



Delta "T" Systems

DELTA "T" SYSTEMS

Marine Smoke & Fire Dampers



- Smoke Closures
- A-60 Rated Fire Dampers
- Aluminum Dampers
- Stainless Steel Dampers
- Round and Rectangular
- Standard and Custom Sizes



SEE CAUTION

A-0 Through A-60 Rated Round Marine Fire Dampers

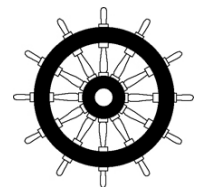
US COAST
GUARD
APPROVED



Approval Number

164.139/10/0

MED
APPROVED



1408/09



Overview

Delta "T" Systems' A-60 Rated Round Fire Dampers have been designed specifically for marine applications. Available in standard and custom sizes ranging from 12 inches to 36 inches (305 mm to 914mm) in diameter with either electric or pneumatic actuation. Standard sizes include:

- 12 inch diameter (305mm)**
- 15 inch diameter (381mm)**
- 19 inch diameter (483mm)**
- 21 inch diameter (533mm)**
- 24 inch diameter (610mm)**
- 30 inch diameter (762mm)**
- 36 inch diameter (914mm)**

The design of both the electric and the pneumatic dampers incorporate redundant closure modes for an extra level of safety. Closure of either model of damper may be triggered by the fire monitoring/suppression system, or if the fire system fails, the dampers themselves will sense the excess heat from a fire and close automatically. The electrically actuated damper senses the excess heat by using an Electrical

Thermal Release (ETR), and the pneumatically actuated damper utilizes a fusible link for the same purpose. All 700-A60R Round Dampers are manufactured using high-grade stainless steel and the finest marine grade components.

Electric Actuation



Delta "T" Systems' 700-A60R Round Dampers may be actuated electrically using either AC or DC power. Closure of the electrically actuated damper may be initiated in one of three ways:

- 1) Signal from the fire system**
- 2) Loss of electric power to the actuator**
- 3) Sensing of heat by the actuator's Electrical Thermal Release (ETR)**

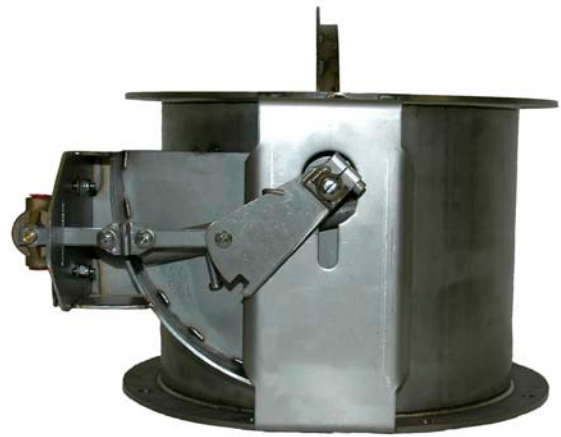
In order to facilitate the automatic closing of the damper, an Electrical Thermal Release (ETR) is mounted on the damper housing to sense elevated temperatures of 162 ° F (72 ° C) or above and trigger the closing of the damper.



The ETR is an integral part of the model 700-A60R damper and is independent of any other fire detection or suppression system that may be connected to it. The fail-safe feature of this actuator causes the damper blade to close in the event that power to the actuator is lost. A green LED light is built into the ETR to give the user a clear and simple visual check that the actuator is receiving power, the ETR is correctly fitted, and the thermal fuse is intact.

