



CEN TEK
MARINE

INSTALLATION & OPERATION MANUAL

DELTA-T SYSTEMS

A60-Rated Slimline *Fire Dampers*



Delta-T Systems

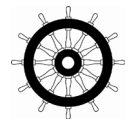
A60-Rated *Fire Dampers*

Key Features

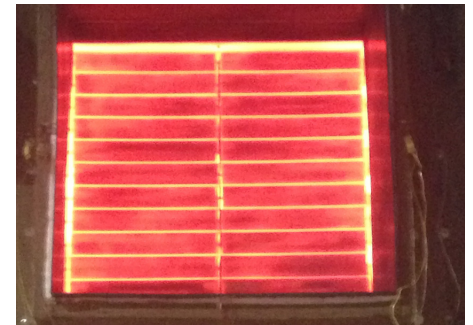
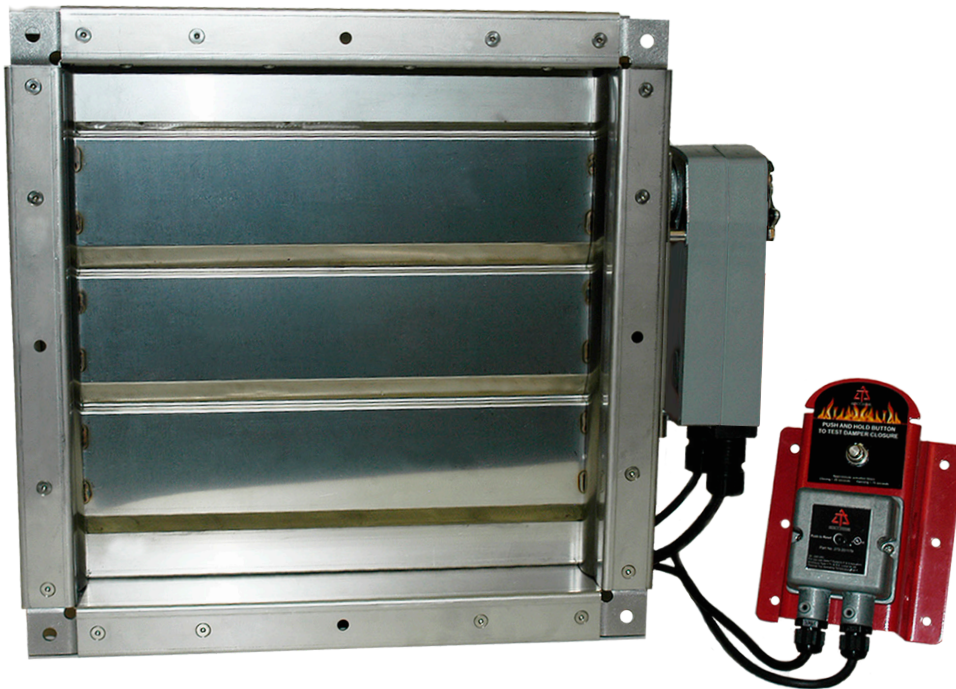
- Made Completely From 316 Stainless Steel
- Slimline Fire Dampers Are Only 4.25 Inches (108 mm) Deep
- Failsafe Operation
- Overlapping Blades and Patented Blade Locking Mechanism
- Fifty Six Standard Sizes Available Up to 46.75 in. x 46.75 in. (1187 mm x 1187 mm)
- Unlimited Custom Sizes Available up to 46.75 in. x 46.75 in. (1187 mm x 1187 mm)
- Fast Turn Around Times - Most Standard and Semi-Custom Sizes in Stock
- USCG, MED Approved
- Made in the United States of America



USCG Approval No:
164.139/12/0



MED Approval No:
1408/YY



Patent No. 9,851,121

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The Actuator

- Failsafe Operation
- Input Power 24 - 240 VAC or 24 - 125 VDC
- Produces 180 in-lb of Closing Torque
- Contains Dry Contact Outputs for Closure Readouts
- NEMA2 IP54 Enclosure ZP Type 2
- CE Approved
- Assembled in USA



The Sensor/Test Switch

A separate mounting bracket houses the thermal tripping device to sense the temperature of the A60-rated machinery space and trigger closure the damper in the event that the temperature in the space reaches 165°F (72°C) or higher. Unlike other thermal tripping devices, the Slimline Fire Dampers use a device that is manually resettable so it will not need to be replaced in the event of an accidental exposure to elevated heat conditions.

The red mounting bracket also houses a test switch that may be use to test closure of the Slimline Fire Damper at any time to check its functionality or to complete on board inspections.

