



JOB NAME:	CONTRACTOR:
JOB LOCATION:	APPROVAL:
ENGINEER:	CONTRACTOR P.O.:
APPROVAL:	REPRESENTATIVE:

**M8E770V3-0\* - M8E770V6-0\* - M8E770V9-0\***

**30°**

**60°**

**90°**

**770V3/V6/V9 DIRECT MOUNT, 3-PC DIRECT MOUNT, 2-WAY STAINLESS STEEL V-BALL VALVE, SANITARY CONNECTION, NON-CAVITY FILLED BALL VALVE W ELECTRIC ACTUATOR**

**SIZES 1/2" TO 4"**

<b>*0*1</b> 12V AC/DC	<b>*0*2</b> 24V AC/DC	<b>*0*3</b> 100-240VAC
<b>*02*</b> POSITIONER	<b>*04*</b> BAT. BACKUP W POS	

### SPECIFICATIONS

The M8E770V3/M8E770V6/M8E770V9 V-ball pneumatic actuated packages feature the 770 non-cavity filled three-piece V-Port stainless steel ball valves with sanitary connections. The valve series are ISO 5211 direct mount, and come with a grounded ball and stem, and a Ra 15 finish. A grounded ball & stem is standard.

The Valbia VBM electric actuator has a rugged NEMA 4 die cast aluminum housing and features a raised or dome position indicator. In addition, the VBM series also incorporates dual voltage motors, two extra limit switches, a heater and thermostat, manual override, 1/2" conduit connections and a 75% duty cycle motor.

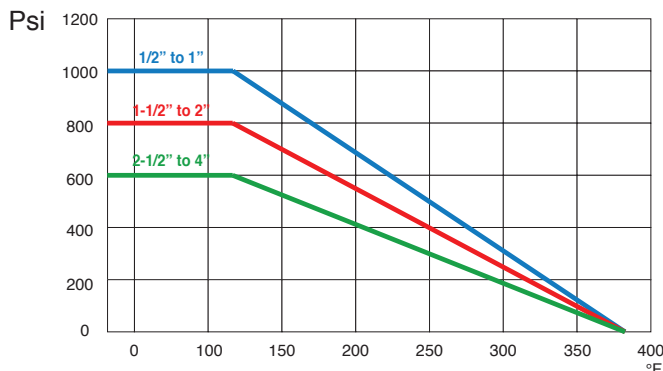
### ACTUATOR FEATURES

- Dual Voltages
- CSA, UL approved
- 24V AC/DC and 100-240V AC
- ISO 5211 dual patterns
- 75% Duty Cycle
- High-Strength, Die Cast Aluminum Powder Coated Housing
- Temperature Range -4°F to 131°F
- NEMA 4 Housing
- Two Auxiliary Switches Standard
- Torque limiter standard
- 1/2" Conduit connections




### VALVE FEATURES

- Stainless Steel, 3 Piece Direct Mount
- Full port, sizes 1/2" to 4"
- Non-Cavity Filled, sizes 1" to 4"  
Cavity Filled, sizes 1/2" to 3/4"
- ISO 5211 mounting pad with double "D" stem
- Temperature range -20°F to 450°F
- Working pressure 1000 psi WOG (1/2" to 1")  
800 psi WOG (1-1/2" to 2")  
600 psi WOG (2-1/2" to 4")
- Blow-out proof stem
- Anti-static Device
- International polishing to Ra 15 micron
- Tri-clamp style end connections
- Ball valves comply with standards: ISO 5211, ANSI B16.11, MSS SP-25, MSS SP-55
- Maintenance free live loaded double sealing stem

