VID FIREKILL

LOW PRESSURE WATERMIST

CATALOGUE

TABLE OF CONTENT

1 ORDER FORM.

Orders are sent to the closest sales office by e-mail or fax. Find your nearest office on our web page WWW.VID.EU
The order should minimum contain:

- Costumer name, Costumer order number, Date, VID FIRE-KILL order code, Quantity, RAL colour.

1.1 MODEL OH AUTOMATIC NOZZLES

All Model OH nozzles should be ordered with the following code:

S&O no. + NRT no. + Thread no. + RAL no. + Plate no. = [XXXXX] + [YYYY] + [ZZZ] + [QQQQ] + [UU]

S&O no. is the different products sales and order number
The sales & order number for each product can be found below in the pricelist.

NRT no. is Nominal release temperature number:

Nominal release temperatures	57 °C	68 °C	79 °C	93 °C	141 °C
NRT No.	0057	0068	0079	0093	0141

Thread no. is the thread type and size:

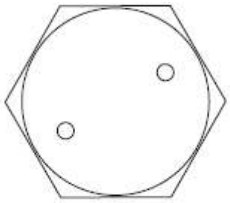
Thread type	½" BSP	½" BSP-T	½" NPT
NRT No.	501	502	503

RAL no. is the Plate finish RAL code number:

RAL Colour	Chrome	Pure White	Jet Black	Pure Red	Other RAL colours can be found on:
RAL No.	0000	9010	9005	3028	WWW.RALCOLOR.COM

Plate no. is plate type:
Type 20 is standard.

No: 20



1.2 ALL OTHER PRODUCTS

All other product should be ordered with the following code:

S&O no. + Thread no. + RAL no = [XXXX] + [YYY] + [ZZZZ]

S&O no. is the different products sales and order number
The sales & order number for each product can be found below in the pricelist.

Thread no. is the thread type and size:
Some nozzle may not have all threads available.

Thread type	½" BSP	½" BSP-T	½" NPT	3/8" BSP	1" BSP	1" NPT	M8x1mm	M10x1mm
NRT No.	501	502	503	381	101	103	810	110

RAL no. is the Plate finish RAL code number:
Some nozzle may not have the possibility to be painted.

RAL Colour	Chrome	Pure White	Jet Black	Pure Red	Other RAL colours can be found on:
RAL No.	0000	9010	9005	3028	WWW.RALCOLOR.COM

1.3 LAND BASED APPLICATIONS

Our range of products for land based application, both building and industrial is holding a range of approval, either FM or third party witness by a notified body or by insurers. In addition, some of the products has been developed for specific project where the full scale fire test has been witnessed by the customer. All fire and component testing is carried out in an ISO 17025 accredited laboratory.

Application	Typical test protocols
Apartments, Atriums, Churches, Concealed spaces, Gymnasiums, Hospitals, Hotel rooms, Institutions, Kitchens, Libraries, Meeting rooms in convention, centres and hotels, Metalworking shops with non-hydraulic cutting operations, Mineral processing such as: glass, cement, ore treating, gypsum processing, etc., Museums, Nursing or convalescent homes, Offices, Residential areas, Restaurant seating areas, Schools and universities classrooms, Unused attics and such applications.	FM 5560:2012, Appendix G VdS Fire test protocol for protection of office spaces and accommodation areas with watermist sidewall nozzles, 04/2016
Data centre above raised floor	FM5560:2016, Appendix M
Data centre below raised floor	FM5560:2016, Appendix N
Machinery spaces and turbine enclosures above 260 m^3	FM5560:2016, Appendix E and F
Machinery spaces and turbine enclosures below 260 m^3	FM5560:2016, Appendix C
Local application fire-fighting systems	FM5560:2016, Appendix I
Non storage occupancy HC2 and HC3	FM5560:2021 Appendix P
Parking garage (OH2)	EN14972:2020 Part 5 / VdS-OH2(Parking)_en_V1
Small storage (OH3) surrounded by OH1	EN14972:2020 Part 2 / VdS-OH3_de_V1_29.09.2011
EN 14972:2020 Fire test protocol for Sidewall Sprinkler systems OH1	EN14972:2020 Part A
Cable tunnel	EN14972:2020 Part 11
Residential and domestic systems	EN14972:2020 Part 17 / BS 8458:2015
Atriums	EN14972:2020 Part 10 / DFL TM 70111-04
Conveyors	DFL TM 180719-1289-4
Special industrial high risk applications	DFL test method 170325-1275-1 part 1, 2, 4, 5 and 8.

1.4 MARITIME APPLICATIONS

Components in fire protection system installed on IMO ships should be tested in accordance with IMO (International Maritime Organization) component and fire test standards and should be approved by a classification company.
International Maritime Organization (IMO) Standards IMO component and fire test standards for watermist systems cover systems for all applications on ships. Below is described which application onboard a ship is covered by the different standards:

Application	Newest standard revision	Older standard	Entering date for latest revision.	Entering date for latest revision.
SPRINKLER SYSTEMS EQUIVALENT TO THAT REFERRED TO IN SOLAS REGULATION II-2/12	IMO MSC 265(84)	IMO A800(19)	9 May 2008.	Existing type approvals issued to confirm compliance of equivalent sprinkler systems with the Revised Guidelines, adopted by resolution A.800(19), should remain valid latest until 6 years after 9 May 2008.
Machinery spaces category A and cargo pump-rooms including bilge areas.	MSC/Circ. 1165 amended by MSC.1/Circular.1237 MSC.1/Circular.1269 MSC.1/Circular.1386	MSC/Circ. 668/728	10 June 2005 30 October 2007 3 June 2008 10 December 2010	Test approvals already conducted in accordance with guidelines contained in MSC/Circ.668, as amended by MSC/Circ.728, should remain valid until 5 years after 10 June 2005.
Local application fire-fighting systems for use in category A machinery spaces.	MSC.1/Circ. 1387	MSC/Circ. 913	10 Dec 2010.	MSC.1/Circ. 1387 supersedes MSC/Circ.913 from 10 Dec 2010.
RO-RO spaces and special category spaces.	MSC.1/Circ. 1430 Rev. 1	MSC.1/Circ. 1430	7 December 2018.	MSC.1/Circ. 1430 Rev. 1 supersedes MSC.1/Circ. 1430 from 1 January 2021.
Galleys	ISO 15371:2009			
Galley ducts	ISO 15371:2009			
Cabin balconies	MSC.1/Circ. 1268			Fixed pressure water-spraying and water-based fire-extinguishing systems for cabin balconies on passenger ships for systems to be installed on or after 1 July 2008.

2 AUTOMATIC LOW-PRESSURE WATERMIST NOZZLES FOR WET PIPE SYSTEMS AND RELATED PRODUCTS.

All Model OH nozzles are concealed nozzles to be installed with the nozzle plate flush with the ceiling surface and fit in ø50-ø55mm ceiling holes using the Model OH-S36 nozzle spanner. Model OH-rosettes should be utilized as well.
Model OH nozzles are as standard available with the cover plate finish in Chrome or RAL 9010 but can be supplied in any RAL colour or metal plating's on request. Model OH nozzles are all tested and approved to the latest land and maritime standards.

2.1 AUTOMATIC LOW-PRESSURE WATERMIST NOZZLES TYPE OH.

2.1.1 Nozzles tested to FM protocols:

Nozzle version		OH-OS	OH-VSO	OH-DC1	OH-DC2	OH-PX2
Applications Land		Apartments, Atriums, Churches, Concealed spaces, Gymnasiums, Hospitals, Hotel rooms, Institutions, Kitchens, Libraries, Meeting rooms in convention, centres and hotels, Metalworking shops with non-hydraulic cutting operations, Mineral processing such as: glass, cement, ore treating, gypsum processing, etc., Museums, Nursing or convalescent homes, Offices, Residential areas, Restaurant seating areas, Schools and universities classrooms, Unused attics and such applications.		Data Processing Equipment Rooms/Halls Above Raised Floors	Data Processing Equipment Rooms/Halls Below Raised Floors	Non-storage occupancy within hazard category HC1, HC-2 and HC-3
Tested to		FM5560:2012 Appendix G		FM5560:2016 Appendix M	FM5560:2016 Appendix N	FM5560:2021 Appendix P
Approval		FM		FM	FM	IBS
Risk *land*	NFPA 13 & NFPA 750	Light Hazard (LH)*				
	CEA 4001 / EN12845 & EN 14972:2020	Light Hazard (LH) & Ordinary Hazard, group 1 (OH1)*				
	FM5560 "HC1" & FM DS no. 3-26 & 4-2	HC-1*				
	BS8458:2015 and EN 14972:2020					
	FM5560 "HC2/3" & FM DS no. 3-26 & 4-2					Non-storage occupancy
	FM5560 Data Centre & FM DS no. 5-32			Data Centres and Related Facilities	Data Centres and Related Facilities	

*exclusive high rack libraries, facilities with storage of electronics and plastic media, Hospital laboratories, Facilities with operation of flammable and hydraulic liquids.
**only specific applications.

2.1.2 Nozzles tested to EN 14972:2020

Nozzle version		OH-SW	OH-SW2	OH-SW4	OH-UPR	OH-DR1	OH-PX2
Applications Land		Apartments, Atriums, Churches, Concealed spaces, Gymnasiums, Hospitals, Hotel rooms, Institutions, Kitchens, Libraries, Meeting rooms in convention, centres and hotels, Metalworking shops with non-hydraulic cutting operations, Mineral processing such as: glass, cement, ore treating, gypsum processing, etc., Museums, Nursing or convalescent homes, Offices, Residential areas, Restaurant seating areas, Schools and universities classrooms, Unused attics, and such applications.		Offices, Public areas of low fire load, hotel rooms, rooms in hospitals, care homes, schools, flats, accommodation areas as well as any other comparable risk using CLT/BLC construction.	Fully enclosed and underground garage	Residential and domestic room up to 50 m^2	OH-3 sales, storage and technology areas enclosed by OH-1 areas
Tested to		DFL80728-SW designed according to EN 14972, annex A.	VdS Fire test protocol for Sidewall Sprinkler systems, Protection of Office Spaces and Accommodation Areas with Watermist Sidewall Sprinklers and EN 14972:2020 Part 1 Appendix A	Effectis test specification for REAL FIRE TESTS WITH AUTOMATIC EXTINGUISHING SYSTEM ON CLT/BLC SCALE 1 MODEL	EN 14972 Part 5 Fire test protocol for car park garages – Revision by Vds with track changes	BS8458:2015 and EN14972:2020 Part 17	VdS-OH3_de_ V1_29.09.2011 EN 14972:2020 Part 5
Approval		DNVGL Witness	IBS		DNVGL Witness	DNVGL Witness	DNVGL Witness
Risk *land*	NFPA 13 & NFPA 750	Light Hazard (LH)*					
	CEA 4001 / EN12845 & CEN/TS14972	Light Hazard (LH) & Ordinary Hazard, group 1 (OH1)*			Ordinary Hazard, group 2 (OH2)**		
	FM5560 "HC1" & FM datasheet no. 3-26 & 4-2	HC-1*			HC-2**		
	BS8458:2015 and EN 14972:2020					Residential and domestic	
	VdS OH3 and+ EN 14972:2020						OH-3 sales, storage and technology areas enclosed by OH-1 areas
	FM5560 Data Centre & FM datasheet no. 5-32:2018						
	*exclusive high rack libraries, facilities with storage of electronics and plastic media, Hospital laboratories, Facilities with operation of flammable and hydraulic liquids. **only specific applications.						

