

Butterfly Valve type 038E/039E



Type 038E

Wafer or lug style with electric valve EA or smart electric valve dEA

Type 039E

Wafer style with electric valve EA or smart electric valve dEA

Product description

The butterfly Valve types 038E and 039E consists of the basic valve body with the electric actuator EA or the smart electric valve dEA.

The metal butterfly Valve types 038E and 039E can be used universally as open/close or control valves. The easy installation of the valve between pipe flanges ensures reliable operation and sealing. The Rilsan-coating of the valve body and the ductile iron valve disk provide a high resistance against corrosion. The butterfly valves are also available in a standard version with a stainless steel valve disk.

Function

Butterfly valves of types 038E and 039E are intended for shutting off, conveying and dosing media in the allowable pressure and temperature range or for controlling flow in piping systems into which they have been installed

Applications

- Water treatment
- Chemical process industry
- Cooling water facilities
- Power plant
- Shipbuilding

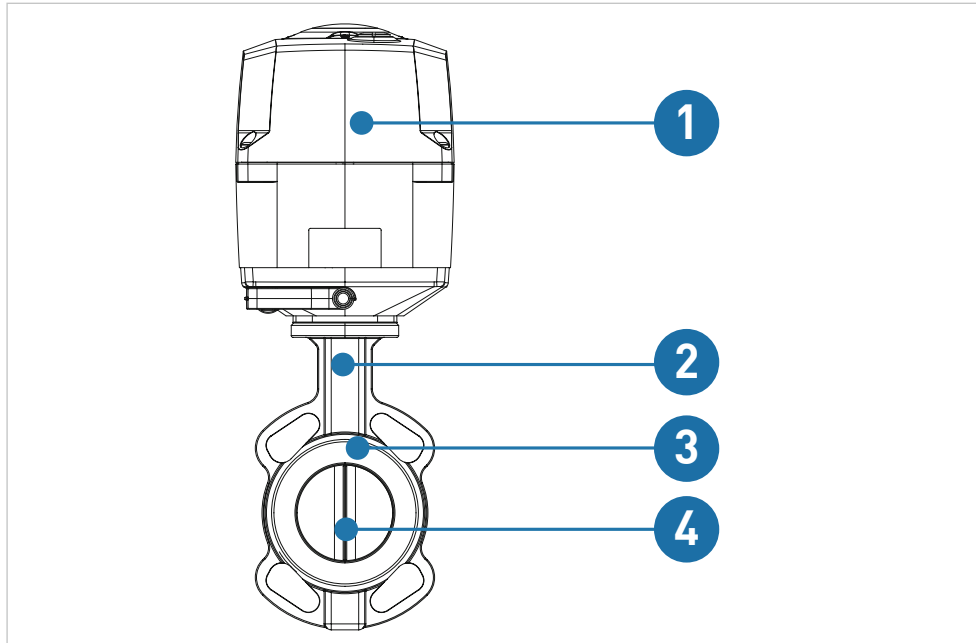
Benefits/features

- Good flow characteristics
- Simple installation
- Ductile cast iron Rilsan/epoxy-coated
- Reliable automatic open/close and control valves
- Lasting high temperature and pressure resistance
- Low maintenance costs and high cost efficiency
- KTW / DVGW / WRAS certification

Flow media

Not recommended for media containing solids

Technical data



- 1 Electric actuator EA or dEA
- 2 Outside housing
- 3 Flange seal
- 4 Disc

Specification			
Dimensions	Type 038E wafer style or lug style installation	DN50 – DN600, 2" – 24"	
	Type 039E wafer style installation	DN50 – DN1200, 2" – 48"	
Base type	Type 038		
	Type 039		
Materials	Disc	Ductile cast iron Rilsan/epoxy-coated	
		Stainless steel	
	Aluminum bronze		
	Outside housing	Ductile cast iron	
Gasket materials	EPDM, FKM, others upon request		
Pressure levels	Type 038E, 039E	PN4/6/10	
Actuator type	Type 038E wafer style or lug style installation	EA45/120/250	
	Type 039E wafer style installation	EA45/120/250, Auma	
Connections	Flange connections	EN1092-1	PN10/PN16
		DIN2501	PN10/PN16
		ANSI B16.5	Class 150
	Valve flange	ISO/DIN, BS, ASTM	
Standards	Type 038E	ISO/DIN, ASTM	
	Type 039E	All standards	
Approvals	KTW, DVGW, ACS, WRAS		