Pneumatic Actuation

A fusible link has been incorporated into the design of the pneumatic version of Delta “T” Systems’ A-60 Round Damper in order to facilitate failsafe closure of the damper. The fusible link functions independently of the pneumatic release in order to allow the damper to close in the event that the ambient temperature reaches a pre-determined threshold. A spring on the damper’s blade shaft serves to provide the necessary torque to close the damper and a locking pin engages when the blade is

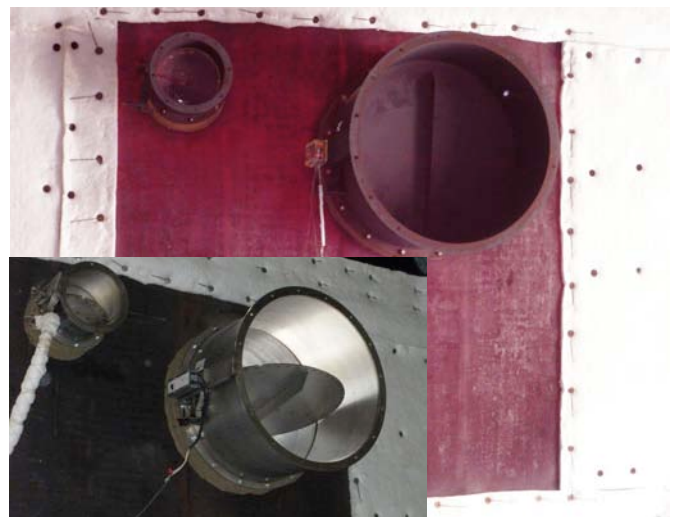
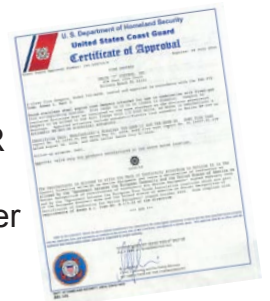


fully closed in order to secure the closure. Pneumatic actuation may be achieved through an onboard pneumatic supply line or with an optional Actuator Gas Cylinder (Part Nos. 273-P150/12 or 273-P150/24) pictured to the right. Dampers may also be manually actuated and reset from the outside of the damper housing when necessary.



USCG Approved

Delta “T” Systems’ 700-A60R line of dampers have passed a strict battery of tests in order to earn their A-60 rating, in accordance with the National Fire Protection Association (NFPA) Resolution A.754(18). Approved for use with both BELIMO and ACTIONAIR actuators.

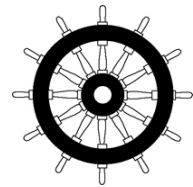


A-60 Rated Rectangular Marine Fire Dampers



USCG Approval Number
164.139/EC0038

MED
APPROVED



MED 0450262



Overview

Delta "T" Systems' A-60 Rated Rectangular Fire Dampers have been constructed from 316 stainless steel, with interlocking blades, end bearings and stainless steel peripheral gasketing. The blade linkage has been completely enclosed and positioned out of the air stream for protection against damage. Actuation is available in both electric and pneumatic.

- Tested and approved for class A-60 divisions (bulkheads and decks)
- Lloyds Register of Shipping Approval to IMO Fire Test Procedures Code, Annex 1, Part 3
- Complies to Marine Equipment Directive 96/98/EC
- Corrosion tested to BS EN 60068-2-52. Severity 2 conditions
- Vibration tested to BS EN 60068-2-6 (5 Hz - 35Hz @ 2g)

Standard Construction

FRAME - 6" x 18 gage (150 mm x 1.2 mm) galvanized, flanged channel.

MAXIMUM SIZE - 39.4" x 39.4" (1.0 m x 1.0 m)

BLADES - Airfoil-shaped, double-skin, Type 430 Ferritic stainless steel construction. Maximum 3" (76 mm) wide.

BEARINGS - Stainless steel blade end bearing and peripheral gasketing.

JAMB SEALS - Stainless steel, flexible metal compression type. Full perimeter.

LINKAGE - Concealed in frame.

ETR72 - (Electrical Thermal Release) threshold temperature - 161°F (72°C)

Standard Round Marine Dampers



Pneumatic Actuation

Pneumatic actuation requires only 70 PSI to release the blade and provide instantaneous spring loaded closure of the air duct. Pneumatic actuation may be achieved through an onboard pneumatic supply line or with an optional Actuator Gas Cylinder (Part Nos. 273-P150/12 or 273-P150/24) pictured below. Dampers may also be manually actuated and reset from outside of the damper housing.