2.1.3 Nozzles tested to VdS

Nozzle version		OH-OE137	OH-AC100		
Applications Land		Cellular offices and open plan offices, Areas with counters, Restaurants, and kitchens, rooms for data processing, public areas in buildings of low fire load, escape routes or other corridors, training classrooms, churches, museums. Areas of a size limited to ≤50 m2 and structurally separated in a fire-retardant manner. Storage rooms, libraries, filing rooms and archives, mechanical floors, as well further comparable risks	Hotel rooms, rooms in hospitals, care homes, senior citizens residences, flats, recreation areas, any other comparable risk.		
Tested to		VdS 3883-1en:2020-06(1)	VdS 3883-1en:2020-06(1)		
Approval		VdS Pending	VdS Pending		
Typical Risk land	NFPA 13 & NFPA 750	Light Hazard (LH) exclusive high rack libraries, facilities with storage of electronics and plastic media, Hospital laboratories, Facilities with operation of flammable and hydraulic liquids.			
	CEA 4001 / EN12845 & CEN/TS14972	Light Hazard (LH) & Ordinary Hazard, group 1 (OH1)*			

2.1.4 Nozzles tested to IMO standards:

Nozzle version	OH-L0	OH-L1	OH-L2	OH-SWC	OH-CA	OH-CA1	OH-CA2	OH-CO	OH-PX1	OH-PX2
Applications	(1) Control stations (6) Accommodation space minor fire risk (7) Accommodation spaces of moderate fire risk (8) Accommodation spaces of greater fire risk (9) Sanitary & similar spaces			(6) Accommodation space minor fire risk (7) Accommodation spaces of moderate fire risk (9) Sanitary & similar spaces				(2) Stairways (3) Corridors	(13) Store rooms, workshops, pantries (14) Other spaces in which flammable liquids are stored	Cabin balconies
Tested to	IMO MSC265 (84) for open spaces up to 2.5m ceiling. height	IMO MSC265 (84) for open spaces up to 2.5m ceiling. height	IMO MSC265 (84) for open spaces up to 5m ceiling. Height	IMO MSC265 (84) for cabins not larger than 4m x 4.5m.	IMO MSC265 (84) for cabins not larger than 5m x 4m. 2 Nozzles to be mounted.	IMO MSC265 (84) for cabins not larger than 4m x 3m.	IMO MSC265 (84) for cabins not larger than 5,5m x 4m.	IMO MSC265 (84) for corridors not wider than 1.5m.	IMO MSC265 (84) for shopping and storage areas up to 2.5m ceiling. height	IMO MSC.1/ Circ 1268
Approval	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B	DnV MED-B and UK MER-B

2.2 OH Nozzles

2.2.1 Model Fire-Kill™ OH-L0

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6 – 16 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 7.0 l/min/√bar
Installation height: Max. 2.5 m.
Nozzle spacing: Max. 2,5 m., 1,3 m. to walls
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B, TA and UK MER-B

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-L0	Chrome plated	OHL0-10038	OHAL0-20038
Model OH-L0	RAL 9010 (pure white)	OHL0-10039	OHAL0-20039
Model OH-L0	Other RAL colour	OHL0-10040	OHAL0-20040
Model OH-L0	Other RAL colour / printed / hidden screws	OHL0-10075	OHAL0-20075

2.2.2 Model Fire-Kill™ OH-L1

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6– 6 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 13.5 l/min/√bar
Installation height: Max. 2.5 m.
Nozzle spacing: Max. 4 m., 2 m. to walls
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP/BSP-T or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B, TA and UK MER-B A

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-L1	Chrome plated	OHL1-10001	OHAL1-20001
Model OH-L1	RAL 9010 (pure white)	OHL1-10002	OHAL1-20002
Model OH-L1	Other RAL colour	OHL1-10003	OHAL1-20003
Model OH-L1	Other RAL colour / printed / hidden screws	OHL1-10066	

2.2.3 Model Fire-Kill™ OH-L2

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6– 6 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 14.5 l/min/√bar
Installation height: Max. 5 m.
Nozzle spacing: Max. 4 m., 2 m. to walls
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B, TA and UK MER-B

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-L2	Chrome plated	OHL2-10004	OHAL2-20004
Model OH-L2	RAL 9010 (pure white)	OHL2-10005	OHAL2-20005
Model OH-L2	Other RAL colour	OHL2-10006	OHAL2-20006
Model OH-L2	Other RAL colour / printed / hidden screws	OHL2-10067	

2.2.4 Model FIRE-KILL™ OH-PX1

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 9-16 bar
Drop size Dv90: < 300µm
K-factor: 23.0 l/min/√bar
Installation height: Max. 2.5 m
Nozzle spacing: Max. 4 m., 2 m. to walls
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B, TA and UK MER-B

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-PX1	Chrome plated	OHPX1-10007	OHAPX1-20007
Model OH-PX1	RAL 9010 (pure white)	OHPX1-10008	OHAPX1-20008
Model OH-PX1	Other RAL colour	OHPX1-10009	OHAPX1-20009
Model OH-PX1	Other RAL colour / printed / hidden screws	OHPX1-10068	

2.2.5 Model FIREKILL™ OH-PX2 Land OH3

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressures: 7 – 16 bars (tested at 7 bar)
Drop size Dv90: < 300µm
K-factor: 19.0 l/min/√bar
Max. Ceiling height: Max. 4.0 m.
Nozzle coverage: 3,5m x 3.5m, 1,75m to corners
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNVGL Witness Land and IBS approval

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-PX2	Chrome plated	OHPX2-10055	
Model OH-PX2	RAL 9010 (pure white)	OHPX2-10056	
Model OH-PX2	Other RAL colour	OHPX2-10057	
Model OH-PX2	Other RAL colour / printed / hidden screws	OHPX2-10078	

2.2.6 Model FIREKILL™ OH-PX2 IMO Balcony

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressures: 6 – 16 bars (tested at 7 bar)
Drop size Dv90: < 300µm
K-factor: 19.0 l/min/√bar
Max. Ceiling height: Max. 2.5 m.
Nozzle coverage: 3,0m x 2.0m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B and UK MER-B

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-PX2	Chrome plated	OHPX2-10055	
Model OH-PX2	RAL 9010 (pure white)	OHPX2-10056	
Model OH-PX2	Other RAL colour	OHPX2-10057	
Model OH-PX2	Other RAL colour / printed / hidden screws	OHPX2-10078	

2.2.7 Model FIREKILL™ OH-PX2 CEN

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressures: 8 – 16 bars (tested at 7 bar)
Drop size Dv90: < 300µm
K-factor: 19.0 l/min/√bar
Max. Ceiling height: Max. 7,6 m.
Nozzle coverage: 3,6m x 3.6m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: IBS

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-PX2	Chrome plated	OHPX2-10055	
Model OH-PX2	RAL 9010 (pure white)	OHPX2-10056	
Model OH-PX2	Other RAL colour	OHPX2-10057	
Model OH-PX2	Other RAL colour / printed / hidden screws	OHPX2-10078	

2.2.8 Model FIRE-KILL™ OH-CO

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6–16 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 15.5 l/min/√bar
Installation height: Max. 2.5 m.
Nozzle spacing: Max. 3m x 1.5m.
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV & LR MED-B and TA

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-CO	Chrome plated	OHCO-10013	OHACO-20013
Model OH-CO	RAL 9010 (pure white)	OHCO-10014	OHACO-20014
Model OH-CO	Other RAL colour	OHCO-10015	OHACO-20015
Model OH-CO	Other RAL colour / printed / hidden screws	OHCO-10070	

2.2.9 Model FIRE-KILL™ OH-VSO

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8 – 16 bars (tested at 8 bar)
Drop size Dv90: < 300µm
K-factor: 16.7 l/min/√bar
Installation height: Max. 5 m.
Nozzle spacing: Max. 4.5 m., 2.25 m. to walls
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: FM and IBS Approved

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-VSO	Chrome plated	OHVSO-10029	
Model OH-VSO	RAL 9010 (pure white)	OHVSO-10030	
Model OH-VSO	Other RAL colour	OHVSO-10031	
Model OH-VSO	Other RAL colour / printed / hidden screws	OHVSO-10072	

2.2.10 Model FIRE-KILL™ OH-UPR

Type: Upright
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6 – 16 bars (tested at 8 bar)
Drop size Dv90: < 300µm
K-factor: 19.4 l/min/√bar
Installation height: Max. 3 m.
Nozzle spacing: Max. 4.0 m., 2.00 m. to walls
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DnVGL Witness and IBS approval

3rd party witness by DNV·GL

IBS Institut für Brandschutztechnik und Sicherheitsforschung

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-UPR	Chrome plated	OHUPR-10041	
Model OH-UPR	RAL 9010 (pure white)	OHUPR-10042	
Model OH-UPR	Other RAL colour	OHUPR-10043	
Model OH-UPR	Other RAL colour / printed / hidden screws	OHUPR-10076	

2.2.11 Model FIRE-KILL™ OH-SW

Type: Side-wall
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressures: 6 – 16 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 12.5 l/min/√bar
Max. Ceiling height: Max. 2.5 m.
Installation height below ceiling: 0.10 – 0,20 meters
Nozzle coverage: 3.7m x 3.7m, 1.85m to corners
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNVGL Witness

3rd party witness by DNV·GL

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-SW	Chrome plated	OHSW-10019	
Model OH-SW	RAL 9010 (pure white)	OHSW-10020	
Model OH-SW	Other RAL colour	OHSW-10021	
Model OH-SW	Other RAL colour / printed / hidden screws	OHSW-10071	

2.2.12 Model FIRE-KILL™ OH-SW2

Type: Sidewall
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8 – 16 bars (Tested at 8 bar)
Drop size Dv90: < 300µm
K-factor: 25,50 l/min/√bar
Installation height: Max. 5.0 m.
Nozzle spacing: 6,00 m x 6,00 m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DnVGL and IBS approval

3rd party witness by DNV·GL

IBS Institut für Brandschutztechnik und Sicherheitsforschung

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-SW2	Chrome plated	OHSW2-10081	
Model OH-SW2	RAL 9010 (pure white)	OHSW2-10082	
Model OH-SW2	Other RAL colour	OHSW2-10083	
Model OH-SW2	Other RAL colour / printed / hidden screws	OHSW2-10083	

2.2.13 Model FIRE-KILL™ OH-SW4

Type: Sidewall
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8 – 16 bars (Tested at 8 bar)
Drop size Dv90: < 300µm
K-factor: 25,50 l/min/√bar
Installation height: 2,00 m to 3.10 m.
Nozzle spacing: 5,40 m x 5,40 m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Test lab: Effectis

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-SW3	Chrome plated	OHSW3-12017	
Model OH-SW3	RAL 9010 (pure white)	OHSW3-12018	
Model OH-SW3	Other RAL colour	OHSW3-12019	
Model OH-SW3	Other RAL colour / printed / hidden screws	OHSW3-12020	

2.2.14 Model FIRE-KILL™ OH-SWC

Type: Side-wall
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressures: 6– 6 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 23.0 l/min/√bar
Max. Ceiling height: Max. 2.5 m.
Installation height below ceiling: 0.10 – 0,20 meters
Nozzle coverage: 4m x 4.5m, 2m to corners
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B, TA and UK MER-B

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-SWC	Chrome plated	OHSWC-10010	OHASWC-20010
Model OH-SWC	RAL 9010 (pure white)	OHSWC-10011	OHASWC-20011
Model OH-SWC	Other RAL colour	OHSWC-10012	OHASWC-20012
Model OH-SWC	Other RAL colour / printed / hidden screws	OHSWC-10069	

2.2.15 Model FIRE-KILL™ OH-CA

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6 – 16 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 10.0 l/min/√bar
Installation height: Max. 2.5 m.
Nozzle spacing: OH1 area 4,0m x 5,0 m 2 nozzle
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B, TA and UK MER-B

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-CA	Chrome plated	OHCA-10032	OHACA-20032
Model OH-CA	RAL 9010 (pure white)	OHCA-10033	OHACA-20033
Model OH-CA	Other RAL colour / printed	OHCA-10034	OHACA-20034
Model OH-CA	Other RAL colour / printed / printed screws	OHCA-10073	

2.2.16 Model FIRE-KILL™ OH-CA1

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6 – 16 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 13.0 l/min/√bar
Installation height: Max. 2.5 m.
Nozzle spacing: OH1 area 12 m2
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B, TA and UK MER-B

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-CA1	Chrome plated	OHCA1-10035	OHACA1-20035
Model OH-CA1	RAL 9010 (pure white)	OHCA1-10036	OHACA1-20036
Model OH-CA1	Other RAL colour	OHCA1-10037	OHACA1-20037
Model OH-CA1	Other RAL colour / printed / hidden screws	OHCA1-10074	

2.2.17 Model FIRE-KILL™ OH-CA2

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6 – 16 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 18.0 l/min/√bar
Installation height: Max. 2.5 m.
Nozzle spacing: OH1 area 22 m2
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNV MED-B, TA and UK MER-B