Kv 100 values

Nominal diameter DN		Opening angle (m ³ /h)							
(mm)	(inch)	20°	30°	40°	50°	60°	70°	80°	90°
50	2"	7	16	26	43	69	110	170	190
65	2 1/2"	9	22	38	60	95	155	250	280
80	3"	14	33	57	95	150	240	370	430
100	4"	24	54	95	155	240	400	620	710
125	5"	38	86	155	240	390	640	950	1'100
150	6"	52	120	220	345	550	950	1'400	1'600
200	8"	95	220	345	600	950	1'600	2'400	2'800
250	10"	155	345	610	950	1'600	2'600	4'000	4'700
300	12"	220	510	860	1'500	2'300	3'800	5'900	6'900
350	14"	290	660	1'200	1'900	2'900	4'800	7'800	8'600
400	16"	380	860	1'600	2'400	3'900	6'400	9'500	11'200
450	18"	490	1'100	2'000	3'100	5'000	8'300	12'900	15'500
500	20"	610	1'400	2'500	4'000	6'200	10'300	15'500	19'000
600	24"	860	2'000	3'400	5'500	8'600	14'700	22'400	25'900
650	26"	980	2'300	4'000	6'100	10'400	16'650	25'850	31'500
700	28"	1'100	2'600	4'600	6'700	12'200	18'600	29'300	37'100
750	30"	1'300	3'100	5'200	8'500	13'800	22'400	34'500	40'500
800	32"	1'800	3'600	6'600	9'700	16'600	28'300	43'200	52'300
900	36"	2'200	4'500	7'800	12'900	19'800	32'800	51'700	60'300
1'000	40"	3'100	5'300	8'700	16'000	24'100	42'200	62'100	78'400
1'050	42"	3'400	5'900	9'600	17'700	26'600	46'600	68'400	86'200
1'100	44"	3'800	6'500	10'600	19'500	29'300	51'300	75'100	95'100
1'200	48"	4'500	7'800	12'700	23'300	35'200	61'500	90'700	114'400

Reference values for tightening torque of screws

Use of PVC-U flange adapters

DIN PN16 and PN10 standard									Required screws for type 039 wafer butterfly valve With PVC-U flange adaptors				Required screws for type 038 lug style butterfly valve With PVC-U flange adaptors			
		Butterfly valve		Flange (DIN-2632)					Studs		Nuts		Screws			
PN (bar)	DN (mm)	Inch (inch)	Housing width A	Flange thickness B	Hole distance øC	Number of holes N°	Outer øD	Length L	Thread M	Number N°	Thread M	Number N°	Length L	Thread M	Number N°	
16	50	2"	43	18	125	4	165	150	M16	4	M16	8	50	M16		
16	65	2 1/2"	46	18	145	4	185	155	M16	4	M16	8	55	M16	4	
16	80	3"	46	20	160	8	200	155	M16	8	M16	16	55	M16	8	
16	100	4"	52	20	180	8	220	165	M16	8	M16	16	60	M16	8	
16	125	5"	56	22	210	8	250	180	M16	8	M16	16	65	M16	8	
16	150	6"	56	22	240	8	285	190	M20	8	M20	16	70	M20	8	
16	200	8"	60	24	295	12	340	220	M20	8	M20	16	80	M20	8	
16	250	10"	68	26	355	12	405	230	M20	8	M20	16	90	M20	8	
16	300	12"	78	28	410	12	460	255	M20	12	M20	16	100	M20	12	
10	350	14"	78	30	470	16	520	275	M20	16	M20	32				
10	400	16"	102	32	525	16	580	310	M24	16	M24	32				

Use flanger adapter PP and PE100

DIN PN16 and PN10 standard									Required screws for type 039 Wafer butterfly flange with flange adapter PP and PE100			Required screws type 038 with flange adapter PP and PE 100			
Butterfly valve				Flange (DIN-2632)					Studs		Nuts		Screws		
PN (bar)	DN (mm)	Inch (inch)	Housing width A	Flange thickness B	Hole spacing øC	Number of holes N°	Outer ø øD	Length L	Thread M	Number N°	Thread M	Number N°	Length L	Thread M	Number N°
16	50	2"	43	18	125	4	165	160	M16	4	M16	8	55	M16	4
16	65	2 ½"	46	18	145	4	185	165	M16	4	M16	8	60	M16	4
16	80	3"	46	20	160	8	200	170	M16	8	M16	16	60	M16	8
16	100	4"	52	20	180	8	220	175	M16	8	M16	16	65	M16	8
16	125	5"	56	22	210	8	250	200	M16	8	M16	16	80	M16	8
16	150	6"	56	22	240	8	285	210	M20	8	M20	16	80	M20	8
16	200	8"	60	24	295	12	340	230	M20	8	M20	16	90	M20	8
16	250	10"	68	26	355	12	405	250	M20	8	M20	16	100	M20	8
16	300	12"	78	28	410	12	460	270	M20	12	M20	16	110	M20	12
10	350	14"	78	30	470	16	520	340	M20	16	M20	32			
10	400	16"	102	32	525	16	580	380	M24	16	M24	32			
10	500	20"	126	34	650	20	715	470	M24	20	M24	40			
10	600	24"	146	36	770	20	840	420	M27	20	M27	40			

Technical basics

Valve handling

Differentiation between and use of respective types

- Use butterfly Valve type 039E only as a wafer style valve
- Use butterfly Valve type 038E as either a wafer style or a lug style valve

Installation notes

- Make sure that the butterfly valves to be installed correspond specifically to the pressure rating, type of connection, dimension and materials of the particular application.
- Perform a function test. To do this, close and re-open the butterfly valve.
- Only install butterfly valves that function without trouble.

