

FDA  
FDB2  
FDL  
FDO  
FDH  
FCE  
.....  
UTA  
UTP  
UTG  
UTT  
UTX  
PRA  
PTS  
.....  
BDH  
PV-KK-S  
PV-KK-SX  
BLD  
BRD  
.....  
KW3  
KWT  
KWH  
KFM  
KVM  
.....  
WR  
CCW-M  
UCS  
LCD  
TDM  
TCG  
HCL  
MMC  
JES

# THE SHORT SPECS

M02Y2020

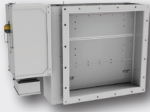
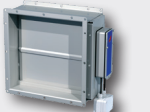




PROCLEAN  
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HFR/M  
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USM  
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WTH

Type	A0(A60) Fire and gas damper	A0(A60) Fire and gas damper	A0(A60) Fire damper	A0(A60) Fire and gas damper	H0(H120) Fire and gas damper	CE-marked fire damper
Name	FDA	FDB2	FDL	FDO	FDH	FCE
Frame	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing	EN 1.4404 or EN 1.4432	EN 1.4301, EN 1.4404 or EN 1.4432 or (carbon) steel with a galvanised or Z275 finishing
Frame thickness	3 or 3-5 mm	3 or 3-5 mm, available as an option up to 10 mm	3 or 3-5 mm	3 mm	3 or 5 mm	1-3 mm
Blades	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 steel	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 steel	EN 1.4404 or EN 1.4432	EN 1.4301, EN 1.4404 or EN 1.4432 or steel with a Z275 finishing
Blade gaskets	stainless spring steel seals and thermal expansion graphite seals	silicone seals and thermal expansion graphite seals	with intumescent seals	with special seals	with stainless spring steel seals and thermal expansion graphite seals	with silicone seals and thermal expansion graphite seals
Leakage class according to EN 1751*	up to class 3	from class 1 to class 3	from class 1 to class 2	from class 2 to class 4	up to class 3	up to class 3
Sizes	from 200x200 to 1200x1250 mm at 25 interval for width and 50 mm interval for height	from 100x100 to 1200x1600 mm at 1 mm intervals	from 100x100 to 1300x1200 at 1 mm intervals	from Ø100 to 500 mm (sizes Ø100 and Ø125 not available in stainless steel)	from 200x200 to 1200x1200 mm at 50 mm intervals	from 150x150 to 1000x1000 mm at 50 mm intervals
Circular connection pieces	from Ø200 to 1250 mm	from Ø100 to 1250 mm	from Ø100 to 1250 mm	from Ø100 to 500 mm	from Ø200 to 1250 mm	from Ø100 to 1000 mm
Modules possible	yes	yes	yes	no	no	no
Special flanges and drilling patterns available as an option	yes	yes	yes	yes	yes	no
ATEX as a whole	available as an option	available as an option	available as an option	available as an option	available as an option	available as an option

\*) Leakage class depending on size. Details available from Halton Marine.


## Flow control dampers

**Halton**


Type	Gas-tight shut-off damper	Balancing damper	Shut-off, balancing and gas dampers	Shut-off, balancing and gas dampers	Adjustment and measurement units	Single-blade damper
						