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	Perforated
Model OH-CA1	Chrome plated	OHCA2-12001	OHACA2-22001
Model OH-CA1	RAL 9010 (pure white)	OHCA2-12002	OHACA2-22002
Model OH-CA1	Other RAL colour	OHCA2-12003	OHACA2-22003
Model OH-CA1	Other RAL colour / printed / hidden screws	OHCA2-12004	

2.2.18 Model FIRE-KILL™ OH-DR1

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 5 – 16 bars (tested at 5 bar)
Drop size Dv90: < 300µm
K-factor: 19.0 l/min/√bar
Installation height: Max. 3.5 m.
Nozzle spacing: 5,00 m x 5,00 m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: DNVGL Witness

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-DR1	Chrome plated	OHDR1-10052	
Model OH-DR1	RAL 9010 (pure white)	OHDR1-10053	
Model OH-DR1	Other RAL colour / printed	OHDR1-10054	
Model OH-DR1	Other RAL colour / printed / hidden screws	OHDR1-10077	

2.2.19 Model FIRE-KILL™ OH-DC1

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8 – 16 bars (Tested at 8 bar)
Drop size Dv90: < 300µm
K-factor: 13.4 l/min/√bar
Installation height: Max. 5.0 m.
Nozzle spacing: 3,60 m x 3,60 m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: FM

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-DC1	Chrome plated	OHDC1-10058	
Model OH-DC1	RAL 9010 (pure white)	OHDC1-10059	
Model OH-DC1	Other RAL colour / printed	OHDC1-10060	
Model OH-DC1	Other RAL colour / printed / hidden screws	OHDC1-10079	

2.2.20 Model FIRE-KILL™ OH-DC2

Type: Upright
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8 – 16 bars (Tested at 8 bar)
Drop size Dv90: < 300µm
K-factor: 13,85 l/min/√bar
Installation height: Max. 1.0 m.
Nozzle spacing: 3,60 m x 3,60 m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: FM

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-DC2	Chrome plated	OHDC2-10061	
Model OH-DC2	RAL 9010 (pure white)	OHDC2-10062	
Model OH-DC2	Other RAL colour / printed	OHDC2-10063	
Model OH-DC2	Other RAL colour / printed / hidden screws	OHDC2-10080	

2.2.21 Model FIRE-KILL™ OH-AC100

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8 – 16 bars (Tested at 8 bar)
Drop size Dv90: < 300µm
K-factor: 10.0 l/min/√bar
Installation height: Max. 4.0 m.
Nozzle spacing: 3,50 m x 3,50 m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: VdS Pending

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-AC100	Chrome plated	OHAC100-12027	
Model OH-AC100	RAL 9010 (pure white)	OHAC100-12028	
Model OH-AC100	Other RAL colour / printed	OHAC100-12029	
Model OH-AC100	Other RAL colour / printed / hidden screws	OHAC100-12030	

2.2.22 Model FIRE-KILL™ OH-OE137

Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8 – 16 bars (Tested at 8 bar)
Drop size Dv90: < 300µm
K-factor: 13.7 l/min/√bar
Installation height: Max. 4.0 m.
Nozzle spacing: 3,50 m x 3,50 m
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
Approval: VdS Pending

Product	Finish cover plate	Sales and order no:	
		Plain cover plate	
Model OH-OE137	Chrome plated	OHOE137-12023	
Model OH-OE137	RAL 9010 (pure white)	OHOE137-12024	
Model OH-OE137	Other RAL colour / printed	OHOE137-12025	
Model OH-OE137	Other RAL colour / printed / hidden screws	OHOE137-12026	

2.2.23 Model FIRE-KILL™ OH-Anti-Ligature Nozzle

FIREKILL™ Model OH Anti-Ligature Automatic Low Pressur Watermist nozzles are small semiconcealded nozzles made with tamper-resistant construction. FIREKILL™ OH Low Pressure Watermist Nozzles have been designed for use with concealed piping in institutional mental health occupancies, correctional facilities, or anywhere a likelihood of tampering with Low Pressure Watermist Nozzles by the occupants may exist.

The FIREKILL™ Model OH Anti-Ligature Low Pressure Watermist Nozzle assembly consists of the nozzzle body with cover plate and a 70 mm diameter thread-on rosette which should be fastened to the ceiling/wall with 4 screws to obtain even more security. The FIREKILL™ Model OH Low Pressure Watermist Nozzle and rosette have a polished chrome finish.
Tests simulating conditions of misuse demonstrate the fusible element assembly consistently breaks away when connected to a 10.6 kg weight for sidewall nozzles and 12 Kg dropped 200 mm for pendent mozzle.

The FIREKILL™ Model OH Anti-Ligature shall be installed together with the OH-ALRTH rosette. The nozzle shall be selcted based on the hazard category for the actual installation.

2.2.24 Model FIRE-KILL™ Start-up cost

Start-up cost for special paint and special foil is to cover the additional cost for small amount of non-standard powder for paint and graphical work and print start-up cost for the special foil.

Product	Finish cover plate	Sales and order no:
All model OH	Special colour	STRATUP-COLOR
All model OH	Special foil	STARTUP-FOIL

3 Open Low Pressure Water Mist Nozzles and Linear Nozzles for industrial applications.

3.1 Open Nozzles

Nozzle name	Model Fire-Kill™ K6			Model K7 Kattegat	Model LAK-7
Application	Machinery spaces and turbine enclosures and other such applications			Local application in Machinery spaces and turbine enclosures and other such applications	
Tested to	FM5560 Machinery spaces & turbine enclosures.	IMO MSC/Circ. 1165 - Total Flooding	IMO MSC/Circ. 1387 - Local Protection	IMO MSC/Circ. 1387 - Local Protection	FM5560:2016 Appendix I
Approvals	FM Approval	DNV TA+MED-B	DNV TA+MED-B	DnV TA + MED-B	FM Approval

Nozzle name	Model Hudson B1	Model Bengal B1	Model Biscay N-pipe K1	Model Tampa N-pipe F1
Application	Industrial and marine applications such as machinery spaces and turbine enclosures, process areas, production areas and more.			
Tested to	IMO MSC/Circ. 1165 - Bilge Protection.			
	1% AFFF after 7min	1% AFFF	Pure watermist	
Approvals	DNVGL MED	DNVGL MED	DNVGL TA+MED	DNVGL TA+MED

3.1.1 Model Fire-Kill™ K6

Model Fire-Kill™ K6 is an open robust water mist nozzles for industrial applications. It has been Factory Mutual tested and approved to the FM5560 test method for machinery spaces and turbine enclosures in a volume of 4610m3 and with a ceiling height of 12m. Further it has been tested and approved to the IMO1165 machinery space tests in volumes up to 5036m³ with 10m ceiling height.
It has also been tested and approved to the latest revision of IMO1387 (local protection) with the installation range of 0,75m to 11m above the risk area.
The Model Fire-Kill™ K6 is MED-B, UK-MER-B and TA approved by DNV to the mentioned test methods, as well as FM Approved.
The Model Fire-Kill™ K6 can be delivered with ordinary thread connections or special M10x1 thread for connection to smart pipe Model N-pipes. The nozzles can be delivered in many materials including brass, stainless steel and titanium. When supplied in stainless steel the nozzle is through DNV approved to be used in galvanized pipe systems.

Approval FM: FM Approved
Approval Full Flooding: DNV MED-B, TA and UK-MER-B
Type: Pendent installation
Materials: Naval Brass, stainless steel 316L, titanium grade 2.
Nozzle body finish: NiSn / natural
Connection/thread: ½" BSP-T, ½" NPT, M10x1mm
Drop size Dv90: < 300µm
Spray angle: 95 °
K-factor: 5.6 l/min/√bar

	FM5560	FM5560	FM5560	IMO1165	IMO1165	IMO1165
Minimum Water pressures	10,00bar	7,70 bar	7,70 bar	8,00 bar	8,00 bar	8,00 bar
Maximum enclosure height	5,00 m	8,00 m	12,00 m	5,00 m	10,00 m	10,00 m
Maximum enclosure volume	320 m³	800 m³	4610 m³	500 m³	3842 m³	5036 m³
Maximum nozzle spacing	4,00 m	3,30 m	3,00 m	4,00 m	3,00 m	3,00 m
N-pipe fit			Type FF		Type FF	Type FF

Product	Variant	Sales and order no:	Package size
Model K6	Material: Brass + NiSn	K6-10100	1
Model K6	Material: Stainless steel 316L	K6-10101	1
Model K6	Material: Titanium Grade 2	K6-10102	1

3.1.2 N-pipes for Model K6 nozzle

N-pipes are designed to save installation cost, time, and to reduce the risk of getting impurities into the system. N-pipes are 6m length stainless steel pipes with premade installation holes in the pipes according to the spacing of the different nozzle configurations.
For Full Flooding Systems the N-pipes should be ordered as Type FF, and for Local Protection systems they should be ordered as Type LP.

- For Type FF they come with two premade installation holes placed 3m apart and with 1.5m to each end. This ensures the spacing of 3m between all nozzles when more pipes are connected.
- For Type LP they come with four premade installation holes placed 1.5m apart and with 0.75m to each end. This ensures the spacing of 1.5m between all nozzles when more pipes are connected.

N-Pipes are installed for fire protection of process areas, machinery spaces, around turbines and other areas where simultaneous activation of multiple nozzles are required. N-pipes are supplied with open ends for press fittings.

General info:
Normal application: Full Flooding systems and Local Protection system
Materials: Stainless steel 316L
Connection/thread: Open ends for press fitting connection.
Water pressures: Maximum 16 bar.
Length: 6m
Pipe size: 28mm and 35mm. Other sizes can be supplied on request.
N-pipe types: Type LP, Type FF.
Approval: FM Approved as a part of Model FIRE-KILL™ K6 System.

Attention: The price below is exclusive nozzles.

Product	N-pipe type:	N-pipe size	Sales and order no:
N-pipe 6 meter	LP-28	28mm with open ends for press fittings	K6-Npipe-10105
N-pipe 6 meter	FF-28	28mm with open ends for press fittings	K6-Npipe-10106
N-pipe 6 meter	LP-35	35mm with open ends for press fittings	K6-Npipe-10107
N-pipe 6 meter	FF-35	35mm with open ends for press fittings	K6-Npipe-10108
N-pipe 6 meter	LP-S	Other sizes	K6-Npipe-10109
N-pipe 6 meter	FF-S	Other sizes	K6-Npipe-10110

3.1.3 Hudson & Bengal Type B1 - open full cone low pressure water mist nozzles.

Type Hudson & Bengal B1 open full cone water mist nozzles are robust small dimension nozzles for bilge protection and other such industrial applications. It has been tested and approved to the IMO 1165 bilge test.

Type: Horizontal installation
Normal application: Bilge Protection
Materials: Brass, stainless steel 316
Nozzle body finish: NiSn
Connection/thread: 3/8" BSP
Drop size Dv90: < 300µm

K-factor: 2.8 l/min/√bar
Installation height: 0.30 – 0.60 meters
Nozzle coverage: 1.5m x 4.0m
Spray angle: 95 °
Approval Full Flooding: DNV MED-B, TA and UK MER-B

	Model Hudson	Model Bengal
Minimum Water pressure	10,50bar	6,00 bar
AFFF Foam liquid	Start after 7 minutes	From system activation
Max height of bilge	1,00 m	1,10 m

Product	Variant	Sales and order no:
Type B1	Material: Brass + NiSn	Hud/Ben-B1-10111
Type B1	Material: Stainless steel 316L	Hud/Ben-B1-10112
Type B1	Material: Titanium Grade 2	Hud/Ben-B1-10113

3.1.4 K7 Kattegat - open full cone low pressure water mist nozzles.

Type K7 Kattegat open full cone water mist nozzles are robust small dimension nozzles for local application. It has been tested and approved to IMO MSC Circ. 1387.
The nozzle is holding DNV MED-B, Type approval and UK MER-B approvals.