Maintenance notes

In normal operation, butterfly valves do not require maintenance. It is nonetheless recommended to perform maintenance on butterfly valves after 5,000 actuation cycles at most. The following steps must be taken when doing so:

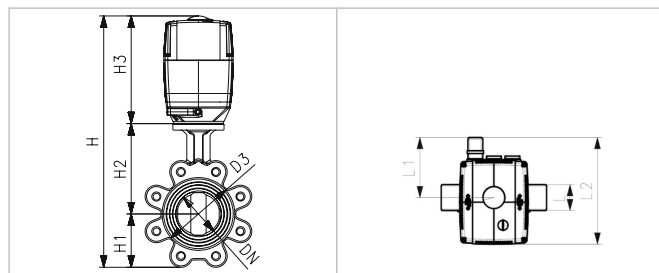
- Regularly check that no medium escapes to the outside. If medium exits from the flange connections, tighten them.
- We recommend operating butterfly valves that are kept permanently in the same position 1 – 2 times per year to check their functionality.
- Depending on the operating conditions, the collars should be lubricated periodically with grease (silicone-based grease).



Installation and maintenance must be performed according to the corresponding installation instructions. The installation manual is included with the product, see also the online product catalog at www.gfps.com

Dimensions

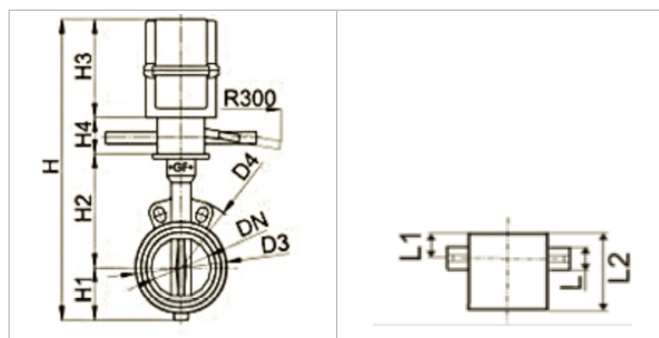
Butterfly Valve type 038E



d (mm)	DN (mm)	Inch (inch)	PN (bar)	kv value(Δp=1bar) (l/min)	Cv value (Δp=1psi) (US gal)/min)
63	50	2	10	3'140	220
75	65	2 ½	10	4'570	320
90	80	3	10	7'140	500
110	100	4	10	11'710	820
140	125	5	10	18'570	1'300
160	150	6	10	27'130	1'900
225	200	8	10	47'130	3'300
280	250	10	6	77'110	5'400
315	300	12	4	114'240	8'000

d (mm)	DN (mm)	inch (inch)	Actuator type	D3 (mm)	L (mm)	L1 (mm)	L2 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)
63	50	2	EA45	65	43	28	122	393	63	140	190
75	65	2 ½	EA120	114	46	28	122	415	73	152	190
90	80	3	EA120	131	46	28	122	430	81	159	190
110	100	4	EA120	152	52	60	220	333	97	178	58
140	125	5	EA120	182	56	60	220	361	112	191	58
160	150	6	EA250	209	56	60	220	383	122	203	58
225	200	8	EA250	262	60	60	220	452	149	245	58
280	250	10	EA250	331	68	70	220	545	203	275	67
315	300	12	EA250	380	78	70	220	623	241	315	67

