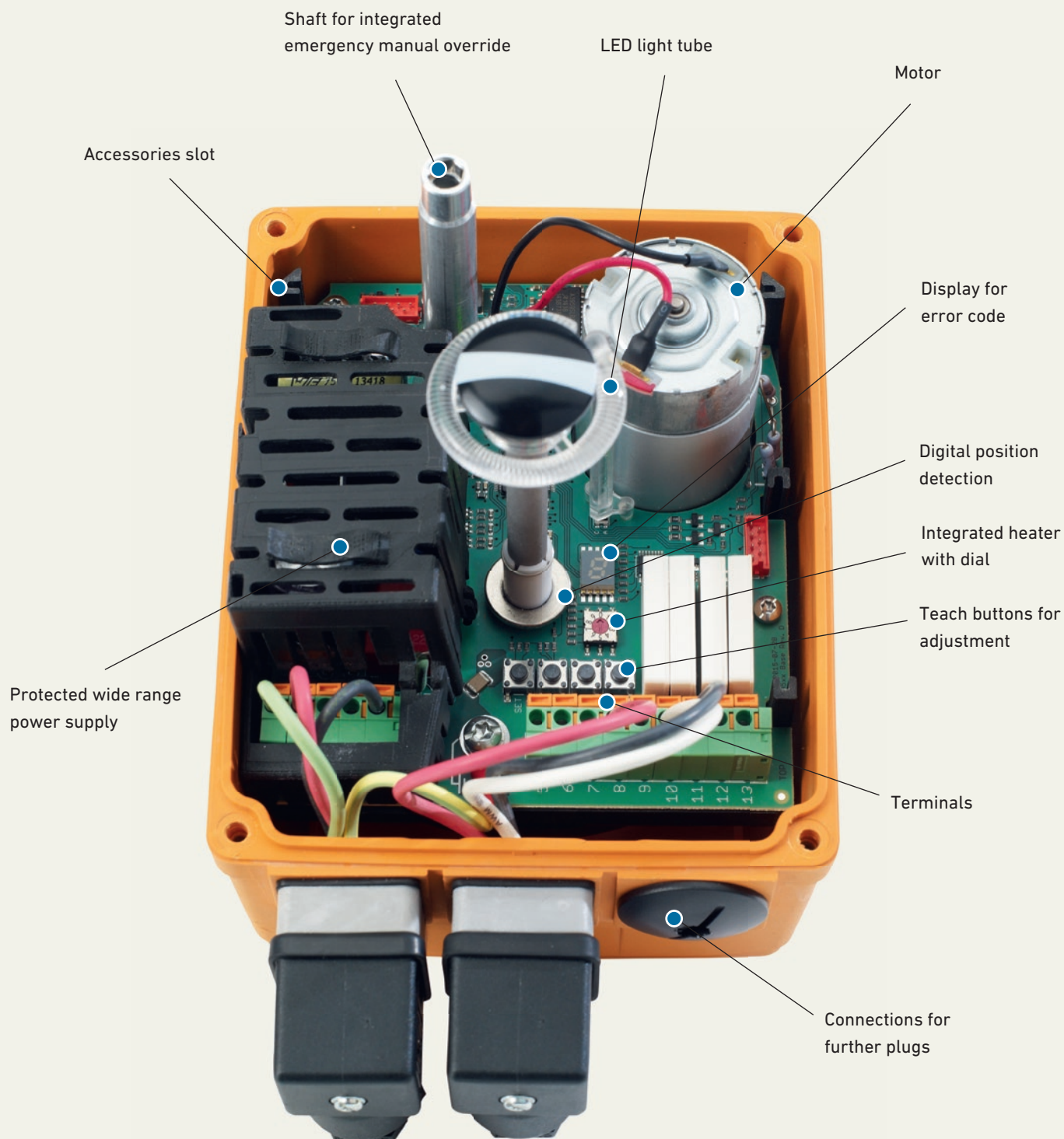


Product Range 2016

Electric Valves & Electric Actuators



Fully packed



Technical details

EA25, EA45, EA120, EA250

Nominal voltage	AC: 100 – 230 V, 50/60 Hz AC/DC: 24 V, 50/60 Hz
Nominal voltage tolerance	± 15%
Protection class	IP 65 (IP67)* according to EN 60529
Pollution degree	2 according to EN 61010-1
Overload protection	Current/time dependent, resetting
Overvoltage category	II
Ambient temperature	-10° to +50 °C
Allowable humidity	Max. 90 % relative humidity, non condensing
Housing material	PP-GF for very good chemical resistance

* When used with cable glands and vertical installation.

	EA25	EA45	EA120	EA250
Nominal power	AC: 35 VA at 100–230 V AC/DC: 40 VA at 24 V	AC: 55 VA at 100–230 V AC/DC: 60 VA at 24 V	AC: 50 VA at 100–230 V AC/DC: 55 VA at 24 V	AC: 60 VA at 100–230 V AC/DC: 65 VA at 24 V
Nominal torque Mdn (peak)	10 (25) Nm	20 (45) Nm	60 (120) Nm	100 (250) Nm
Duty cycle	100%	50%	50%	35%
Cycle time s/90° at Mdn.	5 s	6 s	15 s	20 s
Flange fitting	F05	F05	F07	F07
Tested cycles (at 20 °C and Mdn)	250 000	100 000	100 000	75 000
Weight	2,1 kg	2,2 kg	3,6 kg	5,0 kg
Actuating angle	Max. 355°, set to 90°			



Electric actuator type EA25/45/120/250



EA25/45



EA120



EA250

Model:

- Heating element, position feedback (Open/Close/ Middle)

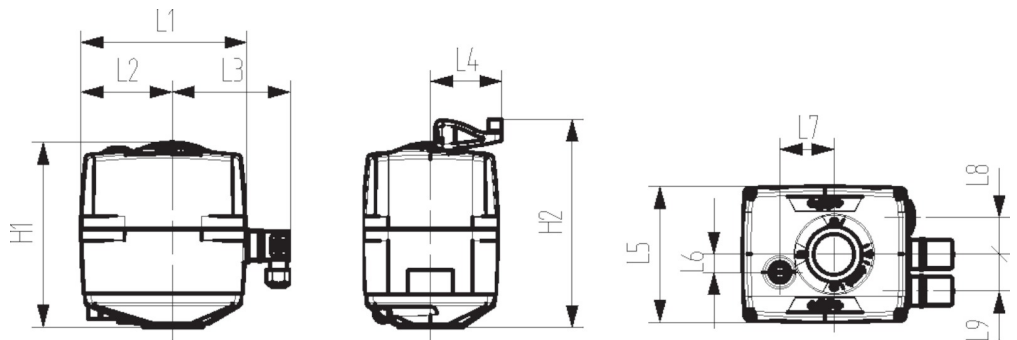
Option:

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

*with adapter 198 000 587 F05 / WS 11, 198 204 057 F05 / WS 14

Type of actuator	Voltage	Torque nominal	Torque maximal	Interfaces	Code
EA25	100 -230V AC	10 Nm	25 Nm	F05* (WS 11/14)	198 153 182
EA25	24V AC/DC	10 Nm	25 Nm	F05* (WS 11/14)	198 153 183
EA45	100 -230V AC	20 Nm	45 Nm	F05* (WS 11/14)	198 153 184
EA45	24V AC/DC	20 Nm	45 Nm	F05* (WS 11/14)	198 153 185
EA120	100 -230V AC	60 Nm	120 Nm	F07 (WS17)	198 153 186
EA120	24V AC/DC	60 Nm	120 Nm	F07 (WS17)	198 153 187
EA250	100 -230V AC	100 Nm	250 Nm	F07 (WS17)	198 153 188
EA250	24V AC/DC	100 Nm	250 Nm	F07 (WS17)	198 153 189

Type of actuator	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)
EA25	167	188	150	82.5	107	64.3	122	16	49	33	33
EA25	167	188	150	82.5	107	64.3	122	16	49	33	33
EA45	167	188	150	82.5	107	64.3	122	16	49	33	33
EA45	167	188	150	82.5	107	64.3	122	16	49	33	33
EA120	190	212	150	82.5	107	64.3	122	16	49	33	33
EA120	190	212	150	82.5	107	64.3	122	16	49	33	33
EA250	200	221	150	82.5	107	64.3	122	16	49	33	33
EA250	200	221	150	82.5	107	64.3	122	16	49	33	33





Accessory for electric actuators type 25/45/120/250

Model:

- All accessory can be retrofitted
- Accessory works with 100-230V and 24V version

Material	Description	Code
Fail-safe return unit integrated	Moves actuator in pre-defined safe position upon power loss, integrated battery pack	199 190 601
Fail-safe return unit external	Moves actuator in pre-defined safe position upon power loss, voltage supply implemented externally	199 190 604
Positioner	Continuous actuator control, 4-20mA or 0-10 V Input and 4-20 mA Feedback	199 190 603
Monitoring	Parameter monitoring. Generates alarm upon reaching its set limitations. Prevents water hammers or indicates maintenance need for valve	199 190 602
Profibus DP	Enables the actuator to be connected to a Profibus DP-V0 network	199 190 605
Diagnostic Tool	Enables to read from the actuator main board and check configurations	199 190 600

Product Configurator

Create your own actuator...

Electric Actuator

- T01 EA11 24V with Cable Plug
- T02 EA11 100-230V with Cable Plug
- T07 EA25 24V with Cable Plug
- T08 EA25 100-230V with Cable Plug
- T09 EA120 24V with Cable Plug
- T10 EA120 100-230V with Cable Plug
- T11 EA250 24V with Cable Plug
- T12 EA250 100-230V with Cable Plug



Angle (Open/ Close)

- W45 45°
- W90 90°
- W180 180°

Middle Position

- W17 No
- W18 Yes

Colour Assignment Feedback

- W20 Open = rot
- W21 Open = grün

Position Feedback

- W23 Open/ Close
- W24 Open/ Close/ Middle
- W25 Middle

Wiring Feedback

- W26 NC
- W28 NO

Heating Threshold

- W29 5°
- ... [5° steps]
- W37 45°

Failsafe Return unit

- W39 Integrated (Battery powered)
- W40 External (no Battery - 24V needed)

Accessory

- W42 Positioner
- W43 Monitoring
- W44 Profibus

Setting Positioner

- W46 BCD = 0
- ...
- W55 BCD = 9

Setting Motor Current

- W56 BCD = 0
- ...
- W65 BCD = 9

Setting Cycle Time Extension

- W66 BCD = 0
- ...
- W75 BCD = 9

Setting Cycle Time Monitoring

- W76 BCD = 0
- ...
- W85 BCD = 9

Setting Cycle Counter

- W86 BCD = 0
- ...
- W96 BCD = 9



T08 W90 W17 W20 W23 W26 W29 W39 W42 W46 W65 - - - =



Valve combinations

Ball Valves 546/543



DN10 – DN50 3/8 – 2 inch	EA25
DN65 2 ½ inch	EA45
DN80 / 100 3 – 4 inch	EA120

Butterfly Valves 567/578



DN50 / 65 2 – 2 ½ inch	EA45
DN80 – DN200 3 – 8 inch	EA120
DN250 / 300 10 – 12 inch	EA250

Electr. Valves	Type old	Type new
Ball Valve 546	130 – 135	179 – 184
Ball Valve 543	185 – 188	167 – 170
Butterfly Valve 567/578	140 – 144	145 – 147

Actuator old	Actuator new
EA11	
EA21	EA25
-	EA45
EA31	EA120
EA42	EA250

Code Interface

Ball Valve Type 546

Dimension	Actuator	Multifunctional module Empty (MFM)	Adapter	Manual override (optional)
DN10-15	EA25	167482680	198150556	198000500
DN20-25	EA25	167482681	198150557	198000500
DN32-40	EA25	167482682	198150558	198000501
DN50	EA25	167482683	198150559	198000501
DN65	EA45	167482684	198000943	
DN80	EA120	167482684	198000601	198000623
DN100	EA120	167482685	198000602	198000624

Ball Valve Type 543

Dimension	Actuator	Multifunctional module Empty (MFM) – Vertical	Multifunctional module Empty (MFM)- Horizontal
DN10-15	EA25	167484945	167484941
DN20-25	EA25	167484946	167484942
DN32-40	EA25	167484947	167484943
DN50	EA25	167484948	167484944

Butterfly Valve

Dimension	Actuator	Adapter Without manual override	Adapter with Manual override
DN50/65	EA45	198000943	
DN80	EA120	198000601	198000623
DN100	EA120	198000602	198000624
DN125	EA120	198000602	198000624
DN150	EA120	198000599	198000625
DN200	EA120	198000603	198000627
DN250	EA250	198000732	
DN300	EA250	198000732	

Product Configurator

Create your own ball valve

Operation

Manual Valve

Electric Actuator

Pneumatic Actuator

Variant Type

A01 Ball Valve 2-Way

A02 Linear Ball Valve 2-Way

Material

B01 PVC-U

B02 PVC-C

B03 ABS

B05 PP-H

B15 PVDF

Diameter

C05 d16 DN10 3/8"

C06 d20 DN15 1/2"

C07 d25 DN20 3/4"

C08 d32 DN25 1"

C09 d40 DN32 1 1/4"

C10 d50 DN40 1 1/2"

C11 d63 DN50 2"

C12 d75 DN65 2 1/2"

C13 d90 DN80 3"

C14 d110 DN100 4"

Treatment

D01 Standard PTFE Ball Seal

D02 Oil-Free PTFE Ball Seal

D03 Silicone-Free/Paint Compatible PTFE Ball Seal (ASTM)

D04 Silicone-Free/Paint Compatible PVDF Ball Seal (ISO)

Sealmaterial

E01 EPDM

E02 FPM

E03 FPPM

Threaded Inserts

F02 With Threaded Inserts

Endings*

G01 PVC-U Solvent Cement Socket ISO

...

G80 PVC-U PVC-U Valve End blank

Mounting plate

L02 With Mounting Plate

Multi-Functional Module (MFM)

I01 Standard Interface

I02 Empty Multi-Functional Module

I03 Multi-Functional Module with 2 Limit Switches Ag, Ni

I04 Multi-Functional Module with 2 Limit Switches Au

I05 Multi-Functional Module with 2 Inductive Switches Namur

I06 Multi-Functional Module with 2 Inductive Switches PNP

I07 Multi-Functional Module with 2 Inductive Switches NPN

Manual Operation

K01 Standard Lever Red

K02 Standard Lever Black

K11 Multi-Functional/Ratched Lever Red

*Endings

G01	PVC-U Solvent Cement Socket ISO
G02	PVC-U Solvent Cement Socket JIS
G03	PVC-U Solvent Cement Socket ASTM
G04	PVC-U Solvent Cement Socket BS
G05	PVC-U Solvent Cement Spigot ISO
G06	PVC-U Threaded Socket ISO Rp
G07	PVC-U Threaded Socket ISO Rp Reinforced
G08	PVC-U Threaded Socket ISO/JIS Rc
G09	PVC-U Threaded Socket ASTM NPT
G11	PVC-C Solvent Cement Socket ISO
G12	PVC-C Solvent Cement Socket JIS
G13	PVC-C Solvent Cement Socket ASTM
G14	PVC-C Solvent Cement Spigot ISO
G15	PVC-C Threaded Socket ISO Rp
G16	PVC-C Threaded Socket ISO Rp Reinforced
G17	PVC-C Threaded Socket ASTM NPT
G20	ABS Solvent Cement Socket ISO
G21	ABS Solvent Cement Socket BS
G22	ABS Threaded Socket ISO Rp
G23	ABS Threaded Socket ISO Rp Reinforced
G30	PP-H Fusion Socket ISO
G32	PP-H Socket fusion Spigot ISO
G33	PP-H Threaded Socket ISO Rp Reinforced
G34	PP-H Threaded Socket ASTM NPT Reinforced
G35	PP-H Butt fusion Spigot SDR11 ISO IR-PLUS
G36	PP-H Butt fusion Spigot SDR17.6 ISO
G37	PP-H Butt fusion Spigot lang SDR11 ISO
G40	PE-100 Fusion Socket ISO
G41	PE-100 Butt fusion Spigot SDR11 ISO
G42	PE-100 Butt fusion Spigot SDR17.6 ISO
G43	PE-100 Butt fusion Spigot lang SDR11 ISO
G44	PE-100 Butt fusion Spigot lang SDR17.6 ISO
G46	PP-R Butt fusion Spigot SDR11 ISO
G50	PVDF Fusion Socket ISO
G51	PVDF Socket fusion Spigot ISO
G52	PVDF Butt fusion Spigot SDR11 ISO IR-PLUS
G53	PVDF Threaded Socket ASTM NPT
G60	Fixed Flange PVC-U gerillt metrisch
G61	Fixed Flange PVC-U flach ISO
G62	Fixed Flange PVC-U JIS
G63	Fixed Flange PP-H gerillt ISO
G64	Fixed Flange PVDF ISO
G70	Backing Flange PVC-U ISO
G70150	Backing Flange PVC-U ISO d160 DN150
G71	Backing Flange PVC-U ANSI
G71150	Backing Flange PVC-U ANSI 6" DN150
G72PVCC	Backing Flange PP-Stahl ISO with PVC-U Endings
G72PVCCU150	Backing Fl. PP-Stahl ISO d160 DN150 with PVC-U Endings
G72PVDF	PVDF Backing Flange PP-Stahl ISO with PVDF Endings
G72PPH	PPH Backing Flange PP-Stahl ISO with PP-H Endings
G72PPH150	PPH150 Backing Fl. PP-Stahl ISO d160 DN150 with PP-H Endings
G72PVCC	PVCC Backing Flange PP-Stahl ISO with PVC-C Endings
G73PVCU	PVCU Backing Flange PP-Stahl ANSI with PVC-U Endings
G73PVCU150	PVCU150 Backing Fl. PP-Stahl ANSI 6" DN150 with PVC-U Endings
G73PPH	PPH Backing Flange PP-Stahl ANSI with PP-H Endings
G73PPH150	PPH150 Backing Fl. PP-Stahl ANSI 6" DN150 with PP-H Endings
G73PVCC	PVCC Backing Flange PP-Stahl ANSI with PVC-C Endings
G73PVDF	PVDF Backing Flange PP-Stahl ANSI with PVDF Endings
G76	Backing Flange PP-GF JIS with PVDF Endings
G77	Backing Flange PP-GF JIS with PP-H Endings
G78PVCU	PVCU Backing Flange PVC-U JIS with PVC-U Endings
G78PVCU150	PVCU150 Backing Fl. PVC-U JIS d160 DN150 with PVC-U Endings
G78PPH	PPH Backing Flange PP-GF JIS with PP-H Endings
G78PPH150	PPH150 Backing Fl. PP-GF JIS d160 DN150 with PP-H Endings
G80 PVC-U	PVC-U Valve End blank
G01	

A01 B01 C08 D01 E01 F02 G01 L02 I01 K01 =

Ball valves, electric

Type 179 - 184

Type 179 – 184 ball valves are based on the type 546 ball valve and the EA25 (DN10 – DN50), EA45 (DN65) or EA120 (DN80 – DN100) electric actuator. The 179 – 184 series is designed for applications with special process requirements.

Ball valve, electric	Actuator electric	Ball valve, hand-operated	Dimensions	Materials	Standards
Type 179	EA25/45/120	Type 546	DN10 – DN100	PVC-U, PVC-C, ABS	ISO/DIN
Type 180	EA25/45/120	Type 546	DN10 – DN100	PP	ISO/DIN
Type 181	EA25/45/120	Type 546	DN10 – DN100	PVDF	ISO/DIN
Type 182	EA25/45/120	Type 546	DN10 – DN100	PVC-U, PVC-C	ASTM/ANSI
Type 183	EA25/45/120	Type 546	DN10 – DN100	PVC-U	BS
Type 184	EA25/45/120	Type 546	DN10 – DN100	PVC-U	JIS

Type 167 - 170

Type 167 – 170 ball valves are based on the type 543 ball valve and the EA25 electric actuator.

Ball valve, electric	Actuator electric	Ball valve, hand-operated	Dimensions	Materials	Standards
Type 167	EA25	Type 543 horizontal	DN10 – DN50	PVC-U, ABS	ISO/DIN, ASTM/ANSI, JIS
Type 168	EA25	Type 543 horizontal	DN10 – DN50	PP	ISO/DIN
Type 170	EA25	Type 543 vertical	DN10 – DN50	PVC-U	ISO/DIN, JIS

Butterfly valves, electric

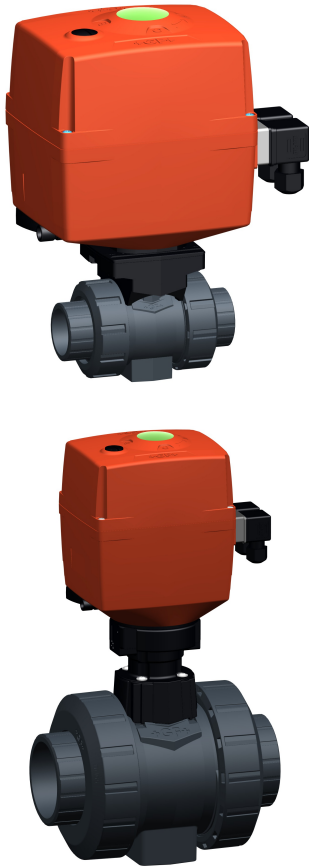
Type 145 - 147

The type 145 electric butterfly valve is intended for wafer style installation and is adaptable to a variety of applications. With the optional positioner, its functional options range from a simple open/close valve to a precise flow control device.

The type 146/147 electric butterfly valve is intended for lug type or wafer style installation and is adaptable to a variety of applications. With the optional positioner, its functional options range from a simple open/close valve to a precise flow control device.

Butterfly valve, electric	Actuator, electric	Butterfly valve, hand-operated	Dimensions	Materials	Standards
Type 145	EA45/120/250	Type 567	DN50 – DN300	All	All standards
Type 146	EA45/120/250	Type 578	DN50 – DN300	All	ISO/DIN
Type 147	EA45/120/250	Type 578	DN50 – DN300	All	ASTM/ANSI

Type 179



Ball valve type 179 PVC-U 100-230V With manual emergency override With solvent cement sockets metric

Model:

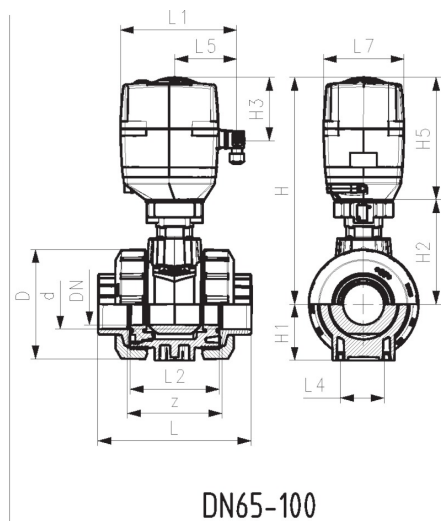
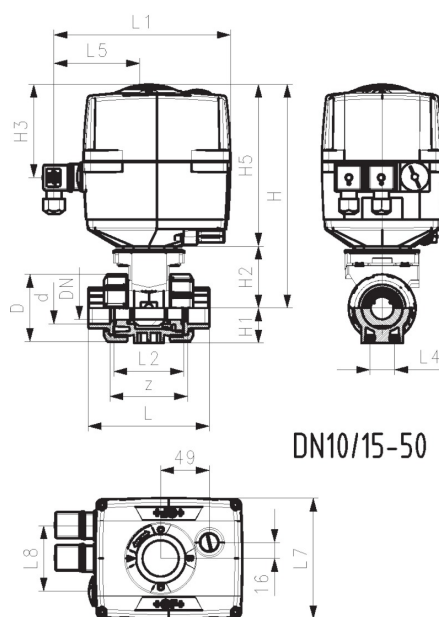
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	70	EA25	199 179 002	2.100	199 179 012	2.100
20	15	10	185	EA25	199 179 003	2.462	199 179 013	2.100
25	20	10	350	EA25	199 179 004	2.563	199 179 014	2.200
32	25	10	700	EA25	199 179 005	2.300	199 179 015	2.300
40	32	10	1000	EA25	199 179 006	2.692	199 179 016	2.600
50	40	10	1600	EA25	199 179 007	3.154	199 179 017	3.168
63	50	10	3100	EA25	199 179 008	3.888	199 179 018	3.800
75	65	10	5000	EA45	199 179 009	7.631	199 179 019	7.400
90	80	10	7000	EA45	199 179 010	9.800	199 179 020	9.800
110	100	10	11000	EA120	199 179 011	14.791	199 179 021	14.100

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)	closest inch (inch)
16	50	231	27	64	94	167	92	180	56	25	97	122	64	3/8
20	50	231	27	64	94	167	95	180	56	25	97	122	64	1/2
25	58	240	30	73	94	167	110	180	65	25	97	122	72	3/4
32	68	240	36	73	94	167	123	180	71	25	97	122	79	1
40	84	251	44	84	94	167	146	180	85	45	97	122	94	1 1/4
50	97	251	51	84	94	167	157	180	89	45	97	122	95	1 1/2
63	124	273	64	106	94	167	183	180	101	45	97	122	107	2
75	166	346	85	156	94	190	233	180	136	70	98	122	144	2 1/2
90	200	358	105	168	94	190	254	180	141	70	98	122	151	3
110	238	365	123	175	94	190	301	180	164	120	98	122	174	4





Ball valve type 179 PVC-U 24V
With manual emergency override
With solvent cement sockets metric

Model:

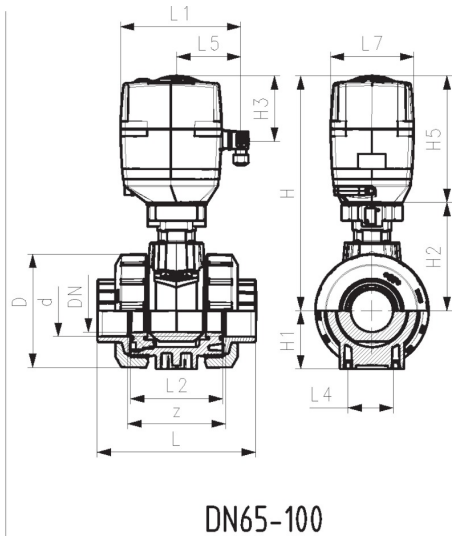
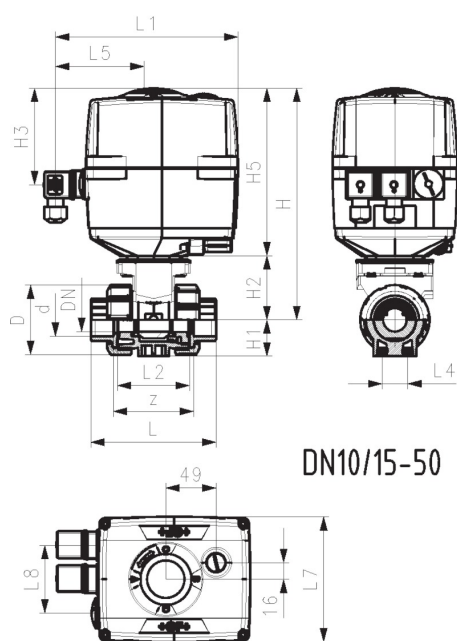
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

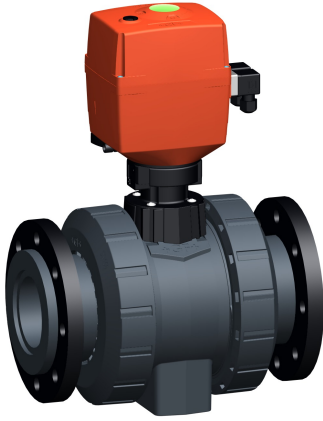
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	70	EA25	199 179 042	3.112	199 179 052	2.100
20	15	10	185	EA25	199 179 043	2.447	199 179 053	2.100
25	20	10	350	EA25	199 179 044	2.542	199 179 054	2.543
32	25	10	700	EA25	199 179 045	2.645	199 179 055	2.647
40	32	10	1000	EA25	199 179 046	2.905	199 179 056	2.600
50	40	10	1600	EA25	199 179 047	3.000	199 179 057	3.144
63	50	10	3100	EA25	199 179 048	3.880	199 179 058	3.886
75	65	10	5000	EA45	199 179 049	7.531	199 179 059	7.400
90	80	10	7000	EA45	199 179 050	9.800	199 179 060	9.800
110	100	10	11000	EA120	199 179 051	14.100	199 179 061	14.100

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)	closest inch (inch)
16	50	231	27	64	94	167	92	180	56	25	97	122	64	3/8
20	50	231	27	64	94	167	95	180	56	25	97	122	64	1/2
25	58	240	30	73	94	167	110	180	65	25	97	122	72	3/4
32	68	240	36	73	94	167	123	180	71	25	97	122	79	1
40	84	251	44	84	94	167	146	180	85	45	97	122	94	1 1/4
50	97	251	51	84	94	167	157	180	89	45	97	122	95	1 1/2
63	124	273	64	106	94	167	183	180	101	45	97	122	107	2
75	166	347	85	156	94	190	233	180	136	70	98	122	144	2 1/2
90	200	358	105	168	94	190	254	180	141	70	98	122	151	3
110	238	365	123	175	94	190	301	180	164	120	98	122	174	4





Ball valve type 179 PVC-U 100-230V
With manual emergency override
With backing flanges PP-st metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