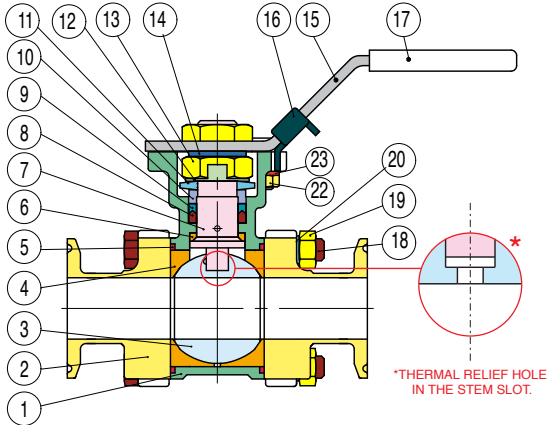
### PRESSURE TEMPERATURE CHART FOR 770V3/770V6/770V9



### V-BALL SERIES MODEL OPTIONS

	<b>90° V-BALL</b>
	<b>M8E770V9</b>
	<b>60° V-BALL</b>
	<b>M8E770V6</b>
	<b>30° V-BALL</b>
	<b>M8E770V3</b>

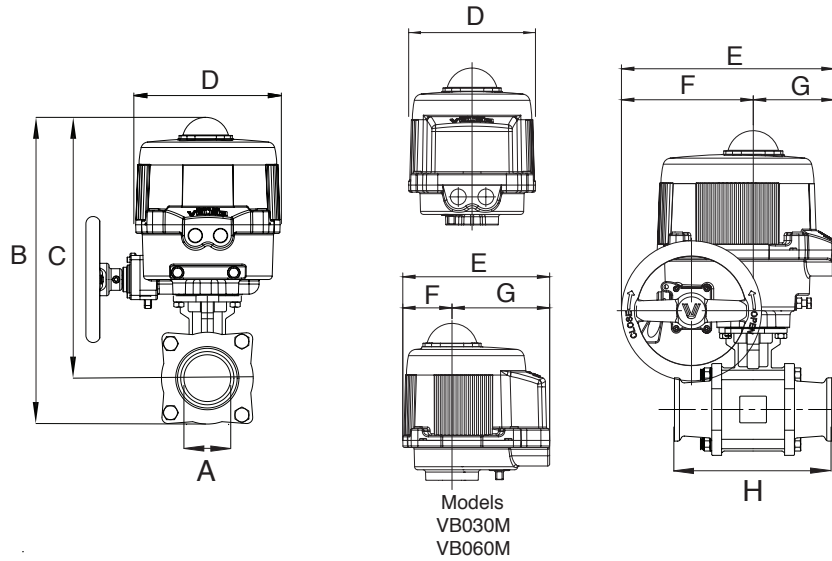
**BILL OF MATERIALS FOR 770V3/770V6/770V9**



N POS	PART NAME	MATERIAL	N PCS
1	BODY	CF8M	1
2	END CONNECTION	CF8M	2
3	BALL	SS316L	1
4	SEATS	P.T.F.E.	2
5	JOINT GASKET	P.T.F.E.	2
6	STEM SEAL	R.P.T.F.E.	1
7	STEM	SS316L	1
8	GLAND PACKING	P.T.F.E.	2
9	GLAND PACKING	P.T.F.E. + GLASS	1
10	GLAND BUSH	SS304	1
11	BELLEVILLE WASHER	SS301	2
12	STOP WASHER	SS304	1

N POS	PART NAME	MATERIAL	N PCS
13	STEM NUT	SS304	2
14	STEM WASHER	SS304	1
15	HANDLE	SS304	1
16	LOCKING DEVICE	SS304	1
17	HANDLE SLEEVE	VINYL	1
18	BOLT	SS304	4
19	BOLT NUT	SS304	4
20	BOLT WASHER	SS304	4
21	STOP PIN	SS304	1
22	PIN NUT	SS304	1
23	WASHER	SS304	1