Name	UTA	UTP	UTG	UTK/UTT	PRA	PTS
Frame	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing	EN 1.4404 or galvanised steel	Casing galvanized steel	Casing galvanized steel
Frame thickness	3 or 5 mm	3 mm (standard) or 5 mm, up to 10 mm as an option	3 mm (standard) or 5 mm, up to 10 mm as an option	1 mm	Blades galvanized steel	Blade and shafts galvanized steel
Blades	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 steel	EN 1.4301, EN 1.4404 or EN 1.4432 or galvanised steel	EN 1.4404 or galvanised steel	Operating mechanism steel	Operating mechanism galvanized steel
Blades	with stainless spring steel seals or silicon seals	no seals	with silicone seals	insulated (only UTT) and with seals	Product options PRA unit (PRA/R) integrated with cleaning access panel	Product options
Leakage class according to EN 1751*	up to class 3	up to class 1	up to class 3	up to class 1 (UTK) up to class 3 (UTT)	Classification of casing leakage EN 1751	A = Shut-off, balancing or control damper B = Adjustment, balancing or control damper C = Adjustment, balancing or control damper with perforated blade
Sizes	from 100x100 to 1200x1600 mm at 25 interval for width and 50 mm interval for height	from 100x100 to 1200x1600 mm at 1 mm intervals	from 100x100 to 1200x1600 mm at 1 mm intervals	from 100x100 to 2400x2400 mm at 1 mm intervals (special sizes available)	up to class C	
Circular connection pieces	from Ø200 to 1250 mm	from Ø100 to 1250 mm	from Ø100 to 1250 mm	from Ø100 to 1250 mm		
Modules possible	yes	yes	yes	yes		
Operation principle	electrical, pneumatical or manual	electrical, pneumatical or manual	electrical, pneumatical or manual	electrical, pneumatical or manual	Sizes from 100 to 315 mm and 350 to 1000 mm	Sizes Ø100, 125, 160, 200, 250, 315, 400, 500
Special drilling patterns	yes	yes	yes	yes		
ATEX as a whole	available as an option	available as an option	available as an option	available as an option (UTT)	Operation principle manual	Operation principle manual or electrical

\*) Leakage class depending on size. Details available from Halton Marine.

## Blast dampers

Type	Blast protection damper
	
Name	BDH
Frame	EN 1.4404 or hot dip galvanized or painted steel. Frame thickness 5 mm
Blades	EN.14404 or hot dip galvanized steel. Blades are bolted to shafts
Operation	self-actuating, remains locked in closed position until manually opened and armed
Protection	positive and negative (suction) phase protection
Installation	vertical (wall or between ducts) and horizontal (floor, roof or between ducts)
Sizes	from 200x300 to 1200x1200 mm at 25 interval for width and 50 mm interval for height
Normal operation temperature range	-60 °C to +80 °C in stainless steel damper, -20 °C to +80 °C in carbon steel damper
Maximum blast load	1.0 bar
Modular construction	available
ATEX as a whole	available

## Blast valves

Type	Blast valve
	
Name	PV-KK-S, PV-KK-SX
Material	EN 1.4404 or hot dip galvanized steel
Construction	valve blocks mounted in frames, amount of blocks determine the product size
Operation	spring operated, automatic re-opening after blast
Protection	positive and negative (suction) phase protection
Installation	vertical (wall) and horizontal (floor or roof)
Sizes	minimum height and width is one blast valve block, maximum height is 10 rows and width 9 columns
Normal operation temperature range	-45...+150 °C (high heat resistance, 300°C for 40min)
Maximum blast load	1.0 bar
Modular construction	available*
ATEX as a whole	available

## Non-return dampers and pressure-relief dampers

**Halton**

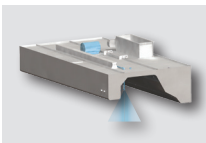
Type	Non-return damper	Pressure-relief damper
		
Name	BLD	BRD
Frame	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing	EN 1.4301, EN 1.4404 or EN 1.4432 or carbon steel with a painted or galvanised finishing
Frame thickness	3 mm	3 mm
Blades	EN 1.4301, EN 1.4404 or EN 1.4432 or galvanized steel	EN 1.4301, EN 1.4404 or EN 1.4432 or galvanized steel
Blades	with silicone seals	with silicone seals
Leakage class according to EN 1751	up to class 2	up to class 2
Sizes	from 150x150 to 1200x1400 mm at 1 mm intervals	from 150x150 to 1200x1400 mm at 1 mm intervals
Circular connection pieces	from Ø100 to 1250 mm	from Ø100 to 1250 mm
Modules possible	yes	yes
Special drilling patterns	yes	yes
ATEX as a whole	available as an option	available as an option

\*) Contact Halton Marine for the availability.

