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About us

Halton Marine

Halton Marine, one of the world's leading suppliers of marine HVAC, develops, manufactures and markets reliable, high-quality ventilation solutions specifically designed for shipbuilding, Oil & Gas, Energy and Naval applications.

Flamgard Calidair

Flamgard Calidair, the member of Halton Group, operates right across the globe within industry sectors as diverse as Oil & Gas, Nuclear, Marine, Power Generation, Tunnel & Metro and Industrial.

Halton Group

Halton Group specializes in indoor environment solutions, ranging from public and commercial buildings to foodservice facilities. Founded in Finland in 1969, Halton operates today in over 35 countries around the world, with annual sales of €197 million and over 1500 employees. The company has production facilities in Brazil, Canada, China, France, Finland, Germany, Malaysia, United Kingdom and USA.



VENTILATION
FIRE SAFETY

Fire dampers
for demanding
conditions

For Marine and Offshore
and Onshore markets

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Fire dampers for marine and offshore applications

Product name	FDB2 - A0(A60) fire and gas damper	FDO - A0(A60) fire and gas damper	FDL - A0(A60) fire damper	FDA - A0(A60) fire and gas damper	FDH - H0(H120) fire and gas damper	CFD-01 - A0(A60) fire damper
Image						
Applications	Ships and ferries; Offshore oil and gas; Offshore wind	Ships and ferries; Offshore oil and gas; Offshore wind	Ships and ferries; Offshore oil and gas; Offshore wind	Offshore oil and gas; Offshore wind; Renewable energy; Ships and ferries	Offshore oil and gas; Offshore wind; Renewable energy; Ships and ferries	Ships and ferries; Offshore oil and gas; Offshore wind
Fire rating	A0 - A60	A0 - A60	A0 - A60	A0 - A60	H0 - H120	A0 - A60
Fuse temperature	50, 65, 70, 72, 74, 95, 100, 144	50, 65, 70, 72, 74, 95, 100, 144	50, 65, 70, 72, 74, 95, 100, 144	50, 65, 70, 72, 74, 95, 100, 144	50, 65, 70, 72, 74	57, 68, 72, 79, 93, 95, 141, 182
Frame material	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or hot-dip galvanised finish	Sizes 100 and 125: carbon steel with a painted or hot-dip galvanised finish. Sizes 160 to 315: EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or hot-dip galvanised finish	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or hot-dip galvanised finish	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or hot-dip galvanised finish	EN 1.4301 or EN 1.4432	316L stainless steel, 304L stainless steel, mill galvanised mild steel
Frame material thickness	3 mm or 3-5 mm according to SOLAS. Available as an option up to 10 mm	3 mm or 4 mm (depending on the size) according to SOLAS	3 mm or 3-5 mm according to SOLAS	3 mm or 3-5 mm according to SOLAS	3 mm or 5 mm	3 mm or 3-5 mm according to SOLAS. 5> on request
Frame depth	Rectangular: 210-215 mm depending on the frame material thickness. Circular: 367-380 mm depending on the frame material thickness	Ø100-199 mm - 200 mm Ø>200 mm - 320 mm	Rectangular: 212-217 mm depending on the frame material thickness. Circular: 367-380 mm depending on the frame material thickness	Rectangular: 270-275 mm depending on the frame material thickness. Circular: 382-395 mm depending on the frame material thickness	255 mm regardless of the frame material thickness	300 mm
