

Butterfly Valves PN16

VKF45...



Butterfly valves with tight shut-off for fitting between two counter flanges PN6, PN10 or PN16. DN40...200, maintenance-free. For use with electric actuators.

Application

The VKF45... butterfly valves are universally applicable, either as control or shut-off valves in heating, ventilating and air conditioning installations. They are suitable for

- medium temperatures from –15 to +120°C
- operating pressures up to 1600 kPa (16 bar)
- open or sealed systems

Suitable media

- **Water**
 - Heating water, domestic water, cooling water
 - Drinking water, mains water, chilled water
 - Sea water, brine (on request)
 - Demineralised water
- **Water with additives**
 - Water with oxygen adsorbing additives
 - Water with glycol, max. 50% (for frost protection)
- **Steam:** Low pressure steam up to 110°C
- **Air**

Summary of Types

DN size mm	Type reference	k _{vs} - value m ³ /h	Δp _{max.} kPa ¹⁾	Velocity m/s ²⁾		Suitable mounting set
				water	air	
40	VKF45.40	50	1000			ASK35
50	VKF45.50	80	1000			
65	VKF45.65	200	1000			
80	VKF45.80	400	1000			
100	VKF45.100	760	1000	5,5	55	
125	VKF45.125	1000	600			
150	VKF45.150	2100	500			
200	VKF45.200	4000	300			

¹⁾ 100 kPa = 1 bar ≈ 10 mWG

²⁾ Recommended max. velocity when valve is fully open

Δp_{max.} = max. permissible differential pressure across closed valve (air bubble tight to DIN 3230)

k_{vs} = nominal flow value of valve in m³/h when valve is fully open and with a pressure drop of 100 kPa (1 bar)

Combination of Units

Suitable actuator

Type reference	Operating voltage	Running time	Mode of control
SQL35.00	230 V~	125 s	three-position

Suitable mounting set

The **ASK35** mounting set is required for the assembly of butterfly valve and actuator. For more detailed information refer to Data Sheet 4506.

Ordering

When ordering, please give product designation and type reference: E.g. **butterfly valve VKF45.50**.

The ASK35 mounting set is to be ordered together with actuator type SQL35.00; it is packed separately.

Technical Data

Tightness	conforming to DIN 3230 sheet 3 (air bubble tight)
Angular rotation	90°
Flange for pipe connections	ISO 7005 for PN16
Effective width	DIN 3202 K ₁
Flange for actuator	ISO 5211
Weight	see «Dimensions» (table)

Design Features

Butterfly valve, actuator and mounting set are supplied separately.

Butterfly valve: Circular shape, body made of GG25 cast iron with vulcanised sealing member made of ethylene-propylene-rubber (EPDM), with rotary butterfly, air bubble tight. Butterfly and spindle are made of stainless steel. A double O-ring is used to seal the spindle.

The rubber seal also serves as a flange seal. The medium does not get into contact with the cast iron body. The position of the butterfly is indicated by a groove in the spindle.

Mounting set: Consisting of console, coupling mechanism with torsion spring, adaptor and fixing material. The torsion spring ensures tight shut-off.

Actuator: Mounted onto the butterfly valve by means of the mounting set. Stickers for «open» and «closed» are included with the mounting set.

Application Guide

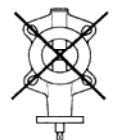
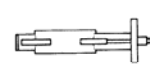
The direction of flow can be either way.

Mounting and Installation Guide

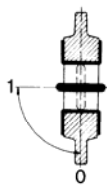
Mounting positions:



Permitted



Not permitted



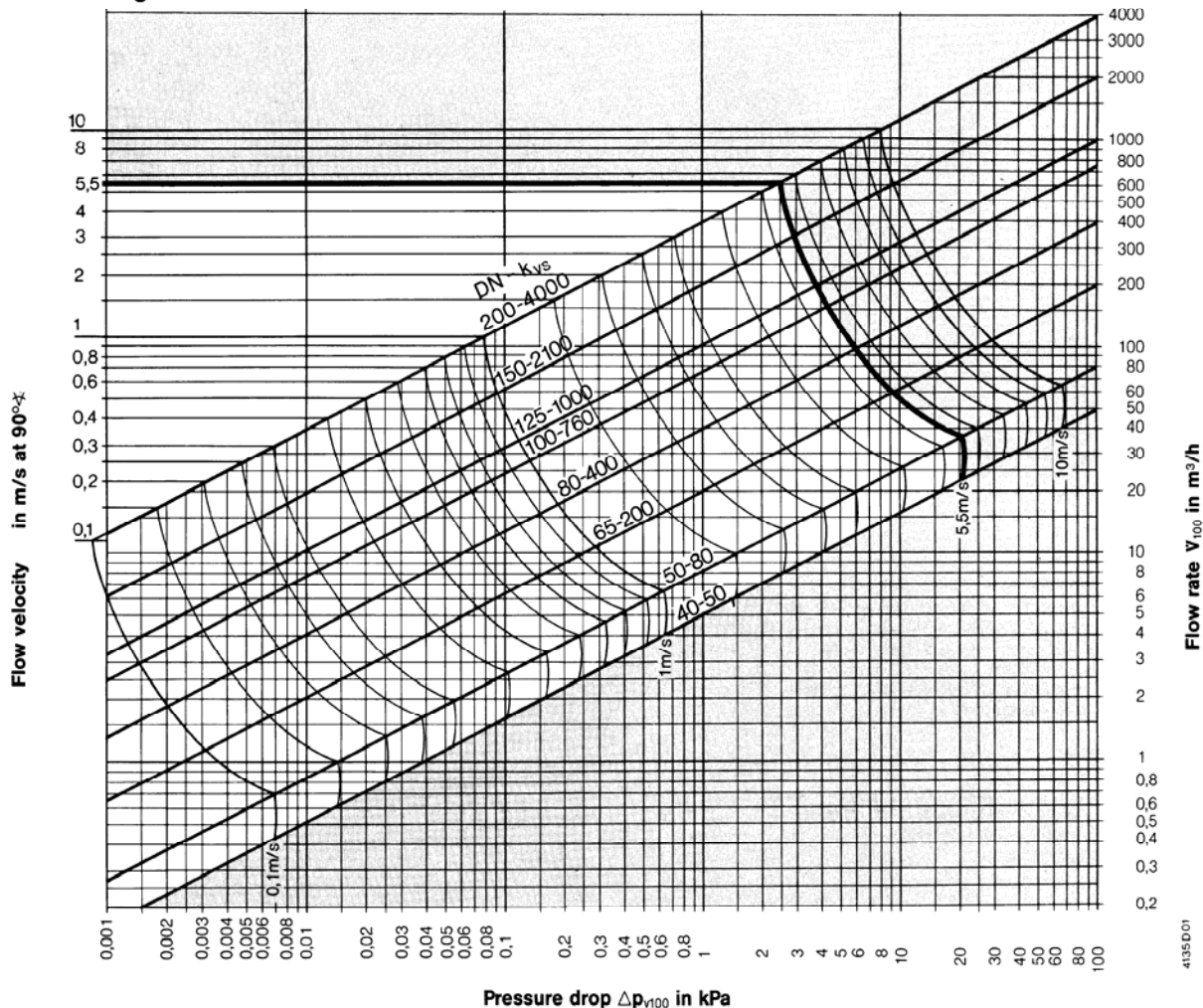
Butterfly valve in position 0 = FULLY CLOSED

Opening in clockwise direction.
Closing in anti-clockwise direction.
Mounting Instructions are supplied with each mounting set.

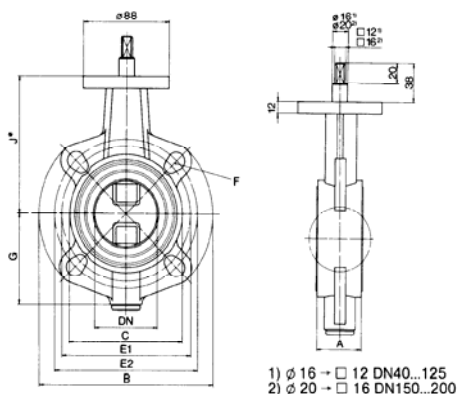
Commissioning Guide

When commissioning the installation, the direction the butterfly moves is to be checked:
Opening of butterfly: clockwise rotation } as seen from the actuator
Closing of butterfly: anti-clockwise }
If the direction the butterfly travels is not correct, the connecting wires Y1 and Y2 to the actuator must be interchanged (also refer to «Mounting and Installation Advice»).

Valve Sizing



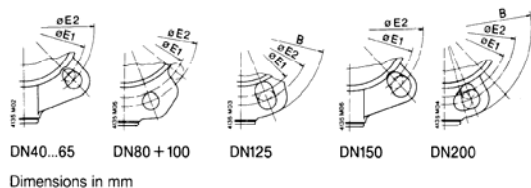
Dimensions



Type reference	DN size mm	A	B \varnothing	C \varnothing	G	J	$\varnothing E1$	PN6 F	PN10 $\varnothing E2$ F	PN16 $\varnothing E2$ F	Weight kg
VKF45.40	40	33	140	82	60,5	113	100	M12(4x)		110 M16(4x)	2,2
VKF45.50	50	43	157	95	79	126	110	M12(4x)		125 M16(4x)	3,0
VKF45.65	65	46	177	115	87,5	134,5	130	M12(4x)		145 M16(4x)	3,6
VKF45.80	80	46	192	130	98,5	157	150	M16(4x)		160 M16(8x)	4,0
VKF45.100	100	52	220	150	109,5	167,5	170	M16(4x)		180 M16(8x)	5,0
VKF45.125	125	56	250	180	122	180	200	M16(8x)		210 M16(8x)	8,8
VKF45.150	150	56	280	206	145	203	225	M16(8x)		240 M20(8x)	8,9
VKF45.200	200	60	335	250	170,5	228,5	280	M16(8x)	295 M20(8x)	295 M20(12x)	11,8

B = dimension butterfly protrudes

A conforming to DIN 3202 K₁



* Mounting surface for actuator

Total height of SQL35.00 actuator complete with ASK35 mounting set = 109 + 125 = 234 mm

We reserve the right to make changes and improvements in our products which may affect the accuracy of the information contained in this leaflet.

