

Autronica Fire and Security



PRODUCTS 2016

Fire and gas safety
Division Maritime



AUTRONICA
United Technologies



Autronica Fire and Security is a leading innovator, manufacturer and supplier of fire and gas safety worldwide. Our products ensure safety in applications on land, sea and in the petrochemical, oil and gas sectors.

Owned by United Technologies Corporation (UTC), we employ more than 450 people handling the complete value chain, from idea, development and manufacturing to the marketing, sales and servicing of our products. We are an international company with worldwide offices and our HQ is located in Trondheim, Norway's technology hotspot.

Protecting life, environment, and property

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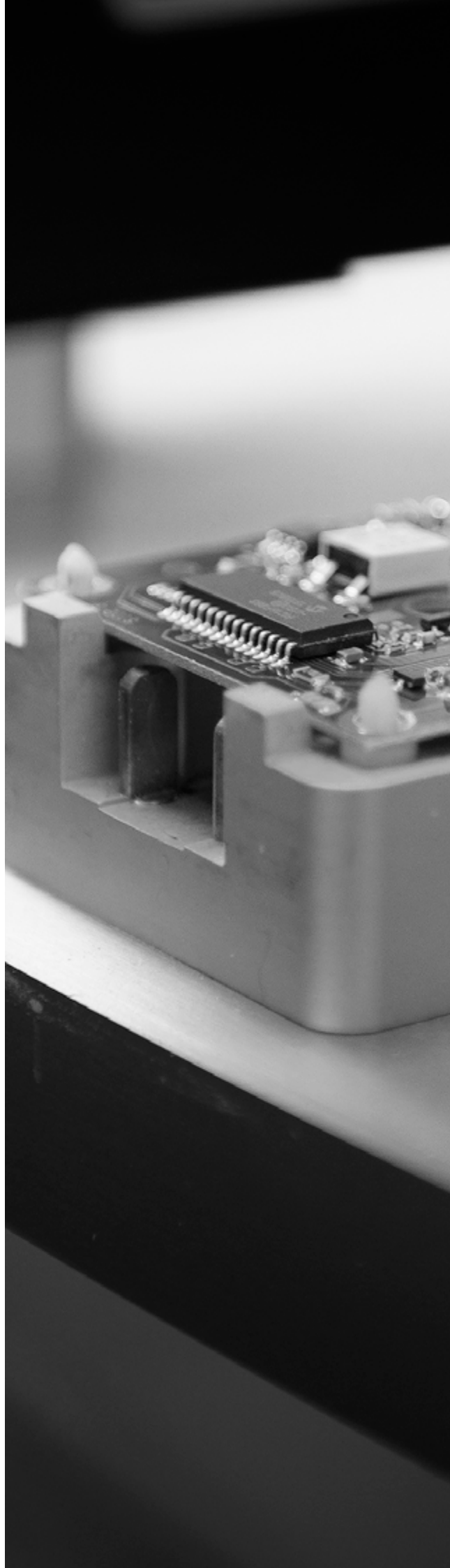
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Stringent control throughout Autronica Fire and Security AS assures the excellence of our products and services. For a complete overview of our approvals, go to www.autronicafire.com.



Autronica Fire and Security AS has once again taken fire safety to a higher level

AutroSafe fire detection system

The next generation in fire safety

AutroSafe is designed for the toughest requirements and expands the possibilities of a fire detection system even further. From hotels to cruise ships to drilling platforms, AutroSafe delivers the most rigorous fire safety yet.

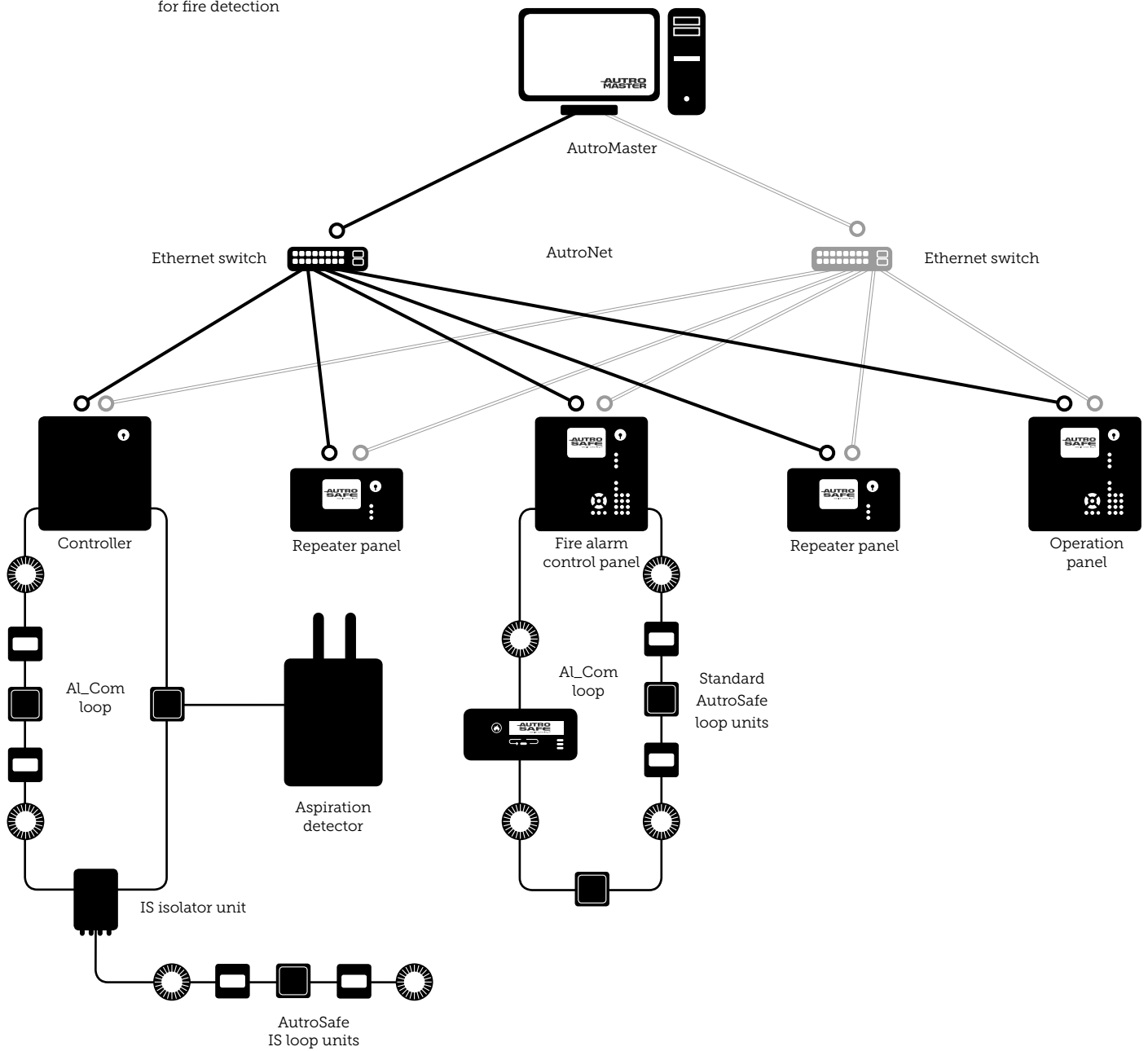
Autronica Fire and Security launched AutroSafe, our high-end fire detection system, in 1999. From day one, AutroSafe has proven its unique stability and reliability in more than 15 000 installations worldwide, both on- and offshore.

AutroSafe provides advanced functionality for a wide range of applications. The system is designed to meet all requirements in the high-end segment of the onshore, maritime and offshore market, and is certified according to Marine Equipment Directive (MED), European directives (CPD) requiring EN 54 compliance, and Factory Mutual (FM) approval according to NFPA 72.

Reliable communication is paramount to your safety. That's why we're adding AutroNet to the AutroSafe system, an innovative network solution safeguarding communication between panels. AutroNet ensures a redundant and high-speed network expanding the reach of the AutroSafe system even further. The system can be set up either in a star or ring network, depending on your needs.

History proves you can rely on AutroSafe. All existing functionality has stood up to the toughest tests worldwide for more than 10 years. With AutroSafe 4, Autronica has once again taken fire safety to a higher level.

AutoSafe
 – a complete solution
 for fire detection



Panels

The AutoSafe 4 family consists of five different panel types. These are:

- **Fire alarm control panel, BS-420.** BS-420 is the main panel in the AutoSafe family. It can be used as a stand-alone panel as well as part of a network system. All operations, alarm management, indications and other functions within an operation zone are controlled and handled by the panel. The panel is equipped with a display, light indicators, a numeric keypad, a navigation wheel and special function buttons (e.g. Silence Alarms). Loop driver, input and output modules can be connected. An integrated AutoFieldBus interface makes it possible to connect AutoFieldBus equipment to the panel. All AutoSafe systems must include at least one BS-420 panel.
- **Operator panel, BS-430.** As for the BS-420 panel, all operations, alarm management, indications and other functions within an operation zone are controlled and handled by the BS-430 panel. The panel is equipped with a display, light indicators, a numeric keypad, a navigation wheel and special function buttons (eg. Silence Alarms). No loop driver, input or output modules can be connected to this panel.
- **Controller, BC-420.** The BC-420 serves as a connection unit for loop driver modules as well as input and output modules. It is equipped with two light indicators for System Fault and Power. The panel has neither display nor operator buttons. An integrated AutoFieldBus interface makes it possible to connect AutoFieldBus equipment to the panel.
- **Controller rack unit, BC-440.** Serves as a connection unit for the detection loop, alarm sounders, controls and inputs. It is a variant of the BC-420 prepared for rack installations. Together with the I/O modules the unit will have the full functionality of the BC-420. Equipped with 2 Ethernet ports, one AutoFieldBus port and one serial port.
- **Repeater panel, BU-BV-420.** Physical dip-switches on the panel control the BU-BV-420 panel function. As an alarm operation panel it can operate alarms within one or more operation zones. As an information panel no operation of alarms are available. The information panel provides information from one or more operation zones.
- **Power Cabinet BP-405.** Includes a 5A power pack (BPS-405) which provides six 24 VDC / 2 A outputs. The input voltage is 115/230 VAC and the total maximum power available is 24 VDC / 5 A. An integrated AutoFieldBus interface makes it possible for the power pack to communicate (send fault messages) with the BS-420 or BC-420 panel. Space for two 12 V / 18 Ah batteries (not included)





Panel kits

For engineering purposes, we have established kits to be equipped according to specifications.

An AL_Com+ stack can contain up to six loop driver modules (BSD-3xx). By using AutoFieldBus, an additional AL_Com+ stack (with up to six additional loop driver modules) can be added to the system.

NOTE! The AutroSafe panels are certified with the AL_Com+ modules mounted inside the panel cabinet.


Image	Part number	Description	Including	Options
	116-KIT-BS-420M	Maritime fire alarm control panel kit	Panel front BSV-420M Cabinet UEA-400 Power supply module BSS-310A Communication module BSL-310 Text foils E-2879	Loop driver module BSD-310 Loop driver module H.P. BSD-311 BS-100 loop driver module BSD-330 Output module BSB-310A Output module BSJ-310 Input module BSE-310 Input module BSE-320 Dual power monitoring module BSS-311
	116-KIT-BC-420	Controller kit	Panel front BCV-420 Cabinet UEA-400 Power supply module BSS-310A Communication module BSL-310 Text foils E-2880	Loop driver module BSD-310 Loop driver module H.P. BSD-311 BS-100 loop driver module BSD-330 Output module BSB-310A Output module BSJ-310 Input module BSE-310 Input module BSE-320
	116-BC-440	Controller rack unit	-	-
	116-KIT-BS-430	Operator panel kit	Panel front BSV-420 Cabinet UE-1488 Text foils E-2879	-
	116-KIT-BU-BV-420	Repeater panel kit	Panel front BUV-420 Cabinet UE-1489 Text foils E-2880	-
	116-BP-405	Power cabinet	-	-

Loop panels

We have now included loop-powered panels in our portfolio, providing our customers a number of advantages: Quicker installation, reduced cabling and cost, and lowered system complexity. A detection loop can accommodate up to eight loop panels.

Image	Part number	Description	Dimensions H x W x D (mm)	Current consumption	Notes
	116-KIT-BU-110	Fire brigade loop panel kit	310 x 154 x 45	<1 mA (idle) 6 mA (max)	Enables silencing the panel's internal buzzer, silencing alarms, and resetting the system. Alarms only are shown in the display.
	116-KIT-BV-110	Information loop panel kit	310 x 154 x 45	<1 mA (idle) 6 mA (max)	Indication device only. Provides information related to the defined operation zone(s).

Printer

Image	Part number	Description
	116-BUP-400	Printer unit for AutoSafe 4
–	116-1712-012.0001	Printer paper 57 x 46 x 13 mm / 25 m

Modules

In addition to loop driver modules BSD-310, BSD-310N and BSD-311, as well as the obligatory power supply module BSS-310A and communication module BSL-310, AutoSafe features input and output modules for different applications (monitored alarm loops, servicing relays and LEDs, control inputs, etc.).

The modules have the same format, mount onto the panels' DIN mounting rail and plug into one another.

Important note on module capacity.






Each fire alarm control panel/controller contains a power supply module BSS-310A and a communication module BSL-310.

The BS-420 and BC-420 panels have space for up to 12 modules totally inside the cabinet.






An AL_Com+ stack can contain up to six loop driver modules (BSD-3xx)

By using AutoFieldBus, an additional AL_Com+ stack (with up to six additional loop driver modules) can be added to the system.


NOTE! The AutoSafe panels are certified with the AL_Com+ modules mounted inside the panel cabinet.

Image	Part number	Description	Monitored inputs	Monitored outputs	Total inputs	Total outputs	Monitors short circuits	Ensures loop communication	For use in EX zone 2 only	Amplified power output	Max. per panel	Notes
	116-BSB-310A	Output module		•	0	4	•					Requires external 24V
	116-BSD-310	Loop driver module			-	-	•	•			6/12	Max. 127 loop units
	116-BSD-310/N	Loop driver module			-	-	•	•	•		6/12	Max. 127 loop units
	116-BSD-311	Loop driver module H.P.			-	-	•	•		•	6/12	
	116-BSD-330	BS-100 loop driver			-	-	•	•			8	

Modules (cont.)

Image	Part number	Description	Monitored inputs	Monitored outputs	Total inputs	Total outputs	Monitors short circuits	Ensures loop communication	For use in EX zone 2 only	Amplified power output	Max. per panel	Notes
	116-BSE-310	Input module	•		4	0						
	116-BSE-320	Input module			8	0						Galvanically insulated inputs
	116-BSJ-310	Output module			0	8						Open transistor outputs
	116-BSS-310A	Power supply module									3	
	116-BSS-311	Dual power monitoring module									2	

Communication

Image	Part number	Description
	116-BSD-321/1	AutroFieldBus protocol converter Interface between AutroFieldBus and AL_Com+. Enables communication between all AL_Com+ modules in an AL_Com+ stack connected to AutroFieldBus. The module enables AutroSafe Dual Safety configuration, with both ordinary AL_Com communication and AutroFieldBus.
	116-BSL-310	AutroSafe communication module, serves as an interface for the common internal communication line between all the different I/O modules. Part of the fire alarm control panel.
	116-BSL-321	Multi-mode fibre optic converter Amplifier for AUTROLON/AutroFieldBus networks, which acts as a fibre-optic modem. The converter ensures reliable communication for distances of up to 3000 m. Uses multi-mode (62.5/125 µm or 50/125 µm) fibre-optic cable. Ingress Protection level: IP20
	116-BSL-322	Single mode fibre optic converter Amplifier for AUTROLON/AutroFieldBus networks, which acts as a fibre-optic modem. The converter ensures reliable communication for distances of up to 15000 m. Uses single-mode (9/125 µm) fibre-optic cable. Ingress Protection level: IP20
	116-BSL-325	AUTROLON/AutroFieldBus communication amplifier Amplifier for communication signals on networks. The amplifier ensures reliable communication in systems where there is great distance between the system panels, and in applications where there are many panels. The amplifier increases maximum cable length from 1000 m to 2800 m. Ingress Protection level: IP20
	116-BSL-337	AutroSafe BU-70 interface module Enables the connection of BU-70/BU-100/BU-101 to AutroSafe. This is a simple, cost effective way to upgrade BS-100 systems to AutroSafe. The RS232/20 mA current loop converter BSL-12/2 must be used to convert RS232 to 20 mA current loop communication. Ingress Protection level: IP20

Service tools

Part number	Description
116-WAS-2000	AS2000, loop diagnostic tool
116-XJA-027	Connection cable for AS2000; for connection between computer and fire alarm panel
116-XGE-1/10-110	Ribbon cable for connection of BSF-310/BSA-400 to BSL-310. 110 cm. Order only.
116-XGE-1/10-200	Ribbon cable for connection of BSF-310/BSA-400 to BSL-310. 200 cm.
116-XL-073	Conversion cable from AutoSafe 3 to AutoSafe 4

Customer configuration

Part number	Description
116-PROG-AUTROSAFE	Customer specific software for AutoSafe
116-TXT-AUTROSAFE	Customer text/controls

OPC server

With the AutoSafe OPC server several fire detection systems and other control systems can communicate. The solution improves the compatibility between the AutoSafe and surveillance systems from other manufacturers.

Part number	Description
116-AS-OPC-SERVER/CD1	AutoSafe OPC server CD V1.2 incl. access code for access level 1. Includes read access to all status information for detectors, output and alarm devices. This level of license will also make it possible to send (write) Silence, Reset and SetTime commands to the AutoSafe system. Within this level you can also Disable/Enable detectors.
116-AS-OPC-SERVER/CD2	AutoSafe OPC server CD V1.2 incl. access code for access level 2. Includes all functionality in level 1, plus the possibility to Activate/Deactivate and Enable/Disable outputs and alarm devices via OPC write commands.
116-AS-OPC-SERVER/CD3	AutoSafe OPC server CD V1.2 incl. access code for access level 3. Includes all functionality in level 1 and 2. This level also provides additional information for points, for example AMEAS, Temp, Smoke, Alarm limits and Engineering values.