Blade material	EN 1.4301, EN 1.4404 or EN 1.4432 or galvanised steel	Sizes 100 and 125: carbon steel with galvanised finish. Sizes 160 to 315: EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with galvanised finishing	EN 1.4301, EN 1.4404 or EN 1.4432 or galvanised steel	EN 1.4301, EN 1.4404 or EN 1.4432 or galvanised finishing	EN 1.4404 or EN 1.4432	316L stainless steel, 304L stainless steel, mill galvanised mild steel
Blade material thickness	1.0 mm + 1.0 mm double sheet construction	1.0 mm + 1.0 mm double sheet construction	1.0 mm + 1.0 mm double sheet construction	1.0 mm + 1.0 mm double sheet construction	1.0 mm + 1.0 mm double sheet construction	1.5 mm thick double skin aerofoil firelock section
Blade gaskets	Silicone seals and thermal expansion graphite seals	Silicone seals	Thermal expansion graphite seals	Stainless spring steel seals and thermal expansion graphite seals	Stainless spring steel seals and thermal expansion graphite seals	316L stainless steel, 304L stainless steel
Leakage class	Case: Class B Blade: From class 1 to 3 in accordance with EN 1751:2014	Case: Class C Blade: From class 2 to 4 in accordance with EN 1751:2014	Case: Class B Blade: From class 1 to 2 in accordance with EN 1751:2014	Case: Class C Blade: Closed damper fulfills the leakage requirement class 3 (EN 1751:2014) for size > 300 x 300 mm and for size > 200 x 200 mm (silicon seals)	Case: Class C Blade: Closed damper fulfills the leakage requirement class 3 (EN 1751:2014) for size > 300 x 300 mm	Case: Class A to C Blade: From class 1 to 3 in accordance with BS EN 1751
Minimum size of one module	100 x 100 mm at 1 mm intervals	Ø100 mm (sizes Ø100 mm and Ø125 mm not available in stainless steel)	100 x 100 mm at 1 mm intervals	200 x 200 mm at 25 mm intervals for width and 50 mm intervals for height or from Ø200 mm	250 x 250 mm at 50 mm intervals	150 x 150 mm at 1 mm intervals
Maximum size of one module	1200 x 1600 mm	Ø500 mm	1300 x 1200 mm	1200 x 1600 mm	1200 x 1200 mm	1000 x 1000 mm
Maximum size of several modules	2060 x 3260 mm or 2460 x 2860 mm (four damper modules). <i>Please note that a vertical module consisting of 2 dampers is not available.</i>	Module construction is not available	2660 x 2460 mm (four damper modules). <i>Please note that a vertical module consisting of 2 dampers is not available.</i>	2500 x 2600 mm (four damper modules with 2 actuators)	Module construction is not available	3100 x 3100 mm
Special flanges and drilling patterns	Available on request	Available on request	Available on request	Available on request	Available on request	Available on request
Minimum and maximum working temperature	From -50 °C to +80 °C (project-specific temperatures on request)	From -50 °C to +80 °C (project-specific temperatures on request)	From -50 °C to +80 °C (project-specific temperatures on request)	From -50 °C to +80 °C (project-specific temperatures on request)	From -50 °C to +70 °C (project-specific temperatures on request)	Project-specific temperatures on request
Actuator	Pneumatic, electric or manual (spring mechanism)	Pneumatic, electric or manual (spring mechanism)	Pneumatic, electric or manual (spring mechanism)	Pneumatic or electric	Pneumatic or electric	Pneumatic, electric or manual (spring mechanism)
ATEX certificate	Available	Available	Available	Available	Available	Available
Others	According to directive 2014/90/EU module B	According to directive 2014/90/EU module B	According to directive 2014/90/EU module B	According to directive 2014/90/EU module B	According to directive 2014/90/EU module B	<ul style="list-style-type: none"> According to directive 2014/90/EU module B H0 - H120 SIL 2 (bare-shaft damper)