Type: Horizontal installation
Normal application: Local application
Materials: Brass, stainless steel 316
Nozzle body finish: NiSn
Connection/thread: ½" BSP, ½" BSP-T and ½" NPT
Drop size Dv90: < 300µm

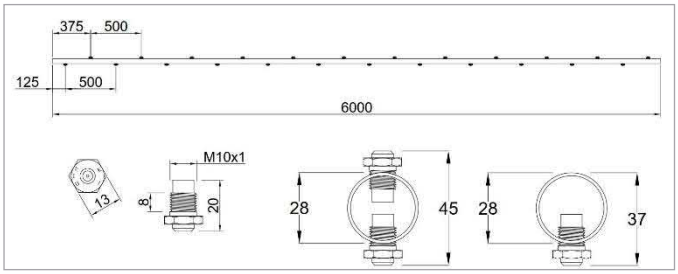
K-factor: 7.0 l/min/√bar
Nozzle coverage: 3.0m x 3.0m
Approval local application: DNV MED-B, TA and UK-MER-B

	1,00 m – 3,75 m above object	0,75 m – 9,25 m
Minimum Water pressures	2 bar	6,00 bar

Product	Variant	Sales and order no:
Type K7	Material: Brass + NiSn	K7-10103
Type K7	Material: Stainless steel 316L	K7-10104

3.1.5 Biscay Type N-pipe K1

Type Biscay N-pipe K1 are 6 meter length stainless steel 316L pipes with small robust nozzles integrated in the pipes. On one 6m pipe 24 nozzles are installed, 2 nozzles per 0.5meter. Every pair is positioned with 180 degree between them and in function they will spray water mist to both sides of the pipe. The pipes are installed in parallel lines with 1.7meter between them and throughout the full length of the area. The system has been tested and approved to the IMO 1165 bilge test without use of any foam enhancements. The Biscay type N-pipe K1 can be supplied in pipes sizes and with pipe ends in accordance to customer requirements.



As option the Type Biscay can be supplied in a special one spray version for installations which require only protection on one side of the pipe.

Type:	Horizontal installation	**Drop size DN_{90}:**	< 300 µm
Normal application:	Bilge Protection	**K-factor per 6m pipe:**	21.6 l/min/√bar
Pipe size:	Ø 28mm.	**K-factor per nozzle:**	0.9 l/min/√bar
Materials pipes:	Stainless steel 316L	**Installation height**:	0.37 – 0.45 m
Materials nozzles:	SS 303 / 304	**Bilge height (max.):**	0.75 m
Nozzle type:	K1 with M10 x 1mm connection	**Nozzle spacing on pipes:**	0.5 m x 1.7 m
Connection/thread:	Open end for press fittings.	**N-pipe spacing parallel:**	Max. 1.7 m
Water pressures:	11 – 16 bars (tested at 11 bars)	**6m pipe coverage:**	6m x 1.7m
Spray angle:	95 °	**Nozzles per 6m:**	24 nozzles, type K1
Approvals:	DNV MED-B, TA and UK MER-B		

Product	N-pipe type:	Variant	Sales and order no:
Biscaya type N-pipe K1 - 6 meter	28mm with open ends	2 side spray press pipe 28mm 6 meter pipe with 24 nozzles	Biscay-K1-10114
Biscaya type N-pipe K1 - 6 meter	Other pipe sizes	Special types	Biscay-K1-10116
Biscaya type N-pipe K1 - 6 meter	28 mm with open ends	1 side spray press pipe 28mm 6 meter pipe with 12nozzles	Biscay-K1-10123

Spares			**Sales and order no:**
K1 nozzle	NA	Spare nozzle Model K1	Biscay-K1-10125

3.1.6 LAK-7 - Open full cone low pressure water mist nozzles.

Type LAK-7 Kattegat open full cone water mist nozzles are robust small dimension nozzles for local application. It has been tested and approved pending to FM5560:2016 Appendix I Local Application.

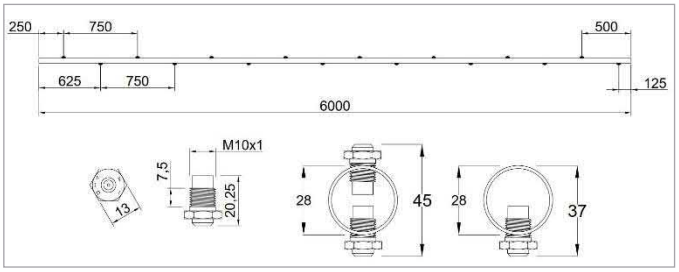
Type:	Horizontal installation
Normal application:	Local application
Materials:	Brass, stainless steel 316
Nozzle body finish:	NiSn
Connection/thread:	½" BSP, ½" BSP-T and ½" NPT
Drop size Dv90:	< 300µm
K-factor:	7.0 l/min/√bar
Nozzle coverage:	Depending on application
Approval local application:	FM

	Pool fires	Channel fires	Spray fires		
Minimum Water pressures	8 Bar	8 bar	8,9 bar		

Product	Variant	Sales and order no:
Type LAK-7	Material: Brass + NiSn	K7-10126
Type LAK-7	Material: Stainless steel 316L	K7-10127

3.1.7 Tampa Type N-pipe F1

Type Tampa N-pipe F1 are 6 meter length stainless steel 316L pipes with small robust nozzles integrated in the pipes. On one 6m pipe 16 nozzles are installed, 2 nozzles per 0.75meter. Every pair is positioned with 180 degree between them and in function they will spray water mist to both sides of the pipe. The pipes are installed in parallel lines with 1.75meter between them and throughout the full length of the area. The system has been tested and approved to the IMO 1165 bilge test without use of any foam enhancements. The Tampa type N-pipe F1 can be supplied in pipes sizes and with pipe ends in accordance to customer requirements.



As option the Type Tampa can be supplied in a special one spray version for installations which require only protection on one side of the pipe.

Type:	Horizontal installation	**Drop size DN_{90}:**	< 300 µm
Normal application:	Bilge Protection	**K-factor per 6m pipe:**	17.6 l/min/√bar
Pipe size:	Ø 28mm.	**K-factor per nozzle:**	1.1 l/min/√bar
Materials pipes:	Stainless steel 316L	**Installation height**:	0.35 – 0.37 m
Materials nozzles:	Brass + NiSn / SS 303	**Bilge height (max.):**	1.10 m
Nozzle type:	F1 with M10 x 1mm connection	**Nozzle spacing on pipes:**	0.75 m
Connection/thread:	Open end for press fittings.	**N-pipe spacing parallel:**	Max. 1.75 m
Water pressures:	11 – 16 bars (tested at 11 bars)	**6m pipe coverage:**	6m x 1.75m
Spray angle:	95 °	**Nozzles per 6m:**	16 nozzles, type F1
Approvals:	DNV MED-B, TA and UK MER-B		

Product	N-pipe type:	Variant	Sales and order no:
Tampa type N-pipe F1 - 6 meter	28mm with open ends	2 side spray press pipe 28mm 6 meter pipe with 24 nozzles	Tampa -F1-10117
Tampa type N-pipe F1 - 6 meter	Other pipe sizes	Special types	Tampa -F1-10119
Tampa type N-pipe F1 - 6 meter	28 mm with open ends	1 side spray press pipe 28mm 6 meter pipe with 12nozzles	Tampa -F1-10120

Spares			Sales and order no:
F1 nozzle	NA	Spare nozzle Model F1	Tampa -F1-10122

3.1.8 Model FIREKILL™ B1 - open full cone low pressure water mist nozzles.

Type B1 open full cone water mist nozzles are robust small dimension nozzles for various applications such as FM Small machinery space, semi-open transformers etc.

Type:	Horizontal installation
Normal application:	Various applications
Materials:	Brass, stainless steel 316
Nozzle body finish:	NiSn for brass
Connection/thread:	3/8" BSP
Drop size Dv90:	< 300µm
K-factor:	Depends on application
Installation height:	Depends on application
Nozzle coverage:	Depends on application
Spray angle:	95 °
Approval small machinery space:	B1-28 FM

Product	Variant	Sales and order no:
Type B1-20	Material: Brass + NiSn – Kv 2,0	B1-20-10130
Type B1-20	Material: Stainless steel 316L – Kv 2,0	B1-20-10131
Type B1-28	Material: Brass + NiSn – Kv 2,8	B1-28-10132
Type B1-28	Material: Stainless steel 316L – Kv 2,8	B1-28-10133

3.1.9 Model FIREKILL™ BM1 - open full cone low pressure water mist nozzles.

Type BM1 open full cone water mist nozzles are robust small dimension nozzles for various applications such as FM Small machinery space, semi-open transformers, infrastructure systems etc.

Type: Horizontal installation
Normal application: Various applications
Materials: Brass, stainless steel 316
Nozzle body finish: NiSn for brass
Connection/thread: M10
Drop size Dv90: < 300µm
K-factor: Depends on application
Installation height: Depends on application
Nozzle coverage: Depends on application
Spray angle: 95 °
Approval small machinery space: BM1-28 FM

Product	Variant	Sales and order no:
Type BM1-20	Material: Brass + NiSn – Kv 2,0	BM1-10290
Type BM1-20-SS	Material: Stainless steel 316L – Kv 2,0	BM1-10294
Type BM1-28	Material: Brass + NiSn – Kv 2,8	BM1-10292
Type BM1-28-SS	Material: Stainless steel 316L – Kv 2,8	BM1-10296
Type BM1-32	Material: Brass + NiSn – Kv 3,2	BM1-10291
Type BM1-32-SS	Material: Stainless steel 316L – Kv 3,2	BM1-10295
Type BM1-40	Material: Brass + NiSn – Kv 4,0	BM1-10293
Type BM1-40-SS	Material: Stainless steel 316L – Kv 4,0	BM1-10297

4 Nozzles and Systems for defined applications.

4.1 Application: Atriums, aula, halls, multiple seating areas etc.

Application:	Atriums, aula, halls, lobbies, multiple seating areas etc.	
System model	Model APS	Model AU7
System type	Horizontally installed system	Pop-up nozzles

4.1.1 Model APS – Atrium/hall protection system

VID FIRE-KILL Atrium Fire Protection Systems Model APS are developed for fixed installed fire protection of atriums and other similar locations without maximum limitations to heights and lengths of the rooms. Atrium locations are defined as tall indoor areas with a large floor area, and a low fire load per area.
The Model APS system is installed on the atrium walls and provides firefighting with a horizontal water mist spray from the walls. The system consists of 6m stainless small steel pipes with premade connection-threads for installation of small open nozzles directly into the pipes. Optional the nozzles can be installed on the walls with the pipe installed behind. Here the extension kit should be used. Nozzle type and configuration is specially designed to cover different size atriums. Connections to the pipe is 28mm open ends prepared for press fittings.

Type: Horizontal installation
Pipe materials: Stainless steel 316,
Pipe size: Open end type: 28x1.2mm
Pipe threads on ends: Open ends prepared for press fitting connection.
Nozzle material + finish: Brass + NiSn
Thread on nozzles: M10x1mm
Nozzles per 6 meter pipe: 6 pcs.
Drop size Dv90: < 300µm
Installation height: 3 – 7 meter
Approval: CEN/ prEN14972:2015 "Atrium Test protocol".

	Type A	Type B	Type C	Type D
Water pressures	5 bar	6 bar	10 bar	6 bar
Coverage area into room	8 m	10 m	13 m	5 m
K-factor per 6m pipe	37	52	62	26

Product	Type	Variant	Sales and order no:
Model APS	Type A	Open ends for press fittings. 6 meter pipe with 6 nozzles	APS-10200
Model APS	Type B	Open ends for press fittings. 6 meter pipe with 6 nozzles	APS-10202
Model APS	Type C	Open ends for press fittings. 6 meter pipe with 6 nozzles	APS-10204
Model APS	Type D	Open ends for press fittings. 6 meter pipe with 6 nozzles	APS-10206
Model APS	Special types		APS-10311

Extra Options		Sales and order no:
Spare nozzles	32-45A K-factor: 4,3	APS-10208
Spare nozzles	40-15A K-factor: 8.0	APS-10342
Spare nozzles	50-15A K-factor: 13.0	APS-10343
Spare nozzles	60-15A K-factor: 16.4	APS-10344
Nozzles extension fitting kit	Straight <0.5m	APS-10209
Nozzles extension fitting kit	Angle <0.5m	APS-10312
RAL Colour on nozzle	NA.	APS-10313

4.1.2 Model AU7 – Water mist nozzle for protection of concert halls and other multiple seated areas

The nozzles are designed for active firefighting in large indoor spaces with high ceiling heights, which contains moderate fire loads. Typical applications are concert halls, cinemas, auditoriums, atriums and lobbies.

