

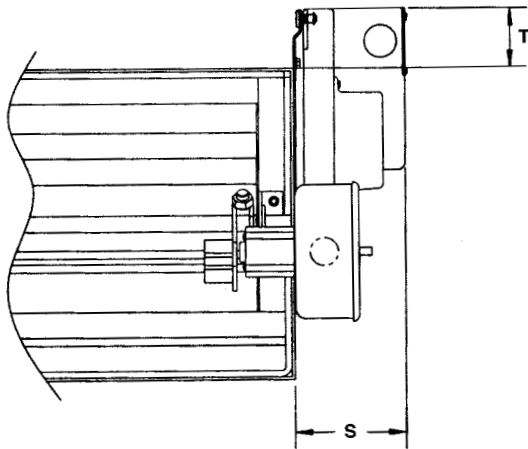
## ACTUATORS AND ACCESSORIES SPACE ENVELOPES FOR ALL FIRE AND SMOKE DAMPERS

Externally mounted actuators require space outside the damper sleeve. The "S" dimension is the "side" clearance, the "T" dimension is the "top" clearance and the "B" dimension is the bottom clearance required for the various actuators approved for use with Ruskin fire/smoke dampers. The space envelope drawings show actuators and accessories mounted on the right hand side when viewed from the actuator side of the wall/floor. Ruskin fire/smoke dampers can be rotated or turned over to accommodate the application. If the actuator must be mounted on top or bottom, select the FSD60V. The dimensions shown are "worse case."

All Combination Fire/Smoke and Smoke damper assemblies having more than one actuator must have all actuators wired to a single heat actuated device, for simultaneous closure of all sections. All multiple actuator wiring is to be done in the **field** and shall be in accordance with applicable codes, ordinances, and regulations.

**(Consult Ruskin for complete factory wiring option)**

### ALL H2000, H2024, MS4209 AND MS8209 EQUIPPED DAMPERS 15" (381) HIGH AND UNDER

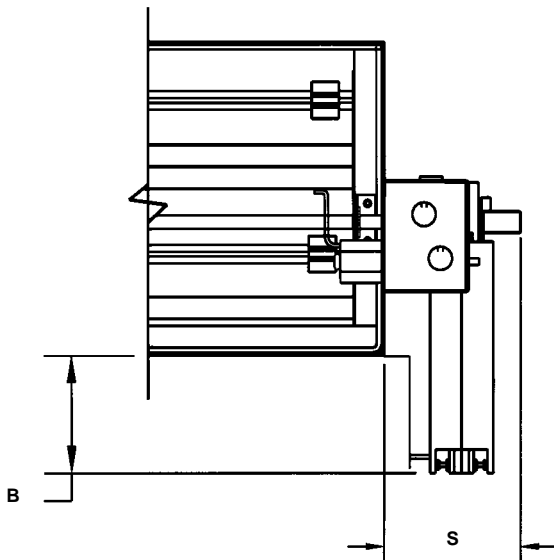


ACTUATORS	S	B	T (see note)
ML4202, ML8202	4" (102)	0"	0"
H2000, H2024	4" (102)	0"	0"
MS4209, MS8209	4" (102)	0"	0"

**NOTE:**

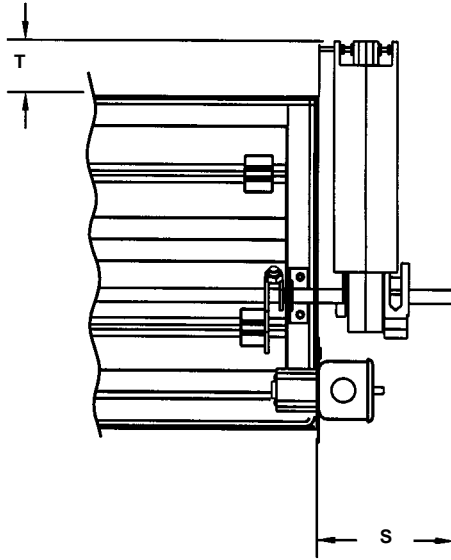
Add 1" (25) to "T" dimension for every 1" (25) damper height is less than 15" (381). For example, the "T" dimension is 1" (25) on an 14" (356) high damper, 2" (51) on a 13" (330) high damper, etc.

### ALL OTHER ELECTRIC ACTUATORS: 10" (254) HIGH AND UNDER



ACTUATORS	S	B	T
GGD221	5" (127)	6" (152)	0"
MS4120	5" (127)	6" (152)	0"
FSNF120	5" (127)	6" (152)	0"
MS8120	5" (127)	6" (152)	0"

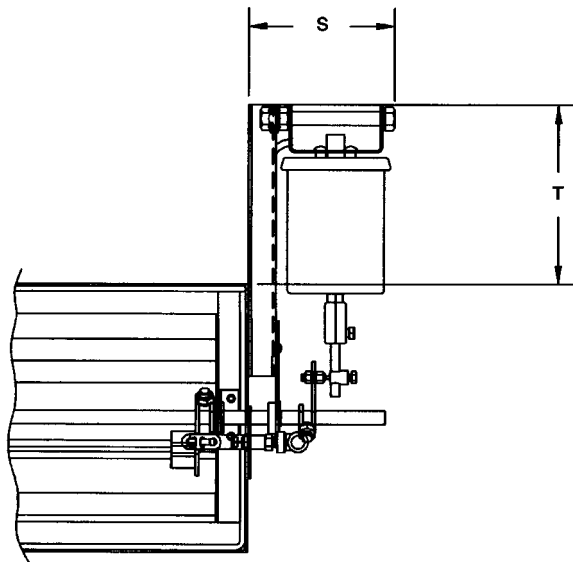
**ALL OTHER ELECTRIC ACTUATORS:  
DAMPERS OVER 10" (254) HIGH**



ACTUATORS	S	B	T (see note)
GGD221	5" (127)	0"	7" (178)
MS4120	5" (127)	0"	7" (178)
FSNF120	5" (127)	0"	7" (178)
MS8120	5" (127)	0"	7" (178)

**Note:** Reduce "T" dimension by 1" (25) for every 1" (25) damper height exceeds 10" (254). For example, the "T" dimension would be 5" (127) on a 12" (305) high damper.

**ALL PNEUMATIC ACTUATORS: 10" (254) HIGH AND UNDER**



ACTUATORS	S	B	T (see note)	
331-4827	5" (127)	0"	9" (229)	
331-2961	8" (203)	0"	13" (330)	11" (279)
331-3060	9" (229)	0"	16" (406)	14" (356)

**Note:** Increase "T" dimension by 1" (25) for every 1" (25) damper height less than 10" (254). For example, the "T" dimension would be 10" (254) on a 9" (229) high damper utilizing a 331-4827.

**ALL PNEUMATIC ACTUATORS: 10" (254) HIGH AND OVER**

For dampers over 10" (254) high use the chart above and reduce the "T" dimension by 1" (25) for every 1" (25) damper height greater

than 10" (254). For example, the "T" dimension would be 8" (203) on an 11" (279) high damper utilizing a 331-4827.



3900 Dr. Greaves Rd.  
Kansas City, MO 64030  
(816) 761-7476  
FAX (816) 765-8955  
www.ruskin.com