

CENTERLINE

Butterfly Valves Series VIA/RS



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Series VIA/RS

The preferred Industrial Valves for Critical Applications and Processes

Areas of application:

CENTERLINE Butterfly Valves Series VIA/RS are reliable, maintenance-free shutoff and control valves with permanently gas-tight seal. This valve has proved itself as a leakage-free and corrosion-resistant valve in various applications under most difficult operating conditions.

The safety and reliability of a valve is especially important when used for aggressive media – all components within the CENTERLINE Butterfly Valves Series VIA/RS have been designed accordingly.

Product features:

- Concentric design
- Soft seat design
- No pins needed to attach the disc to the shaft, only 2 parts in contact with the medium
- Replaceable body lining with firm back-up ring
- Permanently tight closure
- Optimum operation under vacuum conditions
- Standardized head flange for actuator adaption
- Materials for almost all media
- Short face-to-face dimension
- Maintenance-free version
- Blow-out proof shaft
- Direct mounting of actuators without any additional brackets

Over 70,000 Butterfly Valves Series VIA/RS are installed in 60 power generation sites and many sugar refineries worldwide. Used on the most arduous conditions, this is proof of the Series VIA/RS durability and reliability when in operation.

Main areas of application:

- Paper industry
- Sugar industry
- Power generation plants
- Chemical and petrochemical industry
- Steel industry
- Automotive industry
- Energy supply
- Shipbuilding industry
- Breweries
- Cement plants

Applications:

- Hot and cooling water
- Air-conditioning systems
- Drinking water systems
- Flue-gas desulphurisation
- Compressed air systems
- Vacuum systems
- Purification plants
- Sewage treatment plants
- Gas systems





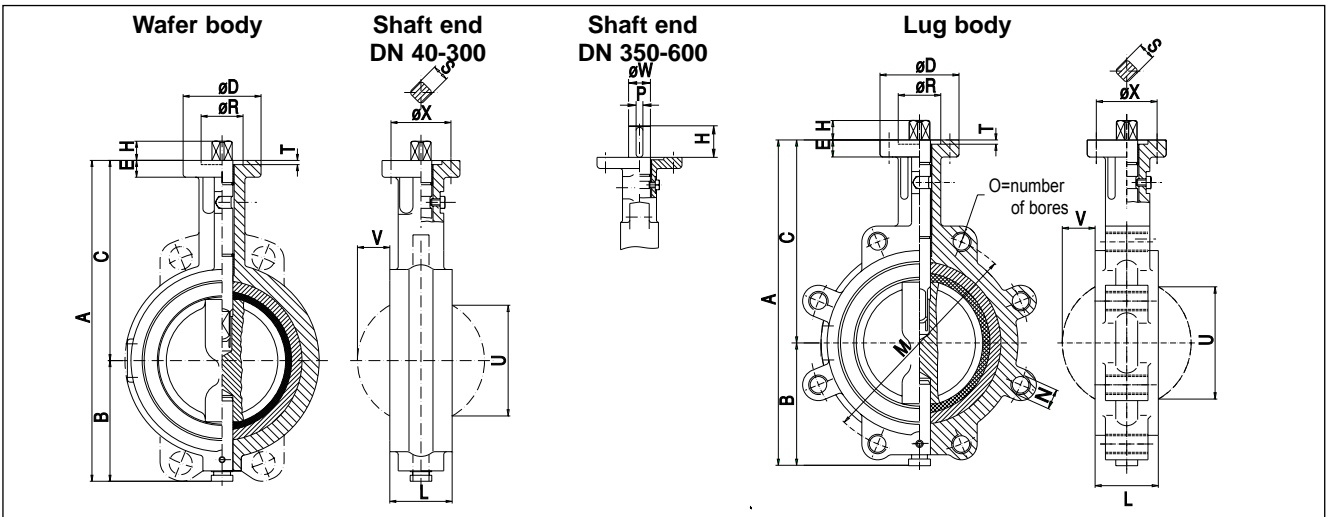
Technical data:

- DN 40 – 1200
- PN 6, 10, 16, ANSI 150
- Temperature range from -34°C (-29°F) to +150°C (+302°F)
- Tightness in accordance with DIN 3230-T3, leakage rate 1
- Face-to-face dimension in accordance with EN 558-1, series 20
- Mounting flange in accordance with ISO 5211
- Shaft end DN 50 – 300 with square in accordance with DIN 3337
- Insulation in accordance with heating system regulation possible
- DVGW – gas approval
- Quality assurance in accordance with ISO 9001



