

## Butterfly Valve type 567/578



### Product description

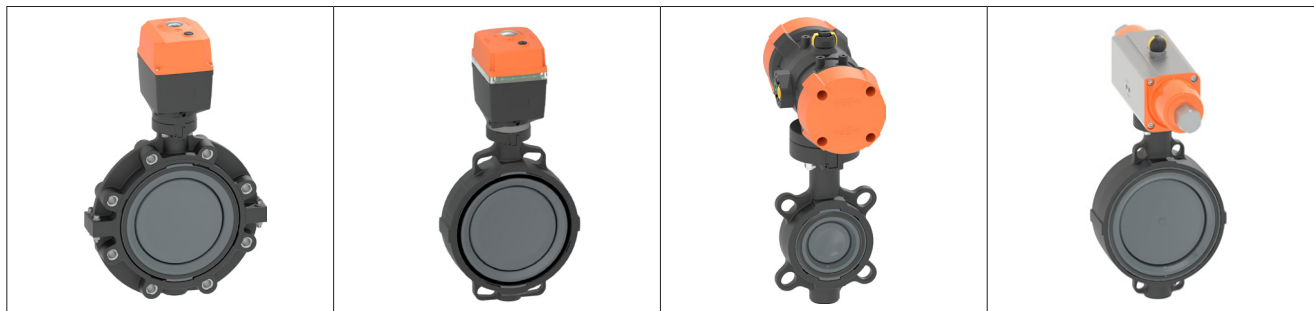
Butterfly valves of types 567 and 578 are corrosion-resistant and reliable control and shut-off valves that can be used in most applications in industrial water treatment, the chemical process industry, chemical trade, galvanization and in power plants. The valves are intended for wafer-style and lug-style applications. They are compact, varied and reliable. The valve is modular in design, allowing individual system parts to be exchanged at any time.

#### Benefits/features

- Lower weight than metallic butterfly valves due to use of fiberglass-reinforced plastic as housing material
- High corrosion resistance: all components that come into contact with media are made of plastic
- Lockable ergonomic lever with standard 5° ratchet setting (fine adjustment as option)
- Low wear due to double eccentric operating principle: up to 50 % lower actuating torque than with centric valves
- Tightness in the passage and to the outside: double, double-sided, internal axis seal
- Optimized modular components: double internal shaft seal on both sides
- Standard interface conforms to ISO 5211
- Integrated electric position indicator (optional)
- Type 578: Use as lugged valve with threaded inserts integrated into the housing

## Automation through use as a process and control valve

Thanks to a wide range of accessories, butterfly valves can be equipped with the appropriate pneumatic or electric actuators and thus used as process and control valves.



Type 567/578 Butterfly Valve with electric actuator EA

Type 567/578 Butterfly Valve with smart actuator dEA

Type 567/578 Butterfly Valve with plastic pneumatic actuator PPA

Type 567/578 Butterfly Valve with pneumatic actuator PA

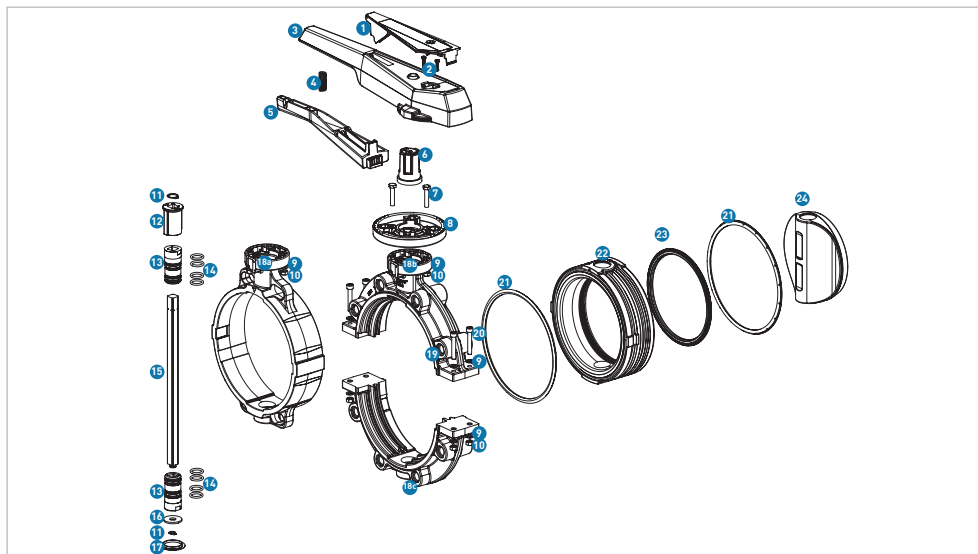
## Flow media

- Very well suited for liquid media
- Suited for gaseous media
- Conditionally suited for media containing solids
- Conditionally suited for viscous media

## Applications

- Chemical process industry
- Water treatment
- Microelectronics
- Measurement and control
- Shipbuilding
- Food & beverage

## Technical data



- 1 Hand lever clip
- 2 Screw
- 3 Lever
- 4 Spring
- 5 Grid lever
- 6 Lever insert
- 7 Screw
- 8 Grid element
- 9 Washer
- 10 Nut
- 11 Circlip
- 12 End stop
- 13 Bearing bush
- 14 O-ring
- 15 Shaft
- 16 Washer
- 17 Cap
- 18 Outer housing
- 19 Threaded inserts
- 20 Screw
- 21 Flange seal
- 22 Inner housing
- 23 Profile seal
- 24 Disc

### Specification

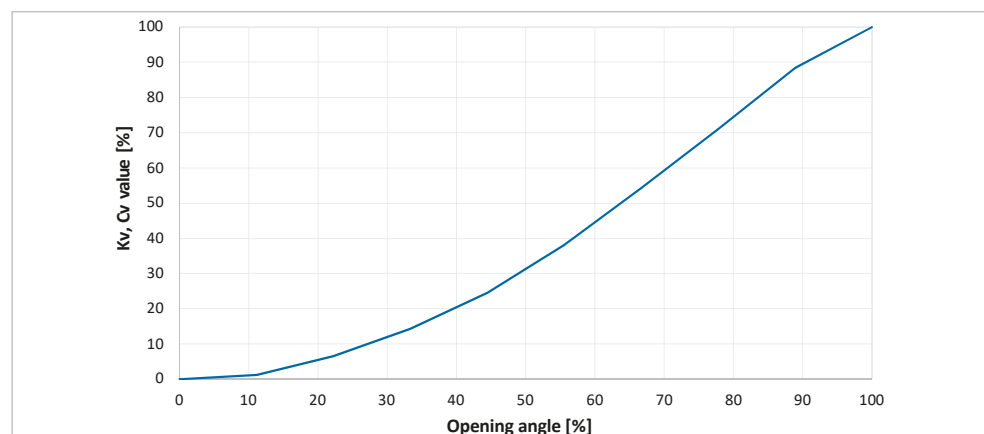
<b>Body type</b>	567 - Wafer-style housing				
	578 - Lug-style housing				
<b>Dimensions</b>	<b>Manual</b>	Type 567	d63/DN50 – d600/DN600, 2" – 24"		
		Type 578	d63/DN50 – d315/DN300, 2" – 12"		
	<b>Pneumatic</b>	Type 240	d63/DN50 – d600/DN600, 2" – 24"		
		Type 243/244	d63/DN50 – d315/DN300, 2" – 12"		
<b>Electric</b>	Type 145	d63/DN50 – d600/DN600, 2" – 24"			
	Type 146/147	d63/DN50 – d315/DN300, 2" – 12"			
<b>Materials</b>	Hand lever clip, lever, grid element, end stop, outer housing	1 3 5 8 12 18	PP-GF30		
	Bearing bush, inner housing, disc	13 22 24	PVC-U, PVC-C, ABS, PP-H, PVDF		
	O-ring, flange seal, profile seal	14 21 23	EPDM, FKM, PTFE/FKM		
	Cap	17	PE		
	Lever insert	6	PPS		
	Screw, spring, washer, nut, shaft, circlip, threaded inserts	2 4 7 9 10 11 15 16 19 20	Stainless steel		
<b>Pressure ratings</b>	<b>Manual actuation</b>		<b>Electric actuated</b>		<b>Pneumatic actuated</b>
	DN50-300	PN10	DN50-200	PN10	DN50-250 PN10
	DN350-400	PN6	DN250	PN6	DN300-450 PN5
	DN450	PN5	≥ DN300	PN4	≥ DN500 PN4
	≥ DN500	PN4			
<b>Connections</b>	Flanges	PVC-U, PVC-C, ABS, PP-H, PVDF, PE according to ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220			
	Flange adapters	PVC-U, PVC-C, ABS, PP-H SDR 11: PE100 SDR 11 or 17.6, PVDF			
	Backing flange	PVC-U, PP			
<b>Actuation variants</b>	Manually operated (hand lever or manual reduction gear)				
	Lockable hand lever				
	Pneumatically actuated FC, FO, DA				
	Electrically actuated AC: 100 – 230 V, AC/DC: 24 V				
<b>Installation length</b>	ISO 5752 / EN 558 DN50-200 Series 25, DN250-300 Series 16				
<b>Actuator interface</b>	EN ISO 5211				
<b>Flange standards</b>	EN 1092 PN 10, ASME B16.5 Class 150, BS 1560-3.2 Class 150, JIS B2220 10K				
<b>Markings</b>	CE, UKCA				
<b>Product Standard</b>	EN ISO 16136				
<b>Test Standard</b>	ISO 9393-2, EN 12266-1 (leakage rate A)				
<b>Approvals</b>	ACS, ABS, DIBt, BV, DNV; FDA, SIL, KR				

## Flow characteristics

### Kv 100 values

DN (mm)	d (mm)	Inch (inch)	Kv 100 (l/min)	Cv 100 (US gal./min)	Kv 100 (m <sup>3</sup> /h)
50	63	2	740	52	44
65	75	2 ½	1'500	105	90
80	90	3	2'400	168	144
100	110	4	3'800	266	228
125	140	5	8'600	602	516
150	160	6	11'400	798	684
200	225	8	19'900	1'393	1'194
250	280	10	34'000	2'380	2'040
300	315	12	50'000	3'500	3'000
350	355	14	90'000	6'300	5'400
400	400	16	115'000	8'050	6'900
450	450	18	155'000	10'850	9'300
500	500	20	204'000	14'280	12'240
600	630	24	265'000	18'550	15'900

### Flow characteristics according to opening angle



## Operating torque

### DN50 – DN600 for opening/closing torque (standard valve, as delivered)

DN (mm)	d (mm)	Inch (")	Operating torque @ maximum operating pressure	
			(Nm)	(ft-lb)
50	63	2	12	8.8
65	75	2 ½	17	12.5
80	90	3	28	20.6
100	110	4	38	28.0
125	140	5	50	36.9
150	160	6	61	45.0
200	225	8	90	66.4
250	280	10	115	84.8
300	315	12	145	106.9
350	355	14	200	147.5
400	400	16	260	191.7
450	450	18	330	243.4
500	500	20	410	302.4
600	630	24	600	442.5

Depending on the operation conditions (e.g. control time, medium, temperature, etc.) the stated operating torque can increase up to 4 times.

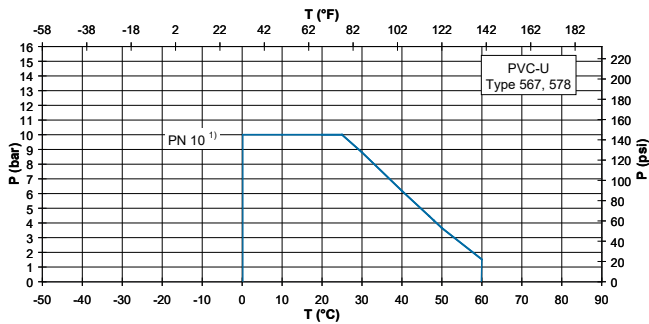
## Pressure-temperature diagrams

The following pressure-temperature diagrams are based on a lifetime of 25 years and water or similar media.

T Temperature (°C, °F)

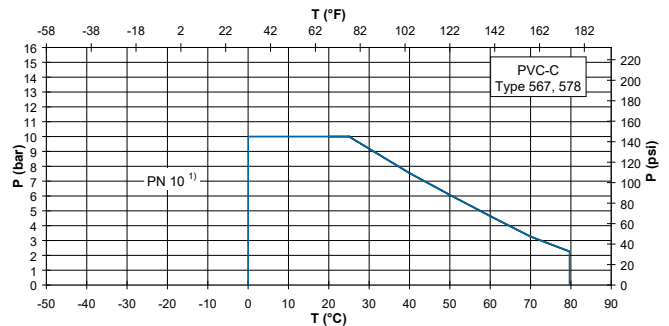
P Permissible pressure (bar, psi)

### PVC-U (DN50 – DN300)



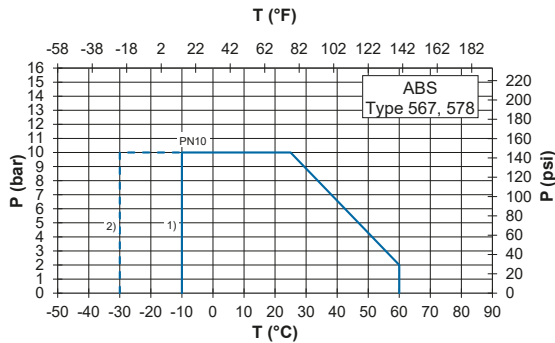
1) DN50 – DN300

### PVC-C (DN50 – DN300)



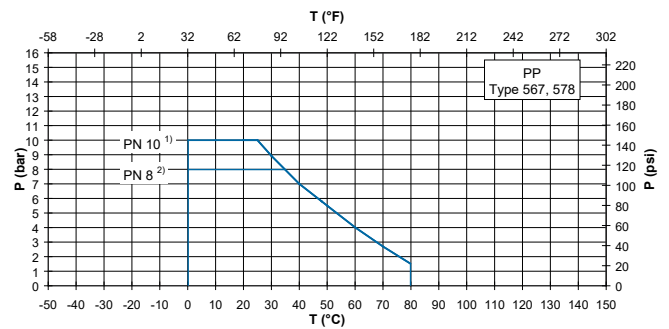
1) DN50 – DN300

### ABS (DN50 – DN300)



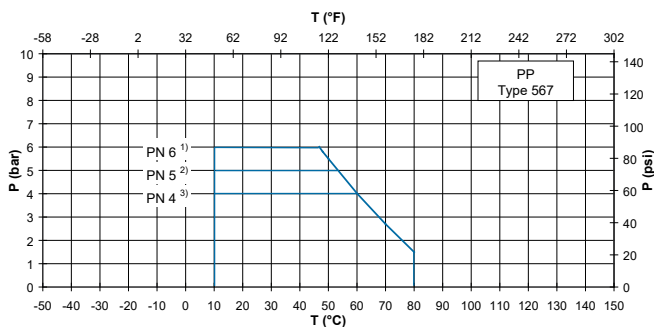
- 1) with standard type 567/578  
 2) - with PE flange adapter: only with COOL-FIT version of Type 567  
 - with ABS flange adapter: with standard type 567 in installation direction A-B, or with COOL-FIT version of type 567