AutroSafe maritime gas detection system

A new era in maritime gas detection

Autronica is a long-standing player in the maritime market; our reputation as a developer and supplier of reliable systems designed to withstand the rigours of the maritime environment is forged from our dedication to developing the best solutions for this market.


Our task was demanding, yet simple: Take the best fire and gas (F&G) safety system around and make it the best Gas system ever. The AutroSafe 4 Maritime Gas system is developed using the same proven in use design and technology as the AutroSafe 4 Integrated Fire & Gas system. All existing functionality has stood up to the toughest tests worldwide for more than 10 years. AutroSafe 4 Maritime Gas supports a wide range of third-party gas detection devices, allowing flexibility and accuracy.

Addressability ensures that correct information is routed to where it is needed, indicating which detection unit has given the alarm. Built-in fault monitoring ensures that if a detection unit fails, it is automatically identified and can be replaced with a minimum of effort.


BS-420MG is a maritime gas alarm control panel with full operation capabilities. All gas alarm handling and system features can be controlled and monitored from the panel. Note that the panel cannot be used for detection of fires. The panel communicates with other system units on the Ethernet-based local area network, AutroNet. The maximum number of system units supported by AutroNet depends on the type of system. In a standard system the maximum number is 64. The panel can accommodate up to a maximum of 12 I/O modules. All modules are easily plugged onto each other on a standard mounting rail inside the unit.





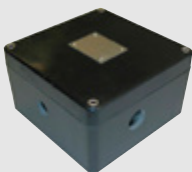
Panel

Image	Part number	Description	Including	Options
	116-KIT-BS-420MG	Maritime gas alarm control panel kit	Panel front BSV-420M Cabinet UEA-400 Power supply module BSS-310A Communication module BSL-310 Text foils E-2879	Output module BSB-310A Output module BSJ-310 Input module BSE-310 Input module BSE-320 Dual power monitoring module BSS-311

Maritime gas detectors

Image	Part number	Description	Stainless steel housing	With hydrophobic filter/weather baffle	Addressable for maritime gas panel	4-20 mA	Cable entries	Notes
	116-010195-056	AutroPoint Maritime Gas detector	•	•	•		2xM25	
	116-010195-057	AutroPoint Maritime Gas detector	•		•		2xM25	
	116-010195-058	AutroPoint Maritime Gas detector	•	•		•	2xM25	
	116-010195-059	AutroPoint Maritime Gas detector	•			•	2xM25	

4-20 mA interface modules

Image	Part number	Description
	116-BN-342/1	PowerLoop 4-20 mA input unit, rack mounted A general-purpose PowerLoop interface designed for third-party detectors connected to the AutoSafe IFG system. The unit has a 4-20 mA input galvanically isolated from the PowerLoop. 19" 3U rack version, bare PCB with 19" rack front panel, no DC/DC. Ingress Protection level: IP20
	116-BN-342/2	PowerLoop 4-20 mA input unit, DIN rail mounted A general-purpose PowerLoop interface designed for third party detectors connected to the AutoSafe IFG system. The unit has a 4-20 mA input galvanically isolated from the PowerLoop. DIN rail version, bare PCB in an open DIN rail box, no DC/DC. Ingress Protection level: IP20
	116-BN-342/EX	PowerLoop 4-20 mA input unit, field mounted A general-purpose PowerLoop interface designed for third party detectors connected to the AutoSafe IFG system. The unit has a 24 VDC/400 mA supply output providing power to the connected detectors, plus a 4-20 mA input galvanically isolated from the PowerLoop. EEX me version including 9,5 W 24 VDC/DC for external detector power supply. Cable entry, PowerLoop: 2 x M25. Cable entry, 4-20 mA input: 1 x M25 Ingress Protection level: IP66

Accessories

Part number	Description
116-007355-001	Duct mount assembly for AutoPoint Maritime Gas detectors. One duct air inlet tube and one return tube. Pipe length to be specified: 1ft/305mm (116-000214-281), 3ft/915mm (116-000214-282), 6ft/1830mm (116-000214-283) or 10ft/3050mm (116-000214-284)
116-007525-003	Direct duct mount kit for AutoPoint Maritime Gas detectors
116-US-843	Rain and sun shield for AutoPoint Maritime Gas detectors





Simple, reliable and flexible
fire detection system

Autroprime fire detection system

Fire detection system for small-to-medium sized installations

Autroprime brings simplicity, quality and extensive functionality in one integrated system, providing safety and economy in a complete package. Our SelfVerify technology make sure the system takes care of everyday maintenance routines by itself.

Autronica's products have always been associated with innovating high quality technologies, challenging your way of thinking about fire detection. Autroprime® is no exception; the system includes many tried and tested Autronica technologies. The very good news is the achievement of combing high-end features, easy engineering and low life cycle cost.

Autroprime® is the ideal choice for protecting life and property in the merchant ships' market. The system with its four loops, finally brings a truly integrated concept to fire safety with its possibility to provide interface to the FlexiFOG® water mist system, or to a third party system.

Autroprime® finally brings a truly integrated concept to fire detection: everything is in place, and system functionality and reliability have never been better. Low-level simplicity ensures that this fire detection system exceeds expectation and provides next-generation possibilities, all for a low life-cycle cost.

Autroprime is approved according to EN 54/2 and 4 and SOLAS.

Panels

The Autoprime system allows for a combination of maximum 8 panels and mimic drivers on a redundant panel bus. Ingress Protection level all panels: IP32.


Image	Part number	Description	Dimensions L x W x D (mm)	Notes
	116-71211548	Fire alarm control panel BS-200M	420 x 346 x 140	Full fire detection system with 4 loop drivers each controlling 127 devices. The operator panel may be mounted remotely with redundant connections both for signal and power. With space for batteries.
	116-71211549	Fire alarm control panel BS-200M	420 x 346 x 140	Full fire detection system with 4 loop drivers each controlling 127 devices. The operator panel may be mounted remotely with redundant connections both for signal and power. An extra termination block is included for simplified panel bus and RS232/-244/-485 connection. With 230 VAC main and emergency power inputs.
	116-71211550	Fire alarm control panel BS-200M	420 x 346 x 140	Full fire detection system with 4 loop drivers each controlling 127 devices. The operator panel may be mounted remotely with redundant connections both for signal and power. An extra termination block is included for simplified panel bus and RS232/-244/-485 connection. With 110 VAC main and emergency power inputs.
	116-BS-211	Repeater panel	310 x 220 x 45	Helps users manage alarms and other events. Panel bus included
	116-BU-210	Fire brigade panel	310 x 154 x 45	Showing alarms only. The user may mute the internal buzzer, silence sounders/bells and reset the system. Panel bus included.
	116-BV-210	Information panel	310 x 154 x 45	Provides all information, but does not allow handling of events. Panel bus included
	116-BC-250	Controller unit	441 x 217 x 63	In combination with Operator Panel BS-210 (an integrated part of Fire Alarm Control Panel BS-200M) it can serve as a stand-alone panel. All alarm handling and system features are configured, controlled and monitored from the BS-210.
	116-71211551	Mimic driver BUR-200M	181 x 125 x 40	Panel bus included. With termination blocks. 8 in/16 out

Panel kits

Prefabricated products for console and cabinet mounting. The units are delivered with a standardized configuration for maritime installations.

Part number	Description	Dimensions L x W x D (mm)
116-AP-MAR-CAB	Autoprime in cabinet, without Mimic driver	600 x 760 x 350
116-AP-MAR-CAB-BUR	Autoprime in cabinet, with Mimic driver	600 x 760 x 350
116-AP-MAR-PLATE	Autoprime on mounting plate, without Mimic driver	310 x 154 x 45
116-AP-MAR-PLATE-BUR	Autoprime on mounting plate, with Mimic driver	549 x 730 x 127,5
116-KIT-BS-250	Autoprime controller unit BC-250 with operator panel	420 x 346 x 140

Printer

Image	Part number	Description
	116-BUP-200	Printer unit for Autoprime
–	116-1712-012.0001	Printer paper 57 x 46 x 13 mm / 25 m

Modules

Part number	Description
116-BSD-200A/PACK	Autoprime loop extension pack, 2 loops
116-BSA-200A	Autoprime main circuit board

Service and configuration tool

Part number	Description
116-AUTROCLIENT	AutoClient, latest version



Fire detection system accessories

In order to project our fire detection system to any application, we provide a wide range of accessories such as cabinets, racks, mounting equipment, batteries etc.

Power supply units

Part number	Description	Output voltage
116-BPS-405/BOXED	Power supply unit for AutoSafe 4	24 VDC / 5 A
116-BPS-410/BOXED	Power supply unit for AutoSafe 4	24 VDC / 10 A
116-BPS-410/115/BOXED	Power supply unit for AutoSafe 4, 115 VAC	24 VDC / 10 A,
116-BSS-103A	Power supply unit for all systems. Including housing for mounting on TS-35 rail	24 VDC / 3 A
116-BSS-103A/02	Power supply without housing. Supplied with NTC resistor	24 VDC / 3 A
116-4550-004.0001	Power supply for Autroprime SC-150 27ME	24 VDC / 5 A, 110/230 VAC
116-4550-012.2410	Power supply with fault output for all systems	24 VDC / 10 A, 110/230 VAC
116-4660-055.0001	DC/DC converter	24 VDC / 6,3 A
116-8147-015.5120	Transformer	110-130 VAC / 220 VAC, 200 VA
116-8147-038.5130	Transformer	110-130 VAC / 220 VAC, 300 VA

Batteries

Autronica Fire and Security AS offers accumulator batteries for every Autronica fire detection system. Generally, 24 VDC backup is used, requiring two batteries per panel. All batteries are sealed and can be placed in cabinets.

Part number	Description	Voltage	Weight	Dimensions L x W x H (mm)
116-4160-001.	FIAMM FG20721	12V / 7.2 Ah	2,4 kg	79 x 56 x 106
116-4160-002.	FIAMM FG21803	12V / 18 Ah	5,9 kg	181 x 76 x 167
116-4160-003.	FIAMM FG22703	12V / 27 Ah	8,7 kg	166 x 175 x 125
116-4160-004.	FIAMM FG24204	12V / 42 Ah	13,8 kg	196 x 163 x 174
116-4160-005.	FIAMM FG20201	12V / 2.0 Ah	0,9 kg	178 x 34 x 65
116-4160-005.0001	FIAMM FG21202	12V / 12 Ah	4,0 kg	151 x 98 x 99
116-4160-005.0003	FIAMM FG20341	12 V / 3 Ah	1,41 kg	134 x 67 x 60
116-4160-005.0005	FIAMM FG20451	12V / 4,5 Ah	1,6 kg	90 x 70 x 106
116-4160-006.	FIAMM FG27004	12V / 70 Ah	22,0 kg	350 x 166 x 174
116-4160-006.0001	Sonnenschein A512/115	12V / 115 Ah	40,0 kg	286 x 269 x 230
116-4160-006.0003	Sonnenschein A512/85	12V / 80 Ah	31,0 kg	330 x 171 x 236
116-4160-006.0004	Sonnenschein A115/200	12V /200 Ah	70,0 kg	518 x 274 x 242

Switches

A network solution (AutoNet) with more than two panels demands the use of switches. Only Phoenix Ethernet switches are approved and supported by Autronica Fire and Security AS. The type and number of switches depends on the installation/network construction (no. of panels and distance between panels and switches)

Image	Part number	Description*	Current consumption (max.) @ 24 VDC	RJ45 ports	Fibre optic ports**	Operating temperature
	116-5151-030.2127	FL switch SFNT 5TX	120 mA	5	–	-40 - 75°C
	116-5151-030.2128	FL switch SFNT 4TX/FX	160 mA	4	1 MM (SC)	-40 - 75°C
	116-5151-030.2129	FL switch SFNT 8TX	153 mA	8	–	-40 - 75°C
	116-5151-030.2130	FL switch SFNT 7TX/FX	175 mA	7	1 MM (SC)	-40 - 70°C
	116-5151-030.2131	FL switch LM 5TX	150 mA	5	–	-40 - 70°C
	116-5151-030.2132	FL switch LM 4TX/FX	380 mA	4	1 MM (SC)	-40 - 70°C

* SFNT = Standard Function, Narrow housing, high Temperature range
 LM = Lean Managed
 SFNB = Standard Function, Narrow housing, Basic entry level
 SFN = Standard Function, Narrow housing

** MM = Multi Mode
 SM = Single Mode
 SC = Square Connector
 (Set and Click, Stab and Click, Standard Connector)

Switches (cont.)

Image	Part number	Description*	Current consumption (max.) @ 24 VDC	RJ45 ports	Fibre optic ports**	Operating temperature
	116-5151-030.2133	FL switch LM 4TX/2FX	400 mA	4	2 MM (SC)	-40 - 70°C
	116-5151-030.2134	FL switch LM 4TX/FX SM	380 mA	4	1 SM (SC)	-40 - 70°C
	116-5151-030.2135	FL switch LM 4TX/2FX SM	400 mA	4	2 SM (SC)	-40 - 70°C
	116-5151-030.2142	FL switch SFNB 4TX/FX SM 20	185 mA	4	1 SM (SC)	0 - 60°C

* SFNT = Standard Function, Narrow housing, high Temperature range
 LM = Lean Managed
 SFNB = Standard Function, Narrow housing, Basic entry level
 SFN = Standard Function, Narrow housing

** MM = Multi Mode
 SM = Single Mode
 SC = Square Connector
 (Set and Click, Stab and Click, Standard Connector)

Cabinets and racks

Part number	Description	System	W x H x D (mm)	Capacity
116-BT-422/B	Battery cabinet 18 Ah		420 x 346 x 146	
116-BV-311	Cabinet for evacuation and emergency documents	AutoSafe	402 x 347 x 75	
116-UEA-323/1	Cabinet for flush mounting BS-410/-420/BC-420	AutoSafe	Flush mounting: 320 x 320 x 140	
116-UE-1710	Battery shelf	19" rack	398 x 190 x 174	2 x 12 V / 36 Ah or 1 x 12 V / 65 Ah battery
116-US-820/1	Document holder with logo	All		

Mounting accessories for cabinets/racks

Part number	Description
116-UB-383	19" subrack 160 mm, Europe for BC-440
116-UE-474	Mounting plate with cutouts
116-UE-921	Mounting plate with spacers
116-UE-1662	Spacer between 2 rack mounted AutoSafe BS/BC-320 panels. Distance between panels = 80 mm
116-UW-1454	Mounting kit for BS-420/-430 and BC-420 front panels in 19" cabinet/rack, for use with UEA-323/1
116-UW-1482	Mounting kit for BU-BV-420 cabinet in 19" cabinet/rack. Front panel
116-UW-1514	Mounting plate for flush mounting BS-420/-430 and BC-420 panel fronts in 19" rack
116-UW-1516/1	Dummy plate 19" for BC-440, 3U x 12HP
116-UW-1518	Mounting plate for mounting AutoSafe 4 front panel on double BS-100 cabinet
116-6175-100.0010	Ferrite clamps
116-6745-011.	Standard fire key for panel door (plastic)

Rittal cabinets available on request.

Relays

Part number	Description
116-7624-030.0001	Relay PLC RSC 24DC/21, single change-over contact
116-7624-030.0002	Relay PLC RSC 24DC/21-21, double change-over contact
116-7624-030.1001	Relay PLC RSC 230UC/21, single change-over contact
116-7633-060.	Relay with adjustable time delay 50 ms –10 h, 12–24 V
116-7461-008.0001	Relay base Z-348 for timers
116-BSX-310	Relay kit for FARE and FWRE

Miscellaneous

Image	Part number	Description
	116-6731-017.0002	Door magnet armature. Type AG w/adjustable socket. For use with part no: 116-6731-017.0005
	116-6731-017.0005	Door holding magnet. GPT, holdpower 650 N, 1 W, 40 mA. Manual release push button. DNV approved. For use with part no: 116-6731-017.0002
	116-6731-017.0010	Robust magnetic door release w/counter plate, 50 kg, 490 N
	116-UV-028-T	Release button for magnet with impulse switch
	116-BF-8A	General alarm push button, flush mounting, IP22
	116-BF-8/Y5	General alarm push button, bulkhead mounting, IP22
	116-BF-8A/IMP	General alarm push button, flush mounting, IP22 With impulse switch
	116-4860-010.9001	General alarm push button, bulkhead mounting, IP66

PLC equipment

Part number	Description
PCD1	
116-5151-025.M130	M135 PLC for 4 modules
PCD2	
116-KDC-30/2M120	M120 PLC for 8 modules
116-KDX-30/2C100	Expansion module (8 I/O modules)
116-KDD-30/2F520	Communication module RS232 and RS422/-485
Modules for PCD1 and PCD2	
116-KDB-30/2A250	A250 8 outputs relay 48 VAC / 2 A
116-KDB-30/2A400	I/O module, 8 outputs
116-KDB-30/2A460	A460 16 outputs 24 VDC
116-KDB-30/2E110	I/O module
116-KDB-30/2E160	I/O module, 16 inputs
116-5151-025.E165	E165 16 inputs 24 VDC
116-KDB-30/2E610	I/O module, 8 inputs
116-KDU-30/7F110	F110 communication module RS422/-485
116-5151-025.F120	F120 communication module RS232
116-KDU-30/7F150	1 serial ch. RS485 with galvanic isolation
116-KCX-30/2K233	K223 cable for I/O modules. 300 cm
PCD3	
116-5151-025.M544	M5440 PLC for 4 modules
116-5151-025.M554	M5540 PLC for 4 modules
116-5151-025.T760	T760 remote unit for 4 I/O modules
116-5151-025.C100	C100 expansion unit for 4 I/O modules
116-5151-025.K106	K106 extension cable 0.7 m
116-5151-025.K010	K010 extension plug PCD3-PCD3
116-5151-025.R500	R500 1 Mb flash memory
Modules PCD3	
116-5151-025.A400	A400 8 outputs 24 VDC/0.5 A
116-5151-025.A465	A465 16 outputs 24 VDC/0.5 A
116-5151-025.E110	E110 8 inputs 24 VDC 8 ms
116-5151-026.E165	E165 16 inputs 24 VDC
116-5151-025.E610	E610 8 inputs isolated 24 VDC 8 ms
116-5151-025.0001	I/O plug spring coupl. 10-P
116-5151-025.0002	I/O plug spring coupl. 24-P
Miscellaneous	
116-KD-30/7T100	Repeater RS485 with galvanic isolation





SelfVerify ensures optimal detection

Loop units

A wide range covering your basic fire detection needs

We provide a wide range of loop units for our fire detection systems. Our detectors, manual call points, I/O units, control units and alarm units are developed and approved according to European directives (CPD) requiring EN 54 compliance and other appropriate worldwide regulations.

