

V5421B

BUTTERFLY VALVES

SPECIFICATION DATA



GENERAL

In combination with rotary actuators VMM/M6061A,L and VRM/M7061E as well as (for DN200) damper actuator M6422L1003, the butterfly valves V5421B are suitable for heating and cooling applications as well as boiler management systems.

FEATURES

- Suitable for M6061, M7061, and M6422L1003 actuators
- No separate linkage required
- Easy mounting
- Centric Butterfly Valve with elastomer liner
- Wide DN-range
- For heating water containing up to 50% glycol
- Corrosion-resistant design

SPECIFICATIONS

Valve sizes	DN25...DN200
Nominal pressure	PN6, PN10, or PN16 bar
Differential pressure	See section "Models" on page 2
Leakage rate	bubble-tight as per DIN EN 12266-1 (DIN 3230/3)
Temperature range	See section "Models" on page 2
Body construction	Wafer form
Valve housing	Ductile iron GGG40, blue
Liner	EPDM
Rotary disc	stainless steel 1.4581 (DN25-80) ductile iron GGG40 (DN100-200) coating: DeltaMagni
Shaft	Stainless steel 1.4021
Linkage	Cast stainless steel
Dimensions, weights	See Fig. 2.
Suitable actuator models	See section "Models" on page 2

MODELS

DN	K _{vs} (m ³ /h)	pressure Δp (kPa)	suitable temp. range	order no.	suitable actuators		
					230 Vac floating	24 Vac floating	24 Vac, 0...10 V
25	26	1600	-10...+120 °C	V5421B1009	VMM20/M6061L10 27	VMM20- 24/M6061A1021	VRM20/M7061E10 20
32	26	1600	-10...+120 °C	V5421B1017	VMM20/M6061L10 27	VMM20- 24/M6061A1021	VRM20/M7061E10 20
40	50	1600	-10...+120 °C	V5421B1025	VMM20/M6061L10 27	VMM20- 24/M6061A1021	VRM20/M7061E10 20
50	116	1000	-10...+120 °C	V5421B1033	VMM20/M6061L10 27	VMM20- 24/M6061A1021	VRM20/M7061E10 20
65	259	1000	-10...+120 °C	V5421B1041	VMM20/M6061L10 27	VMM20- 24/M6061A1021	VRM20/M7061E10 20
80	377	1000	-10...+120 °C	V5421B1058	VMM30/M6061L10 35	VMM30- 24/M6061A1039	--
100	763	800	-10...+120 °C	V5421B1066	VMM40/M6061L10 43	VMM40- 24/M6061A1047	--
125	1030	600	0...+90 °C	V5421B1074	VMM40/M6061L10 43	VMM40- 24/M6061A1047	--
150	1790	400	0...+90 °C	V5421B1082	VMM40/M6061L10 43	VMM40- 24/M6061A1047	--
200	3460	300	0...+90 °C	V5421B1090	M6422L1003	--	--

HYDRAULIC CHARACTERISTICS

Table 1 shows the K_v values at different opening angles.

Table 1. K_v versus opening angle

DN	K _v -value (m ³ /h) at opening angle							
	20°	30°	40°	50°	60°	70°	80°	90°
25 32	--	1	2.5	6.5	11.6	17.6	22.2	26
40	--	1.1	5.5	14.4	26.7	39.5	48.3	49.6
50	--	4.2	13	26.3	50.3	86.9	108.5	116
65	0.4	8.8	22.9	43.3	78.5	143.6	223.3	259
80	1.1	14.2	39.8	75.5	128.6	211.2	330	337
100	10.5	45.3	87.9	155.1	267.2	481.4	711.3	763
125	11.7	61.6	122.3	222.3	373.8	589.5	899.5	1030
150	25.2	83.9	177.4	319.9	567.4	971.5	1638	1790
200	45.8	151.1	314.6	586.5	1021	1793	3126	3460

OPERATION

The butterfly valve can shut on/off liquid flow by turning the rotary disc 0...90° rotary angle. Preferred use of these valves in boiler cascade systems where boiler supply flow is to shut off in case of non-heat requirements.

CAUTION

For safety reason, do not leave the valve without actuator while the line is under pressure.

