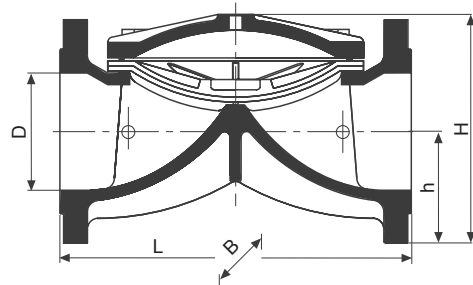


# ELECTRIC FLOAT CONTROL VALVE

## RAF 1031



### Description

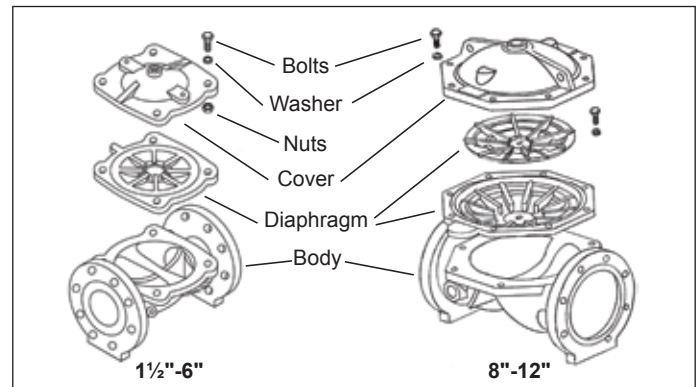
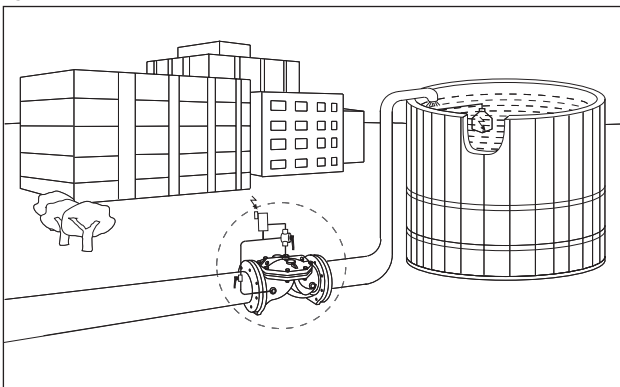
RAF 10-31 is a normally closed electric float control valve, activated by line pressure. The electric circuit is switched by a float hanging over the water surface at the desired height. when the water level drops below the float, the electric circuit is switched on and opens the RAF 10-31 through a solenoid valve. As the rising water reaches the maximum level, the solenoid is deenergized and the RAF 10-31 closes. The RAF 13 is a non modulating service valve, operating as an on/off valve.

### Dimensions

Nom. Dia.		L	H	B	h	Weight	Connections
mm	inch	mm				kg	
* 40	1 1/2	159	80	96	29	1.8	Thread/Grooved
* 50	2	190	100	125	38	3.9	Thread/Grooved
* 50	2	190	159	165	76	7.9	Flange
65	2 1/2	216	110	125	46	5.0	Thread/Grooved
65	2 1/2	216	173	185	80	10.1	Flange
80-50-80	3-2-3	230	125	125	50	5.0	Thread/Grooved
80-50-80	3-2-3	230	175	200	100	11.0	Flange
80-65-80	3-2 1/2-3	244	127	138	50	5.4	Thread/Grooved
80-65-80	3-2 1/2-3	216	192	200	92	11.4	Flange
80	3	290	138	200	50	10.4	Thread/Grooved
* 80	3	283	200	200	100	17.5	Flange
100-80-100	4-3-4	283	222	222	111	20.1	Flange
100	4	346	220	230	60	16.5	Thread/Grooved
* 100	4	305	220	230	99	25.5	Flange
125-100-125	5-4-5	305	243	250	120	29.5	Flange
150-100-150	6-4-6	325	285	285	143	35.8	Flange
* 150	6	406	295	300	142	49.5	Flange
* 200	8	470	383	354	160	71.0	Flange
250	10	635	430	464	197	109.0	Flange
300	12	749	474	480	234	140.0	Flange

\* Note : Standard Stock

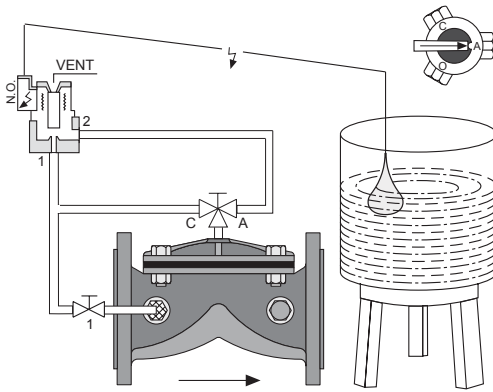
### Typical Application



**RAF 10-31** electric float controls the water level of a water tank. The valve can be located also above the upper water level of the tank. Use RAF 10-31 for water level control. The valve is best for remote or local control of reservoirs and water tanks level control when electricity is available. Due to its simple design it is virtually maintenance free.

