

Actuators for FSD-3V, SSD-3V, FD-MB-3V and FDD-MB-3V Dampers

@ 250F, 2000fpm, 4 in.W.G. static pressure

Power Supply	Actuator Type	Mounting	Size Limitation Per Actuator
Pneumatic (25PSI)	Siemens #3, 331-4826	Internal / External	6 sq.ft., 36" w x 48" h
	Siemens #4, 331-2961	Internal / External	12 sq.ft., 36" w x 48" h
Electric (24VAC)	Honeywell MS8104	Internal / External	6 sq.ft., 36" w x 48" h
	Honeywell MS8109	Internal / External	9 sq.ft., 36" w x 48" h
	Honeywell MS8120F	Internal / External	12 sq.ft., 36" w x 48" h
		External	18 sq.ft., 72" w x 48" h (two sections per actuator)
	Belimo FSLF24	Internal / External	4 sq.ft., 36" w x 48" h
	Belimo FSNF24	Internal / External	12 sq.ft., 36" w x 48" h
	Siemens GND-126	Internal / External	4 sq.ft., 36" w x 48" h
	Siemens GGD-121-1	Internal / External	12 sq.ft., 36" w x 48" h
Electric (120VAC)	Honeywell MS4104	Internal / External	6 sq.ft., 36" w x 48" h
	Honeywell MS4109	Internal / External	9 sq.ft., 36" w x 48" h
	Honeywell MS4120F	Internal / External	12 sq.ft., 36" w x 48" h
		External	18 sq.ft., 72" w x 48" h (two sections per actuator)
	Belimo FSLF120	Internal / External	4 sq.ft., 36" w x 48" h
	Belimo FSNF120	Internal / External	12 sq.ft., 36" w x 48" h
	Siemens GND-226	Internal / External	4 sq.ft., 36" w x 48" h
	Siemens GGD-221-1	Internal / External	12 sq.ft., 36" w x 48" h
Electric (230VAC)	Honeywell MS4604	Internal / External	6 sq.ft., 36" w x 48" h
	Honeywell MS4609	Internal / External	9 sq.ft., 36" w x 48" h
	Honeywell MS4620F	Internal / External	12 sq.ft., 36" w x 48" h
		External	18 sq.ft., 72" w x 48" h (two sections per actuator)
	Belimo FSLF230	Internal / External	4 sq.ft., 36" w x 48" h
	Belimo FSNF230	Internal / External	12 sq.ft., 36" w x 48" h
	Siemens GND-326	Internal / External	4 sq.ft., 36" w x 48" h
	Siemens GGD-321-1	Internal / External	12 sq.ft., 36" w x 48" h

NOTE:

- 230VAC ACTUATORS ARE SPECIAL ORDER. CONTACT FACTORY FOR LEAD TIME.
- ACTUATORS MAY OPERATE A SINGLE DAMPER SECTION ONLY, EXCEPT FOR MS4120, MS4620, AND MS8120 AS NOTED IN CHART. DAMPER SECTIONS MUST BE ORIENTED SIDE BY SIDE TO BE OPERATED BY A SINGLE ACTUATOR.
- SIEMENS GGD AND GND SERIES ACTUATORS AVAILABLE ON SPECIAL REQUEST, CONTACT FACTORY FOR LEAD TIME AND PRICING.

ALL METRIC DIMENSIONS () ARE SOFT CONVERTED. IMPERIAL DIMENSIONS ARE CONVERTED TO METRIC AND ROUNDED TO THE NEAREST MILLIMETER.

PROJECT:		
ENGINEER:		
CUSTOMER:		256128
SUBMITTAL DATE:		2014/02/25
SPEC. SYMBOL:		FSD, SSD FD-MB, FDD-MB ACTUATOR SELECTION REFERENCE CHART

Actuators for FSD-3V and SSD-3V Dampers


@ 350F, 2000fpm, 4 in.W.G. static pressure (N/A to FD-MB-3V and FDD-MB-3V dampers)

