

Type 131, 132, 133 Electrically Actuated Ball Valve

Standard Features

- **Size**
3/8" - 4"
- **Voltage**
24 AC or DC
110-230 AC
- **Emergency Manual Override**
- **Material**
PVC, CPVC, PROGEF® Standard
Polypropylene, SYGEF® PVDF
- **Connection Ends**
Socket, Flanged,
Spigot (PVDF and PP only),
Threaded to 2" (up to 4" in PVC)
- **Seat**
PTFE
- **Seals**
EPDM or FPM
- **Mounting**
Stainless steel threaded inserts
for easy and secure mounting
- **Duty Cycle**
3/8" - 2" 100%
2 1/2" - 4" 50%

Optional Features

- **Pneumatic Actuation**
- **Limit Switches**
- **Positioner (voltage or current)**
- **Position Feedback**
- **Fail Safe Return**
Back up battery pack
- **Heating Element**
- **RS 232 Configuration Tool**
- **Smart Modules**
Cycle monitoring, cycle counter,
cycle extension, motor current
monitoring



General

Designed to be modular, the 130 series electrically actuated ball valve is adaptable to a variety of conditions and applications. The type 130 series, our premium actuated valve, is available in PVC, CPVC, Polypropylene, and PVDF materials. With the optional positioner, it goes from being a simple on/off valve to a precision flow control device, integrated into systems controlled by PLCs and other computerized instrumentation.



Technical specifications

Electric actuators 21/31



CE		✓	✓
SP		✓	✓
CULUS*		✓	✓
		EA 21	EA 31
Size	$\frac{3}{8}$ "-2"		2½"-4"
Nominal torque Mdn	10 Nm		60 Nm
Peak torque	20Nm		120 Nm
Cycle of time	5 s/ 90° at Mdn		15 s/ 90° at Mdn
Actuating angle	max. 180°, set to 90°		max. 180°, set to 90°
L/W/H	150/122/167		150/122/190
Cycles at 68°F and Mdn	250,000		100,000
Flanges	F05		F07
Housing materials	PP fiberglass reinforced, flame retardant, captive stainless steel screws externally		PP fiberglass reinforced, flame retardant, captive stainless steel screws externally
Position indicator	optical, integrated		optical, integrated
Emergency manual override	integrated		integrated
Rated voltage	100- 230V, 50/60 Hz 24V, AC/DC, 50/60Hz		100- 230V, 50/60 Hz 24V, AC/DC, 50/60Hz
Rated voltage tolerance	+/- 10%		+/- 10%
Rated output	28 Watts		32 Watts
Direct impedance	230V, 100k 24V, 4k7		230V, 100k 24V, 4k7
Duty cycle ED	100%		50%
Protection class	IP 65 per EN 60529 [3] UL/CSA: for interior use, Nema 4X		IP 65 per EN 60529 [3] UL/CSA: for interior use, Nema 4X
Overload protection	current / time dependent (resetting) [1], temperature-dependent		current / time dependent (resetting) [1], temperature-dependent
Overvoltage category [5]	II		II
Electrical connections	Connector plug 3 P+ E per DIN EN 175301-03 (formerly DIN 43650), screw cable gland M20x1.5 per ISO 724		Connector plug 3 P+ E per DIN EN 175301-03 (formerly DIN 43650), screw cable gland M20x1.5 per ISO 724
Pollution grade [5]	2		2
Height over NN (UL/CSA)	< 2000m		< 2000m
Ambient temperature	14° to 122°F [2]		14° to 122°F [2]
Allowable humidity	max. 90% relative humidity, non condensing		max. 90% relative humidity, non condensing

[1] Overload protection of the motor is dimensioned so that the motor and the power supply board are protected. As soon as the load is in the torque range, the actuator runs again.

[2] At temperatures below 14°F and if there is condensation, the heating element no. 198 190 086 should be built in.