Overview

The Delta "T" Systems Round Dampers are designed to close couple directly to either end of Delta "T" Systems' Marine Axial Fans in standard sizes from 12 inches ID through 36 inches ID (305 mm to 914mm) to provide the safest, most compact, high volume ventilation component assembly available. The short casing design allows the damper blade to project into the open section of the plenum to minimize overall length. Dampers may also be installed independently within an air shaft or plenum if no fan is installed. Using silicone blade seals, these units are provided with a simple mounting flange for attachment. These dampers may be manufactured in any size between 12 inches ID through 36 inches ID (305 mm to 914mm) and are available in either aluminum or stainless steel. Delta "T" Systems Round Dampers may be closed using either pneumatic or electric actuation.

All actuators are suitable for use with CO₂, Halon, FM-200 and other pressurized fire suppression systems and are U.S. Coast Guard (162.038/7/0), American Bureau of Shipping, UL (EX-2968) and Factory Mutual type approved.



Electric Actuation



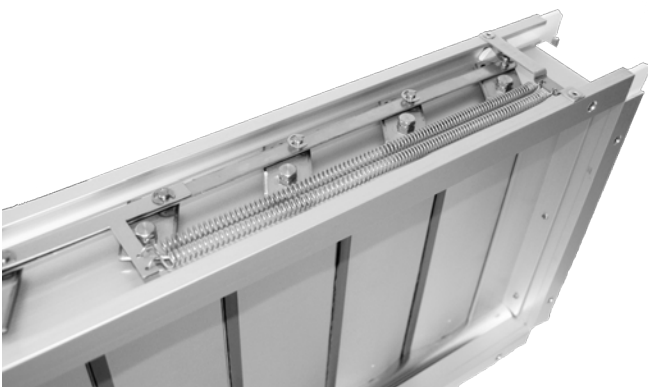
Electric actuation is available in AC and DC power to suit any application. Electrically actuated dampers may be opened and closed manually. A built in failsafe mode will automatically close the damper in the event of a power loss to the actuator.

Standard Rectangular Marine Dampers

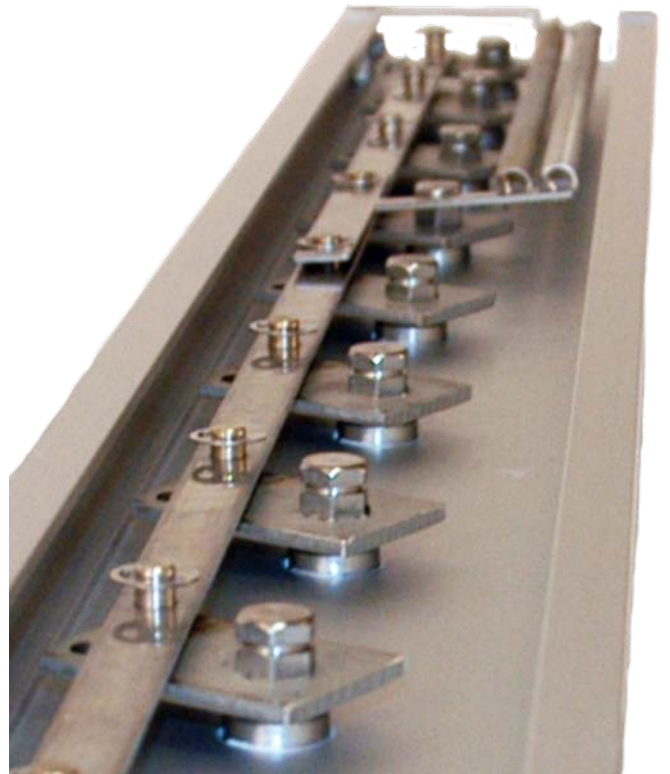


Overview

Delta "T" Systems' robust rectangular dampers are custom sized and manufactured to any required specification. The frame and blades are manufactured from anodized marine grade aluminum. Powder coating in any color is also available to suit the application and add an extra level of protection. Both electric and pneumatic actuation are available for all size dampers and each actuation method provides a means for manual damper closure, if necessary.