Power Supply	Actuator Type	Mounting	Size Limitation Per Actuator
Pneumatic (25PSI)	Siemens #4, 331-2961	External	9 sq.ft., 36" w x 48" h (class 1)
			12 sq.ft., 36" w x 48" h (class 2)
Electric (24VAC)	Honeywell MS8104	Internal / External	4 sq.ft., 36" w x 48" h
	Honeywell MS8120F	Internal / External	9 sq.ft., 36" w x 48" h (class 1)
			12 sq.ft., 36" w x 48" h (class 2)
	Belimo FSLF24	Internal / External	4 sq.ft., 36" w x 48" h
Siemens GND-126	Internal / External	4 sq.ft., 36" w x 48" h	
Electric (120VAC)	Honeywell MS4104	Internal / External	4 sq.ft., 36" w x 48" h
	Honeywell MS4120F	Internal / External	9 sq.ft., 36" w x 48" h (class 1)
			12 sq.ft., 36" w x 48" h (class 2)
	Belimo FSLF120	Internal / External	4 sq.ft., 36" w x 48" h
Siemens GND-226	Internal / External	4 sq.ft., 36" w x 48" h	
Electric (230VAC)	Honeywell MS4604	Internal / External	4 sq.ft., 36" w x 48" h
	Honeywell MS4620F	Internal / External	9 sq.ft., 36" w x 48" h (class 1)
			12 sq.ft., 36" w x 48" h (class 2)
	Belimo FSLF230	Internal / External	4 sq.ft., 36" w x 48" h
Siemens GND-326	Internal / External	4 sq.ft., 36" w x 48" h	

NOTE:

- 230VAC ACTUATORS ARE SPECIAL ORDER. CONTACT FACTORY FOR LEAD TIME.
- ACTUATORS MAY OPERATE A SINGLE DAMPER SECTION ONLY, EXCEPT FOR MS4120 , MS4620 AND MS8120 AS NOTED IN CHART. DAMPER SECTIONS MUST BE ORIENTED SIDE BY SIDE TO BE OPERATED BY A SINGLE ACTUATOR.
- SIEMENS GGD AND GND SERIES ACTUATORS AVAILABLE ON SPECIAL REQUEST, CONTACT FACTORY FOR LEAD TIME AND PRICING.

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PROJECT:		
ENGINEER:		
CUSTOMER:		256128
SUBMITTAL DATE:		2014/02/25
SPEC. SYMBOL:		FSD, SSD FD-MB, FDD-MB ACTUATOR SELECTION REFERENCE CHART

Actuators for FSD-AF, SSD-AF, FD-MB-AF and FDD-MB-AF Dampers

@ 250F, 2000fpm, 4 in.W.G. static pressure

Power Supply	Actuator Type	Mounting	Size Limitation Per Actuator
Pneumatic (25PSI)	Siemens #3, 331-4826	Internal / External	6 sq.ft., 36"w x 48"h
	Siemens #4, 331-2961	Internal / External	12 sq.ft., 36"w x 48"h
Electric (24VAC)	Honeywell MS8104	Internal / External	6 sq.ft., 36"w x 48"h
	Honeywell MS8109	Internal / External	9 sq.ft., 36"w x 48"h
	Honeywell MS8120F	External	12 sq.ft., 36"w x 48"h
	Belimo FSLF24	Internal / External	4 sq.ft., 36"w x 48"h
	Belimo FSNF24	Internal / External	12 sq.ft., 36"w x 48"h
	Siemens GND-126	Internal / External	4 sq.ft., 36"w x 48"h
	Siemens GGD-121-1	Internal / External	12 sq.ft., 36"w x 48"h
Electric (120VAC)	Honeywell MS4104	Internal / External	6 sq.ft., 36"w x 48"h
	Honeywell MS4109	Internal / External	9 sq.ft., 36"w x 48"h
	Honeywell MS4120F	External	12 sq.ft., 36"w x 48"h
	Belimo FSLF120	Internal / External	4 sq.ft., 36"w x 48"h
	Belimo FSNF120	Internal / External	12 sq.ft., 36"w x 48"h
	Siemens GND-226	Internal / External	4 sq.ft., 36"w x 48"h
	Siemens GGD-221-1	Internal / External	12 sq.ft., 36"w x 48"h
Electric (230VAC)	Honeywell MS4604	Internal / External	6 sq.ft., 36"w x 48"h
	Honeywell MS4609	Internal / External	9 sq.ft., 36"w x 48"h
	Honeywell MS4620F	External	12 sq.ft., 36"w x 48"h
	Belimo FSLF230	Internal / External	4 sq.ft., 36"w x 48"h
	Belimo FSNF230	Internal / External	12 sq.ft., 36"w x 48"h
	Siemens GND-326	Internal / External	4 sq.ft., 36"w x 48"h
	Siemens GGD-321-1	Internal / External	12 sq.ft., 36"w x 48"h

