

FIRE DAMPER, A0(A60)

Halton FDL for offshore applications

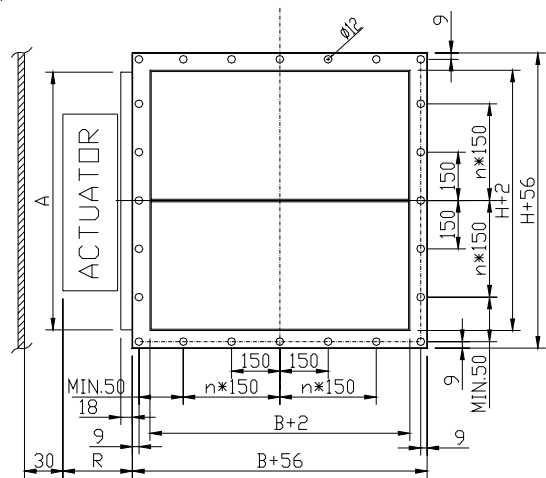
Halton FDL fire dampers are type-approved class A0(A60) fire dampers for use in offshore and marine ventilation systems. The FDL can be installed in rectangular or circular ducts. The FDL dampers are used to prevent the spread of fire within the ventilation ductwork. All fire dampers have a fusible link (except MAN-model) and spring return actuator. When the blades are in the open position, the device does not cause significant pressure loss 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. Fire dampers with non-standard dimensions can also be supplied on request.



Features

- Type approved by most recognized classification societies, class A0 - A60 fire damper
- Fixed frame and blades of painted, galvanized or stainless steel. Maintenance-free stainless steel bearings and shafts. Bronze bearings available as an option
- Blades without sealing
- Nominal release temperatures of fuses are 50 °C, 74 °C and 100 °C degrees
- Can be installed in any position
- Automatic electrical, pneumatic, spring or manual operation system available
- Frame material thickness 3 mm
- Maximum duct pressure 5000 Pa and maximum air velocity 15 m/s

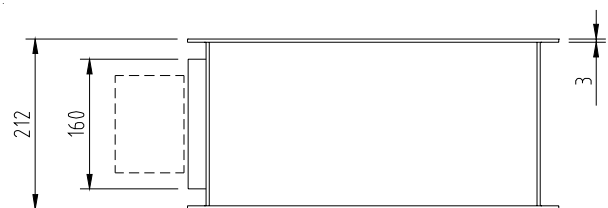
General FDL drawing



FDL dimensions and material thickness

FDL fire dampers are manufactured according to international standards for both rectangular (width B 100-1300 mm and height H 100-1200 mm, 50 mm division) and circular ducts (Ø100-1250 mm). Special non-standard dimensions and flange drilling are available on request. Modular construction sizes up to 2600x2400 mm are available. Standard frame material thickness 3 mm. Material thickness 3-5 mm according to SOLAS available on request.

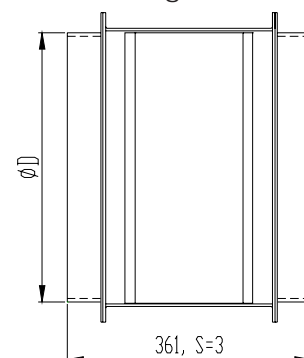
General FDL drawing, top



Actuator effect on dimensions

ACTUATOR		DIMENSIONS	
		R	A
Manual	Handle	95	H
Electrical	BF24 or BF230	90	H
Pneumatic PNL	Linear actuator 245/300 N	110	H _{≤500} = 500 H _{>500} = H
Pneumatic PNR	Pneumatic rotating actuator	170	H
Spring	Spring	140	H

General FDL drawing, circular connections



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SMV1M08Y2003
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Product options

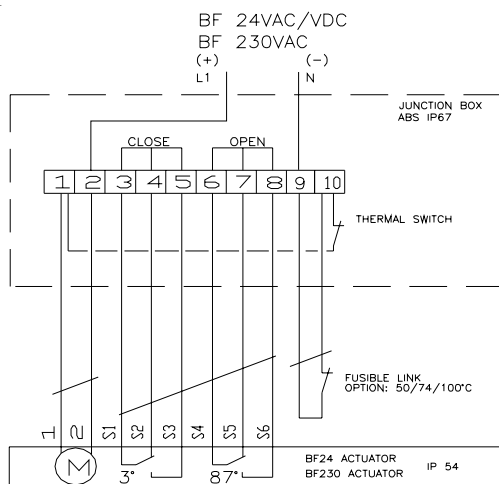
Halton FDL is available with following actuators:

- FDL-EL: Electrical spring return motor; standard actuators being BF24, BF24-T (24 VAC \pm 20% 50...60 Hz; 24VDC \pm 10%) or BF230, BF230-T (220-240 VAC 50...60 Hz). The motor contains built-in open-closed limit switches. Separate junction box included in the EL-model.
- FDL-PNL: Pneumatic actuator, material AISI 316, 4-10 bar. Junction box available as an option.
- FDL-PNR: Pneumatic rotating actuator, 4-6 bar. Junction box available as an option.
- FDL-SP: Manual spring-actuated damper with fusible link.
- FDL-MAN: Manual operation without actuator and without fusible link.
- DOT: Manual override function available for PNL and EL models

Accessories

Many accessories are available for all Halton Marine fire dampers.