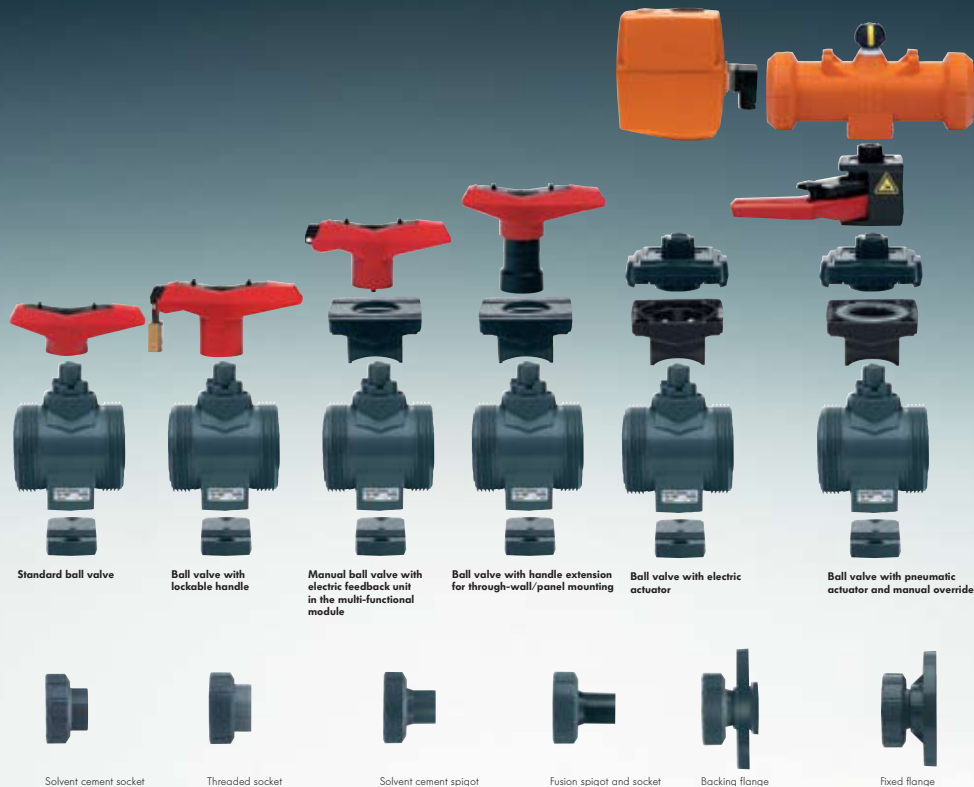
[3] Protection class IP67 for use of cable glands and vertical installation.

* pending

[4] Linear decrease up to 50% relative humidity at 104°F.