The loop units are available both with and without SelfVerify function. SelfVerify solves all issues of manual maintenance, leaving time consuming and costly physical testing redundant. With AutoSafe SelfVerify®, the system checks all detectors, interfaces, connections and cables – from detector chamber to alarm output – every single day.

Not only does the system test whether a detector is capable of provoking an alarm, it even verifies the sensitivity of every detector with a calibrated signal. The SelfVerify system ensures that each detector always responds to the correct alarm level. In the event of irregularities, the display on the operating panel will accurately pinpoint the source of any problem.

SelfVerify ensures that you have the safest and most reliable fire safety system available – a system ensuring optimal detection.

Input and output units

We offer a wide range of interactive input and output units for many different applications. The system features Exn-, Exia- and Exd approved input and output units for high risk applications.

All input and output units feature automatic addressing and short-circuit protection.

Image	Part number	Description	Configurable input	Monitored input	Monitored output	Inputs/outputs	Requires external PSU	SelfVerify	For use in EX areas	Ingress Protection level*	Notes
	116-BN-180	AutoKeeper				2/2		•		IP50	Use two units to access one loop from two loop controllers. DIN rail mounting in cabinet. For AutoSafe only
	116-BN-201	Monitoring unit	•	•		1/0				IP54 IP67	
	116-BN-303	Single monitored input unit	•	•		1/0		•		IP54 IP67	Function selectable via dip switch
	116-BN-304	Input/output unit	•	•	•	1/1		•		IP54 IP67	Function selectable via dip switch
	116-BN-305	Dual monitored input/output unit	•	•	•	2/2		•		IP54 IP67	Function selectable via dip switch

*: When two degrees of protection is given, the lowest is relevant when using the included glands. To achieve the highest, special IP67 glands must be ordered (see page 44)

Input and output units (cont.)

Image	Part number	Description	Configurable input	Monitored input	Monitored output	Inputs/outputs	Requires external PSU	SelfVerify	For use in EX areas	Ingress Protection level*	Notes
	116-BN-307	Monitored fire alarm device control unit			•	0/1	•	•		IP54 IP67	
	116-BN-320	Interface unit	•	•		2/1		•		IP54 IP67	For AutoFlame detectors
	116-BNB-330A	Loop adapter unit for conventional loops					•				Replacement unit for BNB-330 in existing AutoSafe 3 systems
	116-BNB-331	Loop adapter unit for conventional loops		•		1/1	•	•			AutoSafe ver. 4.4.1 → Autoprime ver. 2.0 →
	116-BN-500/EX	Input unit	•	•		1/0		•	•	IP54 IP67	For interfacing external units, clean contacts, alarm relays, etc. Zones 0, 1 & 2
	116-BN-500/N	Input unit	•	•		1/0		•	•	IP54 IP67	For interfacing external units, clean contacts, alarm relays, etc. Zone 2

*: When two degrees of protection is given, the lowest is relevant when using the included glands. To achieve the highest, special IP67 glands must be ordered (see page 44)

Detectors


We offer a wide range of interactive detectors for many different applications, with or without SelfVerify. The following series are available:

- 200 series, standard interactive addressable detectors.
- 300 series with SelfVerify, interactive addressable detectors.
- 500 series with SelfVerify, interactive addressable detectors for use in demanding environments.

The system also offers Exn- and Exia approved versions of detectors designed for use in high risk applications. S series smoke detectors are specially designed for applications where high sensitivity is required.

Image	Part number	Heat	Smoke	MultiSensor	Including base	SelfVerify	Environmentally protected	For use in EX areas	For use in EX zone 2 only	High sensitivity	Sealed unit	Wet/dry areas	Ingress Protection level	Notes
	116-5861-033.0150	•			•		•				•	W/D	IP65	SWM-1KL 140°C
	116-BD-200M	•			•		•				•	W	IP56	For steam saunas/cold stores (-30 °C)
	116-BD-501	•			•	•	•				•	W	IP56	
	116-BD-501/EX	•			•	•	•	•			•	W	IP56	
	116-BD-501/N	•			•	•	•		•		•	W	IP56	
	116-BDH-200	•										D	IP44D	
	116-BDH-300	•				•						D	IP44D	
	116-BDH-500	•				•	•						IP44D	
	116-BDH-500/EX	•				•	•	•					IP44D	
	116-BDH-500/EXE	•				•		•					IP44D	RIME approved/NK
	116-BDH-500/N	•				•			•				IP44D	
	116-BHH-200		•										IP44D	
	116-BHH-300		•			•							IP44D	
	116-BHH-500		•			•	•						IP44D	
	116-BHH-500/EX		•			•	•	•					IP44D	
	116-BHH-500/EXE		•			•	•	•					IP44D	RIME approved/NK
	116-BHH-500/N		•			•	•		•				IP44D	
	116-BHH-500/S		•			•	•			•			IP44D	
	116-BHH-500/S/Ex		•			•	•	•		•			IP44D	
116-BHH-500/S/N		•			•	•		•	•			IP44D		

Detectors (cont.)

Image	Part number	Heat	Smoke	MultiSensor	Including base	SelfVerify	Environmentally protected	For use in EX areas	For use in EX zone 2 only	High sensitivity	Sealed unit	Wet/dry areas	Ingress Protection level	Notes
	116-BHH-220			•									IP44D	
	116-BHH-320			•		•							IP44D	
	116-BHH-520			•		•	•						IP44D	
	116-BHH-520/EX			•		•	•	•					IP44D	
	116-BHH-520/EXE			•		•	•	•	•				IP44D	RIME approved NK
	116-BHH-520/N			•		•	•		•				IP44D	

Manual call points / release stations

We offer a wide range of interactive manual call points for different applications, every unit features SelfVerify. Two main series are available:




- 300 series with SelfVerify, interactive addressable manual call points.
- 500 series with SelfVerify, interactive addressable manual call points for use in demanding environments.

The system features Exn- and Exia approved versions for high risk applications.

Image	Part number	Description	For use in EX areas	For use in EX zone 2 only	Watertight / outdoor model	Extreme environments	LED indicator	Metal connection box	Glass NOT included	Ingress Protection level	Notes
	116-BF-300V2	Manual call point					•			IP42D w/o cover IP44D w cover	
	116-BF-510WP-H	Manual call point			•	•	•			IP52 w/o cover IP55 w cover	
	116-BF-510WP-HM	Manual call point			•	•	•			IP52 w/o cover IP55 w cover	Cable glands pre mounted, robust mounting plate.
	116-BF-300M/EXE	Manual call point	•				•	•	•	IP44D*	NK RIME approved
	116-BF-300M/N	Manual call point		•			•	•	•	IP44D*	
	116-BF-500V2/EX	Manual call point	•							IP44D*	







*: Ingress Protection level, inner housing.

Manual call points / release stations (cont.)

Image	Part number	Description	For use in EX areas	For use in EX zone 2 only	Watertight / outdoor model	Extreme environments	LED indicator	Metal connection box	Glass not included	Ingress Protection level	Notes
New design 2016	116-BF-500/N	Manual call point		•					•	IP66	
	116-BF-501	Manual call point			•	•				IP66	
	116-BF-501/EX	Manual call point	•		•	•				IP66	
	116-BF-501/N	Manual call point		•	•	•				IP66	
	116-BF-502	Manual call point			•	•				IP66	
	116-BF-502/EX	Manual call point	•		•	•				IP66	
	116-BF-502/N	Manual call point		•	•	•				IP66	
	116-BFG-3/XX	Glass for call point, available in several languages. Replace XX with country code. No ending = No text GB = English GB/AR = English and Arabic N/GB = Norwegian and English SU = Russian									







Alarm units

We offer a wide range of alarm units for connection to detection loops or dedicated alarm outputs.

Image	Part number	Description	Alarm output mounting	Loop mounting	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output (c/l)*	Ingress Protection level	Notes
	116-BBL-100	Alarm indicator		•						•	-	2 c	IP32C	
	116-BBL-100/IP	Alarm indicator		•				•		•	-	2 c	IP65	
	116-BBR-7M	Alarm bell 6"	•						•		93	-	IP55	
	116-BBR-24	Alarm bell 6"	•						•		91	-	IP42	
	116-BBR-130	Base sounder		•	•		•		•		90	-	IP32C	Combined detector base and addressable sounder.
	116-BBR-230	Sounder		•			•		•		100	-	IP32C	







*: Candela (c), Joule (j)

Alarm units (cont.)

Image	Part number	Description	Alarm output mounting	Loop mounting	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output (c/j)*	Ingress Protection level	Notes
	116-BBR-230/IP	Sounder		•			•	•	•		100	-	IP65	
	116-BBQ-130	Base sounder w/ alarm indicator		•			•		•	•	90	2 c	IP21C	Combined detector base and addressable sounder/ alarm indicator.
	116-BBQ-230	Sounder/ alarm indicator		•			•		•	•	100	2 c	IP32C	
	116-BBQ-230/IP	Sounder/ alarm indicator		•			•	•	•	•	100	2 c	IP65	
	116-BU-47	Alarm indicator	•							•	-		IP30	With LED
	116-4340-003.4001	Signal light BLG-LED	•		•	•	•	•		•	-	-	IP67	

*: Candela (c), Joule (j)

Alarm units (cont.)

Image	Part number	Description	Alarm output mounting	Loop mounting	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output (c/j)*	Ingress Protection level	Notes
	116-4340-006.0201	Xenon beacon	•		•					•	-		IP55	
	116-4340-006.0924	Solex beacon, shallow base	•		•			•		•	-	2,5 c	IP54	
	116-4340-006.0925	Solex beacon, deep base	•		•			•		•	-	2,5 c	IP54	
	116-4340-006.0926	Solex beacon, shallow base	•		•			•		•	-	2,5 c	IP54	
	116-4340-007.0001	Solista LX beacon, wall mounted, deep base	•		•	•		•		•	-	W-2.4-7.5	IP65	Red flash
	116-4340-007.0002	Solista LX beacon, ceiling mounted, shallow base	•		•	•	•			•	-	C-3-7.5	IP33C	Red flash

*: Candela (c), Joule (j)

Alarm units (cont.)

Image	Part number	Description	Alarm output mounting	Loop mounting	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output (c/j)*	Ingress Protection level	Notes
	116-4340-007.0005	Symphoni LX WP conventional base beacon, wall mounted	•		•	•	•	•		•	-	W-2.4-7.5	IP66	Red flash
	116-7770-009.0040	Symphoni IP66							•		100	-	IP66	For use with 116-4340-007.0005
	116-4340-007.0007	Solista LX wall, shallow base	•		•	•	•			•	-	C-3-7.5	IP33C	Red flash
	116-4340-007.0008	Symphony G1 LX, wall	•		•	•	•			•	100	W-2.4-7.5	IP21C	Red flash
	116-4340-007.0009	Symphony G1 LX, wall	•		•	•	•			•	100	W-2.4-7.5	IP21C	Red flash
	116-7770-009.0002	Roshni LP, shallow base	•		•	•		•	•		102	-	IP54	
	116-7770-009.0004	Roshni LP, shallow base	•		•	•		•	•		102	-	IP54	

*: Candela (c), Joule (j)

Alarm units (cont.)

Image	Part number	Description	Alarm output mounting	Loop mounting	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1m)	Light output (c/l)*	Ingress Protection level	Notes
	116-7770-009.0005	Roshni, deep base	•		•	•		•	•		102	-	IP65	
	116-7780-004.0001	Flashni, shallow base	•			•		•		•	101	0,7 j	IP54	
	116-7780-004.0002	Flashni, deep base	•			•		•	•	•	101	0,7 j	IP65	
	116-7780-005.2301	Sounder and beacon AL112	•		•	•			•	•	112	5 j	IP55	
	116-7780-005.2401	Sounder and beacon AL121	•		•	•			•	•	121	5 j	IP55	
	116-7780-006.	Air typhoon	•					•	•		141	-	IP65	0.6-1.0 Mpa
	116-7780-006.0002	Air typhoon	•					•	•		141	-	IP65	2.5-3.0 Mpa

*: Candela (c), Joule (j)

Accessories for loop units

Image	Part number	Description
	116-BWA-100	Detector base for AuroSafe detectors
	116-BWB-110	Base adapter for analogue addressable detectors mounted on interactive loops
	116-BWP-100/20	Drip proof conduit box with M20 glands
	116-BWP-100/20/PG16	Drip proof conduit box with M20 glands (PG16)
	116-BWP-100/25	Drip proof conduit box with holes for M25 glands
-	116-WBJ-140	Mounting/demounting tool for AuroSafe detectors mounted on base BWA-100
-	116-WBW-100	Bypass unit for BWA-100
-	116-WBW-101	Mounting plate for false ceilings
	116-BZ-500	Galvanic barrier for Exia approved detectors. If power to the unit is supplied from the panel, a 24 V DC/DC converter, e.g. 116-4660-055.0001 (page 21) must be used to regulate the power.



Accessories for loop units (cont.)

Part number	Description
116-CXBZ	Bezel for manual call points. Only for 116-BF-300V2.
116-4860-011.0100	Polycarbonate cover for manual call point BF-300V2
116-4860-011.9901	Test key for manual call point 116-BF-300V2 (10 pack).
116-4890-021.0001	Lift flap in polycarbonate for manual call point 116-BF-502, all versions
116-4890-021.0010	Lift flap in stainless steel for manual call point 116-BF-502, all versions
116-4890-022.0001	Lift flap in polycarbonate for manual call point 116-BF-501, all versions
116-4890-022.0010	Lift flap in stainless steel for manual call point 116-BF-501, all versions
116-6550-125.0075	Spacer for open installation of base sounder BBR-110
116-6571-011.1920	Cable gland M20-1.5 for Ingress Protection level IP67 for I/O units. NB! Order with 116-6531-006.1920
116-6531-006.1920	Backnut for cable gland IP67. NB! Order with 116-6571-011.1920
116-BW-240	Deep mounting plate for base sounders
116-7770-009.0008	Power base 230 V for Roshni

Protecting life, environment and property
by any means necessary



Flame detection

Keeping a close watch

Autronica's flame detectors are solutions for applications in which risk to personnel is high and where fire might result in a large loss of equipment. Beyond critical life-safety concerns, our products have proven to minimize total cost of ownership while minimizing false alarms.

Our maritime applications include engine rooms, mooring decks and other technical areas where there is risk of flames.

Bottom line – Autronica offers flame-detection technologies with wide area coverage, high false-alarm immunity, reduced response times, and the appropriate global approvals. And to improve ease of use, all X-Series flame detectors have HART-protocol options.



Flame detectors

The AutoFlame IR Flame Detector BG-201 and BG-21 is a point flame detector for detection of fires involving combustion of carbonaceous materials. It has a high IP rating making it suitable for the harshest environments.

The dual IR flame detector is used in various applications in which risk to personnel is high and where fire might result in a large loss of equipment. Beyond critical life-safety concerns, the advanced signal processing and DYFI+ intelligence ensure that the detector has a high immunity to any nuisance alarm source and makes this detector the obvious choice for demanding applications.

All AutoFlame X detectors have 4 x M25 cable entries. Swivel mount, glands and blind plugs are not included.

All AutoFlame X detectors have an ambient temperature range of -55 °C to + 60 °C for T6 and -55 °C to + 75 °C for T5.

For interfacing AutoFlame X detectors to AutoSafe, use 116-BN-304.

