V6001
Butterfly Valve

Application
These valves are suitable for heating and conditioning (HVAC).

For in-line and end of line installation with frequent actuation; the integrated support, in accordance with ISO 5211, allows easy mounting of a wide range of actuators and drives.

Approvals
- CE
- In conformity with directive 2014/68/UE (ex 97/23/CE PED).
- Face-to-face: EN 558/1-20
- Flanges: EN 1092 ISO 7005
- Design: EN 593, EN12516, EN 12570
- Marking: EN 19
- Testing: 100% testing in accordance with EN 12266

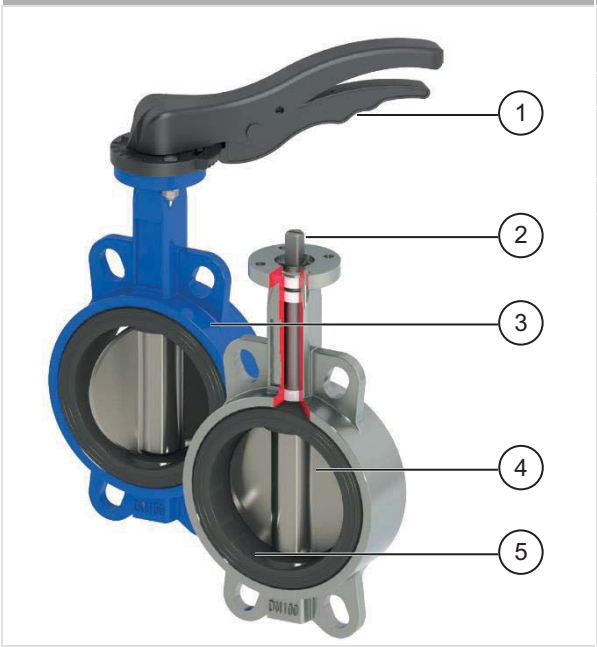
Special Features
- Suitable for VMM and VRM actuators
- Easy mounting
- Lockable operation lever
- Removable bonnet for inspection and maintenance
- Wide DN-range
- For HVAC usage
- Corrosion-resistant design

Technical Data

Pressure values	
Nominal static pressure:	PN10, PN16
Specifications	
Body construction:	Waffer
Valve size:	DN25 - DN400
Temperature range:	-10 to 120°C

Note: Not suitable for steam

Construction

Overview		Components	Materials
	**1**	Lever / Handwheel with gearbox	Lever DN25-100 Aluminium Handwheel with gearbox DN125-DN400 EN GJL 25
	2	Stem	AISI 420
	3	Body	Ductile iron Fusion bonded epoxy paint
	4	Bonnet gasket	Nickel plated ductile iron EN GJS 400-15
	5	Liner	EPDM

Method of 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.

Installation Guidelines

Setup requirements

- Avoid inclinations, torques and non-alignments of the piping which could stress the butterfly valve once installed.
- Do not use the softest parts (handle, wheel) to lift the butterfly valve. The valve disc must be half open.
- Place the butterfly valve between two flanges. When placing the butterfly valve between flanges, make sure that there is enough space not to damage rubber. Do not install gaskets between Butterfly valve and flanges.
- Protruded sharp ends shall be strictly avoided as it causes damage on/off rubber seating surfaces of gasket.
- Do not install the butterfly valve on a rubber to rubber surface (e.g. expansion joints); the perfect installation shall be on rubber to metal surface.
- Do not place joints between flange and the butterfly valve – We recommend the use of flanges of the WELDING NECK type.
- When using flat flanges make sure the pipe is welded exactly edgewise with the flange.
- Centre the butterfly valve by bolting the body locator first. Tighten bolts and nuts in progressive and crosswise with bolting pressure evenly distributed until the contact between valve body and flange faces.
- Water hammers might cause damage and ruptures. Avoid inclination, twisting and misalignments of the piping which may subject the installed valve to excessive stresses. It is recommended that elastic joints be used in order to reduce such effects as much as possible
- The fluid turbulence may increase the wear and reduce the butterfly valve endurance. In order to reduce the instance it is recommended to install the butterfly valve at a distance equal to at least 1 time the DN upstream and 2-3 DN downstream of fittings and bends.
- In open position the butterfly valve shows a greater space occupied than the nominal face to face. You need to verify that there aren't interferences with other elements of the piping which could cause damages or malfunctions. In this case you need to set up a spacer to permit the right functioning.

