

# Electrically Actuated Ball Valve Type 127



## General

- **Size:** 3/8"-2"
- **Material:** PVC, CPVC, ABS
- **Seat:** PTFE
- **Seals:** EPDM or FPM
- **End Connection:** Solvent cement socket, threaded, flanged
- **Actuator Housing:** Glass-filled PP
- **Voltage:** 100-230VAC
- **Protection Class:** IP67
- **Mounting:** Stainless steel threaded inserts
- **Manual Override:** Integrated
- **Position Feedback:** Open/close, bistable relay
- **Optical Position Indicator:** Integrated, LED enforced

## Key Valve Certifications

- **NSF 61:** PVC and CPVC
- **FDA CFR 21 177.2600:** EPDM and FPM
- **FDA CFR 21 177.1550:** PTFE
- **ABS:** All materials
- **USP Class VI (physiological non-toxic):** EPDM, FPM, PTFE, PP and PVDF

## Sample Speciation

The Type 127 Ball Valve shall be used in open/close applications. The actuator shall be a Type EA15 with integrated adjustable heating element and open/close position feedback via two bistable relays. The ball valve shall be true union and utilize a floating ball design. A 7-segment display shall communicate specific fault status. The ball shall be fully molded and full port with two way blocking capability. The stem shall be blowout proof, utilizing a double o-ring seal and a predetermined break point opposite the media side of the stem seals. The seat carrier shall be adjustable and reverse threaded. The valve nut threads shall be of buttress type. Ball seats shall have an elastomeric backing o-ring and all elastomeric seals shall be of like material. ANSI flanged versions shall meet ANSI B16.5 150lb standards. All valves shall be tested in accordance to ISO9393 and designed to ISO16135 standards. All valves shall be manufactured under ISO9001 for Quality and ISO14001 for Environmental Management. Following assembly, every valve shall be tested and certified bubble tight exceeding Class VI standards.

## Material Specification

PVC valves shall meet ASTM D1784 cell classification 12454 standards. CPVC valves shall meet ASTM D1784 cell classification 23447-B standards. ABS valves shall meet ASTM D3965 cell classification 42222 standards. Valves of all materials shall be RoHS compliant.

## Optional Features

- **Fail Safe Return:** Battery back-up, internal or external
- **Manual Loading Station:** Local control box
- **Vented Ball:** For sodium hypochlorite use
- **Voltage:** 24VAC/DC

## Key Actuator Certifications

- **CE 2006/42/EC, Annex II B:** EA15
- **CE 2004/108/CE:** EA15
- **CE 2006/95/CE:** EA15
- **UL 61010-1:** EA15
- **CSA C22.2 NO. 61010-1:** EA15

## Components



## Actuator Technical Data

	EA 15
Cycle Time	5s/90°
Cycles at 70°F	150,000
Housing Material	Glass-filled PP
Position Indicator	Optical, integrated LED for visual communication of position and actuator status
Emergency Manual Override	Integrated
Rated Voltage	100–230VAC, 50/60 Hz
Rated Voltage Tolerance	+/- 15%
Nominal Output	35VA
Calculated Current Draw	0.3A @ 100VAC 0.13A @ 230VAC
Duty Cycle	40%
Position Feedback	Bi-stable, 250V, 2A
Protection Class	IP67 per EN 60529 UL/CSA: For interior use NEMA 4X
Overload Protection	Resetting (1)
Overvoltage Category	Category II according to DIN EN 61010-1
Power Connection	Connector plug 3 P+ E per DIN EN 175301-03
Pollution Grade	Grade 2 according to DIN EN 61010-1
Maximum Elevation	6561 feet
Ambient Temperature	14°F to 122°F (2)
Allowable Humidity	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 within the torque range, the actuator will begin operating again.

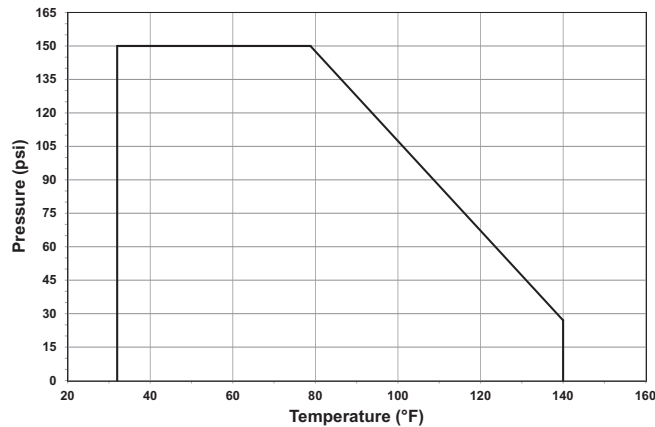
(2) At temperatures below 14°F and if there is condensation, the heating element should be activated.