[5] According to DIN EN 61010-1

Ideal for Virtually any application

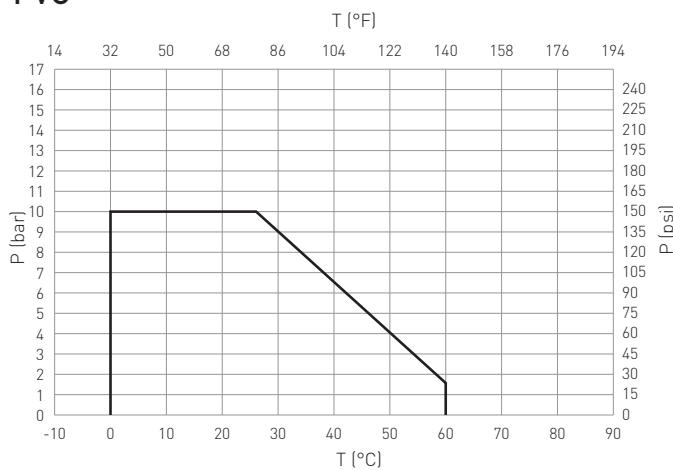


Technical Data

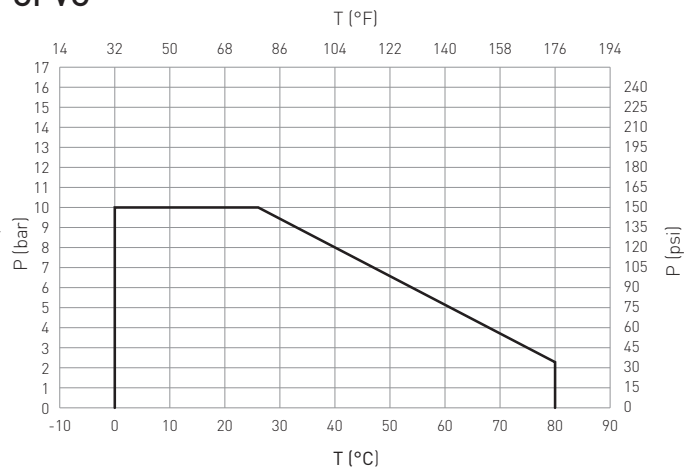
Pressure-Temperature Diagrams Technical data for Type 131, 132, 133 Ball Valves 3/8"-4"

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

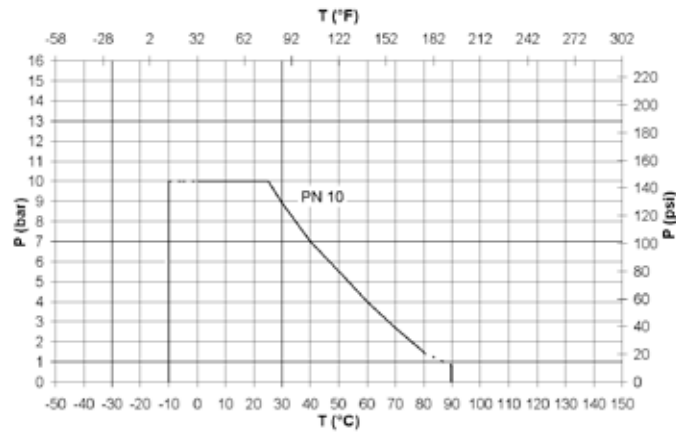
PVC



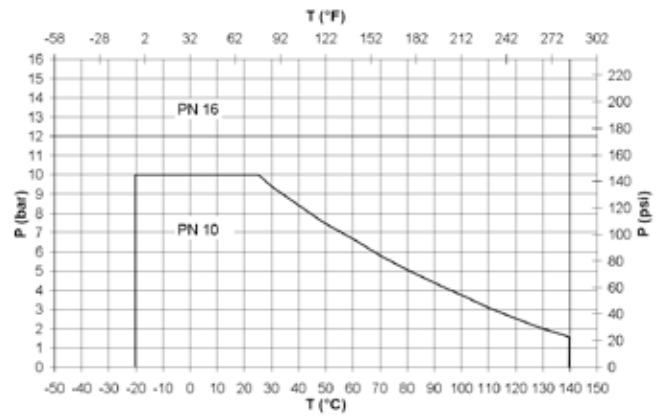
CPVC



PP

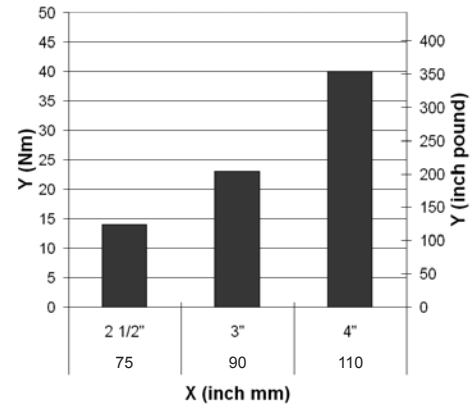
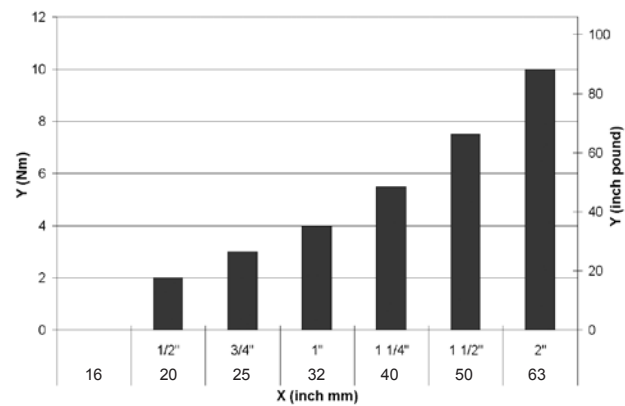