Technical Characteristics

Maximum pressure

Fluids	Mounting	
	Between flanges	End of line
Non hazardous fluids	16 bar DN25-400	10 bar DN25-400
Water *	16 bar	16 bar

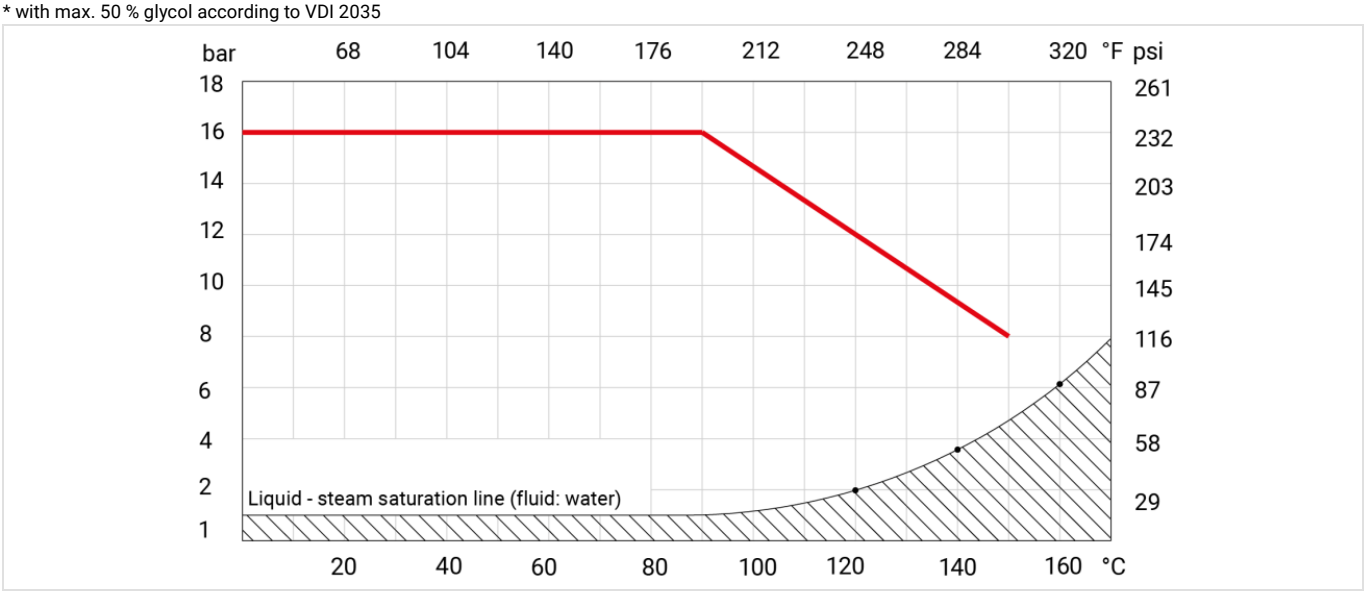
* For supply, distribution and discharge of water (PED 2014/68/EU 1.1.2b) 2014/68/EU 1.1.2

* with max. 50 % glycol according to VDI 2035

Temperature

Temperature	Min °C	Max °C	
		continuous	peak
EPDM	-10	120	130

NB: the maximum working pressure decreases while the temperature increases; please refer to “pressure/temperature” chart