### PP (DN50 – DN300)



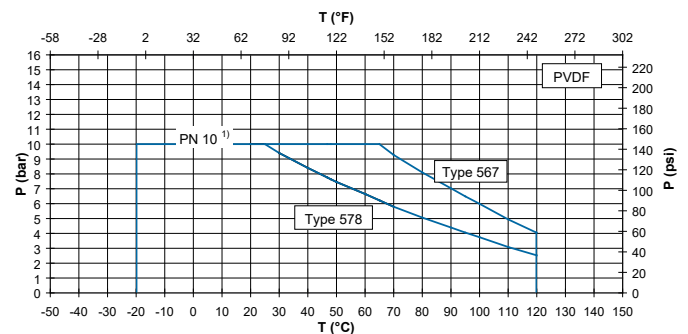
- 1) DN50 – DN200  
 2) DN250 – DN300

### PP (DN350 – DN600)



- 1) DN350 – DN400  
 2) DN450  
 3) DN500 – DN600

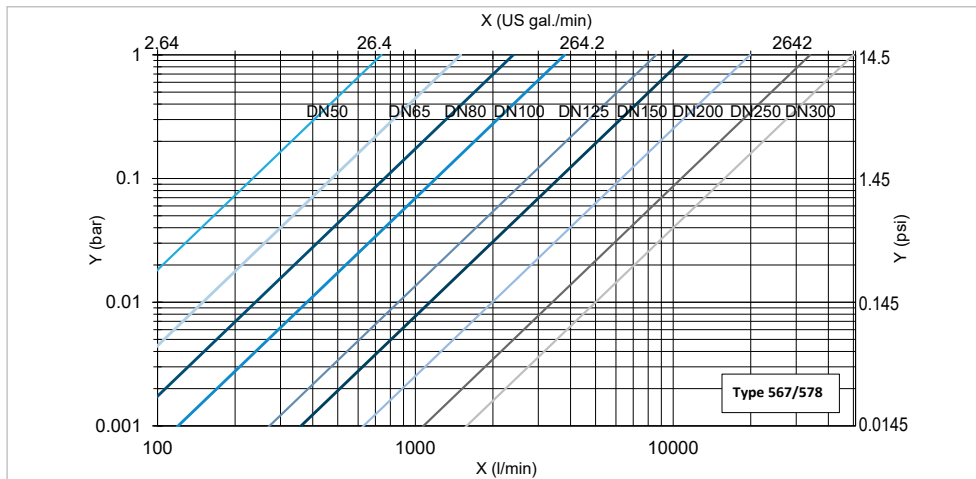
### PVDF (DN50 – DN300)



- 1) DN50 – DN300

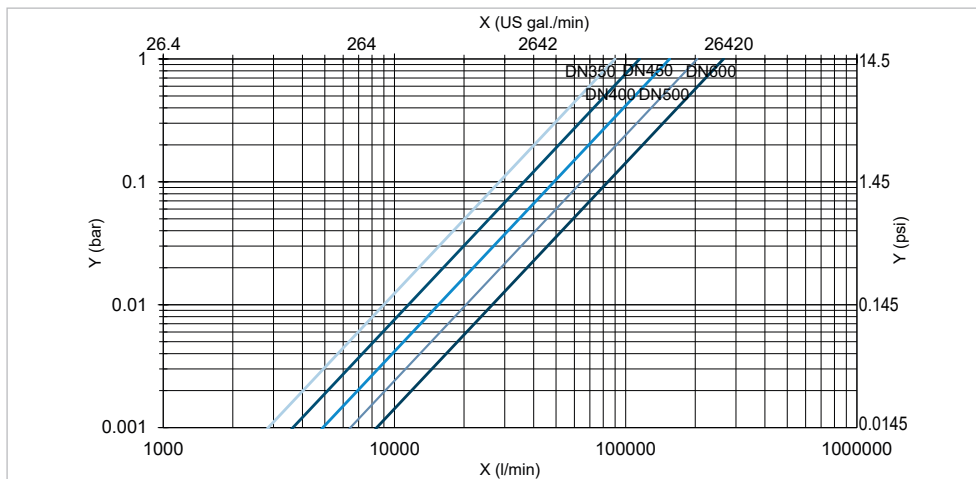
## Pressure losses

### DN50 – DN300



- X Flow rate (l/min, US gal./min)
- Y Pressure loss  $\Delta p$  (bar, psi)

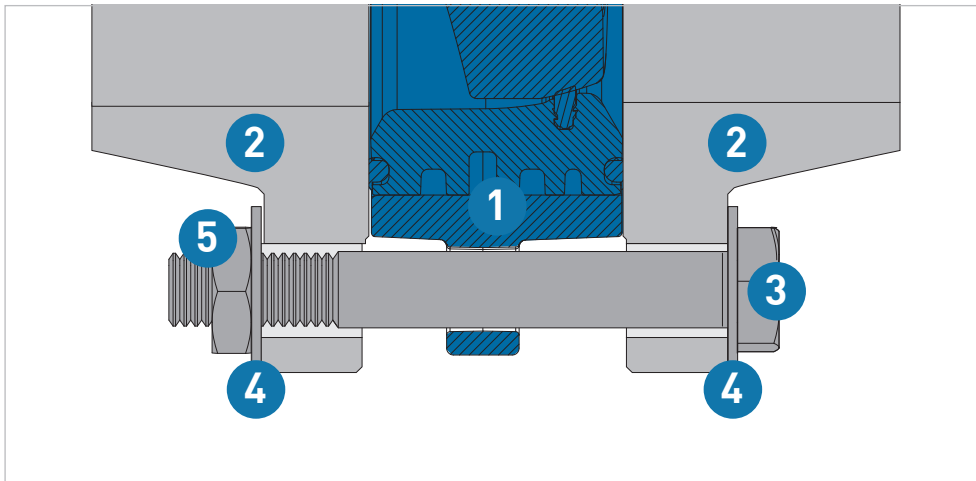
### DN350 – DN600



- X Flow rate (l/min, US gal./min)
- Y Pressure loss  $\Delta p$  (bar, psi)

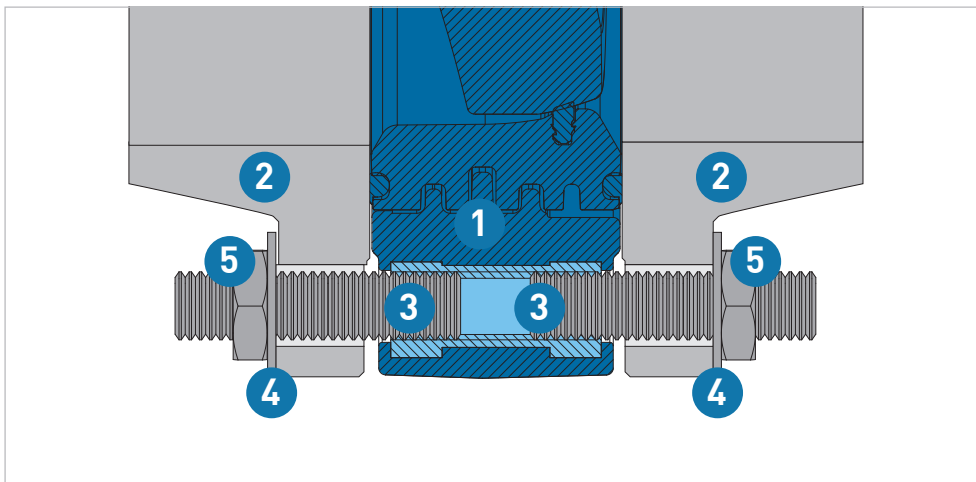
## Flange connections

### 567 wafer-style flange connection with hexagon head screws



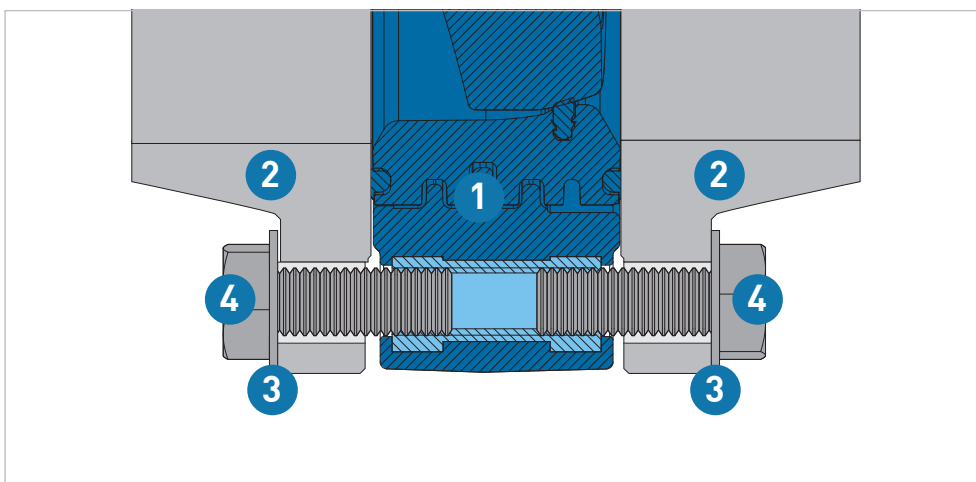
- 1 Wafer body
- 2 Flange
- 3 Screw
- 4 Washer
- 5 Nut

### 578 lug-style flange connection with studs



- 1 Lug body
- 2 Flange
- 3 Stud
- 4 Washer
- 5 Nut

### 578 lug-style flange connection with hexagon head screws



- 1 Lug body
- 2 Flange
- 3 Washer
- 4 Screw

## Reference values for tightening torque of screws

### Reference values for tightening torque of screws AK type 567 in flange connections

Dimension			Screws		Max. tightening torque	
DN (mm)	d (mm)	Inch (inch)	Metric (mm)	UNC (Inch)	(Nm)	(ft-lb)
50	63	2	4x M16 x 140mm	4 x UNC 5/8" x 5 1/2"	25	18
65	75	2 1/2	4x M16 x 140mm	4 x UNC 5/8" x 5 1/2"	25	18
80	90	3	8x M16 x 150mm	4 x UNC 5/8" x 6"	25	18
100	110	4	8x M16 x 180mm	8 x UNC 5/8" x 7"	30	22
125	140	5	8x M16 x 200mm	8 x UNC 3/4" x 7 3/4"	35	26
150	160	6	8x M20 x 220mm	8 x UNC 3/4" x 8 1/2"	40	30
200	225	8	8x M20 x 220mm	8 x UNC 3/4" x 9 1/2"	50	37
250	280	10	8x M20 x 300mm	12 x UNC 7/8" x 12"	80	59
300	315	12	12x M20 x 300mm	12 x UNC 7/8" x 12"	80	59
350	355	14	depending on counterpart		80	59
400	400	16	depending on counterpart		100	74
450	450	18	depending on counterpart		100	74
500	500	20	depending on counterpart		100	74
600	630	24	depending on counterpart		100	74

### Reference values for tightening torque of screws AK type 578 in ISO flange connections

ISO DN (mm)	d (mm)	Quantity of screws/size	SFA - BFA with the various flanges (mm)						Max. tightening torque (Nm)	Max. tightening torque (ft-lb)	
			PP/PE		PVC-U/PVC-C/ABS		PVDF				
			PP-V	PP/steel	PVC-U	PP-V	PP/steel	PP-V	PP/steel		
50	63	8x M16	60	55	50	55	50	55	50	20	15
65	75	8x M16	65	55	50	60	50	60	50	20	15
80	90	16x M16	70	60	55	65	55	65	55	20	15
100	110	16x M16	70	65	60	70	60	70	60	25	18
125	140	16x M16	80	80	70	75	70	80	70	30	22
150	160	16x M20	90	80	70	80	70	80	70	35	26
200	225	16x M20	100	90	90	90	90	90	80	45	33
250	280	24x M20	130	120	110	120	110	110	110	50	37
300	315	24x M20	130	120	120	120	120	120	110	50	37

### Reference values for tightening torque of screws AK type 578 in ANSI flange connections

ANSI Inch	d (mm)	Quantity of screws/size	SFA - BFA with the various flanges (mm)						Max. tightening torque (Nm)	Max. tightening torque (ft-lb)	
			PP/PE		PVC-U/PVC-C/ABS		PVDF				
			PP-V	PP/steel	PVC-U	PP-V	PP/steel	PP-V	PP/steel		
2	63	8x UNC 5/8	2 1/4	2	2	2	2	2	2	20	15
2 1/2	75	8x UNC 5/8	2 1/2	2	2	2 1/4	2	2 1/4	2	20	15
3	90	8x UNC 5/8	2 3/4	2 1/4	2	2 1/2	2	2 1/2	2	20	15
4	110	16x UNC 5/8	2 3/4	2 1/2	2 1/4	2 3/4	2 1/4	2 3/4	2 1/4	25	18
5	140	16x UNC 5/8	3 1/4	3 1/4	2 3/4	3	2 3/4	3 1/4	2 3/4	30	22
6	160	16x UNC 3/4	3 1/2	3 1/4	3 1/4	3 1/4	2 3/4	3 1/4	2 3/4	35	26
8	225	16x UNC 3/4	4	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/4	45	33
10	280	24x UNC 3/8	5	4 3/4	4 1/4	4 3/4	4 1/4	4 1/4	4 1/4	50	37
12	315	24x UNC 3/8	5	4 3/4	4 3/4	4 3/4	4 3/4	4 3/4	4 1/4	50	37



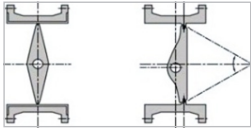
## Technical basics

### Function

Butterfly valves of types 567 and 578 have a double-eccentric mode of action and are of modular construction.

#### Double eccentric operating principle

The disc does not touch the seal in the open position. The disc can be quickly unscrewed from the gasket, ensuring low wear and tear. Pressure surges in the direction of flow can be absorbed more readily.



#### Use as a process and control valve

The butterfly valves can be equipped with corresponding pneumatic or electric actuators and can be used with other extensive accessories as process and regulating valves.

The integrated electrical position indicator IER enables direct feedback of the axis position in the valve head flange by means of limit switches and thereby an exact determination of the position of the valve disc.

The type RPC (Rotary Process Controller) are digital, electro-pneumatic positioners for integrated mounting on pneumatically operated industrial valves with single and double-acting rotary actuators e.g. PA and PPA.

### Valve handling

#### Installation notes

##### Differentiation between and use of the types concerned

- Use butterfly Valve type 567 only as a wafer-style valve.
- Use butterfly Valve type 578 as either a wafer-style or a lug-style valve.

As a connecting piece, GF Piping Systems recommends valve ends or flange adapters with smooth jointing faces, together with flanges made of PVC-U, PP-V, PP/steel or UP-GF. In the case of SFA Socket flange adaptor or BFA Butt fusion flange adaptor with a ribbed jointing face, a flat gasket can also be used in individual cases.

#### Requirements for installation

Ensure that the following conditions are satisfied prior to installation:

- 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 problems.

## Maintenance notes

In normal operation, butterfly valves do not require maintenance. It is still 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 the butterfly valves that are kept permanently in the same position 1-2x per year to check their functionality.
- Depending on the operating conditions, the collars should be lubricated periodically with (silicon-based) grease.
- It is recommended that you check and, if necessary, replace the O-rings when removing the bearing bushings.