All linkage and side seals are precision crafted from marine grade stainless steel for maximum service life and dependability in the harsh offshore environment. Rubber blade seals ensure a secure closure of any compartment when the damper is closed.



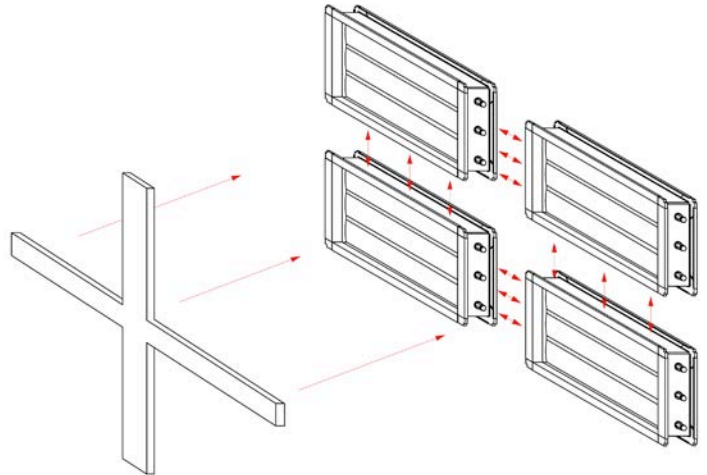
Electric Actuation



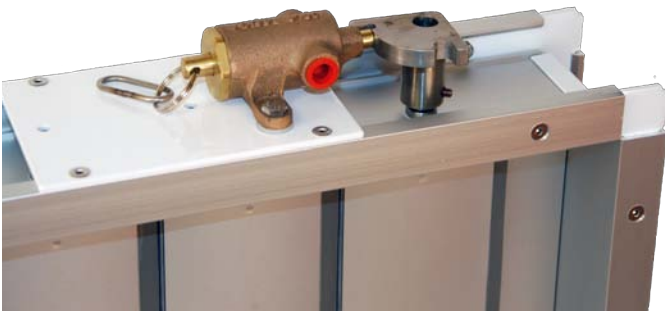
Delta “T” Systems’ electric actuation is available in both AC and DC power. The failsafe nature of the electric actuation will automatically close the damper in the event of a power loss to the actuator.

Multiple Damper Arrangements

Delta “T” Systems’ line of rectangular dampers may be joined in a wide variety of configurations in order to provide closure to any size of space. This is true of our standard line of dampers as well as our A-60 rated line of fire dampers.



Pneumatic Actuation



Pneumatic actuation of Delta “T” Systems’ line of rectangular dampers requires only 70 PSI to release the blades and provide instantaneous spring loaded closure of the air duct. Pneumatic actuation may be achieved through an onboard pneumatic supply line or with an optional Actuator Gas Cylinder (Part Nos. 273-P150/12 or 273-P150/24) pictured to the right. Dampers may also be manually actuated and reset from outside of the damper housing.



The Perfect Pair



Delta “T” Systems’ custom moisture eliminators, when mated with the aluminum rectangular dampers, form the *perfect pair* for your vessel’s engine room. The combo fits into the rough opening(s) for the machinery space to remove salt, moisture and dirt from the incoming air while providing a means for complete closure of the space when necessary.

The moisture eliminator and the damper are the first half of a *full Delta “T” System* for engineered engine room ventilation. The fans and the controls are the final two components that Delta “T” Systems uses to create a complete engineered ventilation system for any marine machinery space.



Call today for a free consultation with one of our application engineers.

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