

667M Series

Diaphragm Actuator

Sizes 30-70

The 667M Series is a reverse-acting, spring-opposed diaphragm actuators providing 3" (76 mm) of maximum travel. Although typical pressure ranges are 3 to 15 psi (0, 21 to 1,03 bar) or 6 to 30 psi (0,41 to 2,07 bar), additional pressure ranges are available upon request. The 667M Actuator is used for automatic operation of control valves, effective in applications where throttling or on/off service is required.

The actuator positions the valve plug in the valve in direct response to the varying loading pressure on the actuator diaphragm. When the signal pressure increases to the lower diaphragm casing, the actuator stem is forced upward, compressing the spring. When the signal pressure is reduced, the spring moves the actuator stem in the downward direction. If the signal pressure should fail, the spring will force the stem downward, providing "fail-closed action" for "push down to close" valves.



667M Actuator

SPECIFICATIONS

Refer to the Specifications Table for the 667M Actuator, and to the nameplate on your actuator for settings specific to your equipment.

It is important not to exceed the Maximum Diaphragm Pressure as listed in the Specifications Table when the actuator is set at less than full travel. If this pressure is exceeded before the travel stop comes in contact with the upper diaphragm plate, the maximum allowable valve stem load may be exceeded.

The Maximum Excess Diaphragm Pressure as listed in the Specifications Table is the pressure that can be added when the actuator is set at full travel. The sum of the pressure which is required to fully stroke the valve and the excess pressure added when the actuator is against the stop must not exceed the "Maximum Diaphragm Casing Pressure" as outlined in the Specifications Table.



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667M SERIES DIAPHRAGM ACTUATOR

SPECIFICATIONS (CONT'D)

Specification		Actuator Size								
		30	34	40	45	46	50	60	70	
Nominal Effective Area	Sq. In.	46	69	69	105	156	105	156	220	
	Sq. cm	297	445	445	677	1006	677	1006	1419	
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	
	mm	54	54	71	71	71	90	90	90	
Valve Stem Size	In.	3/8	3/8	1/2	1/2	1/2	3/4	3/4	3/4	
	mm.	9.5	9.5	12.7	12.7	12.7	19.1	19.1	19.1	
Max. Allowable Output Thrust	Lbs	2300	2300	2700	5650	7550	5650	6800	8800	
	N	10,230	10,230	12,010	25,131	33,582	25,131	30,246	39,142	
Maximum Travel ²	Standard	In.	3/4	3/4	1-1/2	2	2	2	2	3
		mm	19	19	38	51	51	51	51	76
	Top-Loaded	In.	---	3/4	---	3/4	---	---	1-1/8	---
		mm	---	19	---	19	---	---	29	---
Max. Diaphragm Pressure to Stroke Actuator	Psig	40	45	45	50	45	50	45	40	
	Bar	2.8	3.1	3.1	3.4	3.1	3.4	3.1	2.8	
Max. Excess Diaphragm Pressure	Psig	70	45	45	30	15	30	15	15	
	Bar	4.8	3.1	3.1	2.1	1.0	2.1	1.0	1.0	
Max. Diaphragm Case Pressure ¹	Psig	110	90	90	65	55	65	55	55	
	Bar	7.6	6.2	6.2	4.5	3.8	4.5	3.8	3.8	
Approximate Weight	Lb	40	60	56	95	125	97	125	254	
	Kg	18	27	25	43	57	44	57	115	

1. Maximum diaphragm casing pressure must not be exceeded, and must not produce a force on the actuator stem greater than the maximum allowable actuator output thrust or the maximum allowable valve stem load.

2. Actuator travel may be less than the value specified after being connected to the valve.