**i** Installation and maintenance must be performed in accordance with the corresponding installation manual. The installation manual is provided with the product, see also the online product catalog at [www.gfps.com](http://www.gfps.com)

## Tips for installation

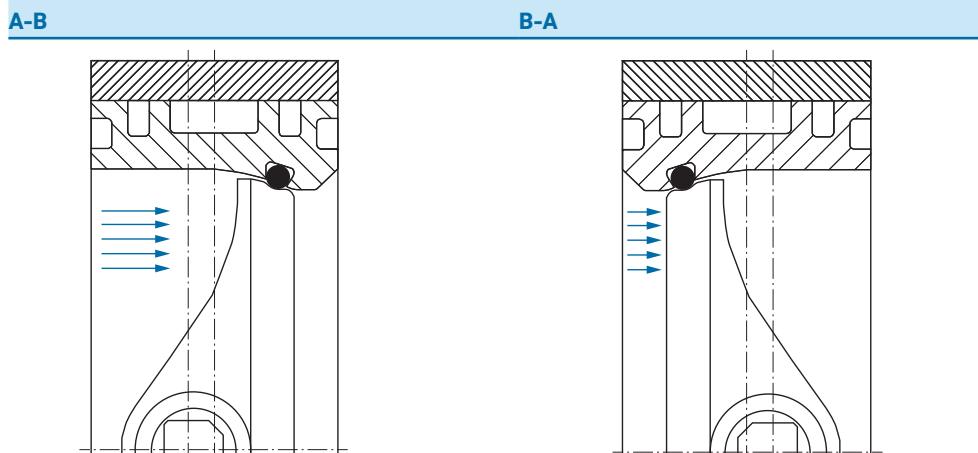
### Chamfering of socket flange adaptor/butt fusion flange adaptor

When using the specified socket flange adapters/butt fusion flange adapters from GF Piping Systems, chamfering is not necessary, because the disc does not touch the socket flange adapters/butt fusion flange adapters or the butt fusion flange adapters are already chamfered. If you want to install socket flange adapters/butt fusion flange adapters of a different brand, then please make sure that the inside diameter (int) of the socket flange adaptor/butt fusion flange adaptor is greater than the output measure (Q1) of the disc. If necessary, chamfer the socket flange adaptor/butt fusion flange adaptor.

### Installation as a lugged valve

If a valve is installed as a lugged valve and pressure is applied to it, it must be closed with a blind flange (or blind cover and counterflange), in order to prevent personal injury or property damage in the event of leaks and/or impermissible opening.

### Recommendation of installation direction



The installation direction A-B is recommended, if increased safety in the event of pressure surges is required.

If lower torques are important when opening and closing the butterfly valve, installation direction B-A is recommended.

## Type 567/578 actuator assignment

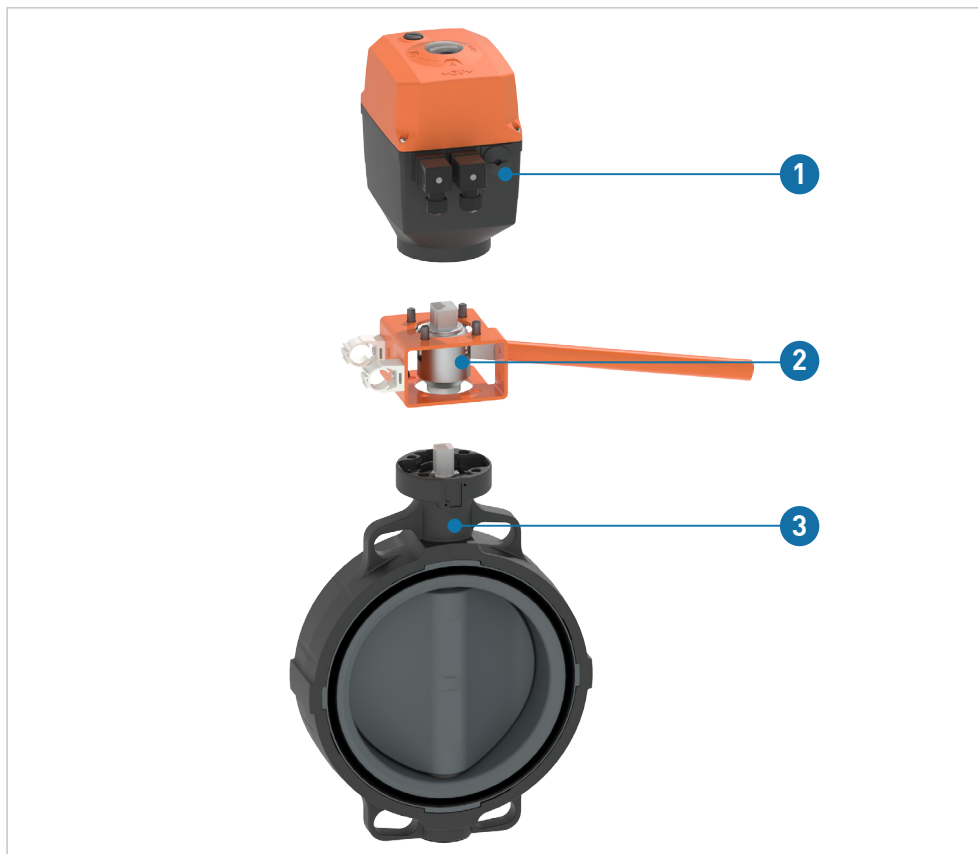
Dimension			Pneumatic actuator				Electric actuator		
DN (mm)	d (mm)	Inch (inch)	Interface	Plastic Actuator		Metal Actuator		Type	Voltage
				FC/FO	DA	FC/FO	DA		
50	63	2	F07	PPA40	PPA40	PA30	PA35	EA45 / dEA45	100–230 V~or 24 V
65	75	2 ½	F07	PPA40	PPA40	PA30	PA35	EA45 / dEA45	100–230 V~or 24 V
80	90	3	F07	PPA80	PPA40	PA35	PA40	EA45 / dEA45	100–230 V~or 24 V
100	110	4	F07	PPA80	PPA80	PA40	PA45	EA120/dEA120	100–230 V~or 24 V
125	140	5	F07	PPA80	PPA80	PA45	PA45	EA120/dEA120	100–230 V~or 24 V
150	160	6	F07			PA50	PA55	EA120/dEA120	100–230 V~or 24 V
200	225	8	F07			PA55	PA55	EA250/dEA250	100–230 V~or 24 V
250	280	10	F10			PA65	PA65	EA250/dEA250	100–230 V~or 24 V
300	315	12	F10			PA70	PA65	EA250/dEA250	100–230 V~or 24 V
350	355	14	F10			Airpower APD 140	Airpower APS 190	AUMA SQ10.2	240 V and 400 V three-phase
400	400	16	F12			Airpower APD 140	Airpower APS 210	AUMA SQ10.2	240 V and 400 V three-phase
450	450	18	F14			Airpower APD 160	Airpower APS 240	AUMA SQ12.2	240 V and 400 V three-phase
500	500	20	F14			Airpower APD 190	Airpower APS 240	AUMA SQ12.2	240 V and 400 V three-phase
600	600	24	F14			Airpower APD 190	Airpower APS 270	AUMA SQ14.2	240 V and 400 V three-phase

## Design with pneumatic actuator



- 1 Pneumatic actuator
- 2 Butterfly valve Type 567/578

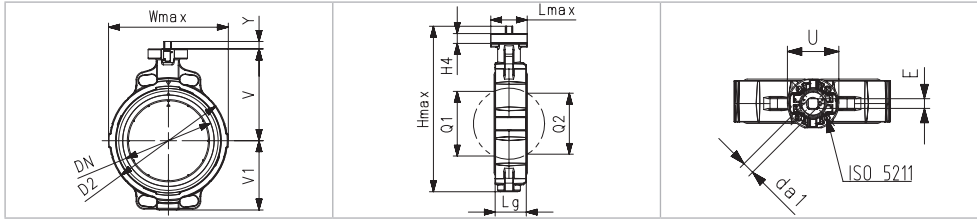
## Design with electric actuator



- 1 Electric actuator
- 2 Manual override (optional)
- 3 Butterfly valve Type 567/578

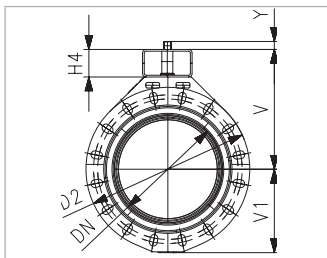
## Dimensions type 567 wafer-style

Butterfly Valve type 567 wafer-style, DN50 – DN300, with open shaft end



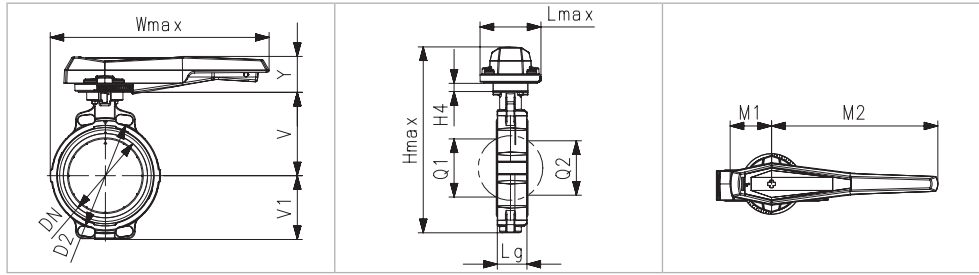
Dimensions			Measurements													
DN (mm)	d (mm)	d (")	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	U (mm)	V1 (mm)	V (mm)	Y (mm)	H4 (mm)	E (mm)	da1 (mm)	Lg (mm)	Q1 (mm)	Q2 (mm)
50	63	2	238.3	84.8	118.4	104	90	78.8	133.3	26.2	23	11	13.5	45	40	
65	75	2 ½	251.2	84.8	132.5	115	90	85.1	139.9	26.2	23	11	13.5	46	54	35
80	90	3	263.0	84.8	136.8	131	90	91.2	145.6	15.4	23	11	13.5	49	67	50
100	110	4	284.5	84.8	161.0	161	90	105.7	166.4	15.4	23	14	17.3	56	88	74
125	140	5	314.2	84.8	187.0	187	90	118.8	180.0	15.4	23	14	17.3	64	113	97
150	160	6	338.3	84.8	215.0	215	90	130.9	189.0	18.4	23	17	21.1	72	139	123
200	225	8	387.2	84.8	267.0	267	90	158.3	210.5	18.4	23	17	21.1	73	178	169
250	280	10	508.9	125.0	329.0	329	125	206.1	262.6	40.2	23	22	27.0	113	210	207
300	315	12	553.3	125.0	380.4	379	125	228.8	284.3	40.2	23	22	27.0	113	256	253

Butterfly Valve type 567 wafer-style, DN350 – DN600, with open shaft end



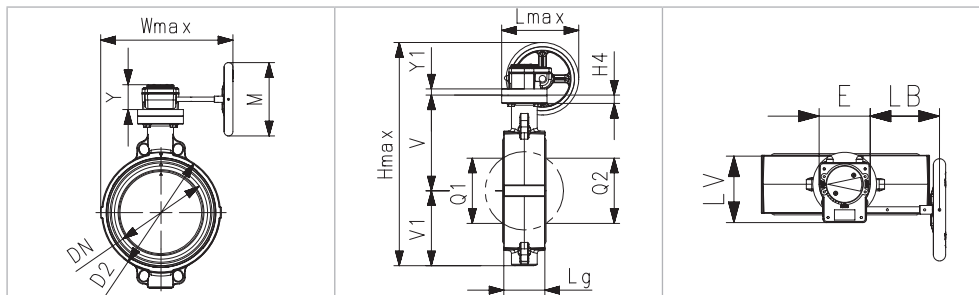
Dimensions			Measurements														
DN (mm)	d (mm)	d (")	Hmax (mm)	Lmax (mm)	Wmax (mm)	k (mm)	D2 (mm)	U (mm)	V (mm)	V1 (mm)	Y (mm)	H4 (mm)	E (mm)	da1 (mm)	Lg (mm)	Q1 (mm)	Q2 (mm)
350	355	14"	709	180	535	460	535	180	410	268	31	100	22	28.5	129	325	305
400	400	16"	766	180	595	515	595	180	435	300	31	100	27	36.0	169	353	350
450	450	18"	875	220	635	565	635	220	520	320	35	130	27	36.0	179	393	390
500	500	20"	935	220	700	620	700	220	550	350	35	130	27	36.0	190	444	440
600	630	24"	1065	220	813	725	813	220	610	420	35	130	36	45.0	209	530	527

## Butterfly Valve type 567 wafer-style, DN50 – DN300, with hand lever



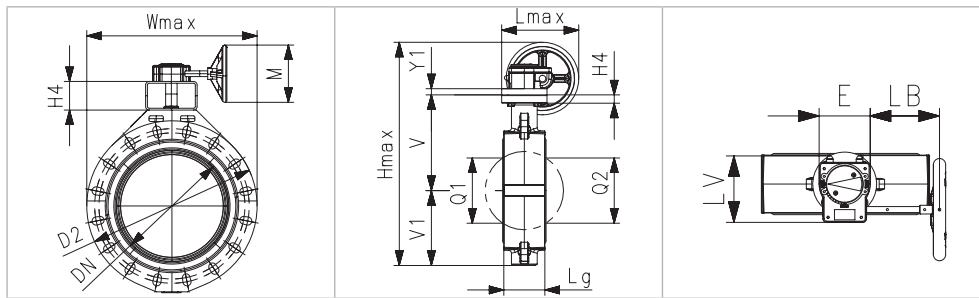
Dimensions			Measurements													
DN (mm)	d (mm)	d (")	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	U (mm)	H4 (mm)	V1 (mm)	V (mm)	Y (mm)	Lg (mm)	Q1 (mm)	Q2 (mm)	M1 (mm)	M2 (mm)
50	63	2	278.9	115.2	269.0	104	90	23	78.8	134	54	45	40		64.7	205.5
65	75	2 ½	291.8	115.2	271.8	115	90	23	85.1	140	54	46	54	35	64.7	205.5
80	90	3	303.6	115.2	273.9	131	90	23	91.2	146	54	49	67	50	64.7	205.5
100	110	4	342.2	115.2	336.0	161	90	23	105.7	167	55	56	88	74	64.9	255.5
125	140	5	368.9	115.2	349.0	187	90	23	118.8	181	55	64	113	97	64.9	255.5
150	160	6	390.0	115.2	363.0	215	90	23	130.9	189	55	72	139	123	64.9	255.5
200	225	8	455.1	115.2	543.0	267	90	23	158.3	210	67	73	178	169	103.6	409.5
250	280	10	555.0	149.4	574.0	329	125	23	206.1	264	85	113	210	207	103.6	409.5
300	315	12	599.4	149.4	599.7	379	125	23	228.8	285	85	113	256	253	103.6	409.5

