

SIZE PROJECTIONS FOR FACTORY MOUNTED EXTERNAL ACTUATORS ATTACHED TO FIRE/SMOKE AND SMOKE DAMPERS

MODELS: FS (Non-Integral Sleeve Design), S, FT, FA, TA, and SA Series

Fire/smoke and smoke dampers are often mounted in confined spaces. This document is intended to provide APPROXIMATE actuator size projection information for externally mounted actuators. Depending on the height of the damper and the actuator selected, the actuator may extend above or below the damper. The following data is based on ABI's standard actuator orientations. Consult the factory if a non-standard orientation is required. Non-standard actuator orientations must be clearly stated at order entry since re-orientation of the actuator after it has been mounted can be difficult. Larger damper assemblies can have actuators on both sides of the damper sleeve.

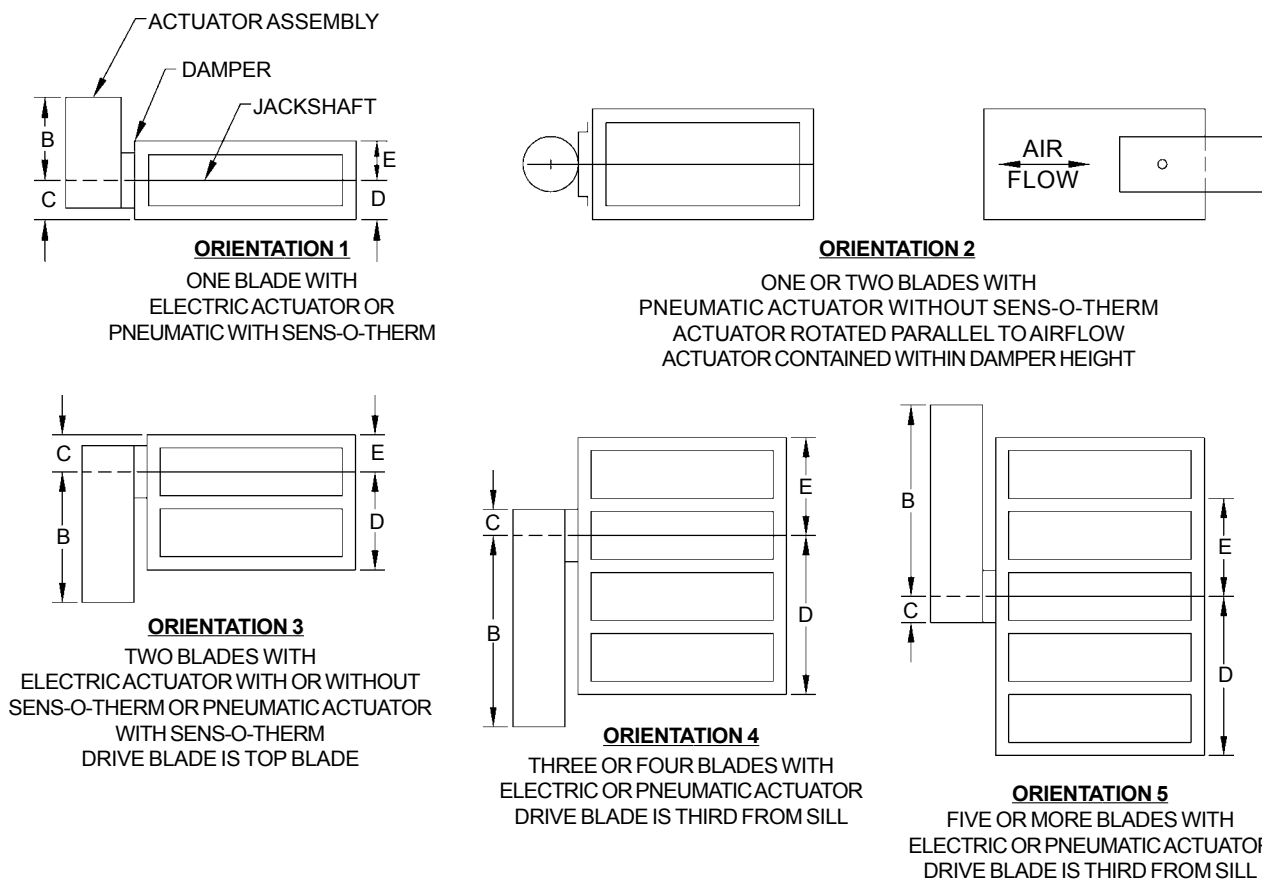
INSTRUCTIONS FOR DETERMINING ACTUATOR SIZE PROJECTIONS

- Step 1 – Determine damper model, damper height and actuator model.
 Step 2 – Determine the damper's jackshaft location and actuator orientation from the "Jackshaft Location Table". Actuators are connected to jackshafting for all fire/smoke and smoke dampers.
 Step 3 – From the "Actuator Orientations" drawing below, determine if the long part of the actuator (dimension "B") points up or down.
 Step 4A – When the "Jackshaft Location Table" specifies Orientations 1 or 5 (actuator points up), then subtract damper dimension "E" from actuator dimension "B". If this number is positive, then this is how far the actuator extends above the damper. If this number is negative, then the damper is taller than the actuator.
 Step 4B – When the "Jackshaft Location Table" specifies Orientations 3 or 4 (actuator points down), then subtract damper dimension "D" from actuator dimension "B". If this number is positive, then this is how far the actuator extends below the damper. If this number is negative then the damper is taller than the actuator,