## Galley hoods and canopies

Type	Galley water wash hood with Capture Jet	Galley water wash hood with Capture Jet	Galley water wash hood with Capture Jet	Galley hood without water wash	Condensate canopy
					
Name	KW3	KWT	KWH	KFM	KVM
Material	EN 1.4301, EN 1.4404 available as an option	EN 1.4301, EN 1.4404 available as an option	EN 1.4301, EN 1.4404 available as an option	EN 1.4301, EN 1.4404 available as an option	EN 1.4301, EN 1.4404 available as an option
Continuously welded construction, manufactured according to USPHS	yes	yes	yes	yes	yes
Halton Capture Jet™	yes, Capture Jet™ 3	yes, Capture Jet™	yes, Capture Jet™	as an option	no
Supply air	no	yes	no	no	as an option
Airflow measurement tap	yes	yes	yes	yes	no
Light fixture	yes	yes	yes	yes	yes
Washing system	yes	yes	yes	no	no
Airflow balancing damper	yes	yes	yes	yes	no
Fire damper	as an option	as an option	as an option	as an option	no
Shut-off damper	as an option	as an option	as an option	as an option	no
Grease collection tray	as an option	as an option	as an option	yes	no
Drain pipe	yes	yes	yes	no	no
KSA grease filters	yes	yes	yes	yes	no
UV-light system	as an option	as an option	as an option	no	no
Fire suppression system	as an option	as an option	as an option	as an option	as an option
M.A.R.V.E.L.	as an option	as an option	as an option	as an option	as an option

### Fire suppression system



Fire suppression system that protects equipment, exhaust chamber and exhaust duct. Reliable mechanical heat or remote actuation that can be connected to a gas line or power supply shut-off devices. Simple and compact design that is fully compatible with Halton Marine galley hoods.

### Control cabinet / WR



Halton WR water wash control cabinets are used to control the washing cycle of Halton galley hoods KWH and KWT. The main body is manufactured from EN 1.4301 (EN 1.4404 available as an option). Designed and manufactured according to USPHS requirements. One control cabinet serves 1 to 7 hood groups. Fully automatic washing cycle that is programmable for using different type of operation conditions. Embedded UV-control panel available as an option.

### Control cabinet for controlling and monitoring Halton hoods / CCW-M



Casing material EN 1.4301 or 1.4404 as an option. Manufactured according to USPHS requirements. One control cabinet can manage up to 16 hoods. Fully automatic washing cycle that is programmable for using different type of operation conditions. LCD touch panel as user interface for operating the hood and selected technologies like UV-light technology, water wash system and demand based ventilation.

### Control panel / UCS



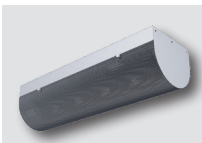
UCS control panel for UV-light technology. Independent operation for 1 - 12 hood modules. Indication for UV-lamp functionality, alarms and running hours. Small, user-friendly design that can be integrated in the hood surface or water wash control cabinet. Bluetooth communication for service and commissioning purposes.

### Touch panel / LCD



The touch panel interface has been developed to provide fast and simple approach of galley ventilation features. It can manage all Halton galley ventilation technologies such as UV-light technology, water wash system and demand based ventilation (M.A.R.V.E.L.). The touch panel displays individual hoods with descriptive pictures allowing the potential alarms or hood statuses to be displayed visually. The touch panel can manage up to 24 hoods.

### Low velocity ceiling diffuser / TCG



TCG low velocity ceiling diffuser for galleys. Manufactured of EN 1.4404. Rectangular connection of 302x152 mm. Special circular connections available. Low velocity air supply. Enables a potential saving on extract airflow quantity needed for a hood. Supports comfortable thermal and good acoustic conditions. Detachable front panel and perforated plate enable easy cleaning of the diffuser. Manufactured according to USPHS requirements.

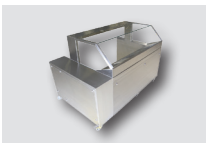
### Halton Skyline / HCL



An LED-based lighting system designed for professional kitchens. LEDs fitted in two types of a spot: a broad beam with 4,000 K colour temperature and a focused beam with 3,000 K colour temperature. Can be equipped with two sets of LEDs enabling varying of the colour temperature from 2200 to 6500 K. Close to sunlight render and increased illumination levels. Keeps the calculated lighting level after 50,000 working hours. Excellent shielding prevents dazzling.

