

Type 05 Air-O-Motor Actuators



Function

Type 05 Air-O-Motor actuators, thrust or lever type, are power devices which operate on a small air signal from a controller and convert this signal into mechanical motion.

The force developed exerts a straight. Downward thrust, or operates a reversible lever working on a pivot. These actions operate final control elements such as rotary shaft valves, dampers, louvers and butterfly valves.

Description

Both thrust and lever model actuators have cast aluminum diaphragm cases and yokes.

The Air-O-Motor actuator diaphragms are neoprene. *The clevis-type connector and stem are zinc-plated steel. The spring is totally enclosed and corrosion resistant.

- Reg U.S. Patent Office



Figure 1 – Lever Model



Figure 2 – Thrust Model



Figure 3 – Lever Model with Side mounted positioner.

Specifications	
Operating Conditions	
Ambient Temperature Range -29°C to 71°C (-21°F to 160°F)	
Performance	
Travel	Refer to Table 1
Force	Refer to Table 2
Spring Range	Refer to Table 2
Design	
Air Supply	Normal Air-To-Diaphragm 18 or 35 psig (124 or 241 kPa); 50 psig (344.7 kPa) maximum for side mounted or no positioner
Mounting	Both models, thrust and lever are constructed for base mounting. A right angle bracket kit can be supplied if wall or vertical mounting is required.
Dimensions	Wall bracket: Refer to Figure 8 Air-O-Motor: Refer to Figure 9

Table 1 - Travel in Inches (Millimeters)

Lever Model	Lever Hole	A	B	C	D	E	F	G	H
		3.24	4.32	5.40	6.48	7.57	8.63	9.72	10.8
		(82.2)	(109.9)	(137.3)	(164.7)	(152.0)	(219.2)	(237.6)	(274.4)

Thrust Model - Travel 1 - 1/2 (38.1)

TABLE 2 - Force (Lbs)

Spring Range	Full Travel						Zero Travel		
	3-15	5-13			7-18		3-15	5-13	7-18
Air Pressure	18	18	25	35	25	35	0	0	0
Thrust Model	120	200	480	880	280	680	120	200	280
Lever Model									
Lever Hole									
A	55	90	220	405	130	310	55	90	130
B	41	70	165	305	95	235	41	70	95
C	33	55	130	245	80	190	33	55	80
D	28	45	110	200	65	155	28	45	65
E	24	40	95	175	55	135	24	40	55
F	21	35	80	150	50	115	21	35	50
G	18	30	75	135	45	105	18	30	45
H	16	25	65	120	40	95	16	25	40

Note: For Rotary-actuated final control elements, determine available torque using brochure PIB-16, "Air-O-Motor Actuator Size Selection"

Thrust Model

This model has direct action which moves the actuator stem downward with increasing air pressure. Thrust models provide more force with less stroke.

Level Model

The action of lever models is reversible. Direct action (Figure 6) requires the actuator stem to be connected between the pivot and the take-off. The actuator has reverse action (Figure 7) when the lever is connected so that the pivot is between the actuator stem and the load take-off.