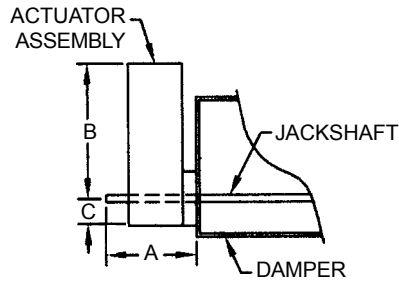
Example:

Will a Honeywell ML4115 actuator extend above or below an 18" x 18" Model FS-Series fire/smoke damper?

From the "Jackshaft Location Table", the jackshaft will be 13.70" above the sill of the damper (dimension "D") and the actuator will be mounted per Orientation 4. Actuator Orientation 4 shows the long part of the actuator pointed down (dimension "B"). From the "Actuator Size Table", the "B" dimension for the ML4115 actuator is 7". When dimension "D" is subtracted from dimension "B", a negative number (-6.70") results, therefore the damper is taller than the actuator, and the actuator does not extend beyond the bottom of the damper.



ACTUATOR ORIENTATIONS



NOTE: ACTUATOR ASSEMBLY DIMENSIONS HAVE BEEN "ROUNDED-UP" AND MAY BE SLIGHTLY LESS. CONSULT FACTORY IF MORE EXACTING DIMENSIONS ARE REQUIRED.

Actuator Model	A	B	C
Honeywell ML-4202, ML-4302, ML-8202, ML-8302, ML-4115, ML-8115, MS-4209 MS-4309, MS-8209, MS-8309	5½	7	2½
Honeywell MS-4120, MS-8120 Siemens GGD121, GGD221, GGD321 Belimo FSNF120, FSNF24	6	12	3
Siemens # 3; 331-4830 Siemens # 4; 331-2977, 331-2997	9	12	4
Siemens # 6; 331-2996	12½	18½	4½

ACTUATOR SIZE TABLE

Nominal Height	Models FS, FT, S-Series			Models FA, TA, SA-Series		
	"D"	"E"	Actuator Orientation	"D"	"E"	Actuator Orientation
8	3.40	4.60	1 or 2	3.00	5.00	1 or 2
9	4.40	4.60	1 or 2	3.50	5.50	1 or 2
10	4.90	5.10	1 or 2	3.50	6.50	1 or 2
11	7.30	3.70	2 or 3	3.80	7.20	1 or 2
12	8.20	3.80	2 or 3	5.00	7.00	1 or 2
13	8.40	4.60	2 or 3	5.50	7.50	1 or 2
14	9.10	4.90	2 or 3	8.90	5.10	2 or 3
15	9.10	5.90	2 or 3	9.40	5.60	2 or 3
16	10.00	6.00	2 or 3	9.40	6.60	2 or 3
17	10.40	6.60	2 or 3	9.40	7.60	2 or 3
18	13.70	4.30	4	10.90	7.10	2 or 3
19	14.60	4.40	4	11.40	7.60	2 or 3
20	14.80	5.20	4	14.80	5.20	4
21	14.80	6.20	4	15.25	5.75	4
22	15.80	6.20	4	15.00	7.00	4
23	16.40	6.60	4	15.25	7.75	4
24	13.90	10.10	4	16.75	7.25	4
25	14.80	10.20	4	17.25	7.75	4
26	14.90	11.10	4	14.90	11.10	4
27	15.40	11.60	4	15.40	11.60	4
28	15.90	12.10	4	15.90	12.10	4
29	16.40	12.60	4	15.25	13.75	4
30	14.00	16.00	5	16.90	13.10	4
31	14.80	16.20	5	14.50	16.50	5
32	14.80	17.20	5	15.00	17.00	5
33	15.50	17.50	5	15.50	17.50	5
34	16.00	18.00	5	16.00	18.00	5
35	16.50	18.50	5	16.50	18.50	5
36	14.20	21.80	5	17.00	19.00	5
37	14.80	22.20	5	14.60	22.40	5
38	14.80	23.20	5	15.10	22.90	5
39	15.70	23.30	5	15.60	23.40	5
40	16.30	23.70	5	15.25	24.75	5
41	13.80	27.20	5	16.60	24.40	5
42	14.30	27.70	5	17.10	24.90	5
43	14.80	28.20	5	14.75	28.25	5
44	14.80	29.20	5	15.25	28.75	5
45	15.80	29.20	5	15.75	29.25	5
46	16.30	29.70	5	15.25	30.75	5
47	13.90	33.10	5	16.75	30.25	5
48	14.80	33.20	5	14.40	33.60	5

JACKSHAFT LOCATION TABLE