**DIMENSIONS**

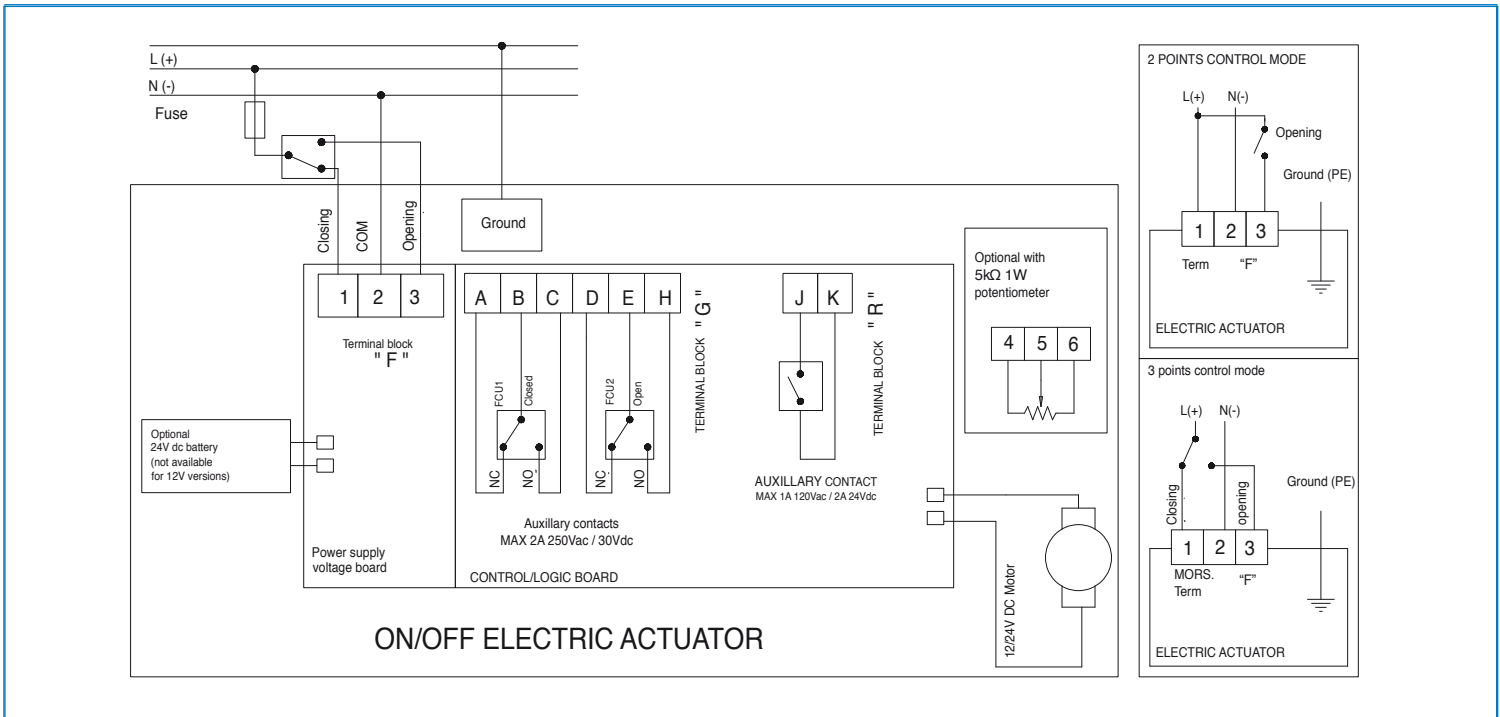


Size	A	B	C	D	E	F	G	H	ACT.
1/2"	0.37	9.12	8.62	5.37	6.10	3.63	2.47	3.50	VB015M
3/4"	0.62	9.41	8.85	5.37	6.10	3.63	2.47	4.00	VB015M
1"	0.87	10.72	10.05	6.34	7.36	2.48	4.88	4.50	VB030M
1-1/2"	1.37	12.63	11.71	6.93	7.76	2.48	5.28	5.51	VB060M
2"	1.87	13.02	12.01	6.93	7.76	2.48	5.28	6.25	VB060M
2-1/2"	2.37	15.23	13.95	10.63	10.48	6.50	3.98	6.85	VB110M
3"	2.87	15.70	14.31	10.63	10.48	6.50	3.98	7.60	VB110M
4" *	3.83	16.45	14.89	10.63	10.48	6.50	3.98	8.89	VB190M