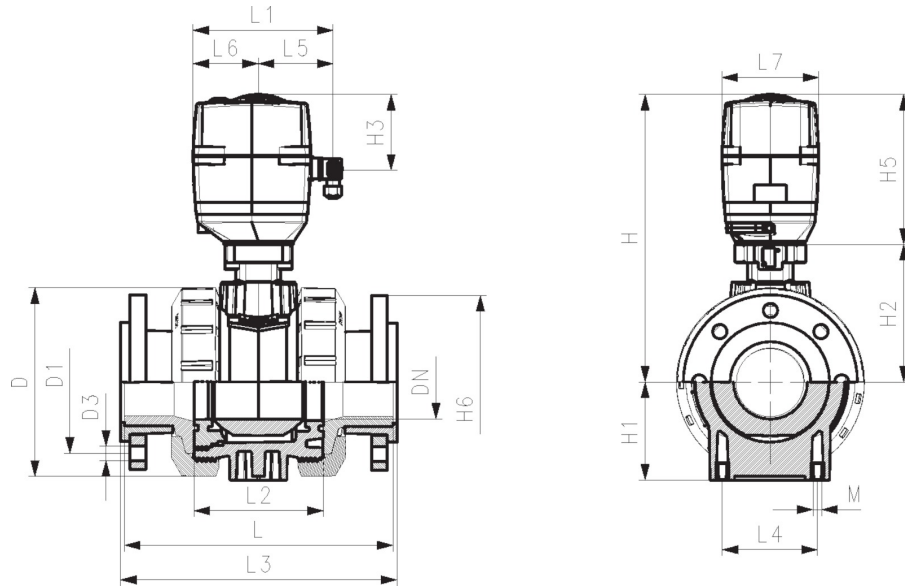
Option:

- Other valve and actuator configurations available

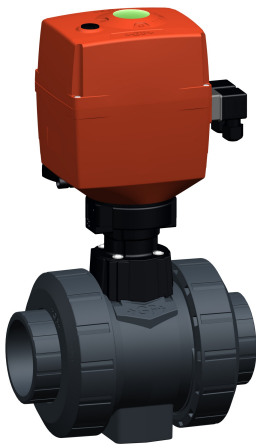
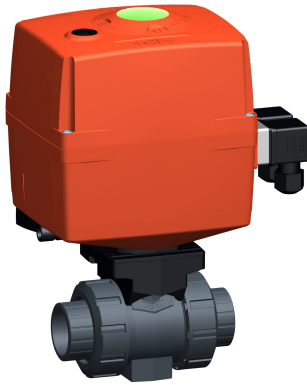
d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
75	65	10	5000	EA45	199 179 349	10.749	199 179 359	11.500
90	80	10	7000	EA45	199 179 350	14.900	199 179 360	14.900
110	100	10	11000	EA120	199 179 351	20.900	199 179 361	20.900

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
75	166	346	85	156	94	190	93	284	180	136	290	70	98	83	122
90	200	358	105	168	94	190	100	300	180	141	310	70	98	83	122
110	238	365	123	175	94	190	110	340	180	164	350	120	98	83	122

d (mm)	L8 (mm)
75	66
90	66
110	66



Type 182



Ball valve type 182 PVC-U 100-230V
Manual emergency override
Solvent cement sockets Inch ASTM
Incl. 2 threaded valve

Model:

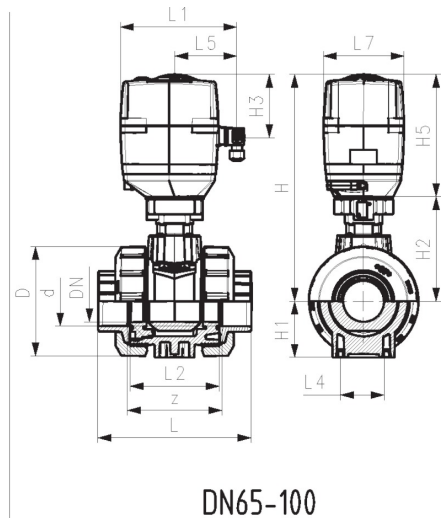
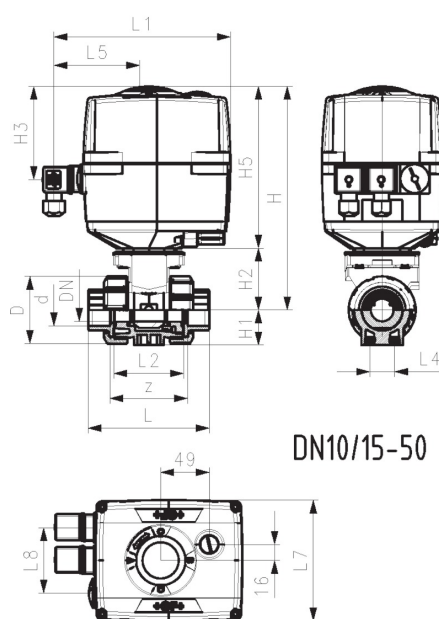
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

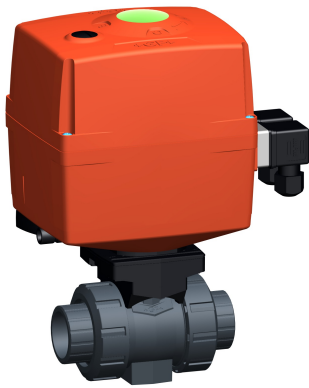
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
3/8	10	10	70	EA25	199 182 002	2.100	199 182 012	2.100
1/2	15	10	185	EA25	199 182 003	2.474	199 182 013	2.100
3/4	20	10	350	EA25	199 182 004	2.200	199 182 014	2.200
1	25	10	700	EA25	199 182 005	2.300	199 182 015	2.300
1 1/4	32	10	1000	EA25	199 182 006	2.600	199 182 016	2.600
1 1/2	40	10	1600	EA25	199 182 007	3.000	199 182 017	3.000
2	50	10	3100	EA25	199 182 008	3.800	199 182 018	3.800
2 1/2	65	10	5000	EA45	199 182 009	7.400	199 182 019	7.400
3	80	10	7000	EA45	199 182 010	9.800	199 182 020	9.800
4	100	10	11000	EA120	199 182 011	13.900	199 182 021	13.900

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
3/8	50	231	27	64	94	167	105	180	56	25	97	122	67
1/2	50	231	27	64	94	167	105	180	56	25	97	122	61
3/4	58	240	30	73	94	167	121	180	65	25	97	122	70
1	68	240	36	73	94	167	133	180	71	25	97	122	76
1 1/4	84	251	44	84	94	167	154	180	85	45	97	122	90
1 1/2	97	251	51	84	94	167	164	180	89	45	97	122	94
2	124	273	64	106	94	167	183	180	101	45	97	122	107
2 1/2	166	346	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174





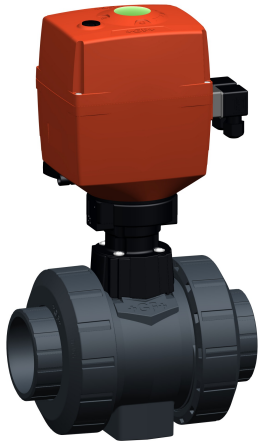
Ball valve type 182 PVC-U 24V
Manual emergency override
Solvent cement sockets Inch ASTM
Incl. 2 threaded valve

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

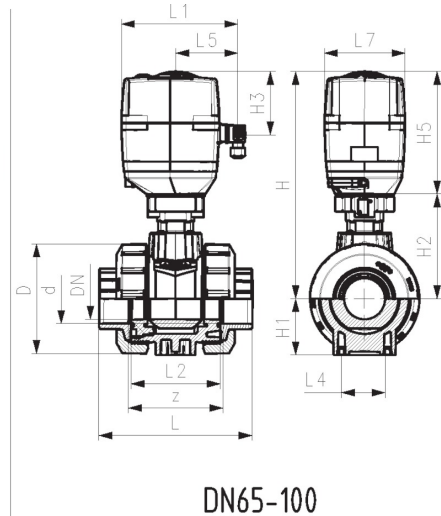
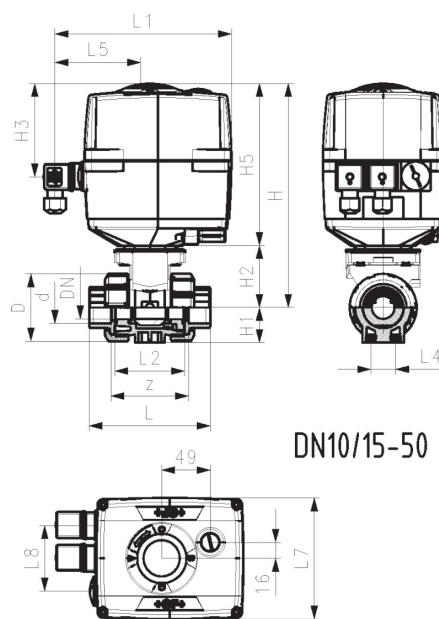
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

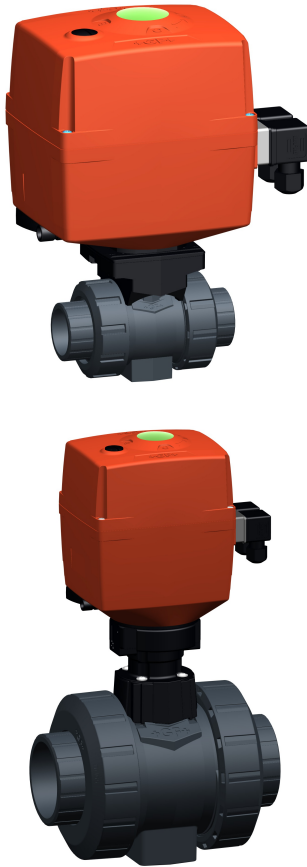


Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
3/8	10	10	70	EA25	199 182 022	2.100	199 182 032	2.100
1/2	15	10	185	EA25	199 182 023	2.100	199 182 033	2.100
3/4	20	10	350	EA25	199 182 024	2.200	199 182 034	2.200
1	25	10	700	EA25	199 182 025	2.300	199 182 035	2.300
1 1/4	32	10	1000	EA25	199 182 026	2.600	199 182 036	2.600
1 1/2	40	10	1600	EA25	199 182 027	3.000	199 182 037	3.000
2	50	10	3100	EA25	199 182 028	3.800	199 182 038	3.800
2 1/2	65	10	5000	EA45	199 182 029	7.400	199 182 039	7.400
3	80	10	7000	EA45	199 182 030	9.800	199 182 040	9.800
4	100	10	11000	EA120	199 182 031	13.900	199 182 041	13.900

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
3/8	50	231	27	64	94	167	105	180	56	25	97	122	67
1/2	50	231	27	64	94	167	105	180	56	25	97	122	61
3/4	58	240	30	73	94	167	121	180	65	25	97	122	70
1	68	240	36	73	94	167	133	180	71	25	97	122	76
1 1/4	84	251	44	84	94	167	154	180	85	45	97	122	90
1 1/2	97	251	51	84	94	167	164	180	89	45	97	122	94
2	124	273	64	106	94	167	183	180	101	45	97	122	107
2 1/2	166	347	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174



Type 183



Ball valve type 183 PVC-U 100-230V With manual emergency override With solvent cement sockets Inch BS

Model:

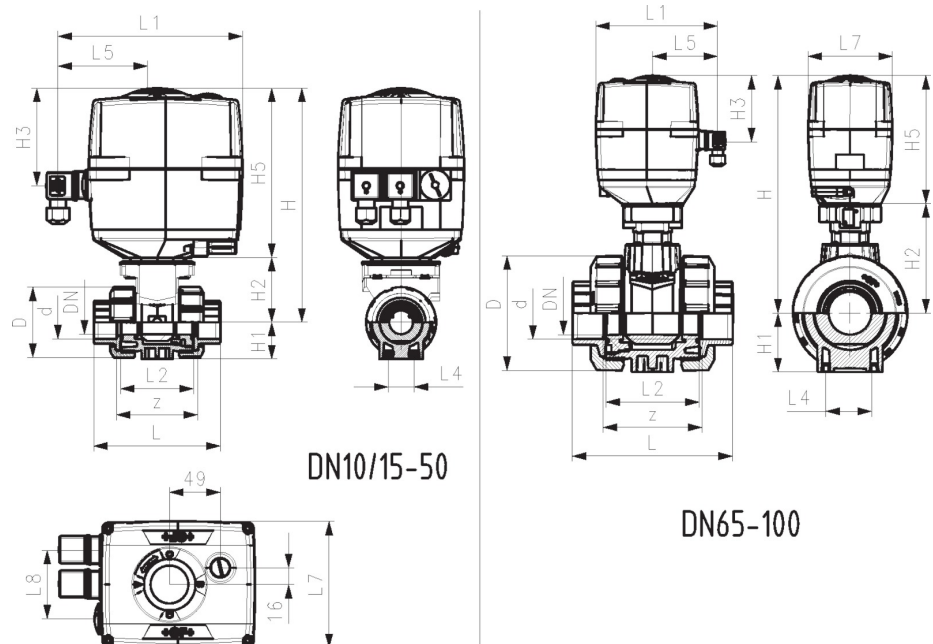
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

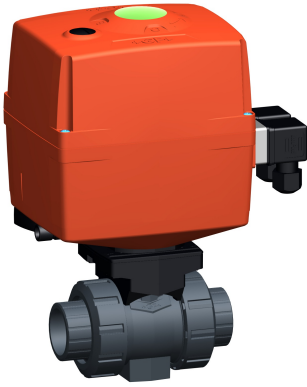
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
3/8	10	10	70	EA25	199 183 002	2.100	199 183 012	2.100
1/2	15	10	185	EA25	199 183 003	2.100	199 183 013	2.100
3/4	20	10	350	EA25	199 183 004	2.200	199 183 014	2.200
1	25	10	700	EA25	199 183 005	2.661	199 183 015	2.300
1 1/4	32	10	1000	EA25	199 183 006	2.600	199 183 016	2.600
1 1/2	40	10	1600	EA25	199 183 007	3.000	199 183 017	3.000
2	50	10	3100	EA25	199 183 008	3.800	199 183 018	3.800
2 1/2	65	10	5000	EA45	199 183 009	7.400	199 183 019	7.400
3	80	10	7000	EA45	199 183 010	9.800	199 183 020	9.800
4	100	10	11000	EA120	199 183 011	13.900	199 183 021	13.900

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
3/8	50	231	27	64	94	167	92	180	56	25	97	122	60
1/2	50	231	27	64	94	167	95	180	56	25	97	122	60
3/4	58	240	30	73	94	167	110	180	65	25	97	122	69
1	68	240	36	73	94	167	123	180	71	25	97	122	75
1 1/4	84	251	44	84	94	167	146	180	85	45	97	122	89
1 1/2	97	251	51	84	94	167	157	180	89	45	97	122	97
2	124	273	64	106	94	167	183	180	101	45	97	122	110
2 1/2	166	347	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174





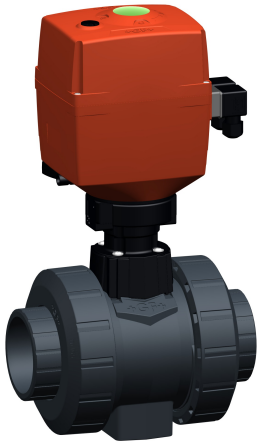
Ball valve type 183 PVC-U 24V
With manual emergency override
With solvent cement sockets Inch BS

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

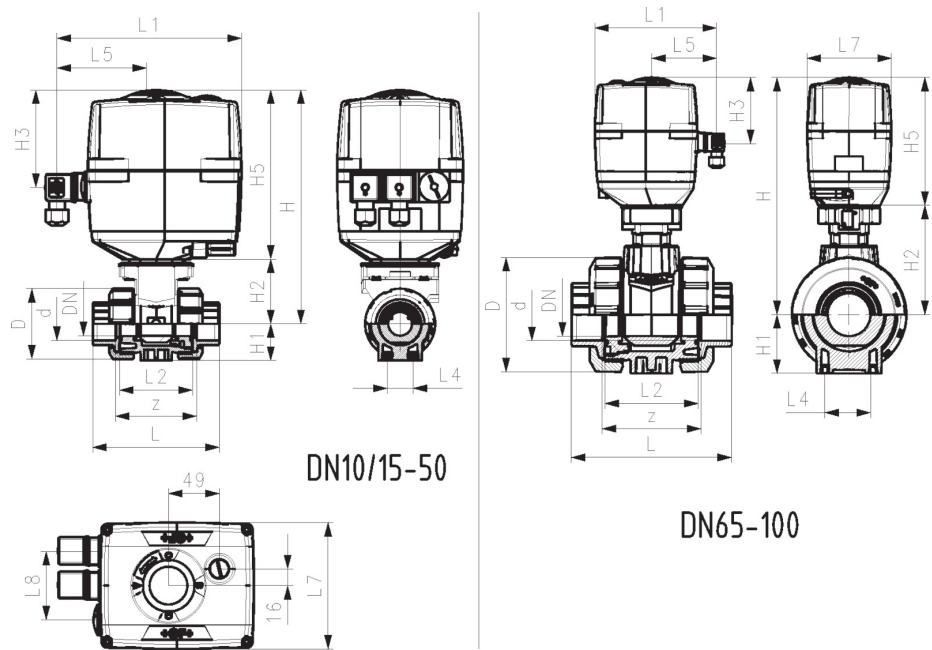
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

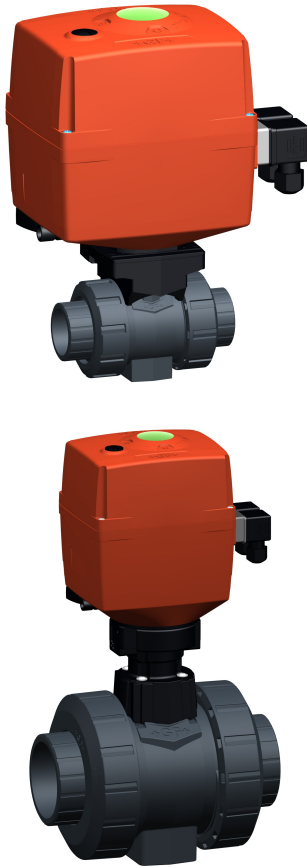


Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
3/8	10	10	70	EA25	199 183 042	2.100	199 183 052	2.100
1/2	15	10	185	EA25	199 183 043	2.100	199 183 053	2.100
3/4	20	10	350	EA25	199 183 044	2.200	199 183 054	2.200
1	25	10	700	EA25	199 183 045	2.642	199 183 055	2.300
1 1/4	32	10	1000	EA25	199 183 046	2.600	199 183 056	2.899
1 1/2	40	10	1600	EA25	199 183 047	3.000	199 183 057	3.000
2	50	10	3100	EA25	199 183 048	3.800	199 183 058	3.800
2 1/2	65	10	5000	EA45	199 183 049	7.400	199 183 059	7.400
3	80	10	7000	EA45	199 183 050	9.442	199 183 060	9.800
4	100	10	11000	EA120	199 183 051	13.900	199 183 061	13.900

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
3/8	50	231	27	64	94	167	92	180	56	25	97	122	60
1/2	50	231	27	64	94	167	95	180	56	25	97	122	60
3/4	58	240	30	73	94	167	110	180	65	25	97	122	69
1	68	240	36	73	94	167	123	180	71	25	97	122	75
1 1/4	84	251	44	84	94	167	146	180	85	45	97	122	89
1 1/2	97	251	51	84	94	167	157	180	89	45	97	122	97
2	124	273	64	106	94	167	183	180	101	45	97	122	110
2 1/2	166	346	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174



Type 184



Ball valve type 184 PVC-U 100-230V
With manual emergency override
With solvent cement sockets JIS

Model:

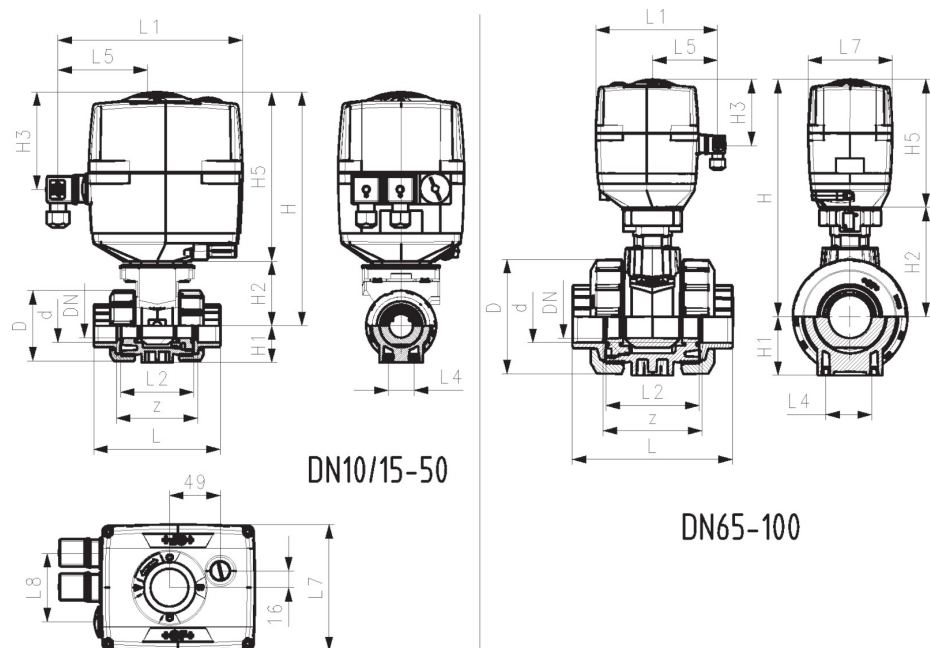
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

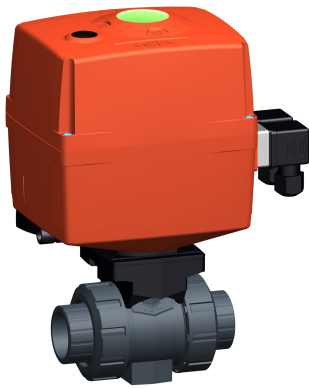
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size	DN	PN	kv-value	EA	EPDM	Weight	FPM	Weight
(inch)	(mm)	(bar)	($\Delta p=1$ bar)		Code	(kg)	Code	(kg)
			(L/min)					
½	15	10	185	EA25	199 184 003	2.100	199 184 013	2.100
¾	20	10	350	EA25	199 184 004	2.618	199 184 014	2.200
1	25	10	700	EA25	199 184 005	2.737	199 184 015	2.300
1 ¼	32	10	1000	EA25	199 184 006	2.600	199 184 016	2.600
1 ½	40	10	1600	EA25	199 184 007	3.238	199 184 017	3.000
2	50	10	3100	EA25	199 184 008	3.800	199 184 018	3.800
2 ½	65	10	5000	EA45	199 184 009	7.300	199 184 019	7.300
3	80	10	7000	EA45	199 184 010	9.800	199 184 020	9.800
4	100	10	11000	EA120	199 184 011	14.000	199 184 021	14.000

Size	D	H	H1	H2	H3	H5	L	L1	L2	L4	L5	L7	z
(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
½	50	231	27	64	94	167	95	180	56	25	97	122	64
¾	58	240	30	73	94	167	110	180	65	25	97	122	72
1	68	240	36	73	94	167	123	180	71	25	97	122	79
1 ¼	84	251	44	84	94	167	146	180	85	45	97	122	94
1 ½	97	251	51	84	94	167	157	180	89	45	97	122	95
2	124	273	64	106	94	167	183	180	101	45	97	122	107
2 ½	166	347	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174





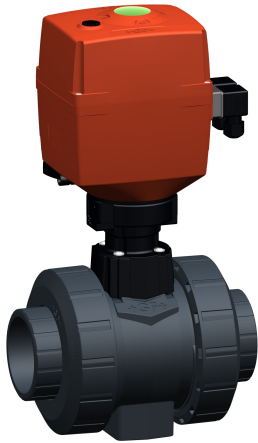
Ball valve type 184 PVC-U 24V
With manual emergency override
With solvent cement sockets JIS

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

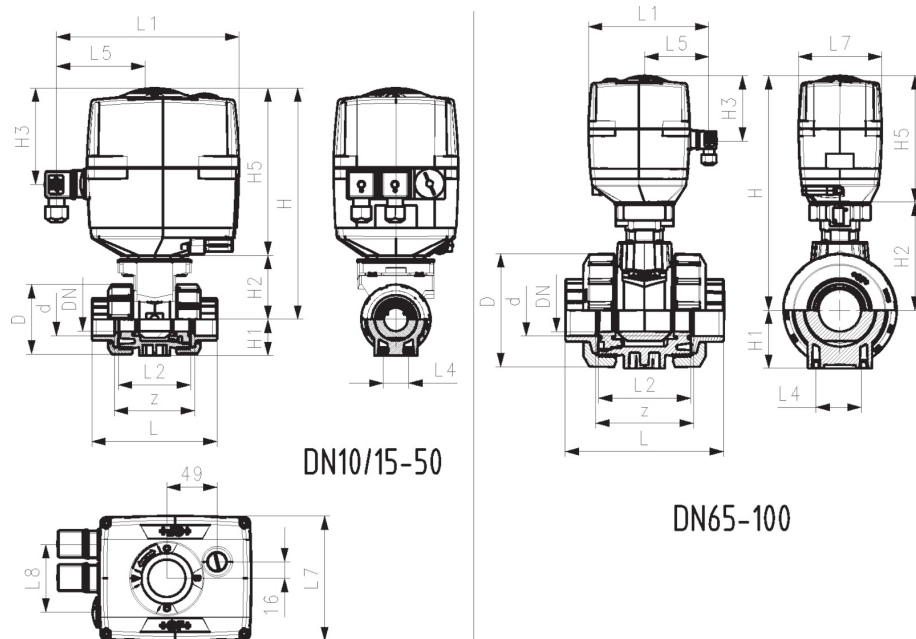
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



Size (inch)	DN (mm)	PN (bar)	kv-100- value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
½	15	10	185	EA25	199 184 023	2.100	199 184 033	2.100
¾	20	10	350	EA25	199 184 024	2.200	199 184 034	2.200
1	25	10	700	EA25	199 184 025	2.300	199 184 035	2.300
1 ¼	32	10	1000	EA25	199 184 026	2.600	199 184 036	2.600
1 ½	40	10	1600	EA25	199 184 027	3.000	199 184 037	3.000
2	50	10	3100	EA25	199 184 028	3.800	199 184 038	3.800
2 ½	65	10	5000	EA45	199 184 029	7.300	199 184 039	7.300
3	80	10	7000	EA45	199 184 030	9.800	199 184 040	9.800
4	100	10	11000	EA120	199 184 031	14.000	199 184 041	14.000

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
½	50	231	27	64	94	167	95	180	56	25	97	122	64
¾	58	240	30	73	94	167	110	180	65	25	97	122	72
1	68	240	36	73	94	167	123	180	71	25	97	122	79
1 ¼	84	251	44	84	94	167	146	180	85	45	97	122	94
1 ½	97	251	51	84	94	167	157	180	89	45	97	122	95
2	124	273	64	106	94	167	183	180	101	45	97	122	107
2 ½	166	346	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174





DN10/15 - 50

Ball valve type 184 PVC-U 100-230V
With manual emergency override
With fixed flanges JIS

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

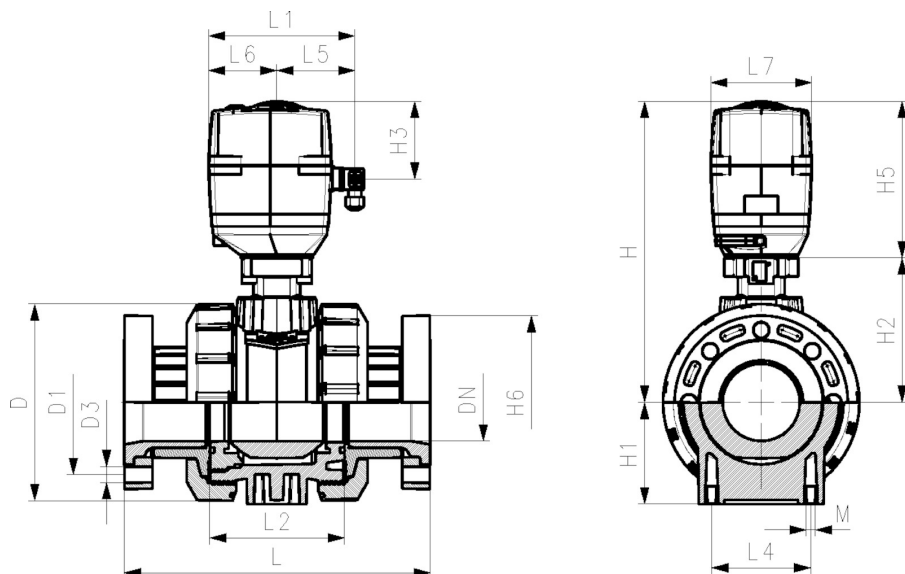
Option:

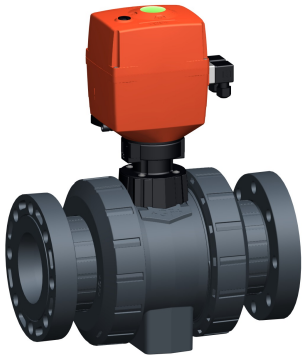
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
½	15	10	185	EA25	199 184 043	2.300	199 184 053	2.300
¾	20	10	350	EA25	199 184 044	2.500	199 184 054	2.500
1	25	10	700	EA25	199 184 045	2.700	199 184 055	2.700
1 ¼	32	10	1000	EA25	199 184 046	3.200	199 184 056	3.200
1 ½	40	10	1600	EA25	199 184 047	3.700	199 184 057	3.700
2	50	10	3100	EA25	199 184 048	4.800	199 184 058	4.800