DIMENSIONS

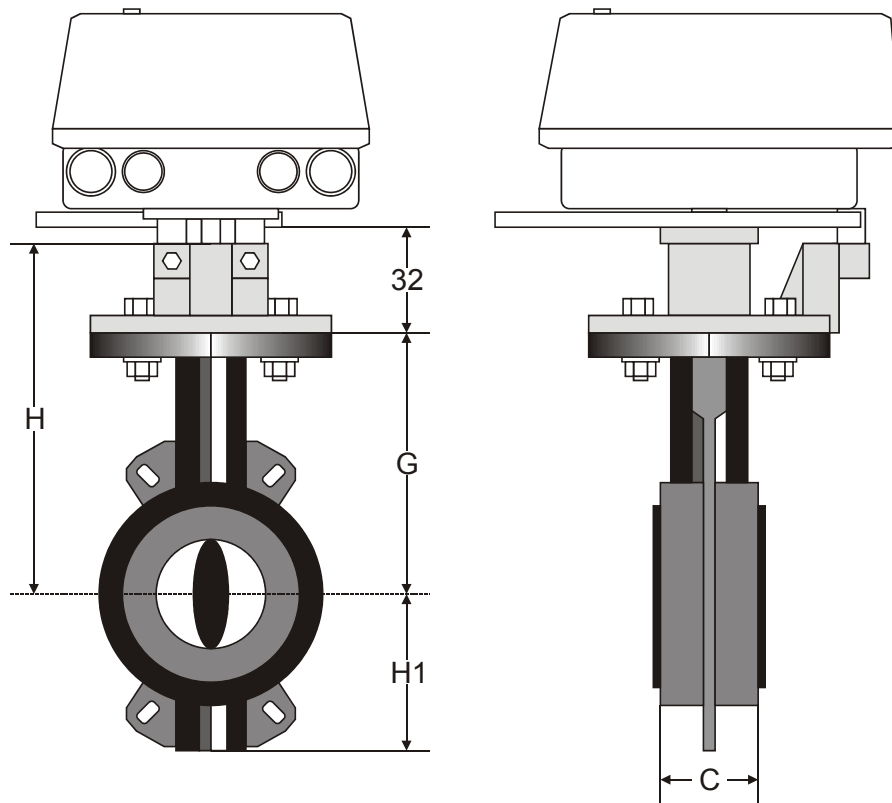


Fig. 1. Dimensions

Table 2. Dimensions

order no.	DN	dimensions (in mm)				weight (kg)	
		H	H1	C	G	valve	valve + actuator
V5421B1009	25	153	58	33	128	1.7	3.2
V5421B1017	32	153	58	33	128	1.7	3.2
V5421B1025	40	159	66	33	134	2.0	3.5
V5421B1033	50	165	69	43	140	2.4	3.9
V5421B1041	65	175	81	46	150	3.0	4.5
V5421B1058	80	183	100	46	158	3.6	5.1
V5421B1066	100	204	109	52	179	4.4	5.9
V5421B1074	125	221	124	56	196	7.0	8.5
V5421B1082	150	237	140	56	212	9.0	10.5
V5421B1090	200	--	167	60	246	12.6	14.3

MOUNTING

Install the actuated valve in the pipe according the following steps (see also Fig. 2).

1. Spread the valve's flanges to facilitate installation. The valve's disc must be partially open.
2. Set all stay-bolts while keeping the valve's disc slightly open and without tightening the nuts.
3. Open the valve's disc completely. Ensure that the piping is aligned. Tighten diagonally opposite the nuts until the flanges are in contact with the body of the valve. Never use gaskets or grease. Never weld the flanges after the valve has been installed.

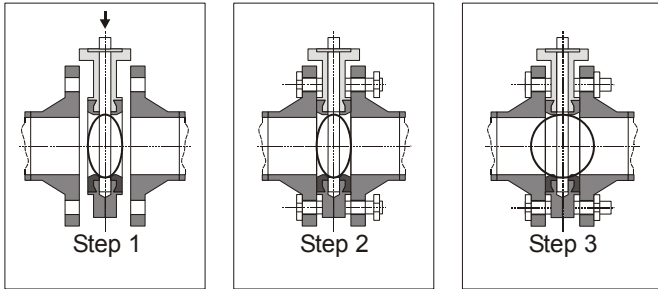


Fig. 2. Installing the valve

Bolting

Number of bolts and nuts depends on nominal pressure PN, see Table 3.

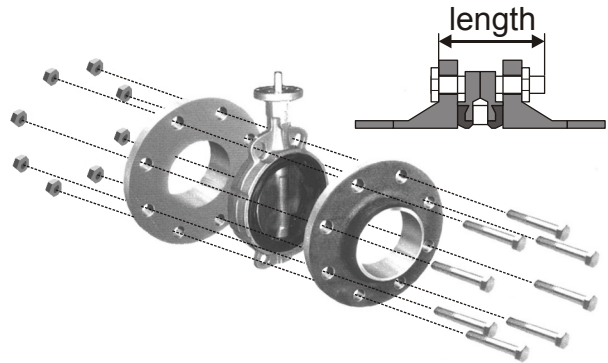


Fig. 3. Bolting

Table 3. Bolts and nuts required for installation

DN	PN6		PN10		PN16	
	bolts	n	bolts	n	bolts	n
25	M10x80	4	M12x90	4	M12x90	4
32	M12x80	4	M16x90	4	M16x90	4
40	M12x80	4	M16x90	4	M16x90	4
50	M12x90	4	M16x90	4	M16x100	4
65	M12x90	4	M16x110	4	M16x110	4
80	M16x100	4	M16x110	8	M16x110	8
100	M16x110	4	M16x120	8	M16x120	8
125	M16x120	8	M16x130	8	M16x130	8
150	M16x120	8	M20x130	8	M20x130	8
200	M16x130	8	M20x140	8	M20x140	12

SPARE PARTS

- Link adapters for blue V5421B (DN25-150)
- Universal console for blue V5421B (DN25-150)

VCU-SET
VCO2