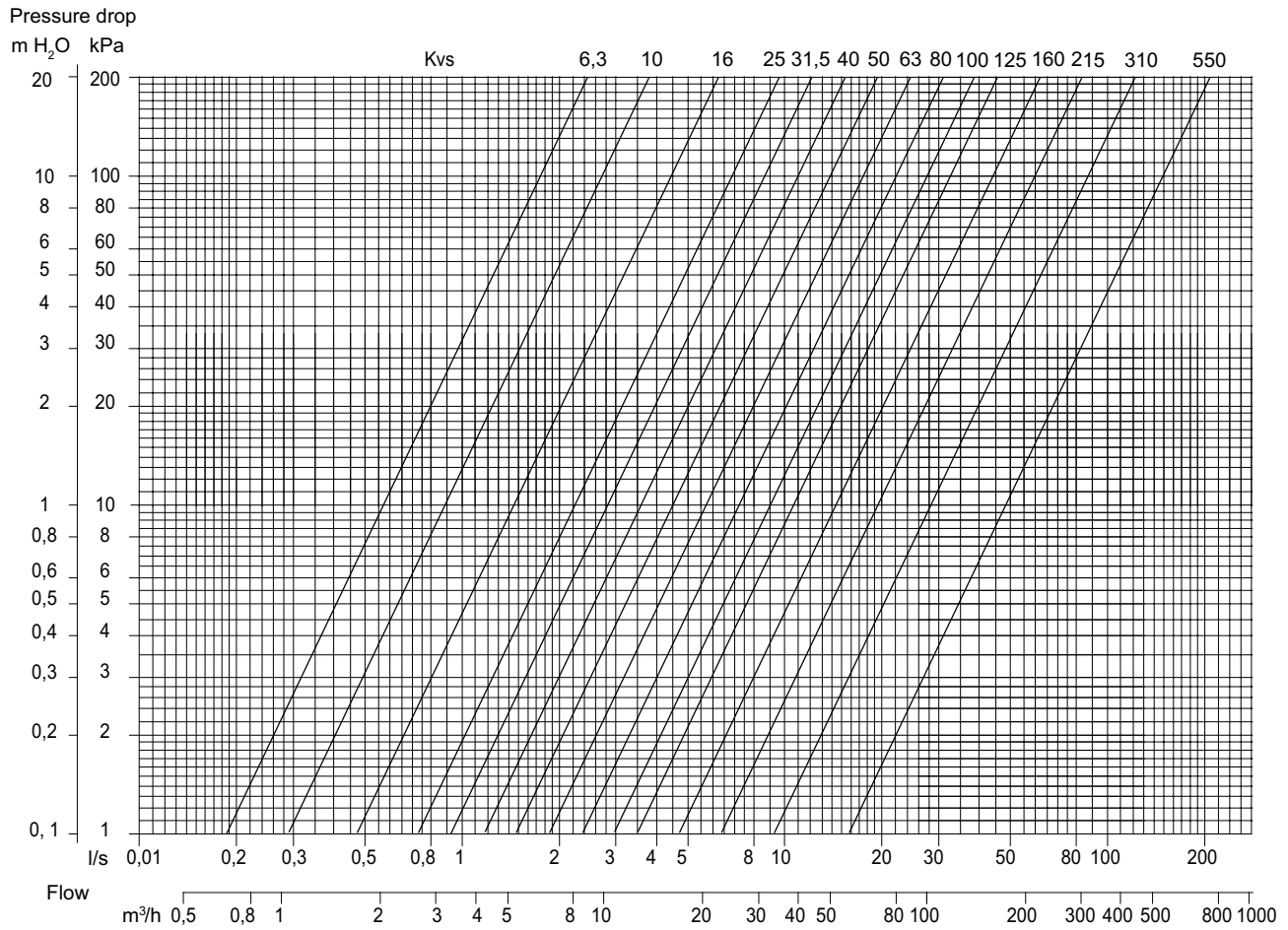
### MAIN OFFICE BRESSANONE

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

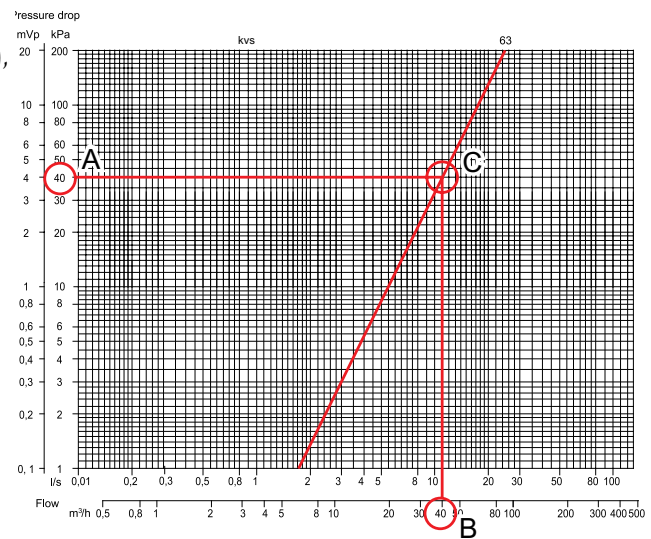
VFFG2/VFFG3

# Pressure drop curves



## EXAMPLE, PRESSURE DROP CURVES

If the pressure drop is 40 kPa (A) and the flow is 40 m<sup>3</sup>/h (B), a valve with the kvs value 63 (C) is preferably selected. See the markings in the picture to the right.



### MAIN OFFICE BRESSANONE

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

VFFG2/VFFG3