

FDD

A0(A60) Fire And Gas Damper



Halton FDD fire dampers are type-approved class A0(A60) fire dampers for use in marine and offshore ventilation systems. The FDD can be installed in circular ducts. All fire dampers have a fusible link and they prevent the spread of fire and gases within the ventilation ductwork. When the blade is in the open position, the device does not cause significant pressure loss, noise or flow disturbance. Fire dampers are set from outside and can be installed in any position. An open-closed indicator is visible on the outside of the damper.

- Type-approved by most recognized classification societies, class A0 - A60 fire and gas damper when suitably insulated

- Fixed frame and blade of painted, galvanized or stainless steel. Flanges available as an option.
- Blade contains glass fibre seals (effective up to 300 °C) and thermal expansion graphite seals (effective from 150 °C)
- Nominal release temperatures of fuses are 50 °C, 74 °C and 100 °C degrees. Other temperatures available
- Very low leakage
- Automatic electrical, pneumatic or spring operation system available
- Maximum duct pressure for damper construction 5000 Pa and maximum air velocity 15 m/s. In case of high duct pressure, contact Halton Marine for finding the most suitable solution.

PART	MATERIAL	FINISHING	NOTE
Frame	Carbon steel	Painted or galvanized	-
Frame	Stainless steel	-	-
Blades	Steel	Galvanized	-
Blades	Stainless steel	-	-
Maintenance-free bearings	Stainless steel	-	Bronze bearings optional
Shafts	Stainless steel	-	-

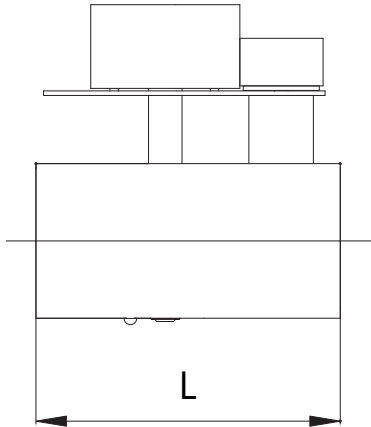
FDD DIMENSIONS AND MATERIAL THICKNESS

FDD fire dampers meet international standards for circular ducts (Ø100-315 mm). Sizes Ø100 and Ø125 are not available of stainless steel. Special flange drilling are available on request. Standard flange width 27 mm. Frame material thickness minimum 3 mm.

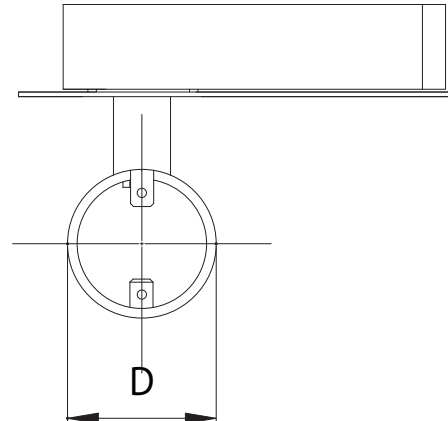
FDD Dimensions without flanges (standard)

		FDD-EL	FDD-PNL	FDD-PNR	FDD-SP
D	L	R	R	R	R
100	200	317	317	-	-
125	200	317	317	-	-
160	200	317	317	-	-
200	320	362	362	-	-
250	320	362	362	-	-
315	320	362	362	-	-

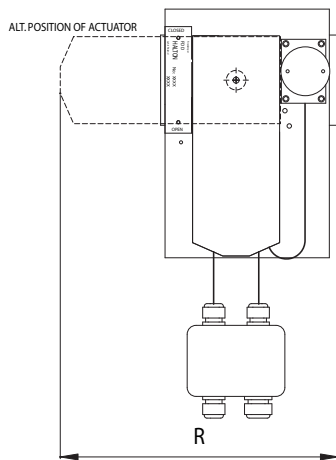
GENERAL FDD DRAWING (without flanges)



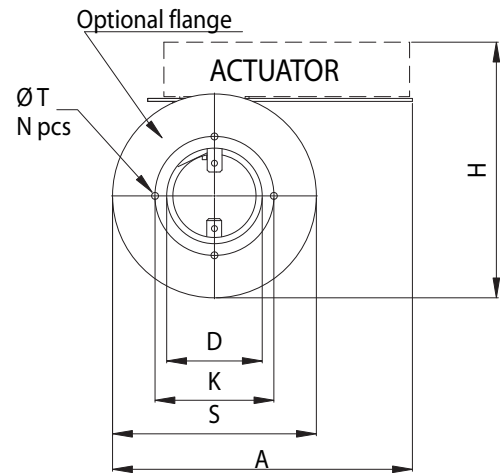
FDD DRAWING (without flanges), TOP



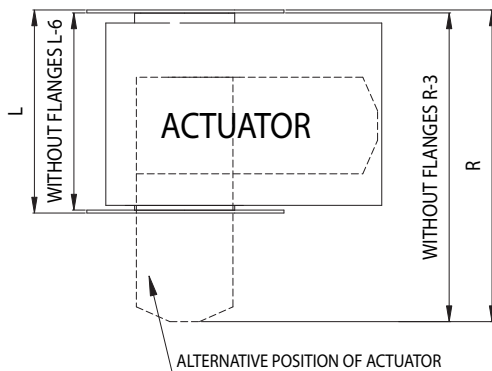
GENERAL FDD DRAWING (without flanges)