Type: Embedded nozzle
Normal application: Multiple seated areas.
Materials: Brass + NiSn
Connection/thread: ¾" BSP male.
Water pressures: 8 – 16 bars
Drop size Dv90: < 300µm
K-factor: 7 l/min/√bar
Installation height: Imbedded in floor or furniture.
Nozzle coverage: 1m x 9m
Spray height: 5.5-6m
Approval: CEN/prEN 14972:2015 – Appendix B.

Product	Variant	Sales and order no:	Package size
Model AU7	Full assembly	AU7-10210	30

4.2 COMMERCIAL AND MARINE FRYERS, AND DUCTS

Application:	Commercial	Commercial and Marine	Commercial and marine
System model	Model DFI-1	Model Vesuvius	Model Etna
System type	Stand-alone unit for small commercial fryer	Pipe and nozzle system	Pipe and nozzle system
Specific application	<25l commercial fat fryers	<25l commercial fat fryers, and <150l industrial fat fryers.	Ducts.

4.2.1 Model DFI-1 – Small standalone system for commercial fat fryer system

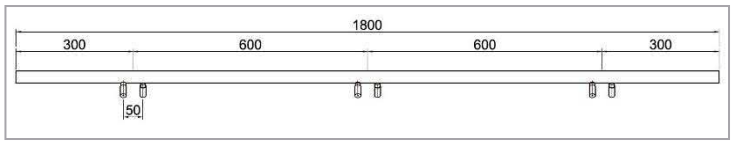
VID FIRE-KILL develops and manufactures micro systems such as the model DFI-1 for protection of commercial fat fryer pools in fast food restaurants, commercial kitchens, restaurants and cafes. DFI-1 is a small self-contained fire protection system with both automatic and manual release, that is tested and approved by DNVGL (Det Norske Veritas) in accordance with the European Norm EN 3-7:2004+A1:2007, class 25F, for protection of fat fryers up to 25 litres. The system is delivered fully assembled and ready for fixed installation. In case of fire the system automatically sends a signal and turns off the heat to the fryer pool at the same time activating a spray of extinguishing agent to suppress and extinguish the fire in a calm and controlled way without any splashing from the fryer pool. The aerosol canisters should be replaced with new every two year.

Installation height above application: 0,6m – 1,2m.
Outputs: Normally Closed or Normally Open
Spray angle: 60°.
Spray Duration time: 10-20 sec
Max. temperature on aerosol canister and control unit: 50°C.
Replacement of canisters: Every 2nd year
Approval: DNVGL EN 3-7:2004+A1:2007, class 25F

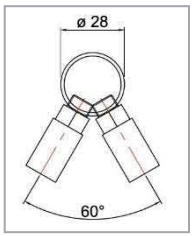
Product	Variant	Sales and order no:
DFI-1	A500 - Complete system incl. 12VDC-230VAC power supply	DFI1-10211

Extra options and spares		Sales and order no:
Power supply 12 Vdc 2 amp	For all systems	DFI1-10212
A500 kitchen Aerosol cylinder	For vertical and horizontal installation (2 years lifetime)	DFI1-10215
DFI-1 Metal protection case, stainless steel	For all systems	DFI1-10303

4.2.2 Model Vesuvius N-Pipe Type 2V BM1 – Linear Nozzle for commercial and marine fat fryers.



The VID FIRE-KILL Model Vesuvius N-pipe Type 2V-BM1 Water Mist System is a linear nozzle with the length of 1.8m and is designed to fight fat fryer fires with pure water. The system is installed in the kitchen hood as close to the centreline as possible and covers up to 0.75m on each side of the centreline and a length of 1.8m. If more coverage area is needed, the system can be connected in the ends to give a coverage area of (no. of system x 1.8m x 1.5m. If the hood is wider than 1.5m more strings of the N-pipe system should be installed parallel with a maximum spacing of 1.5m. The system should in any case be installed between 1m - 1.5m above the fat fryer surface.



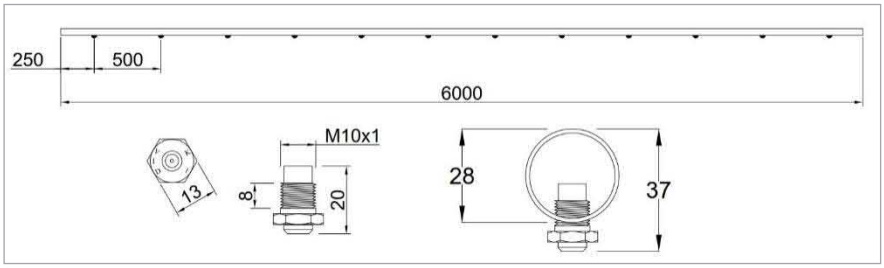
The system is fast and simple to install and requires the use of a minimum of pipe fittings. The system is delivered in 1.8 meter N-pipe lengths with pre-made threaded connections for VID FIRE-KILL BM1 water mist micro nozzles. The nozzles are installed in pairs of two with each pair position with 60° between them (30° from the vertical centreline) and with a spacing of 0.6m between the pair of nozzles on the pipe. A total of six BM1 nozzles are used per 1.8m N-Pipe.
N-Pipes are available in Ø28 x 1,2mm for connections with press-fittings.
Optional Plastic or Metal protection caps for BM-1 micro nozzles are available.
The system has successfully been fire tested to ISO 15371 fire test standard for water mist systems for fire protection of fat fryers up to 25l, conducted by The Danish Fire Laboratories (DFL) and approved by DNV for MED-B, Type approval and UK MER-B
Further the system has been full scale fire tested in industrial fat fryer with surface areas up to 0,22 m² with 150l oil in the fryer.

Type:	Horizontal installation	**Drop size DN_{90}:**	< 300 µm
Normal application:	Commercial & industrial fryers	**K-factor per 1.8m pipe:**	16.8 l/min/√bar
Pipe size:	Ø 28mm.	**K-factor per nozzle:**	2.8 l/min/√bar
Materials pipes:	Stainless steel 316L	**Installation height above fryer**:	1.00m – 1.50 m
Materials nozzles:	Stainless steel 316L	**Fryer size (max.):**	30l
Nozzles per 6m:	6 nozzles	**Fryer surface (max.):**	0.45m x 0.48m
Nozzle type:	BM-1-28	**Nozzle spacing on pipes:**	0.6 m
Connection/thread:	Open end for press fittings	**N-pipe spacing parallel:**	Max. 1.5 m
Water pressures:	7 – 9 bars	**1.8m pipe coverage:**	1.8m x 1.5m
Spray angle:	95 °		
Approvals:	DNV MED-B & TA and UK MER-B		

Product	Pipe type	Variant	Sales and order no:
Vesuvius N-pipe 2V-BM1	28mm with open ends	Type Vesuvius-PR 1,8 meter pipe with 6 nozzles	Vesuvius-10216
Vesuvius N-pipe 2V-BM1	Other pipe sizes	Type Vesuvius-S 1,8 meter pipe with 6 nozzles	Vesuvius-10218

Options		Sales and order no:
Plastic protection cap	Caps	Vesuvius-10314
BM-1-CAP	Stainless steel with chain and gasket	BM1-10298

4.2.3 Model Etna N-pipe Type I-K1 – Linear Nozzle for commercial and marine ventilation ducts.



The VID FIRE-KILL Model Etna N-pipe Type I-K1 Water Mist System is a linear nozzle with the length of 6m and is designed to fights duct fires with pure water. The system is installed in extraction ducts as close to one of the upper corners for square ducts, and as close the upper sides in round ducts as possible. The system will cover the whole duct volume in a 6 meter duct. To cover longer ducts more systems are connected to each other. The system has been tested and approved to cover any length duct when installed throughout the duct and with duct cross sections up to 0.3m x 0.6m for square ducts and a duct cross section up to 0.57m in diameter for round ducts.
The system is fast and simple to install and requires the use of a minimum of pipe fittings. The system is delivered in 6 meter N-pipe lengths with pre-made threaded connections for VID FIRE-KILL K1 water mist micro nozzles. The nozzles are installed with a spacing of 0.5m between each nozzle on the pipe.
A total of 12 K1 micro nozzles are used per 6m N-Pipe. N-Pipes are available in Ø28 x 1,2mm for connections with press-fittings.

Optional Plastic or Metal protection caps for K1 micro nozzles are available. Extension nozzle kits are also available for installation of the N-pipe outside the duct, and the nozzles inside the duct.

The system has successfully been fire tested to ISO 15371 fire test standard for water mist systems for fire protection of duct conducted by The Danish Fire Laboratories (DFL) and approved by DNVGL for MED-B and Type approval.

Type: Horizontal installation
Normal application: Ventilation Ducts
Pipe size: Ø 28mm.
Materials pipes: Stainless steel 316L
Materials nozzles: SS 303
Nozzle type: K1 with M10 x 1mm connection
Connection/thread: Open end for press fittings.
Water pressures: 6 – 16 bars (tested at 6 bars)
Spray angle: 95 °
Approvals: DNV MED-B, TA and UK MER-B

Drop size DN_{90}: < 300 µm
K-factor per 6m pipe: 10.8 l/min/√bar
K-factor per nozzle: 0.9 l/min/√bar
Duct cross section (max): 0.6m x 0.3m
Duct length (max.): NA.
Nozzle spacing on pipes: 0.50 m
Nozzles per 6m: 12 nozzles, type K1
6m pipe coverage area 6m x 0.6m

Product	Pipe type	Variant	Sales and order no:
Etna type N-pipe I-K1	28mm with open ends	Type Etna-PR, 6 meter pipe	Etna-10219
Etna type N-pipe I-K1	Other pipe sizes	Type Etna-S	Etna-10221
K1 Nozzle		Nozzle model K1 12 pcs eack 6 m pipe	K1-10328

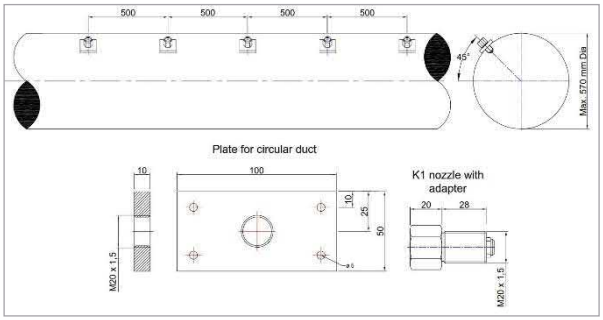
Options		Sales and order no:
K1-Extensionkit	NA.	Etna-10316

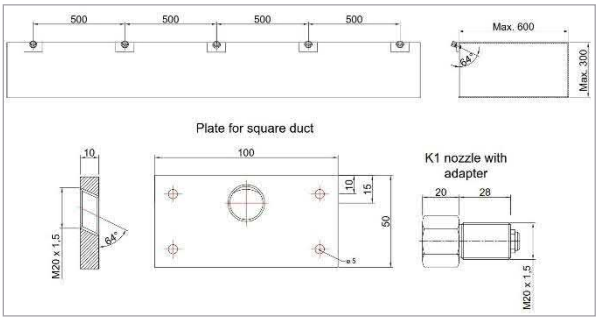
4.2.4 Model Etna Adapter-K1 – Linear Nozzle for commercial and marine ventilation ducts.

Installation where there is a challenge to fit the N-Pipe, nozzles can be supplied as loose items including an adapter and adapter plate which shall be fitted to the duct.

Type: Horizontal installation
Normal application: Ventilation Ducts
Materials adapter: Brass with NiSn
Materials nozzles: SS 303
Nozzle type: K1 with M10 x 1mm connection
Connection/thread: 3/8" BSP.
Water pressures: 6 – 16 bars (tested at 6 bars)
Spray angle: 95 °
Approvals: DNV MED-B, TA and UK MER-B.

Drop size DN_{90}: < 300 µm
Pipe size: Ø 28mm.
K-factor per nozzle: 0.9 l/min/√bar
Duct cross section (max): 0.6m x 0.3m
Duct length (max.): NA.
Nozzle spacing on duct: 0.50 m
6m pipe coverage area 6m x 0.6m





Product	Variant	Sales and order no:
Model Etna Adapter K1-Straight	Model: ETNA - K1 adapter for straight ducts	Etna-10340
Model Etna Adapter K1-Round	Model: ETNA - K1 adapter for circular ducts	Etna-10341
Flexible hose N-pipe adapter	230 mm	Etna-10315
Flexible hose N-Pipe adapter	430 mm	Etna-10317

4.3 APPLICATION: RESIDENTIAL HOMES, INSTITUTIONS, ELDERLY PEOPLE HOMES, ETC

Application:	Residential homes, institutions, elderly people homes, etc	
System model	Model BB	Model BBK
System type	Modular retrofit system	Object protect

4.3.1 Model BB – Fire suppression and life safety in residential areas.

The VID Model BB is designed for fast and simple protection of people's lives in case of fire in private homes or institutions. The system is easy to install and has a discrete design and is designed to be installed in existing buildings.