CENTERLINE-Butterfly Valves Series VIA/RS

Dimensions/ Weights DN 40-600



RS/DB-0006-GB/10.01/GP

Dimensions in mm, bare shaft

Mea- sure- ment	Pressure class	Size																	
		40 ³⁾ 1 1/2"	50 2"	65 2 1/2"	80 3"	100 4"	125 5"	150 6"	200 8"	250 10"	300 12"	350 14"	400 16"	450 18"	500 20"	600 24"			
A ¹⁾		202	202	225	240	268	292	320	386	462	542	627	677	743	793	934			
A ²⁾		202	202	225	251	286	314	342	401	462	542	-	-	-	-	-			
B		72	72	79	86	101	112	125	156	192	242	277	302	341	366	424			
C ¹⁾		130	130	146	154	167	180	195	230	270	300	350	375	402	427	510			
C ²⁾		130	130	146	165	185	202	217	245	270	300	-	-	-	-	-			
D ⁴⁾		65			90			125			175			210					
E ⁴⁾		14			15			18			23			25					
H ⁴⁾		16			19			24			65			80					
L ⁴⁾		43	43	46		52	56		60	68	78	78	102	114	127	154			
M	PN 10	110	125	145	160	180	210	240	295	350	400	460	515	565	620	725			
M	PN 16	110	125	145	160	180	210	240	295	355	410	470	525	585	650	770			
M	ANSI 150	-	120,7	139,7	152,4	190,5	215,9	241,3	298,5	362	431,3	476,3	539,8	577,9	635	749,3			
N	PN 10	M 16				M 20				M 20				M 24				M 27	
N	PN 16	M 16				M 20				M 24				M 27				M 30	M 33
N	ANSI 150	-	5/8"-11 UNC				3/4"-10 UNC				7/8"-9 UNC			1"-8 UNC		1 1/8"-7 UNC		1 1/4"-7 UNC	
O	PN 10	4			8			8		12		16		20					
O	PN 16	4			8			12		12		16		20					
O	ANSI 150	-	4			8			12			16		20					
P		-							14			20							
R		Ø35				Ø55				Ø70			Ø100			Ø130			
S ⁴⁾		□14-0,1				□17-0,1				□22-0,1			-						
T		3,5							5					7					
U		39	39	56	71	93	117	144	191	240	291	327	371	423	472	575			
V		7	7	13	19	27	37	49	70	90	111	129	141	162	181	221			
W		-							Ø45					Ø70					
X		Ø50/4 x Ø7				Ø70/4 x Ø9				Ø102/4 x Ø11			Ø140/4 x Ø18			Ø165/4 x Ø22 x Ø16			
		F05				F07				F10			F14						

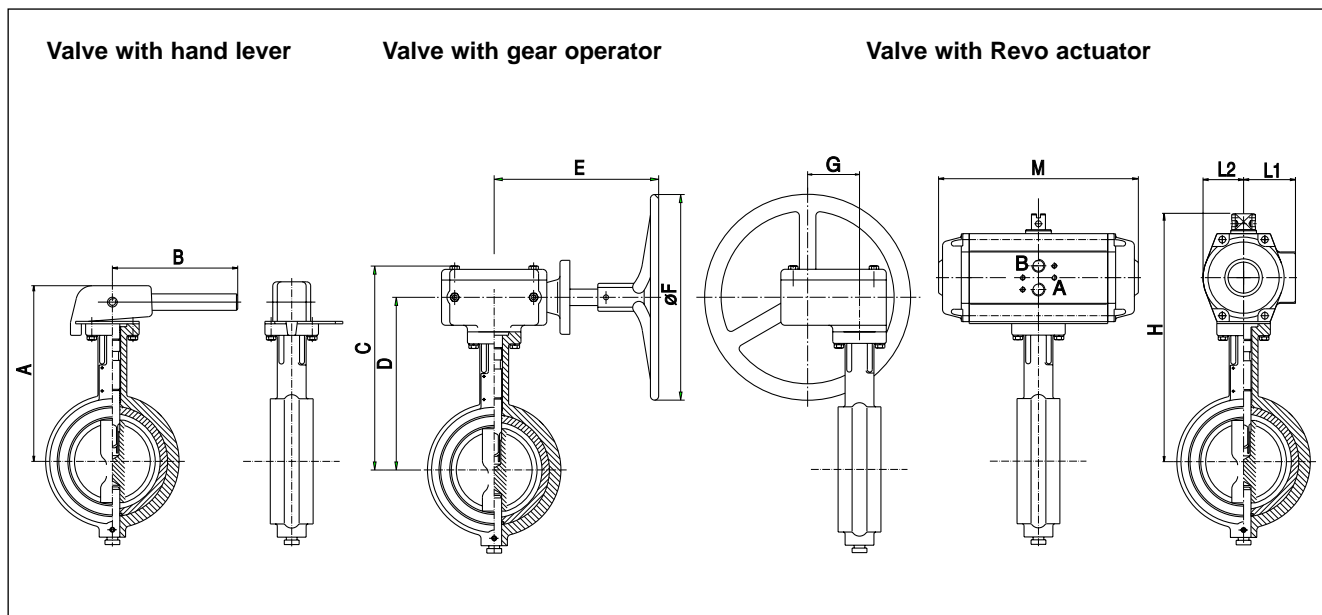
¹⁾ Body made of GGG/GS-C ²⁾ Body made of GG ³⁾ Inner parts DN 50 ⁴⁾ Dimensions in accordance with DIN/ISO