## Butterfly Valve type 567 wafer-style, DN50 – DN300, with manual reduction gear



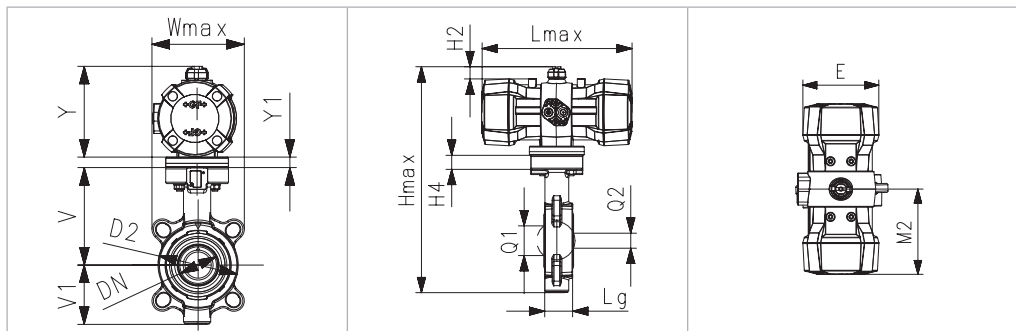
Dimensions			Measurements															
DN (mm)	d (mm)	d (")	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	H4 (mm)	V1 (mm)	V (mm)	Y (mm)	Y1 (mm)	Lg (mm)	Q1 (mm)	Q2 (mm)	E (mm)	M (mm)	LV (mm)	LB (mm)
50	63	2	319.4	169.1	240.2	104	23	78.8	133.3	61.2		45	40		80	160	112.3	129.5
65	75	2 ½	332.3	169.1	247.3	115	23	85.1	139.9	61.2		46	54	35	80	160	112.3	129.5
80	90	3	344.1	169.1	249.4	131	23	91.2	145.6	61.2		49	67	50	80	160	112.3	129.5
100	110	4	379.4	169.1	261.5	161	23	105.7	166.4	61.2		56	88	74	80	160	112.3	129.5
125	140	5	406.1	169.1	274.5	187	23	118.8	180.0	61.2		64	113	97	80	160	112.3	129.5
150	160	6	427.2	169.1	288.5	215	23	130.9	189.0	61.2		72	139	123	80	160	112.3	129.5
200	225	8	476.1	169.1	267.0	267	23	158.3	210.5	61.2		73	178	169	80	160	112.3	129.5
250	280	10	613.0	212.6	329.0	329	23	206.1	262.6	68.4	17	113	210	207	100	200	130.0	134.0
300	315	12	657.4	212.6	380.4	379	23	228.8	284.3	68.4	17	113	256	253	100	200	130.0	134.0

## Butterfly Valve type 567 wafer-style, DN350 – DN600, with manual reduction gear



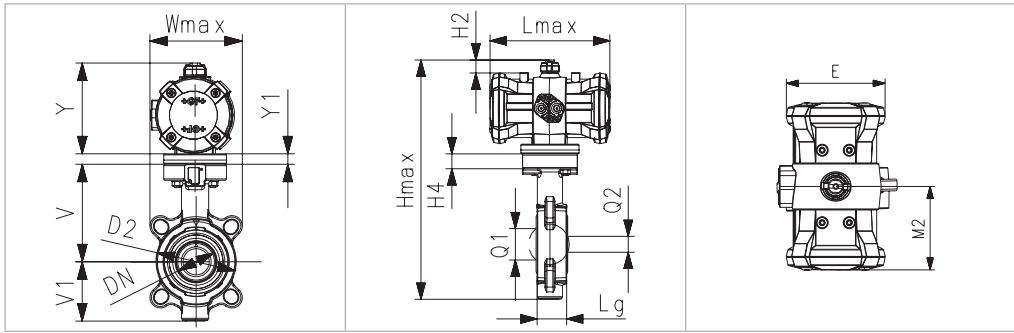
Dimensions			Measurements															
DN (mm)	d (mm)	d (")	Hmax (mm)	Lmax (mm)	Wmax (mm)	k (mm)	D2 (mm)	H4 (mm)	V1 (mm)	V (mm)	Y (mm)	Lg (mm)	Q1 (mm)	Q2 (mm)	E (mm)	M (mm)	LV (mm)	LB (mm)
350	355	14"	709	180	535	460	535	100	268	410	31	129	325	305	130	200	146	122
400	400	16"	766	180	595	515	595	100	300	435	31	169	353	350	130	200	174	122
450	450	18"	875	220	635	565	635	130	320	520	35	179	393	390	130	250	185	203
500	500	20"	935	220	700	620	700	130	350	550	35	190	444	440	174	300	201	151
600	630	24"	1065	220	813	725	813	130	420	610	35	209	530	527	74	300	210	151

## Butterfly valve type 240 wafer-style, DN50 – DN125, with plastic pneumatic actuator FC/FO



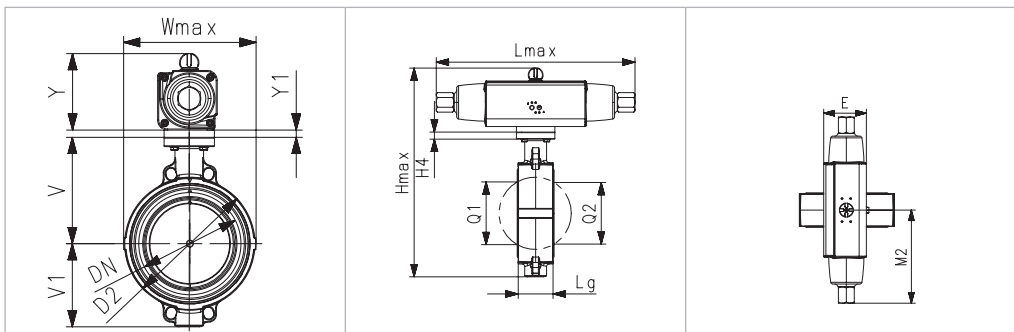
Dimensions			Measurements															
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	V (mm)	H2 (mm)	H4 (mm)	V1 (mm)	Lg (mm)	D2 (mm)	Q1 (mm)	Q2 (mm)	Y (mm)	Y1 (mm)	M2 (mm)	E (mm)
50	63	2	PPA40	338.1	245.5	121.2	133.3	20	23	78.8	45	104	40		111	15	122.75	119.5
65	75	2 ½	PPA40	351.0	245.5	132.5	139.9	20	23	85.1	46	115	54	35	111	15	122.75	119.5
80	90	3	PPA80	382.8	343.0	136.8	145.6	20	23	91.2	49	131	67	50	111	15	171.50	141.5
100	110	4	PPA80	403.1	343.0	161.0	166.4	20	23	105.7	56	161	88	74	131		171.50	141.5
125	140	5	PPA80	429.8	343.0	187.0	180.0	20	23	118.8	64	187	113	97	131		171.50	141.5

## Absperrklappe Typ 240 Wafer-Style, Zwischeneinbau, DN50 – DN125, mit pneumatischem Kunststoff-Antrieb DA



Dimensions			Measurements															
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	V (mm)	H2 (mm)	H4 (mm)	V1 (mm)	Lg (mm)	D2 (mm)	Q1 (mm)	Q2 (mm)	Y (mm)	Y1 (mm)	M2 (mm)	E (mm)
50	63	2	PPA40	338.1	183.5	121.2	133.3	20	23	78.8	45	104	40		111	15	91.8	119.5
65	75	2 ½	PPA40	351.0	183.5	132.5	139.9	20	23	85.1	46	115	54	35	111	15	91.8	119.5
80	90	3	PPA40	362.8	183.5	136.8	145.6	20	23	91.2	49	131	67	50	111	15	91.8	119.5
100	110	4	PPA80	403.1	261.0	161.0	166.4	20	23	105.7	56	161	88	74	131		130.5	141.5
125	140	5	PPA80	429.8	261.0	187.0	180.0	20	23	118.8	64	187	113	97	131		130.5	141.5

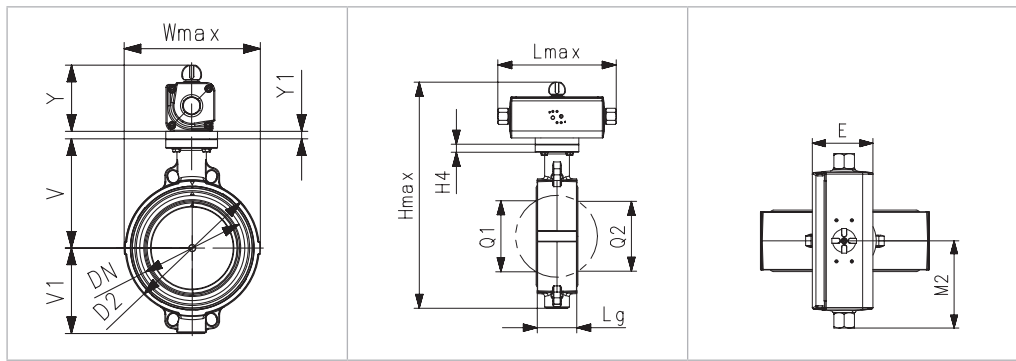
## Butterfly Valve type 240 wafer-style, DN50 – DN600, with pneumatic actuator FC/FO



Dimensions			Measurements															
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V (mm)	V1 (mm)	Y (mm)	Y1 (mm)	H4 (mm)	E (mm)	Q1 (mm)	Q2 (mm)	M2 (mm)	Lg (mm)	
50	63	2	PA30	325.3	274.4	118.4	104	133.3	78.8	98.2	15.0	23	70.4	40		137.2	45	
65	75	2 ½	PA30	338.2	274.4	132.5	115	139.9	85.1	98.2	15.0	23	70.4	54	35	137.2	46	
80	90	3	PA35	362.9	325.2	136.8	131	145.6	91.2	111.1	15.0	23	83.3	67	50	162.6	49	
100	110	4	PA40	386.9	359.6	161.0	161	166.4	105.7	114.8		23	87.0	88	74	179.8	56	
125	140	5	PA45	448.3	418.0	187.0	187	180.0	118.8	149.5		23	107.5	113	97	209.0	64	
150	160	6	PA50	473.0	434.0	215.0	215	189.0	130.9	153.1		23	111.1	139	123	217.0	72	
200	225	8	PA55	528.8	498.4	267.0	267	210.5	158.3	160.0		23	118.0	178	169	249.2	73	
250	280	10	PA60 FC	676.9	646.0	329.0	329	262.6	206.1	190.0	18.2	23	148.0	210	207	323.0	113	
250	280	10	PA70 FO	676.9	646.0	329.0	329	262.6	206.1	190.0	18.2	23	148.0	210	207	323.0	113	
300	315	12	PA65 FC	741.4	681.0	379.0	379	284.3	228.8	210.1	18.2	23	168.0	256	253	340.5	113	
300	315	12	PA70 FO	741.4	681.0	379.0	379	284.3	228.8	210.1	18.2	23	168.0	256	253	340.5	113	
350	355	14	APS190	887.0	390.0	535.0	535	410.0	268.0	185		100	153.0	325	305	195.0	129	
400	400	16	APS210	972.0	458.0	595.0	595	435.0	300.0	206		100	176.0	353	350	326.0	169	
450	450	18	APS240	1077.0	458.0	635.0	635	520.0	320.0	206		130	176.0	393	390	263.0	179	
500	500	20	APS240	1173.0	525.0	700.0	700	550.0	350.0	230		130	206.0	444	440	263.0	190	
600	630	24	APS270	1303.0	525.0	813.0	813	610.0	420.0	300		130	206.0	530	527	263.0	209	

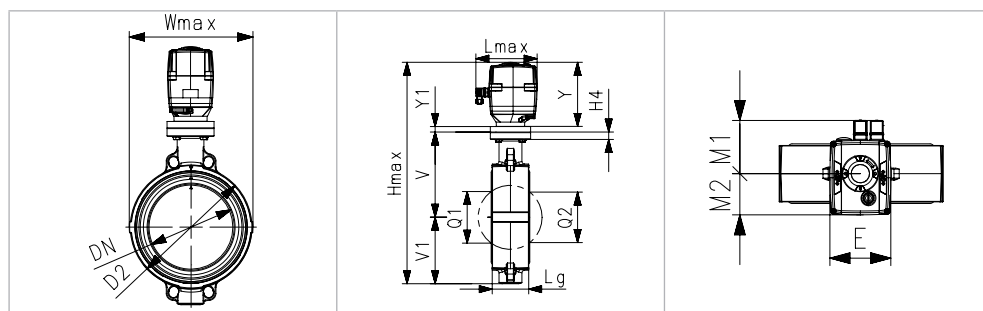


## Butterfly Valve type 240 wafer-style, DN50 – DN600, with pneumatic actuator DA



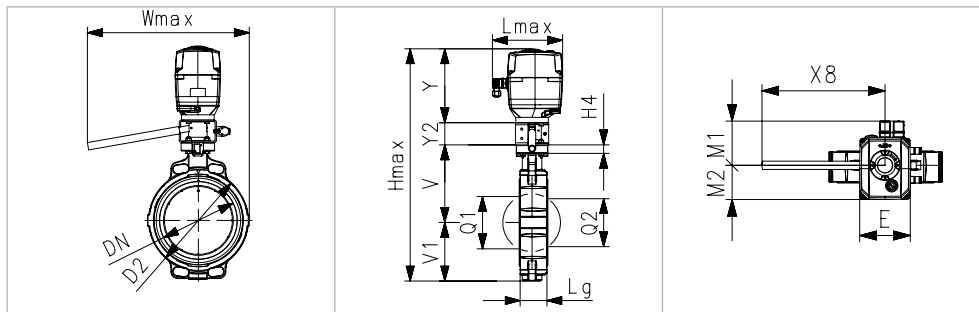
Dimensions			Measurements														
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V (mm)	V1 (mm)	Y (mm)	Y1 (mm)	H4 (mm)	E (mm)	Q1 (mm)	Q2 (mm)	M2 (mm)	Lg (mm)
50	63	2	PA30	319.4	196.2	118.4	104	133.3	78.8	92.3	15.0	23	64.5	40		98.1	45
65	75	2 ½	PA30	332.3	196.2	132.5	115	139.9	85.1	92.3	15.0	23	64.5	54	35	98.1	46
80	90	3	PA35	350.0	205.6	136.8	131	145.6	91.2	98.2	15.0	23	70.4	67	50	102.8	49
100	110	4	PA40	383.3	242.0	161.0	161	166.4	105.7	111.2		23	83.3	88	74	121.0	56
125	140	5	PA45	410.0	242.0	187.0	187	180.0	118.8	111.2		23	83.3	113	97	121.0	64
150	160	6	PA50	469.4	290.0	215.0	215	189.0	130.9	149.5		23	107.5	139	123	145.0	72
200	225	8	PA55	518.3	290.0	267.0	267	210.5	158.3	149.5		23	107.5	178	169	145.0	73
250	280	10	PA65	646.9	339.6	329.0	329	262.6	206.1	160.0	18.2	23	107.5	210	207	169.8	113
300	315	12	PA65	691.4	339.6	380.4	379	284.3	228.8	160.0	18.2	23	118.0	256	253	169.8	113
350	355	14	APS190	887.0	390.0	535.0	535	410.0	268.0	209.0		100	153.0	325	305	195.0	129
400	400	16	APS210	972.0	458.0	595.0	595	435.0	300.0	234.0		100	176.0	353	350	326.0	169
450	450	18	APS240	1077.0	458.0	635.0	635	520.0	320.0	234.0		130	176.0	393	390	326.0	179
500	500	20	APS240	1173.0	525.0	700.0	700	550.0	350.0	270.0		130	206.0	444	440	263.0	190
600	630	24	APS270	1303.0	525.0	813.0	813	610.0	420.0	270.0		130	206.0	530	527	263.0	209