The Model BB system consists of five main parts.

- A control unit which can operate up to 6 zone valves and six smoke detectors.
- Zone valves.
- Smoke detectors.
- Wall panels with water supply pipes and nozzles pipes integrated.
- A water supply unit.

The BB module panels are connected to 2.5 bar – 3.0 bars water pressure, which are common in most domestic water-supplies, and the BB control unit is connected to the domestic power supply.

In case of fire the, smoke activates the smoke detector, and the heat of fire creates a rise of heat in the room. The rise of heat is detected by the thermo sensor located closest to the fire. When both smoke and rise of heat is detected, the system automatically activates a potential free alarm switch. The wall panels do hereafter distribute water onto the area from the activated valve wall module and from the closest valve modules on both sides of the first activated valve wall module.

Valve modules have as additional safety also glass bulb activation, which will operate the system should power of any reason fail. After system activation, the activated valve module should be replaced with a new one. Alarms may be provided from computer LAN connection, by telephone SMS service or from traditional alarm circuits and modems. Rise of heat level and time delays are customized to match the location by help of software and a computer / PC.

All valve and module panels can be supplied in any RAL colour. If not specified, the colour will be white RAL9010.

The system can be supplied in loose parts as specified below or can be designed to fit and actual application. Special designs can be made by request to the sales department.

Product	Sales and order no:
Main parts	
Basic control unit for 6 valve module incl. 48h power back-up	BB-10222
Basic control unit + text and modem alarm output.	BB-10230
Smoke detector with socket and 10m flying wire with plug.	BB-10223
Water supply module with ¾" BSP connections (Electrical monitored stop valve w. lock, strainer, non-return valve, pressure switch, drain tee)	BB-10224
10 m. wire kit for 6 zone valves.	BB-10225

Additions	Sales and order no:
USP Connector module	BB-10226
Software package	BB-10227

Product	Sales and order no:
Zone valves	
Valve unit	BB-10228
Nozzle panels with supply, nozzle pipes, nozzles and wall hanger brackets	
Panel: L= 0-500mm , 1x Nozzle , 2 x brackets	BB-10231
Panel: L= 501-1000mm , 1x Nozzle , 2 x brackets	BB-10232
Panel: L= 501-1000mm , 2x Nozzle , 2 x brackets	BB-10233
Panel: L = 1001-1500mm, 2 x Nozzles, 2 x brackets	BB-10234
Panel: L = 1001-1500mm, 3 x Nozzles, 2 x brackets	BB-10235
Panel: L = 1501-2000mm, 2 x Nozzle, 3 x brackets	BB-10236
Panel: L = 1501-2000mm, 3 x Nozzle, 3 x brackets	BB-10237

Product	Sales and order no:
Nozzle panels without supply pipe, but with nozzle pipes, nozzles and wall hanger brackets.	
Panel: L= 0-500mm , 1x Nozzle , 2 x brackets	BB-10244
Panel: L= 501-1000mm , 1x Nozzle , 2 x brackets	BB-10245
Panel: L= 501-1000mm , 2x Nozzle , 2 x brackets	BB-10246
Panel: L = 1001-1500mm, 2 x Nozzles, 2 x brackets	BB-10247
Panel: L = 1001-1500mm, 3 x Nozzles, 2 x brackets	BB-10248
Panel: L = 1501-2000mm, 2 x Nozzle, 3 x brackets	BB-10249
Panel: L = 1501-2000mm, 3 x Nozzle, 3 x brackets	BB-10250
Panels with supply pipes, without nozzle pipes, but with wall hanger brackets.	
Panel: L= 0-500mm, 2 x brackets	BB-10257
Panel: L= 501-1000mm, 2 x brackets	BB-10258
Panel: L= 501-1000mm , 2 x brackets	BB-10259
Panel: L = 1001-1500mm, 2 x brackets	BB-10260
Panel: L = 1001-1500mm, 2 x brackets	BB-10261
Panel: L = 1501-2000mm, 3 x brackets	BB-10262
Panel: L = 1501-2000mm, 3 x brackets	BB-10263
Corner Panels 90°	
For inner corners: Inside corner panel w. supply pipe, w. nozzle pipe L: 2 x 150mm	BB-10269
For outer corners: Outside corner panel w. supply pipe, w. nozzle pipe L: 2x 150mm	BB-10270
Cover Panels	
Cover panel 200mm white RAL (to cover panel joints)	BB-10272
Panel end cover plate 200mm white RAL – Right version (to finish ends of panel assemblies)	BB-10273
Panel end cover plate 200mm white RAL – Left version (to finish ends of panel assemblies)	BB-10271
Special Panels	
Tee panel 200mm - white RAL	BB-10274
Through wall corner panel 200mm - white RAL	BB-10275
¾"BSP male Water supply connection	BB-10265

4.4 Application: Inventories, Conveyor belts, Attics, Subfloor etc.

4.4.1 N-pipes with BM-1, K1 or F1 nozzles – Protection of class A+B fire risks.

In general N-Pipes are utilized in low pressure water mist installations, where the use of N-pipes represents significant reductions in installation costs. N-Pipes are installed for fire protection of inventories, process areas, machinery spaces, storages, cable tunnels and other local applications like below escalators, around turbines and other areas where simultaneous activation of multiple nozzles are required.
N-pipes integrate small BM-1, K1 or F1 nozzles in different configurations in the pipe, as to suit the individual application. We offer three standard solutions:

- Type I: Is designed with six BM-1 nozzles installed in the N-pipe in a straight row with 1m between each nozzle and 0.5m to both pipe ends. Type I are used for protection of narrow areas not exceeding 1.5m such as conveyor belt, pathways etc.
- Type 2V: Is designed with 12 BM-1 nozzles installed in pairs with each nozzle pair separated with an angle of 90 degrees and having 1m between each nozzle pair and 0.5m to ends. Type 2V is typical used in OH 2/3 areas for protection of class A fires and can be installed up to 10-12m above fuel surface.

N-pipes with BM-1, K1 or F1 nozzles has been full scale tested and installed in many different applications, so it is advised to take contact to our sales department for more advice on how best to utilize N-pipes.
N-pipes are delivered as 28mm, 35mm, 42mm, 54mm or 76.1mm SS316 press pipes with open ends prepared for press fittings. Other pipe sizes can be supplied on request.

4.4.2 General N-Pipes

General info N-pipes:

Normal application:	Industrial class A fire applications
Materials:	Stainless steel 316L
Connection/thread:	Open ends for press fitting connection.
Water pressures:	Maximum 16 bar.
Length:	6m
Pipe size:	28, 35, 42, 54 & 76.1 mm. Other sizes can be supplied on request.
N-pipe types:	Type I, Type 2V

Attention: N-pipes and nozzles are purchased separately.

Product	Pipe type	Variant	Sales and order no:
N-pipe	28x1.2mm with open ends for press fittings	Type I-PR28	Npipe-10280
N-pipe	28x1.2mm with open ends for press fittings	Type 2V-PR28	Npipe-10281
N-pipe	35x1.5mm with open ends for press fittings	Type I-PR35	Npipe-10283
N-pipe	35x1.5mm with open ends for press fittings	Type 2V-PR35	Npipe-10284
N-pipe	42x1.5mm with open ends for press fittings	Type I-PR42	Npipe-10318
N-pipe	42x1.5mm with open ends for press fittings	Type 2V-PR42	Npipe-10319
N-pipe	54x1.5mm with open ends for press fittings	Type I-PR54	Npipe-10321
N-pipe	54x1.5mm with open ends for press fittings	Type 2V-PR54	Npipe-10322
N-pipe	76.1x2mm with open ends for press fittings	Type I-PR76	Npipe-10324
N-pipe	76.1x2mm with open ends for press fittings	Type 2V-PR76	Npipe-10325
N-pipe		Special	Npipe-10227

4.4.3 Conveyor belts

The VID Fire-Kill low pressure, fine water spray deluge system Model N-pipe type I-C 1,5 and 3V-C 2,5 was created for the protection of closed, semi-closed and open conveyor belts. This covers the use of Model N-pipe type I-C 1,5 and 3V-C 2,5, as described above, for transporting Biomass, pellets, coal etc.

The Model N-pipe type I-C 1,5 and 3V-C 2,5 has been designed with a zoned approach in mind, which lowers the time required when designing and installing the system and makes it easier to incorporate into existing locations. To further ease installation, the systems utilize Model N-Pipe type I-C 1,5 and 3V-C 2,5 of ordinarily 6 m in length. Each 6 m length of N-pipe is fitted with 6 or 18 low pressure fine water spray nozzles (BM-1 nozzles) designed specifically for the location size. If needed other configurations with more nozzles can be manufactured.

Model N-pipe type I-C 1,5 and 3V-C 2,5 systems are installed in one rows, covering the entire conveyor in its whole width and length, either in a total flooding design, where the pipes are connected to the same riser pipe, or in zones where each zone of N-pipe is connected to a zone deluge valve. Parallel pipes can be installed when the width of the conveyor exceeds the dimensions tested.

Design type	One or multiple strings of N-pipe Type I-C 1.5 or 3V-C 2.5 covering the entire length and width of the conveyor, with a maximum nozzle spacing of 1,0 with type I-C 1.5 and 0.5m with type 3V-C 2.5
System components:	Supplied in 2 versions, described underneath. 1 x N-pipe with 6/18. The pipe is predrilled with M10x1mm inserts female thread. N-pipe to be made in Ø28, Ø35, Ø42 or Ø54 mm stainless steel press pipe.
Materials – Pipes:	Stainless Steel 316L
Materials - Nozzle:	Stainless Steel 316L or 304
Water Pressure:	6 - 16 bar

Description	Conveyor width max 1,50 m	Conveyor width max 2,50 m
N-Pipe type	1-C 1,5	3V-C 2.5
Number and type of nozzles:	6 x Kv 2,8	12 x Kv 2,8 / 6 x Kv 2
K-Factor 6 m pipe:	16,8 (l/min@1bar)	45,6 (l/min@1bar)
Nominal Flow-rate:	41,2 (l/min)	111,6 (l/min)
Spacing – nozzle	1m	0,5m
Water Density	4,5 mm/min	7,4 mm/min
Max width of conveyor (NOTE 1)	1,50 m	2,50 m
Max. height above object:	1,50 m	1,50 m
Min. height above object:	1,00 m	1,00 m
Design area:	Whole width. Long conveyors may be divided into zones	
Recommended min operation time:	30 min.	
Additives:	None	
Other requirements:	Only 1 row of N-pipe can be used for this combination. It's recommended, in case of fire, to shut down the conveyor, release the zone where fire is detected and its two neighbour zones.	
NOTE 1	If the conveyor is wider multiple parallel pipes can be installed.	

Attention: Nozzles are included for the conveyor N-Pipe part numbers.

Product	Pipe type	Variant	Sales and order no:
N-pipe	28 x 1,2 mm with open ends for press fittings	Type 1-C 1,5	Npipe-10360
N-pipe	35 x 1.5 mm with open ends for press fittings	Type 1-C 1,5	Npipe-10361
N-pipe	42 x 1.5 mm with open ends for press fittings	Type 1-C 1,5	Npipe-10362
N-pipe	54 x 1.5 mm with open ends for press fittings	Type 1-C 1,5	Npipe-10363
N-pipe	76.1 x 2 mm with open ends for press fittings	Type 1-C 1,5	Npipe-10364
N-pipe	28 x 1,2 mm with open ends for press fittings	Type 3V-C 2,5	Npipe-10365
N-pipe	35 x 1.5 mm with open ends for press fittings	Type 3V-C 2,5	Npipe-10366
N-pipe	42 x 1.5 mm with open ends for press fittings	Type 3V-C 2,5	Npipe-10367
N-pipe	54 x 1.5 mm with open ends for press fittings	Type 3V-C 2,5	Npipe-10368
N-pipe	76.1 x 2 mm with open ends for press fittings	Type 3V-C 2,5	Npipe-10369

4.5 MODEL FireKill™ BM-1 NOZZLE

Type BM-1 is an open full cone water mist nozzle which is a robust, small dimension nozzle. The BM-1 nozzles are designed with special M10x1mm thread for installation in N-pipes.