Butterfly Valve type 039E with manual override

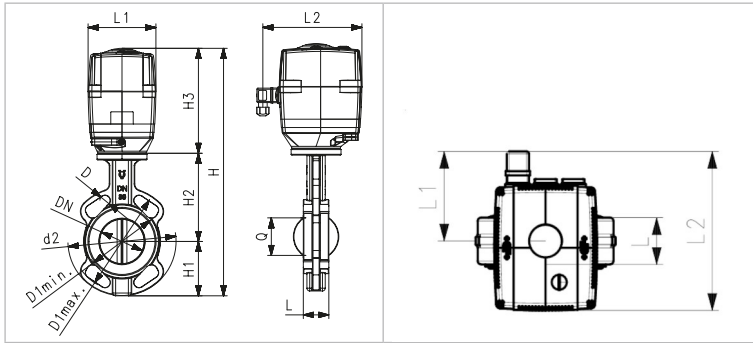


d (mm)	DN (mm)	Inch (inch)	PN (bar)	kv value ($\Delta p=1\text{bar}$) (l/min)	Cv value ($\Delta p=1\text{psi}$) (US gal/min)	Q
63	50	2	10	3'167	837	32
75	65	2 ½	10	4'667	1'233	51
90	80	3	10	7'167	1'893	69
110	100	4	10	11'834	3'126	89
140	125	5	10	18'334	4'844	115
160	150	6	10	26'667	7'045	143
225	200	8	10	46'668	12'330	194
280	250	10	6	78'335	20'696	243
315	300	12	4	115'002	30'384	293

d (mm)	DN (mm)	Inch (inch)	Actuator type	D3 (mm)	D4 (mm)	L (mm)	L1 (mm)	L2 (mm)
63	50	2	EA45	96	165	43	64	181
75	65	2 ½	EA120	114	185	46	28	181
90	80	3	EA120	131	190	46	28	181
110	100	4	EA250	152	229	52	28	181
140	125	5	EA250	182	254	56	60	220
160	150	6	EA250	209	285	56	60	220
225	200	8	EA250	262	343	60	60	220
280	250	10	EA250	323	333	68	70	220
315	300	12	EA250	373	353	78	70	220

d (mm)	DN (mm)	Inch (inch)	Actuator type	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)
63	50	2	EA45	352	53	140	159	60
75	65	2 ½	EA120	374	63	152	159	60
90	80	3	EA120	389	71	159	159	60
110	100	4	EA250	415	87	178	149	60
140	125	5	EA250	443	102	191	149	60
160	150	6	EA250	475	122	203	149	60
225	200	8	EA250	540	149	241	149	60

Butterfly Valve type 039E without manual override



d (mm)	DN (mm)	inch (inch)	PN (bar)	kv-Wert ($\Delta p=1\text{bar}$) (l/min)	Cv Wert ($\Delta p=1\text{psi}$) (US gal/min)	Q
63	50	2	10	3'140	837	32
75	65	2 ½	10	4'570	1'233	51
90	80	3	10	7'140	1'893	69
110	100	4	10	11'710	3'126	89
140	125	5	10	18'570	4'844	115
160	150	6	10	27'130	7'045	143
225	200	8	10	47'130	12'330	194
280	250	10	6	77'110	20'696	243
315	300	12	4	114'240	30'384	293
355	350	14	4	143'360		332
400	400	16	4	186'700		382
450	450	18	4	258'390		432
500	500	20	4	316'730		478
630	600	24	4	431'750		585
700	700	28	4	618'333		683
800	800	32	4	675'000		755
900	900	36	4	1'005'200		852
1'000	1'000	40	4	1'306'930		958
1'200	1'200	48	4	1'907'050		958

d (mm)	DN (mm)	inch (inch)	Actuator type	D3 (mm)	D4 (mm)	L (mm)	L1 (mm)	L2 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)
63	50	2	EA45	96	165	43	64	181	352	53	140	159
75	65	2 ½	EA120	114	185	46	28	181	374	63	152	159
90	80	3	EA120	131	190	46	28	181	389	71	159	159
110	100	4	EA250	152	229	52	28	181	415	87	178	149
140	125	5	EA250	182	254	56	60	220	443	102	191	149
160	150	6	EA250	209	285	56	60	220	475	122	203	149
225	200	8	EA250	262	343	60	60	220	540	149	241	149
280	250	10	EA250	323	333	68	70	220	671	201	273	197
315	300	12	EA250	373	353	78	70	220	739	231	311	197
355	350	14	GS80	442	460	78		130	905	291	307	307
400	400	16	GS80	493	515	102		154	974	325	342	307
450	450	18	GS100	544	565	113		182	1'065	357	387	321
500	500	20	GS125	601	620	126		182	1'127	381	425	321
630	600	24	GS125	695	725	146		286	1'350	488	532	330
700	700	28	GS125	798	840	175		286	1'409	506	573	330
800	800	32	GS160	908	950	215		286	1'541	578	650	313
900	900	36	GS160	1'004	1'050	246		370	1'673	643	707	323
1'000	1'000	40	GS160	1'114	1'160	280		370	1'807	729	755	323
1'200	1'200	48	GS200	1'330	1'380	360		1'133	2'103	855	900	348

i More dimensions are available in the product range of butterfly Valve types 038 and 039 at www.gfps.com

Accessories

- Limit switch boxes

i For further information on accessories, refer to the online product catalog at www.gfps.com