## Butterfly Valve type 145 wafer-style, DN50 – DN300, with electric actuator, without manual override



Dimensions			Measurements																
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V1 (mm)	V (mm)	Y (mm)	Y1 (mm)	E (mm)	Q1 (mm)	Q2 (mm)	H4 (mm)	M1 (mm)	M2 (mm)	Lg (mm)	
50	63	2	EA45	393.3	190	118.4	104	78.8	133.3	166.2	15	122.3	40		23	107.3	82.7	45	
65	75	2 ½	EA45	406.2	190	132.5	115	85.1	139.9	166.2	15	122.3	54	35	23	107.3	82.7	46	
80	90	3	EA120	426.1	190	136.8	131	91.2	145.6	189.3		122.3	67	50	23	107.3	82.7	49	
100	110	4	EA120	461.4	190	161.0	161	105.7	166.4	189.3		122.3	88	74	23	107.3	82.7	56	
125	140	5	EA120	488.1	190	187.0	187	118.8	180.0	189.3		122.3	113	97	23	107.3	82.7	64	
150	160	6	EA120	509.2	190	215.0	215	130.9	189.0	189.3		122.3	139	123	23	107.3	82.7	72	
200	225	8	EA250	568.1	190	267.0	267	158.3	210.5	199.3		122.3	178	169	23	107.3	82.7	73	
250	280	10	EA250	685.0	190	329.0	329	206.1	262.6	199.3	17	122.3	210	207	23	107.3	82.7	113	
300	315	12	EA250	729.4	190	380.4	379	228.8	262.6	199.3	17	122.3	256	253	23	107.3	82.7	113	
350	355	14	EA250	1036.0	190	535	535	268	410	199.3	17	122.3	325	305	23	107.3	82.7	129	
400	400	16	EA250	1096.0	190	595	595	300	435	199.3	17	122.3	353	350	23	107.3	82.7	169	
450	450	18	EA250	1225.0	190	635	635	320	520	199.3	17	122.3	393	390	23	107.3	82.7	179	
500	500	20	EA250	1285.0	190	700	700	350	550	199.3	17	122.3	444	440	23	107.3	82.7	190	
600	630	24	EA250	1450.0	190	813	813	420	610	199.3	17	122.3	530	527	23	107.3	82.7	209	

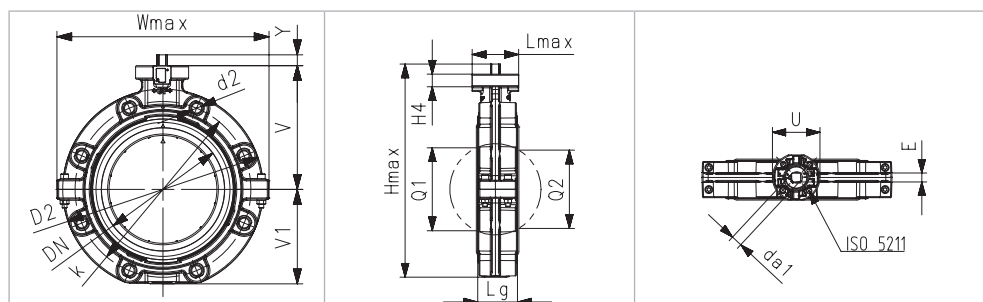
## Butterfly Valve type 145 wafer-style, DN50 – DN200, with electric actuator, with manual override



Dimensions			Measurements																
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V1 (mm)	V (mm)	Y (mm)	Y2 (mm)	E (mm)	Q1 (mm)	Q2 (mm)	H4 (mm)	X8 (mm)	M1 (mm)	M2 (mm)	Lg (mm)
50	63	2	EA120	461.4	190	356.7	104	78.8	133.3	189.3	60	122.3	40		23	297.5	107.3	82.7	45
65	75	2 ½	EA120	474.3	190	363.8	115	85.1	139.9	189.3	60	122.3	54	35	23	297.5	107.3	82.7	46
80	90	3	EA120	486.1	190	365.9	131	91.2	145.6	189.3	60	122.3	67	50	23	297.5	107.3	82.7	49
100	110	4	EA120	521.4	190	378.0	161	105.7	166.4	189.3	60	122.3	88	74	23	297.5	107.3	82.7	56
125	140	5	EA120	548.1	190	391.0	187	118.8	180.0	189.3	60	122.3	113	97	23	297.5	107.3	82.7	64
150	160	6	EA120	569.2	190	405.0	215	130.9	189.0	189.3	60	122.3	139	123	23	297.5	107.3	82.7	72
200	225	8	EA250	628.1	190	431.0	267	158.3	210.5	189.3	60	122.3	178	169	23	297.5	107.3	82.7	73

## Measurements type 578 Lug-Style

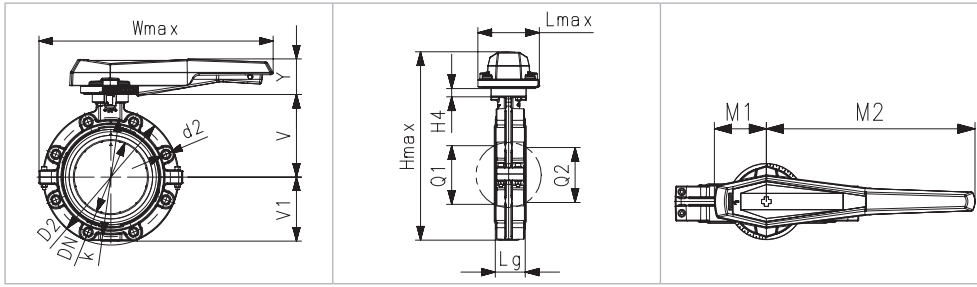
Butterfly Valve type 578 lug-style, DN50 – DN300, with open shaft end



Dimensions			Measurements												
DN (mm)	d (mm)	d (")	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V1 (mm)	V (mm)	Y (mm)	Lg (mm)	H4 (mm)	Q1 (mm)	Q2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)
50	63	2	238.3	84.8	159.5	160	78.8	133.3	26.2	44.7	23	40		125	120.6
65	75	2½	251.2	84.8	166.1	180	85.1	139.9	26.2	45.7	23	54	35	145	139.7
80	90	3	263.0	84.8	187.8	195	91.2	145.6	15.4	48.7	23	67	50	160	152.4
100	110	4	288.9	84.8	181.4	226	107.5	166.0	15.4	55.6	23	88	74	180	190.5
125	140	5	318.1	84.8	195.4	258	122.7	180.0	15.4	63.5	23	113	97	210	215.9
150	160	6	341.9	84.8	207.4	284	134.5	189.0	18.4	71.5	23	139	123	240	241.3
200	225	8	390.4	84.8	228.9	341	161.5	210.5	18.4	72.5	23	178	169	295	298.4
250	280	10	511.5	125.0	304.6	412	206.9	264.4	40.2	113.2	23	210	207	350	362.0
300	315	12	560.9	125.0	325.4	482	235.5	285.2	40.2	114.6	23	256	253	400	431.8

Dimensions			Measurements				
DN (mm)	d (mm)	d (")	d <sub>2ISO</sub> (mm)	d <sub>2ANSI</sub> (")	E (mm)	da1 (mm)	U (mm)
50	63	2	M16	UNC 5/8	11	13.5	90
65	75	2½	M16	UNC 5/8	11	13.5	90
80	90	3	M16	UNC 5/8	11	13.5	90
100	110	4	M16	UNC 5/8	14	17.3	90
125	140	5	M16	UNC 3/4	14	17.3	90
150	160	6	M20	UNC 3/4	17	21.1	90
200	225	8	M20	UNC 3/4	17	21.1	90
250	280	10	M20	UNC 7/8	22	27.0	125
300	315	12	M20	UNC 7/8	22	27.0	125

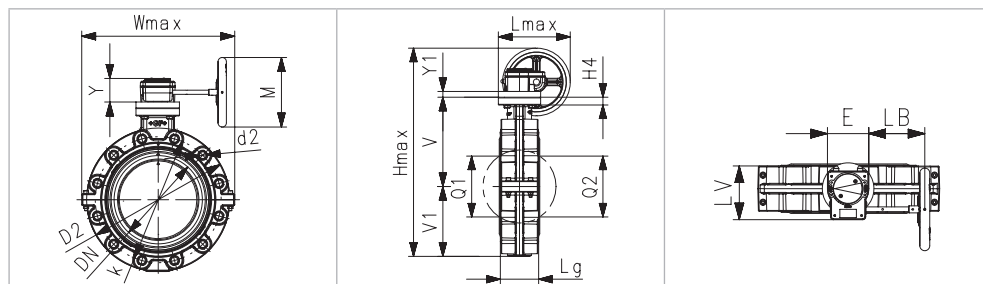
## Butterfly Valve type 578 lug-style, DN50 – DN300, with hand lever



Dimensions			Measurements												
DN (mm)	d (mm)	d (")	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V1 (mm)	V (mm)	Y (mm)	Lg (mm)	H4 (mm)	Q1 (mm)	Q2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)
50	63	2	278.9	115.2	287.8	160	78.8	133.3	66.8	44.7	23	40		125	120.6
65	75	2½	291.8	115.2	296.3	180	85.1	139.9	66.8	45.7	23	54	35	145	139.7
80	90	3	303.6	115.2	310.3	195	91.2	145.6	66.8	48.7	23	67	50	160	152.4
100	110	4	343.6	115.2	375.2	226	107.5	166.0	70.1	55.6	23	88	74	180	190.5
125	140	5	372.8	115.2	391.2	258	122.7	180.0	70.1	63.5	23	113	97	210	215.9
150	160	6	393.6	115.2	395.2	284	134.5	189.0	70.1	71.5	23	139	123	240	241.3
200	225	8	458.1	149.4	588.1	341	161.5	210.5	86.1	72.5	23	178	169	295	298.4
250	280	10	557.6	149.4	628.1	412	206.9	264.4	86.3	113.2	23	210	207	350	362.0
300	315	12	607.0	149.4	663.1	482	235.5	285.2	86.3	114.6	23	256	253	400	431.8

Dimensions			Measurements			
DN (mm)	d (mm)	d (")	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")	M1 (mm)	M2 (mm)
50	63	2	M16	UNC 5/8	63.7	205.3
65	75	2½	M16	UNC 5/8	63.7	205.3
80	90	3	M16	UNC 5/8	63.7	205.3
100	110	4	M16	UNC 5/8	63.7	205.3
125	140	5	M16	UNC 3/4	63.7	205.3
150	160	6	M20	UNC 3/4	63.7	205.3
200	225	8	M20	UNC 3/4	101.7	408.1
250	280	10	M20	UNC 7/8	101.7	408.1
300	315	12	M20	UNC 7/8	101.7	408.1

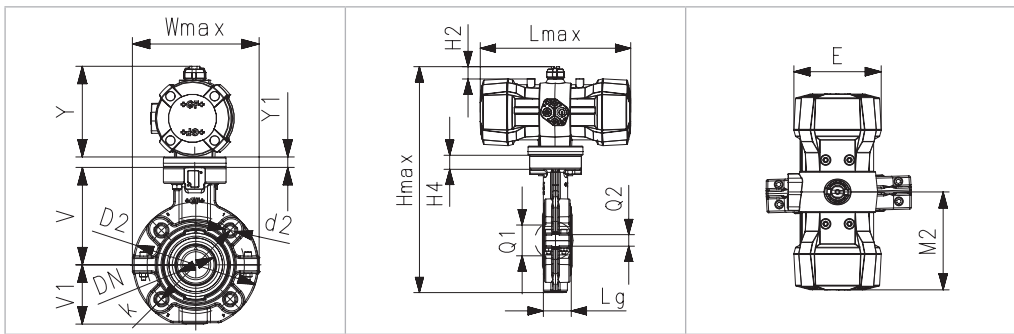
## Butterfly Valve type 578 lug-style, DN50 – DN300, with manual reduction gear



Dimensions			Measurements											
DN (mm)	d (mm)	d (")	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	H4 (mm)	V1 (mm)	V (mm)	Y (mm)	Y1 (mm)	Lg (mm)	Q1 (mm)	Q2 (mm)
50	63	2	319.4	263.5	263.5	160	23	78.8	133.3	61.2		44.7	40	
65	75	2 ½	332.3	272.0	272.0	180	23	85.1	139.9	61.2		45.7	54	35
80	90	3	344.1	286.0	286.0	195	23	91.2	145.6	61.2		48.7	67	50
100	110	4	380.8	301.0	301.0	226	23	107.5	166.0	61.2		55.6	88	74
125	140	5	410.0	317.0	317.0	258	23	122.7	180.0	61.2		63.5	113	97
150	160	6	430.8	321.0	321.0	284	23	134.5	189.0	61.2		71.5	139	123
200	225	8	479.3	360.0	360.0	341	23	161.5	210.5	61.2		72.5	178	169
250	280	10	615.6	440.0	440.0	412	23	206.9	264.4	68.4	17	113.2	210	207
300	315	12	665.0	510.0	510.0	482	23	235.5	285.2	68.4	17	114.6	256	253

Dimensions			Measurements								
DN (mm)	d (mm)	d (")	E (mm)	M (mm)	LV (mm)	LB (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d <sub>ISO</sub> (mm)	d <sub>ANSI</sub> (")	
50	63	2	80	160	112.3	129.5	125	120.6	M16	UNC 5/8	
65	75	2 ½	80	160	112.3	129.5	145	139.7	M16	UNC 5/8	
80	90	3	80	160	112.3	129.5	160	152.4	M16	UNC 5/8	
100	110	4	80	160	112.3	129.5	180	190.5	M16	UNC 5/8	
125	140	5	80	160	112.3	129.5	210	215.9	M16	UNC 3/4	
150	160	6	80	160	112.3	129.5	240	241.3	M20	UNC 3/4	
200	225	8	80	160	112.3	129.5	295	298.4	M20	UNC 3/4	
250	280	10	100	200	130.0	134.0	350	362.0	M20	UNC 7/8	
300	315	12	100	200	130.0	134.0	400	431.8	M20	UNC 7/8	

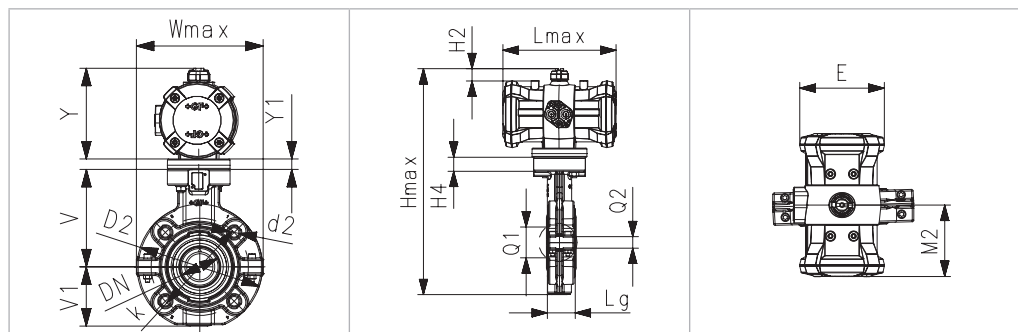
## Butterfly valve type 243 lug-style, DN50 – DN125, with plastic pneumatic actuator FC/FO



Dimensions			Measurements													
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	V (mm)	H2 (mm)	H4 (mm)	V1 (mm)	Lg (mm)	D2 (mm)	Q1 (mm)	Q2 (mm)	Y (mm)	Y1 (mm)
50	63	2	PPA40	338.1	245.5	165	133.3	20	23	78.8	44.7	160	40		111	15
65	75	2 ½	PPA40	351.0	245.5	182	139.9	20	23	85.1	45.7	180	54	35	111	15
80	90	3	PPA80	367.8	343.0	210	145.6	20	23	91.2	48.7	195	67	50	111	15
100	110	4	PPA80	404.5	343.0	240	166.4	20	23	107.5	55.6	226	88	74	131	
125	140	5	PPA80	433.7	343.0	272	180.0	20	23	122.7	63.5	258	113	97	131	