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
½	58	231	30	73	94	167	53	144	180	65	143	25	97	83	122
¾	50	240	27	64	94	167	48	124	180	56	172	25	97	83	122
1	68	240	36	73	94	167	58	154	180	71	187	25	97	83	122
1 ¼	84	251	44	84	94	167	70	174	180	85	190	45	97	83	122
1 ½	97	251	51	84	94	167	75	194	180	89	212	45	97	83	122
2	124	273	64	106	94	167	83	224	180	101	234	45	97	83	122

Size (inch)	L8 (mm)
½	66
¾	66
1	66
1 ¼	66
1 ½	66
2	66





Ball valve type 184 PVC-U 100-230V
With manual emergency override
With backing flanges PVC-U JIS

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

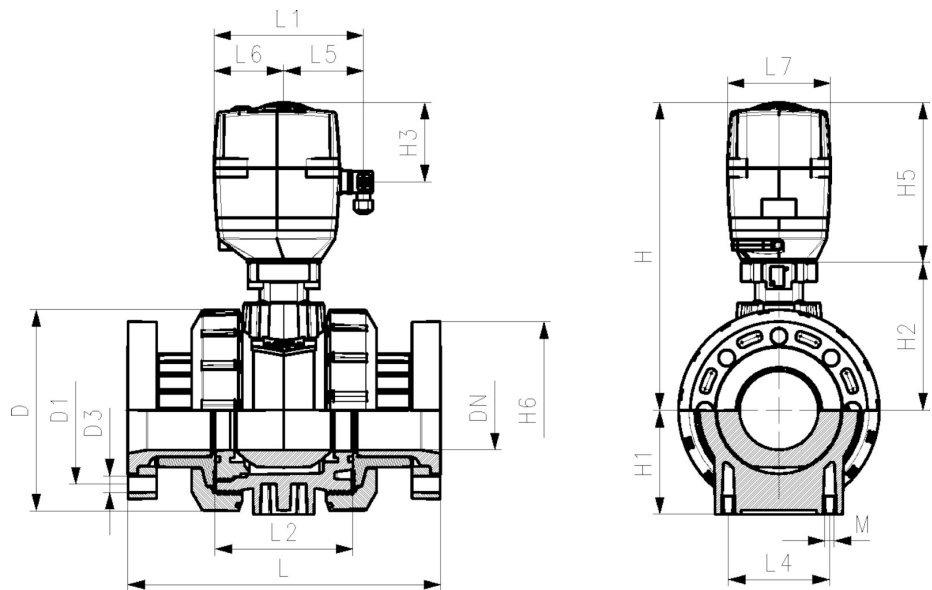
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

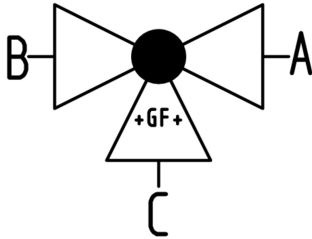
Size	DN	PN	kv-value	EA	EPDM	Weight	FPM	Weight
(inch)	(mm)	(bar)	($\Delta p=1$ bar)		Code	(kg)	Code	(kg)
			(l/min)					
2 ½	65	10	5000	EA45	199 184 349	9.800	199 184 359	9.800
3	80	10	7000	EA45	199 184 350	13.300	199 184 360	13.300
4	100	10	11000	EA120	199 184 351	18.900	199 184 361	18.900

Size	D	H	H1	H2	H3	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
2 ½	166	346	85	156	94	190	88	284	180	136	290	70	98	83	122
3	200	358	105	168	94	190	93	300	180	141	310	70	98	83	122
4	238	365	123	175	94	190	105	340	180	164	350	120	98	83	122

Size	L8
(inch)	(mm)
2 ½	66
3	66
4	66



Type 167



3-Way ball valve type 167 PVC-U Horizontal/L-port 100-230V With manual emergency override With solvent cement spigots metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

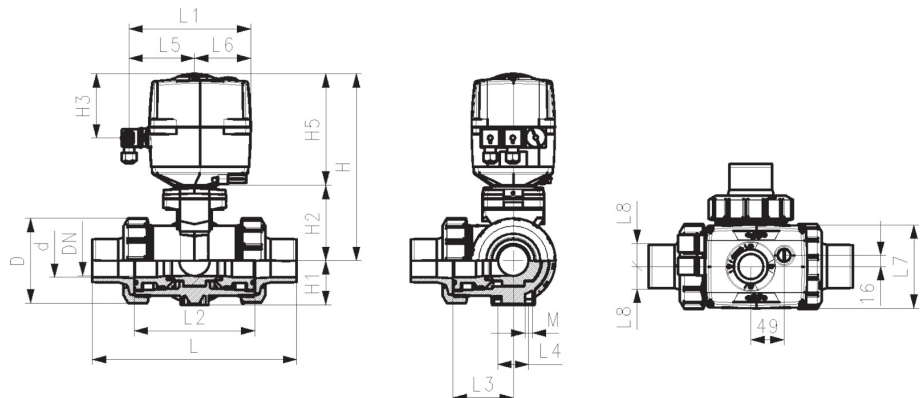
Option:

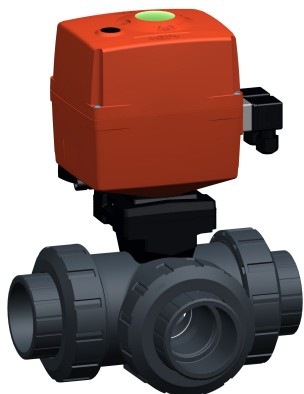
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	50	EA25	199 167 002	2.128	199 167 012	2.128
20	15	10	75	EA25	199 167 003	2.137	199 167 013	2.137
25	20	10	150	EA25	199 167 004	2.271	199 167 014	2.271
32	25	10	280	EA25	199 167 005	2.470	199 167 015	2.470
40	32	10	480	EA25	199 167 006	2.891	199 167 016	2.891
50	40	10	620	EA25	199 167 007	3.749	199 167 017	3.385
63	50	10	1230	EA25	199 167 008	4.809	199 167 018	4.809

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	131	180	194	36	25	97	83	122
20	50	231	28	64	94	167	8	141	180	194	36	25	97	83	122
25	58	240	32	73	94	167	8	165	180	194	43	25	97	83	122
32	68	240	36	73	94	167	8	182	180	194	50	25	97	83	122
40	84	251	45	84	94	167	9	209	180	194	60	45	97	83	122
50	97	251	51	84	94	167	9	242	180	194	69	45	97	83	122
63	124	273	65	106	94	167	9	302	180	194	89	45	97	83	122

d (mm)	L8 (mm)	M	closest inch (inch)
16	33	6	$\frac{3}{8}$
20	33	6	$\frac{1}{2}$
25	33	6	$\frac{3}{4}$
32	33	6	1
40	33	8	1 $\frac{1}{4}$
50	33	8	1 $\frac{1}{2}$
63	33	8	2





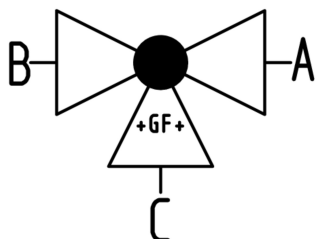
3-Way ball valve type 167 PVC-U
Horizontal/L-port 100-230V
With manual emergency override
With solvent cement sockets metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

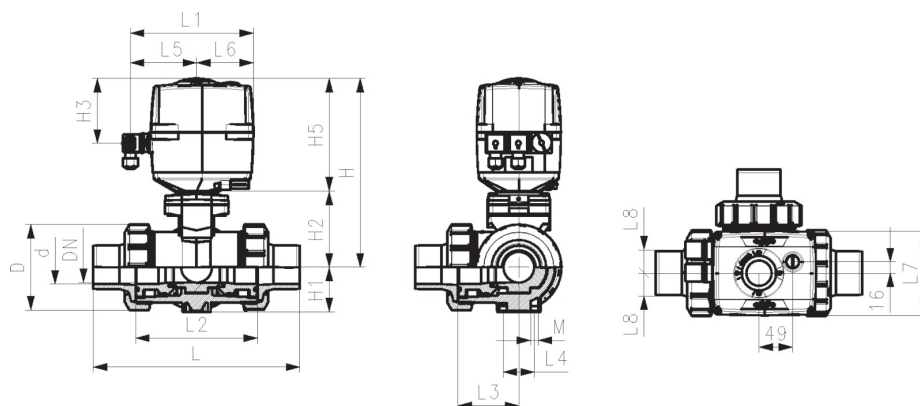
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

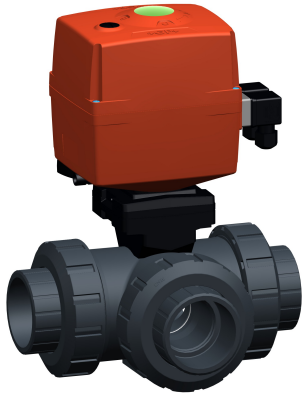


d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	50	EA25	199 167 022	2.122	199 167 032	2.122
20	15	10	75	EA25	199 167 023	2.540	199 167 033	2.128
25	20	10	150	EA25	199 167 024	2.256	199 167 034	2.256
32	25	10	280	EA25	199 167 025	2.842	199 167 035	2.446
40	32	10	480	EA25	199 167 026	3.234	199 167 036	2.870
50	40	10	620	EA25	199 167 027	3.683	199 167 037	3.322
63	50	10	1230	EA25	199 167 028	5.043	199 167 038	4.683

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2





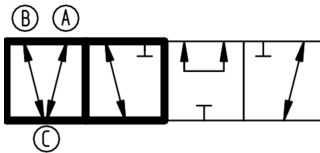
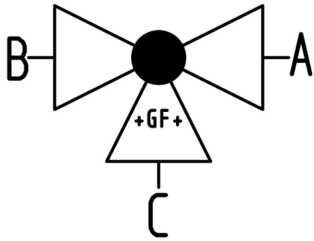
3-Way ball valve type 167 PVC-U
Horizontal/T-port 100-230V
With manual emergency override
With solvent cement sockets metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

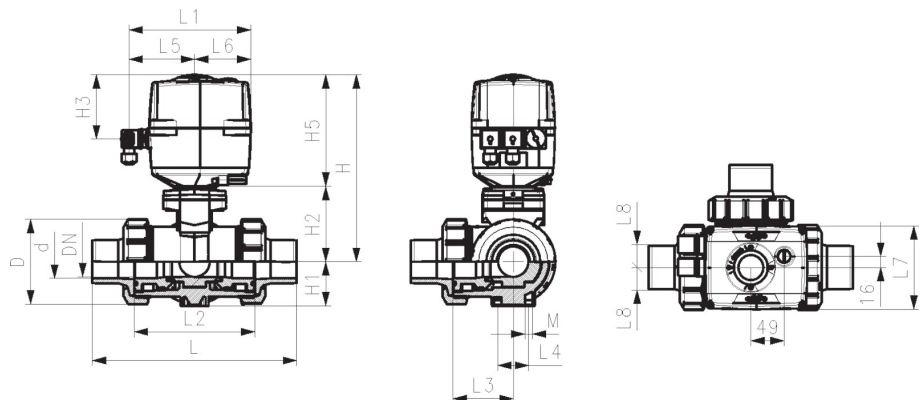
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

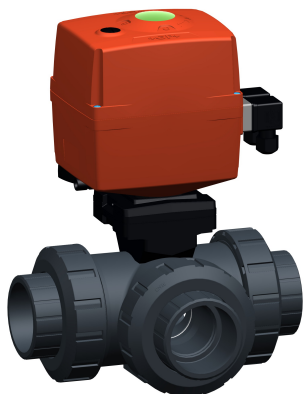


d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	140	EA25	199 167 062	2.121	199 167 072	2.121
20	15	10	200	EA25	199 167 063	2.127	199 167 073	2.127
25	20	10	470	EA25	199 167 064	2.254	199 167 074	2.254
32	25	10	793	EA25	199 167 065	2.834	199 167 075	2.846
40	32	10	1290	EA25	199 167 066	3.217	199 167 076	2.859
50	40	10	1910	EA25	199 167 067	3.674	199 167 077	3.301
63	50	10	3100	EA25	199 167 068	4.638	199 167 078	4.638

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2





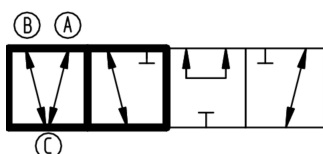
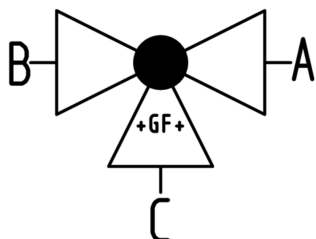
3-Way ball valve type 167 PVC-U
Horizontal/T-port 100-230V
With manual emergency override
With solvent cement sockets metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

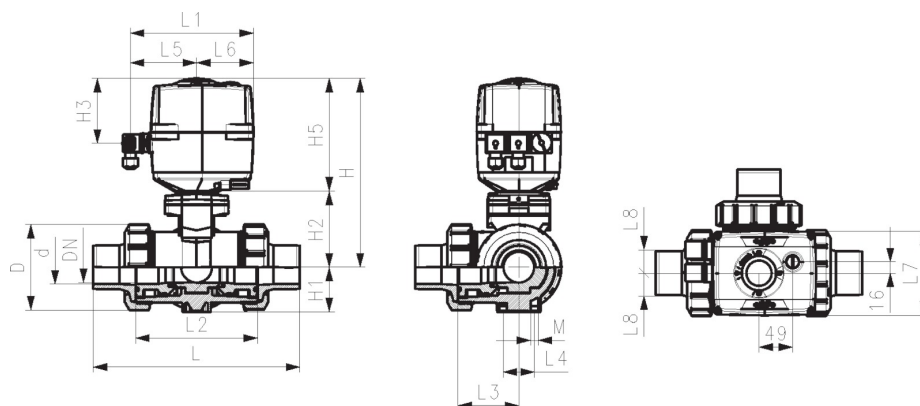
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

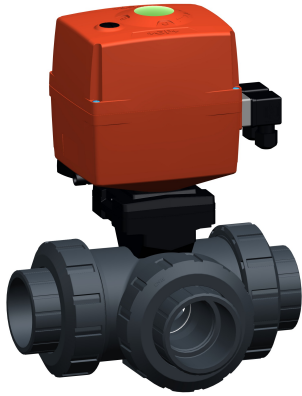


d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	140	EA25	199 167 202	2.122	199 167 212	2.122
20	15	10	200	EA25	199 167 203	2.128	199 167 213	2.128
25	20	10	470	EA25	199 167 204	2.256	199 167 214	2.256
32	25	10	793	EA25	199 167 205	2.446	199 167 215	2.446
40	32	10	1290	EA25	199 167 206	2.870	199 167 216	2.870
50	40	10	1910	EA25	199 167 207	3.698	199 167 217	3.322
63	50	10	3100	EA25	199 167 208	5.018	199 167 218	4.683

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2





3-Way ball valve type 167 PVC-U
Horizontal/T-port 24V
With manual emergency override
With solvent cement sockets metric

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

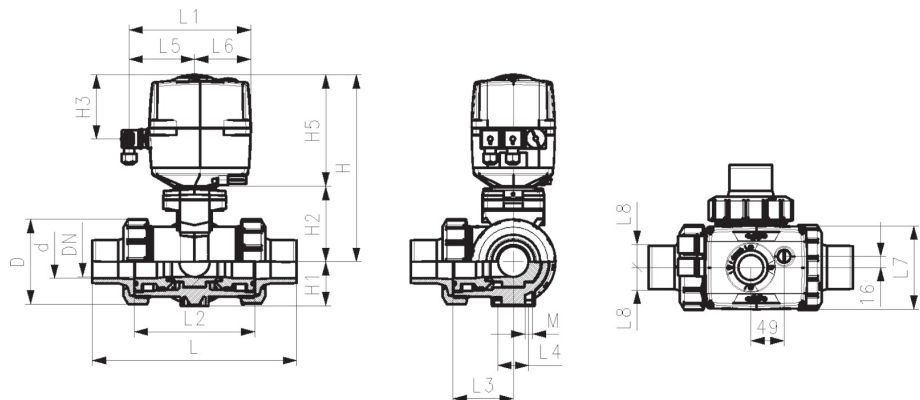
Option:

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

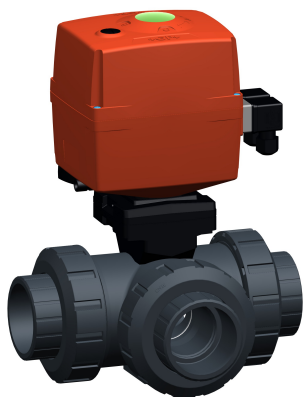
d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	140	EA25	199 167 242	2.121	199 167 252	2.121
20	15	10	200	EA25	199 167 243	2.127	199 167 253	2.127
25	20	10	470	EA25	199 167 244	2.254	199 167 254	2.254
32	25	10	793	EA25	199 167 245	2.817	199 167 255	2.439
40	32	10	1290	EA25	199 167 246	3.197	199 167 256	2.859
50	40	10	1910	EA25	199 167 247	3.654	199 167 257	3.301
63	50	10	3100	EA25	199 167 248	4.972	199 167 258	4.638

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	$\frac{3}{8}$
20	33	6	81	40	$\frac{1}{2}$
25	33	6	94	47	$\frac{3}{4}$
32	33	6	107	54	1
40	33	8	130	65	1 $\frac{1}{4}$
50	33	8	143	72	1 $\frac{1}{2}$
63	33	8	185	92	2



Type 167



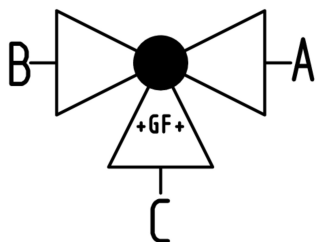
3-Way ball valve type 167 PVC-U Horizontal/L-port 100-230V With manual emergency override With solvent cement sockets ASTM

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

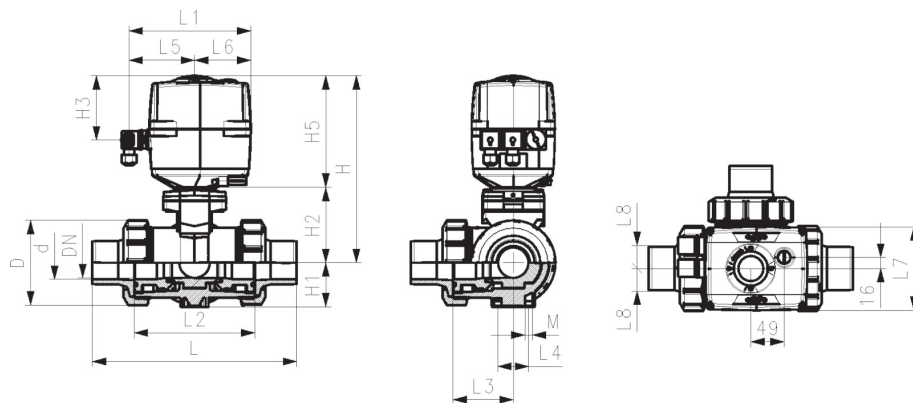
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

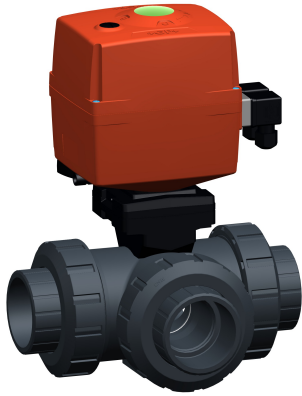


Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
3/8	10	10	50	EA25	199 167 382	2.122	199 167 392	2.122
1/2	15	10	75	EA25	199 167 383	2.128	199 167 393	2.128
3/4	20	10	150	EA25	199 167 384	2.256	199 167 394	2.256
1	25	10	280	EA25	199 167 385	2.446	199 167 395	2.446
1 1/4	32	10	480	EA25	199 167 386	2.870	199 167 396	2.870
1 1/2	40	10	620	EA25	199 167 387	3.322	199 167 397	3.322
2	50	10	1230	EA25	199 167 388	4.683	199 167 398	4.683

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
3/8	50	231	28	64	94	167	8	123	180	73	36	25	97	83	122
1/2	50	231	28	64	94	167	8	122	180	73	36	25	97	83	122
3/4	58	240	32	73	94	167	8	141	180	86	43	25	97	83	122
1	68	240	36	73	94	167	8	161	180	99	50	25	97	83	122
1 1/4	84	251	45	84	94	167	9	187	180	120	60	45	97	83	122
1 1/2	97	251	51	84	94	167	9	213	180	137	69	45	97	83	122
2	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

Size (inch)	L8 (mm)	M (mm)	z (mm)	z1 (mm)
3/8	33	6	85	42
1/2	33	6	77	38
3/4	33	6	92	46
1	33	6	105	53
1 1/4	33	8	126	63
1 1/2	33	8	143	72
2	33	8	185	92





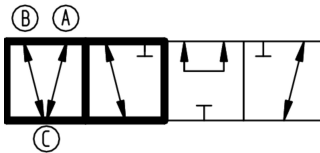
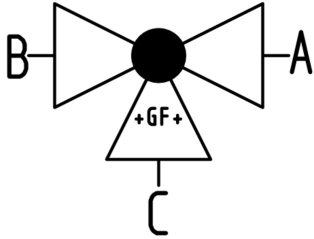
3-Way ball valve type 167 PVC-U
Horizontal/T-port 100-230V
With manual emergency override
With solvent cement sockets ASTM

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

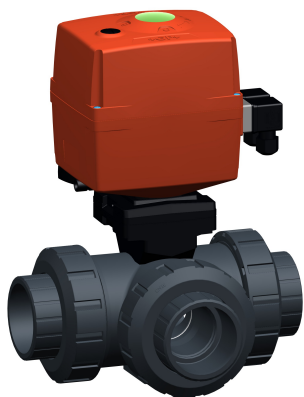


Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
3/8	10	10	140	EA25	199 167 422	2.121	199 167 432	2.121
1/2	15	10	200	EA25	199 167 423	2.127	199 167 433	2.127
3/4	20	10	470	EA25	199 167 424	2.254	199 167 434	2.254
1	25	10	793	EA25	199 167 425	2.439	199 167 435	2.439
1 1/4	32	10	1290	EA25	199 167 426	2.859	199 167 436	2.859
1 1/2	40	10	1910	EA25	199 167 427	3.301	199 167 437	3.301
2	50	10	3100	EA25	199 167 428	4.638	199 167 438	4.638

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
3/8	50	231	28	64	94	167	8	123	180	73	36	25	97	83	122
1/2	50	231	28	64	94	167	8	122	180	73	36	25	97	83	122
3/4	58	240	32	73	94	167	8	141	180	86	43	25	97	83	122
1	68	240	36	73	94	167	8	161	180	99	50	25	97	83	122
1 1/4	84	251	45	84	94	167	9	187	180	120	60	45	97	83	122
1 1/2	97	251	51	84	94	167	9	213	180	137	69	45	97	83	122
2	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

Size (inch)	L8 (mm)	M (mm)	z (mm)	z1 (mm)
3/8	33	6	85	42
1/2	33	6	77	38
3/4	33	6	92	46
1	33	6	105	53
1 1/4	33	8	126	63
1 1/2	33	8	143	72
2	33	8	185	92

Type 167



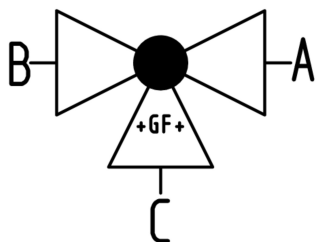
3-Way ball valve type 167 PVC-U Horizontal/L-port 100-230V With manual emergency override With solvent cement sockets JIS

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

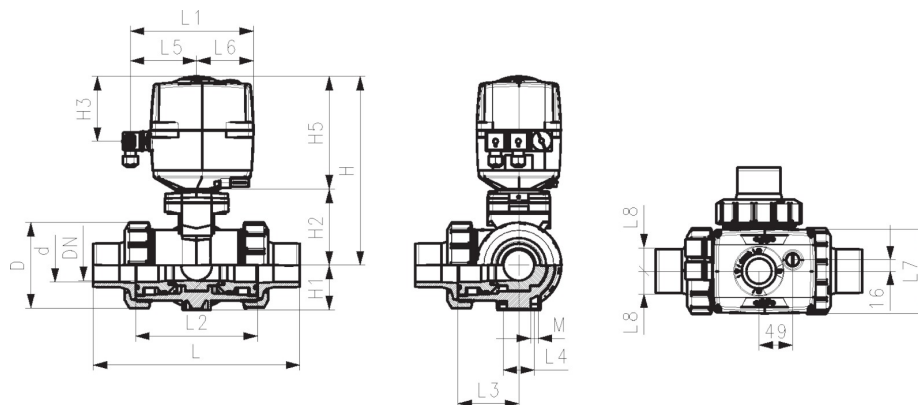
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



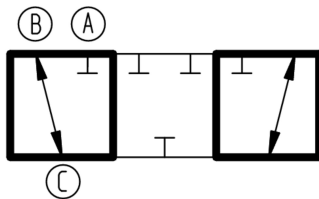
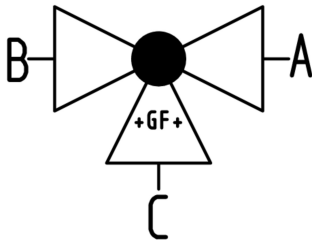
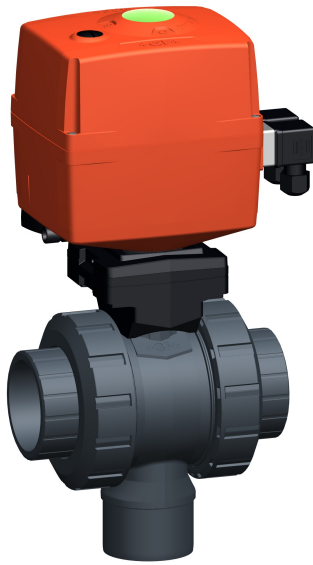
Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code
½	15	10	75	EA25	199 167 843	2.122	
¾	20	10	150	EA25	199 167 844	2.128	
1	25	10	280	EA25	199 167 845	2.256	
1 ¼	32	10	480	EA25	199 167 846	2.446	
1 ½	40	10	620	EA25	199 167 847	2.870	
2	50	10	1230	EA25	199 167 848	3.322	

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
½	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
¾	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
1	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
1 ¼	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
1 ½	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
2	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

Size (inch)	L8 (mm)	M (mm)	z (mm)	z1 (mm)
½	33	6	81	40
¾	33	6	94	47
1	33	6	107	54
1 ¼	33	8	130	65
1 ½	33	8	143	72
2	33	8	185	92



Type 170



3-Way ball valve type 170 PVC-U Vertical/L-port 100-230V With manual emergency override With solvent cement sockets JIS

Model:

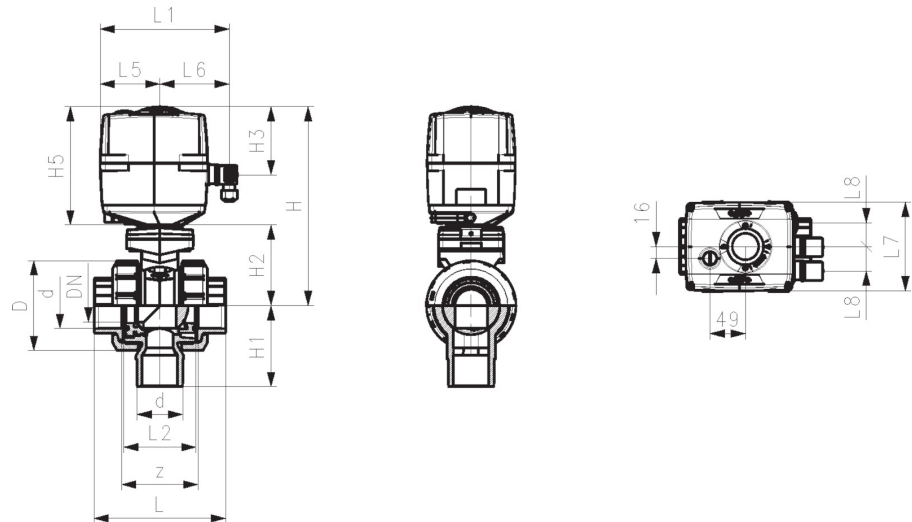
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

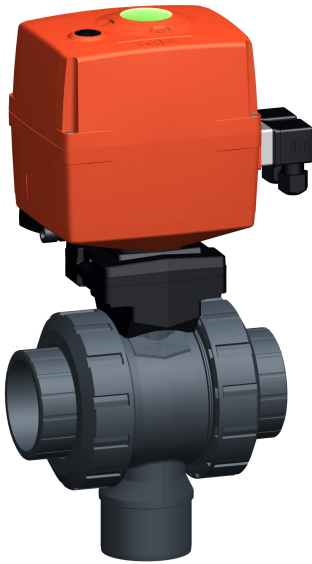
Option:

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
½	15	10	77	EA25	199 170 333	2.043	199 170 343	2.001
¾	20	10	146	EA25	199 170 334	2.150	199 170 344	2.004
1	25	10	260	EA25	199 170 335	2.267	199 170 345	2.090
1 ¼	32	10	437	EA25	199 170 336	2.554	199 170 346	2.179
1 ½	40	10	667	EA25	199 170 337	2.818	199 170 347	2.407
2	50	10	1293	EA25	199 170 338	3.595	199 170 348	2.609