PVDF



Operating Torque

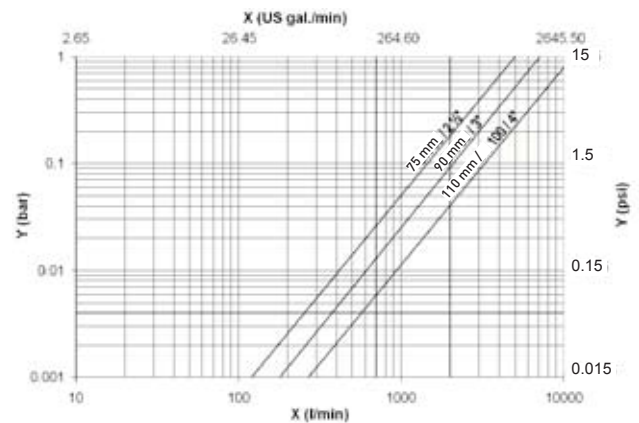
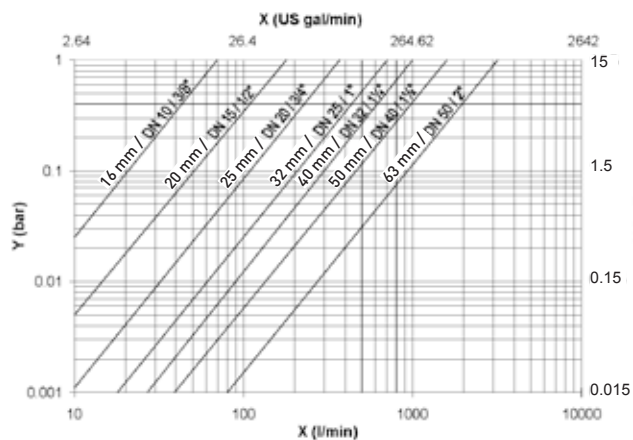
Average values at nominal pressure



X Size (mm, inch)

Y Torque (Nm, inch pound)

Pressure loss



Medium: water, 20°C

X Flow rate (l/min / U.S. gal/min)

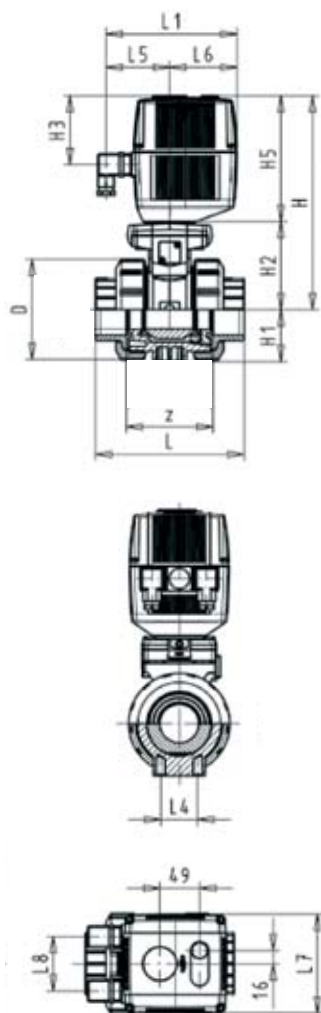
Y Pressure loss Δp (bar / psi)

PVC/CPVC

Type 133 Electrically Actuated Ball Valve

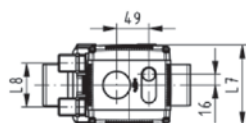
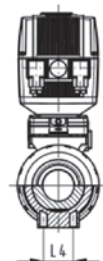
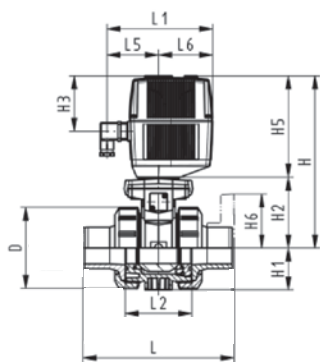
With manual emergency override