Fire dampers for onshore applications

Product name	FCE - EI60S fire damper	FDH - H0(H120) fire and gas damper	CFD-01 - A0(A60) E120S fire damper	CFD-01-ICB - EI120S insulated fire damper	CFD-02TM - High temperature tunnel damper
Image					
Applications	Airports; Hospitals; Heavy industry; Laboratories; Office buildings	Heavy industry	Airports; Heavy industry; Tunnels	Heavy industry	Airports; Heavy industry; Tunnels
Fire rating	EI - EI60S ES - E120S	H0 - H120	E120S	Vertical installation: EI90S Horizontal installation: EI60S	Guaranteed to perform up to 400 °C for up to 2 hours
Fuse temperature	72	50, 65, 70, 72, 74	57, 68, 79, 93, 141, 182	57, 68, 79, 93, 141, 182	N/A
Frame material	EN 1.4301, EN 1.4404 or EN 1.4432 or hot-dip galvanised carbon steel (3 mm) or steel galvanised finish Z275 (1 mm)	EN 1.4301 or EN 1.4432	316L stainless steel, 304L stainless steel	316L stainless steel, 304L stainless steel	316L stainless steel, 304L stainless steel, mill galvanised mild steel
Frame material thickness	1 mm or 3 mm	3 mm or 5 mm	3 mm	3 mm	3 mm
Frame depth	270 mm (standard)	255 mm regardless of the frame material thickness	300 mm	300 mm	300 mm
Blade material	EN 1.4301, EN 1.4404 or EN 1.4432 or steel galvanised finish Z275	EN 1.4404 or EN 1.4432	316L stainless steel, 304L stainless steel	316L stainless steel, 304L stainless steel	316L stainless steel, 304L stainless steel
Blade material thickness	1.0 mm + 1.0 mm double sheet construction	1.0 mm + 1.0 mm double sheet construction	1.5 mm thick double-skin aerofoil firelock section	1.5 mm thick double-skin aerofoil firelock section	2.0 mm thick double-skin aerofoil firelock section
Blade gaskets	Silicone seals and thermal expansion graphite seals	Stainless spring steel seals and thermal expansion graphite seals	Intumescent	Intumescent	316L stainless steel, 304L stainless steel
Leakage class	Case: Class C Blade: Closed damper fulfills the leakage requirement class 3 (EN 1751:2014) for size ≥ 200 x 200 mm	Case: Class C Blade: Closed damper fulfills the leakage requirement class 3 (EN 1751:2014) for size > 300 x 300 mm	Case: Class A to C Blade: From class 1 to 3 in accordance with BS EN 1751	Case: Class A to C Blade: From class 1 to 3 in accordance with BS EN 1751	Case: Class A to C Blade: From class 1 to 3 in accordance with BS EN 1751
Minimum size of one module	150 x 150 mm at 50 mm intervals for height and 25 mm intervals for width	250 x 250 mm at 50 mm intervals for height and 25 mm intervals for width	150 x 150 mm at 1 mm intervals	150 x 150 mm at 1 mm intervals	150 x 150 mm at 1 mm intervals
Maximum size of one module	1000 x 1000 mm	1200 x 1200 mm	1000 x 1000 mm	1000 x 1000 mm	Vertical installation: 2550 x 1900 mm. Horizontal installation: 2050 x 1900 mm
Maximum size of several modules	Module construction is not available. "Damper wall" available.	Module construction is not available	Module construction is not available	Module construction is not available	Project-specific sizes on request. The largest multi-modular size that has been supplied to date is 4.8 x 4.8 metres.
Special flanges and drilling patterns	Not available	Available on request	Available on request	Available on request	Available on request
Minimum and maximum working temperature	From -30 °C to +50 °C	From -50 °C to +70 °C (project-specific temperatures on request)	Project-specific temperatures on request	Project-specific temperatures on request	Project-specific temperatures on request. High-temperature pressure tested: 400 °C for 1 hour at 4,000 pa
Actuator	Pneumatic or electric	Pneumatic or electric	Electric	Pneumatic	Electric
CE approval	Yes	Pending	Yes	Yes	Yes
ATEX certificate	Available	Available	No	Yes	No
SIL rating	No	No	SIL 2 (bare-shaft damper)	SIL 2 (bare-shaft damper)	Low-demand SIL 4 rating
Others	According to standard EN 15650:2010	According to directive 2014/90/EU module B	According to directive 2014/90/EU module B		<ul style="list-style-type: none"> Fire Integrity Tested according to UL555 and BS746 (pt 20) UL555 high-pressure hose tested Endurance tested for 100,000 electrically actuated cycles Environmental exposure tested Damper frame endurance tested for 1 million cycles Salt mist anti-corrosion tested