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A60-Rated *Fire Dampers*

Standard Damper Sizes



USCG Approval Number
164.139/12/0



MED Approval Number
1408/YY

Damper		Frame Width (ID in.)	Frame Height (ID in.)	Frame Width (ID mm.)	Frame Height (ID mm.)	Damper Part Number
Blade Width	Height (nominal)					
9	9	9.375	9.375	238	238	700-A60SL-09
9	14	9.375	14.375	238	365	700-A60SL-0914
9	17	9.375	17.375	238	441	700-A60SL-0917
9	20	9.375	20.375	238	518	700-A60SL-0920
9	23	9.375	23.375	238	594	700-A60SL-0923
9	27	9.375	27.375	238	695	700-A60SL-0927
9	46	9.375	46.75	238	1187	700-A60SL-0946
14	9	9.375	14.375	238	365	700-A60SL-1409
14	14	14.375	14.375	365	365	700-A60SL-14
14	17	14.375	17.375	365	441	700-A60SL-1417
14	20	14.375	20.375	365	518	700-A60SL-1420
14	23	14.375	23.375	365	594	700-A60SL-1423
14	27	14.375	27.375	365	695	700-A60SL-1427
14	46	14.375	46.75	365	1187	700-A60SL-1446
17	9	17.375	9.375	441	238	700-A60SL-1709
17	14	17.375	14.375	441	365	700-A60SL-1714
17	17	17.375	17.375	441	441	700-A60SL-17
17	20	17.375	20.375	441	518	700-A60SL-1720
17	23	17.375	23.375	441	594	700-A60SL-1723
17	27	17.375	27.375	441	695	700-A60SL-1727
17	46	17.375	46.75	441	1187	700-A60SL-1746
18	18	18.75	18.75	476	476	700-A60SL-18
18	23	18.75	23.375	476	594	700-A60SL-1823
18	27	18.75	27.375	476	695	700-A60SL-1827
18	46	18.75	46.75	476	1187	700-A60SL-1846
20	9	20.375	9.375	518	238	700-A60SL-2009
20	14	20.375	14.375	518	365	700-A60SL-2014
20	17	20.375	17.375	518	441	700-A60SL-2017

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Standard Damper Sizes



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MED Approval Number
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Damper		Frame Width (ID in.)	Frame Height (ID in.)	Frame Width (ID mm.)	Frame Height (ID mm.)	Damper Part Number
Blade Width	Height (nominal)					
20	20	20.375	20.375	518	518	700-A60SL-20
20	23	20.375	23.375	518	594	700-A60SL-2023
20	27	20.375	27.375	518	695	700-A60SL-2027
20	46	20.375	46.75	518	1187	700-A60SL-2046
23	9	23.375	9.375	594	238	700-A60SL-2309
23	14	23.375	14.375	594	365	700-A60SL-2314
23	17	23.375	17.375	594	441	700-A60SL-2317
23	20	23.375	20.375	594	518	700-A60SL-2320
23	23	23.375	23.375	594	594	700-A60SL-23
23	27	23.375	27.375	594	695	700-A60SL-2327
23	46	23.375	46.75	594	1187	700-A60SL-2346
27	9	27.375	9.375	695	238	700-A60SL-2709
27	14	27.375	14.375	695	365	700-A60SL-2714
27	17	27.375	17.375	695	441	700-A60SL-2717
27	20	27.375	20.375	695	518	700-A60SL-2720
27	27	27.375	27.375	695	695	700-A60SL-27
27	46	27.375	46.75	695	1187	700-A60SL-2746
28	28	28.75	28.75	730	730	700-A60SL-28
28	46	28.75	46.75	730	1187	700-A60SL-2846
34	34	34.75	34.75	883	883	700-A60SL-34
34	46	34.75	46.75	883	1187	700-A60SL-3446
40	40	40.75	40.75	1035	1035	700-A60SL-40
40	46	40.75	46.75	1035	1187	700-A60SL-4046
46	9	46.75	9.375	1187	238	700-A60SL-4609
46	14	46.75	14.375	1187	365	700-A60SL-4614
46	17	46.75	17.375	1187	441	700-A60SL-4617
46	20	46.75	20.375	1187	518	700-A60SL-4620
46	46	46.75	46.75	1187	1187	700-A60SL-46

Delta-T Systems

A60-Rated *Fire Dampers*

The A60 Slimline Fire Damper has been designed specifically to meet the needs of today's boat builders. This USCG/MED Approved damper is available in 56 standard off-the-shelf sizes which means extremely fast turn around times for prompt delivery to builders and refit yards around the world. This turnkey fire damper is ready to install on board a vessel when it arrives. Each damper comes complete with an electric actuator (Input Power 24 - 240 VAC or 24 - 125 VDC) as well as an integrated electro-thermal tripping device and test switch completely wired up on a separate bracket and ready for installation and power.

The A60 Slimline Fire Dampers are also available in any custom size to accommodate a vessel's duct work or rough openings. The A60 Slimline Fire Dampers are made completely from marine grade 316 stainless steel and are built in the United States.

	U. S. Department of Homeland Security United States Coast Guard Certificate of Approval
Coast Guard Approval Number: 164.139/12/0 Expires: 05 August 2021	
FIRE DAMPERS	
DELTA "T" SYSTEMS, INC. 858 West 13th Court Riviera Beach FL 33404	
"Slimline" fire dampers approved in accordance with Part 3 of Annex 1 of the IMO FTP Code.	
Multi-louvered, automatic fire dampers for use in penetrating Class A-0, A-15, A-30 and A-60 bulkheads and decks. Damper and ventilation penetrations must be insulated similarly to the division. Damper dimensions limited to a range of 2 x 9 inches through 46 x 46 inches. Approval includes fusible link, and DELTA "T" SYSTEMS P/N 273-A60-24/240 electrical actuators mounted directly to dampers.	
Identifying Data: Southwest Research Institute (SwRI) reports Project Nos. 01.21601.16.407a[1] and 01.21601.16.407b[1]; and manufacturer's drawings nos. 700-A60SL-09, 14 and 46.	
Follow-up program: SwRI.	
Approval valid for products manufactured at the above factory location.	
	
1408/YY	
The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 2004 and by the "Agreement between the European Free Trade Association countries which are part of the European Economic Area and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed October 2005. Item complies with requirements of Annex A.1, Item No. A.1/3.22 of the directive.	
*** End ***	
THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.	
	GIVEN UNDER MY HAND THIS 05 th DAY OF AUGUST 2016, AT WASHINGTON D.C.  B. A. BALDWIN Chief, Lifesaving and Fire Safety Division BY DIRECTION OF THE COMMANDANT

Patent No. 9,851,121



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