With solvent cement sockets/threaded NPT



Inch	Cv-value [gal/min]	psi		D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	
		socket	NPT							Socket	NPT
3/8	4.9	150	150	50	231	27	64	94	167	105	98
1/2	12.9	150	150	50	231	27	64	94	167	105	98
3/4	24.5	150	150	58	240	30	73	94	167	121	111
1	49.0	150	150	68	240	36	73	94	167	133	127
1 1/4	70.0	150	150	84	251	44	84	94	167	154	147
1 1/2	112.0	150	150	97	251	51	84	94	167	164	157
2	217.1	150	150	124	273	64	106	94	167	183	183
2 1/2	350.0	150	150	166	347	85	156	94	190	233	234
3	490.0	150	150	200	358	105	168	94	190	254	255
4	770.0	150	150	238	365	123	175	94	190	301	302

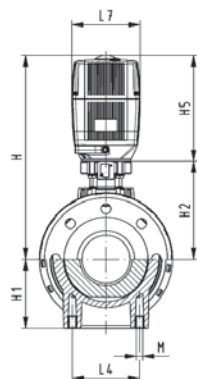
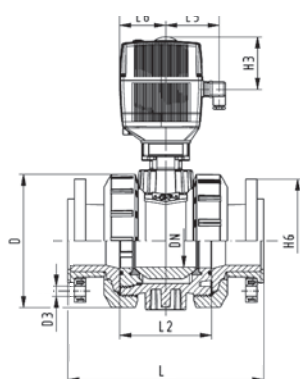
L1 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
180	25	97	83	122	67
180	25	97	83	122	61
180	25	97	83	122	70
180	25	97	83	122	76
180	45	97	83	122	90
180	45	97	83	122	94
180	45	97	83	122	107
180	70	98	83	122	14
180	70	98	83	122	151
180	120	98	83	122	174



With flanges, ANSI

Inch	psi	Cv-value [gal/min]	d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]
1/2	150	12.9	20	50	231	27	64	94	167	48
3/4	150	24.5	25	58	240	30	73	94	167	53
1	150	49.0	32	68	240	36	73	94	167	58
1 1/4	150	70.0	40	84	251	44	84	94	167	70
1 1/2	150	112.0	50	97	251	51	84	94	167	75
2	150	217.0	63	124	273	64	106	94	167	83

L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
149	180	56	25	98	83	122	66
165	180	65	25	97	83	122	66
184	180	71	25	97	83	122	66
206	180	85	45	97	83	122	66
221	180	89	45	98	83	122	66
251	180	101	45	97	83	122	66



With flanges, ANSI

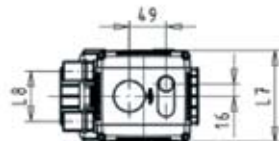
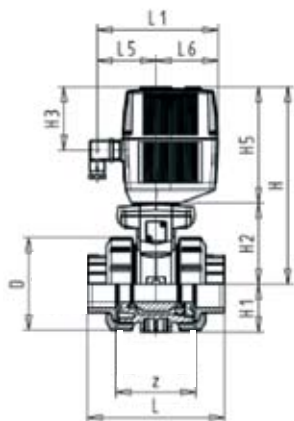
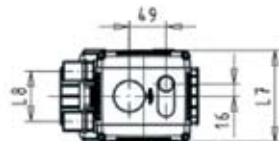
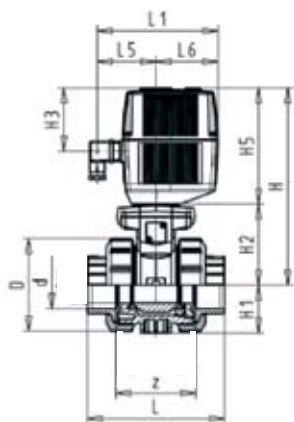
Inch	psi	Cv-value [gal/min]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]
2 1/2	150	350	166	346	85	156	94	190	93	311	180
3	150	490	200	358	105	168	94	190	100	343	180
4	150	770	238	365	123	175	94	190	110	397	180