# Technical Data

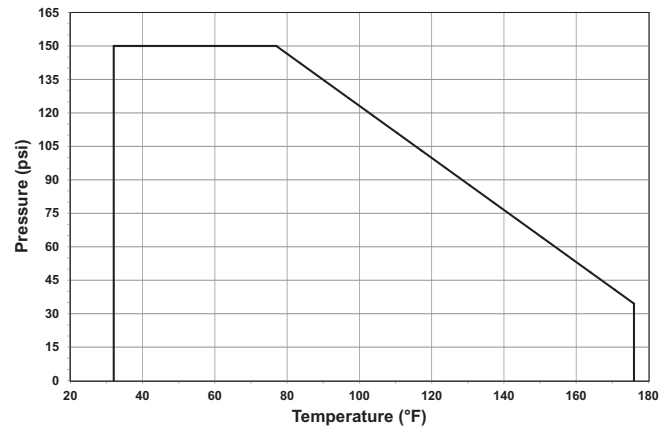
## Pressure Temperature Curves

The following graphs are based on a 25 year lifetime water or similar media application

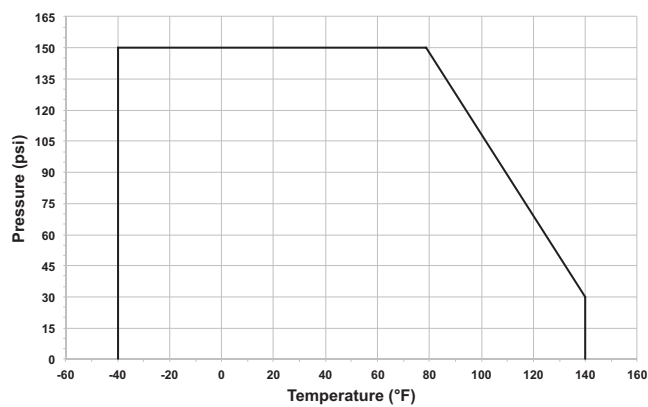
### PVC



### CPVC



### ABS



### Pressure-Temperature

Material	Temperature Range (°F)	Max Pressure (psi)
PVC	32 to 140	150
CPVC	32 to 176	150
ABS	-40 to 140	150

### Vacuum Service

The Type 127 is rated for full vacuum service. Maximum differential pressure of 15psi at 122°F.

## Flow

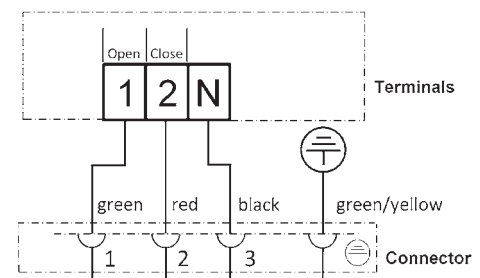
The following information is based on water applications at 68° F

### Cv Value

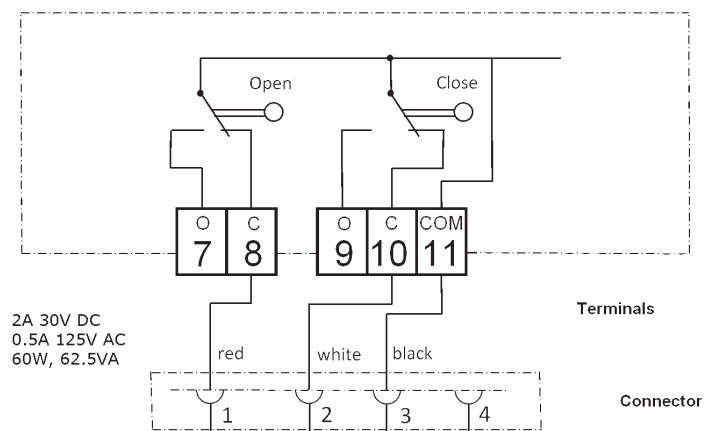
Size (inch)	d (mm)	Cv (gal/min)
3/8	16	5
1/2	20	13
3/4	25	25
1	32	49
1 1/4	40	70
1 1/2	50	112
2	63	217

