

H0~H120 Marine Fire Damper

Model: FSD-H-E
FSD-H-P

Introduction

Fire / Smoke Dampers are used in ventilation systems to prevent spread of toxic smoke and hazardous gas between divisions.

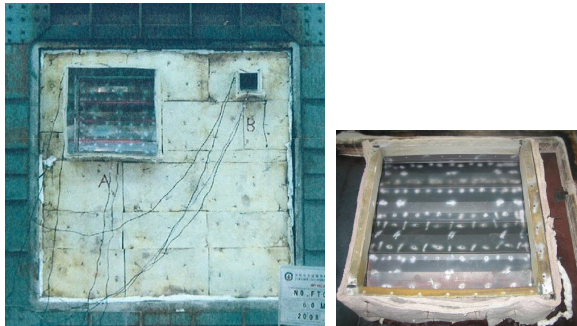
Description

Class H for Deck and Bulkhead Applications. Kyodo fire dampers satisfy for 120 minutes the requirements for stability and integrity according to Chapter II-2, Regulation 3 of **SOLAS** 1974, as amended.

Tested according to **IMO** International Code for Application of **FTP** Fire Test Procedures Annex 1, part 3 (IMO Res. A.754 (18), using 834-3 and the NPD time/temperature curve for hydrocarbon fires.)

Type Approval document in accordance with Standard for Certification No. 1.2, Type Approval, April 2009.

Damper comply with DNV offshore standards.



Applications

Marine, Oil & Gas, Process Plants and General Ventilation Systems.

Features

- Robust construction
- Low casing leakage
- Low blade leakage
- Low airflow resistance

Construction

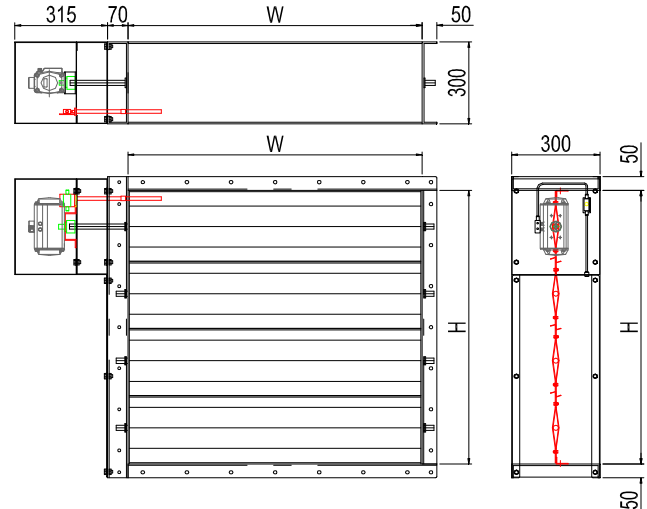
The damper frame is welded with integral 50mm folded flanges using 3-6mm thick galvanized steel. The drive side casing section is provided with a return flange to facilitate the mounting of the actuator bracket. For cases where there is difficulty to access the bolt holes behind the control enclosure, welded nuts will be provided.

The blades are double skin aerofoil type using 1.5mm thick SUS316 / 304 / Galvanized Steel are plug welded and bolted to 19mm diameter solid shafts.

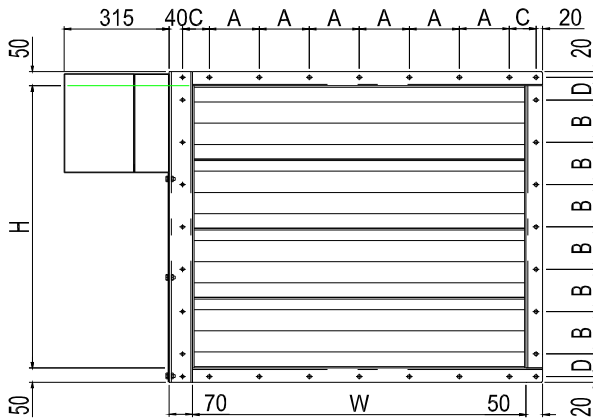
Mechanical bushings are fitted on the non-drive side.

Damper with multiple blades are fitted with a linkage to provide an opposed motion. Robust blade links are welded to the drive shafts and connected together by flat bar. The linkage arrangement is contained within the flanges of the damper frame.

Round connection available on request.