FDL-EL wiring diagram

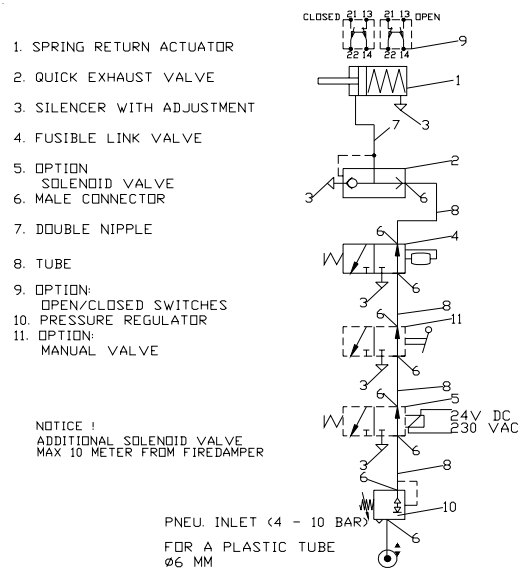


Operation principle

In the event of a temperature rise in ductwork,

- FDL-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.
- FDL-PNL and FDL-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.
- FDL-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.
- FDL-MAN: fire damper does not contain a fusible link. The damper is opened and closed manually.

FDL pneumatic diagram



Weights of Halton Marine FDL-EL dampers and other models (kg)

FDL-EL, weight with the frame thickness of 3 mm

FDL-EL (weight with frame thickness of 3-5 mm according to SOLAS)

H / Height (mm)	B / Width (mm)											D2 ØD (mm)	Weight kg		
	100	200	300	400	500	600	700	800	900	1000	1100			1200	1300
100	10 (10)	12 (12)	13 (13)	15 (15)	17 (19)	18 (22)	20 (26)	22 (28)	23 (30)	25 (33)	27 (36)	29 (39)	30 (41)	100	12(12)
200	12 (12)	14 (14)	15 (15)	17 (17)	19 (22)	21 (24)	23 (29)	25 (32)	27 (35)	28 (37)	30 (40)	32 (43)	34 (45)	125	13(13)
300	12 (12)	16 (16)	18 (18)	20 (20)	22 (25)	24 (28)	27 (34)	29 (37)	31 (40)	33 (43)	35 (45)	37 (48)	39 (51)	160	14(14)
400	16 (16)	18 (18)	20 (20)	23 (23)	25 (28)	27 (31)	29 (37)	32 (40)	34 (44)	36 (47)	38 (50)	40 (53)	43 (56)	200	16(16)
500	18 (19)	21 (22)	23 (25)	26 (28)	28 (32)	31 (35)	33 (42)	36 (45)	38 (48)	40 (52)	43 (55)	45 (58)	48 (62)	250	20(20)
600	20 (22)	23 (24)	25 (28)	28 (31)	31 (35)	33 (38)	36 (46)	38 (50)	41 (52)	44 (56)	46 (59)	49 (63)	51 (66)	315	24(24)
700	22 (28)	25 (32)	28 (35)	31 (39)	34 (43)	37 (46)	39 (50)	42 (54)	45 (57)	48 (61)	51 (65)	54 (68)	57 (72)	400	31(31)
800	24 (31)	27 (34)	30 (38)	33 (42)	36 (46)	39 (50)	42 (54)	45 (57)	48 (61)	51 (65)	54 (69)	57 (73)	60 (77)	500	37(44)
900	26 (34)	29 (38)	33 (42)	36 (46)	39 (50)	42 (54)	45 (58)	49 (62)	52 (66)	55 (70)	58 (74)	62 (78)	65 (82)	630	46(57)
1000	28 (36)	31 (40)	35 (44)	38 (49)	41 (53)	45 (57)	48 (62)	52 (65)	55 (70)	58 (74)	62 (78)	65 (82)	68 (86)	800	61(83)
1100	30 (39)	34 (44)	37 (48)	41 (53)	45 (57)	48 (61)	52 (66)	55 (70)	59 (75)	63 (79)	66 (83)	70 (88)	73 (92)	1000	81(110)
1200	32 (42)	36 (46)	40 (51)	43 (55)	47 (60)	51 (65)	55 (70)	58 (74)	62 (79)	66 (83)	70 (88)	73 (92)	77 (97)	1250	109(146)

FDL-EL weights include actuator weight (BF24 or BF230).

Weights of other models: FDL-PNL=FDL-EL +1 kg, FDL-PNR=FDL-EL +1 kg, FDL-SP=FDL-EL -2 kg, FDL-MAN=FDL-EL -3 kg