Dimensions			Measurements					
DN (mm)	d (mm)	d (")	M2 (mm)	E (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")
50	63	2	122.8	119.5	125	120.6	M16	UNC 5/8
65	75	2 ½	122.8	119.5	145	139.7	M16	UNC 5/8
80	90	3	171.5	141.5	160	152.4	M16	UNC 5/8
100	110	4	171.5	141.5	180	190.5	M16	UNC 5/8
125	140	5	171.5	141.5	210	215.9	M16	UNC 3/4

## Butterfly valve type 243 lug-style, DN50 – DN125, with plastic pneumatic actuator DA

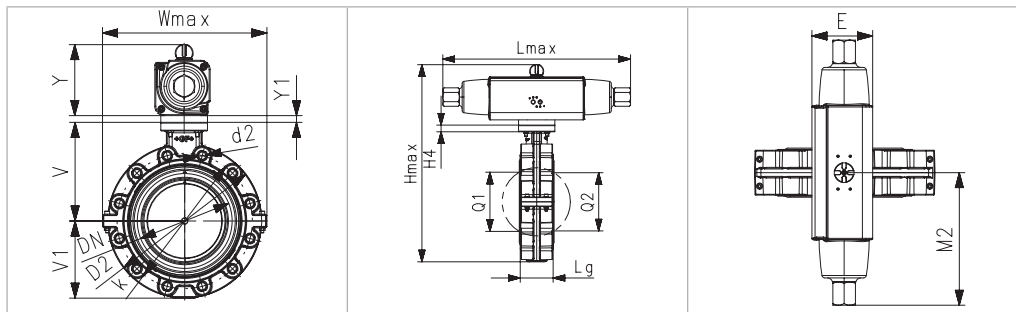


Dimensions			Measurements												
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	V (mm)	H2 (mm)	H4 (mm)	V1 (mm)	Lg (mm)	D2 (mm)	Q1 (mm)	Q2 (mm)	Y (mm)
50	63	2	PPA40	338.1	183.5	165	133.3	20	23	78.8	44.7	160	40		111
65	75	2 ½	PPA40	351.0	183.5	182	139.9	20	23	85.1	45.7	180	54	35	111
80	90	3	PPA40	362.8	183.5	210	145.6	20	23	91.2	48.7	195	67	50	111
100	110	4	PPA80	404.5	261.0	240	166.0	20	23	107.5	55.6	226	88	74	131
125	140	5	PPA80	433.7	261.0	272	180.0	20	23	122.7	63.5	258	113	97	131

Dimensions			Measurements						
DN (mm)	d (mm)	d (")	Y1 (mm)	M2 (mm)	E (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")
50	63	2	15	91.8	119.5	125	120.6	M16	UNC 5/8
65	75	2 ½	15	91.8	119.5	145	139.7	M16	UNC 5/8
80	90	3	15	91.8	119.5	160	152.4	M16	UNC 5/8
100	110	4		130.5	141.5	180	190.5	M16	UNC 5/8
125	140	5		130.5	141.5	210	215.9	M16	UNC 3/4



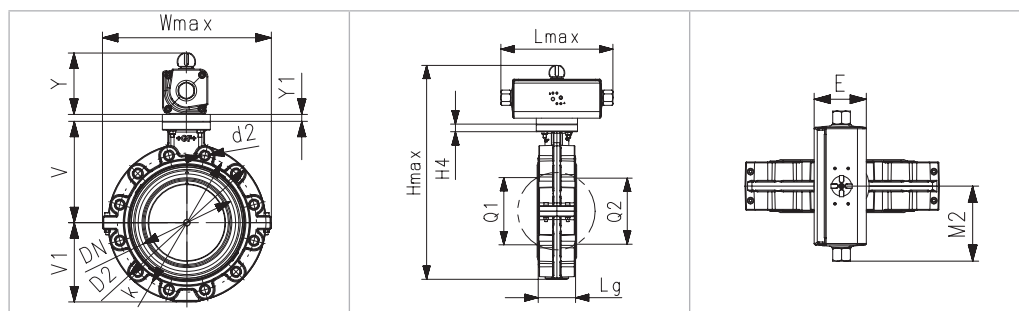
## Butterfly Valve type 243 lug-style, DN50 – DN300, with pneumatic actuator FC/FO



Dimensions				Measurements												
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V1 (mm)	V (mm)	Y (mm)	Y1 (mm)	H4 (mm)	Lg (mm)	E (mm)	M2 (mm)	
50	63	2	PA30	328.1	274.4	165	160	78.8	133.3	98.2	15.0	23	44.7	70.4	137.2	
65	75	2 ½	PA30	341.0	274.4	182	180	85.1	139.9	98.2	15.0	23	45.7	70.4	137.2	
80	90	3	PA35	365.7	325.2	210	195	91.2	145.6	111.1	15.0	23	48.7	83.3	162.6	
100	110	4	PA40	388.3	359.6	240	226	107.5	166.0	114.8		23	55.6	87.0	179.8	
125	140	5	PA45	452.2	418.0	272	258	122.7	180.0	149.5		23	63.5	107.5	209.0	
150	160	6	PA50	476.6	434.0	280	284	134.5	189.0	153.1		23	71.5	111.1	217.0	
200	225	8	PA55	532.0	498.4	360	341	161.5	210.5	160.0		23	72.5	118.0	249.2	
250	280	10	PA60 FC	679.5	646.0	440	412	206.9	264.4	190.0		23	113.2	148.0	323.0	
250	280	10	PA70 FO	749.0	681.0	440	412	206.9	264.4	190.0		23	113.2	168.0	340.5	
300	315	12	PA65 FC	679.5	646.0	510	482	235.5	285.2	210.1	18.2	23	114.6	148.0	323.0	
300	315	12	PA70 FO	749.0	681.0	510	482	235.5	285.2	210.1	18.2	23	114.6	168.0	340.5	

Dimensions			Measurements						
DN (mm)	d (mm)	d (")	Q1 (mm)	Q2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")	
50	63	2	40		125	120.6	M16	UNC 5/8	
65	75	2 ½	54	35	145	139.7	M16	UNC 5/8	
80	90	3	67	50	160	152.4	M16	UNC 5/8	
100	110	4	88	74	180	190.5	M16	UNC 5/8	
125	140	5	113	39	210	215.9	M16	UNC 3/4	
150	160	6	139	123	240	241.3	M20	UNC 3/4	
200	225	8	178	169	295	298.4	M20	UNC 3/4	
250	280	10	210	207	350	362.0	M20	UNC 7/8	
250	280	10	210	207	350	362.0	M20	UNC 7/8	
300	315	12	256	253	400	431.8	M20	UNC 7/8	
300	315	12	256	253	400	431.8	M20	UNC 7/8	

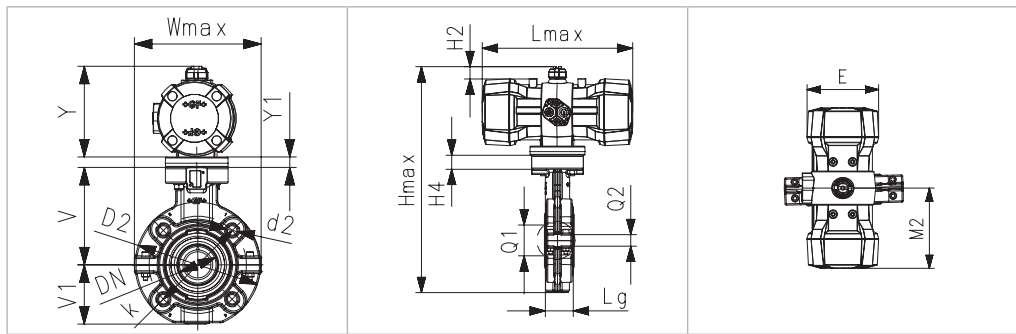
## Butterfly Valve type 243 lug-style, DN50 – DN300, with pneumatic actuator DA



Dimensions			Measurements														
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V1 (mm)	U (mm)	V (mm)	Y (mm)	Y1 (mm)	H4 (mm)	Lg (mm)	E (mm)	M2 (mm)	
50	63	2	PA35	319.4	196.2	165	160	78.8	90	133.3	92.3	15.0	23	44.7	64.5	98.1	
65	75	2 ½	PA35	332.3	196.2	182	180	85.1	90	139.9	92.3	15.0	23	45.7	64.5	98.1	
80	90	3	PA40	352.8	205.6	210	195	91.2	90	145.6	98.2	15.0	23	48.7	70.4	102.8	
100	110	4	PA45	384.7	242.0	240	226	107.5	90	166.0	111.2		23	55.6	83.3	121.0	
125	140	5	PA45	413.9	242.0	272	258	122.7	90	180.0	111.2		23	63.5	83.3	121.0	
150	160	6	PA55	473.0	290.0	280	284	134.5	90	189.0	149.5		23	71.5	107.5	145.0	
200	225	8	PA55	521.5	290.0	360	341	161.5	90	210.5	149.5		23	72.5	107.5	145.0	
250	280	10	PA65	649.5	339.6	440	412	206.9	90	264.4	160.0		23	113.2	118.0	169.8	
300	315	12	PA65	689.9	339.6	510	482	235.5	125	285.2	160.0	18.2	23	114.6	118.0	169.8	

Dimensions			Measurements						
DN (mm)	d (mm)	d (")	Q1 (mm)	Q2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")	
50	63	2	40		125	120.6	M16	UNC 5/8	
65	75	2 ½	54	35	145	139.7	M16	UNC 5/8	
80	90	3	67	50	160	152.4	M16	UNC 5/8	
100	110	4	88	74	180	190.5	M16	UNC 5/8	
125	140	5	113	39	210	215.9	M16	UNC 3/4	
150	160	6	139	123	240	241.3	M20	UNC 3/4	
200	225	8	178	169	295	298.4	M20	UNC 3/4	
250	280	10	210	207	350	362.0	M20	UNC 7/8	
300	315	12	256	253	400	431.8	M20	UNC 7/8	

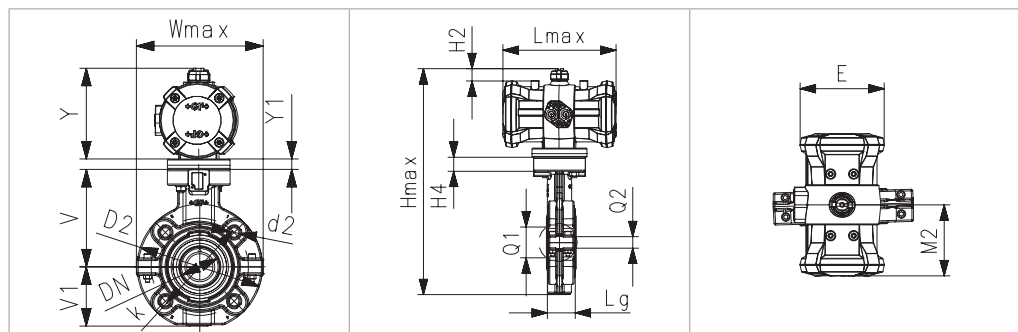
## Butterfly valve type 244 lug-style, DN50 – DN125, with plastic pneumatic actuator FC/FO



Dimensions			Measurements															
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	U (mm)	V (mm)	H2 (mm)	H4 (mm)	V1 (mm)	Lg (mm)	D2 (mm)	Q1 (mm)	Q2 (mm)	Y (mm)	Y1 (mm)	M2 (mm)
50	63	2	PPA40	338.1	245.5	165	90	133.3	20	23	78.8	44.7	160	40		111	15	122.8
65	75	2 ½	PPA40	351.0	245.5	182	90	139.9	20	23	85.1	45.7	180	54	35	111	15	122.8
80	90	3	PPA80	367.8	343.0	210	90	145.6	20	23	91.2	48.7	195	67	50	131	15	171.5
100	110	4	PPA80	404.5	343.0	240	90	166.4	20	23	107.5	55.6	226	88	74	131		171.5
125	140	5	PPA80	433.7	343.0	272	90	180.0	20	23	122.7	63.5	258	113	97	131		171.5

Dimensions			Measurements				
DN (mm)	d (mm)	d (")	E (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")
50	63	2	119.5	125	120.6	M16	UNC 5/8
65	75	2 ½	119.5	145	139.7	M16	UNC 5/8
80	90	3	141.5	160	152.4	M16	UNC 5/8
100	110	4	141.5	180	190.5	M16	UNC 5/8
125	140	5	141.5	210	215.9	M16	UNC 3/4

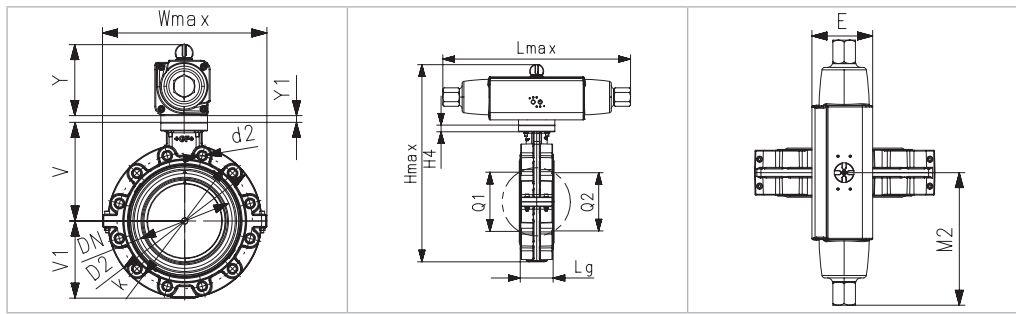
## Butterfly valve type 244 lug-style, DN50 – DN125, with plastic pneumatic actuator DA



Dimensions			Measurements														
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	V (mm)	H2 (mm)	H4 (mm)	V1 (mm)	Lg (mm)	D2 (mm)	Q1 (mm)	Q2 (mm)	Y (mm)	Y1 (mm)	M2 (mm)
50	63	2	PPA40	338.1	183.5	165	133.3	20	23	78.8	44.7	160	40		111	15	91.8
65	75	2 ½	PPA40	351.0	183.5	182	139.9	20	23	85.1	45.7	180	54	35	111	15	91.8
80	90	3	PPA40	362.8	183.5	210	145.6	20	23	91.2	48.7	195	67	50	111	15	91.8
100	110	4	PPA80	404.5	261.0	240	166.0	20	23	107.5	55.6	226	88	74	131		130.5
125	140	5	PPA80	433.7	261.0	272	180.0	20	23	122.7	63.5	258	113	97	131		130.5

Dimensions			Measurements				
DN (mm)	d (mm)	d (")	E (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")
50	63	2	119.5	125	120.6	M16	UNC 5/8
65	75	2 ½	119.5	145	139.7	M16	UNC 5/8
80	90	3	119.5	160	152.4	M16	UNC 5/8
100	110	4	141.5	180	190.5	M16	UNC 5/8
125	140	5	141.5	210	215.9	M16	UNC 3/4