## Show galley

### Halton Marine MobiChef / MMC



Halton Marine MobiChef is a totally autonomous mobile cooking station for electric appliances. Main body is made from EN 1.4404 stainless steel. Glass is tempered and laminated. Includes LED strip lighting and caster wheel type of wheels. Front wheels are locable. Halton MMC is available in different sizes: small, medium and large. Service table on lefthand side available as an option.

### Jet extraction system / JES



Exhaust plenum constructed from AISI 304 stainless steel, fully welded, U.L. 710 listed. T.A.B.™ (Testing and Balancing) port to verify exhaust air values. Grease and condensates are collected in a drip tray easily removable for cleaning. Stainless steel tube is equipped with an aerodynamic nozzle, shaped to generate a highly efficient cyclonic suction effect. The nozzle is also used to support the glass plate. Glass Tempered Safety Glass plate is 12 mm thick.

## Halton central vacuum cleaning system

### Halton ProClean



Halton's ProClean central vacuum cleaning system design minimizes investment and maintenance. Usually one module serves one fire zone. A module contains central unit (complete unit with cyclone and cartridge filter, dust container/dust pack, electric and logic control cabin, compressor), pipes, cable to inlet valves, inlet valves, cleaning valves and pneumatic pipes and cleaning tools. ProClean is available from components to whole scope.

## Fancoil and Halton CaBeam

**Halton**

### Fancoil / FCU



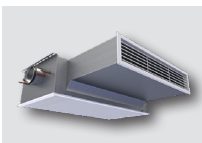
Casing galvanized steel or EN 1.4404 as an option. Mineral wool insulation. Silent and stepless fan operation. Electrical reheaters up to 1200 W. Total cooling capacity: up to 1250 W depending on quantity of fresh air and cooling water. Recycled air range up to 235 m<sup>3</sup>/h. Quick water connections. Integrated electric connections. Air connections and fan type tailored according to customer needs.

### Chilled beam for recessed installation for outside cabins / Halton CaBeam\*



An active chilled beam solution for demanding marine applications. Front panel, side plates and end plates are manufactured from galvanised steel with a polyester-epoxy-painted finishing in white RAL 9010. Supply air plenum and brackets are galvanised steel. Coil pipes are copper. Coil fins are aluminium or copper as an option. The maximum operating pressure of chilled/hot water pipework is 1.0 MPa. The supply air ductwork connection is D125 mm.

### Chilled beam for integrated installation / Halton CaBeam\*



An active chilled beam solution designed for bulkhead and enclosed installation with return and supply air grilles for demanding marine applications. Return air grille is galvanised steel. Supply air grille is aluminium. Casing, supply air plenum and brackets are galvanised steel. Coil pipes are copper. Coil fins are aluminium or copper as an option. The maximum operating pressure of water pipework is 1.0 MPa. The supply air ductwork connection is D125 mm.

### Chilled beam for exposed wall installation for outside cabins / Halton CaBeam\*



An active chilled beam solution for demanding marine applications. Front panel is manufactured from galvanised steel with a polyester-epoxy-painted finishing in white RAL 9010. Supply air plenum and brackets are galvanised steel. Coil pipes are copper. Coil fins are aluminium or copper as an option. The maximum operating pressure of chilled/hot water pipework is 1.0 MPa. The supply air ductwork connection is D125 mm.

\*) The Halton CaBeam units can be tailored to customer demands according to the needed integration and requirements. Dimensions, capacities, and functionality details can be modified to project specific.

Note: Halton CaBeam is not exchangeable with FCU fancoil due to differences in cooling circuit. Halton CaBeam takes care air distribution in cabin as well.