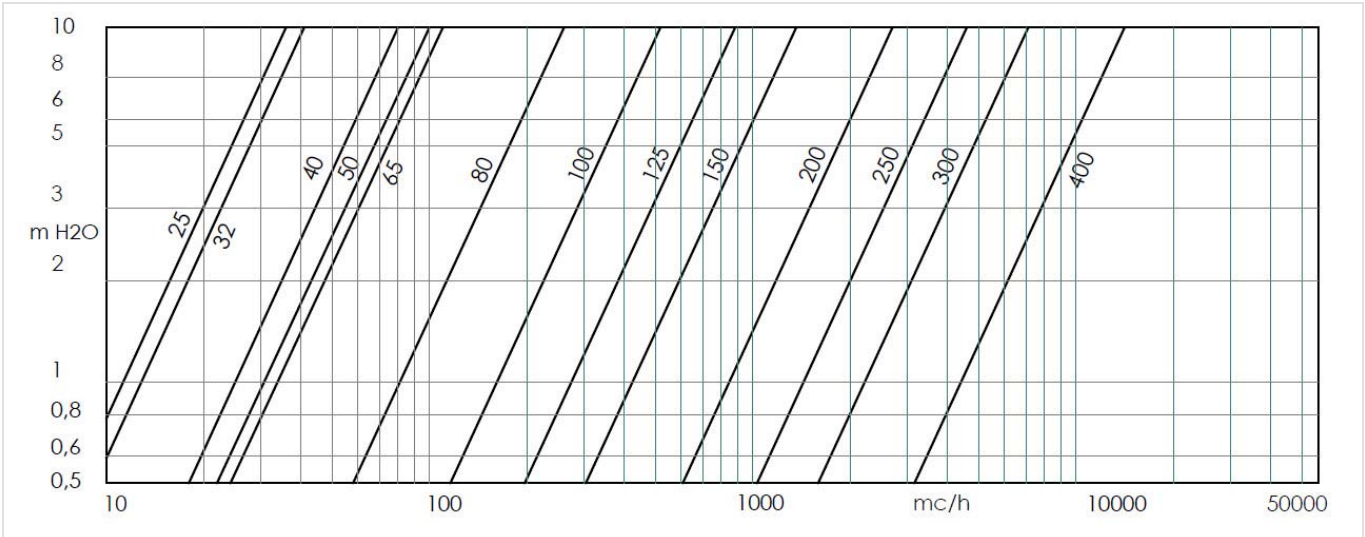


Pressure / temperature chart

RANGE NOT SUITABLE FOR STEAM. DO NOT use when temperature and pressure are below the liquid-steam saturation line (hatched)

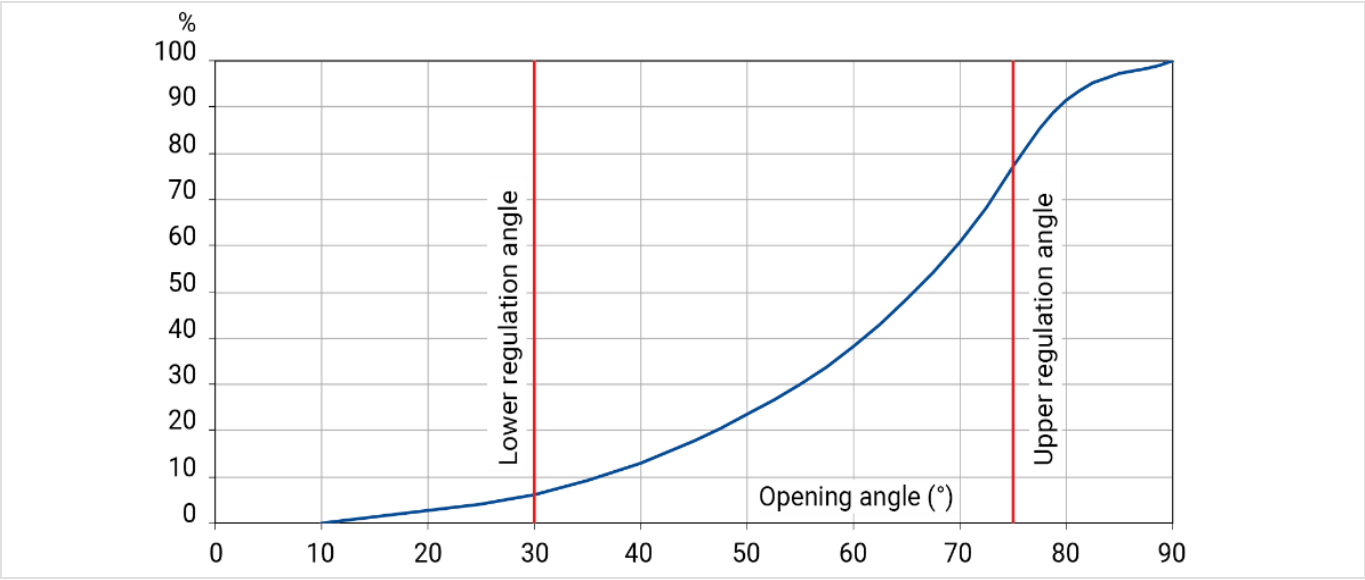
Head loss

Fluid: water (1 m H_2O = 0,098 bar) - Head loss with shutter fully opened



Flow rate / opening position chart

Flow percentage on the flow at full opening under the same loss of head.