## Wiring

### Control

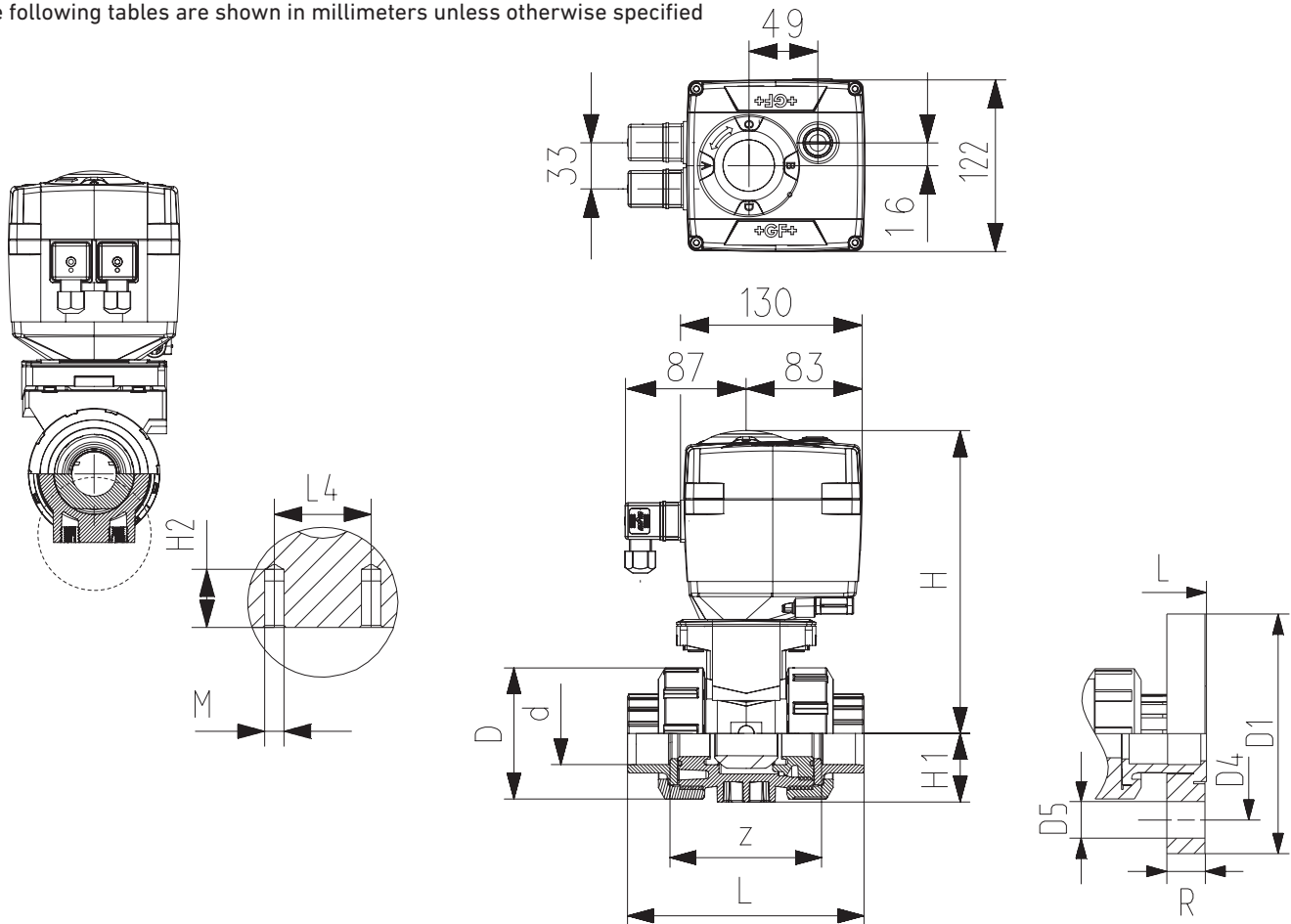


### Feedback



# Dimensions

The following tables are shown in millimeters unless otherwise specified



## All Materials

Size (inch)	d (mm)	D	H	H1	H2	L4	M
3/8	16	50	201	27	12	25	M6
1/2	20	50	201	27	12	25	M6
3/4	25	58	210	30	12	25	M6
1	32	68	210	36	12	25	M6
1 1/4	40	84	221	44	16	45	M8
1 1/2	50	97	221	51	16	45	M8
2	63	124	243	64	16	45	M8

## PVC/CPVC

Size (inch)	IPS Socket		Threaded NPT		ANSI Flanged				
	L	z	L	z	L	D1 (inch)	D4 (inch)	D5 (inch)	R (inch)
3/8	105	67	98	69	-	-	-	-	-
1/2	105	61	98	65	149	3.5	2.38	0.63	0.57
3/4	121	70	111	74	165	3.88	2.75	0.63	0.58
1	133	76	127	82	184	4.25	3.13	0.63	0.66
1 1/4	154	90	147	98	206	4.63	3.5	0.63	0.69
1 1/2	164	94	157	110	221	5	3.88	0.63	0.76
2	183	107	183	135	251	6	4.75	0.75	0.82

## ABS

Metric Socket		
d (mm)	L	z
16	92	64
20	95	64
25	110	72
32	123	79
40	146	94
50	157	95
63	183	107