Actuators for FSD-AF and SSD-AF Dampers


@ 350F, 2000fpm, 4 in.W.G. static pressure (N/A to FD-MB-AF and FDD-MB-AF dampers)

Power Supply	Actuator Type	Mounting	Size Limitation Per Actuator
Electric (24VAC)	Honeywell MS8120F	External	12 sq.ft., 36"w x 48"h (class 2)
Electric (120VAC)	Honeywell MS4120F	External	12 sq.ft., 36"w x 48"h (class 2)
Electric (230VAC)	Honeywell MS4620F	External	12 sq.ft., 36"w x 48"h (class 2)

NOTE:

- 230VAC ACTUATORS ARE SPECIAL ORDER. CONTACT FACTORY FOR LEAD TIME.
- ACTUATORS MAY OPERATE A SINGLE DAMPER SECTION ONLY.
- SIEMENS GGD AND GND SERIES ACTUATORS AVAILABLE ON SPECIAL REQUEST, CONTACT FACTORY FOR LEAD TIME AND PRICING.

ALL METRIC DIMENSIONS () ARE SOFT CONVERTED. IMPERIAL DIMENSIONS ARE CONVERTED TO METRIC AND ROUNDED TO THE NEAREST MILLIMETER.

PROJECT:		 FSD, SSD FD-MB, FDD-MB ACTUATOR SELECTION REFERENCE CHART
ENGINEER:		
CUSTOMER:		
SUBMITTAL DATE:		
SPEC. SYMBOL:		256128 2014/02/25

Actuators for FSD-RD and SSD-RD Dampers


@250/350F, 2000fpm, 4 in.W.G. static pressure

Power Supply	Actuator Type	Mounting	Maximum Size Limitation
Pneumatic (25PSI)	Siemens #3, 331-4826	External	24" diameter
	Siemens #4, 331-2961	External	24" diameter
Electric (24VAC)	Honeywell MS8104	External	24" diameter
	Honeywell MS8109	External	24" diameter
	Honeywell MS8120F	External	24" diameter
	Belimo FSLF24	External	18" diameter
	Belimo FSNF24	External	24" diameter
	Siemens GND-126	External	18" diameter
	Siemens GGD-121-1	External	24" diameter
Electric (120VAC)	Honeywell MS4104	External	24" diameter
	Honeywell MS4109	External	24" diameter
	Honeywell MS4120F	External	24" diameter
	Belimo FSLF120	External	18" diameter
	Belimo FSNF120	External	24" diameter
	Siemens GND-226	External	18" diameter
	Siemens GGD-221-1	External	24" diameter
Electric (120VAC)	Honeywell MS4604	External	24" diameter
	Honeywell MS4609	External	24" diameter
	Honeywell MS4620F	External	24" diameter
	Belimo FSLF230	External	18" diameter
	Belimo FSNF230	External	24" diameter
	Siemens GND-326	External	18" diameter
	Siemens GGD-321-1	External	24" diameter

NOTE:

- 230VAC ACTUATORS ARE SPECIAL ORDER. CONTACT FACTORY FOR LEAD TIME.
- SIEMENS GGD AND GND SERIES ACTUATORS AVAILABLE ON SPECIAL REQUEST, CONTACT FACTORY FOR LEAD TIME AND PRICING.

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PROJECT:		
ENGINEER:		
CUSTOMER:		256128
SUBMITTAL DATE:		2014/02/25
SPEC. SYMBOL:		FSD, SSD FD-MB, FDD-MB ACTUATOR SELECTION REFERENCE CHART