Working range

Refer also to “Installation guidelines”: Measuring the flow rate

k_V-value (m^3/h) at opening angle 90°	DN												
	25	32	40	50	65	80	100	125	150	200	250	300	400
	14.2	22.5	79	99	108	261	518	883	1364	2716	4611	7124	14152

Operating Torque

Torque [Nm]	DN												
Differential pressure [bar]	25	32	40	50	65	80	100	125	150	200	250	300	400
3	2.9	4.7	7.8	11.3	17	23	33	48	68	120	189	290	481
6	3.1	5.1	8.4	12	18	25	36	54	78	134	212	316	551
10	3.3	5.4	8.8	13	20	26	40	61	88	148	234	342	622
16	3.4	5.7	9.2	13	21	28	44	68	99	162	257	367	850

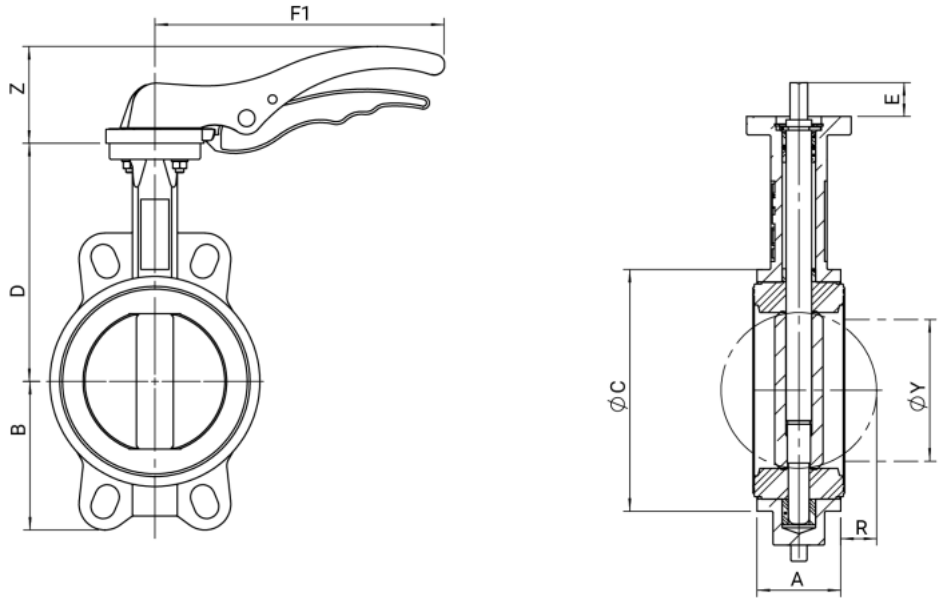
Note: In order to choose the right actuator, we recommend multiplying the operating torque figure by a safety coefficient, K=1.5

Recommended flange types

Norms	Type	
EN 1092-1 PN6/10/16	Type 11	weld neck
	Type 21	integral
	Type 02 + 35	loose plate with weld ring neck
	Type 02 + 36	loose plate with pressed collar
	Type 04 + 34	loose plate with weld neck collar
ANSI B16.1#150° ANSI B16.5#150°		flat face
		raised face
		lap joint

Dimensions

Overview



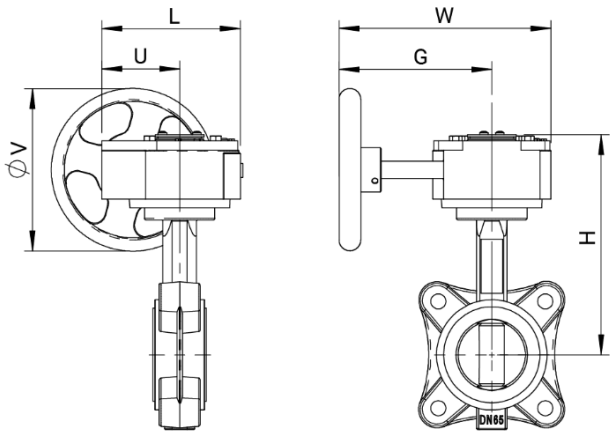
Item No.	DN	Dimensions								Weight [kg]
		A	ØC	D	B	F1	Z	R	ØY	
V60010025	25	33	65	104	51	192	68	-	-	1.7
V60010032	32	33	73	110	56	192	68	1	12	1.7
V60010040	40	33	82	116	63	170	50	5	27	1.8
V60010050	50	43	89	126	62	170	50	5	31	2.1
V60010065	65	46	102	136	69	170	50	9	45	2.4
V60010080	80	46	118	150	90	206	69	17	65	3.2
V60010100	100	52	150	170	106	206	69	26	90	4.3
V60010125	125	56	174	180	119	-	-	34	110	9.6
V60010150	150	56	205	200	131	-	-	50	146	11.1
V60010200	200	60	260	230	166	-	-	71	194	22.3
V60010250	250	68	318	266	202	-	-	91	241	32.8
V60010300	300	78	376	292	235	-	-	112	291	42
V60010400	400	102	471	360	292	-	-	144	379	60
V60011125	125	56	174	180	119	285	90	34	110	6.3
V60011150	150	56	205	200	131	285	90	50	146	7.8
V60011200	200	60	260	230	166	400	72	71	194	15
V60011250	250	68	318	266	202	530	72	91	241	23.5

Note: All dimensions in mm unless stated otherwise.