Image	Part number	Description	Housing	Ingress Protection level	Notes
	116-BG-201	AutoFlame Dual IR interactive	PCB	IP66/67	
	116-BG-201MRK	AutoFlame Dual IR interactive	PCB	IP66/67	Maritime replacement kit for 601F-M, including detector and mounting plate
	116-BG-21	AutoFlame Dual IR conventional	PCB	IP66/67	
	116-5861-011.4310	AutoFlame X33AF multispectrum IR	SS	IP66	Available with HART protocol on request (X3301S4M23W1) Combination unit with camera available
	116-5861-011.4320	AutoFlame X33AF multispectrum IR	Alu	IP66	Available with HART protocol on request (X3301S4M23W1) Combination unit with camera available
	116-5861-011.4340	AutoFlame X33AF multispectrum IR	SS	IP66	For areas with high temperatures
	116-5861-011.4360	AutoFlame X33AF multispectrum IR	Alu	IP66	For areas with high temperatures
	116-5861-011.4341	AutoFlame X33AF multispectrum IR	SS	IP66	Built-in BNB-300
	116-5861-011.4361	AutoFlame X33AF multispectrum IR	Alu	IP66	Built-in BNB-300
	116-5861-011.3980	AutoFlame X98 single IR	SS	IP66	
	116-5861-011.3981	AutoFlame X98 single IR	Alu	IP66	
	116-5861-010.2010	601FEX-M IR	FR110	IP20	Ambient temperature range: -20 °C – +70 °C

Accessories

Part number	Description
116-UL-046	Mounting bracket for BG-21 and BG-201
116-6571-071.2500	Cable gland M25, polyamid, Eexe, Ingress Protection level: IP67
116-6332-032.1925	Blind plug M25, polyamid, Eexe, Ingress Protection level: IP67
116-6571-016.2520	Cable gland adapter M20/M25
116-6530-030.0020	Blind plug M20, brass, nickel plated. Exd/Exe, Ingress Protection level: IP66/68
116-6530-030.0025	Blind plug M25, brass, nickel plated. Exd/Exe, Ingress Protection level: IP66/68
116-001680-001	K1003A1006 Window cleaner for flame detectors (6 pcs.)
116-5861-011.9050	Q9033B Swivel mount for AutoFlame detectors, stainless steel
116-5861-011.9051	Q9033A Swivel mount for AutoFlame detectors, aluminium
116-007338-010	Q2033A10R 10 degree field-of-view limiter
116-007338-020	Q2033A20R 20 degree field-of-view limiter
116-007338-030	Q2033A30R 30 degree field-of-view limiter/Weather shield (maintains standard field of view)
116-007240-001	Q1116A air shield assembly
116-009199-001	Q1198A dual air shield/flange mount assembly
116-5861-010.1002	UV detector base, IP55
116-5861-010.2013	Ex detector base for 601FEX-M
116-5861-010.2014	Deckhead mounting kit for series 601

Test/measuring equipment

Part number	Description
116-006439-004	W8067S1003 Test lamp IR/UVIR
116-102740-002	Test magnet for AutoFlame X33AF
116-WBJ-5/01	Test gas dispenser for smoke detectors, excluding pole
116-WBJ-5/02	Telescopic pole, 1,26 m – 4,5 m. 1,8 kg
116-WBJ-5/03	Expansion pole, 1,13 m. 0,5 kg
116-WBJ-5/04	Test gas for smoke detectors
116-WBJ-5/05	Telescopic pole 2-S, 1.26-2.5 m
116-WBJ-6/01	Heat detector test kit, including 2 x batteries and charger
116-WBJ-10	Testifire smoke/heat detector test kit (head unit 2 x battery baton and fast charger)
116-WBJ-10/01	Testifire smoke/heat head unit
116-WBJ-10/02	Smoke capsule for WBJ-10 (6 pack)
116-WBJ-10/03	Solo 760 battery baton
116-WBJ-10/04	Solo 725 universal fast battery charger
116-3400-004.	Smoke pump (type: Bee Keeper)





Easy to use,
provides full overview
and saves valuable time

AutroMaster presentation system

A fully integrated safety and emergency management system

AutroMaster ISEMS is an Integrated Safety and Emergency Management System combining the strengths of a powerful fire detection system with control and monitoring functions dedicated to make sure you are in control in case of an emergency.

Graphical user interface

The AutroMaster provides an intuitive control and monitoring interface built to save valuable time when every second counts. Status information is displayed in real-time with easy-to-understand graphical representation. Navigation is fast and instinctual and the powerful zoom functions allow you to monitor all areas in great detail. AutroMaster displays values for gas density, smoke and heat in dynamic colours, making it easy to perform the necessary actions during emergencies.

Interoperability

Control and monitoring of third party systems can easily be performed via serial protocols or network interfaces. They provide connection to basically any source – network time servers, telephone systems for text messaging,

public address systems for automated voice messaging, emergency lights, access control systems, CCTV, automation systems and so on.

Logging and reporting

The AutroMaster keeps track of all events in the system and has a built-in report generator. This provides a cost-effective system log for maintenance and documentation purposes.

Decision-making tools

In high-risk environments around the world, a seemingly innocuous fire can quickly escalate into an emergency of large proportions. When disaster strikes and you only have seconds to make the proper decisions, the right safety and emergency management system is an invaluable asset. The AutroMaster includes a Decision Support System (DSS) that will help you make the right decisions at the right time.



AutoMaster editions

AutoMaster ISEMS is the complete AutoMaster edition, including all functionality. In addition, we offer a market specific edition with the modules most relevant for the maritime market

Modules/functions	AutoMaster - maritime edition	AutoMaster - ISEMS
Basic functionality		
Fire management basic functions	•	•
MultiSensor control	•	•
Report generator	•	•
Control and monitoring of emergency lights/LLL	•	•
Extended functionality		
AutoSafe IFG unit support	NA	•
Touch screen support	•	•
Decision support system/incident manager		•
Electronic plotting table		•
Training/simulation module		•
Event record and replay module		•
Video module (live video support CCTV)		•
Remote connect function		•
Message Centre module		•
Interfaces		
Hermis CCTV interface		•
System-S interface		•
NMEA interface		•
VDR output	•	•
MODBUS interface	•	•
ESPA 4.4.4 interface	•	•

Software licences

Part number	Description
116-PROG-AUTROMASTER-MAR	AutoMaster Maritime Edition – For the maritime market the AutoMaster Maritime Edition is specially designed to meet the IMO/SOLAS requirements and regulatory demands.
116-PROG-AUTROMASTERISEMS	AutoMaster ISEMS – Provides the full range of functionality – every possible add-on module is included in this package, making it the perfect choice for demanding applications and professional customers.
116-PROG-AM-UPGRADE	Upgrade of AutoMaster to most recent version – Existing AutoMaster customers can upgrade their license to the most recent version of AutoMaster. Requires change of AutoMaster configuration data.

Software modules

Part number	Description
116-PROG-AM-MOD-DSS	Decision Support System (DSS) – An interactive incident management system for AutoMaster. The DSS gives operators access to customer-specified checklists. The checklists are organized as checkpoints with one or more action items that can be used to manage operations, and these can be marked off as actions are completed.
116-PROG-AM-MOD-EPTABLE	Electronic fire control plotting table – gives you a dynamic plotting table to keep track of actors events during an emergency or drill. All EPT activity is logged in the Decision Support System and is available for later reviews.
116-PROG-AM-MOD-TSIM	Training/Simulation module – A tool to simulate pre-configured events. During a simulation it is possible to pause, stop/end, and continue the simulation. Running the simulation tool is similar to running a live event, alarms and faults are acknowledgeable and resettable. Every event is logged, and after a simulation (or a stop), a full log can be created and it is possible to replay the simulation using the Event record/replay module.
116-PROG-AM-MOD-EVENT	Event Record/Replay module – Offers a screenshot-based replay of incidents on AutoMaster and can be configured to start recording manually or on pre-configured events as pre-warning, alarm or simulation. Recordings are available for replay, and under replay the operator can start, stop, pause, fast-forward and fast backwards. It is possible to export stored events.
116-PROG-AM-MOD-VIDEO	Video interface module – Includes display of live video in AutoMaster from IP based video cameras.
116-PROG-AM-MOD-REMOTE	Remote Connect function – The Remote Connect Module enables a remote connection to AutoMaster from any location using a server/client technology.
116-PROG-AM-MOD-MC	Message Centre module – In the Message Centre the user can send text messages to telephone systems and other AutoMaster PCs. The user can also send pre-recorded voice messages to PA systems. Requires ESPA 4.4.4. interface.



Interface modules

Part number	Description
116-PROG-AM-MOD-HERNIS	Hernis CCTV interface – Interface enables use of AutoMaster together with video cameras and servers from Hernis.
116-PROG-AM-MOD-NMEA	NMEA interface – A protocol used for interface in between maritime electronic equipment, and AutoMaster has built-in support for this in the NMEA interface module. Interface towards GPS is the most common application.
116-PROG-AM-MOD-VDROUTPUT	VDR output – Used in maritime applications for giving output to the Voyage Data Recorder. Configuration of which data and status messages to send to the VDR is done by project engineering.
116-PROG-AM-MOD-MODBUS	MODBUS interface – With the MODBUS interface AutoMaster can be connected to almost any kind of electronic equipment for monitoring and control.
116-PROG-AM-MOD-ESPA444	ESPA 4.4.4 interface – Offers a serial protocol intended for the interconnection of paging equipment with telephone exchanges or computer systems. The protocol used is message-based and is built upon the ISO1745 transport specification. Required if Message Centre module is used.

Software hardcopies

Part number	Description
116-AUTROMASTER-MAR-CD	AutoMaster MAR back-up CD without license
116-AUTROMASTERISEMS-CD	AutoMaster ISEMS back-up CD without license

Engineering/Configuration

Part number	Description
116-AM-CONFIG	General configuration work on setup of AutoMaster
116-AM-CHANGE	Change of AutoMaster configuration
116-PROSJAMB	Conversion of drawings into AutoMaster format
116-PROSJAMD	Adding of detectors to drawings
116-PROSJAMDF	Adding of color fill for analog values

Hardware

Part number	Description
116-AUTROMASTER-PC-11M	PC, maritime standard. Model subject to change without prior notice.
116-AUTROMASTER-RACKPC	19" rack mount PC
116-5151-020.0210	Industrial PC w/SSD
116-5151-019.2350	Maritime desktop kit MS2350 800 G1 TWR
116-5151-019.2360	Maritime tower kit MS2360 800 G1 TWR
116-5151-020.1951	19" standard LCD monitor
116-5151-200.1027	20" console mounted monitor, DuraMON
116-5151-020.2405	24" widescreen LCD monitor
116-5151-019.1027	DuraMON WS bracket standard
116-5760-050.2003	Laser printer, colour, network and USB
116-5151-200.0023	20" monitor, console mounted, JH20T17 MMD
116-5151-017.0002	Keyboard - UK/English character set
116-5151-020.0400	Mouse - USB - 3 buttons
116-5151-020.0732	Network card TG-3468 10/100/1000
116-5151-020.2029	Moxa 4-port serial PCIE



Premium quality
safety monitoring and
environmental surveillance



Omicron systems

Solutions you can trust

Every day, thousands of vessels navigate the world's oceans, containing valuable and often high-risk products. We are dedicated to the crew onboard, always doing our best to ensure that they have the safest working conditions possible.

Each application is unique in design or task, and it is our mission to provide each one with an optimal safety system. Autronica's Omicron product range is designed to meet the most demanding requirements within the maritime industry. For more than 25 years we have designed high level/overflow alarm systems, gas detection systems and vapour alarm systems to meet and exceed the individual demands of each vessel. The entire value chain from project engineering via production to after sales and administration is bundled in our Special Detection Competence Center in

Norway, ensuring fast, efficient and high quality project realization. Based on the experience of approximately 200 projects per year and our thorough application know-how our team of dedicated and highly specialized employees will always find the ideal solution for your needs.

Since 1989 we have developed and optimized a range of high end systems that require minimal maintenance, are extremely robust and reliable as well as easy to operate. Our service-friendly systems fulfill all regulatory and class societies' regulations and enable economically viable operations. Omicron systems can be used onboard high complexity vessels like LNG, LPG, FPSO, FSRU or similar, as well as on more standardized crude oil or chemical tankers.

Level alarm system – OAS 5.5

Independent high level and overflow monitoring system

Our high level / overflow alarm system is the classical product in the Omicron range. Ever since the first system was delivered in 1989 we have continuously improved and optimized the system to the robust, market leading design of today. The OAS 5 is designed to monitor all pumpable liquid cargo types as an independent alarm system as required by IMO's "International Code for Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk" (IBC Code) as well as classification societies rules for chemical, oil product and gas carriers.

Each system is specified in line with the individual customer's needs and contains a monitoring cabinet and a sensing element, optimized for the various cargo types and able to withstand the most demanding maritime conditions.

Features:

- Preconfigured 1 to 3 alarm level thresholds
 - Suitable for all pumpable liquid cargo types
 - Resistant to tank cleaning machines
 - Application specific sensor types, e.g. LNG / LPG
 - Same alarm point for different cargo densities
 - Alarm hold function, avoiding repeating alarms from same sensor
 - Fail safe, fully encapsulated design
 - Intrinsically safe connections to sensors
 - Mechanically and electrically separated high level and overflow alarms
 - No active electronic components in the open deck area
 - Alarm panel in electronic cabinet or remote
 - Connectable to external alarm / control system
- Manual sensor / system test functionality
 - Continuous system verification
 - At sea mode, adjusting for ship movements (Optional)
 - Remote control with control transfer (Optional)



Part number	Name	Description
116-KIT-K1001	Level alarm system OAS 5.5/A	Control cabinet for single level sensor system with intrinsically safe alarm module and integrated alarm panel. Cabinet to be operated in indoor safe area.
116-KIT-K1025	Level alarm system OAS 5.5/B	Control cabinet for single level sensor system with intrinsically safe alarm module and use with remote alarm panel. Cabinet to be operated in indoor safe area.
116-KIT-K1050	Level alarm system OAS 5.5/C	Control cabinet for dual/triple level sensor system with fully independent intrinsically safe alarm modules and integrated alarm panel. Cabinet to be operated in indoor safe area.
116-KIT-K1075	Level alarm system OAS 5.5/D	Control cabinet for dual/triple level sensor system with fully independent intrinsically safe alarm modules and use with remote alarm panel. Cabinet to be operated in indoor safe area.

OAS 5.5 classification

Part number	Name	Description
116-Classification	Classification by class society	

OAS 5.5 sensor elements

Part number	Name	Description
116-KIT-K1501	Level sensor single HL 8903	Standard single level sensor with intrinsically safe electrical circuit
116-KIT-K1510	Level sensor dual HHL 8903	Standard dual level sensor with fully independent, intrinsically safe electrical circuits
116-KIT-K1520	Level sensor single HL 8903LPG	Single level sensor for LPG with intrinsically safe electrical circuit
116-KIT-K1530	Level sensor dual HHL 8903LPG	Dual level sensor for LPG with fully independent, intrinsically safe electrical circuits
116-KIT-K1535	Level sensor triple HHL 8903LPG	Triple level sensor for LPG with fully independent, intrinsically safe electrical circuits
116-KIT-K1540	Level sensor single LNG HL8903A	Single level sensor for LNG with intrinsically safe electrical circuit
116-KIT-K1550	Level sensor dual LNG HHL8903A	Dual level sensor for LNG with fully independent, intrinsically safe electrical circuits
116-KIT-K1560	Level sensor triple LNG HHL8903A	Triple level sensor for LNG with fully independent, intrinsically safe electrical circuits

OAS 5.5 system options

Part number	Name	Description
116-M1630	Modbus OAS 5	
116-M1636	At sea mode A/C	At sea mode module for use with control cabinets with integrated alarm panels. Blocking of high level and 45s delay of overfill alarm
116-M1637	At sea mode B/D	At sea mode module for use with control cabinets operated with remote alarm panels. Blocking of high level and 45s delay of overfill alarm
116-M1635	At sea mode separate	Standalone at sea mode. Blocking of high level and 45s delay of overfill alarm
116-M1638	Override function A/C	Override function to block alarms e.g. during maintenance for use with cabinets with integrated alarm panels
116-M1639	Override function B/D	Override function to block alarms e.g. during maintenance for use with cabinets with remote alarm panels
116-M1640	Test function A/C	Alarm and indicator test functionality for cabinets with integrated alarm panels
116-M1641	Test function B/D	Alarm and indicator test functionality for cabinets with remote alarm panels
116-M1642	Indication function A/C	Alarm indication interface to third party equipment for use with control cabinets with integrated alarm panels
116-M1643	Indication function B/D	Alarm indication interface to third party equipment for use with control cabinets with remote alarm panels
116-M1644	Relay output common 2 pole	
116-M1645	Relay output common 1 pole	



OAS 5.5 system options (cont.)

Part number	Name	Description
116-M1646	Relay output individual 2 pole	
116-M1647	relay output individual 1 pole	
116-11292	Omicron flange JIS5K100/DN80	DN80 JIS5K100 SS flange including sensor pole junction box with M25 thread
116-14281	Bl. flange ANSI 3"/150LBS RF SS	ANSI 3"/150LBS excluding sensor pole junction box
116-14216	Bl. flange ANSI 3"/300LBS RF SS	ANSI 3"/300LBS excluding sensor pole junction box
116-14270	Bl. flange DN100/PN25 RF SS	DN100/PN25 excluding sensor pole junction box
116-14213	Bl. flange ANSI 4"/150LBS RF SS	ANSI 4"/150LBS excluding sensor pole junction box
116-14214	Bl. flange ANSI 4"/300LBS RF SS	ANSI 4"/300LBS excluding sensor pole junction box
116-14277	Bl. flange JIS 10K100A SS	JIS10K100A SS flange, excluding sensor pole junction box
116-M1138	Sensor pole junction box with 1" thread	
116-M1139	Sensor pole junction box with 3/4" thread	
116-M1140	Sensor pole junction box with M25" thread	

OAS 5.5 accessories

Part number	Name	Description
116-33060	Tank overfill alarm sign	
116-33070	Tank high level alarm sign	
116-M1110	Flexible hose 3/4" - JIS5K40 SS	500 mm flexible adaptor hose with JIS5K40 SS flange, 3/4" NPT threads, Cable gland M25 brass to connect OAS wiring up to 14mm to deck flange
116-M1111	Flexible hose 3/4" - JIS5K40 ST	500 mm flexible adaptor hose with JIS5K40 ST flange, 3/4" NPT threads, Cable gland M25 brass to connect OAS wiring to deck flange
116-M1112	Flexible hose 1" - JIS5K40, 600 mm	600 mm flexible adaptor hose with JIS5K40 SS flange, 1" NPT threads, Cable gland M32 brass to connect OAS wiring to deck flange
116-M1114	Flexible hose 1" - JIS5K40, 360M mm	360 mm flexible adaptor hose with JIS5K40 SS flange, 1" NPT threads, Cable gland M32 brass to connect OAS wiring to deck flange
116-M1115	Flexible hose 3/4" - JIS5K50 SS	500 mm flexible adaptor hose with JIS5K50 SS flange, 3/4" NPT threads, Cable gland M25 brass to connect OAS wiring to deck flange
116-M1116	Flexible hose 3/4" - JIS5K50 ST	500 mm flexible adaptor hose with JIS5K50 ST flange, 3/4" NPT threads, Cable gland M25 brass to connect OAS wiring to deck flange
116-M1117	Flexible hose 1" - JIS5K50, 600 mm	600 mm flexible adaptor hose with JIS5K50 SS flange, 1" NPT threads, Cable gland M32 brass to connect OAS wiring to deck flange
116-M1118	Flexible hose 1" - JIS5K50, 360 mm	360 mm flexible adaptor hose with JIS5K50 SS flange, 1" NPT threads, Cable gland M32 brass to connect OAS wiring to deck flange

OAS 5.5 spare part kits

Part number	Name
116-M6101	Spare part set OAS 5.5 standard
116-M6102	Spare part set OAS 5.5 3 years
116-M6104	Spare part set OAS 5.5 5 years
116-M6150	Spare HL sensor standard
116-M6151	Spare HL sensor standard, 3 years
116-M6152	Spare HL sensor standard, 5 years
116-M6153	Spare HL sensor High temp
116-M6154	Spare HL sensor High temp, 3 years
116-M6155	Spare HL sensor High temp, 5 years
116-M6156	Spare HL sensor LPG
116-M6157	Spare HL sensor LPG, 3 years
116-M6158	Spare HL sensor LPG, 5 years
116-M6159	Spare HL+DT sensor LPG
116-M6160	Spare HL+DT sensor LPG, 3 years
116-M6161	Spare HL+DT sensor LPG, 5 years
116-M6162	Spare HL sensor LNG
116-M6163	Spare HL sensor LNG, 3 years
116-M6164	Spare HL sensor LNG, 5 years

Vapour alarm system – OVS 2.1

For vapour return lines on tankers

Today's OVS 2.1 comes factory assembled, calibrated and tested according to agreed customer specifications, ready to be installed and commissioned without special tools required. The intuitive and well-structured operation panel ensures ease of use and limited training requirements.