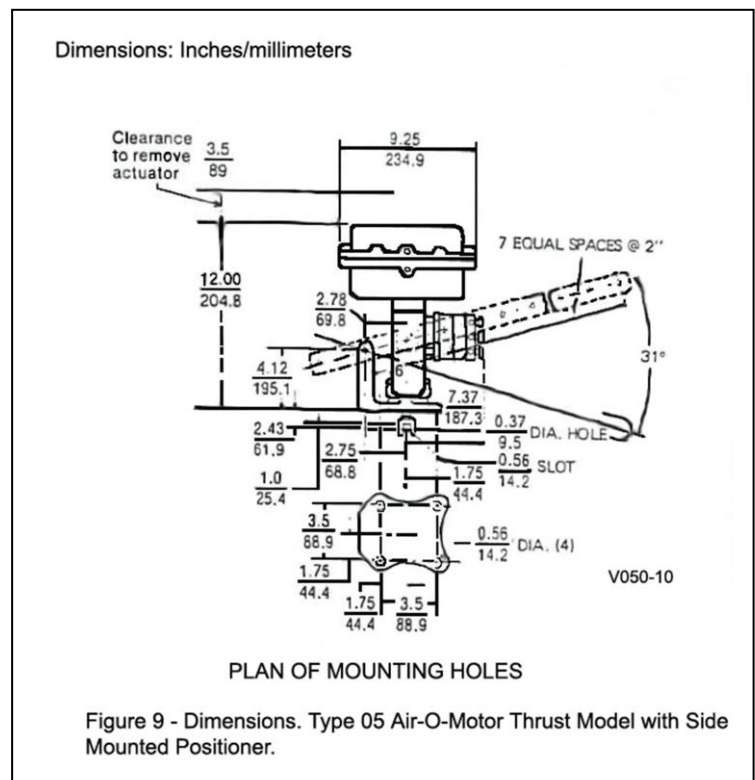
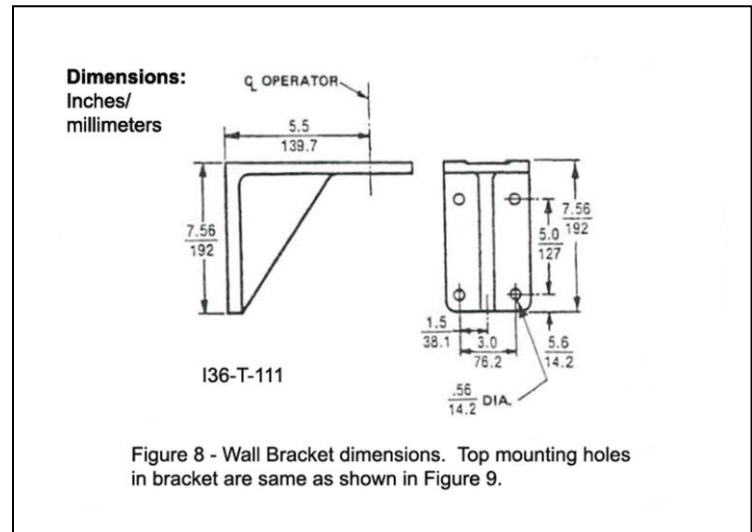
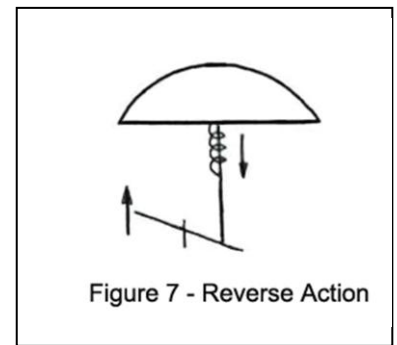
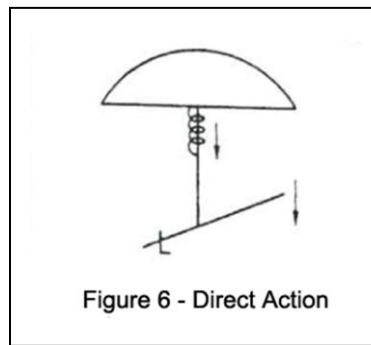
Optional Accessories

Positioner

Nor'East pneumatic, electro-pneumatic.

Handwheels

Top Mounted (air-to-close-only)
NOTE: Also available are accessories such as Transducer, Micro Switch precision switches, air regulators and boosters.



Ordering Information

Please Specify:

- all required accessories

Instructions

- Select the Key Number
- Make one Selection each from Tables I through III
- Select the proper number of digits in each table

Key Number

Key Number	Type		
05.....		865K1	.

Table I Model, Spring Range	Model	Actuator PSI			
	Lever	5 to 13		A	•
		7 to 18		B	•
		3 to 15		C	•
	Thrust	5 to 13		D	•
		7 to 18		E	•
		3 to 15		F	•

Table II Configuration	Plain.....	1	•
	Handwheel.....	2	•

Table III	Mounting		
	Plain.....	1	•
	Handwheel.....	2	•