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
½	50	231	62	64	94	167	95	180	56	97	83	122	33	64
¾	58	240	72	73	94	167	111	180	66	97	83	122	33	74
1	68	240	77	73	94	167	123	180	71	97	83	122	33	79
1 ¼	84	251	87	84	94	167	146	180	85	97	83	122	33	95
1 ½	97	251	97	84	94	167	157	180	89	97	83	122	33	95
2	124	273	112	106	94	167	183	180	101	97	83	122	33	107





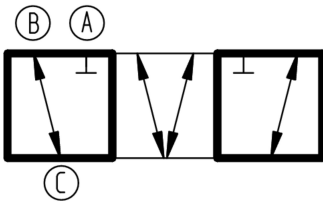
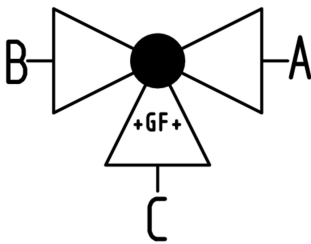
3-Way ball valve type 170 PVC-U
Vertical diverter ball 100-230V
With manual emergency override
With solvent cement sockets JIS

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

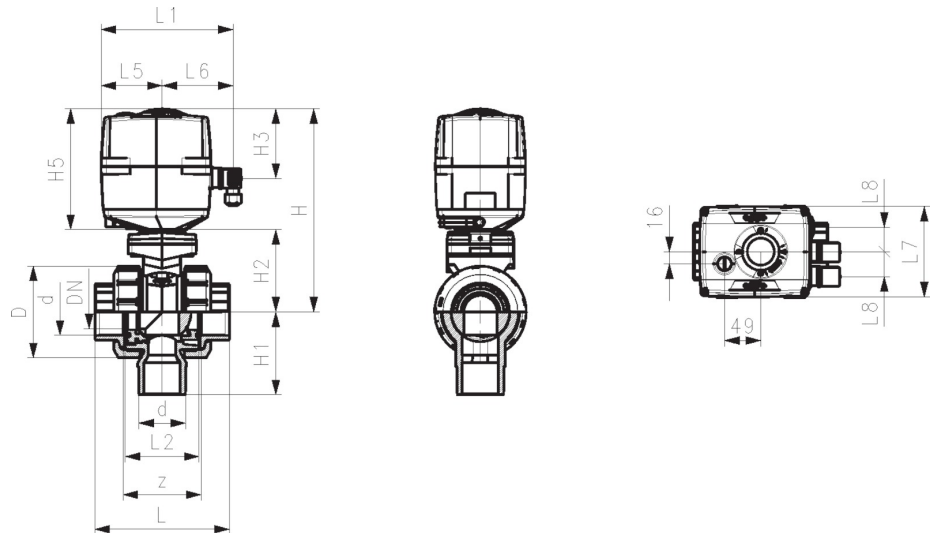
Option:

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



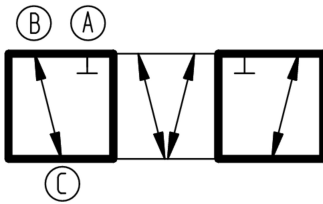
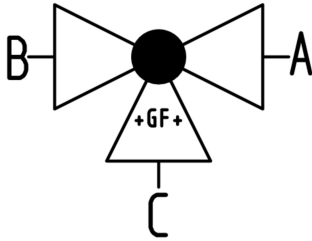
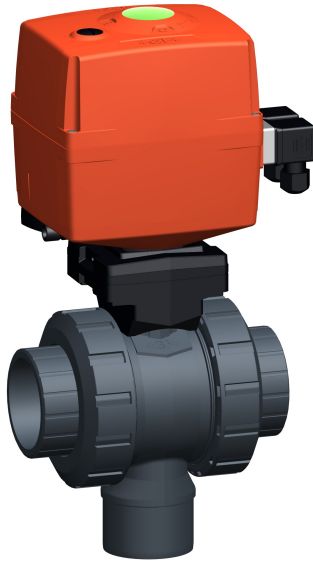
Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
½	15	10	77	EA25	199 170 373	3.595	199 170 383	3.550
¾	20	10	146	EA25	199 170 374	2.042	199 170 384	2.042
1	25	10	260	EA25	199 170 375	2.148	199 170 385	2.148
1 ¼	32	10	437	EA25	199 170 376	2.260	199 170 386	2.260
1 ½	40	10	667	EA25	199 170 377	2.543	199 170 387	2.543
2	50	10	1293	EA25	199 170 378	2.797	199 170 388	2.797

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
½	50	231	62	64	94	167	95	180	56	97	83	122	33	64
¾	58	240	72	73	94	167	111	180	66	97	83	122	33	74
1	68	240	77	73	94	167	123	180	71	97	83	122	33	79
1 ¼	84	251	87	84	94	167	146	180	85	97	83	122	33	95
1 ½	97	251	97	84	94	167	157	180	89	97	83	122	33	95
2	124	273	112	106	94	167	183	180	101	97	83	122	33	107



Type 170

3-Way ball valve type 170 PVC-U OF Vertical diverter ball 100-230V With manual emergency override With solvent cement sockets JIS



Model:

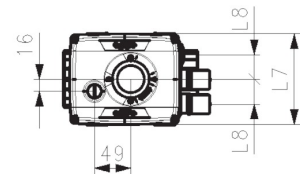
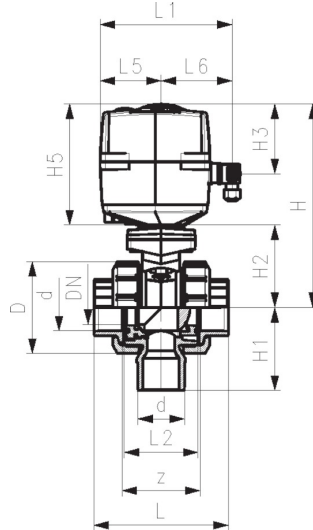
- Voltage 100-230 V, 50-60 Hz
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

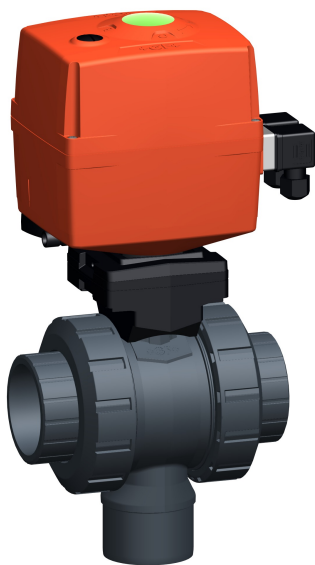
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)
½	15	10	77	EA25	199 170 393	3.550
¾	20	10	146	EA25	199 170 394	2.042
1	25	10	260	EA25	199 170 395	2.148
1 ¼	32	10	437	EA25	199 170 396	2.260
1 ½	40	10	667	EA25	199 170 397	2.543
2	50	10	1293	EA25	199 170 398	2.797

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)
½	50	231	62	64	94	167	95	180	56	97	83	122	33	64
¾	58	240	72	73	94	167	111	180	66	97	83	122	33	74
1	68	240	77	73	94	167	123	180	71	97	83	122	33	79
1 ¼	84	251	87	84	94	167	146	180	85	97	83	122	33	95
1 ½	97	251	97	84	94	167	157	180	89	97	83	122	33	95
2	124	273	112	106	94	167	183	180	101	97	83	122	33	107



Type 170



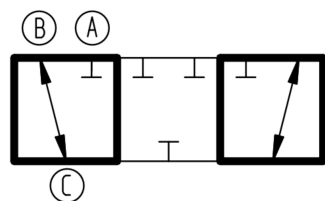
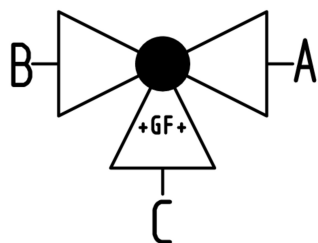
3-Way ball valve type 170 PVC-U Vertical/L-port 100-230V With manual emergency override With solvent cement sockets metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

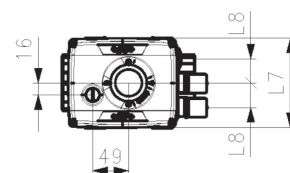
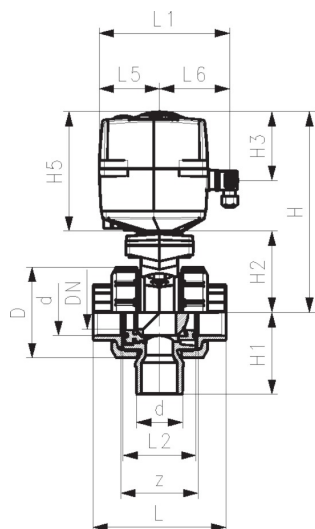
Option:

- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

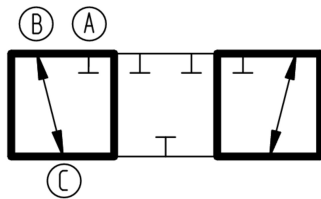
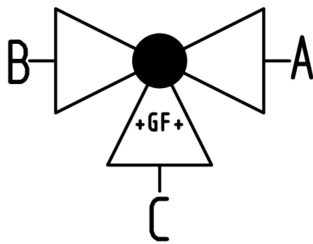
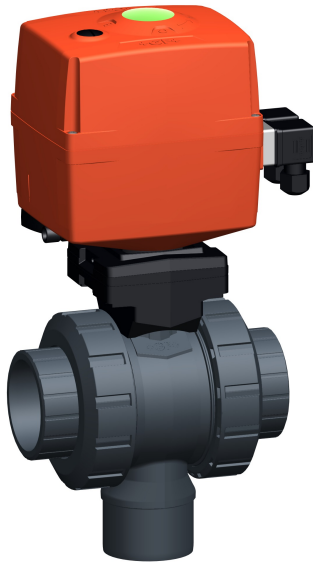


d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	49	EA25	199 170 242	2.039	199 170 252	2.039
20	15	10	77	EA25	199 170 243	2.043	199 170 253	2.043
25	20	10	146	EA25	199 170 244	2.150	199 170 254	2.150
32	25	10	260	EA25	199 170 245	2.267	199 170 255	2.267
40	32	10	437	EA25	199 170 246	2.554	199 170 256	2.554
50	40	10	667	EA25	199 170 247	3.203	199 170 257	2.818
63	50	10	1293	EA25	199 170 248	3.977	199 170 258	3.595

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)	closest inch (inch)
16	50	231	62	64	94	167	92	180	56	97	83	122	33	64	$\frac{3}{8}$
20	50	231	62	64	94	167	95	180	56	97	83	122	33	64	$\frac{1}{2}$
25	58	240	72	73	94	167	111	180	66	97	83	122	33	74	$\frac{3}{4}$
32	68	240	77	73	94	167	123	180	71	97	83	122	33	79	1
40	84	251	87	84	94	167	146	180	85	97	83	122	33	95	$1 \frac{1}{4}$
50	97	251	97	84	94	167	157	180	89	97	83	122	33	95	$1 \frac{1}{2}$
63	124	273	112	106	94	167	183	180	101	97	83	122	33	107	2



3-Way ball valve type 170 PVC-U
Vertical/L-port 24V
With manual emergency override
With solvent cement sockets metric



Model:

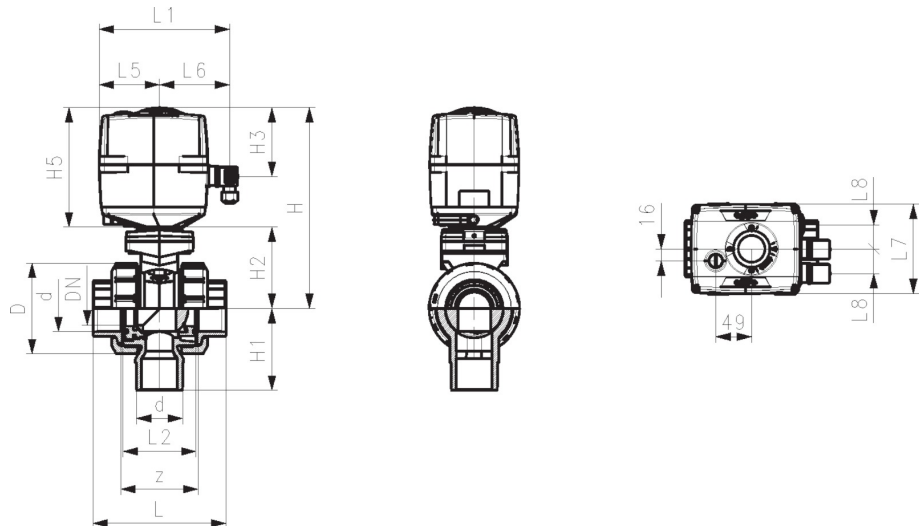
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Basic position B-C opened, activated position A-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

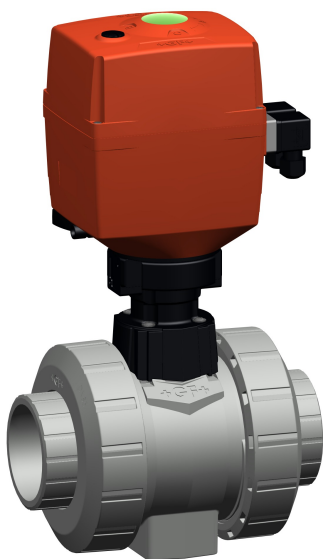
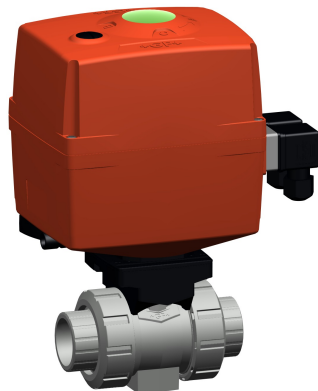
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	49	EA25	199 170 262	2.039	199 170 272	2.039
20	15	10	77	EA25	199 170 263	2.043	199 170 273	2.043
25	20	10	146	EA25	199 170 264	2.546	199 170 274	2.150
32	25	10	260	EA25	199 170 265	2.267	199 170 275	2.267
40	32	10	437	EA25	199 170 266	2.922	199 170 276	2.554
50	40	10	667	EA25	199 170 267	2.818	199 170 277	2.818
63	50	10	1293	EA25	199 170 268	3.595	199 170 278	3.595

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	z (mm)	closest inch (inch)
16	50	231	62	64	94	167	92	180	56	97	83	122	33	64	3/8
20	50	231	62	64	94	167	95	180	56	97	83	122	33	64	1/2
25	58	240	72	73	94	167	111	180	66	97	83	122	33	74	3/4
32	68	240	77	73	94	167	123	180	71	97	83	122	33	79	1
40	84	251	87	84	94	167	146	180	85	97	83	122	33	95	1 1/4
50	97	251	97	84	94	167	157	180	89	97	83	122	33	95	1 1/2
63	124	273	112	106	94	167	183	180	101	97	83	122	33	107	2



Type 179



Ball valve type 179 PVC-C 100-230V With manual emergency override With solvent cement sockets metric

Model:

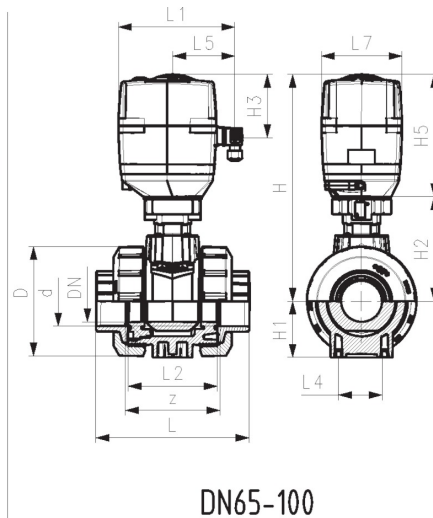
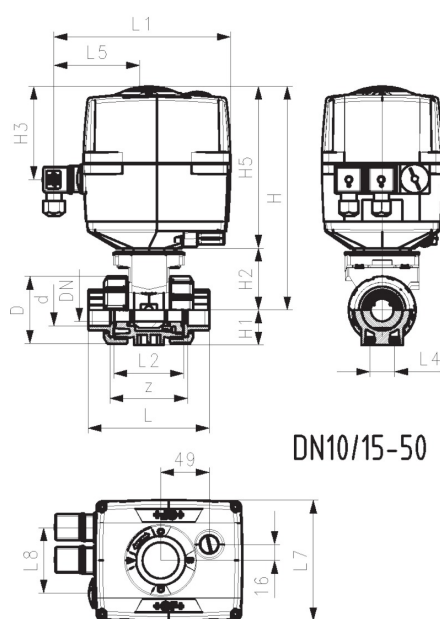
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

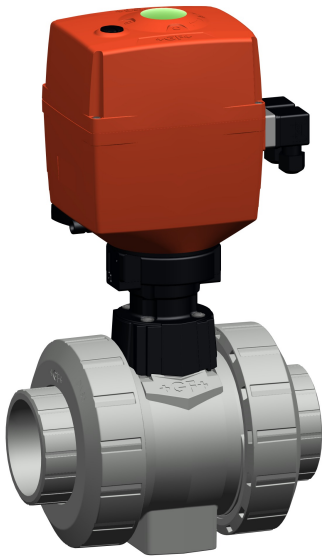
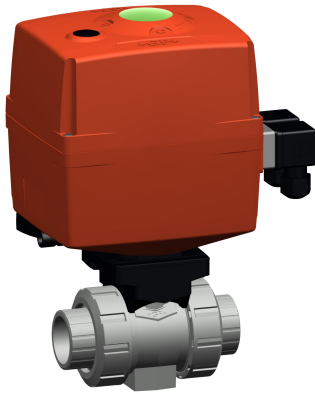
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	70	EA25	199 179 402	2.100	199 179 412	2.100
20	15	10	185	EA25	199 179 403	2.100	199 179 413	2.100
25	20	10	350	EA25	199 179 404	2.200	199 179 414	2.200
32	25	10	700	EA25	199 179 405	2.300	199 179 415	2.695
40	32	10	1000	EA25	199 179 406	2.600	199 179 416	2.600
50	40	10	1600	EA25	199 130 407	3.000	199 179 417	3.213
63	50	10	3100	EA25	199 179 408	3.800	199 179 418	3.800
75	65	10	5000	EA45	199 179 409	7.700	199 179 419	7.700
90	80	10	7000	EA45	199 179 410	10.400	199 179 420	10.400
110	100	10	11000	EA120	199 179 411	15.100	199 179 421	15.100

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)	closest inch (inch)
16	50	231	27	64	94	167	92	180	56	25	97	122	64	$\frac{3}{8}$
20	50	231	27	64	94	167	95	180	56	25	97	122	64	$\frac{1}{2}$
25	58	240	30	73	94	167	110	180	65	25	97	122	72	$\frac{3}{4}$
32	68	240	36	73	94	167	123	180	71	25	97	122	79	1
40	84	251	44	84	94	167	146	180	85	45	97	122	94	1 $\frac{1}{4}$
50	97	251	51	84	94	167	157	180	89	45	97	122	95	1 $\frac{1}{2}$
63	124	273	64	106	94	167	183	180	101	45	97	122	107	2
75	166	346	85	156	94	190	233	180	136	70	98	122	144	2 $\frac{1}{2}$
90	200	358	105	168	94	190	254	180	141	70	98	122	151	3
110	238	365	123	175	94	190	301	180	164	120	98	122	174	4



Type 182



Ball valve type 182 PVC-C 100-230V
Manual emergency override
Solvent cement sockets Inch ASTM
Incl. 2 threaded valve ends NPT

Model:

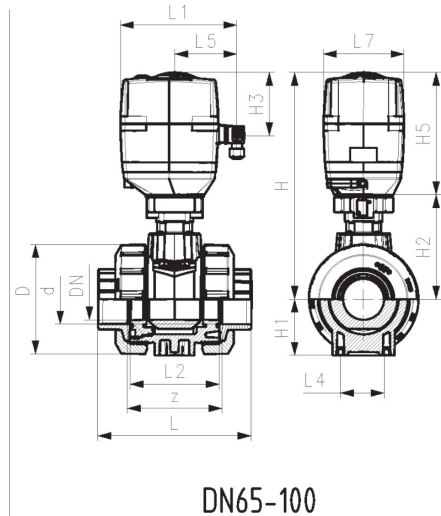
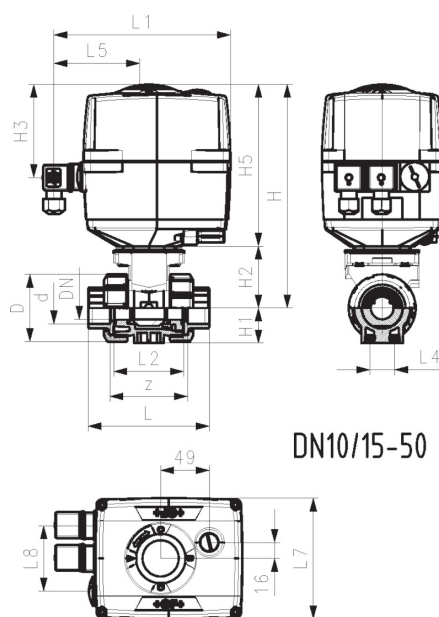
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

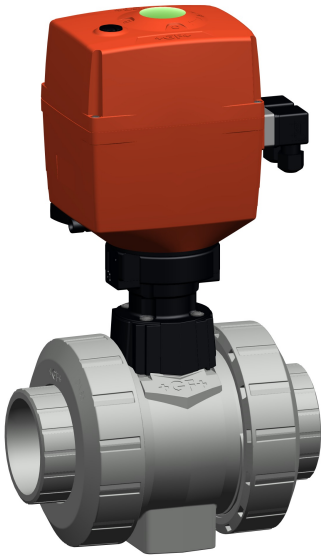
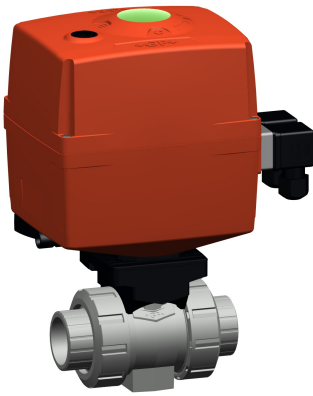
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
3/8	10	10	70	EA25	199 182 402	2.100	199 182 412	2.100
1/2	15	10	185	EA25	199 182 403	2.100	199 182 413	2.100
3/4	20	10	350	EA25	199 182 404	2.200	199 182 414	2.200
1	25	10	700	EA25	199 182 405	2.300	199 182 415	2.300
1 1/4	32	10	1000	EA25	199 182 406	2.600	199 182 416	2.600
1 1/2	40	10	1600	EA25	199 182 407	3.000	199 182 417	3.000
2	50	10	3100	EA25	199 182 408	3.800	199 182 418	3.800
2 1/2	65	10	5000	EA45	199 182 409	7.800	199 182 419	7.800
3	80	10	7000	EA45	199 182 410	10.400	199 182 420	10.400
4	100	10	11000	EA120	199 182 411	15.000	199 182 421	15.000

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
3/8	50	231	27	64	94	167	105	180	56	25	97	122	67
1/2	50	231	27	64	94	167	105	180	56	25	97	122	61
3/4	58	240	30	73	94	167	121	180	65	25	97	122	70
1	68	240	36	73	94	167	133	180	71	25	97	122	76
1 1/4	84	251	44	84	94	167	154	180	85	45	97	122	90
1 1/2	97	251	51	84	94	167	164	180	89	45	97	122	94
2	124	273	64	106	94	167	183	180	101	45	97	122	107
2 1/2	166	346	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174





Ball valve type 182 PVC-C 24V
Manual emergency override
Solvent cement sockets Inch ASTM
Incl. 2 threaded valve ends NPT

Model:

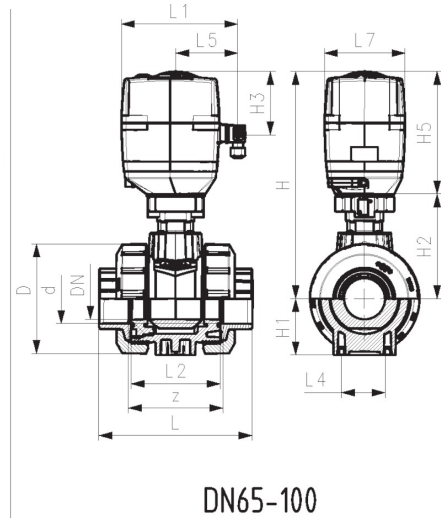
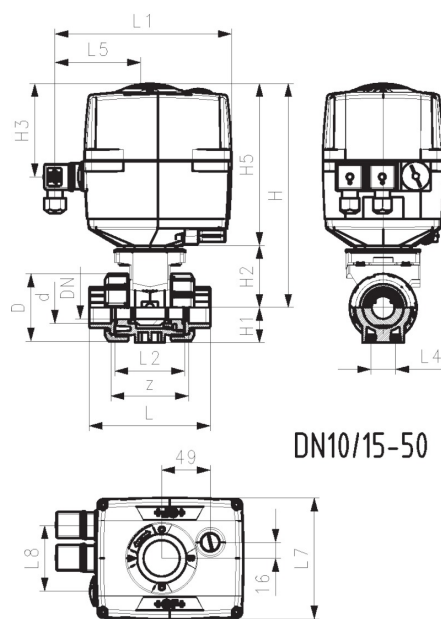
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

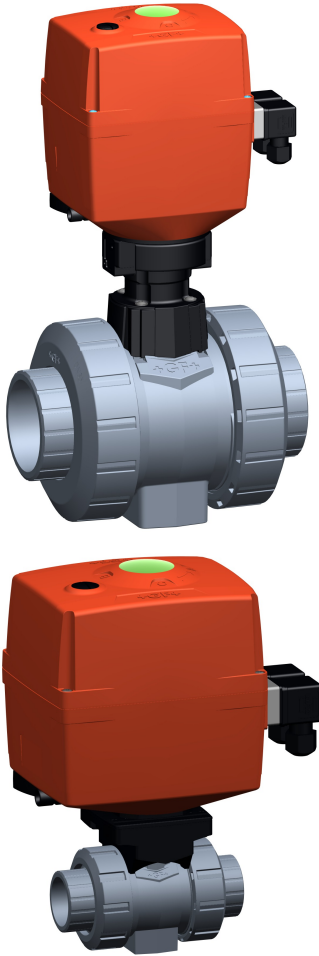
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
3/8	10	10	70	EA25	199 182 422	2.100	199 182 432	2.100
1/2	15	10	185	EA25	199 182 423	2.100	199 182 433	2.100
3/4	20	10	350	EA25	199 182 424	2.200	199 182 434	2.200
1	25	10	700	EA25	199 182 425	2.300	199 182 435	2.300
1 1/4	32	10	1000	EA25	199 182 426	2.600	199 182 436	2.600
1 1/2	40	10	1600	EA25	199 182 427	3.000	199 182 437	3.000
2	50	10	3100	EA25	199 182 428	3.800	199 182 438	3.800
2 1/2	65	10	5000	EA45	199 182 429	7.800	199 182 439	7.800
3	80	10	7000	EA45	199 182 430	10.400	199 182 440	10.400
4	100	10	11000	EA120	199 182 431	15.000	199 182 441	15.000

Size (inch)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
3/8	50	231	27	64	94	167	105	180	56	25	97	122	67
1/2	50	231	27	64	94	167	105	180	56	25	97	122	61
3/4	58	240	30	73	94	167	121	180	65	25	97	122	70
1	68	240	36	73	94	167	133	180	71	25	97	122	76
1 1/4	84	251	44	84	94	167	154	180	85	45	97	122	90
1 1/2	97	251	51	84	94	167	164	180	89	45	97	122	94
2	124	273	64	106	94	167	183	180	101	45	97	122	107
2 1/2	166	347	85	156	94	190	233	180	136	70	98	122	144
3	200	358	105	168	94	190	254	180	141	70	98	122	151
4	238	365	123	175	94	190	301	180	164	120	98	122	174



Type 179



Ball valve type 179 ABS 24V
With manual emergency override
With solvent cement sockets metric

Model:

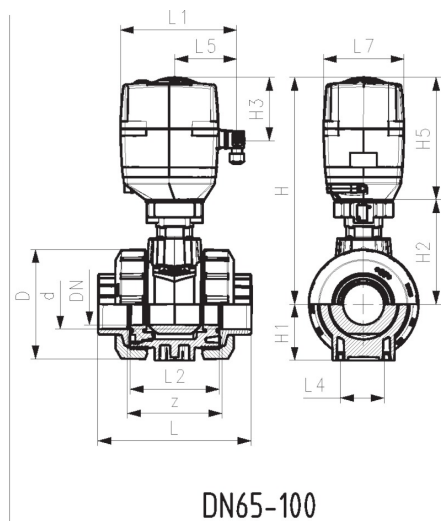
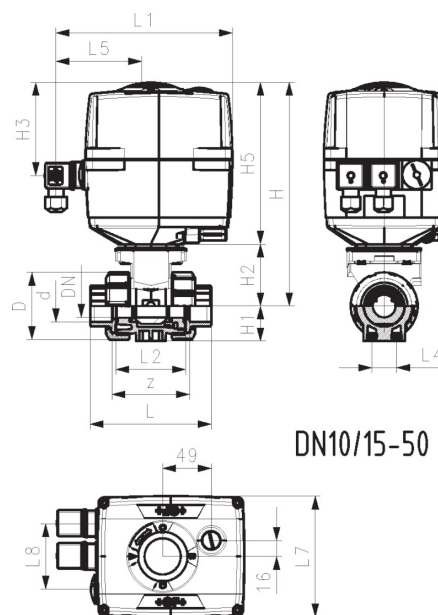
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