\* available only on -02\* model

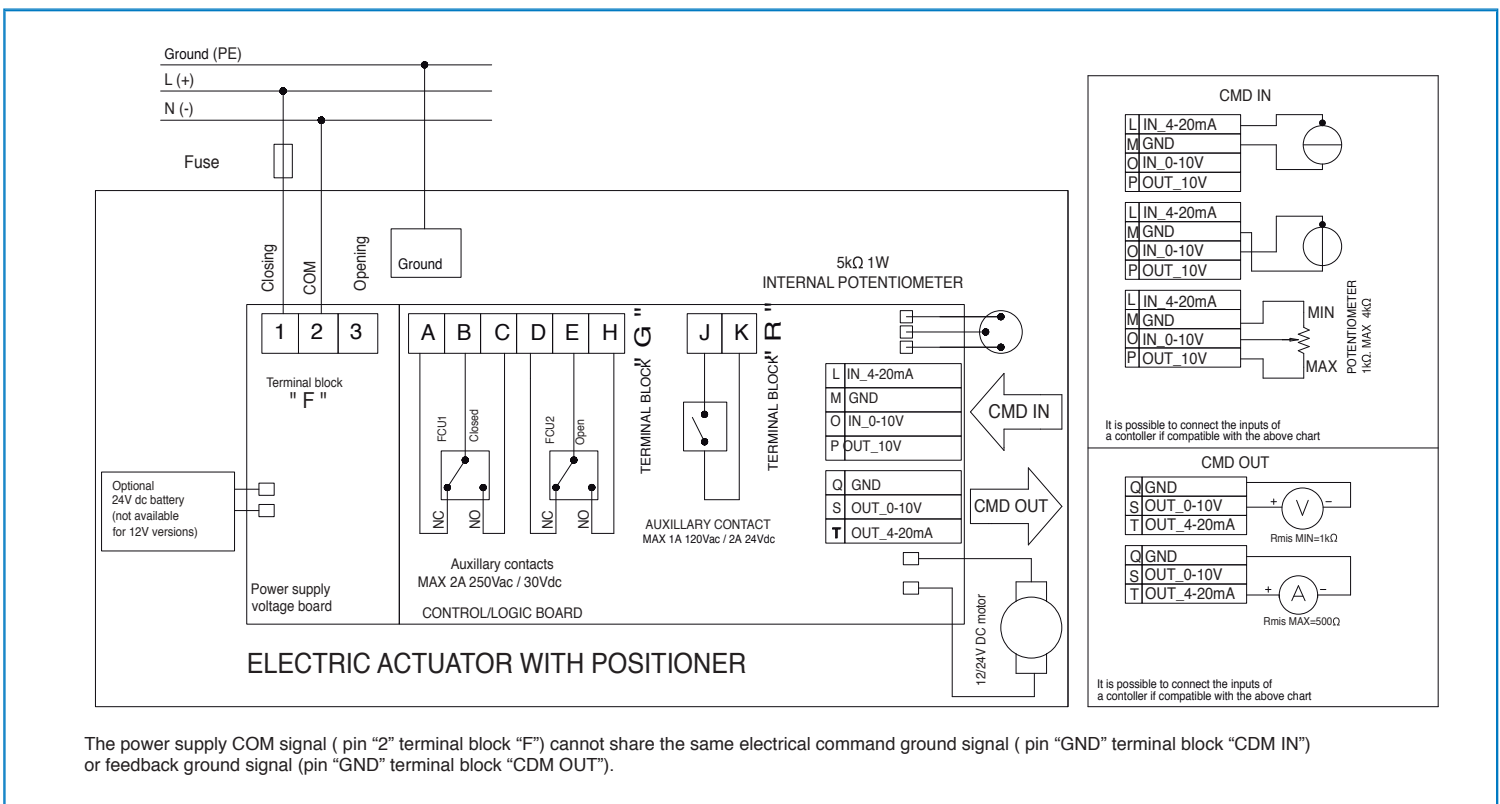
## ON/OFF WIRING DIAGRAM

12V AC/DC, 24V AC/DC & 100-240VAC



## POSITIONER WIRING DIAGRAM

12V AC/DC, 24V AC/DC & 100-240VAC



The power supply COM signal ( pin "2" terminal block "F" ) cannot share the same electrical command ground signal ( pin "GND" terminal block "CDM IN" ) or feedback ground signal ( pin "GND" terminal block "CDM OUT" ).

## CV VERSUS VALVE PERCENTAGE OPEN

Size	V-Ball Angle	Class VI S/O	Low %	Control Zone								Full Open
				0%	10%	20%	30%	40%	50%	60%	70%	
1/2"	30°	0.00	0.00	0.03	0.11	0.31	0.50	0.92	1.34	1.85	2.67	3.26
	60°	0.00	0.00	0.06	0.14	0.40	0.69	1.21	1.92	2.86	4.84	7.79
	90°	0.00	0.00	0.06	0.16	0.48	0.85	1.53	2.51	4.06	6.77	10.70
3/4"	30°	0.00	0.00	0.06	0.24	0.69	1.13	2.07	3.02	4.17	6.00	7.32
	60°	0.00	0.00	0.13	0.31	0.89	1.56	2.73	4.31	6.43	10.89	17.53
	90°	0.00	0.00	0.14	0.37	1.13	1.98	3.53	5.86	8.93	15.62	26.31
1"	30°	0.00	0.00	0.11	0.42	1.23	2.01	3.68	5.38	7.41	10.66	13.02
	60°	0.00	0.00	0.24	0.55	1.59	2.77	4.86	7.66	11.43	19.36	31.16