Type: BM-1
Normal application: Industrial applications
Materials: AISI 304 / AISI 316
Nozzle body finish: Natural
K-factor (metric) 2.0, 2.8, 3,2, 4,0
Connection/thread: M10x1mm
Water pressures: 4 – 16 bars depending on application.
Drop size Dv90: < 300µm
N-pipe fit: N-pipe Type I, Type 2V, Type 3V
Installation height: Depending on application.
Nozzle coverage: Depending on application.

Attention: N-pipes and nozzles are purchased separately.

Product	Variant	Sales and order no:
BM-1-20	K: 2,0 l/min/√bar, SS303+304	BM1-10290
BM-1-28	K: 2,8 l/min/√bar, SS303+304	BM1-10292
BM-1-32	K: 3,2 l/min/√bar, SS303+304	BM1-10291
BM-1-40	K: 4,0 l/min/√bar, SS303+304	BM1-10293
BM-1-20-SS	K: 2,0 l/min/√bar, SS316.	BM1-10294
BM-1-28-SS	K: 2,8 l/min/√bar, SS316.	BM1-10296
BM-1-32-SS	K: 3,2 l/min/√bar, SS316.	BM1-10295
BM-1-40-SS	K: 4,0 l/min/√bar, SS316.	BM1-10297

4.6 K1 AND F1 NOZZLE

Type K1 and F1 nozzles are open full cone water mist nozzles which is a robust, small dimension nozzle. The nozzles are designed with special M10x1mm thread for installation in N-pipes.

Type: K1 & F1
Normal application: Industrial applications
Materials: Stainless steel 304
K1 K-factor (metric): 0.9
F1 K-factor (metric): 1.1
Connection/thread: M10x1mm
Water pressures: 4 – 16 bars depending on application.
Drop size Dv90: < 300µm
N-pipe fit: N-pipe Type I, Type 2V, Type 3V
Installation height: Depending on application.
Nozzle coverage: Depending on application.

Attention: N-pipes and nozzles are purchased separately.

Product	Variant	Sales and order no:
Type K1	K: 0.9 l/min/√bar, SS304	K1-10328
Type F1	K: 1.1 l/min/√bar, SS304	F1-10329

4.7 BM-1 PROTECTION CAP

Type BM-1 protection cap is fitted to the nozzle to avoid dirt clogging the nozzle due to a dirty environment.

Type: BM-1 Cap
Normal application: Industrial applications
Materials: Stainless steel

Product	Variant	Sales and order no:
BM-1-CAP	Stainless steel with chain and gasket for Ø28 and Ø35 pipes	BM1-10298
BM-1-CAP	Stainless steel with chain and gasket for Ø42 and Ø54 pipes	BM1-10396
BM-1-CAP	Stainless steel with chain and gasket for Ø76,1 pipes	BM1-10397

4.8 Application: Military, air force, navy

Application:	Military, air force, navy	
System model	Model F48	Model F102
System type	Pop-up nozzle for deck protection	Pop-up nozzle for hangar protection

4.8.1 Model M48 - deck nozzle

Model M48 deck nozzles are designed for fire protection and cooling of decks for example helicopter decks or navy ship decks for protection and flushing of decks.
The Model M48 design allows the nozzles to be cast into the deck coating, and at a later time being serviced without dismounting the nozzles from the deck coating.
On customer request Model M48 nozzles are custom designed to specific deck thickness etc. Listed prices are for standard versions made in Stainless steel (AISI 316):

Type: Floor nozzle
Normal application: Deck protection
Materials: Stainless steel 316
Connection/thread: ¾" BSP-T Male
Water pressures: 2 – 16 bars
Drop size Dv90: < 300µm
K-factor: 48 l/min/√bar
Installation height: Imbedded in deck.
Spray height: Range: 0.8m at 2bar. 0.95m at 6bar
Nozzle coverage diameter: Range: 8.4m at 2bar. 10.6m at 6bar.
Nato stock number: NSC 4210 NIIN 226272988

Product	Variant	Sales and order no:
Model M48	Full assembly with drain in house	M48-10298
Model M48	Full assembly without drain in house	M48-10299
Spares		
Model M48	Housing + holding ring+ screws	M48-10350
Model M48	Cartridge + O-ring	M48-10351
Model M48	O-ring	M48-10352
Model M48	Cartridge spanner	M48-10353
Model M48	Plug	M48-10354

4.8.2 VID Model F102 - aircraft hangar low pressure water mist nozzle

The nozzles are installed in military aircraft hangars (NATO) to protect helicopters, fighter planes, transport - and aviation planes against fire, with only pure water mist as the extinguishing agent.
The nozzles do automatic elevate from the floor surface of the hangar to distribute water mist sprays in case of fire. They are cast into the hangar floors to be positioned flush to the floor surface.

Type: Floor nozzle
Normal application: Hangar protection
Materials: Stainless steel 316
Connection/thread: ¾" BSP-T female.
Water pressures: 10 – 16 bars
Drop size Dv90: < 300µm
K-factor: 10 l/min/√bar
Installation height: Imbedded in floor.
Nozzle coverage: 2m x 4m
Spray angle: Horizontal 95 °

Product	Variant	Sales and order no:
Model F102	Full assembly – one way spray	F102-10305
Model F102	Full assembly – two way spray	F102-10306
Spares		
Model F102	Housing	F102-10345
Model F102	Cartridge	F102-10346
Model F102	Casting cover incl. Screws	F102-10347
Model F102	Gasket & sealing kit	F102-10348
Model F102	Strainer	F102-10349

4.9 ROAD TUNNELS, RAIL, TUNNELS, METRO TUNNELS, CABLE TUNNELS, ETC.

TUNPROTEC®

IBS Institut für Brandschutztechnik und Sicherheitsforschung

Application:	Road tunnels, rail, tunnels, metro tunnels, cable tunnels, etc.
System model	Model Tunprotec
System type	Modular build system with integrated detection and activation system. Modules pre-fabricated and pre-tested from factory for fast, easy and simple installation.

4.9.1 Model Tunprotec – Watermist system for protection of infrastructure tunnels.

The tunnel system is a low pressure water mist system with an integrated double knock detection system.
The active firefighting system operates with a minimum water pressure on the nozzles of 10 bars. The system consists of tunnel modules for installation inside the tunnel pipe, and a pump skid to supply water to the tunnel protection modules inside the tunnel pipe. The installation inside tunnel pipes consist of pre-assembled pipe modules of 10m in lengths, which are installed in centre of the tunnel pipe, and which divide the whole tunnel length into protection zones. Each protection zone being 20m long and covering the whole tunnel width (maximum 10m).The Tunnel Modules include tunnel riser pipe, nozzle pipes, water mist nozzles, monitored stop and activation valve. The tunnel modules are flanged assembled together to form a continuous string of pipes in the tunnel pipe ceiling. The tunnel modules include hangers to make a fast and efficient installation in the tunnel pipe. In case of a fire in the tunnel pipe, the tunnel protection system automatically activates and distributes water mist in the protection zone, where the fire was detected and its two neighbour zones. Water mist is distributed in total tunnel length of 60m.The system delivers a minimum water density of 2.5 mm/min in the protected area, with a waterflow of approximately 1610 l/min at 10 bar over three 20m zones. The system has been successfully tested in accordance to the UPTUN test programme with this configuration. The system has been tested in fires with HRR up from5MW - 100MW in the Runhammar test tunnel.

The double knock detection system consists of linear heat detection throughout the tunnel and two flame detectors in each zone. The signals from the detection systems are sampled in a local control box. Every 20 control boxes are connected in a Can Bus and sampled in a gateway panel. All gateway panels are connected in fiber optics to a control computer. The control computer is supplied with software for visual overview and active control and activation of the system. The system can also activate manually if needed.

The Tunprotec system can be supplied with hydraulic system and detection system integrated or can be supplied as separate systems. The hydraulic system comes in different sizes depending on tunnel length.
Prices and system design is supplied on project base. For assistance contact the sales department.

4.9.2 Cable tunnels

The FIREKILL™ low pressure, fine water spray system is a Fixed Fire Suppression System suitable for fire protection purposes in cable tunnels. The system is tested with both open deluge type nozzles and pendent automatic nozzles.
The FIREKILL™ low pressure, fine water spray deluge system has been tested to prEN14972 Part 11.
Based on the testing the system can protect but not limited to various applications such as:

- Concealed or semi concealed cable tunnels with wind velocities up to 4,1 m/s.
- The test is witness by DnVGL, accredited 3 party certification body and holding IBS Approval..

IBS Institut für Brandschutztechnik und Sicherheitsforschung

Type: Pendent open
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8 – 16 bars
Drop size Dv90: < 300µm
K-factor: 13,4 l/min/√bar
Connection/thread: ½" BSP / BSPT / NPT
3 party witness: DNVGL Acc. to EN 14972
Approval: IBS

Type: Pendent automatic
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 8-16 bar
Drop size Dv90: < 300µm
K-factor: 13.4 l/min/√bar
Time response index (RTI): Fast response < 45m/√s
Connection/thread: ½" BSP or ½" NPT
Nominal release temperatures: 57, 68, 79, 93,141 °C
3 party witness: DNVGL acc. to EN 14972
Approval: IBS

NOTE: Picture shown with nozzle guard which is recommended when using automatic nozzles within a cable tunnel.

Product	Material	Sales and order no:
Model CT-ODC1 Open nozzle	Material: Brass + NiSn	CTODC1-10137
Model OH-DC1 Automatic nozzle	Material: Brass + NiSn	OHDC1-10058

Pre-drilled N-Pipes can be supplied for the Model CT. The N-pipe is predrilled and threaded with 3/8" BSP using the Flowdrill technology making the installation easy and cost effective as no threaded pipe fittings is required and the distance between the nozzles is fixed. The pipes used is suitable for any press fittings system. Length of the pipes is 6 meter.
When using 1/2" BSP Nozzles, an adapter is required.

Product	Material	Sales and order no:
N-PIPE Model CT 3/8" BSP 35 mm	AISI 316	NPIPE-10370
N-PIPE Model CT 3/8" BSP 42mm	AISI 316	NPIPE-10371
N-PIPE Model CT 3/8" BSP 54 mm	AISI 316	NPIPE-10372
N-PIPE Model CT 3/8" BSP 76 mm	AISI 316	NPIPE-10373
Adapter 3/8" BSPM x 1/2" BSPF	Brass + NiSn	NPIPE-10392

4.10 Application: RO-RO spaces and special category spaces.

RORO spaces are defined as a cargo ship or ferry designed so that vehicles can be driven straight on and straight off. Special category spaces are high hazard spaces not covered by other IMO standards.
For such applications systems may be automatically activated, manually activated, or automatically activated with manual release capabilities. Automatic activation should be approved by the Administration, considering the implications of such activations
To cover RORO spaces and special category spaces VID Fire-Kill can offer Low Pressure Water Mist Nozzles Model SUEZ and PANAMA which are patented open, low pressure water mist nozzles, ideal for installations on car and truck decks and special category spaces on ships, ferries, etc. The nozzles provide a highly reliable and enhanced firefighting performance along with low water requirements.
Suez nozzles are designed to protect vehicle decks and special category spaces up to 2.5m ceiling height and Panama nozzles are designed to protect vehicle decks and special category spaces up to 5m ceiling height.
The Suez and Panama nozzles have been tested in accordance with IMO Resolution MSC.1/Circ. 1430 for RORO spaces and special category spaces and Model OH-OPX1 nozzles are MED and TA approved by DNV.

