

# 657M Series

## Diaphragm Actuator

### Sizes 30-70

The 657M Actuator is used for the automatic operation of control valves, and is designed as a direct acting, spring-opposed diaphragm. By varying the pneumatic loading pressure on the actuator diaphragm, the valve plug within the body will open, close or throttle.

When the loading pressure is increased within a direct-acting diaphragm actuator the actuator stem moves downward, compressing the spring. A decrease in pressure will cause actuator stem to move upward with the decompression of the spring (Figure 2).

The valve plug action of the 657M Actuator can be set to “push down to close” or “push down to open” and will then either open or close the control valve upon failure of the loading pressure. When the loading pressure fails, the diaphragm of the actuator moves to the extreme upward position and performs the selected action.

All accessories used with the 657M have individual manuals which should be consulted regarding installation, operation and maintenance.



**657M Series Actuator**

### SPECIFICATIONS

Actuator size	30	34	40	45	46	50	60	70	
Nominal Effective Area (Sq. In.) (Diaphragm)	46	69	69	105	156	105	156	220	
Yoke Boss Size Diameter (In.)	2-1/8	2-1/8	2-13/16	2-13/16	2-13/16	3-9/16	3-9/16	3-9/16	
Valve Body Stem Size (In.)	3/8	3/8	1/2	1/2	1/2	3/4	3/4	3/4	
Maximum Allowable Stem Force (Lbs)	2300	2300	2700	5650	7550	5650	6800	8800	
Maximum Travel (In.)	3/4	1-1/8	1-1/2	2	2	2	2	3	
Maximum Diaphragm Case Pressure (PSI)*	140	75	75	60	50	60	50	65	
Approximate Weight	Kg	16	22	23	37	49	41	53	107
	Lbs.	36	48	51	82	107	92	116	235
*Maximum allowable diaphragm case pressure may be used only when maximum allowable stem forces are not exceeded.									



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