# ELECTRIC FLOAT CONTROL VALVE

## RAF 1031



RAF 10-31 Electric Float Control Valve

### RAF 10-31 Control mode

RAF Electric Float Control Valve is activated by line pressure and controlled by a three-way solenoid valve. The RAF 10-31 is normally closed. An electric circuit is switched ON/OFF by a dry contact float hanging over the water surface. When the float hangs by its cable vertically above the water surface, the circuit is connected, the solenoid is energized and the RAF valve fully opens. When the float by its cable vertically above the water surface, the circuit is disconnected, the solenoid is de-energized and the RAF is closed. In case of power failure, the RAF 10-31 remains tight-close to avoid uncontrolled spill of water.

### Automatic Operation:

Position the selecting cock on AUTO. When the water level is low, the electric circuit is connected. The solenoid is energized. The RAF's control chamber drains out. The RAF is fully open. When the water level rises and turns over the electric float, the electric circuit turns off and de-energizes the solenoid. Line pressure is then connected to control chamber through solenoid. The R AF 10-31 closes & stops the water flow into the tank.

### Manual Operation:

To open the valve overriding the float place the selecting cock in Open position. To close the valve overriding the float place the selecting cock in Close position.

### Recommended Working Conditions Range

Nom. Dia.		Inlet Pressure, Bar		*Kv factor Fully opened Valve	Control Chamber Volume	
mm	inch	Min.	Max.	RAF	Liter	Gallon
* 40	1.5	0.8	16	40	0.06	0.016
* 50	2	0.7	16	70	0.08	0.021
65	2.5	0.7	16	100	0.16	0.042
80-50-80	3-2-3	0.7	16	72	0.08	0.021
80-65-80	3-2.5-3	0.7	16	130	0.16	0.042
* 80	3	0.6	16	170	0.3	0.079
100-80-100	4-3-4	0.6	16	170	0.3	0.079
* 100	4	0.4	16	290	0.7	0.185
125-100-125	5-4-5	0.4	16	290	0.7	0.185
150-100-150	6-4-6	0.4	16	300	0.7	0.185
* 150	6	0.4	16	490	1.5	0.396
* 200	8	0.4	16	790	3.5	0.924
250	10	0.3	16	1400	7.6	2.006
300	12	0.3	16	1800	7.6	2.006

$Q = Kv\sqrt{\Delta P}$

$Q = \text{Flow rate, m}^3/\text{h}$   $\Delta P = \text{Head loss across the valve, bars}$

$Cv = 1.16Kv$

\* Note : Standard Stock

### Recommended Flow

Nom. Dia.		Flow Rate m <sup>3</sup> /h	
mm	inch	Nomal	Intermitent
40	1.5	25	35
50	2	45	60
65	2.5	60	80
80-50-80	3-2-3	50	60
80-65-80	3-2, 5-3	70	100
80	3	90	120
100-80-100	4-3-4	90	120
100	4	150	180
125-100-125	5-4-5	150	200
150-100-150	6-4-6	150	200
150	6	320	400
200	8	550	750
250	10	950	1150
300	12	1200	1700

### Technical Specifications

- Body and Cover: Cast iron with Rilsan (Nylon 11) coating. Epoxy or enamel coating are available by request.
  - Bolts, Nuts and Washers : Zinc plated Steel.
  - Diaphragm: Natural Rubber reinforced with Nylon Fabric.
- Working Pressure: Up to 16 bars.  
Temperature Rating: -10°C to 80°C

### Standard RAF 10-31:

- Basic RAF valve Rilsan Coated
- Self-cleaning screen filter
- 3 way 24V AC N.O. Solenoid valve 50/60Hz
- Dry contact electric float w/10m, cable
- Selecting cock valve (3 port ball valve)
- Reinforced plastic tubing

### Please Specify:

- Maximum Operating pressure(closed valve).
- Electric source data if different than standard.

### Adjustment

Fix the float's cable to the reservoir's inner wall at the desired level. This fixation point will be in between minimum and maximum levels, allowing the float to turn up and down. The length of electric cable left after the fixation point will define the difference between minimum and maximum water level pre set.

### Special Features:

- Enamel coating
- Large capacity external filter
- 110V, 220V AC and 9V, 12V, 24V, DC
- Copper or stainless steel tubing