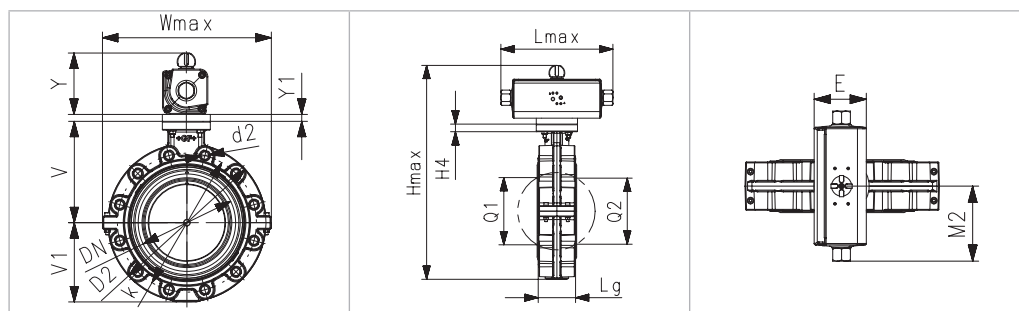
## Butterfly Valve type 244 lug-style, DN50 – DN300, with pneumatic actuator FC/FO



Dimensions				Measurements											
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V1 (mm)	V (mm)	Y (mm)	Y1 (mm)	H4 (mm)	Lg (mm)	E (mm)	M2 (mm)
50	63	2	PA30	328.1	274.4	165	160	78.8	133.3	98.2	15.0	23	44.7	70.4	137.2
65	75	2 ½	PA30	341.0	274.4	182	180	85.1	139.9	98.2	15.0	23	45.7	70.4	137.2
80	90	3	PA35	365.7	325.2	210	195	91.2	145.6	111.1	15.0	23	48.7	83.3	162.6
100	110	4	PA40	388.3	359.6	240	226	107.5	166.0	114.8		23	55.6	87.0	179.8
125	140	5	PA45	452.2	418.0	272	258	122.7	180.0	149.5		23	63.5	107.5	209.0
150	160	6	PA50	476.6	434.0	280	284	134.5	189.0	153.1		23	71.5	111.1	217.0
200	225	8	PA55	532.0	498.4	360	341	161.5	210.5	160.0		23	72.5	118.0	249.2
250	280	10	PA60 FC	679.5	646.0	440	412	206.9	264.4	190.0		23	113.2	148.0	323.0
250	280	10	PA70 FO	749.0	681.0	440	412	206.9	264.4	190.0		23	113.2	168.0	340.5
300	315	12	PA65 FC	679.5	646.0	510	482	235.5	285.2	210.1	18.2	23	114.6	148.0	323.0
300	315	12	PA70 FO	749.0	681.0	510	482	235.5	285.2	210.1	18.2	23	114.6	168.0	340.5

Dimensions			Measurements						
DN (mm)	d (mm)	d (")	Q1 (mm)	Q2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")	
50	63	2	40		125	120.6	M16	UNC 5/8	
65	75	2 ½	54	35	145	139.7	M16	UNC 5/8	
80	90	3	67	50	160	152.4	M16	UNC 5/8	
100	110	4	88	74	180	190.5	M16	UNC 5/8	
125	140	5	113	39	210	215.9	M16	UNC 3/4	
150	160	6	139	123	240	241.3	M20	UNC 3/4	
200	225	8	178	169	295	298.4	M20	UNC 3/4	
250	280	10	210	207	350	362.0	M20	UNC 7/8	
250	280	10	210	207	350	362.0	M20	UNC 7/8	
300	315	12	256	253	400	431.8	M20	UNC 7/8	
300	315	12	256	253	400	431.8	M20	UNC 7/8	

## Butterfly Valve type 244 lug-style, DN50 – DN300, with pneumatic actuator DA

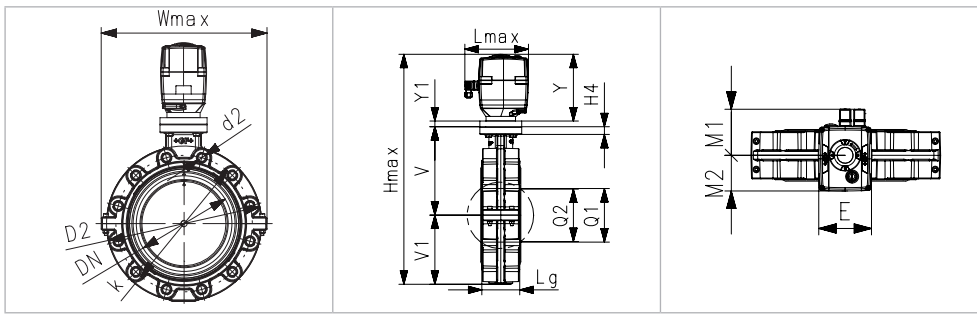


Dimensions			Measurements													
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	V1 (mm)	V (mm)	Y (mm)	Y1 (mm)	H4 (mm)	Lg (mm)	E (mm)	M2 (mm)	
50	63	2	PA35	319.4	196.2	165	160	78.8	133.3	92.3	15.0	23	44.7	64.5	98.1	
65	75	2 ½	PA35	332.3	196.2	182	180	85.1	139.9	92.3	15.0	23	45.7	64.5	98.1	
80	90	3	PA40	352.8	205.6	210	195	91.2	145.6	98.2	15.0	23	48.7	70.4	102.8	
100	110	4	PA45	384.7	242.0	240	226	107.5	166.0	111.2		23	55.6	83.3	121.0	
125	140	5	PA45	413.9	242.0	272	258	122.7	180.0	111.2		23	63.5	83.3	121.0	
150	160	6	PA55	473.0	290.0	280	284	134.5	189.0	149.5		23	71.5	107.5	145.0	
200	225	8	PA55	521.5	290.0	360	341	161.5	210.5	149.5		23	72.5	107.5	145.0	
250	280	10	PA65	649.5	339.6	440	412	206.9	264.4	160.0		23	113.2	118.0	169.8	
300	315	12	PA65	689.9	339.6	510	482	235.5	285.2	160.0	18.2	23	114.6	118.0	169.8	

Dimensions			Measurements						
DN (mm)	d (mm)	d (")	Q1 (mm)	Q2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d2 <sub>ISO</sub> (mm)	d2 <sub>ANSI</sub> (")	
50	63	2	40		125	120.6	M16	UNC 5/8	
65	75	2 ½	54	35	145	139.7	M16	UNC 5/8	
80	90	3	67	50	160	152.4	M16	UNC 5/8	
100	110	4	88	74	180	190.5	M16	UNC 5/8	
125	140	5	113	39	210	215.9	M16	UNC 3/4	
150	160	6	139	123	240	241.3	M20	UNC 3/4	
200	225	8	178	169	295	298.4	M20	UNC 3/4	
250	280	10	210	207	350	362.0	M20	UNC 7/8	
300	315	12	256	253	400	431.8	M20	UNC 7/8	

Anschlussmass nach ANSI/ASME B16.5 Class 150

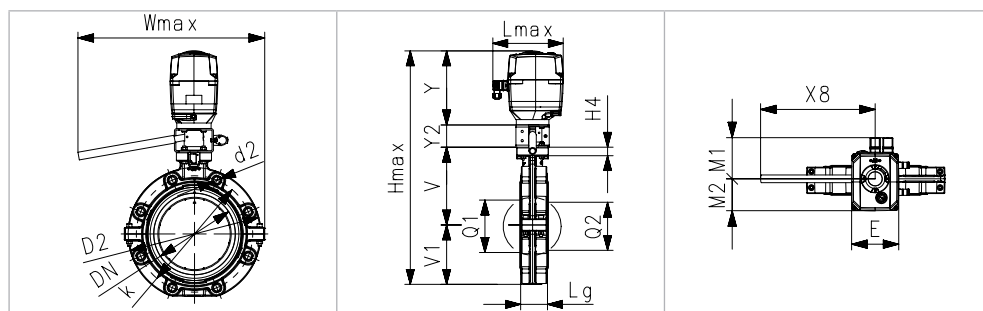
## Butterfly Valve type 146 lug-style, DN50 – DN200, with electric actuator, without manual override



Dimensions			Measurements										
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	Lg (mm)	V1 (mm)	V (mm)	Y (mm)	Y1 (mm)	E (mm)
50	63	2	EA45	378.3	190	165	160	44.7	78.8	133.3	166.2		122.3
65	75	2 ½	EA45	391.2	190	182	180	45.7	85.1	139.9	166.2		122.3
80	90	3	EA120	426.1	190	210	195	48.7	91.2	145.6	189.3		122.3
100	110	4	EA120	462.8	190	240	225	55.6	107.5	166.4	189.3		122.3
125	140	5	EA120	492.0	190	272	258	63.5	122.7	180.0	189.3		122.3
150	160	6	EA120	522.8	190	300	284	71.5	134.5	189.0	189.3		122.3
200	225	8	EA250	571.3	190	360	341	72.5	161.5	210.5	199.3		122.3
250	280	10	EA250	670.6	190	440	412	113.2	206.9	264.4	199.3	17	122.3
300	315	12	EA250	720.0	190	510	482	114.6	235.5	285.2	199.3	17	122.3

Dimensions			Measurements								
DN (mm)	d (mm)	d (")	Q1 (mm)	Q2 (mm)	H4 (mm)	M1 (mm)	M2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d <sub>ISO</sub> (mm)	d <sub>ANSI</sub> (")
50	63	2	40		23	107.3	82.7	125	120.6	M16	UNC 5/8
65	75	2 ½	54	35	23	107.3	82.7	145	139.7	M16	UNC 5/8
80	90	3	67	50	23	107.3	82.7	160	152.4	M16	UNC 5/8
100	110	4	88	74	23	107.3	82.7	180	190.5	M16	UNC 5/8
125	140	5	113	97	23	107.3	82.7	210	215.9	M16	UNC 3/4
150	160	6	139	123	23	107.3	82.7	240	241.3	M20	UNC 3/4
200	225	8	178	169	23	107.3	82.7	295	298.4	M20	UNC 3/4
250	280	10	210	207	23	107.3	82.7	350	362.0	M20	UNC 7/8
300	315	12	256	253	23	107.3	82.7	400	431.8	M20	UNC 7/8

## Butterfly Valve type 146 lug-style, DN50 – DN200, with electric actuator, with manual override

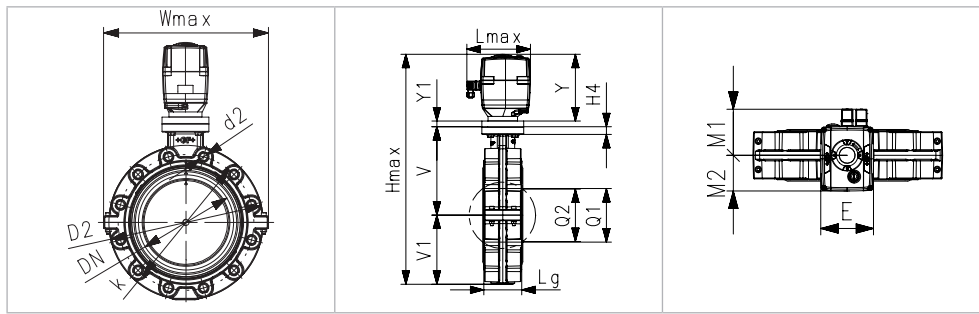


Dimensions			Measurements										
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	Lg (mm)	V1 (mm)	V (mm)	Y (mm)	Y2 (mm)	E (mm)
50	63	2	EA45	438.3	190	380.0	160	44.7	78.8	133.3	166.2	60	122.3
65	75	2 ½	EA45	451.2	190	388.5	180	45.7	85.1	139.9	166.2	60	122.3
80	90	3	EA120	486.1	190	402.5	195	48.7	91.2	145.6	189.3	60	122.3
100	110	4	EA120	522.8	190	417.5	225	55.6	107.5	166.4	189.3	60	122.3
125	140	5	EA120	552.0	190	433.5	258	63.5	122.7	180.0	189.3	60	122.3
150	160	6	EA120	582.8	190	447.5	284	71.5	134.5	189.0	189.3	60	122.3
200	225	8	EA250	631.3	190	447.5	341	72.5	161.5	210.5	199.3	60	122.3

Dimensions			Measurements										
DN (mm)	d (mm)	d (")	Q1 (mm)	Q2 (mm)	H4 (mm)	M1 (mm)	M2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d <sub>ISO</sub> (mm)	d <sub>ANSI</sub> (")	X8 (mm)	
50	63	2	40		23	107.3	82.7	125	120.6	M16	UNC 5/8	297.5	
65	75	2 ½	54	35	23	107.3	82.7	145	139.7	M16	UNC 5/8	297.5	
80	90	3	67	50	23	107.3	82.7	160	152.4	M16	UNC 5/8	297.5	
100	110	4	88	74	23	107.3	82.7	180	190.5	M16	UNC 5/8	297.5	
125	140	5	113	97	23	107.3	82.7	210	215.9	M16	UNC 3/4	297.5	
150	160	6	139	123	23	107.3	82.7	240	241.3	M20	UNC 3/4	297.5	
200	225	8	178	169	23	107.3	82.7	295	298.4	M20	UNC 3/4	297.5	



## Butterfly Valve type 147 lug-style, DN50 – DN300, with electric actuator, without manual override

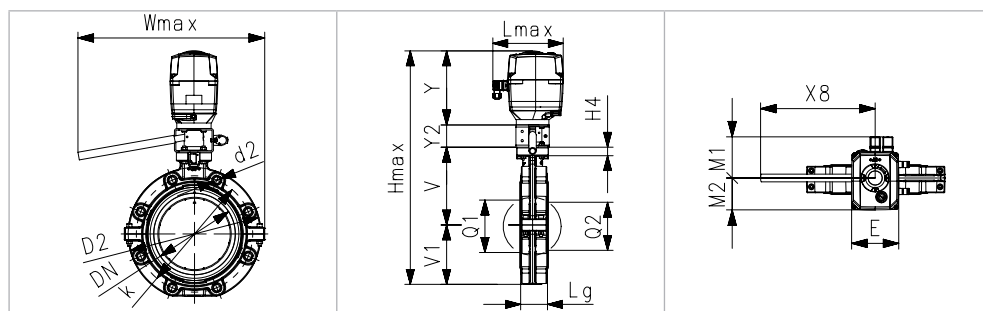


Dimensions			Measurements										
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	Lg (mm)	V1 (mm)	V (mm)	Y (mm)	Y1 (mm)	E (mm)
50	63	2	EA45	378.3	190	165	160	44.7	78.8	133.3	166.2		122.3
65	75	2 ½	EA45	391.2	190	182	180	45.7	85.1	139.9	166.2		122.3
80	90	3	EA120	426.1	190	210	195	48.7	91.2	145.6	189.3		122.3
100	110	4	EA120	462.8	190	240	225	55.6	107.5	166.4	189.3		122.3
125	140	5	EA120	492.0	190	272	258	63.5	122.7	180.0	189.3		122.3
150	160	6	EA120	522.8	190	300	284	71.5	134.5	189.0	189.3		122.3
200	225	8	EA250	571.3	190	360	341	72.5	161.5	210.5	199.3		122.3
250	280	10	EA250	670.6	190	440	412	113.2	206.9	264.4	199.3	17	122.3
300	315	12	EA250	720.0	190	510	482	114.6	235.5	285.2	199.3	17	122.3

Dimensions			Measurements								
DN (mm)	d (mm)	d (")	Q1 (mm)	Q2 (mm)	H4 (mm)	M1 (mm)	M2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d <sub>ISO</sub> (mm)	d <sub>ANSI</sub> (")
50	63	2	40		23	107.3	82.7	125	120.6	M16	UNC 5/8
65	75	2 ½	54	35	23	107.3	82.7	145	139.7	M16	UNC 5/8
80	90	3	67	50	23	107.3	82.7	160	152.4	M16	UNC 5/8
100	110	4	88	74	23	107.3	82.7	180	190.5	M16	UNC 5/8
125	140	5	113	97	23	107.3	82.7	210	215.9	M16	UNC 3/4
150	160	6	139	123	23	107.3	82.7	240	241.3	M20	UNC 3/4
200	225	8	178	169	23	107.3	82.7	295	298.4	M20	UNC 3/4
250	280	10	210	207	23	107.3	82.7	350	362.0	M20	UNC 7/8
300	315	12	256	253	23	107.3	82.7	400	431.8	M20	UNC 7/8