L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
136	70	98	83	122	66
141	70	98	83	122	66
164	120	98	83	122	66

PROGEF® Standard Polypropylene Type 131 Electrically Actuated Ball Valve

With manual emergency override

With fusion sockets metric



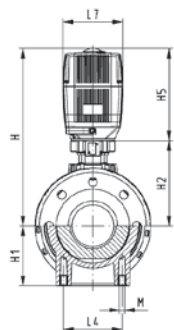
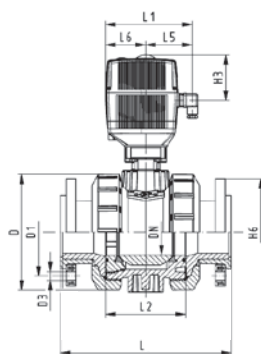
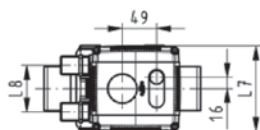
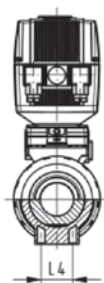
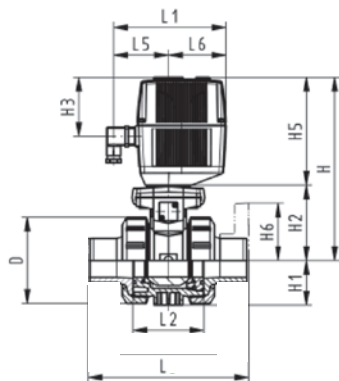
d [mm]	psi	Cv-value [gal/min]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]
16	150	4.9	50	231	27	64	94	167	93	180
20	150	12.9	50	231	27	64	94	167	95	180
25	150	24.5	58	240	30	73	94	167	108	180
32	150	49.0	68	240	36	73	94	167	118	180
40	150	70.0	84	251	44	84	94	167	137	180
50	150	112.0	97	251	51	84	94	167	147	180
63	150	217.0	124	273	64	106	94	167	168	180
75	150	350.0	166	346	85	156	94	190	233	180
90	150	490.0	200	358	105	168	94	190	254	180
110	150	770.0	238	365	123	175	94	190	301	180

L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
25	97	83	122	67
25	97	83	122	66
25	97	83	122	77
25	97	83	122	83
45	97	83	122	99
45	97	83	122	105
45	97	83	122	117
70	97	83	122	167
70	97	83	122	180
120	97	83	122	215

With threaded NPT

Inch	psi	Cv-value [gal/min]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]
3/8	150	4.9	50	231	27	64	94	167	96	180
1/2	150	12.9	50	231	27	64	94	167	99	180
3/4	150	24.5	58	240	30	73	94	167	111	180
1	150	49.0	68	240	36	73	94	167	127	180
1 1/4	150	70.0	84	251	44	84	94	167	146	180
1 1/2	150	112.0	97	251	51	84	94	167	157	180
1	150	217.0	124	273	64	106	94	167	183	180

L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
25	97	83	122	71
25	97	83	122	64
25	97	83	122	76
25	97	83	122	83
45	97	83	122	100
45	97	83	122	111
45	97	83	122	134



With ANSI flanges

Inch	psi	Cv-value [gal/min]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]
1/2	150	12.9	50	231	27	64	94	167	166	180
3/4	150	24.5	58	240	30	73	94	167	177	180
1	150	49.0	68	240	36	73	94	167	191	180
1 1/4	150	70.0	84	251	44	84	94	167	209	180
1 1/2	150	112.0	97	251	51	84	94	167	229	180
2	150	217.0	124	273	64	106	94	167	253	180

L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
56	25	97	83	122	66
65	25	97	83	122	66
71	25	97	83	122	66
85	45	97	83	122	66
89	45	97	83	122	66
101	45	97	83	122	66