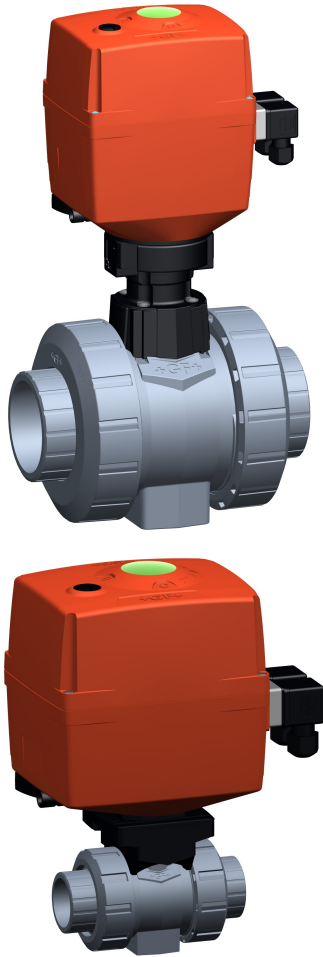
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)
16	10	10	70	EA25	199 179 742	2.100
20	15	10	185	EA25	199 179 743	2.100
25	20	10	350	EA25	199 179 744	2.200
32	25	10	700	EA25	199 179 745	2.300
40	32	10	1000	EA25	199 179 746	2.600
50	40	10	1600	EA25	199 179 747	3.000
63	50	10	3100	EA25	199 179 748	3.535
75	65	10	5000	EA45	199 179 749	6.300
90	80	10	7000	EA45	199 179 750	8.200
110	100	10	11000	EA120	199 179 751	11.500

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)	closest inch (inch)
16	50	231	27	64	94	167	92	180	56	25	97	122	64	3/8
20	50	231	27	64	94	167	95	180	56	25	97	122	64	1/2
25	58	240	30	73	94	167	110	180	65	25	97	122	72	3/4
32	68	240	36	73	94	167	123	180	71	25	97	122	79	1
40	84	251	44	84	94	167	146	180	85	45	97	122	94	1 1/4
50	97	251	51	84	94	167	157	180	89	45	97	122	95	1 1/2
63	124	273	64	106	94	167	183	180	101	45	97	122	107	2
75	166	346	85	156	94	190	233	180	136	70	98	122	144	2 1/2
90	200	358	105	168	94	190	254	180	141	70	98	122	151	3
110	238	365	123	175	94	190	301	180	164	120	98	122	174	4



Ball valve type 179 ABS 100-230V
With manual emergency override
With solvent cement sockets metric



Model:

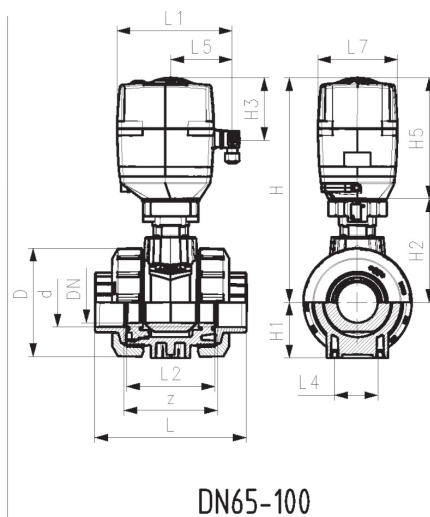
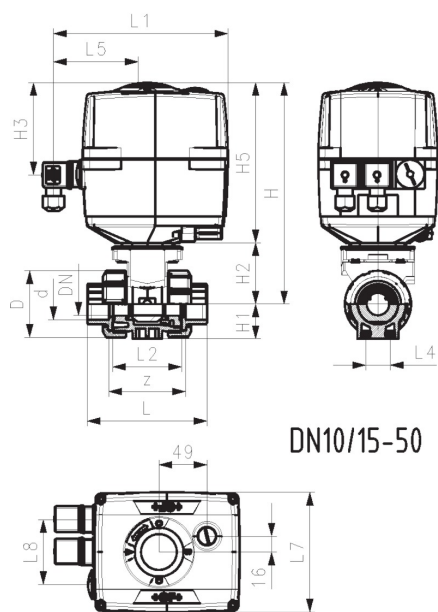
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

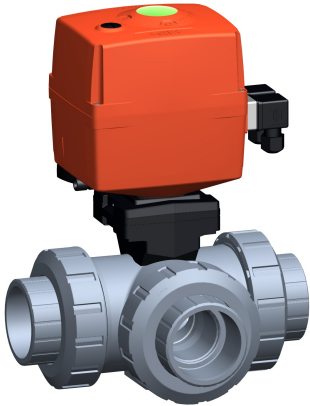
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)
16	10	10	70	EA25	199 179 702	2.100
20	15	10	185	EA25	199 179 703	2.100
25	20	10	350	EA25	199 179 704	2.200
32	25	10	700	EA25	199 179 705	2.300
40	32	10	1000	EA25	199 179 706	2.600
50	40	10	1600	EA25	199 179 707	3.000
63	50	10	3100	EA25	199 179 708	3.555
75	65	10	5000	EA45	199 179 709	6.300
90	80	10	7000	EA45	199 179 710	8.200
110	100	10	11000	EA120	199 179 711	11.500

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)	closest inch (inch)
16	50	231	27	64	94	167	92	180	56	25	97	122	64	3/8
20	50	231	27	64	94	167	95	180	56	25	97	122	64	1/2
25	58	240	30	73	94	167	110	180	65	25	97	122	72	3/4
32	68	240	36	73	94	167	123	180	71	25	97	122	79	1
40	84	251	44	84	94	167	146	180	85	45	97	122	94	1 1/4
50	97	251	51	84	94	167	157	180	89	45	97	122	95	1 1/2
63	124	273	64	106	94	167	183	180	101	45	97	122	107	2
75	166	346	85	156	94	190	233	180	136	70	98	122	144	2 1/2
90	200	358	105	168	94	190	254	180	141	70	98	122	151	3
110	238	365	123	175	94	190	301	180	164	120	98	122	174	4



Type 167



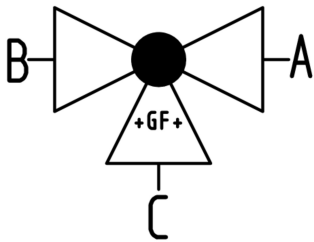
3-Way ball valve type 167 ABS Horizontal/L-port 24V With manual emergency override With solvent cement sockets metric

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

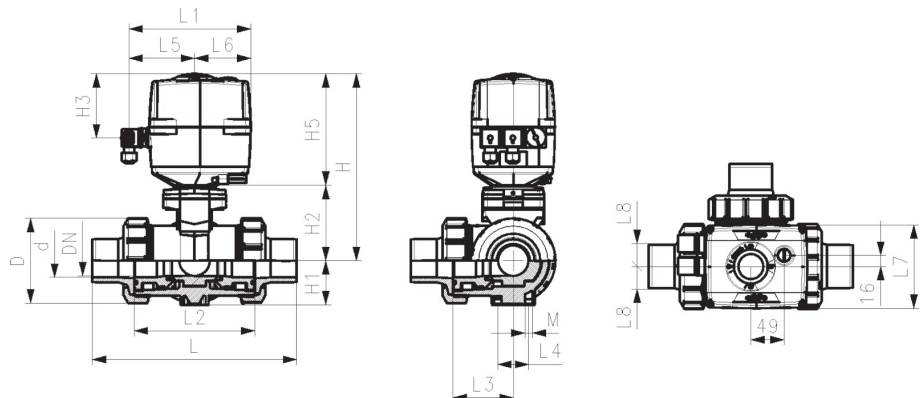
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

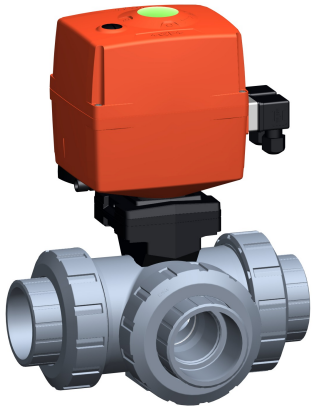


d (mm)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EA	EPDM Code	Weight (kg)
16	10	10	50	EA25	199 167 342	2.065
20	15	10	75	EA25	199 167 343	2.069
25	20	10	150	EA25	199 167 344	2.171
32	25	10	280	EA25	199 167 345	2.704
40	32	10	480	EA25	199 167 346	3.681
50	40	10	620	EA25	199 167 347	3.370
63	50	10	1230	EA25	199 167 348	4.042

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2





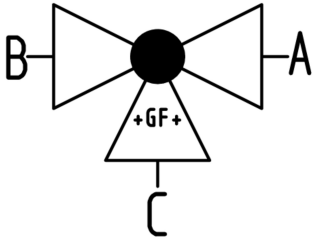
3-Way ball valve type 167 ABS
Horizontal/T-port 24V
With manual emergency override
With solvent cement sockets metric

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

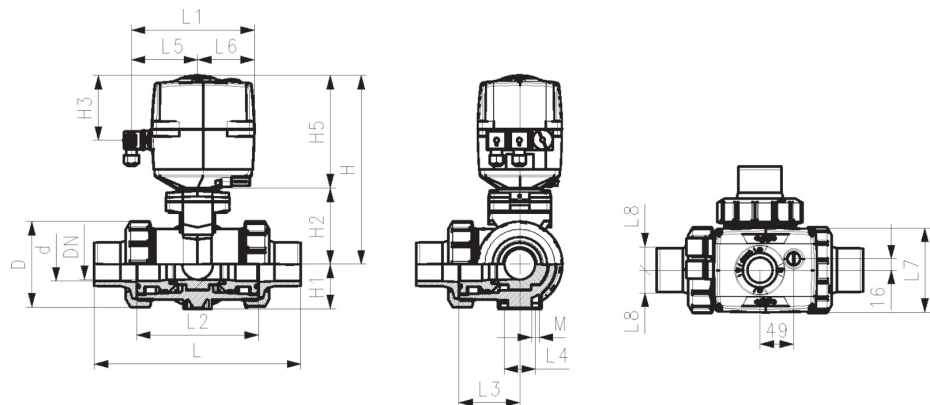
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

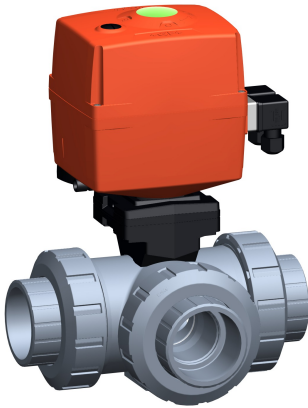


d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)
16	10	10	50	EA25	199 167 352	2.064
20	15	10	75	EA25	199 167 353	2.068
25	20	10	150	EA25	199 167 354	2.169
32	25	10	280	EA25	199 167 355	2.311
40	32	10	480	EA25	199 167 356	2.640
50	40	10	620	EA25	199 167 357	2.977
63	50	10	1230	EA25	199 167 358	4.008

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2





3-Way ball valve type 167 ABS
Horizontal/L-port 100-230V
With manual emergency override
With solvent cement sockets metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

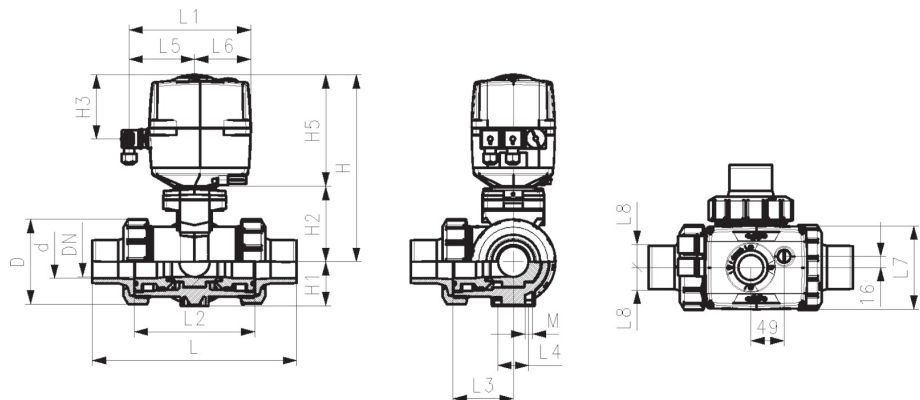
Option:

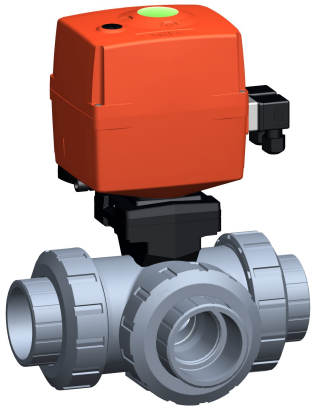
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)
16	10	10	50	EA25	199 167 162	2.065
20	15	10	75	EA25	199 167 163	2.069
25	20	10	150	EA25	199 167 164	2.171
32	25	10	280	EA25	199 167 165	2.316
40	32	10	480	EA25	199 167 166	2.649
50	40	10	620	EA25	199 167 167	3.384
63	50	10	1230	EA25	199 167 168	5.324

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	$\frac{3}{8}$
20	33	6	81	40	$\frac{1}{2}$
25	33	6	94	47	$\frac{3}{4}$
32	33	6	107	54	1
40	33	8	130	65	1 $\frac{1}{4}$
50	33	8	143	72	1 $\frac{1}{2}$
63	33	8	185	92	2





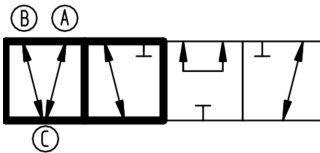
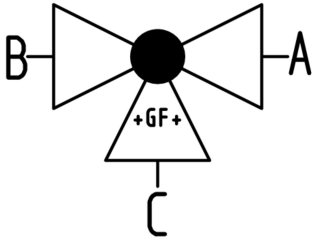
3-Way ball valve type 167 ABS
Horizontal/T-port 100-230V
With manual emergency override
With solvent cement sockets metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-B-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

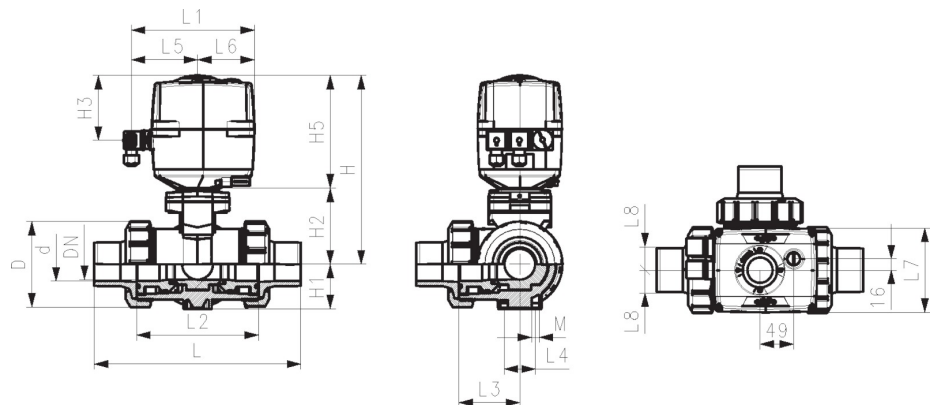
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



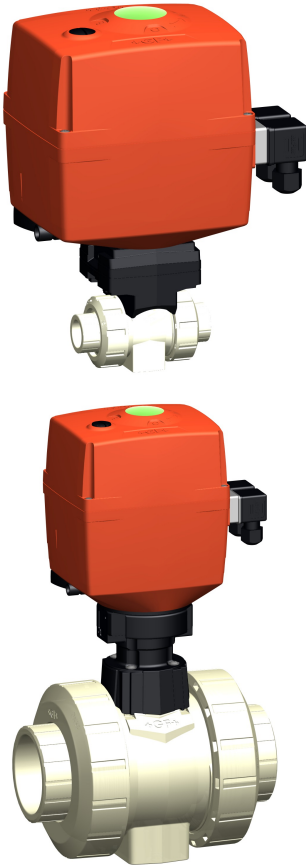
d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)
16	10	10	140	EA25	199 167 172	2.064
20	15	10	200	EA25	199 167 173	2.068
25	20	10	470	EA25	199 167 174	2.169
32	25	10	793	EA25	199 167 175	2.732
40	32	10	1290	EA25	199 167 176	2.640
50	40	10	1910	EA25	199 167 177	3.377
63	50	10	3100	EA25	199 167 178	5.135

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	109	180	73	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	73	36	25	97	83	122
25	58	240	32	73	94	167	8	131	180	86	43	25	97	83	122
32	68	240	36	73	94	167	8	151	180	99	50	25	97	83	122
40	84	251	45	84	94	167	9	181	180	120	60	45	97	83	122
50	97	251	51	84	94	167	9	205	180	137	69	45	97	83	122
63	124	273	65	106	94	167	9	261	180	179	89	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	81	40	3/8
20	33	6	81	40	1/2
25	33	6	94	47	3/4
32	33	6	107	54	1
40	33	8	130	65	1 1/4
50	33	8	143	72	1 1/2
63	33	8	185	92	2



Type 180



PROGEF Standard
Ball valve type 180 100-230V
With manual emergency override
With fusion sockets metric

Model:

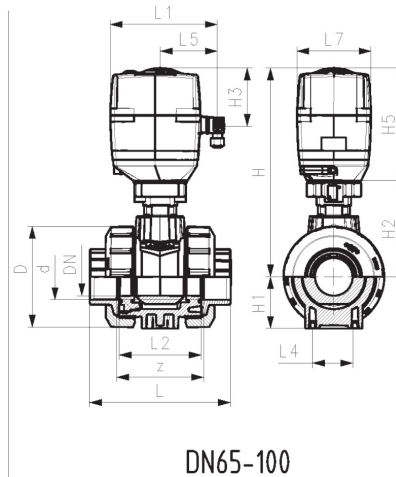
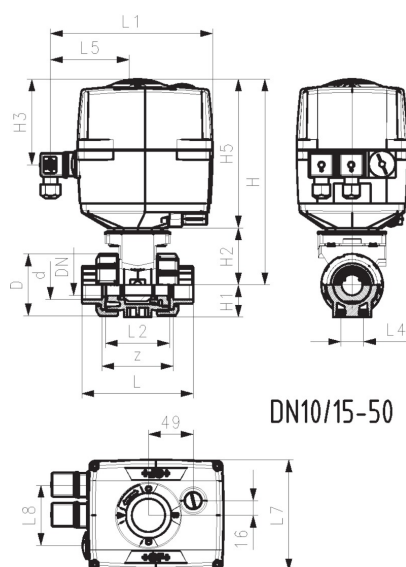
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts
- Material: PP-H

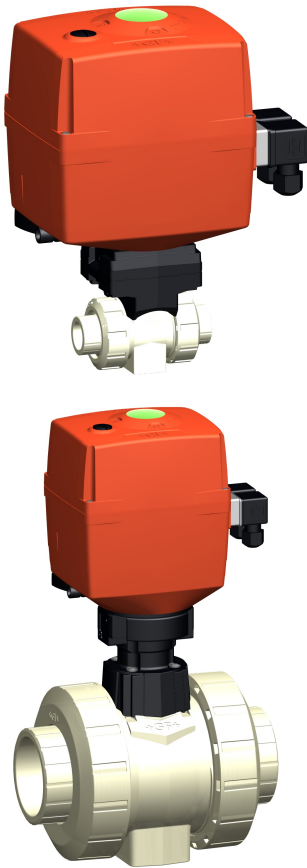
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	70	EA25	199 180 002	2.100	199 180 012	2.100
20	15	10	185	EA25	199 180 003	2.439	199 180 013	2.100
25	20	10	350	EA25	199 180 004	2.200	199 180 014	2.200
32	25	10	700	EA25	199 180 005	2.577	199 180 015	2.589
40	32	10	1000	EA25	199 180 006	2.763	199 180 016	2.600
50	40	10	1600	EA25	199 180 007	3.000	199 180 017	3.000
63	50	10	3100	EA25	199 180 008	3.800	199 180 018	3.482
75	65	10	5000	EA45	199 180 009	6.200	199 180 019	6.200
90	80	10	7000	EA45	199 180 010	8.000	199 180 020	8.000
110	100	10	11000	EA120	199 180 011	11.200	199 180 021	11.200

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)	closest inch (inch)
16	50	231	27	64	94	167	93	180	56	25	97	122	67	3/8
20	50	231	27	64	94	167	95	180	56	25	97	122	66	1/2
25	58	240	30	73	94	167	108	180	65	25	97	122	77	3/4
32	68	240	36	73	94	167	118	180	71	25	97	122	83	1
40	84	251	44	84	94	167	137	180	85	45	97	122	99	1 1/4
50	97	251	51	84	94	167	147	180	89	45	97	122	105	1 1/2
63	124	273	64	106	94	167	168	180	101	45	97	122	117	2
75	166	346	85	156	94	190	233	180	136	70	98	122	167	2 1/2
90	200	358	105	168	94	190	254	180	141	70	98	122	180	3
110	238	365	123	175	94	190	301	180	164	120	98	122	215	4





PROGEF Standard
Ball valve type 180 24V
With manual emergency override
With fusion sockets metric

Model:

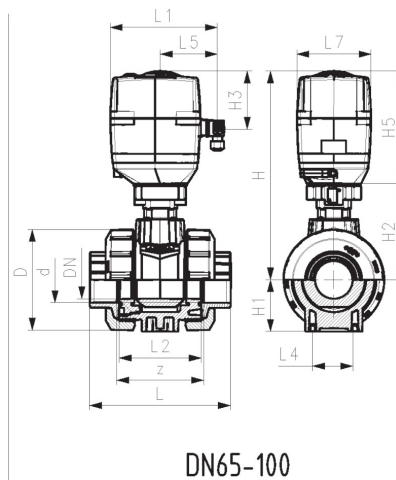
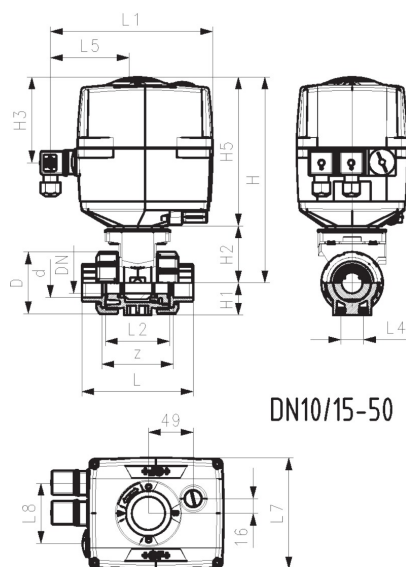
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts
- Material: PP-H

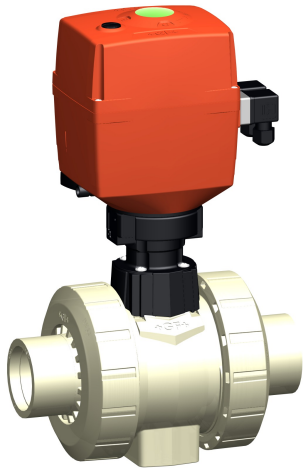
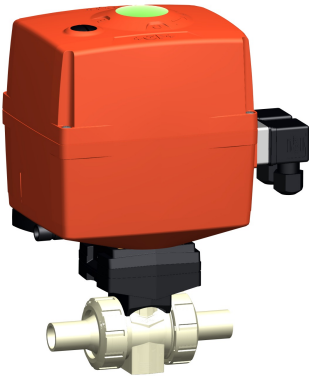
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	70	EA25	199 180 042	2.100	199 180 052	2.100
20	15	10	185	EA25	199 180 043	2.413	199 180 053	2.100
25	20	10	350	EA25	199 180 044	2.483	199 180 054	2.200
32	25	10	700	EA25	199 180 045	2.300	199 180 055	2.300
40	32	10	1000	EA25	199 180 046	2.746	199 180 056	2.600
50	40	10	1600	EA25	199 180 047	3.555	199 180 057	3.000
63	50	10	3100	EA25	199 180 048	3.447	199 180 058	3.460
75	65	10	5000	EA45	199 180 049	6.200	199 180 059	6.200
90	80	10	7000	EA45	199 180 050	8.000	199 180 060	8.000
110	100	10	11000	EA120	199 180 051	11.200	199 180 061	11.200

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)	closest inch (inch)
16	50	231	27	64	94	167	93	180	56	25	97	122	67	3/8
20	50	231	27	64	94	167	95	180	56	25	97	122	66	1/2
25	58	240	30	73	94	167	108	180	65	25	97	122	77	3/4
32	68	240	36	73	94	167	118	180	71	25	97	122	83	1
40	84	251	44	84	94	167	137	180	85	45	97	122	99	1 1/4
50	97	251	51	84	94	167	147	180	89	45	97	122	105	1 1/2
63	124	273	64	106	94	167	168	180	101	45	97	122	117	2
75	166	346	85	156	94	190	233	180	136	70	98	122	167	2 1/2
90	200	358	105	168	94	190	254	180	141	70	98	122	180	3
110	238	365	123	175	94	190	301	180	164	120	98	122	215	4





PROGEF Standard
Ball valve type 180 100-230V
With manual emergency override
With butt fusion spigots IR-Plus SDR11 metric

Model:

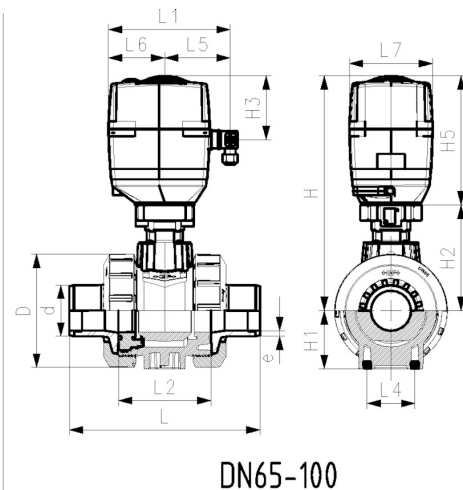
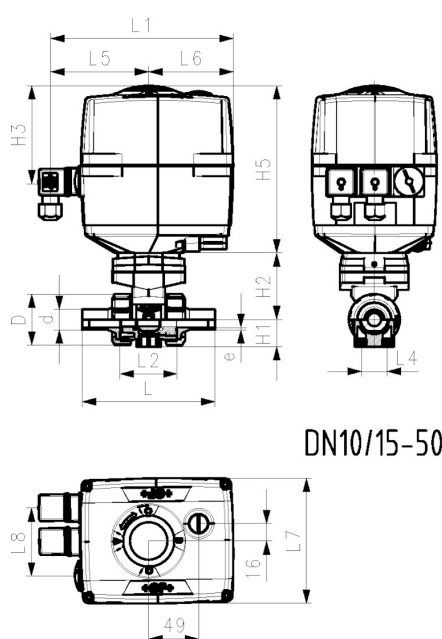
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts
- Material: PP-H

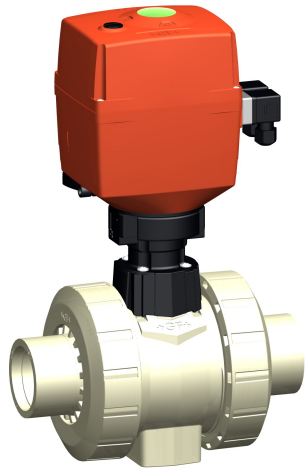
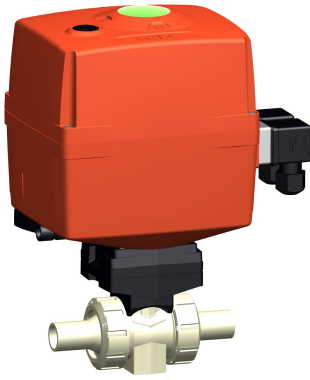
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)
20	15	10	185	EA25	199 180 323	2.100
25	20	10	350	EA25	199 180 324	2.200
32	25	10	700	EA25	199 180 325	2.300
40	32	10	1000	EA25	199 180 326	2.600
50	40	10	1600	EA25	199 180 327	2.952
63	50	10	3100	EA25	199 180 328	3.800
75	65	10	5000	EA45	199 180 329	6.200
90	80	10	7000	EA45	199 180 330	8.000
110	100	10	11000	EA120	199 180 331	11.200

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	e (mm)	closest inch (inch)
20	50	231	27	64	94	167	130	180	56	130	25	97	122	2	½
25	58	240	30	73	94	167	143	180	65	150	25	97	122	2	¾
32	68	240	36	73	94	167	150	180	71	160	25	97	122	3	1
40	84	251	44	84	94	167	171	180	85	180	45	97	122	4	1 ¼
50	97	251	51	84	94	167	191	180	89	200	45	97	122	5	1 ½
63	124	273	64	106	94	167	220	180	101	230	45	97	122	6	2
75	166	346	85	156	94	190	266	180	136	290	70	98	122	8	2 ½
90	200	358	105	168	94	190	264	180	141	310	70	98	122	10	3
110	238	365	123	175	94	190	301	180	164	350	120	98	122	12	4