The system consists of a detector cabinet mounted on deck with Ex ia approved oxygen and pressure sensors, flow fail indicator, manifold selector, test and purge facility as well as an electronic cabinet mounted in the cargo control room containing the alarm panel, with individual alarm displays and status LEDs. Different models are available to cover all configurations of manifolds and vapour lines.

The system is designed to meet IMO's "International Code for Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk" (IBC Code) requirements as well as all classification society rules.

Features

- Factory assembled , calibrated and tested according to agreed customer specification
- Compatible with all types of manifolds and vapour lines
- Intuitive Operation
- Customer adjustable oxygen, low and high pressure alarm levels
- Four configurable alarm settings for each sensor
- Multiple pressure sensors / vapour sample lines
- Continuous flow and system watch dog
- No special tools required for installation and commissioning
- Alarm panel separate from electrical control cabinet (optional)
- Remote alarm unit to display alarms on a second location e.g. ship's bridge (optional)
- RS 485/422 Modbus RTU serial line communication (optional)



Part number	Name	Description
116-KIT-K4001	Vapour alarm system OVS 2.1 OP/A AL	Alarm cabinet with integrated alarm panel including intrinsically safe EX barriers for communication with the detector cabinet. Cabinet to be operated in indoor safe area.
116-KIT-K4010	Vapour alarm system OVS 2.1 OP/B AL	Alarm cabinet with remote alarm panel including intrinsically safe EX barriers for communication with the detector cabinet. Cabinet and alarm panel to be operated in indoor safe area.
116-KIT-K4020	Vapour alarm system OVS 2.1 OP/ DET	Ex approved detector cabinet for oxygen and pressure monitoring

OVS 2.1 classification

Part number	Name	Description
116-Classification	Classification by class society	

Point gas detection system – OGS 2.1

For cargo rooms, AC inlets, crankcases and other applications

Our point gas detection system OGS 2.1 is the ideal solution for environments that require continuous monitoring for hazardous gases.

Typical higher risk areas that require fixed point gas detection are e.g. pump rooms and engine rooms. The system can be equipped with an infinite number of sensors and supports various detection methods such as e.g. electrochemical, catalytical and infrared technology.

The OGS 2.1 system operates on the same platform as our gas sampling family OGS 3, making it easy combinable and the ideal extension to the OGS sampling systems whenever both solutions need to be pooled to one economically sound system. The platform flexibility enables us to meet the individual customer's needs.

The OGS 2.1 meets the requirement set out by IMO and the different classification societies.

Features

- Individual readings and alarm LEDs for each individual sensor
- Up to 4 adjustable independent alarm set points
- Detection of Oxygen, Hydrocarbons and toxic gases
- Infrared, catalytical and electrochemical sensors
- Continuous system verification
- Intuitive operation
- Remote alarm unit to display alarms on a second location e.g. ship's bridge (optional)
- Integrated temperature alarm for cargo pump bearings (optional)
- Cargo pump emergency shutdown (option)
- RS 485/422 Modbus RTU serial line communication (option)
- Separated alarm and detector cabinet (optional)



Part number	Name	Description
116-KIT-K2001	Gas alarm system OGS 2.1	Control cabinet with integrated alarm panel for a fixed gas detection system with a set number of sensors. Cabinet to be operated in indoor safe area. Standard Autronica project documentation included. Number of sensors must be specified when ordering.

OGS 2.1 classification

Part number	Name	Description
116-Classification	Classification by class society	



OGS 2.1 Gas sensors & accessories

Part number	Name	Description
116-010195-058	AutroPoint HC200	IR Sensor 0 - 100% LEL, 2 x M25 cable entries
116-009480-004	GT3000 transmitter	Electrochemical, stainless steel housing, Eex d certified
116-009471-032	GT3000 sensor module H2S 0-50 ppm	
116-009471-010	GT3000 sensor module CO 0-100 ppm	
116-009471-008	GT3000 sensor module H2 0-1000 ppm	
116-009471-009	GT3000 sensor module O2 0-25% vol	
116-75777	GT3000 junction box	
116-14382	Cable gland M20 for GT3000 junction box	
116-M2050	Modbus OGS 2.1	

Other sensors on request. Customor specific configuration and documentation on request

OGS 2.1 spare part kits

Part number	Name
116-M6170	OGS 2.1 standard spare part kit
116-M6171	OGS 2.1 3 years spare part kit

Gas sampling systems – OGS 3.1 / OGS 3.11

For total solutions in gas sampling

The OGS 3 family is our 4th generation gas sampling system, relied on by major operators around the world. Built to withstand the harshest conditions the Omicron Gas Sampling Systems are the ideal solution for gas detection in areas where normal installation of gas sensors is impossible.

Our OGS 3 family consists of two different gas sampling systems; The OGS 3.11 is the ideal gas sampling system for all typical marine applications. Based on our more than 20 years of experience we have optimized the system to meet the demanding maritime conditions and to become the all-round solution for monitoring the air content in e.g. water ballast tanks, pump rooms or void spaces in the cargo area.

The OGS 3.1 is our top of the range gas sampling system and typically used for larger installations. The system contains a monitoring cabinet and a detector cabinet which increases its scalability. It enables us to design the ideal solution for the individual operational challenges on e.g. FPSOs or FLNGs.

Both systems meet the requirement set out by IMO and the different classification societies.

Intuitive and efficient

Within standard operation the OGS system runs a fully automated sampling sequence from the various defined sampling points. The cycle time is minimized by using 2 independent vacuum pumps; one main pump that continuously draws air from all sample points and one smaller pump taking samples from the actual point according to the sample sequence. This ensures fresh samples and a quick response in case gas is detected. The system continuously self verifies all pneumatic components to ensure proper operation at all times. All alarms, gas as well as potential malfunctions, are shown on the standardized Omicron operator panel in plain text, making the operation extremely intuitive and limiting training requirements, especially for combined systems.

Scalability

The wide range of optional features in conjunction with the overall system flexibility allow Omicron Gas Sampling Systems to cover a brought range of applications, ranging from a system with only a few sample points to a tailor made OGS 3.1 system with a centralized monitoring cabinet and several detector cabinets, making it the ideal solution for large and demanding applications.

Both systems – OGS 3.1 and OGS 3.11 – utilize the common Omicron product line platform, so that they can be easily combined with the Omicron fixed gas detection system OGS 2.1 creating an overall cost effective gas detection solution for an entire vessel.

Features

Standard

- Infrared hydrocarbon sensor(s) with range 0 - 100% LEL
- Low and high gas alarms
- Flame arrestor and shut off valves for each sampling tube
- Automatic and sequential purging of each sampling tube
- Two vacuum pumps for reliable detection (main and sample)
- Non-return valves to avoid liquid entering into the system
- Continuous system verification
- Adjustable purge and sample time on every sampling point
- Semi-automatic test functionality for span and zero calibration
- Manual disconnecting of sampling points that are not in use.

Optional

- Multiple gas analysis. Up to 3 different gas sensors simultaneously
- Dilute functionality for detection of non IR detectable combustible gases (e.g. NH₃)
- Repeater display units with control transfer (max. 5)
- Remote alarm units with alarm LEDs and sounder (e.g. for bridge)
- Bulkhead penetrations
- RS 485/422 Modbus RTU serial line communication
- Up to 32 freely configurable aux. relay outputs
- Dual purge supply (i.e. nitrogen and instrument air)
- Standby pump with manual switch over
- Special design materials for extreme gases (OGS 3.1 only)





OGS 3.11

Part number	Name	Description
116-KIT-K3501	Gas sampling system OGS 3.11	Gas sampling system existing of a combined alarm & control cabinet, including 1 AutoPoint HC200 0-100% LEL IR sensor configured for a set number of sample points. Cabinet is shielded by flame arrestors and to be operated in indoor safe area. Standard Autronica project documentation included. Number sampling points must be specified when ordering.

Customer specific configuration and documentation and/or other sensor types on request

OGS 3.1

Part number	Name	Description
116-KIT-K3001	OGS 3.1 Alarm & control cabinet	IP66 Control cabinet with integrated alarm panel for a set number of sample points. Cabinet to be operated in safe area. Standard Autronica project documentation included. Number sampling points must be specified when ordering.
116-KIT-K3010	OGS 3.1 Detector cabinet	IP66 detector cabinet incl. 1 AutoPoint HC200 0-100% LEL IR sensor, flame arrestors and manifolds for a set number of sample points. Cabinet to be operated in safe area. Standard Autronica project documentation included. Number sampling points must be specified when ordering.

Customer specific configuration and documentation and/or other sensor types on request

OGS 3.1/3.11 classification

Part number	Name	Description
116-Classification	Classification by class society	

OGS 3.1/3.11 sensors and system options

Part number	Name	Description
116-009480-004	GT3000 transmitter	
116-009471-032	GT3000 sensor module H2S 0-50PPM	
116-009471-009	GT3000 sensor module O2 0-25%VOL	
116-M3252	GT3000 flow cap	
116-M3035	Modbus OGS 3	
116-M3050	Flamescreen OFS1/10MMOD	Flamescreen for exhaust air

OGS 3.1/3.11 sensors and system options (cont.)

Part number	Name	Description
116-M3051	FLAMESCREEN OFS1/12mmOD	Flamescreen for exhaust air
116-M3078	Shut-off valve 1X6MMOD EX HEX	
116-M3079	SShut-off valve 1X6MMOD W/HEX	
116-M3080	Shut-off valve 2X8MMOD	
116-M3081	Shut-off valve 1X8MMOD	
116-M3082	Shut-off valve 2X10MMOD	
116-M3083	Shut-off valve 1X10MMOD	
116-M3084	Shut-off valve 2X12MMOD	
116-M3085	Shut-off valve 1X12MMOD	
116-M3140	Filter regulator 12MMOD-12MMTX	
116-M3141	Filter regulator 10MMOD-12MMTX	
116-M3142	Filter regulator 8MMOD-12MMTX	
116-M3060	Bulkhead pen 150/32/ 2X8MM OD	
116-M3061	Bulkhead pen 150/32/ 1X8MM OD	
116-M3062	Bulkhead pen 150/32/ 2X10MM OD	
116-M3063	Bulkhead pen 150/32/ 1X10MM OD	
116-M3064	Bulkhead pen 150/32/2X12MMOD	
116-M3065	Bulkhead pen 150/32/1X12MMOD	
116-M3066	Bulkhead pen 150/22/2X8MMOD	
116-M3067	Bulkhead pen 150/22/ 1X8MM OD	
116-M3068	Bulkhead pen 150/22/2X10MMOD	
116-M3069	Bulkhead pen 150/22/1X10MMOD	
116-M3070	Bulkhead pen 150/22/2X12MMOD	
116-M3071	Bulkhead pen 150/22/1X12MMOD	
116-M3122	Non-return valve 8MM OD SS	
116-M3123	Non-return valve 10MM OD SS	
116-M3105	Inline filter 90MICRON/8MMOD	
116-M3106	Inline filter 90MICRON/10MMOD	
116-M3110	Endline filter 8MM OD	
116-M3111	Endline filter 10MM OD	
116-75321	Water trap	



OGS 3.1 spare part kits

Part number	Name
116-M6180	OGS3.1 standard spare part kit
116-M6181	OGS3.1 3 years spare part kit
116-M6182	OGS3.1 5 year spare part kit
116-M6183	OGS3.1 standard spare part kit for LPG
116-M6184	OGS3.1 3 years spare part kit for LPG
116-M6185	OGS3.1 5 years spare part kit for LPG

OGS 3.11 spare part kits

Part number	Name
116-M6190	OGS3.11 standard spare part kit
116-M6191	OGS3.11 3 years spare part kit
116-M6192	OGS3.11 5 year spare part kit
116-M6193	OGS3.11 standard spare part kit for LPG
116-M6194	OGS3.11 3 years spare part kit for LPG
116-M6195	OGS3.11 5 years spare part kit for LPG

Standard accessories for Omicron product range

Bridge remote units

Part number	Name	Description
116-M6051	Bridge remote unit box mounted	Remote alarm panel for use with OAS 5.5, OVS 2.1, and OGS systems
116-M6050	Bridge remote unit flush mounted	Remote alarm panel for use with OAS 5.5, OVS 2.1, and OGS systems

Alarm lights and horns

Part number	Name	EX approval	Alarm sound frequency	Alarm colour	Sound output	Ingress Protection level	Voltage
116-M6015	Alarm light XB11 M20	EEx d IIB T5/T6	-	red	-	IP66/67	24 V DC
116-M6016	Alarm light XB11 M20	EEx d IIB T5/T6	-	orange	-	IP66/67	24 V DC
116-M6017	Alarm light XB11 M20	EEx d IIC T6	-	blue	-	IP66/67	24 V DC
116-46062	Alarm light EX XB9	EEx d IIC T6	-	red	-	IP66/67	24 V DC
116-46069	Alarm light EX XB9	EEx d IIC T6	-	red	-	IP66/67	220 V AC
116-46072	Alarm light EX XB9	EEx d IIC T6	-	red	-	IP66/67	230 V AC
116-46073	Alarm light EX XB9	EEx d IIC T6	-	orange	-	IP66/67	24 V DC
116-46077	Alarm light EX XB9	-	-	orange	-	IP66/67	220 V AC
116-M6030	Alarm horn KT75 M20	-	Air driven 400 Hz	-	136 dB(A)	IP65	24 V DC
116-M6031	Alarm horn KT75 M20	-	Air driven 800 Hz	-	136 dB(A)	IP65	24 V DC
116-M6032	Alarm horn EX DB3 M20	Eex d IIC T4	Electrical 400 - 3100 Hz	-	113 dB(A)	IP67	24 V DC
116-M6033	Alarm horn EX DB3 M20	Eex d IIC T4	Electrical 400 - 3100 Hz	-	113 dB(A)	IP67	230 V AC
116-M6034	Alarm horn A121 WR M20	-	Electrical 1000 Hz	-	126 dB(A)	IP66	24 V DC
116-M6035	Alarm horn A105 WR M20	-	Electrical 1000 Hz	-	112 dB(A)	IP66	24 V DC
116-M6036	Alarm horn A105 WR M20	-	Electrical 1000 Hz	-	112 dB(A)	IP66	230 V AC
116-M6037	Alarm horn MA121 WR M20	-	Electrical 1000 Hz	-	126 dB(A)	IP66/67	24 V DC

Test gas

Part number	Name	Description
116-93019	Hose 6mm PA	
116-93626	Quickc male 6mm open/open brass	
116-94008	Reduction valve	AGA Pressure reducer for test gas w/flowmeter (0-800 ml/min)

Test gas (cont.)

Part number	Name	Description
116-81029	Methane 50% LEL air 1l/12bar	
116-81028	Propane 50% LEL air 1l/12bar	
116-96630	N-Butane 50% LEL air 1l/12bar	
116-81031	H2S 25 ppm N2 1l/12bar	
116-96635	Nitrogen 1l/12bar	
116-81024	Test gas. N-Butane 50% L.E.L. in air 10L	
116-94009	Flow regulator for AGA 5L 10/l fixicontrol cylinder	

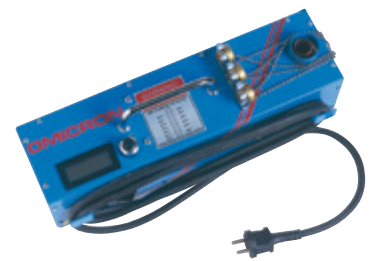
Calibration devices

TEMPERATURE CALIBRATOR – OTE-T700

The temperature calibrator is intended for testing of temperature sensors, indicators, switches and safety equipment. The heating medium is hot air. This makes it clean to use and it has quick temperature change response. Temperature range is about 10 degrees above ambient to + 700° C with digital readout of the measured temperature.