Weights in kg

Bare shaft valve	Size														
	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Wafer body*	2,2	2,2	2,8	3,4	4,7	6,8	7,6	11,5	19,6	31,2	50	72	92	111	195
Lug body	3,4	3,4	4,0	4,8	6,9	10,6	11,4	15,9	26,0	38,2	60	92	108	151	245

* version with centering lugs made of GG25 up to DN300

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Dimensions in mm*, with actuations

Measurement	Size														
	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
A ¹⁾	181	181	197	205	218	231	246	281	-	-	-	-	-	-	-
A ²⁾	181	181	197	216	236	253	268	296	-	-	-	-	-	-	-
B	200	200	200	200	200	240	240	240	-	-	-	-	-	-	-
C ¹⁾	206	206	222	230	243	256	271	306	346	376	437	462	489	514	616
C ²⁾	206	206	222	241	261	278	293	321	346	376	-	-	-	-	-
D ¹⁾	172	172	188	196	209	222	237	272	312	342	402	427	454	479	560
D ²⁾	172	172	188	207	227	244	259	287	312	342	-	-	-	-	-
E	230	230	230	230	230	230	230	230	230	230	285	285	285	285	366
F	200	200	200	200	200	250	250	250	250	250	400	400	400	400	610
G	65	65	65	65	65	65	65	65	65	65	96	96	96	96	123
H ¹⁾	216	216	232	266,5	308	321	361	396	456	486	652	677	704	729	962
H ²⁾	216	216	232	277,5	326	343	383	411	456	486	-	-	-	-	-
L1	38	38	38	52,5	67	67	79	79	94	94	135	135	135	135	211
L2	33	33	33	41	55	55	67	67	78	78	119	119	119	119	211
M	175	175	175	205	214	214	267	267	355	355	388	388	510	510	533

* Dimensions apply to valves PN 10/16 Δ p 10 bar, Revo actuator, double-acting at 5 bar air supply

¹⁾ Body made of GGG/GS-C

²⁾ Body made of GG

Weights in kg**

Valve with	Size														
	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Hand lever	3,8	3,8	4,4	4,6	5,9	8,5	9,5	13,6	24,5	35,9	-	-	-	-	-
Gear operator	10,2	10,2	10,8	11,0	12,3	14,8	15,8	19,9	27,6	39,0	66,8	88,8	108,8	127,8	230,0
Revo actuator	4,3	4,3	4,9	5,6	8,1	10,6	11,4	19,4	31,2	43,2	76,0	104,0	129,0	148,0	318,0

** Weights apply to valves with wafer body



The following flow velocities should not be exceeded so as to avoid valve noise, vibration and cavitation:

a) for liquids: 4,5 m/sec.

b) for gases: 100 m/sec.

These speeds can be checked by using the following formulae:

a) for liquids $C = \frac{Q}{F \cdot 0,36}$ in m/sec.

b) for gases $C = \frac{V_N \cdot T}{F \cdot p_1 \cdot 98,28}$ in m/sec.

Actuator Sizing

The drive torque required when calculating the size of automatic actuators for Saunders butterfly valves can be obtained from the following table:

Shut off pressure in bar	Nominal diameter of a butterfly valve (mm)																		
	40/50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
3,5	-	-	-	31	40	63	115	210	260	420	550	970	1250	2310	3500	4800	6300	8500	10000
10	16	23	35	71	95	127	200	280	400	890	1190	1460	1800	3470	5000	7000	9000	11000	12000
16	26	38	59	121	180	260	330	480	690	1520	2020	2490	3070	5760	8500	12000	15000	20000	25000

The torques apply to liquid and moist media. For dry media they need to be increased.

The torques are listed in Nm. The actuator should be capable of producing the torque listed in the table over the total travel angle.

The closing speed of the actuator must be taken into consideration in order to avoid water hammer when the butterfly valve is installed in pipes conveying a liquid.

The closure period for pneumatic and hydraulic actuators can be achieved by controlling the flow of compressed air or hydraulic fluid. In electrical systems the actuator should be designed by the manufacturer to provide the appropriate closure period.

Instructions for the installation of actuators

CENTERLINE Butterfly Valves Series VIA/ RS are equipped with a DIN/ISO 5211 flange. The DN 40-300 shaft end is square acc. to DIN 3337. The DN 350-600 shaft is provided with parallel keyway. The shaft dimensions are shown in the following table. An actuator bore with tolerance H11 is recommended.

DN	350	400	450	500	600	700	800	900	1000	1200
Ø	45	45	45	45	70	70	75	85	90	95

All CENTERLINE Butterfly Valves are also available with mounting flange for the transmission to smaller or larger sized DIN/ISO flanges.