PROGEF Standard
Ball valve type 180 24V
With manual emergency override
With butt fusion spigots IR-Plus SDR11 metric

Model:

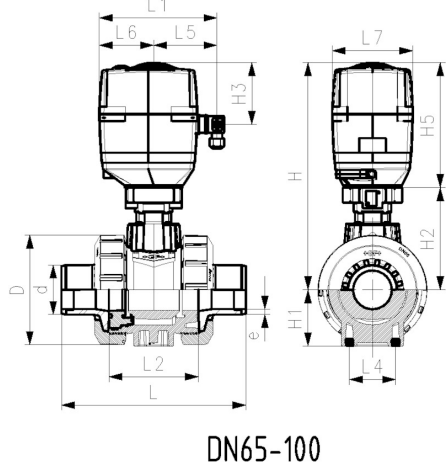
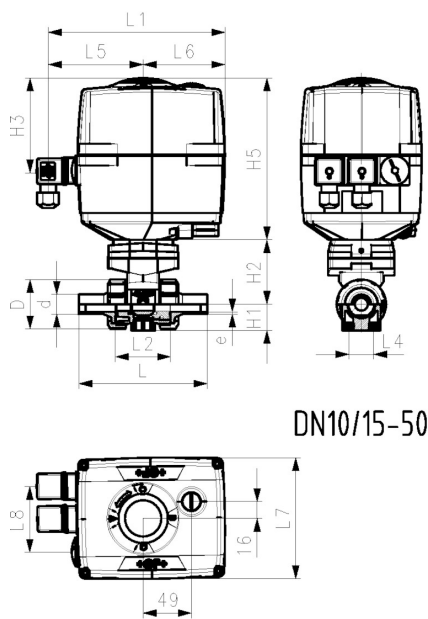
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts
- Material: PP-H

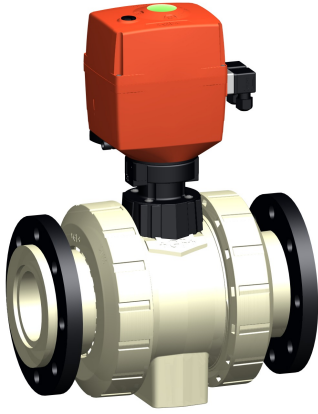
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
20	15	10	185	EA25	199 180 363	2.100	199 180 373	2.100
25	20	10	350	EA25	199 180 364	2.200	199 180 374	2.200
32	25	10	700	EA25	199 180 365	2.562	199 180 375	2.300
40	32	10	1000	EA25	199 180 366	2.600	199 180 376	2.600
50	40	10	1600	EA25	199 180 367	3.000	199 180 377	3.000
63	50	10	3100	EA25	199 180 368	3.800	199 180 378	3.800
75	65	10	5000	EA45	199 180 369	6.200	199 180 379	6.200
90	80	10	7000	EA45	199 180 370	8.000	199 180 380	8.000
110	100	10	11000	EA120	199 180 371	11.200	199 180 381	11.200

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	e (mm)	closest inch (inch)
20	50	231	27	64	94	167	130	180	56	130	25	97	122	2	½
25	58	240	30	73	94	167	143	180	65	150	25	97	122	2	¾
32	68	240	36	73	94	167	150	180	71	160	25	97	122	3	1
40	84	251	44	84	94	167	171	180	85	180	45	97	122	4	1 ¼
50	97	251	51	84	94	167	191	180	89	200	45	97	122	5	1 ½
63	124	273	64	106	94	167	220	180	101	230	45	97	122	6	2
75	166	346	85	156	94	190	266	180	136	290	70	98	122	8	2 ½
90	200	358	105	168	94	190	264	180	141	310	70	98	122	10	3
110	238	365	123	175	94	190	301	180	164	350	120	98	122	12	4





PROGEF Standard
Ball valve type 180 100-230V
With manual emergency override
With backing flanges PP-st metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts
- Material: PP-H

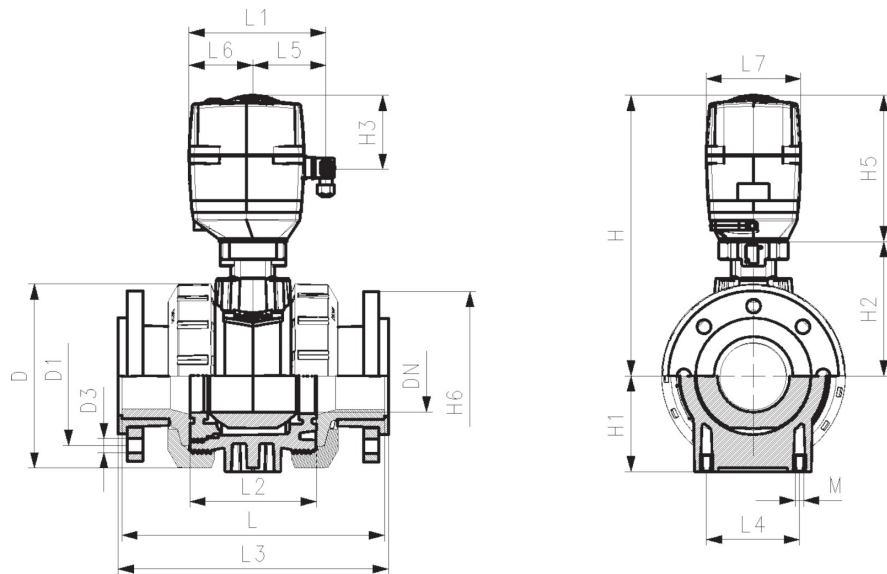
Option:

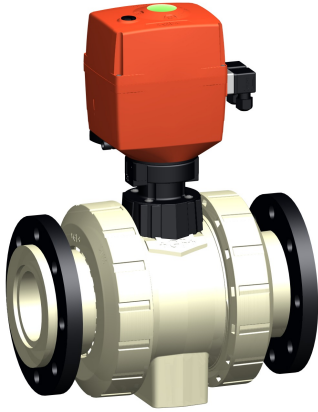
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	Size	DN	PN	kv-value	EA	EPDM	Weight	FPM	Weight
(mm)	(inch)	(mm)	(bar)	($\Delta p=1$ bar)		Code	(kg)	Code	(kg)
				(L/min)					
75	2 ½	65	10	5000	EA45	199 180 129	10.500	199 180 139	10.500
90	3	80	10	7000	EA45	199 180 130	12.800	199 180 140	13.200
110	4	100	10	11000	EA120	199 180 131	18.400	199 180 141	18.400

d	D	H	H1	H2	H3	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
75	166	346	85	156	94	190	93	280	180	136	290	70	98	83	122
90	200	358	105	168	94	190	100	296	180	141	310	70	98	83	122
110	238	365	123	175	94	190	110	336	180	164	350	120	98	83	122

d	L8
(mm)	(mm)
75	66
90	66
110	66





PROGEF Standard
Ball valve type 180 24V
With manual emergency override
With backing flanges PP-st metric

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts
- Material: PP-H

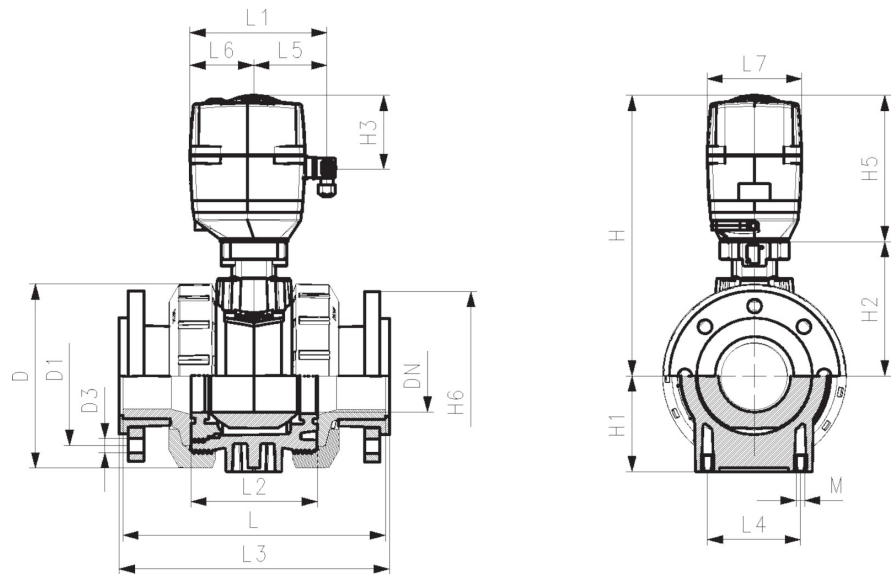
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

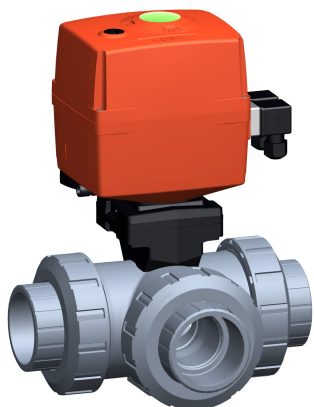
d	Size	DN	PN	kv-value	EA	EPDM	Weight	FPM	Weight
(mm)	(inch)	(mm)	(bar)	($\Delta p=1$ bar)		Code	(kg)	Code	(kg)
75	2 ½	65	10	5000	EA45	199 180 149	10.500	199 180 159	10.500
90	3	80	10	7000	EA45	199 180 150	13.200	199 180 160	13.200
110	4	100	10	11000	EA120	199 180 151	18.400	199 180 161	18.400

d	D	H	H1	H2	H3	H5	H6	L	L1	L2	L3	L4	L5	L6	L7
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
75	166	346	85	156	94	190	93	280	180	136	290	70	98	83	122
90	200	358	105	168	94	190	100	296	180	141	310	70	98	83	122
110	238	365	123	175	94	190	110	336	180	164	350	120	98	83	122

d	L8
(mm)	(mm)
75	66
90	66
110	66



Type 168



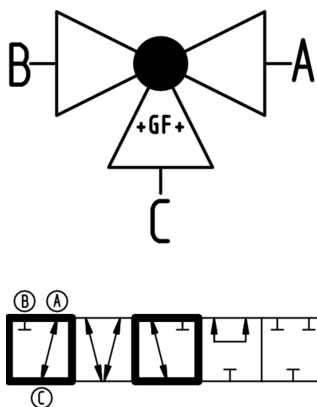
PROGEF Standard
3-Way ball valve type 168
Horizontal/L-port 100-230V
With manual emergency override
With fusion sockets metric

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Basic position A-C opened, activated position B-C opened, see flow scheme
- Other positions possible by adjusting the limit switches
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts
- Material: PP-H

Option:

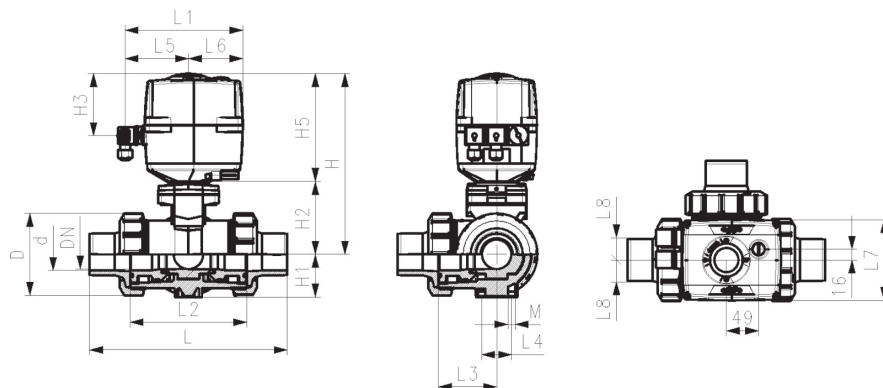
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
16	10	10	50	EA25	199 168 022	2.038	199 168 032	2.038
20	15	10	75	EA25	199 168 023	2.042	199 168 033	2.042
25	20	10	150	EA25	199 168 024	2.132	199 168 034	2.132
32	25	10	280	EA25	199 168 025	2.257	199 168 035	2.257
40	32	10	480	EA25	199 168 026	2.548	199 168 036	2.548
50	40	10	620	EA25	199 168 027	2.844	199 168 037	2.844
63	50	10	1230	EA25	199 168 028	4.205	199 168 038	3.751

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	H6 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)
16	50	231	28	64	94	167	8	110	180	72	36	25	97	83	122
20	50	231	28	64	94	167	8	112	180	72	36	25	97	83	122
25	58	240	32	73	94	167	8	129	180	85	43	25	97	83	122
32	68	240	36	73	94	167	8	146	180	98	49	25	97	83	122
40	84	251	45	84	94	167	9	170	180	118	59	45	97	83	122
50	97	251	51	84	94	167	9	193	180	135	68	45	97	83	122
63	124	273	65	106	94	167	9	244	180	176	88	45	97	83	122

d (mm)	L8 (mm)	M	z (mm)	z1 (mm)	closest inch (inch)
16	33	6	82	41	3/8
20	33	6	82	41	1/2
25	33	6	97	49	3/4
32	33	6	110	55	1
40	33	8	132	66	1 1/4
50	33	8	151	76	1 1/2
63	33	8	188	94	2



Type 181



SYGEF Standard
Ball valve type 181 100-230V
With manual emergency override
With fusion sockets metric

Model:

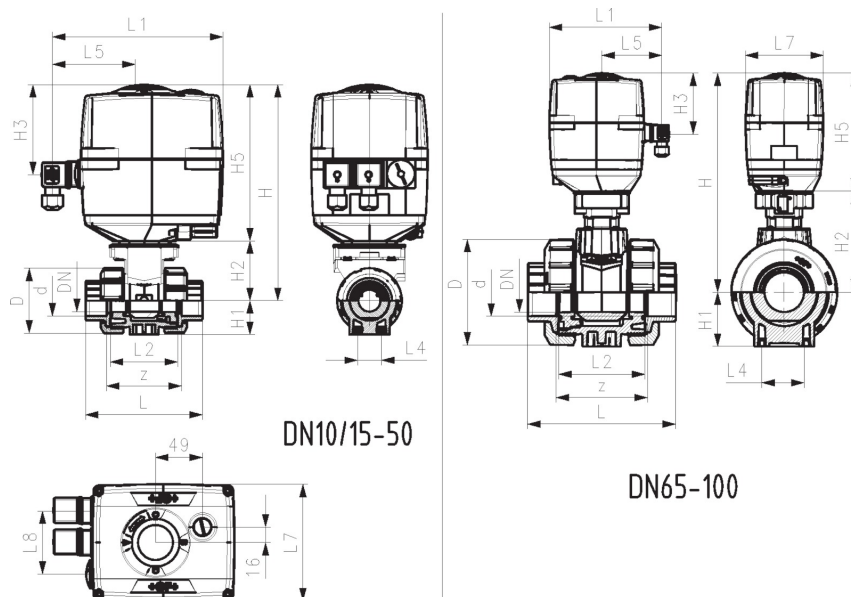
- Material: PVDF
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

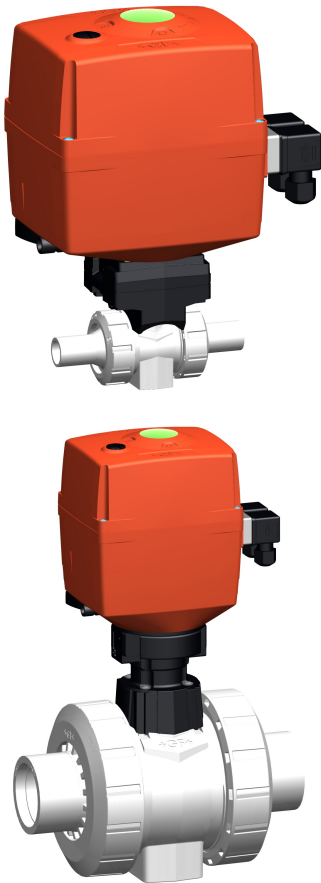
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	FPM Code	Weight (kg)
16	10	10	70	EA25	199 181 012	2.100
20	15	10	185	EA25	199 181 013	2.100
25	20	10	350	EA25	199 181 014	2.200
32	25	10	700	EA25	199 181 015	2.300
40	32	10	1000	EA25	199 181 016	2.600
50	40	10	1600	EA25	199 181 017	3.000
63	50	10	3100	EA25	199 181 018	3.800
75	65	10	5000	EA45	199 181 019	8.800
90	80	10	7000	EA45	199 181 020	11.900
110	100	10	11000	EA120	199 181 021	17.500

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	z (mm)
16	50	231	27	64	94	167	93	180	56	25	97	122	67
20	50	231	27	64	94	167	95	180	56	25	97	122	66
25	58	240	30	73	94	167	109	180	65	25	97	122	77
32	68	240	36	73	94	167	119	180	71	25	97	122	83
40	84	251	44	84	94	167	135	180	85	45	97	122	99
50	97	251	51	84	94	167	147	180	89	45	97	122	105
63	124	273	64	106	94	167	168	180	101	45	97	122	117
75	166	346	85	156	94	190	233	180	136	70	98	122	167
90	200	358	105	168	94	190	254	180	141	70	98	122	180
110	238	365	123	175	94	190	301	180	164	120	98	122	215





SYGEF Standard
Ball valve type 181 100-230V
With manual emergency override
With butt fusion spigots IR-Plus metric

Model:

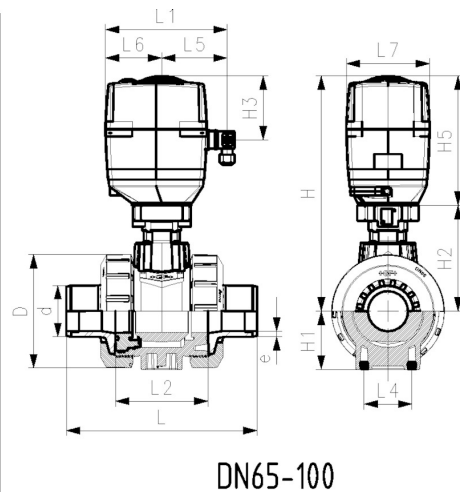
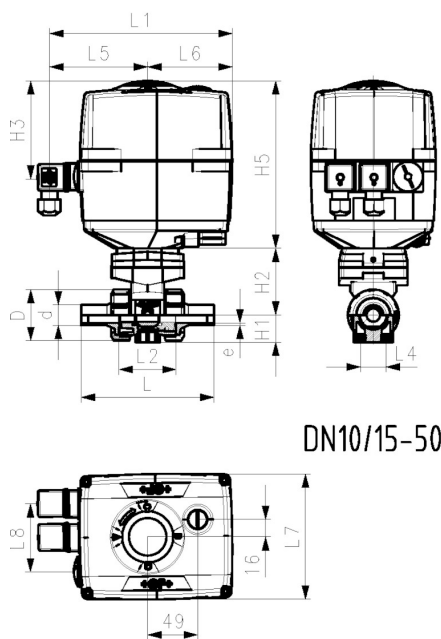
- Material: PVDF
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Integrated stainless steel mounting inserts

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EA	FPM Code	Weight (kg)
20	15	10	185	EA25	199 181 113	2.100
25	20	10	350	EA25	199 181 114	2.200
32	25	10	700	EA25	199 181 115	2.300
40	32	10	1000	EA25	199 181 116	2.600
50	40	10	1600	EA25	199 181 117	3.000
53	50	10	3100	EA25	199 181 118	3.800
63	50	10	5000	EA25	199 181 119	9.100
90	80	10	7000	EA45	199 181 120	12.200
110	100	10	11000	EA120	199 181 121	17.500

d (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H5 (mm)	L (mm)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	L7 (mm)	e (mm)
20	50	231	27	64	94	167	130	180	56	25	97	122	1.9
25	58	240	30	73	94	167	143	180	65	25	97	122	1.9
32	68	240	36	73	94	167	150	180	71	25	97	122	2.4
40	84	251	44	84	94	167	171	180	85	45	97	122	2.4
50	97	251	51	84	94	167	191	180	89	45	97	122	3.0
53	124	273	64	106	94	167	220	108	101	45	97	122	3.0
63	166	346	85	156	94	190	266	180	136	70	98	122	3.6
90	200	358	105	168	94	190	264	180	141	70	98	122	4.3
110	238	365	123	175	94	190	301	180	164	70	98	122	5.3



Type 145



Butterfly valve type 145 PVC-U 100-230V Without manual override

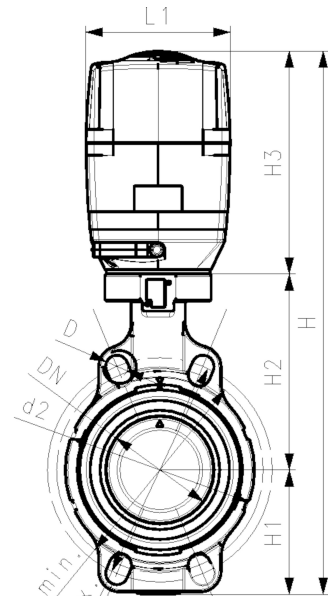
Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

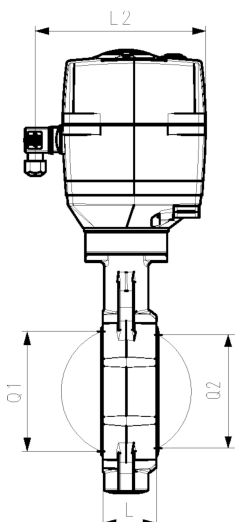
Option:

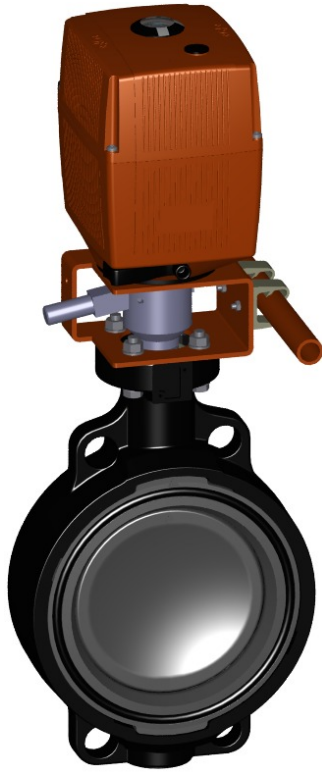
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
63	2	50	10	1470	199 145 042	4.408	199 145 062	4.182
75	2 ½	65	10	2200	199 145 043	4.509	199 145 063	4.286
90	3	80	10	3000	199 145 044	4.675	199 145 064	4.453
110	4	100	10	6500	199 145 045	6.890	199 145 065	5.073
140	5	125	10	11500	199 145 046	5.626	199 145 066	5.644
160	6	150	10	39600	199 145 047	6.631	199 145 067	6.654
225	8	200	10	39600	199 145 048	12.606	199 145 068	12.634
280	10	250	6	55200	199 145 049	14.334	199 145 069	14.481
315	12	300	4	80000	199 145 050	19.546	199 145 070	19.546



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-120	215	24	241	241	508	130	189	188	72	122	180	139	169
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169
280	EA-250	329	25	353	362	677	205	264	208	113	122	180	210	207
315	EA-250	379	25	400	432	721	228	285	208	113	122	180	256	253





Butterfly valve type 145 PVC-U 100-230V
With manual override

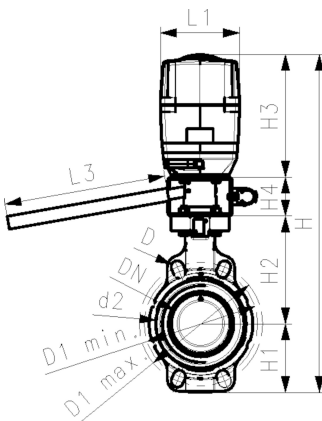
Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

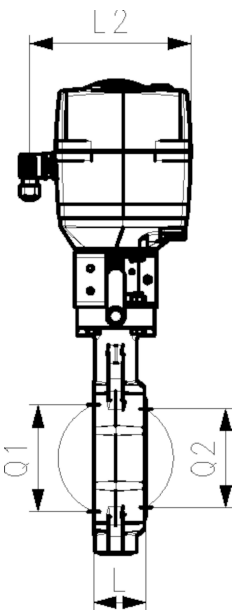
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)	FPM Code	Weight (kg)
63	2	50	10	1470	199 145 002	6.138	199 145 022	5.682
75	2 ½	65	10	2200	199 145 003	7.213	199 145 023	5.786
90	3	80	10	3000	199 145 004	6.360	199 145 024	5.953
110	4	100	10	6500	199 145 005	6.990	199 145 025	6.573
140	5	125	10	11500	199 145 006	7.508	199 145 026	7.147
160	6	150	10	16600	199 145 007	10.062	199 145 027	8.154
225	8	200	10	39600	199 145 008	14.106	199 145 028	14.134



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250



d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



**Butterfly valve type 145 PVC-U 24V
Without manual override**

Model:

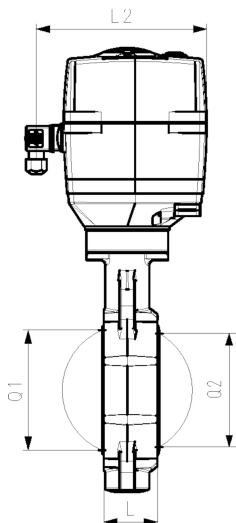
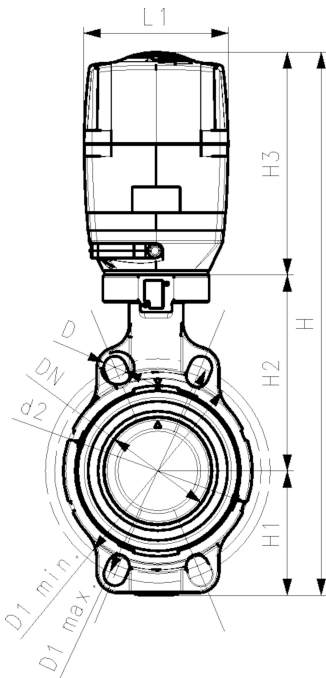
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

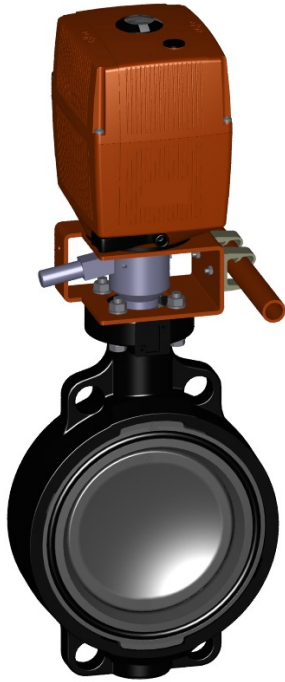
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	Size	DN	PN	kv-value	EPDM	Weight	FPM	Weight
(mm)	(inch)	(mm)	(bar)	($\Delta p=1$ bar)	Code	(kg)	Code	(kg)
				(L/min)				
63	2	50	10	1470	199 145 122	4.178	199 145 142	5.073
75	2 ½	65	10	2200	199 145 123	4.281	199 145 143	5.073
90	3	80	10	3000	199 145 124	4.660	199 145 144	5.073
110	4	100	10	6500	199 145 125	5.252	199 145 145	5.073
140	5	125	10	11500	199 145 126	5.793	199 145 146	4.286
160	6	150	10	16600	199 145 127	6.631	199 145 147	4.182
225	8	200	10	39600	199 145 128	12.606	199 145 148	12.634
280	10	250	6	55200	199 145 129		199 145 149	
315	12	300	6	55200	199 145 130	19.546	199 145 150	

d	Actuator	d2	D	D1	D1	H	H1	H2	H3	L	L1	L2	Q1	Q2
(mm)	unit type	(mm)	(mm)	min.	max.	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
				(mm)	(mm)									
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-120	215	24	241	241	508	130	189	188	72	122	180	139	123
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169
280	EA-250	329	25	353	362	677	205	264	208	113	122	180	210	207
315	EA-250	329	25	353	362	677	205	264	208	113	122	180	210	207





Butterfly valve type 145 PVC-U 24V
With manual override

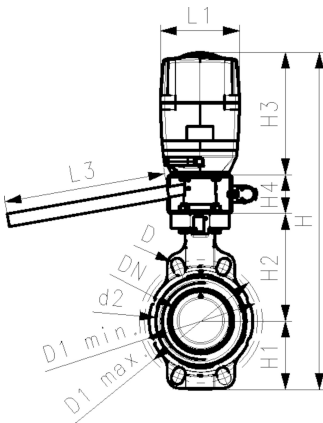
Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

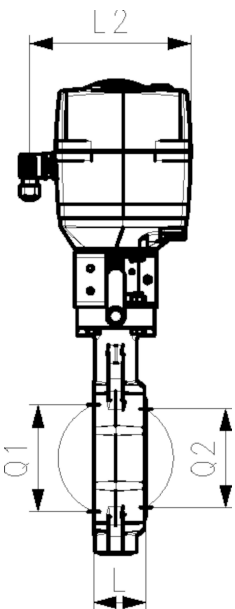
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 145 082	6.116
75	2 ½	65	10	2200	199 145 083	6.183
90	3	80	10	3000	199 145 084	6.327
110	4	100	10	6500	199 145 085	6.975
140	5	125	10	11500	199 145 086	9.142
160	6	150	10	16600	199 145 087	8.418
225	8	200	10	39600	199 145 088	14.106