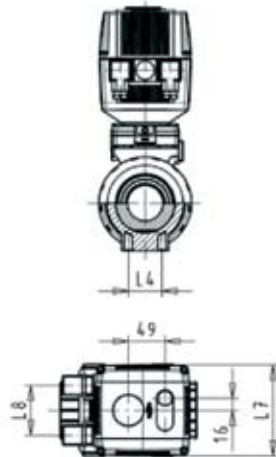
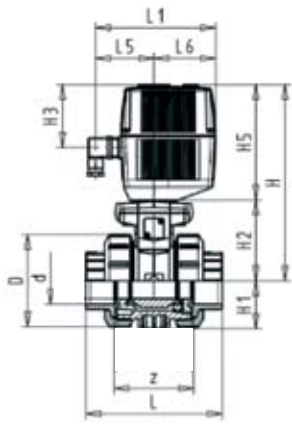
With ANSI Flanges

Inch	psi	Cv-value [gal/min]	D [mm]	D3 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]
2 1/2	150	350	166	19	346	85	156	94	190	93
3	150	490	200	19	358	105	168	94	190	100
4	150	770	238	19	365	123	175	94	190	110

L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	D3 [mm]
416	180	136	70	98	83	122	66	19
414	180	141	70	98	83	122	66	19
451	180	164	120	98	83	122	66	19

SYGEF® Standard PVDF Type 132 Electrically Actuated Ball Valve

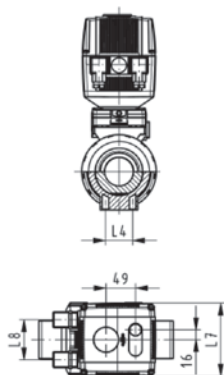
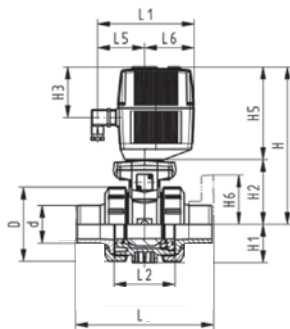
With manual emergency override
With fusion sockets metric



d [mm]	psi	Cv-value [gal/min]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]
16	150	4.9	50	231	27	64	94	167	92	180
20	150	12.9	50	231	27	64	94	167	95	180
25	150	24.5	58	240	30	73	94	167	110	180
32	150	49.0	68	240	36	73	94	167	123	180
40	150	70.0	84	251	44	84	94	167	146	180
50	150	112.0	97	251	51	84	94	167	157	180
63	150	217.0	124	273	64	106	94	167	183	180

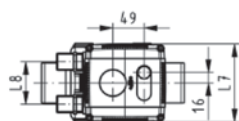
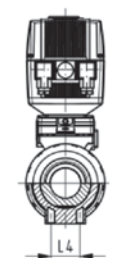
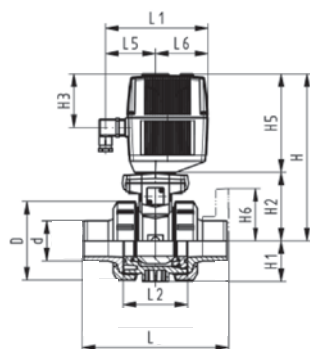
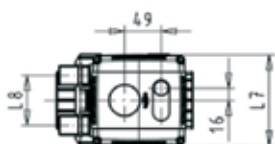
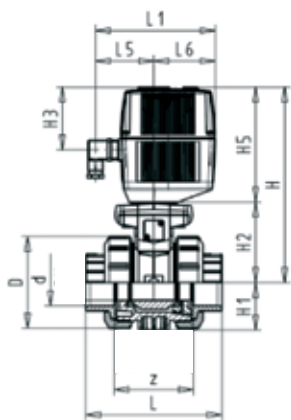
L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	Z [mm]
25	97	83	122	66	64
25	97	83	122	66	64
25	97	83	122	66	72
25	97	83	122	66	79
45	97	83	122	66	94
45	97	83	122	66	95
45	97	83	122	66	107