Dimensions in accordance with ANSI/ASME B16.5 Class 150

## Butterfly Valve type 147 lug-style, DN50 – DN200, with electric actuator, with manual override



Dimensions			Measurements										
DN (mm)	d (mm)	d (")	Act. type	Hmax (mm)	Lmax (mm)	Wmax (mm)	D2 (mm)	Lg (mm)	V1 (mm)	V (mm)	Y (mm)	Y2 (mm)	E (mm)
50	63	2	EA45	438.3	190	380.0	160	44.7	78.8	133.3	166.2	60	122.3
65	75	2 ½	EA45	451.2	190	388.5	180	45.7	85.1	139.9	166.2	60	122.3
80	90	3	EA120	486.1	190	402.5	195	48.7	91.2	145.6	189.3	60	122.3
100	110	4	EA120	522.8	190	417.5	225	55.6	107.5	166.4	189.3	60	122.3
125	140	5	EA120	552.0	190	433.5	258	63.5	122.7	180.0	189.3	60	122.3
150	160	6	EA120	582.8	190	447.5	284	71.5	134.5	189.0	189.3	60	122.3
200	225	8	EA250	631.3	190	447.5	341	72.5	161.5	210.5	199.3	60	122.3

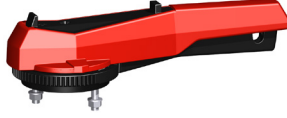
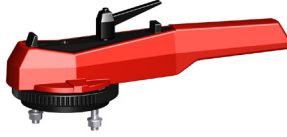
Dimensions			Measurements										
DN (mm)	d (mm)	d (")	Q1 (mm)	Q2 (mm)	H4 (mm)	U (mm)	M1 (mm)	M2 (mm)	k <sub>ISO</sub> (mm)	k <sub>ANSI</sub> (mm)	d <sub>ISO</sub> (mm)	d <sub>ANSI</sub> (")	X8 (mm)
50	63	2	40		23	90	107.3	82.7	125	120.6	M16	UNC 5/8	297.5
65	75	2 ½	54	35	23	90	107.3	82.7	145	139.7	M16	UNC 5/8	297.5
80	90	3	67	50	23	90	107.3	82.7	160	152.4	M16	UNC 5/8	297.5
100	110	4	88	74	23	90	107.3	82.7	180	190.5	M16	UNC 5/8	297.5
125	140	5	113	97	23	90	107.3	82.7	210	215.9	M16	UNC 3/4	297.5
150	160	6	139	123	23	90	107.3	82.7	240	241.3	M20	UNC 3/4	297.5
200	225	8	178	169	23	90	107.3	82.7	295	298.4	M20	UNC 3/4	297.5

Dimensions in accordance with ANSI/ASME B16.5 Class 150

## Accessories

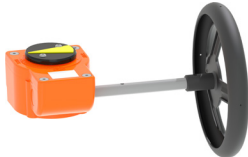
### Hand lever

Hand lever incl. fastening screws.

d (mm)	DN (mm)	Size (inch)	with index plate Code	With fine adjustment Code	Product picture
63	50	2	161 486 690	161 486 325	
75	65	2 ½	161 486 690	161 486 325	
90	80	3	161 486 690	161 486 325	
110	100	4	161 486 691	161 486 326	
140	125	5	161 486 691	161 486 326	
160	150	6	161 486 694	161 486 327	
225	200	8	161 486 695	161 486 328	
280	250	10	161 486 697		
315	300	12	161 486 697		

### Reduction gear

For valve operation via a manual gear with handwheel.

DN (mm)	Code	Product picture
50-200	161 483 471	
250-300	161 483 472	

### Integrated electrical position indicator (IER)

- Position indicator in combination with actuators
- For manual valve as well as for manual reduction gear

General technical data of the electrical position indicator:

- Protection rating with DIN plug (2) IP65
- Protection rating with cable gland IP67
- Ambient temperature: -10 °C to +50 °C

Assignment of the electrical position indicator to butterfly valve of types 567 and 578:

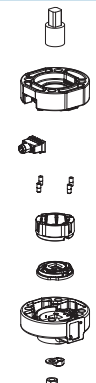
Shaft	Dimension
1	11 mm DN50 – DN80
2	14 mm DN100 – DN125
3	17 mm DN150 – DN200

## Double Sensor Adapter Butterfly Valve 567

Adapter to mount the double sensor on butterfly valves type 567. Double sensor for electrical position feedback must be ordered separately.


### Butterfly Valve type 567 DN50-DN200 with lever

Code	DN (mm)	d (")	Actuation Type
161486949	DN50-DN80	2"-3"	Lever
161486951	DN100-DN125	4"-5"	Lever
161486950	DN150-DN200	6"-8"	Lever



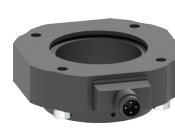
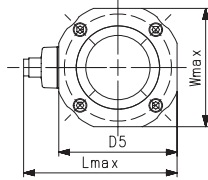
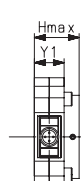
### Butterfly Valve type 567 DN50-DN200 with actuator

Code	DN (mm)	d (")	Actuation Type
161486955	DN50-DN65	2"-2.5"	PPA, PA, EA
161486953	DN80	3"	PPA
161486954	DN80	3"	PA, EA
161486952	DN100-DN125	4"-5"	PPA
161486951	DN100-DN125	4"-5"	PA, EA
161486950	DN150-DN200	6"-8"	PA, EA



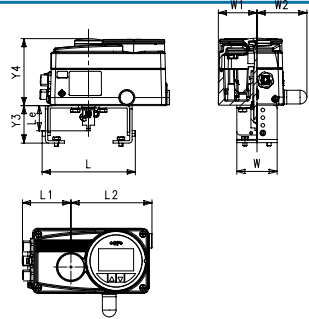
### Butterfly Valve type 567 DN350-DN600

Code	DN (mm)	D5 (mm)	Hmax (mm)	Hmax (mm)	Wmax (mm)	Y1 (mm)
167484209	DN350-400	74	28	96	74	18.6
167484210	DN450-600	74	28	96	74	18.6

## Type RPC / RPC D / RPC PID


Designation	Order code	Y4	W1	W2	L1	L2
RPC	199 190 640	83.5	48	62	60.5	100.5
RPC D	199 190 641	83.5	48	62	60.5	100.5
RPC PID	199 190 644	83.5	48	62	60.5	100.5




## Pneumatic Plastic Actuator PPA

The PPA pneumatic actuator can be mounted on any rotary valves with an interface according to ISO 5211.


### Single-acting FC

Code	Type	Torque max.	Acc. to ISO 5211	Product picture
198 155 401	PPA40	30 Nm	F05	
198 155 801	PPA80	53 Nm	F07	

### Single-acting F0

Code	Type	Torque max.	Acc. to ISO 5211	Product picture
198 155 402	PPA40	17 Nm	F05	
198 155 802	PPA80	40 Nm	F07	


### Double-acting DA

Code	Typ	Torque max.	Acc. to ISO 5211	Product picture
198 155 403	PPA40	31 Nm	F05	

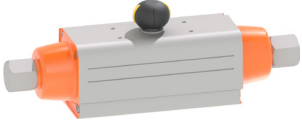
## Pneumatic Actuator PA30-90

The PA30 - PA90 pneumatic actuator can be mounted on any rotary valves with an interface according to ISO 5211.

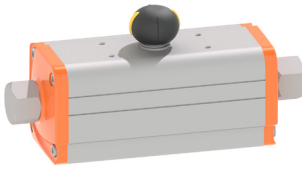
### Single-acting FC

Code	Type	Torque max.	Acc. to ISO 5211	Product picture
198 811 617	PA30	30 Nm	F05/07	
198 811 601	PA35	53 Nm	F05/07	
198 811 609	PA40	60 Nm	F05/07	
198 811 603	PA45	90 Nm	F07/10	
198 811 610	PA50	180 Nm	F07/10	
198 811 605	PA55	240 Nm	F07/10/12	
198 811 607	PA65	360 Nm	F10/12	
198 811 612	PA70	480 Nm	F10/12	

### Single-acting F0


Code	Typ	Torque max.	Acc. to ISO 5211	Product picture
198 811 627	PA30	30 Nm	F05/07	
198 811 628	PA35	53 Nm	F05/07	
198 811 629	PA40	60 Nm	F05/07	
198 811 630	PA45	90 Nm	F07/10	
198 811 631	PA50	180 Nm	F07/10	
198 811 632	PA55	240Nm	F07/10/12	
198 811 654	PA65	360 Nm	F10/12	
198 811 634	PA70	480 Nm	F10/12	

### Double-acting DA

Code	Typ	Torque max.	Acc. to ISO 5211	Product picture
198 811 618	PA35	46 Nm	F03/05	
198 811 619	PA40	60 Nm	F05/07	
198 811 604	PA45	106 Nm	F05/07	
198 811 606	PA55	180 Nm	F07/10	
198 811 608	PA65	360 Nm	F07/10	


## Electric Actuator EA25-250

The EA45/120/250 electric actuator is mounted on a valve (e.g. ball valve or butterfly valve) and connected to a control system provided by the customer. It actuates the valve with a rotary movement of up to 180°.

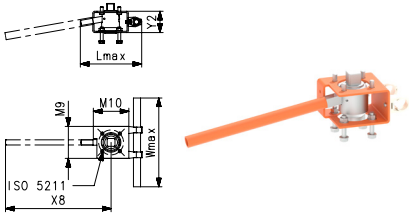

Code	Type	Spannung	Torque max.	Acc. to ISO 5211	Product picture
198 153 184	EA45	AC 100-230V	45 Nm	F05* (WS 11/14)	
198 153 185	EA45	AC/DC 24V	45 Nm	F05* (WS 11/14)	
198 153 186	EA120	AC 100-230V	120 Nm	F07 (WS17)	
198 153 187	EA120	AC/DC 24V	120 Nm	F07 (WS17)	
198 153 188	EA250	AC 100-230V	250 Nm	F07 (WS17)	
198 153 189	EA250	AC/DC 24V	250 Nm	F07 (WS17)	

## Smart Actuator dEA45-250

The Smart Actuator dEA45/120/250 is mounted on a valve (e.g. ball valve or butterfly valve) and connected to a control system provided by the customer. It actuates the valve with a rotary movement up to 180°. The Smart Actuator offers wireless connectivity via NFC and Wi-Fi Direct, as well as control and reading of process data via downloadable App.

Code	Type	Spannung	Torque max.	Acc. to ISO 5211	Product picture
198 153 194	dEA45	AC 100-230V	45 Nm	F05* (WS 11/14)	
198 153 195	dEA45	AC/DC 24V	45 Nm	F05* (WS 11/14)	
198 153 196	dEA120	AC 100-230V	120 Nm	F07 (WS17)	
198 153 197	dEA120	AC/DC 24V	120 Nm	F07 (WS17)	
198 153 198	dEA250	AC 100-230V	250 Nm	F07 (WS17)	
198 153 199	dEA250	AC/DC 24V	250 Nm	F07 (WS17)	

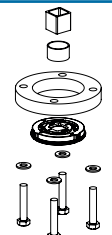
## Manual override

Code	Acc. to ISO 5211	Lmax (mm)	Wmax (mm)	M9 (mm)	M10 (mm)	X8 (mm)	Y2 (mm)	Dimensions	Product picture
198 000 623	F05	172	250	90	100	298	60		
198 000 624	F07	172	250	90	100	298	60		
198 000 625	F07	172	250	90	100	298	60		

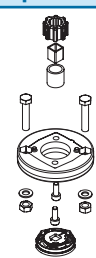
## Intermediate elements

Intermediate elements are required as a connection between valve and Actuator. The intermediate elements include different screws, hexagon nuts, washer, switching rings, etc. (depends on actuator and dimension).


### Intermediate elements for Reduction Gear

DN (mm)	Code	Reduction gear	Acc. to ISO 5211	Product picture example
50 - 80	198 000 621	161 483 471	F07	
100 - 125	198 000 622	161 483 471	F07	
150 - 200	198 000 599	161 483 471	F07	
250 - 300	198 000 732	161 483 472	F07	


### Intermediate elements for Electric Actuators EA45-250, dEA45-250

DN (mm)	Code	Actuator Type	Acc. to ISO 5211	Product picture example
50 - 65	198 000 943	EA45	F05/F07	
80	198 000 601	xEA120	F07	
100 - 125	198 000 602	xEA120	F07	
150	198 000 600	xEA120	F07	
200 - 250	198 000 603	xEA250	F07	
300	198 000 732	xEA250	F07/F10	

### Intermediate elements for Pneumatic Actuators PPA, function FC/F0

DN (mm)	Code	Typ	Acc. to ISO 5211	Product picture example
50 - 65	198 000 950	PPA40	F05/F07	
80	198 000 949	PPA80	F05/F07	
100 - 125	198 000 948	PPA80	F05/F07	

### Intermediate elements for Pneumatic Actuators PPA, function DA

DN (mm)	Code	Typ	Acc. to ISO 5211	Product picture example
50 - 65	198 000 950	PPA40	F05/F07	
80	198 000 950	PPA40	F05/F07	
100 - 125	198 000 948	PPA80	F05/F07	



## Intermediate elements for Pneumatic Actuators PA30-90, function FC/F0

DN (mm)	Butterfly valve type	Code	Type	Acc. to ISO 5211	Product picture example
50	567/578	198 000 791	PA30	F05/F07	
65	567/578	198 000 791	PA30	F05/F07	
80	567/578	198 000 793	PA35	F05/F07	
100	567/578	198 000 794	PA40	F07	
125	567/578	198 000 795	PA45	F07	
150	567/578	198 000 796	PA50	F07	
200	567/578	198 000 798	PA55	F07	
250	567	198 000 730	PA65	F10	
250	578	198 000 945	PA65	F10	
300	567	198 000 225	PA70	F10	
300	578	198 000 946	PA70	F10	

## Intermediate elements for Pneumatic Actuators PA30-90, function DA

DN (mm)	Butterfly valve type	Code	Type	Acc. to ISO 5211	Product picture example
50	567/578	198 000 595	PA35	F05/F07	
65	567/578	198 000 595	PA35	F05/F07	
80	567/578	198 000 791	PA40	F07	
100	567/578	198 000 794	PA45	F07	
125	567/578	198 000 797	PA45	F07	
150	567/578	198 000 796	PA55	F07	
200	567/578	198 000 796	PA55	F07	
250	567	198 000 731	PA65	F10	
250	578	198 000 944	PA65	F10	
300	567	198 000 731	PA65	F10	
300	578	198 000 944	PA65	F10	



For further information on accessories, refer to the online product catalog at [www.gfps.com](http://www.gfps.com)

Mobile apps and online tools to support configuration and calculation at [www.gfps.com/tools](http://www.gfps.com/tools)



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Tel. +41 52 631 11 11 • [www.gfps.com](http://www.gfps.com) • E-Mail: [info.ps@georgfischer.com](mailto:info.ps@georgfischer.com)