Type	Single duct cabin unit	Manual single duct cabin unit	Multi-connection cabin unit	Sound attenuator and balancing box	Double duct cabin unit	Manual single duct cabin unit
Name	HMF	HMM	HFR/M	HME	HMR	HMC
Casing material	hot galvanized steel or EN 1.4404 as an option	hot galvanized steel or EN 1.4404 as an option	hot galvanized steel or EN 1.4404 as an option	hot galvanized steel or EN 1.4404 as an option	hot galvanized steel or EN 1.4404 as an option	hot galvanized steel or EN 1.4404 as an option
Insulation	mineral wool, s=20 mm or s=25 mm as an option, MED approved	mineral wool, s=20 mm or s=25 as an option, MED approved	mineral wool, s=25 mm, MED approved	mineral wool, s=20 mm or s=25 as an option, MED approved	mineral wool, s=25 mm, MED approved	mineral wool, s=25 mm, MED approved
Operation principle	automatic with pressure independent or dependent operation system	manually operation. recommended to be used with JCC diffuser	automatic with pressure independent or dependent operation system	-	automatic with pressure independent operation system	manually operation. designed to be used together with TCL diffuser
Reheater options	400W, 800W, 400W + 800W, 1200W, 1500W, 1800W	400W, 800W, 1200W, 1500W, 1800W. Max. 1500W with K01	400W, 800W, 400W + 800W, 1200W, 1500W, 1800W	400W, 800W, 1200W, 1500W, 1800W. Max. 1500W with K01	-	-
Operation pressure range	200...1000 Pa	50...1000 Pa	200...1000 Pa	0...200 Pa	200...1000 Pa	0...200 Pa
Airflow range	120...500 m3/h	0...500 m3/h	175...1000 m3/h	0...500 m3/h	120...400 m3/h	0...180 m3/h
Spigots (male or female)	inlet spigot D100...125 mm, outlet spigots D160...250 mm	inlet spigot D100...125 mm, outlet spigots D160...250 mm	inlet spigot D125...200 mm, outlet(s) spigots D125...200 mm (1-3 pcs)	inlet spigot D100...160 mm, outlet spigots D160...250 mm	inlet spigot D100...125 mm, outlet spigots D160...250 mm	inlet spigot D100 mm (male or female), outlet spigot D160 mm (female)
Applicable to B-0 and B-15 installations	yes	yes	no need (not a terminal unit)	yes	yes	yes
Network options	Different cabin ventilation networks available: LON or Ethernet or Wi-Fi (or a combination). Can be also embedded into existing network. All needed components, such as routers, switches and repeaters available. Commissioning and start-up services available. Available for all cabin unit types, excluded HMC and limited availability for HME and HMM.					



## Terminal and inline units








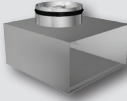


Type	Airflow unit for large air volumes
Name	HML
Casing material	hot galvanized steel or EN 1.4404 as an option
Insulation	mineral wool, s=50 mm, MED approved
Operation principle	automatic CAV/VAV unit with pressure independent operation system
Reheater options	0,9 kW...30 kW
Operation pressure range	100...1000 Pa
Sizes	from 200x200 to 1000x1000 mm. Larger sizes available on request
Circular connection pieces	available from 200 mm to 1000 mm
Network options	Different cabin ventilation networks available: LON or Ethernet or Wi-Fi (or a combination). Can be also embedded into existing network. All needed components, such as routers, switches and repeaters available. Commissioning and start-up services available

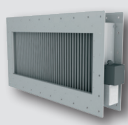
## Room thermostats



Type	Control unit	Control unit	Control unit	Control unit
Name	LPC-3.GOT.111	LCD	Push buttons	Rotating knob
Cabin temperature measurement	yes	yes	yes	yes
Wireless service connection	yes	yes	yes	yes, excluded K01 control package
Delivered with connection cable (thermostat - terminal unit)	as an option	yes, 7 m. as standard	yes, 7 m. as standard	yes, 7 m. as standard
Temperature adjustment	yes	by touch buttons	by push buttons	by rotating knob
Self diagnose function	no	yes	yes	no
LED intensity control and auto dimming	yes	yes	yes	no
Display for actual and set point temperatures	yes	settable	no	no
Time display	as an option	as an option	no	no
Customized picture	yes	as an option	no	no
Customized labeling	no	no	as an option	as an option
Front panel colour options	yes	yes	yes	yes