With fusion spigots metric



d [mm]	psi	Cv-value [gal/min]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]
16	150	4.9	50	231	27	64	94	167	114	180
20	150	12.9	50	231	27	64	94	167	124	180
25	150	24.5	58	240	30	73	94	167	144	180
32	150	49.0	68	240	36	73	94	167	154	180
40	150	70.0	84	251	44	84	94	167	174	180
50	150	112.0	97	251	51	84	94	167	194	180
63	150	217.0	124	273	64	106	94	167	224	180

L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
25	97	83	122	66
25	97	83	122	66
25	97	83	122	66
25	97	83	122	66
45	97	83	122	66
45	97	83	122	66
45	97	83	122	66



With Threaded NPT

d [mm]	psi	Cv-value [gal/min]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]
16	150	4.9	50	231	27	64	94	167	96	180
20	150	12.9	50	231	27	64	94	167	99	180
25	150	24.5	58	240	30	73	94	167	111	180
32	150	49.0	68	240	36	73	94	167	127	180
40	150	70.0	84	251	44	84	94	167	146	180
50	150	112.0	97	251	51	84	94	167	157	180
63	150	217.0	124	273	64	106	94	167	183	180

L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
25	97	83	122	66
25	97	83	122	66
25	97	83	122	66
25	97	83	122	66
45	97	83	122	66
45	97	83	122	66
45	97	83	122	66

With ANSI flanges PVDF serrated

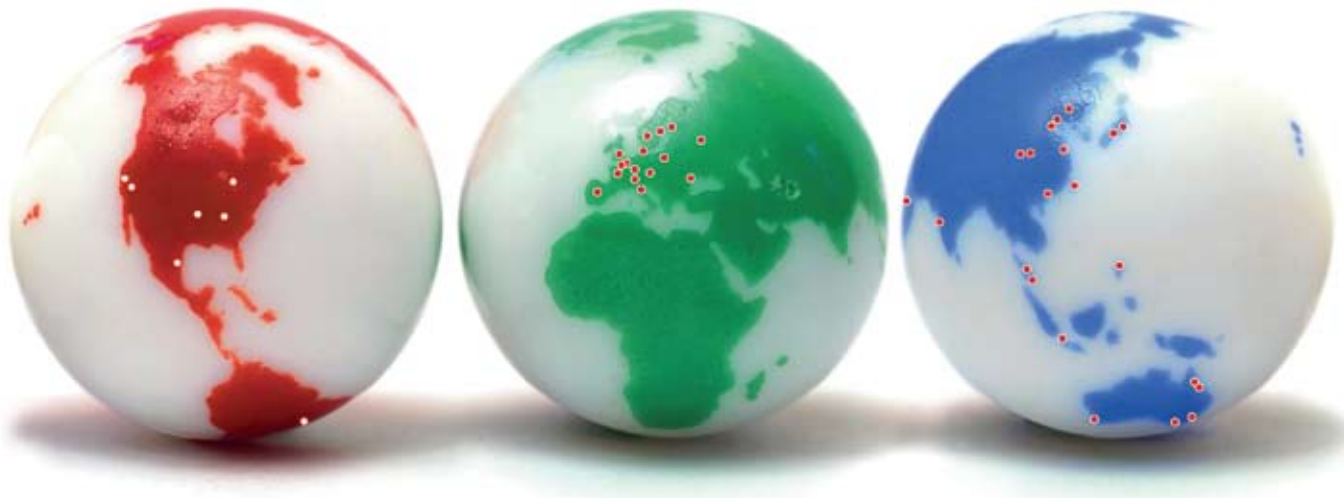
d [mm]	psi	Cv-value [gal/min]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]
20	150	12.9	50	231	27	64	94	167	174	180
25	150	24.5	58	240	30	73	94	167	189	180
32	150	49.0	68	240	36	73	94	167	199	180
40	150	70.0	84	251	44	84	94	167	235	180
50	150	112.0	97	251	51	84	94	167	243	180
63	150	217.0	124	273	64	106	94	167	261	180

L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
56	25	98	83	122	66
65	25	97	83	122	66
71	25	97	83	122	66
85	45	97	83	122	66
89	45	98	83	122	66
101	45	97	83	122	66

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