Note: Valves ≤ DN100 will be supplied with manual reducer

Valves > DN100 will be supplied with handwheel with gearbox

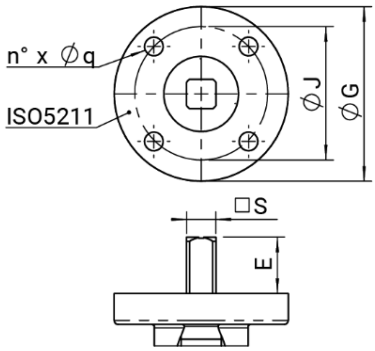
Overview



Item No.	DN	Dimensions					
		L	U	H	W	G	V
V60010125	125	130	77	242	119	170	150
V60010150	150	130	77	262	131	107	150
V60010200	200	180	104	308	166	260	300
V60010250	250	205	124	346	202	260	300
V60010300	300	205	124	372	235	260	300
V60010400	400	178	118	457	292	167	380

Note: All dimensions in mm unless stated otherwise.

Overview

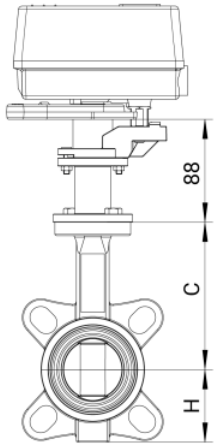


DN 25-400

DN	ISO 5211	G	J	n x q	S	E
25	F05	65	50	4 x 7	7	32
32	F05	65	50	4 x 7	7	32
40	F05	65	50	4 x 7	9	21
50	F05	65	50	4 x 7	9	21
65	F05	65	50	4 x 7	9	21
80	F05	65	50	4 x 7	11	21
100	F05	65	50	4 x 7	11	21
125	F07	90	70	4 x 9	14	27
150	F07	90	70	4 x 9	14	27
200	F10	125	102	4 x 11	17	27
250	F12	150	125	4 x 13	27	27
300	F12	150	125	4 x 13	27	27
400	F12	150	125	4 x 13	27	27

Note: All dimensions in mm unless stated otherwise.

Overview



Item No.			DN	Dimensions		Weight [kg]	
Valve	Adapter	Actuator		H	C	Valve	Valve + Actuator*
V60010040	V6001A01	VMM40	40	63	116	1.5	3.3
V60010050	V6001A01	VMM40	50	62	126	1.8	3.6
V60010065	V6001A01	VMM40	56	69	136	2.1	3.9
V60010080	V6001A02	VMM40	80	90	150	2.9	4.7
V600100100	V6001A02	VMM40	100	106	170	4.0	5.8

Note: All dimensions in mm unless stated otherwise.

* included weight of connection adapter

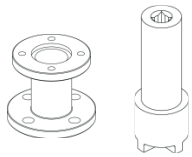
Ordering Information

The following tables contain all the information you need to make an order of an item of your choice.
When ordering, please always state the type, the ordering or the part number.

Options

DN	k_{VS}-value	Lever	Gear-box	Item No.
25	14.2	•	-	V60010025
32	22.5	•	-	V60010032
40	79	•	-	V60010040
50	99	•	-	V60010050
65	108	•	-	V60010065
80	261	•	-	V60010080
100	518	•	-	V60010100
125	883	-	•	V60010125
150	1364	-	•	V60010150
200	2716	-	•	V60010200
250	4611	-	•	V60010250
300	7124	-	•	V60010300
400	14152	-	•	V60010400
125	883	•	-	V60011125
150	1364	•	-	V60011150
200	2716	•	-	V60011200
250	4611	•	-	V60011250

Accessories

	Description		Dimension	Item No.
	**V6001A**	**Actuator connection adapter**		
			DN40 - DN65	V6001A01
			DN80 - DN100	V6001A02
	**VMM**	**Electric Actuator**		
			DN40 - DN100	VMM40

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Subject to change. EN0H-2152GE23 R0624

For more information
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