Actuators for Model CCD - Commercial Control Dampers

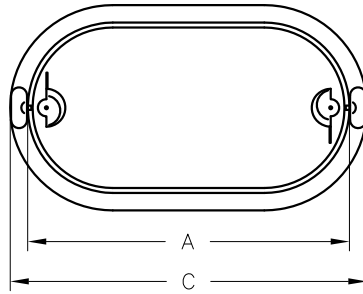
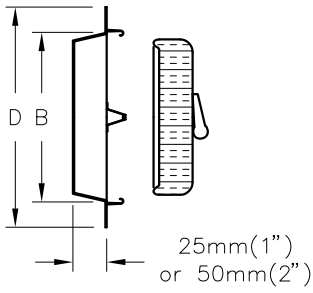
Power Supply	Actuator Model	Size Limitation Per Actuator			
		3V or AF Blades (no Blade Seals)	3V or AF Blades (w/ Blade Seals)	Aluminum Blades	True Round Damper
Pneumatic (25PSI) spring return	Siemens #3, 331-4826	9 sq.ft.	9 sq.ft.	9 sq.ft.	24" dia.
	Siemens #4, 331-2961	25 sq.ft.	25 sq.ft.	20 sq.ft.	24" dia.
Electric (120VAC) spring return	Belimo TF120 (-S)	4.5 sq.ft.	2.5 sq.ft.	1.8 sq.ft.	12" dia.
	Belimo LF120 (-S)	8 sq.ft.	5 sq.ft.	3.5 sq.ft.	18" dia.
	Belimo NFBUP (-S)	22.5 sq.ft.	12.75 sq.ft.	9 sq.ft.	24" dia.
	Belimo AF120 (-S)	33 sq.ft.	19 sq.ft.	13.3 sq.ft.	24" dia.
	Honeywell ML-4115	9 sq.ft.	6 sq.ft.	6 sq.ft.	24" dia.
	Honeywell MS-4209/8309	20 sq.ft.	11.5 sq.ft.	8 sq.ft.	24" dia.
	Honeywell MS-4120	25 sq.ft.	25 sq.ft.	17.5 sq.ft.	24" dia.
	Siemens GND226.1	8 sq.ft.	5 sq.ft.	3.5 sq.ft.	18" dia.
Electric (24VAC/DC) spring return	Siemens GGD221.1	25 sq.ft.	20 sq.ft.	14.1 sq.ft.	24" dia.
	Belimo TF24 (-S)	4.5 sq.ft.	2.5 sq.ft.	1.8 sq.ft.	12" dia.
	Belimo LF24 (-S)	8 sq.ft.	5 sq.ft.	3.5 sq.ft.	18" dia.
	Belimo NFB24 (-S)	22.5 sq.ft.	12.75 sq.ft.	9 sq.ft.	24" dia.
	Belimo AF24 (-S)	33 sq.ft.	19 sq.ft.	13.3 sq.ft.	24" dia.
Electric (24VAC) spring return	Siemens GND126.1	8 sq.ft.	5 sq.ft.	3.5 sq.ft.	18" dia.
	Honeywell ML-8115	9 sq.ft.	6 sq.ft.	6 sq.ft.	24" dia.
	Honeywell MS-8209/8309	20 sq.ft.	11.5 sq.ft.	8 sq.ft.	24" dia.
	Honeywell MS-8120	25 sq.ft.	25 sq.ft.	17.5 sq.ft.	24" dia.
Electric (24VAC/DC) spring return, modulating	Siemens GGD121.1	25 sq.ft.	20 sq.ft.	14.1 sq.ft.	24" dia.
	Belimo LF24-SR (-S)	8 sq.ft.	5 sq.ft.	3.5 sq.ft.	18" dia.
	Belimo NFB24-SR (-S)	22.5 sq.ft.	12.75 sq.ft.	9 sq.ft.	24" dia.
	Belimo AF24-SR (-S)	33 sq.ft.	19 sq.ft.	13.3 sq.ft.	24" dia.
	Belimo AFB24-MFT (-S)	33 sq.ft.	19 sq.ft.	13.3 sq.ft.	24" dia.
	Belimo AFB24-MFT95	33 sq.ft.	19 sq.ft.	13.3 sq.ft.	24" dia.

NOTE:

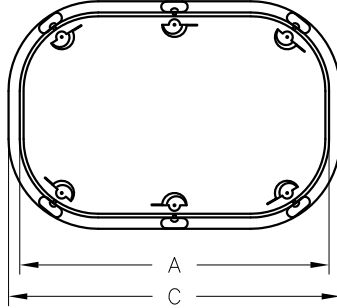
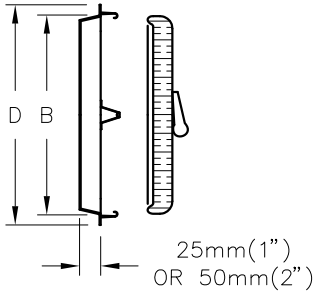
- BELIMO AF SERIES AND HONEYWELL MS-4120/8120 ARE SUITABLE FOR OPERATING UP TO TWO DAMPER SECTIONS. ALL OTHER ACTUATORS MAY OPERATE ONE DAMPER SECTION ONLY.
- USE ALUMINUM BLADE SQUARE FOOTAGE FOR STEEL FRAME DAMPERS WITH INSULATED BLADES.
- 230VAC ACTUATORS ARE AVAILABLE ON SPECIAL REQUEST. CONTACT FACTORY FOR AVAILABILITY.
- SIEMENS GGD AND GND SERIES ACTUATORS ARE AVAILABLE ON SPECIAL REQUEST, CONTACT FACTORY FOR LEAD TIME AND PRICING.