	90°	0.00	0.00	0.30	0.72	2.07	3.63	6.52	10.69	16.57	28.92	48.95
1-1/2"	30°	0.00	0.00	0.74	2.09	3.47	6.13	8.35	12.93	18.87	28.77	40.84
	60°	0.00	0.00	0.61	1.74	3.27	7.45	10.31	16.52	31.06	48.26	79.82
	90°	0.00	0.00	0.97	2.03	3.96	9.13	13.27	22.31	43.31	70.82	130.16
2"	30°	0.00	0.00	1.31	3.71	6.16	10.89	14.85	22.99	33.55	51.15	72.60
	60°	0.00	0.00	1.09	3.10	5.81	13.24	18.34	29.37	55.22	85.80	141.90
	90°	0.00	0.00	1.04	3.64	7.11	16.46	24.50	41.37	83.67	133.78	243.02
2-1/2"	30°	0.00	0.00	2.14	6.06	10.06	17.79	24.26	37.55	54.80	83.55	118.59
	60°	0.00	0.00	1.78	5.07	9.49	21.63	29.95	47.98	90.20	140.16	231.80
	90°	0.00	0.00	2.36	7.02	12.99	29.97	42.85	71.86	141.57	230.24	423.69
3"	30°	0.00	0.00	2.84	7.52	15.60	25.49	37.16	54.90	76.23	108.40	141.89
	60°	0.00	0.00	3.60	11.73	21.36	33.25	53.10	96.62	144.55	233.32	360.96
	90°	0.00	0.00	4.64	15.49	29.40	46.12	75.73	144.02	222.73	385.54	658.35
4"	30°	0.00	0.00	5.27	13.95	28.94	47.28	68.93	101.84	141.41	201.08	263.21
	60°	0.00	0.00	6.68	21.75	36.92	61.68	98.51	179.24	268.15	432.83	669.60
	90°	0.00	0.00	8.40	28.29	52.36	83.74	137.57	261.50	405.31	703.95	1241.30