Technical specifications:

- Measuring range: ~30 - 700° C
- Heating medium: Air
- Display: 15 mm 3,5 Digit LCD.
- Dimensions: 410 x 140 x 160 mm.
- Weight: 4 kg
- Power: 120 V - 50/60 Hz - 2700 W, 230 V - 50/60 Hz - 2300 W
- Accuracy up to 100 °C: +/- 1 °C, 101-400 °C: +/- 1 % FS, 401-700 °C: +/- 2 % FS

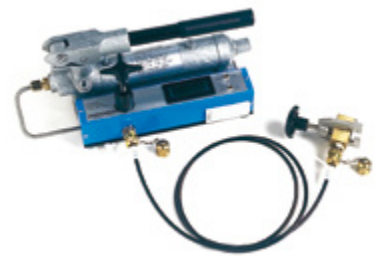


PRESSURE CALIBRATOR – OTE-P202 AND OTE-P300

The pressure calibrator is intended for testing of pressure sensors, indicators, switches and safety equipment. The pressure medium is oil. It has fine adjustment of the pressure, and an overpressure relief valve. The digital readout can be selected to Bar or PSI. Pressure range is 0 - 200 bar / 0 - 300 bar. The unit can also be delivered in Eex version.

Technical specifications:

- Measuring range: 0-200 Bar / 0-1999 PSI // 0-300 Bar 0-4350 PSI
- Pressure medium: Oil
- Display: 15 mm 3,5 Digit LCD.
- Dimensions: 310 x 115 x 135 mm.
- Weight: 5 kg
- Hose length: 1,5 m with quick connector and 40 mm test cock
- Power: 1 pc. 9V battery
- Accuracy 0-10 Bar: +/- 0.2 Bar
- 11-200 Bar: +/- 0.25 % F.s.
- 11-300 Bar: +/- 0.25 % F.s.



Part number	Name
116-M5020	Temperature calibrator OTE-T700/230V
116-M5030	Pressure calibrator OTE-P202
116-M5040	Pressure calibrator OTE-P300
116-M5050	Pressure calibrator OTE-P300ex. Eex ia IIC T6 approved

One supplier
– total fire safety



Fire suppression systems

– real-world safety solutions

Integration of fire-safety equipment ensures that the correct response is made automatically; the integration of fire detection and suppression is a logical step. It can be difficult to get equipment made by two different suppliers to work together in a satisfactory way, and costs and installation time increase accordingly. That is why Autronica offers the total safety solution for maritime applications.

Autronica's fire suppression systems provide reliable, low-maintenance performance that distracts attention away from every-day activities as far as possible. They are hard-wearing enough to face the challenges of environments characterized by pollutants, corrosive chemicals and constant activity, as well as being sensitive enough to respond correctly in an emergency situation.

Novec 1230 Fluid

Novec™ 1230 Engineered Fire Suppression System is the new generation in gaseous fire suppression technology. Designed to protect human life and high value assets from fire, it meets the marine industry's concerns for safety, performance and the environment.

Novec 1230 fluid is a fluorinated ketone that is stored as a liquid and discharged as a gas. It distributes uniformly throughout the hazard zone, and suppresses fire by a combination of heat absorption and chemical interference with the flame.

Environment

With a zero ozone depletion potential (ODP), a global warming potential (GWP) of just one, and an atmospheric lifetime (ALT) of only 5 days, Novec 1230 fluid has no measurable impact on climate change. At the end of the lifetime of the system, the fluid can be readily recovered and recycled.

Clean

Novec 1230 fluid discharges as a colourless, electrically non-conductive and noncorrosive gas that does not damage sensitive equipment. There is no post-discharge residue, no costly clean-up operations are required, and down-time is kept to a minimum.

Cost-effective

By using its tried and trusted range of 25 bar equipment, Autronica can offer a cost-effective Novec 1230 fire suppression system.

Efficient

Small and large-scale tests have proven that Novec 1230 fluid puts fires out quickly, before they can do any serious damage. It does this by reaching extinguishing concentrations in ten seconds or less. It is effective on a wide range of Class A, B and electrical fires.

Safety

The US EPA Significant New Alternatives Program (SNAP) classifies Novec 1230 fluid as acceptable for use as a total flooding agent in occupied spaces. A low design concentration of 4 to 6% in combination with a high No Observable Adverse Effect Level (NOAEL) of 10% means it provides a safety margin of up to 100%. This is by far the largest safety margin of any clean agent currently available. In addition, there is no risk of human asphyxiation with Novec 1230 fluid since it does not act by oxygen depletion in the hazard zone.

System design

The Autronica Engineered Fire Suppression System comprises Novec 1230 fluid stored in cylinders connected to distribution pipework and specially designed discharge nozzles.

Novec 1230 fluid is stored as a liquid in nitrogen-pressurised steel cylinders. This ensures minimal storage space and weight requirements compared to all other viable gaseous agents. It also enables refills to be transported in unpressurised cylinders without the restrictions on gaseous alternatives.

The range of cylinders, valves and related components has been specially selected for use with Novec 1230 fluid and has been subjected to stringent testing procedures. Flexibility, quality and reliability make the Novec 1230 range the world's finest in fire safety.

Engineered systems are designed using FM Global and UL verified software and guidelines, and offer optimum designs for the defined risks with reduced pipe sizes, unbalanced flows and common room and void protection possible.

Applications

Novec 1230 systems are ideally suited to the protection of machinery spaces, cargo pump rooms, control and switchboard rooms in a wide range of vessel types.



Cylinders and accessories

Part number	Name	Description
116-1-45-200040-001	16 l cylinder	Including 1.5" valve assembly, mounting hardware, pressure operated control head and standard supervisory pressure switch. Cable operated control head and ATEX pressure switch available on request.
116-1-45-200070-001	28 l cylinder	Including 1.5" valve assembly, mounting hardware, pressure operated control head and standard supervisory pressure switch. Cable operated control head and ATEX pressure switch available on request.
116-1-45-200125-001	51 l cylinder	Including 1.5" valve assembly, mounting hardware, pressure operated control head and standard supervisory pressure switch. Cable operated control head and ATEX pressure switch available on request.
116-1-45-200200-001	81 l cylinder	Including 2" valve assembly, mounting hardware, pressure operated control head and standard supervisory pressure switch. Cable operated control head and ATEX pressure switch available on request.
116-1-45-200350-001	142 l cylinder	Including 2" valve assembly, mounting hardware, pressure operated control head and standard supervisory pressure switch. Cable operated control head and ATEX pressure switch available on request.
116-1-486488	Container bracket for 28 l cylinder.	Also available for 16 l cylinder.
116-1-878757	Cylinder recharge adapter for cylinder size: 5 to 51 l	
116-1-878758	Cylinder recharge adapter for cylinder size: 81 to 142 l	

Nozzles

Part number	Name	Description
116-1-45-294713	Nozzle 1/2" BSP 180°.	Brass. Available with different drill sizes.
116-1-45-294714	Nozzle 3/4" BSP 180°.	Brass. Available with different drill sizes.
116-1-45-294715	Nozzle 1" BSP 180°.	Brass. Available with different drill sizes.
116-1-45-294716	Nozzle 1 1/4" BSP 180°.	Brass. Available with different drill sizes.
116-1-45-294717	Nozzle 1 1/2" BSP 180°.	Brass. Available with different drill sizes.
116-1-45-294718	Nozzle 2" BSP 180°	Brass. Available with different drill sizes.
116-1-45-294723	Nozzle 1/2" BSP 360°	Brass. Available with different drill sizes.
116-1-45-294724	Nozzle 3/4" BSP 360°	Brass. Available with different drill sizes.
116-1-45-294725	Nozzle 1" BSP 360°	Brass. Available with different drill sizes.
116-1-45-294726	Nozzle 1 1/4" BSP 360°	Brass. Available with different drill sizes.
116-1-45-294727	Nozzle 1 1/2" BSP 360°	Brass. Available with different drill sizes.
116-1-45-294728	Nozzle 2" BSP 360°	Brass. Available with different drill sizes.



Release cabinets

Part number	Name	Description
116-814470	Valve release cabinet	Steel. Available in stainless steel.
116-814610	Pneumatic release cabinet.	With time delay and by-pass. Steel. Available in stainless steel.
116-814640	Pneumatic supply cabinet	With time delay and by-pass. Steel. Available in stainless steel.

Miscellaneous

Part number	Name	Description
116-162045	Flexible hose SS 1 1/2" X 610 mm PN60	
116-162055	Flexible hose SS 2" X 787 mm PN55	
116-243047	Key holder with hammer and chain	
116-198405	Shuttle valve with OD 6 mm tube.	

FlexiFOAM

FlexiFOAM is a reliable and effective low expansion foam system for protection of the following areas:

- Cargo tank deck
- LFL area
- Car-decks (open or closed)
- Heli-deck and helicopter landing areas

The system and its components are designed to withstand ambient temperature changes, vibration, humidity, shock, impact and corrosion normally encountered in those environments.

FlexiFOAM systems have proved their effectiveness when used as an agent for control and extinguishing of Class A and B fires.

FlexiFOAM systems are designed to be rapid and simple to operate.

The foam

Depending on the application, synthetic AFFF and ARC foams in different mixing concentration are used. All the foams concentrates are approved by all the major classifications societies and fulfill IMO requirements.

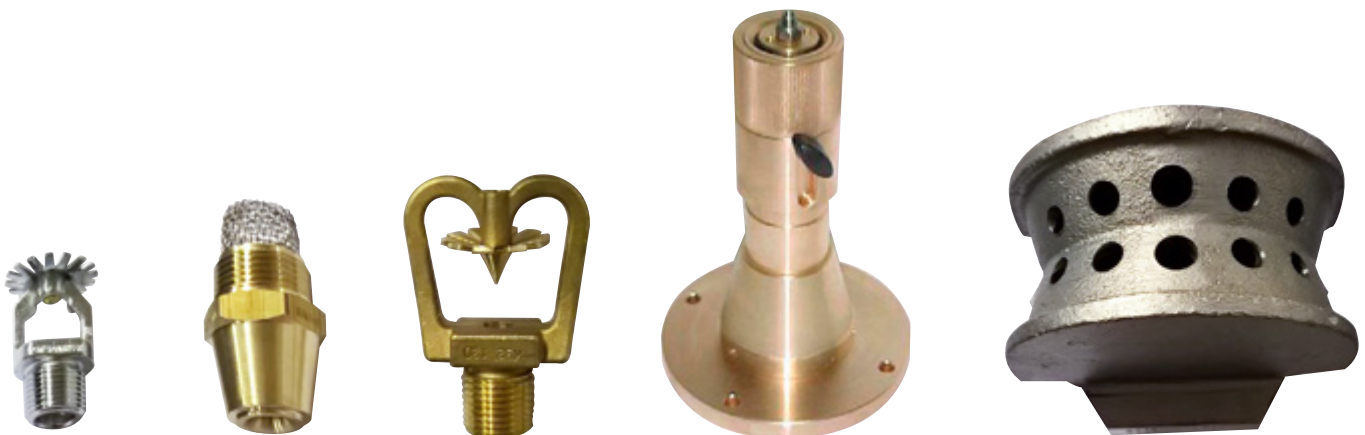
Foam discharging devices

Autronica can deliver a broad range of discharging devices to meet the requirements set by applicable regulations and to satisfy the needs of each specific vessel.

Depending on the application Autronica can provide:

- Jet/fog nozzles
- Monitors
- Foam nozzles
- Branchpipes
- Pop-up nozzles

All foam discharging devices have been tested according to the relevant regulations and fulfill IMO requirements.



FlexiFOG – local protection

Low-pressure water mist system

Local protection in accordance with IMO MSC/Circ. 913

Low-pressure water mist fire-fighting system provided for local fire suppression in areas, as specified in SOLAS II-2/10.5.6 for category A machinery space, such as top of main engine, top of auxiliary engines, boiler fronts, incinerators and fuel oil separators.

The system may be released locally by use of manual release button within the protected space and from manned station or automatic by fire detectors for ships with unattended machinery space.

The central operating panel should always be located in the manned station



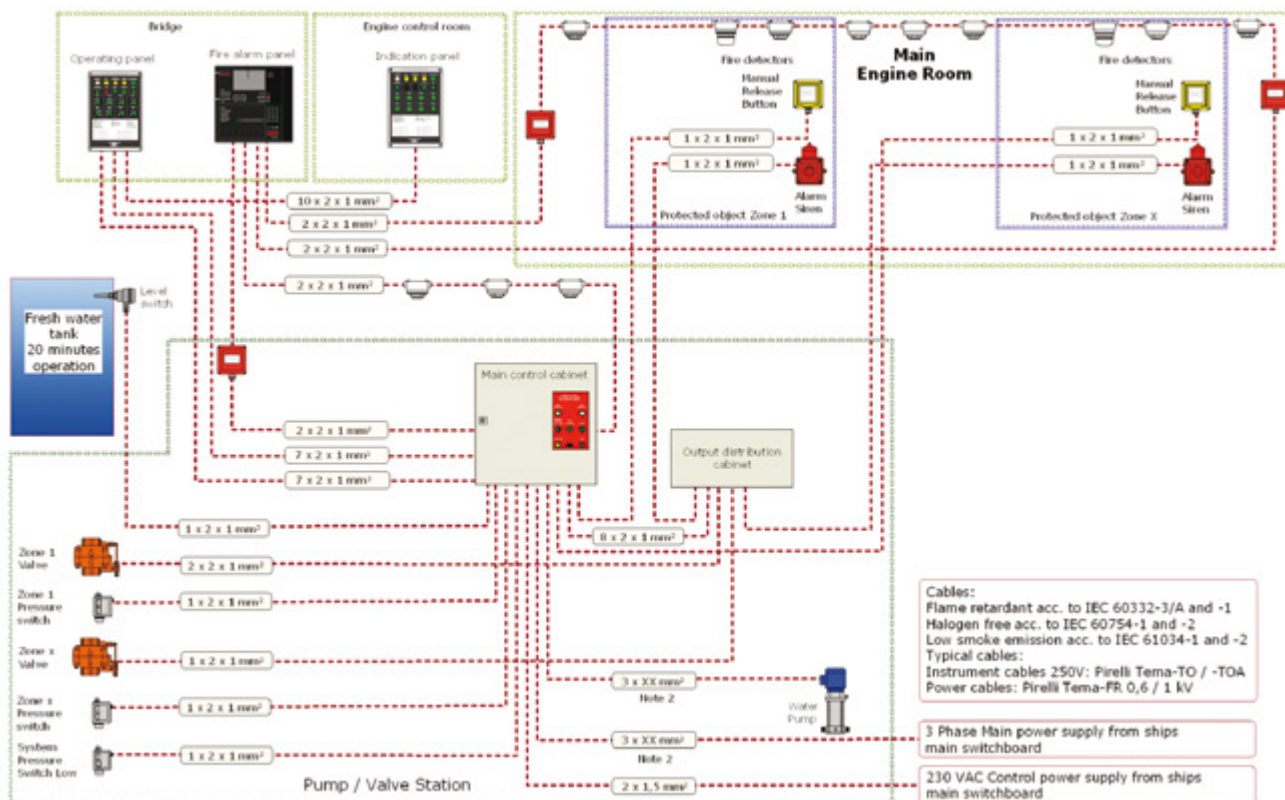
Control systems

- Option 1
With integrated AutoSafe I/O for interconnection with the ship's AutoSafe fire detection system. The advantage is saving cables as one of the AutoSafe loops are routed through the local protection control panel.
- Option 2
For integration with any type of ships fire detection system. Voltage free outputs from the ships fire detection system is required.
- Option 3
Touch screen operated system with integrated fire detector loops for conventional fire detectors. Automatic activation based on any two detectors on the loop covering one object.

Advantages

- Tested in accordance with IMO MSC/circ. 913
- Low water consumption, 1,1 – 1,6 l/min./m²
- Low power consumption, 1,5 – 5,5 kW
- Height 0,5 – 8 meters, operating pressure, 4 bar
- Height 8 – 14,5 meters, operating pressure, 9 bar
- Small pipe size, 3/4"
- Low weight piping, PN10 and PN16
- Type approved by all major classification societies
- Holding wheel mark certificate, Module B and D

Low pressure water mist local protection integrated with AutoSafe interactive fire detection system – Typical layout



FlexiFOG – total flooding

Low-pressure water mist system

For Machinery Spaces cat. A and cargo pump room in accordance with IMO MSC/Circ. 1165

Low-pressure water mist fire-fighting system provided for total flooding in areas, as specified in the FSS Code chapter 7 section 2.2 for category A machinery space and cargo pump room. The system can be supplied to any vessel with machinery spaces volume up to 3348 m³. FlexiFOG® can protect up to 10.1 meters height with one single grid. The bilge is also protected by FlexiFOG. No additional nozzles required to fulfil IMO MSC/Circ. 913 for protection of high risk areas.

The system may be released locally within the protected space and from manned station. The control panel will always monitor and indicate status of the system. Automatic release possibility for local protection when unmanned engine room condition.

Common control system with local protection and accommodation.