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250



d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169

Type 146



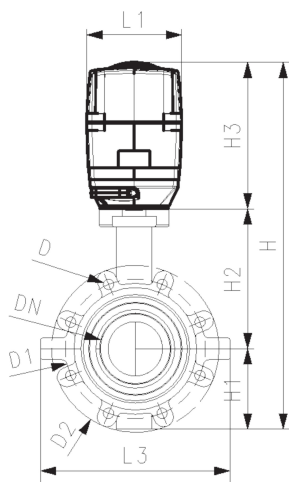
Lugstyle butterfly valve type 146 PVC-U 100-230V Without manual override

Model:

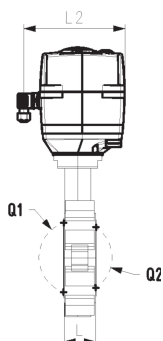
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

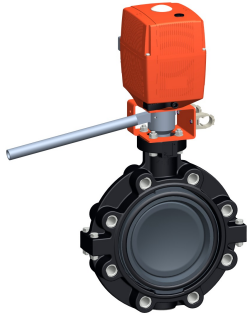


d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 146 042	4.299
75	2 1/2	65	10	2200	199 146 043	4.456
90	3	80	10	3000	199 146 044	4.456
110	4	100	10	6500	199 146 045	5.606
140	5	125	10	11500	199 146 046	7.120
160	6	150	10	16600	199 146 047	8.881
225	8	200	10	39600	199 146 048	13.625
280	10	250	6	55200	199 146 049	24.385
315	12	300	4	80000	199 146 050	30.916



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	160	M16	125	414	77	134	188	45	122	180	165	40	
75	EA-45	180	M16	145	426	83	140	188	46	122	180	182	54	35
90	EA-120	195	M16	160	423	89	146	188	49	122	180	210	67	50
110	EA-120	226	M16	180	461	106	167	188	56	122	180	240	88	74
140	EA-120	258	M16	210	490	121	181	188	64	122	180	272	113	97
160	EA-120	284	M20	240	510	133	189	188	72	122	180	300	139	123
225	EA-250	341	M20	295	577	159	210	208	73	122	180	360	178	169
280	EA-250	412	M20	350	677	205	264	208	113	122	180	440	210	207
315	EA-250	482	M20	400	727	234	285	208	113	122	180	510	256	253

Lugstyle butterfly valve type 146 PVC-U 100-230V
With manual override

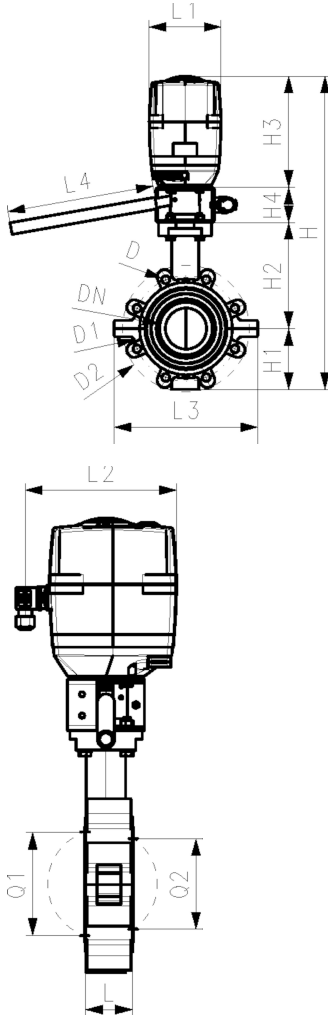


Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 146 002	5.799
75	2 ½	65	10	2200	199 146 003	5.956
90	3	80	10	3000	199 146 004	6.201
110	4	100	10	6500	199 146 005	7.106
140	5	125	10	11500	199 146 006	8.620
160	6	150	10	16600	199 146 007	10.381
225	8	200	10	39600	199 146 008	15.125

d (mm)	Actuator unit type	d2 (mm)	D	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	160	M16	125	474	77	134	188	75	45	122	180	165	40	
75	EA-45	180	M16	145	486	83	140	188	75	46	122	180	182	54	35
90	EA-120	195	M16	160	483	89	146	188	60	49	122	180	210	67	50
110	EA-120	226	M16	180	521	106	167	188	60	56	122	180	240	88	74
140	EA-120	258	M16	210	550	121	181	188	60	64	122	180	272	113	97
160	EA-120	284	M20	240	570	133	189	188	60	72	122	180	300	139	123
225	EA-250	341	M20	295	637	159	210	208	60	73	122	180	360	178	169



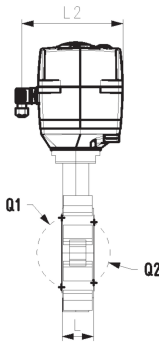
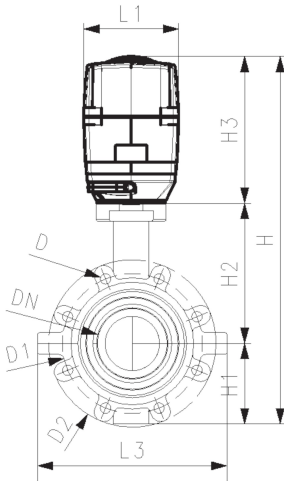
Lugstyle butterfly valve type 146 PVC-U 24V
Without manual override

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

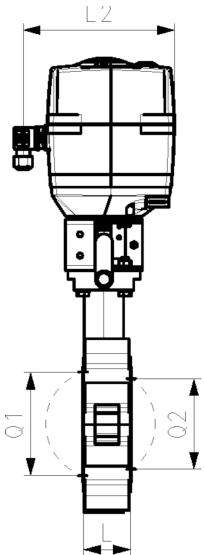
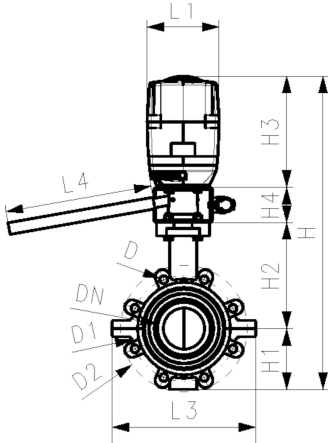
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 146 122	4.299
75	2 ½	65	10	2200	199 146 123	4.456
90	3	80	10	3000	199 146 124	4.701
110	4	100	10	6500	199 146 125	5.606
140	5	125	10	11500	199 146 126	7.120
160	6	150	10	16600	199 146 127	8.881
225	8	200	10	39600	199 146 128	13.625

d (mm)	Actuator unit type	d2 (mm)	D	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	160	M16	125	414	77	134	188	45	122	180	165	40	
75	EA-45	180	M16	145	426	83	140	188	46	122	180	182	54	35
90	EA-120	195	M16	160	423	89	146	188	49	122	180	210	67	50
110	EA-120	226	M16	180	461	106	167	188	56	122	180	240	88	74
140	EA-120	258	M16	210	490	121	181	188	64	122	180	272	113	97
160	EA-120	284	M20	240	410	133	189	188	72	122	180	300	139	123
225	EA-250	341	M20	295	577	159	210	208	73	122	180	360	178	169

**Lugstyle butterfly valve type 146 PVC-U 24V
With manual override**



Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 146 082	5.799
75	2 ½	65	10	2200	199 146 083	5.956
90	3	80	10	3000	199 146 084	6.201
110	4	100	10	6500	199 146 085	7.106
140	5	125	10	11500	199 146 086	8.620
160	6	150	10	16600	199 146 087	10.381
225	8	200	10	39600	199 146 088	15.125

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	160	M16	125	459	77	134	188	60	45	122	180	165	40	
75	EA-45	180	M16	145	471	83	140	188	60	46	122	180	182	54	35
90	EA-120	195	M16	160	483	89	146	188	60	49	122	180	210	67	50
110	EA-120	226	M16	180	521	106	167	188	60	56	122	180	240	88	74
140	EA-120	258	M16	210	550	121	181	188	60	64	122	180	272	113	97
160	EA-120	284	M20	240	570	133	189	188	60	72	122	180	300	139	123
225	EA-250	341	M20	295	637	159	210	208	60	73	122	180	360	178	169

Type 147



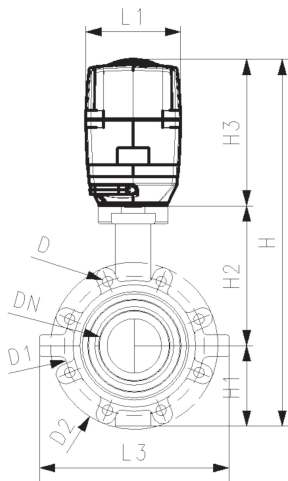
Lugstyle butterfly valve type 147 PVC-U 100-230V Without manual override

Model:

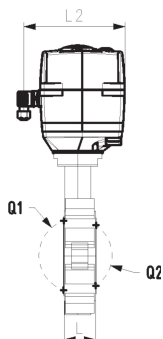
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension ANSI/ASME B 16.5 Class 150

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
2	50	10	1470	199 147 042	4.299
2 ½	65	10	2200	199 147 043	4.456
3	80	10	3000	199 147 044	4.701
4	100	10	6500	199 147 045	5.606
5	125	10	11500	199 147 046	7.120
6	150	10	16600	199 147 047	8.881
8	200	10	39600	199 147 048	13.625
10	250	6	55200	199 147 049	24.385



Size (inch)	Actuator unit type	d2 (mm)	D	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
2	EA-45	160	UNC 5/8	120.6	414	77	134	188	45	122	180	165	40	
2 ½	EA-45	180	UNC 5/8	139.7	426	83	140	188	46	122	180	182	54	35
3	EA-120	195	UNC 5/8	152.4	423	89	146	188	49	122	180	210	67	50
4	EA-120	226	UNC 5/8	190.5	461	106	167	188	56	122	180	240	88	74
5	EA-120	258	UNC 3/4	215.9	490	121	181	188	64	122	180	272	113	97
6	EA-120	284	UNC 3/4	241.3	510	133	189	188	72	122	180	300	139	123
8	EA-250	341	UNC 3/4	298.4	577	159	210	208	73	122	180	360	178	169
10	EA-250	412	UNC 7/8	362.0	677	205	264	208	113	122	180	440	210	207

Lugstyle butterfly valve type 147 PVC-U 100-230V
With manual override

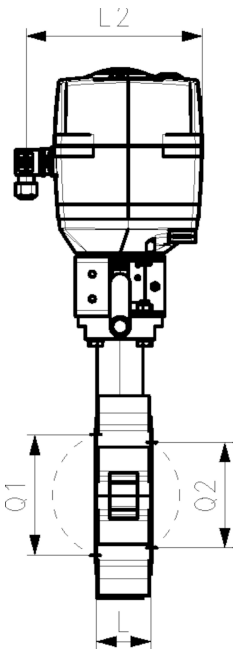
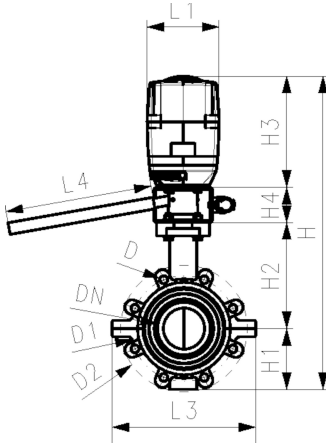


Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension ANSI/ASME B 16.5 Class 150

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)	FPM Code
2	50	10	1470	199 147 002	5.799	199 147 022
2 ½	65	10	2200	199 147 003	5.956	199 147 023
3	80	10	3000	199 147 004	6.201	199 147 024
4	100	10	6500	199 147 005	7.106	199 147 025
5	125	10	11500	199 147 006	8.620	199 147 026
6	150	10	16600	199 147 007	10.381	199 147 027
8	200	10	39600	199 147 008	15.125	199 147 028

Size (inch)	Actuator unit type	d2 (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)
2	EA-45	160	UNC 5/8	120.6	459	77	134	188	60	45	122	180	165	200
2 ½	EA-45	180	UNC 5/8	139.7	471	83	140	188	60	46	122	180	182	200
3	EA-120	195	UNC 5/8	152.4	483	89	146	188	60	49	122	180	210	200
4	EA-120	226	UNC 5/8	190.5	521	106	167	188	60	56	122	180	240	250
5	EA-120	258	UNC 3/4	215.9	550	121	181	188	60	64	122	180	272	250
6	EA-120	284	UNC 3/4	241.3	570	133	189	188	60	72	122	180	300	250
8	EA-250	341	UNC 3/4	298.4	637	159	210	208	60	73	122	180	360	250

Size (inch)	Q1 (mm)	Q2 (mm)
2	40	
2 ½	54	35
3	67	50
4	88	74
5	113	97
6	139	123
8	178	169

Type 145



Butterfly valve type 145 PVC-C 100-230V Without manual override

Model:

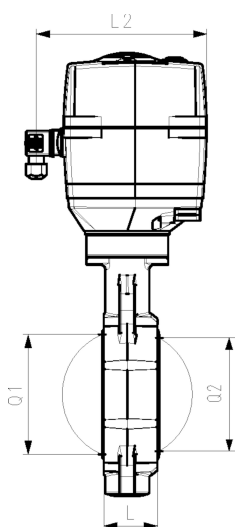
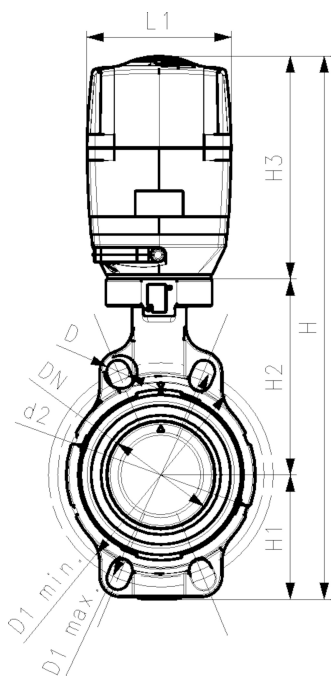
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

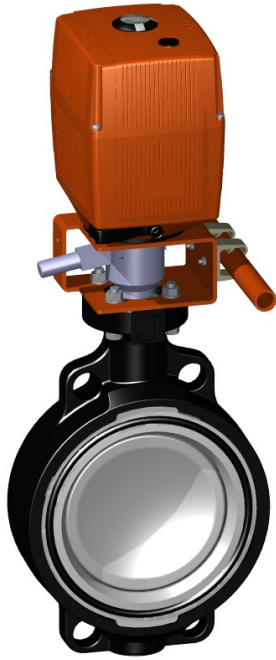
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	Size	DN	PN	kv-value	EPDM	Weight	FPM	Weight
(mm)	(inch)	(mm)	(bar)	($\Delta p=1$ bar)	Code	(kg)	Code	(kg)
63	2	50	10	1470	199 145 202	3.189	199 145 222	3.193
75	2 ½	65	10	2200	199 145 203	3.189	199 145 223	4.312
90	3	80	10	3000	199 145 204	4.484	199 145 224	4.491
110	4	100	10	6500	199 145 205	5.119	199 145 225	5.133
140	5	125	10	11500	199 145 206	4.719	199 145 226	4.737
160	6	150	10	16600	199 145 207	6.701	199 145 227	6.724
225	8	200	10	39600	199 145 208	12.966	199 145 228	12.994
280	10	250	6	55200	199 145 209		199 145 229	
315	12	300	4	80000	199 145 210		199 145 230	

d	Actuator	d2	D	D1	D1	H	H1	H2	H3	L	L1	L2	Q1	Q2
(mm)	unit type	(mm)	(mm)	min.	max.	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-120	215	24	241	241	508	130	189	188	72	122	180	139	123
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169
280	EA-250	329	25	353	362	677	205	264	208	113	122	180	210	207
315	EA-250	379	25	400	432	721	228	285	208	113	122	180	256	253





**Butterfly valve type 145 PVC-C 100-230V
With manual override**

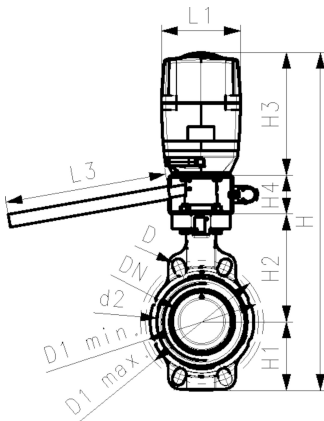
Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

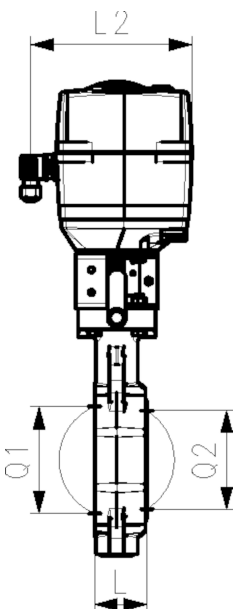
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 145 162	5.678
75	2 ½	65	10	2200	199 145 163	5.801
90	3	80	10	3000	199 145 164	5.984
110	4	100	10	6500	199 145 165	6.619
140	5	125	10	11500	199 145 166	5.732
160	6	150	10	16600	199 145 167	8.201
225	8	200	10	39600	199 145 168	14.466



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250



d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



Butterfly valve type 145 PVC-C 24V
Without manual override

Model:

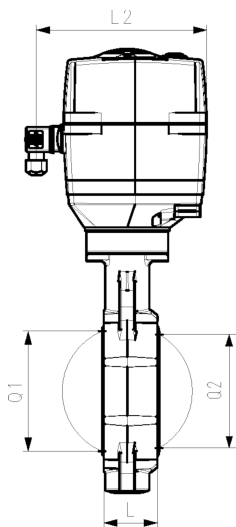
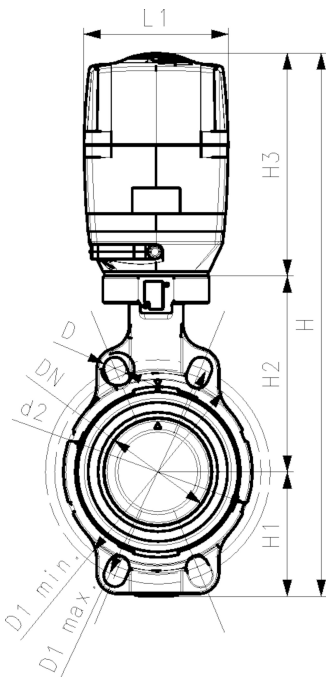
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

Option:

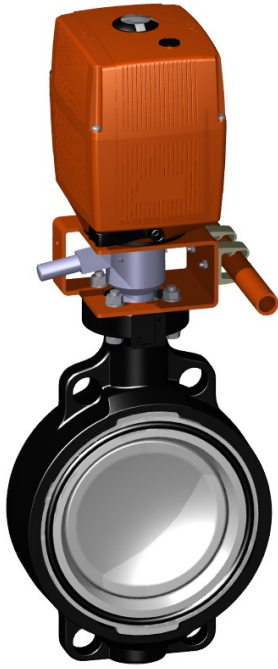
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d	Size	DN	PN	kv-value	EPDM	Weight
(mm)	(inch)	(mm)	(bar)	($\Delta p=1$ bar)	Code	(kg)
				(L/min)		
63	2	50	10	1470	199 145 282	3.189
75	2 ½	65	10	2200	199 145 283	4.301
90	3	80	10	3000	199 145 284	4.484
110	4	100	10	6500	199 145 285	5.119
140	5	125	10	11500	199 145 286	4.719
160	6	150	10	16600	199 145 287	6.701
225	8	200	10	39600	199 145 288	12.966

d	Actuator	d2	D	D1	D1	H	H1	H2	H3	L	L1	L2	Q1	Q2
(mm)	unit type	(mm)	(mm)	min.	max.	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
				(mm)	(mm)									
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-120	215	24	241	241	508	130	189	188	72	122	180	139	123
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169



**Butterfly valve type 145 PVC-C 24V
With manual override**



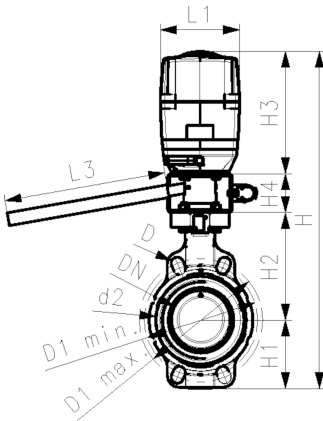
Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

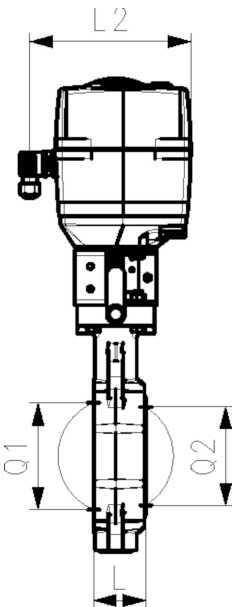
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 145 242	5.678
75	2 ½	65	10	2200	199 145 243	5.801
90	3	80	10	3000	199 145 244	5.984
110	4	100	10	6500	199 145 245	6.619
140	5	125	10	11500	199 145 246	5.732
160	6	150	10	16600	199 145 247	8.201
225	8	200	10	39600	199 145 248	14.466



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250



d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169

Type 146



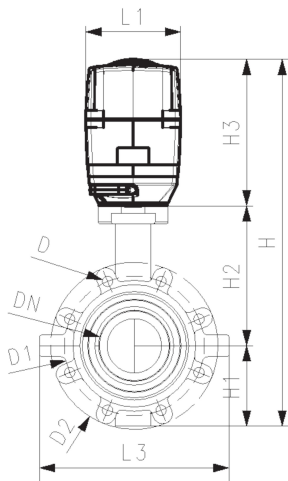
Lugstyle butterfly valve type 146 PVC-C 100-230V Without manual override

Model:

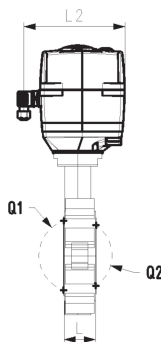
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 146 202	4.299
75	2 1/2	65	10	2200	199 146 203	4.456
90	3	80	10	3000	199 146 204	4.701
110	4	100	10	6500	199 146 205	5.606
140	5	125	10	11500	199 146 206	7.120
160	6	150	10	16600	199 146 207	8.881
225	8	200	10	39600	199 146 208	13.625
280	10	250	6	55200	199 146 209	24.385
315	12	300	4	80000	199 146 210	30.916



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	160	M16	125	414	77	134	188	45	122	180	165	40	
75	EA-45	180	M16	145	426	83	140	188	46	122	180	182	54	35
90	EA-120	195	M16	160	423	89	146	188	49	122	180	210	67	50
110	EA-120	226	M16	180	461	106	167	188	56	122	180	240	88	74
140	EA-120	258	M16	210	490	121	181	188	64	122	180	272	113	97
160	EA-120	284	M20	240	510	133	189	188	72	122	180	300	139	123
225	EA-250	341	M20	295	577	159	210	208	73	122	180	360	178	169
280	EA-250	412	M20	350	677	205	264	208	113	122	180	440	210	207
315	EA-250	482	M20	400	727	234	285	208	113		180	510	256	253

Type 147



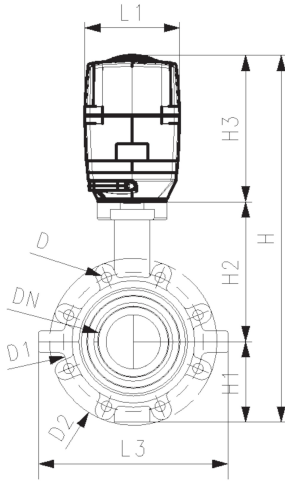
Lugstyle butterfly valve type 147 PVC-C 100-230V Without manual override

Model:

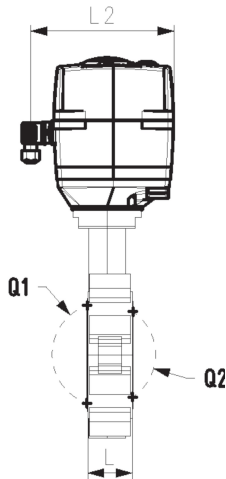
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension ANSI/ASME B 16.5 Class 150

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 147 202	4.299
75	2 ½	65	10	2200	199 147 203	4.456
90	3	80	10	3000	199 147 204	4.701
110	4	100	10	6500	199 147 205	5.606
140	5	125	10	11500	199 147 206	7.120
160	6	150	10	16600	199 147 207	8.881
225	8	200	10	39600	199 147 208	13.625
280	10	250	6	55200	199 147 209	
315	12	300	4	80000	199 147 210	



Actuator unit type	d2 (mm)	D	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
EA-45	160	UNC 5/8	120.6	399	77	134	188	45	122	180	165	40	
EA-45	180	UNC 5/8	139.7	411	83	140	188	46	122	180	182	54	35
EA-120	195	UNC 5/8	152.4	423	89	146	188	49	122	180	210	67	50
EA-120	226	UNC 5/8	190.5	461	106	167	188	56	122	180	240	88	74
EA-120	258	UNC 3/4	215.9	490	121	181	188	64	122	180	272	113	97
EA-120	284	UNC 3/4	241.3	510	133	189	188	72	122	180	300	139	123
EA-250	341	UNC 3/4	298.4	577	159	210	208	73	122	180	360	178	169
EA-250	412	UNC 7/8	362.0	677	205	264	208	113	122	180	440	210	207
EA-250	482	UNC 7/8	431.8	727	234	285	208	113	122	180	510	256	253



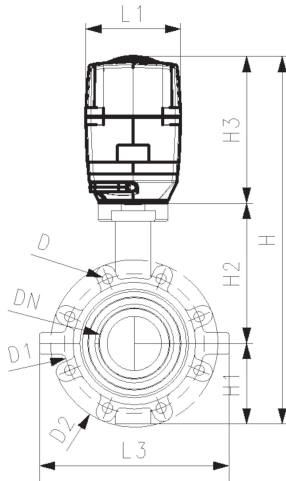
Lugstyle butterfly valve type 147 PVC-C 24V
Without manual override

Model:

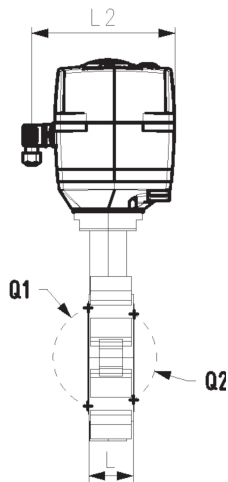
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension ANSI/ASME B 16.5 Class 150

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 147 282	4.299
75	2 ½	65	10	2200	199 147 283	4.456
90	3	80	10	3000	199 147 284	4.701
110	4	100	10	6500	199 147 285	5.606
140	5	125	10	11500	199 147 286	5.606
160	6	150	10	16600	199 147 287	8.881
225	8	200	10	39600	199 147 288	13.625
280	10	250	4	55200	199 147 289	24.385
315	12	300	6	80000	199 147 290	30.916



Actuator unit type	d2 (mm)	D	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
EA-45	160	UNC 5/8	120.6	399	77	134	188	45	122	180	165	40	
EA-45	180	UNC 5/8	139.7	411	83	140	188	46	122	180	182	54	35
EA-120	195	UNC 5/8	152.4	423	89	146	188	49	122	180	210	67	50
EA-120	226	UNC 5/8	190.5	461	106	167	188	56	122	180	240	88	74
EA-120	258	UNC 3/4	215.9	490	121	181	188	64	122	180	272	113	97
EA-120	284	UNC 3/4	241.3	510	133	189	188	72	122	180	300	139	123
EA-250	341	UNC 3/4	298.4	577	159	210	208	73	122	180	360	178	169
EA-250	482	UNC 7/8	431.8	727	234	285	208	113	122	180	510	256	253
EA-250	412	UNC 7/8	362.0	677	205	264	208	113	122	180	440	210	207

Type 145



Butterfly valve type 145 ABS 100-230V With manual override

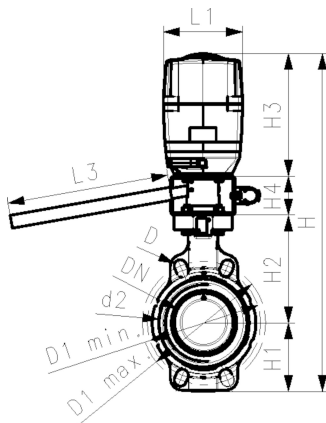
Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

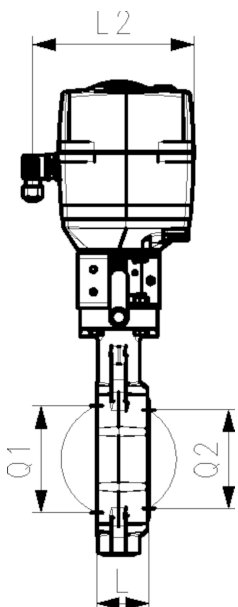
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	50	10	1470	199 145 482	5.678
75	65	10	2200	199 145 483	5.781
90	80	10	3000	199 145 484	5.859
110	100	10	6500	199 145 485	6.395
140	125	10	11500	199 145 486	5.389
160	150	10	16600	199 145 487	7.718
225	200	10	39600	199 145 488	13.529



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250



d (mm)	Q1 (mm)	Q2 (mm)	closest inch (inch)
63	40		2
75	54	35	2 1/2
90	67	50	3
110	88	74	4
140	113	97	5
160	139	123	6
225	178	169	8