GENERAL FDD DRAWING (with flanges)



FDD DRAWING (with flanges), TOP



FDD Dimensions with flanges (as an option)

		FDD-EL		FDD-PNL		FDD-PNR		FDD-SP									
D	S	K	T	N	L	H	A	R	H	A	R	H	A	R	H	A	R
100	200	120	7	4	206	295	300	320	295	500	520	340	300	-	295	200	-
125	225	150	7	4	206	310	315	320	310	515	520	355	315	-	310	225	-
160	260	185	7	4	206	350	330	320	350	530	520	395	330	-	350	260	-
200	300	225	7	4	326	390	350	365	390	550	565	435	350	-	390	300	-
250	350	280	10	4	326	440	375	365	440	575	565	485	375	-	440	350	-
315	415	355	10	8	326	505	410	365	505	610	565	550	410	-	505	415	-

FDD PRODUCT OPTIONS

Halton FDD is available with following actuators:

- FDD-EL: Electrical spring return motor; standard actuators being 24 V or 230 V or 120 V. The motor contains built-in open-closed limit switches. Separate junction box included in the EL-model. A wide range of eex-proof actuators available, including a one second closing time function as an option.
- FDD-PNL: Pneumatic linear actuator, material AISI 316.
- FDD-PNR: Pneumatic rotating actuator
- FDD-SP: Manual spring-actuated damper with fusible link.

DOT: manual override function available for PNL, PNR and EL models. A wide range of accessories available.

OPERATION PRINCIPLE

In the event of a temperature rise in ductwork:

- FDD-EL: fusible link releases and cuts off operating voltage to the spring return motor, allowing the spring to close the damper blades. The fire damper opens automatically when the fuse has been changed and the operating voltage to the motor is re-established.
- FDD-PNL, FDD-PNR: fusible link releases and cuts off operating pressure to the spring return actuator, allowing springs to close the damper blades. The fire damper opens automatically when the fuse has been changed and the pneumatic air supply is re-established.
- FDD-SP: fusible link releases allowing the spring to close the damper blades. When the fuse has been changed, the fire damper must be reset into open position manually.

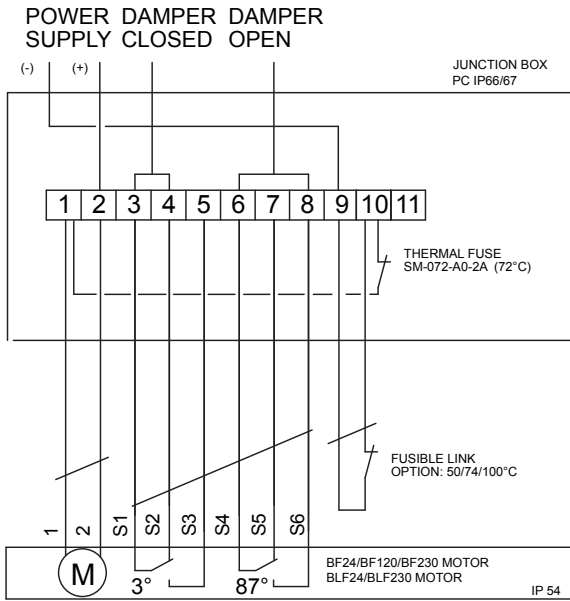
WEIGHTS OF STANDARD HALTON MARINE FDD DAMPERS (KG) without an actuator

Size ØD (mm)	KG	Size ØD (mm)	KG
100	5	200	13
125	6	250	20
160	8	315	24

Weights stated above do not include flanges or any actuator.

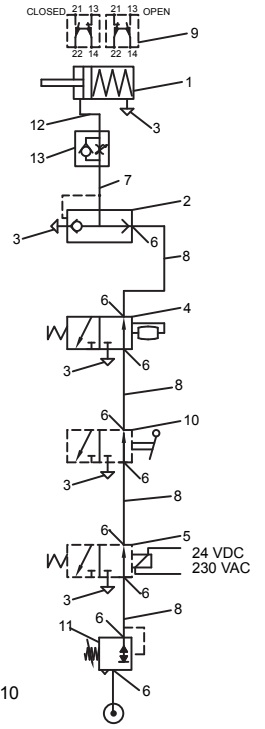
Examples of actuator weights: FDD-EL GGA 326.1E 2,3 kg, GNA 326.1E 1,3 kg, BF230 +3,2 kg, BLF230 +1,7 kg, ExMax /Redmax +3,5 kg, FDD-PNL Roder +4 kg, FDD-PNR AT100 +2,1 kg, AT100 as AISI316 4,4 kg, FDD-SP +1 kg.

FDD-EL WIRING DIAGRAM



FDD-PNR/PNL PNEUMATIC DIAGRAM

1. SPRING RETURN ACTUATOR
2. QUICK EXHAUST VALVE
3. SILENCER
4. FUSIBLE LINK VALVE
5. OPTION: SOLENOID VALVE
6. MALE CONNECTOR
7. DOUBLE NIPPLE
8. PLASTIC TUBE
9. OPTION: OPEN/CLOSED SWITCHES
10. OPTION: MANUAL VALVE
11. PRESSURE REGULATOR
12. MALE ELBOW
13. SPEED CONTROLLER



NOTICE!
ADDITIONAL SOLENOID VALVE
MAX 10 METER FROM FIRE
DAMPER

PNEU. INLET (5-10
BAR)

FOR A PLASTIC TUBE
Ø6 MM