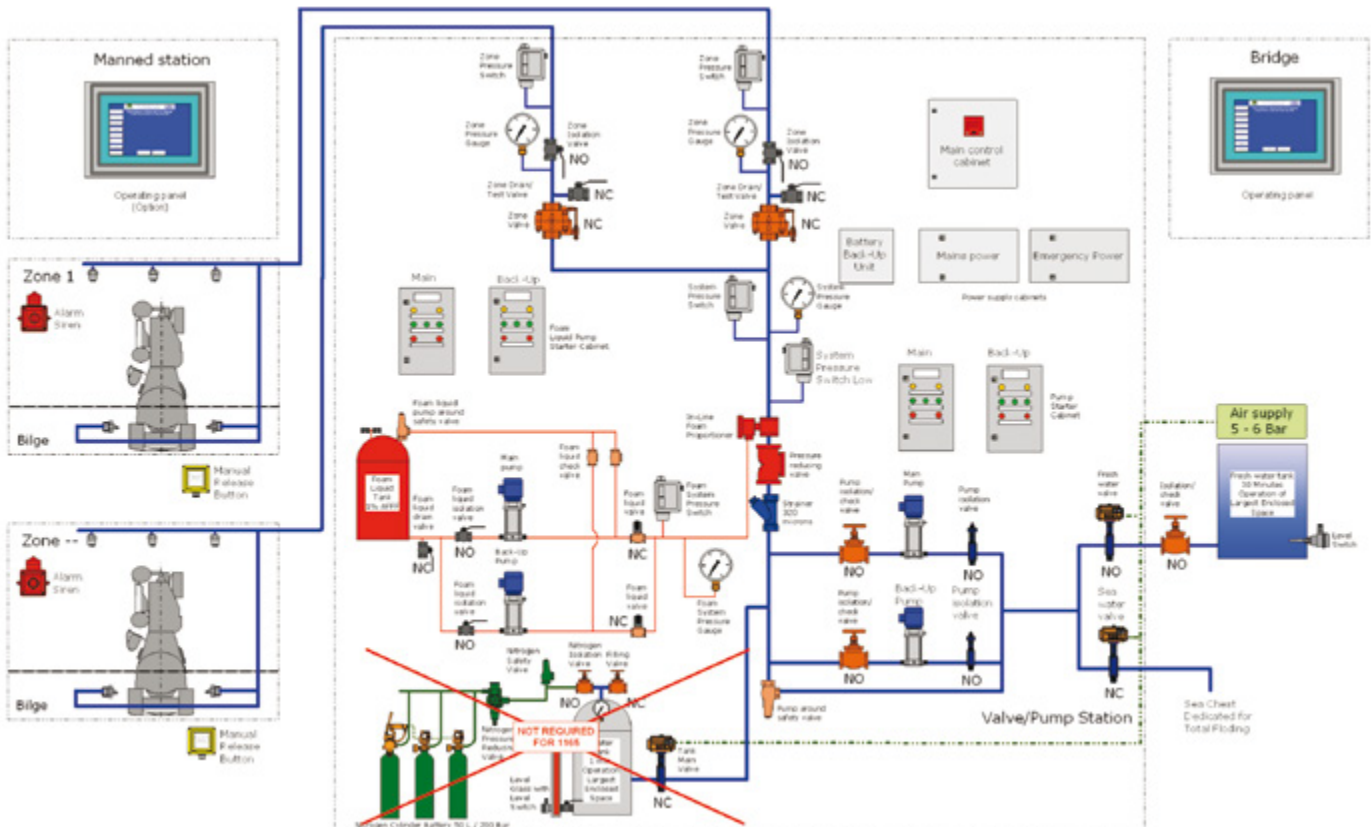
Galvanised steel pipes can be used.

Advantages:

- Tested and approved in accordance with IMO MSC/circ. 1165
- No need for tank for first minutes operation
- No need for doorway manifolds
- Low water consumption, 1,71 l/min./m²
- Low power consumption, 15-60 kW
- Low pressure, 10,45 bar
- Height up to 10,1 meters, single level
- Low weight piping, PN16
- For manual electric operation
- Type approved by all major classification societies
- Holding wheel mark certificate, Module B and D



Low-pressure water mist total flooding: Typical layout according to IMO MSC/Circ. 1165 combined with local protection according to IMO MSC/Circ. 913



FlexiFOG – accommodation

Low-pressure water mist system

For Accommodation and Public Spaces in accordance with IMO MSC Res. 265(84)

The Autronica low-pressure water mist fire suppression system is provided for accommodation areas as specified in the FSS Code chapter 8, section 1 and 2.

The control system consists of a single CPU or two CPUs where Safe Return to Port is required. Accommodation system zone monitoring is either hardwired to the CPU or connected to the Ethernet ring via IE/As-I link modules.

Operation / Indication are by minimum two touch screens connected to the Ethernet.

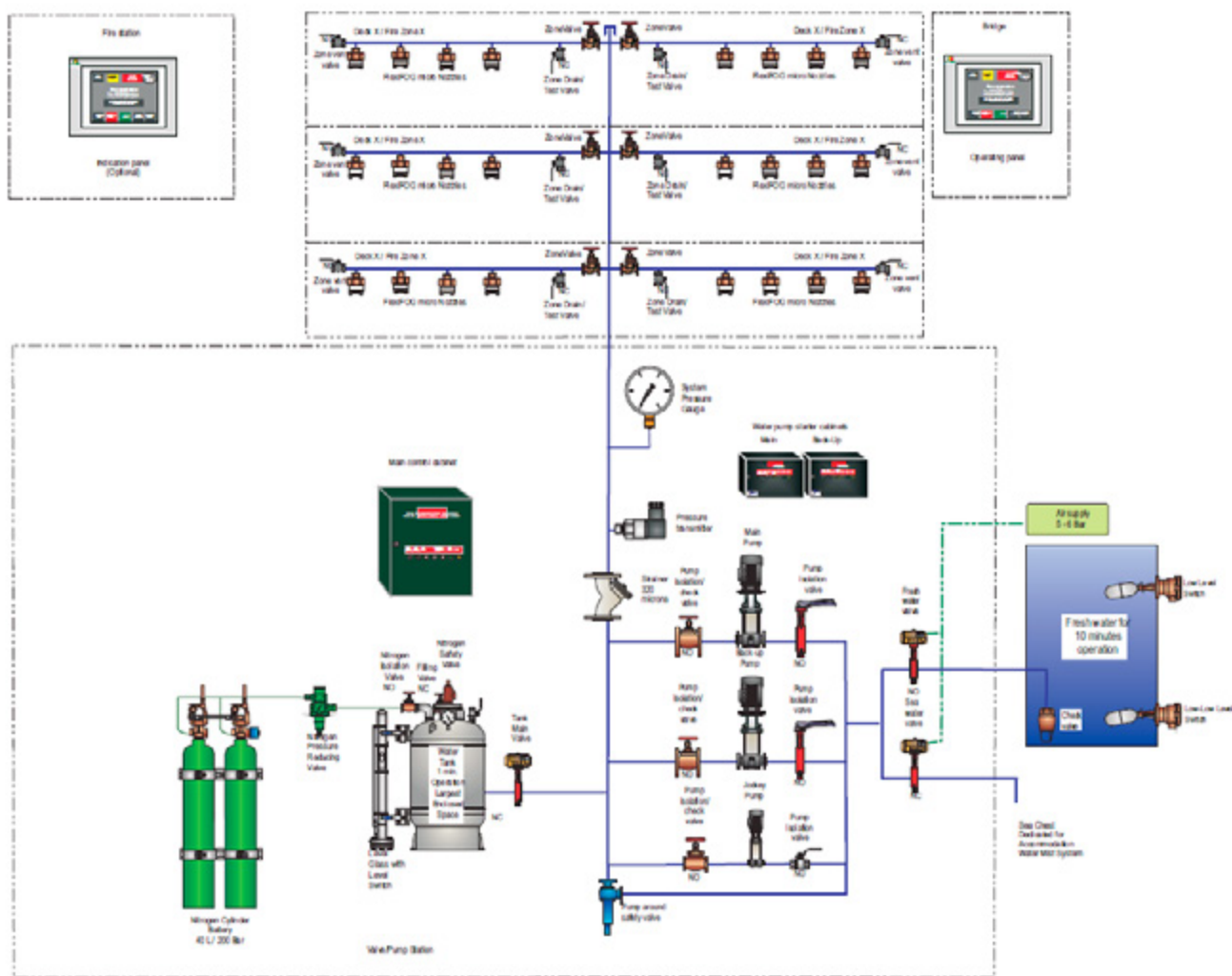
The micro nozzles have integrated heat sensitive elements with ultra fast response character at a nominal release temperature of 57°C. The system can be delivered together with FlexiFOG total flooding and local protection without the need of having a double set of pumps or control panels.

Application

Low-pressure water mist system for protection of accommodation area as specified in IMO MSC Resolution 265(84) and SOLAS II-2/12,

Advantages:

- Tested in accordance with IMO MSC Res. 265(84)
- Less power consumption, 15 – 30 kW
- Less pressure, 10 bar
- Less weight piping, PN16



Low-pressure water mist systems and Safe Return to Port

Safe Return to Port

The Safe Return to Port amendment to the IMO SOLAS regulations was made effective from 1 July 2010. The goal is that a vessel remains functional even in the case of fire or flooding in one compartment and is able to return safely to port without the need to abandon ship.



The regulations are mandatory for passenger ships having a length of 120 metres or more or having three or more main vertical zones. These vessels have to be able to return to port after a casualty case, not exceeding a defined flooding or fire casualty threshold, and provide all persons on board basic services in so-called 'safe areas'. For fire casualty cases exceeding the casualty threshold but not exceeding one main vertical fire zone, systems for supporting orderly evacuation have to be available for 3 hours.

The low-pressure water mist solution

The control system consists of two CPUs, each with its own program. Machinery space systems are hardwired with redundant zone valves. Manual release buttons have inputs to both CPUs.

Accommodation system zone monitoring is connected to the Ethernet ring via IE/As-I link modules.

Operation / Indication are carried out by minimum two touch screens connected to the Ethernet ring. In normal operation, the main CPU is controlled. Change-over to the back-up CPU is carried out automatically or manually from either of the touch screens.

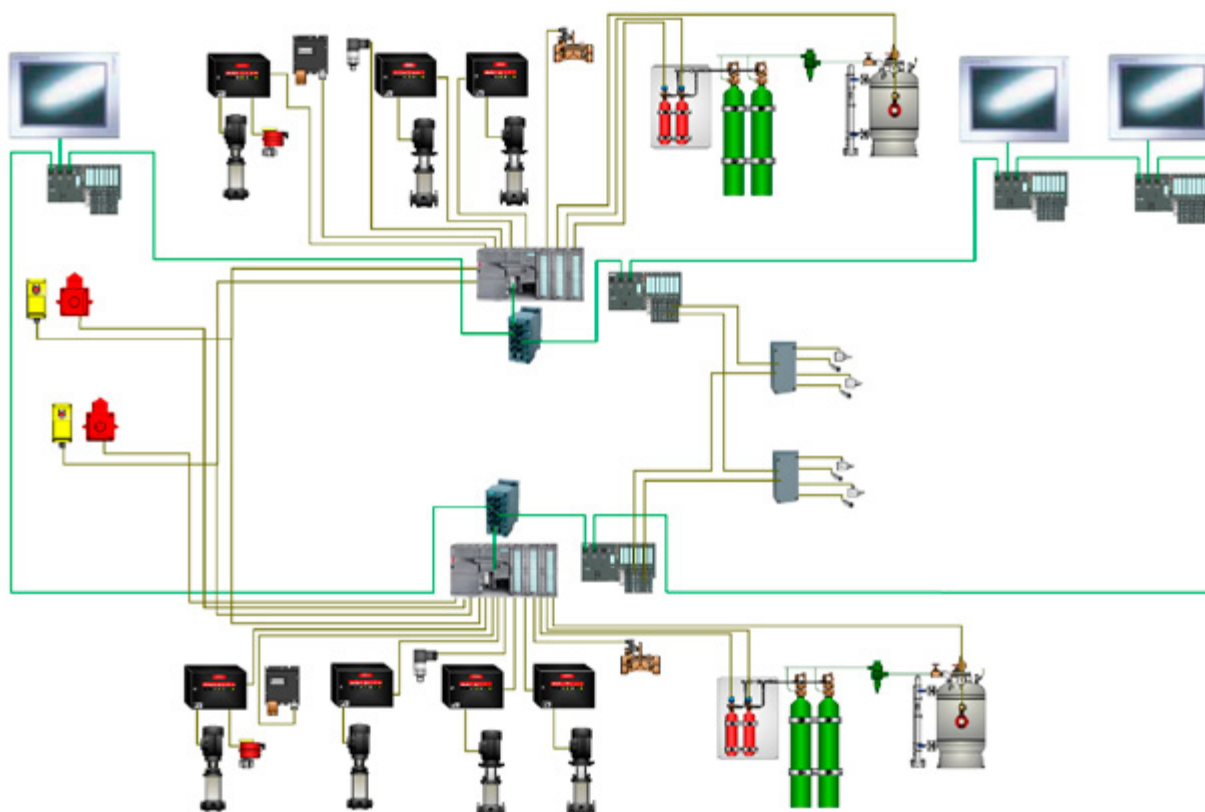
Each of the pump packages has a 100% capacity and is connected to its own dedicated sea chest. The pump package is common for both accommodation and machinery space systems, i.e. it is not necessary to have separate pumps for each of the applications. The pump units is located in the foremost and aftmost main vertical zone.

Zone valves for machinery space protection have 100% redundancy and should be located at the pump station. Zone valves for accommodation are normally located outside the protected fire zone within a dedicated A0 enclosure, i.e. duplicate zone valves are not required. If located outside A0 enclosure, the zone valves has to be duplicated..

Application

Low-pressure water mist system for protection of accommodation area, machinery space cat. A and pump rooms, and local protection, machinery space cat. A. If local protection is separate, i.e. not a part of the total flooding system, SRTF requirements is not required.

Typical layout according to IMO SOLAS Safe Return to Port





PRODUCTS 2016

Fire suppression systems
Control cabinets and accessories

Control cabinets and accessories

Part number	Name	Description
116-901110.KIT	Control panel suppression system	Control panel for FlexiFOG water mist fire suppression system. Options and accessories on request.
116-901120	Main control panel for SRtP systems	Control panel for ethernet and distributed IO using ET200S IO station. Complying with safe return to port requirements. Including switch mode power supply, battery back-up for PLC and 8 port ethernet switch RJ45. Including IO for hardwiring of 15 dry pipe zones, 6 pumps, 2 nitrogen cylinders, SW / FW valves and valve for back-up tank. Options and accessories on request.
116-901140.KIT	Remote IO control panel for SRtP systems	Control panel for ethernet and distributed IO using ET200S IM151 DP/PN with 3 RJ45 ethernet connection. Complying with safe return to port requirements. 10 A switch mode power supply and battery back-up for PLC included. 1 Phase 230 VAC change over for main/emergency supply included. Options and accessories on request.

Operating panels and accessories

Part number	Name	Description
116-901040	Operating panel, 12" multicolour touch screen	Flush mounting
116-901041	Operating panel, 12" multicolour touch screen	Surface mounting
116-901037	Operating panel, 7" multicolour touch screen	Surface mounting, for remote operation
116-901035	Operating panel, 7" multicolour touch screen	Flush mounting, for remote operation
116-138590	Operating panel, 10 zones	
116-138595	Indication panel, 10 zones	
116-142056	Backbox	For bulkhead mounting of operating and indication panels

Nozzles and accessories

Part number	Name	Description
116-900930	Nozzle, LO-Flow M5	M5 nozzle in naval brass for machinery space systems (total flooding and local protection)
116-900960	Nozzle K6	K6 nozzle in naval brass for machinery space systems (total flooding).
116-900960.SS	Nozzle K6 SS	K6 nozzle in stainless steel for machinery spaces systems (total flooding)
116-900950	Nozzle FlexiFOG B1	B1 nozzle in naval brass for bilge area in machinery spaces
116-900950.SS	Nozzle FlexiFOG B1 SS	B1 nozzle in stainless steel for bilge area in machinery spaces
116-900980	Nozle RO-RO OH-OPX1	OH-OPX1 nozzle in naval brass for RO-RO and special category spaces

Nozzles and accessories (cont.)

Part number	Name	Description
116-900820.57	FlexiFOG micro nozzle	FlexiFOG micro nozzle. Naval brass, chrome plated. Available in different types for different areas (cabins / corridors / public spaces / storages) and activation temperatures (57°C / 93°C)
116-700222	Drencher nozzle	Available with different K-factors: 22, 41, 47, 57, 62
116-177443	High velocity nozzle	Available with different K-factors: 23, 43, 80
116-177559	Medium velocity nozzle	Available with different K-factors: 16, 23, 40, 59
116-177499	Nozzle, Thermoshield K260	
116-174965	Nozzle JET/FOG MINI GN-5	Other sizes on request
116-900852	Rosette square	Rosette for FlexiFOG micro nozzle. Square shape. Stainless steel. Grit finishing. Price on request for different finishing (polished / painted) and materials (brass).
116-900862	Rosette circular	Rosette for FlexiFOG micro nozzle. Circular shape. Stainless steel. Grit finishing. Also available in different finishes (polished / painted) and materials (brass).
116-900870	Cover plate Ø 95	Cover plate to be used when replacing old type FlexiFOG accommodation nozzles with FlexiFOG micro. Stainless steel. Polished finishing.
116-900895	Hex pipe for installation of FlexiFOG micro nozzles	Tool for installation of FlexiFOG micro nozzles
116-162625	500 mm hose DN10	3/8" BSP / 15 mm tube end. Available also with 1000 mm length

Valves and accessories

Part number	Name	Description
116-100170	Valve ball DN20 BSPF	Other dimensions available on request (DN8-50)
116-100656	Valve ball DN15 wafer	For pressure vessel level indicator
116-110030	Valve butterfly manual operated DN 80 DIN PN 16	Other dimensions available on request (DN40-150)
116-110440	Valve, Butterfly, El/Pneumatic operated, DN 100	Supplied normally open or normally closed (NO / NC). Other dimensions available on request (DN40-150)
116-106140	Valve, Butterfly, Motor operated 230 VAC, DN 100	Other dimensions available on request (DN50-150)
116-931120	Valve ball DN20 BSPF with cam lock quick coupling	Other dimensions available on request (DN25-50)
116-119633	Valve, Zone DRY remote control DN25 24VDC	Other dimensions available on request (DN20-50)
116-119730	Valve, Zone remote control DN80 FL 24VDC	Other dimensions available on request (DN50-150)
116-137032	Valve, check DN32 DIN PN 16 w/hand wheel, threaded BSP	Other dimensions available on request (DN20-50)
116-137530	Valve, check DN80 DIN PN 16 w/hand wheel	Other dimensions available on request (DN25-100)
116-136425	Valve Check DN25 BSP	Other dimensions available on request (DN32-50)
116-136442	Valve foot DN40 PN25 Bronze	Other dimensions available on request (DN32-50)
116-117730	Valve pressure reducing DN80	Other dimensions available on request (DN40-100)
116-115680	Valve, pump around DN80	Available with different set pressures. Other dimensions available on request (DN40-50)



Valves and accessories (cont.)