Butterfly valve type 145 ABS 24V
Without manual override

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

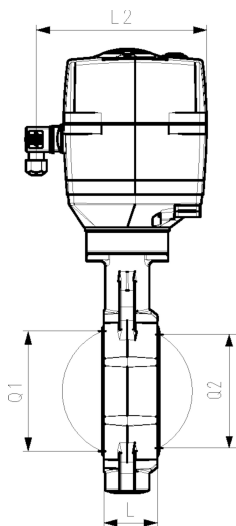
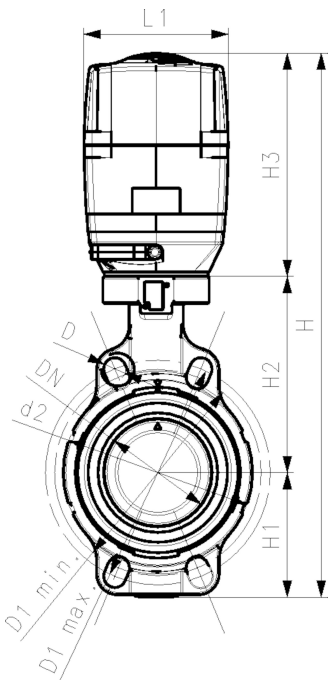
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	50	10	1470	199 145 542	4.178
75	65	10	2200	199 145 543	3.217
90	80	10	3000	199 145 544	4.359
110	100	10	6500	199 145 545	4.895
140	125	10	11500	199 145 546	4.376
160	150	10	16600	199 145 547	6.218
225	200	10	39600	199 145 548	12.029

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-120	215	24	241	241	508	130	189	188	72	122	180	139	123
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169

d (mm)	closest inch (inch)
63	2
75	2 ½
90	3
110	4
140	5
160	6
225	8



Butterfly valve type 145 ABS 24V
With manual override



Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

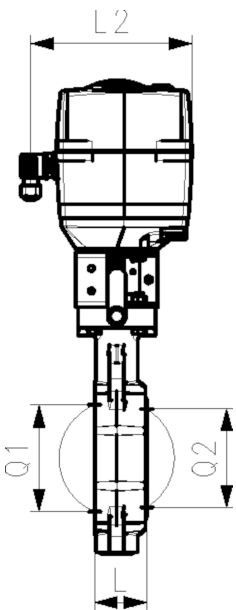
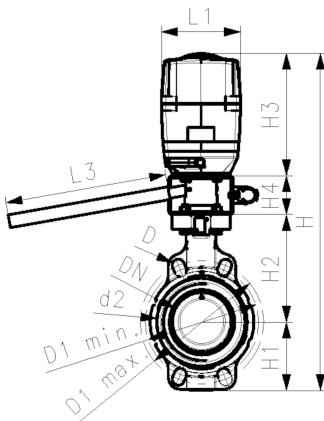
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

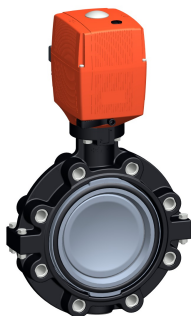
d (mm)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (L/min)	EPDM Code	Weight (kg)
63	50	10	1470	199 145 522	4.161
75	65	10	2200	199 145 523	4.257
90	80	10	3000	199 145 524	5.859
110	100	10	6500	199 145 525	6.395
140	125	10	11500	199 145 526	5.389
160	150	10	16600	199 145 527	9.910
225	200	10	39600	199 145 528	13.529

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250

d (mm)	Q1 (mm)	Q2 (mm)	closest inch (inch)
63	40		2
75	54	35	2 ½
90	67	50	3
110	88	74	4
140	113	97	5
160	139	123	6
225	178	169	8



Type 146



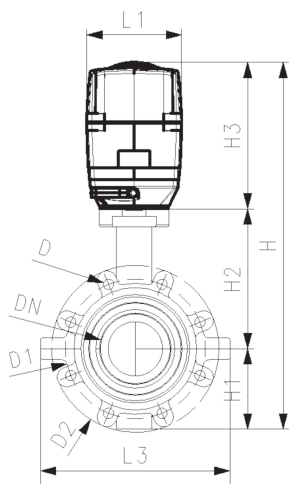
Lugstyle butterfly valve type 146 ABS 100-230V Without manual override

Model:

- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

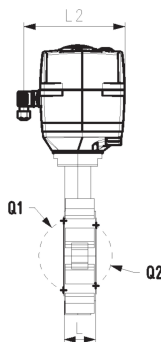
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	DN (mm)	closest inch (inch)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	50	2	10	1470	199 146 502	4.299
75	65	2 ½	10	2200	199 146 503	4.456
90	80	3	10	3000	199 146 504	4.701
110	100	4	10	6500	199 146 505	5.606
140	125	5	10	11500	199 146 506	7.120
160	150	6	10	16600	199 146 507	8.881
225	200	8	10	39600	199 146 508	13.625

d (mm)	Actuator unit type	d2 (mm)	D	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	160	M16	125	399	77	134	188	45	122	180	165	40	
75	EA-45	180	M16	145	411	83	140	188	46	122	180	182	54	35
90	EA-120	195	M16	160	423	89	146	188	49	122	180	210	67	50
110	EA-120	226	M16	180	461	106	167	188	56	122	180	240	88	74
140	EA-120	258	M16	210	490	121	181	188	64	122	180	272	113	97
160	EA-120	284	M20	240	510	133	189	188	72	122	180	300	139	123
225	EA-250	341	M20	295	577	159	210	208	73	122	180	360	178	169



Type 147



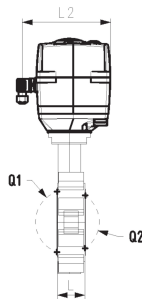
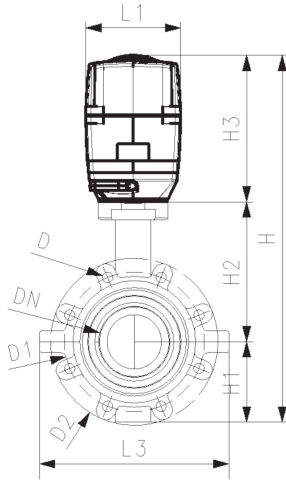
Lugstyle butterfly valve type 147 ABS 24V Without manual override

Model:

- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension ANSI/ASME B 16.5 Class 150

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code
63	2	50	10	1470	199 147 542
75	2 ½	65	10	2200	199 147 543
90	3	80	10	3000	199 147 544
110	4	100	10	6500	199 147 545
140	5	125	10	11500	199 147 546
160	6	150	10	16600	199 147 547
225	8	200	10	39600	199 147 548

d (mm)	Size (inch)	Actuator unit type	d2 (mm)	D UNC	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)
63	2	EA-45	160	5/8	121.0	399	77	134	188	45	122	180	165	40
75	2 ½	EA-45	180	5/8	139.7	411	83	140	188	46	122	180	182	54
90	3	EA-120	195	5/8	152.4	423	89	146	188	49	122	180	210	67
110	4	EA-120	226	5/8	190.5	461	106	167	188	56	122	180	240	88
140	5	EA-120	258	3/4	215.9	490	121	181	188	64	122	180	272	113
160	6	EA-120	284	3/4	241.3	510	133	189	188	72	122	180	300	139
225	8	EA-250	341	3/4	298.4	577	159	210	208	73	122	180	360	178

d (mm)	Size (inch)	Q2 (mm)
63	2	
75	2 ½	35
90	3	50
110	4	74
140	5	97
160	6	123
225	8	169

Type 145



PROGEF Standard Butterfly valve type 145 100-230V Without manual override

Model:

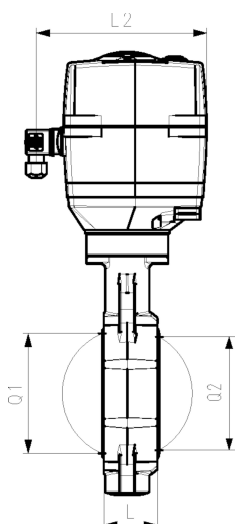
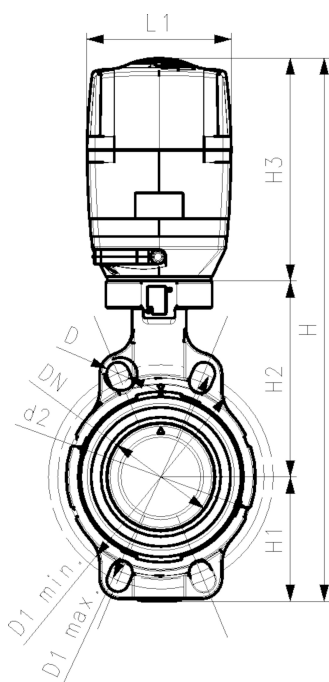
- Material: PP-H
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

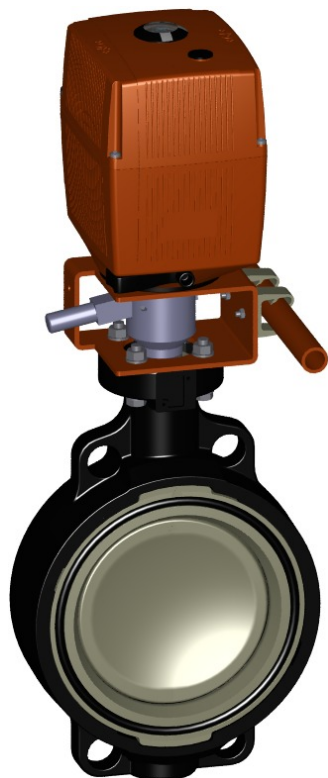
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 145 362	5.264
75	2 ½	65	10	2200	199 145 363	4.423
90	3	80	10	3000	199 145 364	4.548
110	4	100	10	6500	199 145 365	5.034
140	5	125	10	11500	199 145 366	5.271
160	6	150	10	16600	199 145 367	6.256
225	8	200	10	39600	199 145 368	9.656
280	10	250	6	55200	199 145 369	13.747
315	12	300	4	80000	199 145 370	16.722

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-120	215	24	241	241	508	130	189	188	72	122	180	139	123
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169
280	EA-250	329	25	353	362	677	205	264	208	113	122	180	210	207
315	EA-250	379	25	400	432	721	228	285	208	113	122	180	256	253





PROGEF Standard
Butterfly valve type 145 100-230V
With manual override

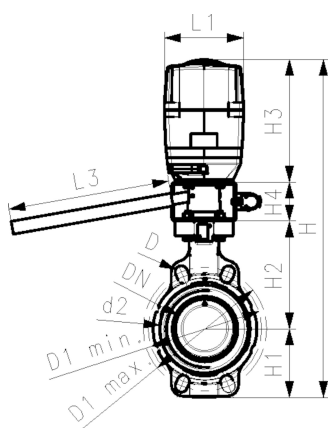
Model:

- Material: PP-H
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

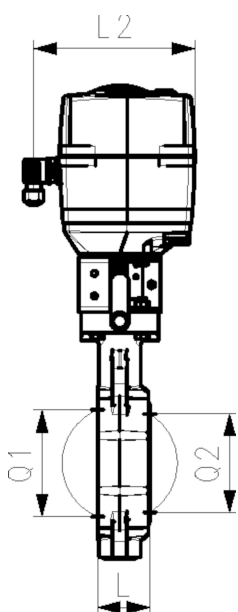
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 145 322	6.002
75	2 ½	65	10	2200	199 145 323	5.694
90	3	80	10	3000	199 145 324	5.822
110	4	100	10	6500	199 145 325	6.327
140	5	125	10	11500	199 145 326	7.174
160	6	150	10	16600	199 145 327	9.604
225	8	200	10	39600	199 145 328	13.271



d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250



d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169



PROGEF Standard
Butterfly valve type 145 24V
Without manual override

Model:

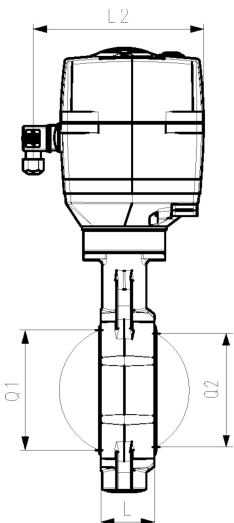
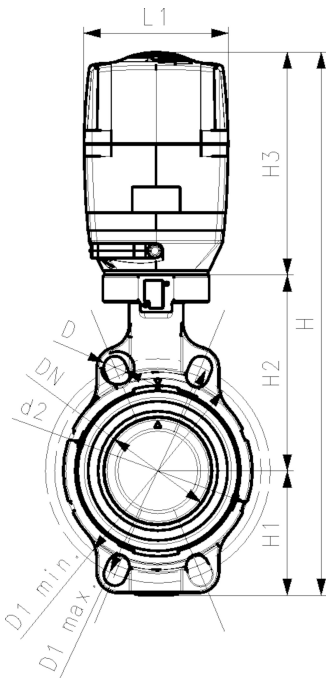
- Material: PP-H
- Voltage 24 V AC/DC
- Factory set control range 90°<-)
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN 10, EN 1092 PN 10, DIN 2501 PN 10, ANSI/ASME B 16.5 Class 150, BS 1560: 1989, BS 4504, JIS B 2220

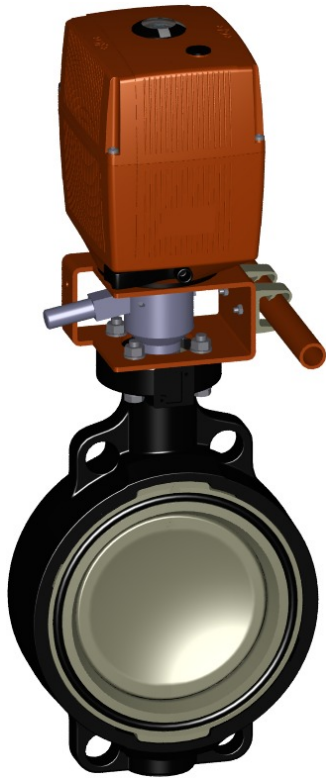
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 145 442	4.314
75	2 ½	65	10	2200	199 145 443	4.194
90	3	80	10	3000	199 145 444	4.529
110	4	100	10	6500	199 145 445	5.017
140	5	125	10	11500	199 145 446	5.271
160	6	150	10	16600	199 145 447	6.056
225	8	200	10	39600	199 145 448	11.771

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	104	19	120	125	415	77	134	188	45	122	180	40	
75	EA-45	115	19	140	145	428	83	140	188	46	122	180	54	35
90	EA-120	131	19	150	160	428	89	146	188	49	122	180	67	50
110	EA-120	161	19	175	191	460	104	167	188	56	122	180	88	74
140	EA-120	187	23	210	216	487	117	181	188	64	122	180	113	97
160	EA-150	215	24	241	241	508	130	189	188	72	122	180	139	123
225	EA-250	267	23	290	295	575	158	210	208	73	122	180	178	169





PROGEF Standard
Butterfly valve type 145 24V
With manual override

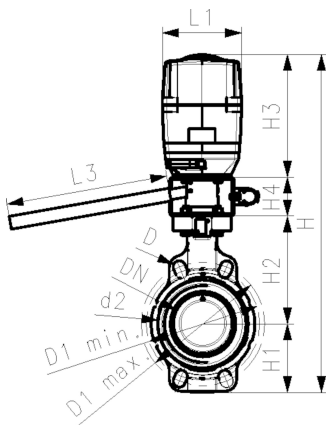
Model:

- Material: PP-H
- Voltage 24 V AC/DC
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

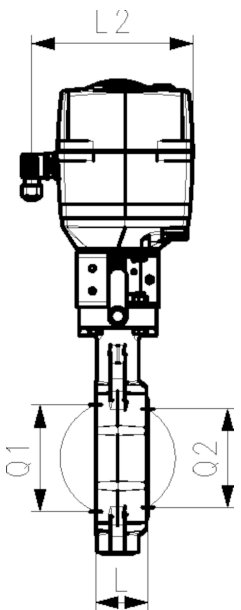
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 145 402	5.603
75	2 ½	65	10	2200	199 145 403	5.694
90	3	80	10	3000	199 145 404	5.822
110	4	100	10	6500	199 145 405	6.327
140	5	125	10	11500	199 145 406	6.771
160	6	150	10	16600	199 145 407	7.556
225	8	200	10	39600	199 145 408	13.271

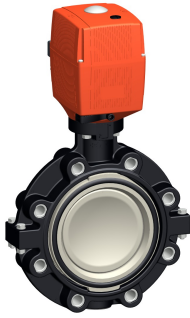


d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250



d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169

Type 146



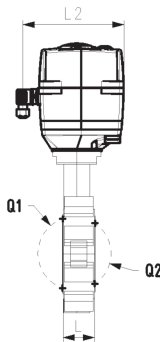
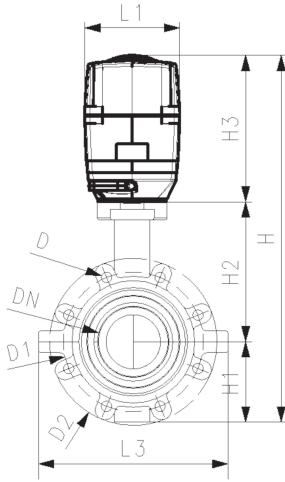
PROGEF Standard
Lugstyle butterfly valve type 146 100-230V
Without manual override

Model:

- Material: PP-H
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

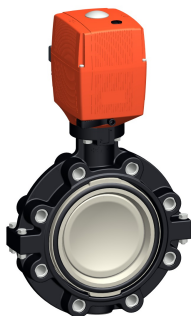
- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	EPDM Code	Weight (kg)
63	2	50	10	1470	199 146 362	4.299
75	2 ½	65	10	2200	199 146 363	4.456
90	3	80	10	3000	199 146 364	4.701
110	4	100	10	6500	199 146 365	5.606
140	5	125	10	11500	199 146 366	7.120
160	6	150	10	16600	199 146 367	8.881
225	8	200	10	39600	199 146 368	13.625
280	10	250	6	55200	199 146 369	24.385
315	12	300	4	80000	199 146 370	30.916

d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	160	M16	125	414	77	134	188	45	122	180	165	40	
75	EA-45	180	M16	145	426	83	140	188	46	122	180	182	54	35
90	EA-120	195	M16	160	423	89	146	188	49	122	180	210	67	50
110	EA-120	226	M16	180	461	106	167	188	56	122	180	240	88	74
140	EA-120	258	M16	210	490	121	181	188	64	122	180	272	113	97
160	EA-120	284	M20	240	510	133	189	188	72	122	180	300	139	123
225	EA-250	341	M20	295	577	159	210	208	73	122	180	360	178	169
280	EA-250	412	M20	350	677	205	264	208	113	122	180	440	210	207
315	EA-250	482	M20	400	727	234	285	208	113	122	180	510	256	253

Type 147



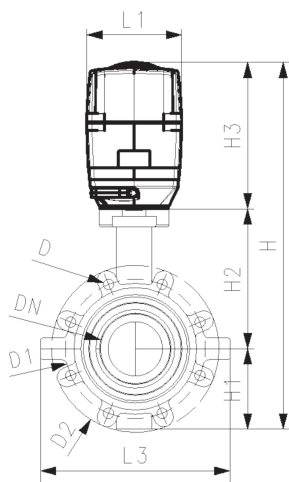
PROGEF Standard Lugstyle butterfly valve type 147 100-230V Without manual override

Model:

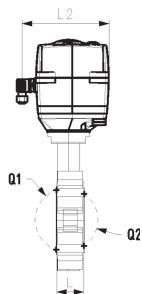
- Material: PP-H
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension ANSI/ASME B 16.5 Class 150

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



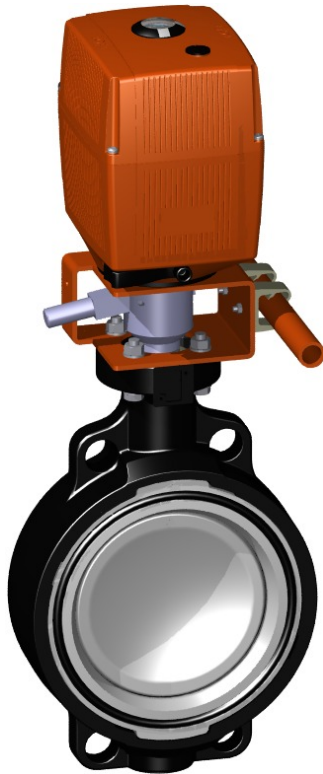
d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value (Δp=1 bar) (l/min)	EPDM Code
75	2 ½	65	10	2200	199 147 363
63	2	50	10	1470	199 147 362
90	3	80	10	3000	199 147 364
110	4	100	10	6500	199 147 365
140	5	125	10	11500	199 147 366
160	6	150	10	16600	199 147 367
225	8	200	10	39600	199 147 368
280	10	250	6	55200	199 147 369
315	12	300	4	80000	199 147 370



d (mm)	Size (inch)	Actuator unit type	d2 (mm)	D (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)
75	2 ½	EA-45	170	UNC 5/8	411	83	140	188	120.6	46	122	180	160	54
63	2	EA-45	150	UNC 5/8	399	77	134	188	139.7	45	122	180	150	40
90	3	EA-120	177	UNC 5/8	423	89	146	188	152.4	49	122	180	175	67
110	4	EA-120	216	UNC 5/8	459	104	167	188	190.5	56	122	180	244	88
140	5	EA-120	246	UNC 3/4	486	117	181	188	215.9	64	122	180	272	113
160	6	EA-120	273	UNC 3/4	507	130	189	188	241.3	72	122	180	297	139
225	8	EA-250	334	UNC 3/4	576	158	210	208	298.4	73	122	180	360	178
280	10	EA-250	412	UNC 7/8	677	205	264	208	362.0	113	122	180	440	210
315	12	EA-250	482	UNC 7/8	727	234	285	208	431.8	113	122	180	510	256

d (mm)	Size (inch)	Q2 (mm)
75	2 ½	35
63	2	
90	3	50
110	4	74
140	5	97
160	6	123
225	8	169
280	10	207
315	12	253

Type 145



SYGEF Standard Butterfly valve type 145 100-230V With manual override

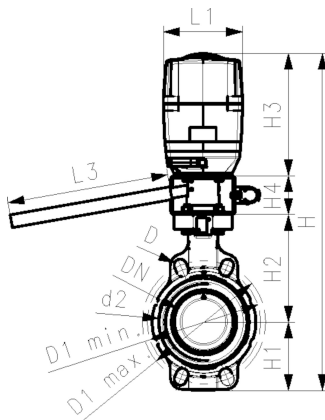
Model:

- Material: PVDF
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: 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

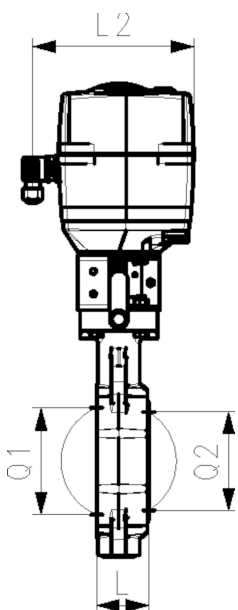
Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

d (mm)	DN (mm)	Size (inch)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	FPM Code	Weight (kg)
63	50	2	10	1470	199 145 562	5.718
75	65	2 ½	10	2200	199 145 563	5.830
90	80	3	10	3000	199 145 564	6.010
110	100	4	10	6500	199 145 565	6.662
140	125	5	10	11500	199 145 566	7.257
160	150	6	10	16600	199 145 567	8.477
225	200	8	10	39600	199 145 568	15.138

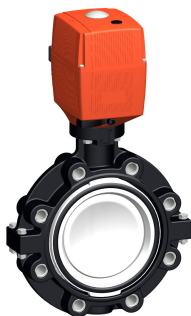


d (mm)	Actuator unit type	d2 (mm)	D (mm)	D1 min. (mm)	D1 max. (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)
63	EA-45	104	19	120	125	475	77	134	188	75	45	122	180	250
75	EA-45	115	19	140	145	488	83	140	188	75	46	122	180	250
90	EA-120	131	19	150	160	488	89	146	188	60	49	122	180	250
110	EA-120	161	19	175	191	520	104	167	188	60	56	122	180	250
140	EA-120	187	23	210	216	547	117	181	188	60	64	122	180	250
160	EA-120	215	24	241	241	568	130	189	188	60	72	122	180	250
225	EA-250	267	23	290	295	635	158	210	208	60	73	122	180	250



d (mm)	Q1 (mm)	Q2 (mm)
63	40	
75	54	35
90	67	50
110	88	74
140	113	97
160	139	123
225	178	169

Type 146



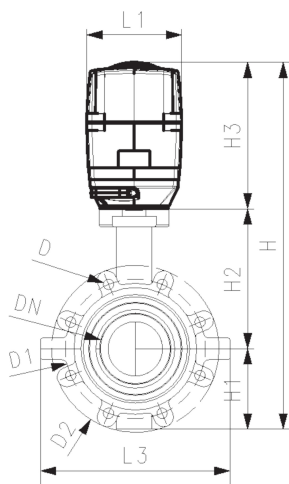
SYGEF Standard Lugstyle butterfly valve type 146 100-230V Without manual override

Model:

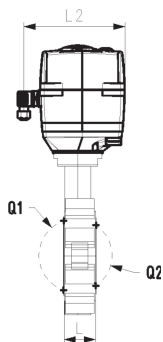
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board

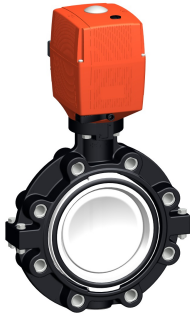


d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	FPM Code	Weight (kg)
63	2	50	10	1470	199 146 582	4.299
75	2 ½	65	10	2200	199 146 583	4.456
90	3	80	10	3000	199 146 584	4.701
110	4	100	10	6500	199 146 585	5.606
140	5	125	10	11500	199 146 586	7.120
160	6	150	10	16600	199 146 587	8.881
225	8	200	10	39600	199 146 588	13.625
280	10	250	6	55200	199 146 589	24.385
315	12	300	4	80000	199 146 590	30.916



d (mm)	Actuator unit type	d2 (mm)	D	D1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)	Q2 (mm)
63	EA-45	160	M16	125	399	77	134	188	45	122	180	165	40	
75	EA-45	180	M16	145	411	83	140	188	46	122	180	182	54	35
90	EA-120	195	M16	160	423	89	146	188	49	122	180	210	67	50
110	EA-120	226	M16	180	461	106	167	188	56	122	180	240	88	74
140	EA-120	258	M16	210	490	121	181	188	64	122	180	272	113	97
160	EA-120	284	M20	240	510	133	189	188	72	122	180	300	139	123
225	EA-120	341	M20	295	577	159	210	208	73	122	180	360	178	169
280	EA-120	412	M20	350	677	205	164	208	113	122	180	440	210	207
315	EA-250	482	M20	400	727	234	285	208	113	122	180	510	256	253

Type 147



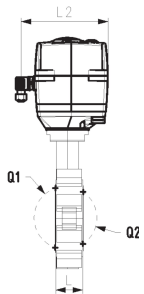
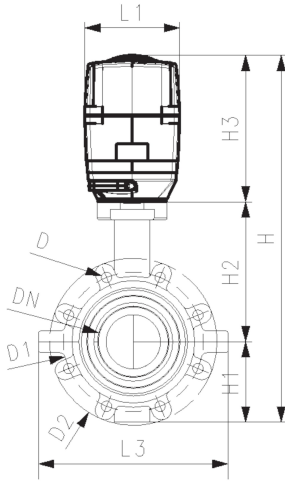
SYGEF Standard Lugstyle butterfly valve type 147 100-230V Without manual override

Model:

- Material: PVDF
- Voltage 100-230 V, 50-60 Hz
- Factory set control range 90°<
- Heating element, position feedback (Open/Close/ Middle)
- Overall length according to EN 558, ISO 5752 (DN50-200 line 25, DN250-300 line 16)
- Connecting dimension ANSI/ASME B 16.5 Class 150

Option:

- Other valve and actuator configurations available
- Optional accessories: Fail-safe return unit, Monitoring board, Position controller, Profibus DP board



d (mm)	Size (inch)	DN (mm)	PN (bar)	kv-value ($\Delta p=1$ bar) (l/min)	FPM Code
63	2	50	10	1470	199 147 582
75	2 ½	65	10	2200	199 147 583
90	3	80	10	3000	199 147 584
110	4	100	10	6500	199 147 585
140	5	125	10	11500	199 147 586
160	6	150	10	16600	199 147 587
225	8	200	10	39600	199 147 588
280	10	250	6	55200	199 147 589
315	12	300	4	80000	199 147 590

d (mm)	Size (inch)	Actuator unit type	d2 (mm)	D	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	D1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Q1 (mm)
63	2	EA-45	150	UNC 5/8	399	77	134	188	139.7	45	122	180	150	40
75	2 ½	EA-45	170	UNC 5/8	411	83	140	188	120.6	46	122	180	160	54
90	3	EA-120	177	UNC 5/8	423	89	146	188	152.4	49	122	180	175	67
110	4	EA-120	216	UNC 5/8	459	104	167	188	190.5	56	122	180	244	88
140	5	EA-120	246	UNC 3/4	486	117	181	188	215.9	64	122	180	272	113
160	6	EA-120	273	UNC 3/4	507	130	189	188	241.3	72	122	180	297	139
225	8	EA-250	334	UNC 3/4	576	158	210	208	298.4	73	122	180	360	178
280	10	EA-250	412	UNC 7/8	677	205	264	208	362.0	113	122	180	440	210
315	12	EA-250	482	UNC 7/8	727	234	285	208	431.8	113	122	180	510	256

d (mm)	Size (inch)	Q2 (mm)
63	2	
75	2 ½	35
90	3	50
110	4	74
140	5	97
160	6	123
225	8	169
280	10	207
315	12	253

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