Type	Architectural ceiling diffuser	Ceiling diffuser with side slot	HMC cabin unit diffuser	Exhaust valve
				
Name	DLQ	JCC	TCL	URH
Material	steel with epoxy paint finishing in RAL/NCS colour	steel with epoxy paint finishing in white RAL 9003 or EN 1.4404 as an option	steel with epoxy paint finishing in white RAL 9003	steel with polyester-epoxy-painted finishing in white RAL 9003
Connections	D250 mm (female)	D100, 125, 160, 200, 250 mm (male)	D160 mm (male)	D100, 125, 160, 200 (male)
Construction	detachable front plate. outer dimensions 967x667 mm	square or circular with solid or perforated front panel	solid front plate. outer dimensions 470x275 mm	adjustable central cone and sleeve. galvanized installation frame as an option
Manual knob	no	available as an option	yes	no
Note	compatible with Halton Marine cabin units	compatible with Halton Marine cabin units	designed to be used together with HMC cabin unit. applicable to B-15 installations	can be installed with or without a separate installation frame
Name	Grilles AWE, AWU	Grilles WDD	Grille AGC	Plenum BDR
				
Specification	anodized or epoxy-painted with white as a standard colour	aluminium with different finishing available	aluminium with different finishing available	galvanized steel

### Droplet separators with heated vanes / DSA



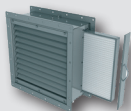
DSA with heated vanes for cold conditions. Frame aluminium EN AW 5754 with a painted finishing (RAL9010 as standard). Painting according to various standards available as an option. Frame also available as EN 1.4404 as an option. Construction: droplet separator with thermal cable and frame. High droplet and moisture efficiency, Class A results (EN 13030:2001), minimum pressure drop. Tailored sizes and designs according to customers' needs. Possibility to connect in conjunction with Halton Marine dampers. DSA is EAC TR CU 012 certified.

### Droplet separators / DSH



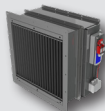
Frame material aluminium EN AW 5754 with a painted finishing (RAL9010 as standard) or EN 1.4404 with a painted finishing as an option. Painting according to various standards available as an option. Construction: droplet separator and frame (single stage), droplet separator, frame and filter (two-stage). Net and mask louver available as an option. High droplet and moisture efficiency, Class A results (EN 13030:2001), low pressure drop. Tailored sizes and designs according to customers' needs. Possibility to connect in conjunction with Halton Marine dampers.

### Droplet separators / DSH optional feature



Access hatch enables easy access to the filter from the side of the unit. (G4 filter in the picture). F7 and F8 bag filters. The materials of the synthetic fine filters are high-quality and durable, progressive mounted synthetic fibres. The filters can be used in example for air purification of intake air. Filters certified with ISO9001 and ISO14001 quality and environmental standards. The fine filters are also certified by Eurovent (EN779) standard.

### Droplet separators / DSH optional feature



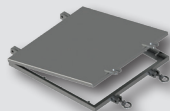
Droplet separator can be connected to Halton Marine dampers with or without a connection piece. In both cases the construction is modified to fit the damper. Connecting DSH together with a damper must be mentioned when ordering products. Combining Halton Marine droplet separator to a damper offers customers a compact solution for air intake that also saves space. The products are recommended to be connected together at Halton Marine factory.

### Outdoor louvres / USM



Sea water resistant aluminium (EN AW 5754) with painted finishing (white RAL9010 as standard colour) or galvanized steel or EN 1.4404. Frame thickness 3 mm as standard, blades 1 mm. For air exhaust or intake. Sizes from 150x150 to 1500x2400 mm at 1 mm intervals. Modular construction for larger sizes available. Non-standard dimensions and flange drilling available as an option. Can be fitted in conjunction with Halton Marine dampers.

### Weather tight hatch / WTH



Weather tight cover to be used with Halton Marine droplet separators and louvres. Material painted or galvanized steel or EN 1.4404.