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All dimensions are in mm

A,B	130 (W<250)
	150 (W≥250)
C,D	Minimum 80, maximum 130

Leakage Rates

Testing conducted by BSRIA on standard production single module dampers has achieved a mean leakage rate of

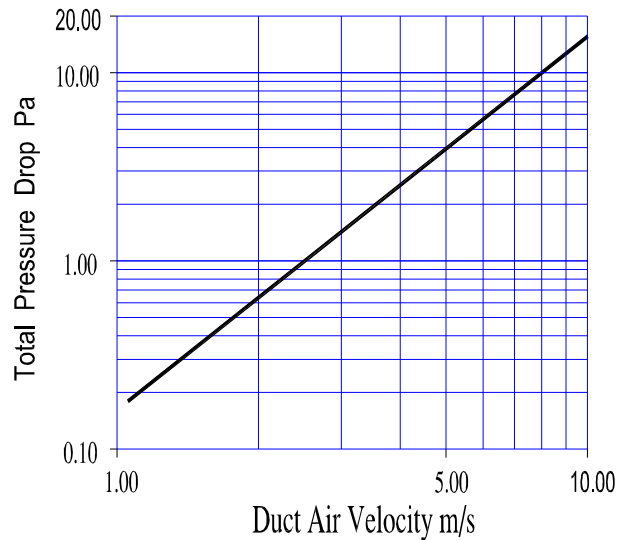
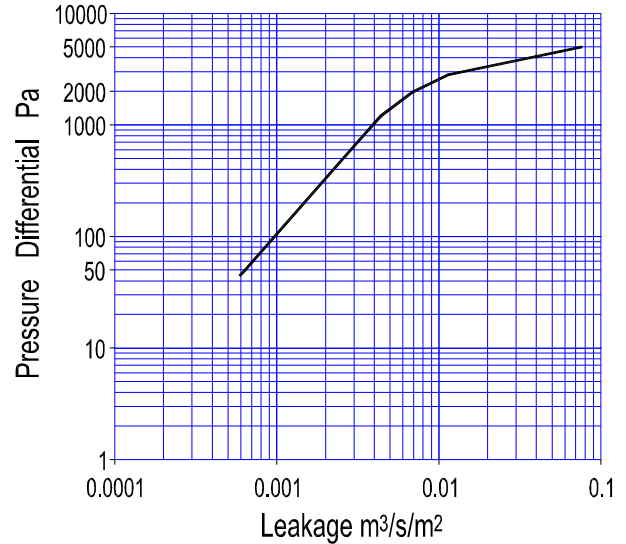
- 0.040 m³/s/m² at a differential pressure of 2,000Pa and
- 0.002 m³/s/m² at a differential pressure of 50Pa.

0.08 m³/s/m² at a differential pressure of 2,000Pa for NORSOK standard.

Lower leakage rates can be achieved upon request.

Performance Tested

The test methods were taken from BS EN 1751:1999, comparable with those used in American standard AMCA 500-D-98. Leakage tests under BS1886, DW144 and UL555s also used the same methods.



Data based on test conducted by BSRIA on a 1,000mm x 1,000mm damper.

Total pressure loss is measured across the damper when the blades are fully open.

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Actuator

- Electrical Actuator [Model FSD-H-E]

BELIMO



Options

1. AC 24V 50/60Hz or DC 24V 10VA 7/2W
2. AC 230V 50/60Hz 12.5VA 8/3W

The damper is fitted with an electrical control system which enables rapid opening and closing of the damper blades.

Remote indication of blade fully open and fully closed status can be signaled by microswitches mounted in to the electrical actuator which is positively connected to the damper blades.

SCHISCHEK
EXPLOSION PROOF



ExMax



RedMax



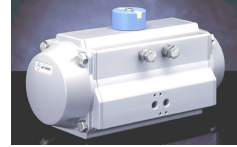
InMax

Hazardous area under Zone 1, 2, 21, 22.
Closing time is 1, 3, or 10 second (adjustable on site).

- Pneumatic Actuator [Model: FSD-H-P]



AIR TORQUE



The Air Torque actuator offers the following characteristics:

- Reliability and high performance
- Wider product range permitting a more economical sizing selection
- Innovative and patented universal drive shaft and multifunction position indicator

For double action and spring return actuators the

- Minimum supply pressure is 2.5 Bar (36 PSI).
- Maximum supply pressure is 8 Bar (116 PSI).

Optional Accessories

- Control Panel