Part number	Name	Description
116-105026	Valve Ball DN25 EL 230AC	Other dimensions available on request (DN32-50)
116-115025	Valve, Safety, DN25 BSP	Available with different set pressures. Other dimensions available on request (DN32-50)
116-104020	Valve, Hydrant DN 50 90°, PN 16	
116-901130	Valve control cabinet for motor operated valve	

Strainers

Part number	Name	Description
116-170140	Strainer DN40 BSPF 320 microns	Other dimensions available on request (DN25-50)
116-170540	Strainer "Y" DN100 FL 320 microns	Other dimensions available on request (DN50-100)
116-170340	Strainer "Y" DN100 FL 1000 microns	Other dimensions available on request

Orifice

Part number	Name	Description
116-196550	Orifice DN50 DIN PN16 AISI 316	Other dimensions available on request (DN25-150)

Pumps and accessories

Part number	Name	Description
116-175366	Water pump 380-415 AC/50Hz/18,50 kW	Other sizes available on request (1,50 - 37,00 kW)
116-175832	Water pump 380-480 AC/60HZ/4,00 kW	Other sizes available on request (1,50 - 37,00 kW)
116-175175	Water pump 690 AC/60HZ/30,00 kW	Other sizes available on request (1,50 - 37,00 kW)
116-176514	Foam pump 380-415 AC/50HZ/1.50 kW	Other sizes available on request (1,10 - 18,50 kW)
116-176012	Foam pump 380-480 AC/60HZ/2.20 kW	Other sizes available on request (1,10 - 18,50 kW)
116-176312	Foam pump 690 AC/60HZ/2.20 kW	Other sizes available on request (1,10 - 18,50 kW)
116-175932	Coupling for pump. 1 1/4" BSP	
116-175950	Coupling for pump. 2" BSP	
116-902600	Third party approval pump	Third party inspection of pumps for following Class Societies: DNV-GL, LRS, ABS, BV, RS. Other Class Societies on request.
116-902600.GP	Factory test certificate pump	

Pumps and accessories (cont.)

Part number	Name	Description
116-175994	Pump Self Suction Aspirator 700 NI/min. Air Driven	Also available with with capacity 300 and 500 NI/min
116-902400.KIT	Pump start cabinet DOL 220-690 VAC	50-60 Hz Main / Emergency supply. Options and accessories on request.
116-902430.KIT	Pump starter SOFT 230-440 VAC	50-60 Hz Main / Emergency supply. Options and accessories on request.
116-902440.KIT	Pump starter SOFT 690 VAC	50-60 Hz Main / Emergency supply. Options and accessories on request.
116-902460.KIT	Pump starter DOL M 220-690 VAC	50-60 Hz Main supply. Options and accessories on request.
116-902480.KIT	Power distribution cabinet	Options and accessories on request.
116-902490	Change over unit 25 A 230-690	

Tanks, pressure vessels and accessories

Part number	Name	Description
116-169500	Transparent Tank 500 l Ø 750 mm X 1290 mm	Other volumes on request (100 - 1000 l)
116-169660	Transparent tank 1600 l with steel frame	
116-166400	GRP Tank 4000 l Ø 1600 mm x 2280 mm	Other volumes on request (2500 - 5000 l)
116-168320	Pressure Vessel - Stainless Steel 210 litre Horizontal	Other volumes on request (340 - 590 l)
116-902620	Third party approval pressure vessel	Third party inspection of pressure vessel for following Class Societies: DNV-GL, LRS, ABS. Other Class Societies on request.
116-168470	Pressure Vessel - Carbon Steel 710 litre / OD 800 mm PN16	DnV approval included.
116-148550	Level indicator PN10 acrylic tube for GRP tank	
116-148610	Level indicator for pressure vessel c/c 500 mm	
116-148620	Level indicator for pressure vessel c/c 1000 mm	
116-903140	Cylinder N2 40L, El/Pneumatic	
116-903040	Cylinder N2 40L, Pneumatic	
116-117025	Valve, Nitrogen pressure regulator, 1"	
116-933002	Manifold, Nitrogen, 1/2", for 2 Cylinders	



PRODUCTS 2016

Fire suppression systems
Foam equipment

Foam equipment

Part number	Name	Description
116-500450	AFFF 1% foam liquid in 200 l drum.	
116-500452	AFFF 1% foam liquid in 25 l can.	
116-500470	Alcohol resistand foam liquid 3% in 200 l drum	
116-500472	Alcohol resistand foam liquid 3% in 25 l can	
116-504424	Foam proportioner DN100	Mixing percentage: 1% or 3%. Capacity: 1200-4000 l/min. Price on request for other dimensions (DN40-150)
116-504508	Foam inductor 3" - variable flow.	Mixing percentage 1%. Capacity 140-1400 l/min
116-506610	Foam cabinet with branch pipe	Foam cabinet including self aspirating portable branch pipe, 2 x 15 m hose, 25 l AFFF1% foam liquid.
116-173080	Foam monitor manual JET/FOG - DN80	Capacity up to 3700 l/min. Other capacities (6000 - 11 700 l/min) available on request.
116-173100	Foam monitor electric remote JET/FOG - DN100	
116-502394	Joy stick panel for control of foam monitors, portable	
116-502396	Joy stick panel for control of foam monitors, flush mounting	
116-502385	Foam monitor control cabinet	

Miscellaneous

Part number	Name	Description
116-138560	Manual release button, Local release.	
116-138567	Manual remote release station	Control Station Local Start/Stop, IP66, Stainless steel.
116-139603	Alarm, Audible/Visual 105 dB / 24 VDC	Other sounds levels (112 - 121 dB) on request
116-139602	Electronic alarm siren with flash light	
116-148355	Level Switch with float "Mobrey", horizontal installation	
116-234950	Optical smoke detector (conventional)	IMO approved. Including backbox and base
116-145160	Pressure gauge 0 - 25 bar. 63 mm	
116-145365	Pressure gauge 0 - 25 bar, 100 mm, 1/2" BSP	
116-146503	Transmitter, System pressure 0-25 Bar, 4-20 mA	
116-146507	Transmitter, System pressure 0-25 Bar, 0-10V	

K-5 Wet chemical system

For DFF protection

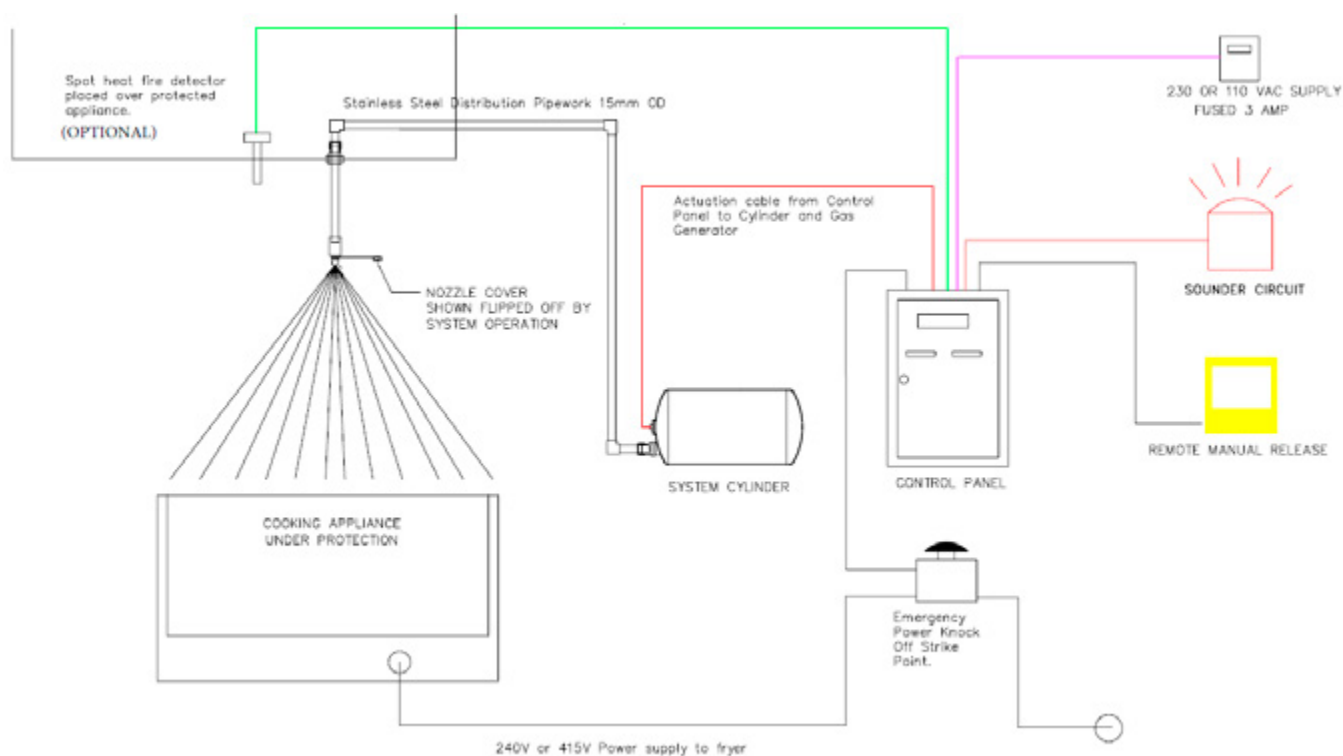
K-5 wet chemical system is an effective and reliable fire suppression system designed to extinguish fires in deep fat fryers quickly and effectively. The wet chemical agent has been specially formulated to suppress fires in cooking oils and grease, and prevents re-ignition by forming a thick soapy vapour barrier between the surface of the fuel and the atmosphere. The wet chemical agent does not damage surrounding work surfaces, is not toxic or harmful and is easy to wash away after discharge, using proprietary cleaning products.

K-5 wet chemical system is activated by a point heat detector placed directly over the protected appliance or in the extract air flow above that appliance. The K-5 system can also be operated manually by a button, or directly from the control panel. The agent is deployed through a single nozzle located directly above the protected appliance.

The gas required to pressurize the storage cylinder is produced in a controlled manner, from a solid propellant gas generator. The cylinder and gas generator remain at zero pressure until an electrical signal is received from the system control panel.

There are no moving parts in the system and consequently there is no scope for failure due to leaking propellant gas or from faulty valves, gauges or pumps. All external field circuits are monitored for both open and closed circuit conditions to assist in diagnostics.

K-5 wet chemical system has been tested in accordance with the requirements of International Standard ISO 15371:2009(E) and is holding type approval certificates from all the major classifications societies as well as valid MED certificate.



Part number	Name	Description
116-189027	Complete K-5 wet chemical system	Complete wet chemical system for deep fat fryer protection. 5 l wet chemical agent, 1pc. Cylinder, 1pc. NFS4 control panel, 1pc. test unit, 1 pc NFS N8 nozzle, 1 pc. manual release button, 1 pc. Sounder/beacon, pipe fittings included.

Dry chemical powder system

For bunkering stations

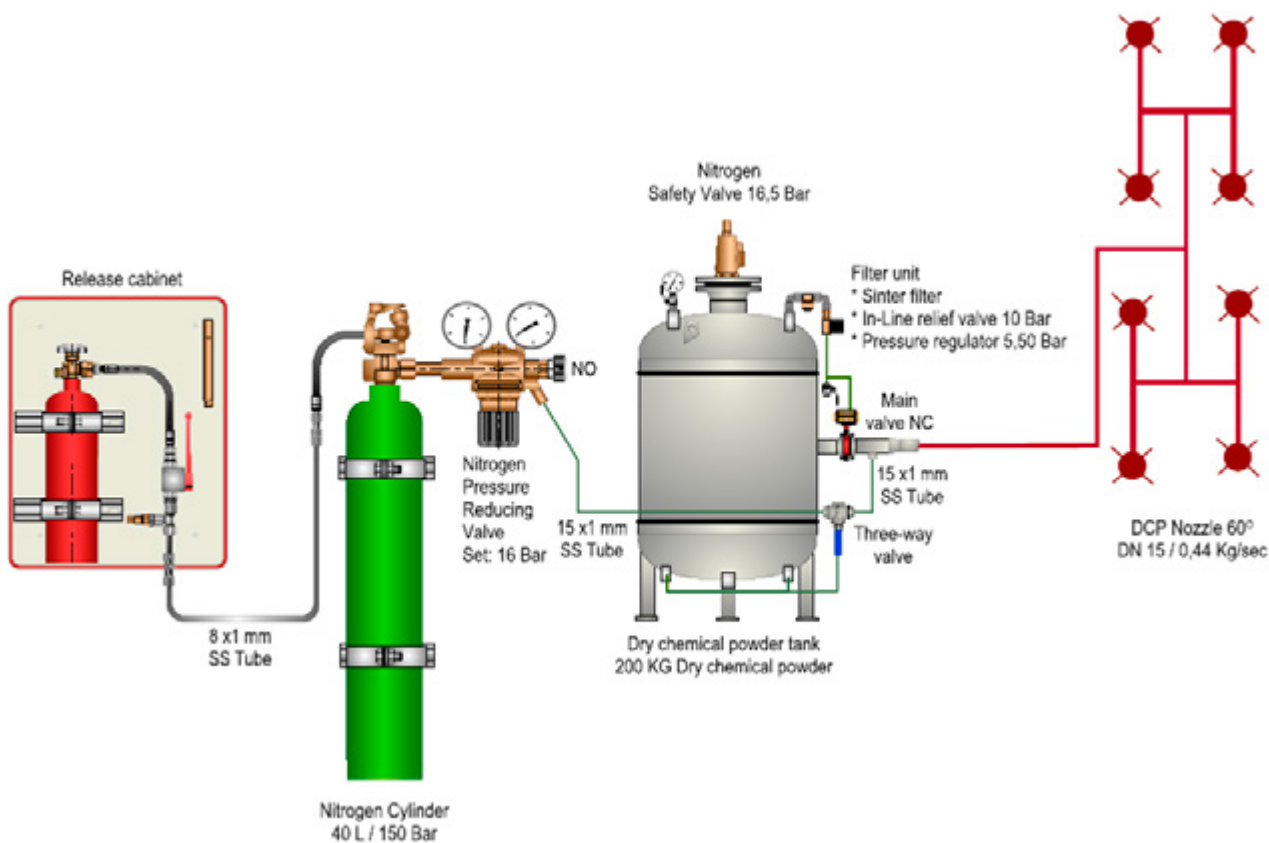
Autronica Dry Chemical Powder System is a fire extinguishing system especially designed for bunkering stations. The system is able to break the chemical reactions during the combustion process. This makes Autronica Dry Chemical Powder System highly effective by extinguishing the flames almost immediately.

The system is non-toxic and harmless to people and the environment.

The powder is composed by very small particles (potassium bicarbonate) with added particulate material supplemented by special treatment to provide resistance to packing, caking and the proper flow capabilities.

The powder is stored in a tank at atmospheric pressure. Upon activation, the system is pressurized by nitrogen through a pressure regulator in order to give the best control of the discharge and ensure a steady discharge rate through the whole discharge period. The powder is then discharged through a distribution system onto or into the protected item/area.

The system holds DNV type-approval, ensuring compliance with IMO MSC.285(86).



Part number	Name	Description
116-610259	Complete DCP system	Complete dry chemical powder system for bunkering station. 200 kg Furex-k extinguishing agent, 1pc. pressure tank with DnV approval, nitrogen pressurization system, 8 pcs. nozzles, hoses and instruction sign included.

CO₂ system

For galley duct protection

Autronica's CO₂ system is specifically designed for the protection of one or more galley ducts. The system is designed to quickly achieve the necessary CO₂ concentration to extinguish a fire inside a galley duct.

The CO₂ cylinder is manufactured according to European Standards and it is located inside a CO₂ cabinet, usually placed close to the protected object. A number of CO₂ nozzles are installed inside the galley duct to achieve an evenly distribution of the extinguishing gas. An audible alarm is installed inside the protected area warning the personnel to evacuate upon activation of the system.

CO₂ systems for galley duct protection are designed to be rapid and simple to operate.



Part number	Name	Description
116-301501	Complete CO ₂ galley duct system	Complete system with the CO ₂ cylinder installed into a GRP cabinet. The cabinet is fitted with 3 pcs. limit switches on the door for start of alarm siren, stop of ventilation fan and damper closing and CO ₂ cylinder, 9 l / 6 Kg CO ₂ . 1pc. nozzle, alarm, warning and instruction sign included.



PRODUCTS 2016

Fire suppression systems
CO2 system

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Our mission is clear,
to make the world a safer place to live in. We know how important this task is, and this drives us to constantly develop
smarter solutions.

Our pride and driving force are anchored in saving as many lives as possible, in protecting the environment and
in securing property around us. In many cases, the consequences of a fire are enormous, and we have undertaken
to understand how they occur, develop and can be fought. Our solutions must discover potential hazards in our
surroundings as early as possible, without causing false alarms and uncertainty. This is a delicate balance, and our
technology must be equally optimised in large cruise ships, in nuclear power stations and on oil platforms, as in
kindergartens.

A masterly exercise in which we place all our honour.
And in this way, we create the safest and most reliable fire and gas safety products in the world.

Protecting life, environment, and property

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