ALL METRIC DIMENSIONS () ARE SOFT CONVERTED. IMPERIAL DIMENSIONS ARE CONVERTED TO METRIC AND ROUNDED TO THE NEAREST MILLIMETER.

PROJECT:			CCD CONTROL DAMPER ACTUATOR SELECTION CHART
ENGINEER:			
CUSTOMER:		256129	
SUBMITTAL DATE:	SPEC. SYMBOL:	2011/01/25	

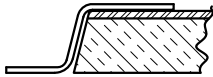


	NOM. SIZE	
	□ 8" x 5" (203x127)	□ 12" x 6" (305x152)
A	7 ⁷ / ₈ " (200)	11 ⁷ / ₈ " (302)
B	5" (127)	6" (152)
C	9 ¹ / ₂ " (241)	13 ³ / ₄ " (349)
D	6 ¹ / ₂ " (165)	7 ⁷ / ₈ " (200)

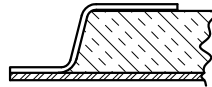


	NOM. SIZE		
	□ 18" x 10" (457x254)	□ 22" x 14" (559x356)	□ 26" x 18" (660x457)
A	18 ¹ / ₈ " (460)	21 ⁵ / ₈ " (549)	25 ⁵ / ₈ " (651)
B	10 ¹ / ₄ " (260)	13 ³ / ₄ " (349)	17 ³ / ₄ " (451)
C	19 ⁵ / ₈ " (498)	23 ¹ / ₄ " (591)	27 ¹ / ₈ " (689)
D	11 ⁷ / ₈ " (302)	15 ³ / ₄ " (400)	19 ⁵ / ₈ " (498)

MOUNTING METHODS



INTERNALLY INSULATED
(FLUSH FITTING)



EXTERIOR INSULATED
(STAND OFF FITTING)

MATERIAL:

- GALVANIZED STEEL
- STYROFOAM INSULATION

WEIGHT AND VOLUME DATA

NOM. SIZE	NO. PER CARTON	WEIGHT PER CARTON	VOLUME PER CARTON	CARTON SIZE
8" x 5"	20	30 lbs. (14kg)	1.44 cu.ft. (.042 cu.m)	20" x 16" x 7 ³ / ₄ " (510x405x200)
12" x 6"	10	26 lbs. (12kg)	1.23 cu.ft. (.035 cu.m)	16 ³ / ₄ " x 14 ¹ / ₂ " x 8 ³ / ₄ " (425x370x220)
18" x 10"	10	48 lbs. (22kg)	2.62 cu.ft. (.074 cu.m)	20 ³ / ₄ " x 16 ³ / ₄ " x 13" (530x425x330)
22" x 14"	5	37 lbs. (17kg)	2.25 cu.ft. (.063 cu.m)	24 ³ / ₄ " x 16 ¹ / ₂ " x 9 ¹ / ₂ " (625x420x240)
26" x 18"	4	42 lbs. (19kg)	2.65 cu.ft. (.076 cu.m)	28 ³ / ₄ " x 20 ¹ / ₂ " x 7 ³ / ₄ " (730x520x200)

NOTE:

REINFORCEMENT OF THE DUCT MAY BE REQUIRED TO PREVENT BOWING IN THE AREA OF THE ACCESS DOOR. THIS WILL ENSURE A PROPER SEAL BETWEEN THE ACCESS DOOR AND DUCT.

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PROJECT:		PRICE[®]	
ENGINEER:		 256130	DADI DUCT ACCESS DOOR INSULATED
CUSTOMER:			
SUBMITTAL DATE:	SPEC. SYMBOL:	2011/01/25	