Nozzle name	Suez OH-OPX1	Panama OH-OPX1
Application	Vehicle decks up 2.5m ceiling height.	Vehicle decks up 5m ceiling height.
Nozzle type	Open nozzle	Open nozzle
Spacing	4m x 4m (16m2)	3.5m x 3.5m (12.25m2)
Tested to	MSC.1/Circ. 1430 for vehicle decks up to 2.5m ceiling height.	MSC.1/Circ. 1430 for vehicle decks up to 5m ceiling height.
Approval	DNVGL, MED-B	DNVGL, MED-B

4.10.1 Open Nozzle - Model Suez & Panama OH-OPX1

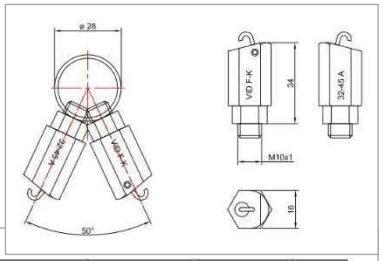
Type: Pendent
Materials: Brass / stainless steel
Nozzle body finish: NiSn
Water pressure: 6 – 16 bars (tested at 6 bar)
Drop size Dv90: < 300µm
K-factor: 23 l/min/√bar
Connection/thread: ½" BSP or ½" NPT
Approval: DNV MED-B, TA and UK MER-B

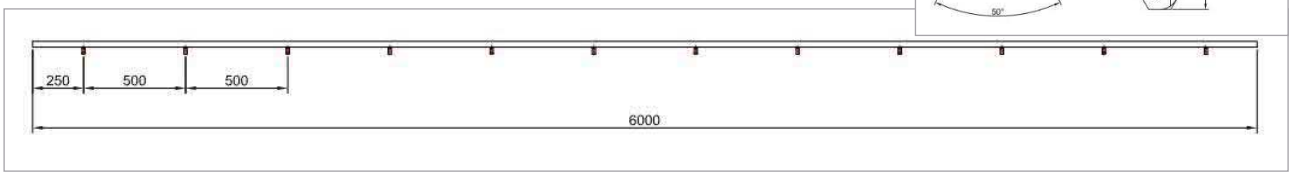
Application Ceiling height	1.5 – 2.5m	2.5 – 5.0m
Installation height	Max. 2.5 m.	Max. 5 m.
Nozzle spacing	Max. 4 m., 2 m. to walls	Max. 3.5 m., 1.75 m. to walls
Nozzle brand name	Suez	Panama

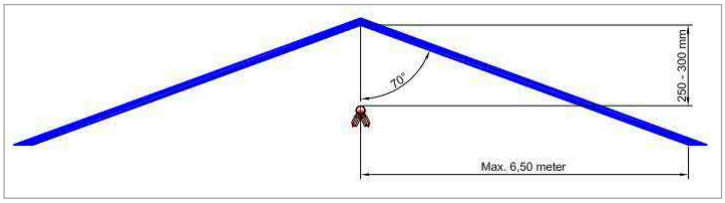
Product	Material	Sales and order no:
Model Suez & Panama OH-OPX1	Material: Brass + NiSn	SUEX-PAN-10334
Model Suez & Panama OH-OPX1	Material: Stainless steel 316L	SUEX-PAN-10335
Model Suez & Panama OH-OPX1	Material: Titanium Grade 2	SUEX-PAN-10336

4.11 Attic Fire Protection System.

The VID FIRE-KILL Low Pressure Water Mist Attic System Model KIP is a system utilizing very small open water mist nozzles integrated in stainless steel pipes, designed specifically for the protection of attics and other such large rooms with sloped ceilings. The system is a deluge system and is designed to cover floors underneath sloped ceilings up to 140 degrees. The system is designed to cover up to 6,5m horizontally to both sides from the installation point only using 7 bar water pressure. Depending on the geometrics of the attic in some cases even larger coverage to each side can be achieved.







Type:	Horizontal installation	**Drop size DN_{90}:**	< 300 µm
Pipe size:	Ø 28mm	**K-factor per 6m pipe:**	51.6 l/min/√bar
Materials pipes:	Stainless steel 316L.	**K-factor per nozzle:**	4.3 l/min/√bar
Materials nozzles:	SS 303	**Coverage area from centre:**	6.5 m to each side
Nozzle type:	32-45A with M10 x 1mm connection	**Nozzle spacing on pipes:**	0.50 m
Connection/thread:	Open end for press fittings.	**Nozzles per 6m:**	12 nozzles
Water pressures:	7 – 16 bars (tested at 7 bars)	**Max ceiling angle:**	70 °
Installation height:	250 to 300 mm below ceiling		

Product	Pipe type	Variant	Sales and order no:
Model KIP	28 mm	Open ends for press fittings. 6 meter pipe with 12 nozzles	APS-KIP-10356
Model KIP	Special types		APS-KIP-10357
Extra Options			
Spare nozzles		32-45A K-factor: 4,3	APS-10208
Spare nozzles		40-15A K-factor: 8.0	APS-10342
Spare nozzles		50-15A K-factor: 13.0	APS-10343
Spare nozzles		60-15A K-factor: 16.4	APS-10344
Nozzles extension fitting kit		Straight <0.5m	APS-10209
Nozzles extension fitting kit		Angle <0.5m	APS-10312
RAL Colour on nozzle		NA.	APS-10313

5 WATER SPRAY NOZZLES.

5.1 HIGH VELOCITY NOZZLES

5.1.1 Type HS

The Type HS nozzles are designed to provide water-spray for fire protection against hydro-carbon fires such as off-shore installations, transformers, refineries etc. These nozzles distribute water in sprays of relatively large droplets which makes the water spray little sensitive to windy conditions. Type HS nozzles are available with and without strainers. Strainers come in same material as nozzle house. Type HS nozzles are FM approved.

Type: High velocity nozzle
Normal application: Off-shore installations, transformers, refineries
Materials: Brass + NiSn, Naval Brass, SS AISI 316, Titanium Grade 2.
Connection/thread: 1" NPT.
Water pressures: 2 – 16 bars
K-factor: 24.5, 42.5, 80 (FM approved version). 56 (DnVGL MED
Spray angle: Full cone 120° and 90° (FM approved version).
Nozzle Strainer: Optional
Approval: HS23, Hs43, HS80 with filter FM Approved. HS56 Naval brass, DNV MED-B, TA and UK MER-B

Product	Variant	Materials	Strainer	Sales and order no:
HS23-120	K-factor: 24.5, angle: 120°	Brass + NiSn	No	HS23-10504
HS23-120	K-factor: 24.5, angle: 120°	Naval brass CuZn35Ni	No	HS23-10505
HS23-120	K-factor: 24.5, angle: 120°	AISI 316L	No	HS23-10506
HS23-120	K-factor: 24.5, angle: 120°	Titanium Grade 2	No	HS23-10507
HS23-120	K-factor: 24.5, angle: 120°	25% Cr SDSS	No	HS23-10536
HS23-120	K-factor: 24.5, angle: 120°	Brass + NiSn	Yes	HS23-10512
HS23-120	K-factor: 24.5, angle: 120°	Naval brass CuZn35Ni	Yes	HS23-10513
HS23-120	K-factor: 24.5, angle: 120°	AISI 316L	Yes	HS23-10514
HS23-120	K-factor: 24.5, angle: 120°	Titanium Grade 2	Yes	HS23-10515
HS43-120	K-factor: 42.5, angle: 120°	Brass + NiSn	No	HS43-10500
HS43-120	K-factor: 42.5, angle: 120°	Naval brass CuZn35Ni	No	HS43-10501
HS43-120	K-factor: 42.5, angle: 120°	AISI 316L	No	HS43-10502
HS43-120	K-factor: 42.5, angle: 120°	Titanium Grade 2	No	HS43-10503
HS43-120	K-factor: 42.5, angle: 120°	25% Cr SDSS	No	HS43-10537
HS43-120	K-factor: 42.5, angle: 120°	Brass + NiSn	Yes	HS43-10508
HS43-120	K-factor: 42.5, angle: 120°	Naval brass CuZn35Ni	Yes	HS43-10509
HS43-120	K-factor: 42.5, angle: 120°	AISI 316L	Yes	HS43-10510
HS43-120	K-factor: 42.5, angle: 120°	Titanium Grade 2	Yes	HS43-10511
HS56-90	K-factor: 56.0, angle: 90°	Naval Brass + NiSn	No	HS56-10532
HS56-90	K-factor: 56.0, angle: 90°	Titanium Grade 2	No	HS56-10540
HS56-90	K-factor: 56.0, angle: 90°	25% Cr SDSS	No	HS56-10538
HS80-90	K-factor: 80.0, angle: 90°	Brass + NiSn	No	HS80-10524
HS80-90	K-factor: 80.0, angle: 90°	Naval brass CuZn35Ni	No	HS80-10525
HS80-90	K-factor: 80.0, angle: 90°	AISI 316L	No	HS80-10526
HS80-90	K-factor: 80.0, angle: 90°	Titanium Grade 2	No	HS80-10527
HS80-90	K-factor: 80.0, angle: 90°	25% Cr SDSS	No	HS80-10539
HS80-90	K-factor: 80.0, angle: 90°	Brass + NiSn	Yes	HS80-10528
HS80-90	K-factor: 80.0, angle: 90°	Naval brass CuZn35Ni	Yes	HS80-10529
HS80-90	K-factor: 80.0, angle: 90°	AISI 316L	Yes	HS80-10530
HS80-90	K-factor: 80.0, angle: 90°	Titanium Grade 2	Yes	HS80-10531

5.2 MEDIUM VELOCITY NOZZLES

5.2.1 Type MS

The medium velocity spray nozzle is a vital part of deluge systems for the protection of plant structures and machineries against fires, which involve flammable liquids and solids. Type MS nozzles are as standard available with ½" NPT connection. Type MS nozzles are FM Approved

Type: Medium velocity nozzle
Normal application: Off-shore installations, transformers, refineries
Materials: Brass + NiSn, Naval Brass, SS AISI 316L, Titanium Grade 2.
Connection/thread: 1/2" NPT.
Water pressures: 1.5 – 16 bars
K-factor: 16, 23, 40 & 59.
Spray angle: Full cone 90° & 120°.

Product	Variant	Materials	Sales and order no:
MS16-90	K-factor: 16, angle: 90°	Brass + NiSn	MS16-90-10604
MS16-90	K-factor: 16, angle: 90°	Naval brass CuZn35Ni	MS16-90-10605
MS16-90	K-factor: 16, angle: 90°	AISI 316L	MS16-90-10606
MS16-90	K-factor: 16, angle: 90°	Titanium Grade 2	MS16-90-10607
MS16-120	K-factor: 16, angle: 120°	Brass + NiSn	MS16-120-10612
MS16-120	K-factor: 16, angle: 120°	Naval brass CuZn35Ni	MS16-120-10613
MS16-120	K-factor: 16, angle: 120°	AISI 316L	MS16-120-10614
MS16-120	K-factor: 16, angle: 120°	Titanium Grade 2	MS16-120-10615
MS23-90	K-factor: 23, angle: 90°	Brass + NiSn	MS23-90-10600
MS23-90	K-factor: 23, angle: 90°	Naval brass CuZn35Ni	MS23-90-10601
MS23-90	K-factor: 23, angle: 90°	AISI 316L	MS23-90-10602
MS23-90	K-factor: 23, angle: 90°	Titanium Grade 2	MS23-90-10603
MS23-120	K-factor: 23, angle: 120°	Brass + NiSn	MS23-120-10608
MS23-120	K-factor: 23, angle: 120°	Naval brass CuZn35Ni	MS23-120-10609
MS23-120	K-factor: 23, angle: 120°	AISI 316L	MS23-120-10610
MS23-120	K-factor: 23, angle: 120°	Titanium Grade 2	MS23-120-10611
MS40-90	K-factor: 40, angle: 90°	Brass + NiSn	MS40-90-10616
MS40-90	K-factor: 40, angle: 90°	Naval brass CuZn35Ni	MS40-90-10617
MS40-90	K-factor: 40, angle: 90°	AISI 316L	MS40-90-10618
MS40-90	K-factor: 40, angle: 90°	Titanium Grade 2	MS40-90-10619
MS40-120	K-factor: 40, angle: 120°	Brass + NiSn	MS40-120-10620
MS40-120	K-factor: 40, angle: 120°	Naval brass CuZn35Ni	MS40-120-10621
MS40-120	K-factor: 40, angle: 120°	AISI 316L	MS40-120-10622
MS40-120	K-factor: 40, angle: 120°	Titanium Grade 2	MS40-120-10623
MS59-90	K-factor: 59, angle: 90°	Brass + NiSn	MS59-90-10624
MS59-90	K-factor: 59, angle: 90°	Naval brass CuZn35Ni	MS59-90-10625
MS59-90	K-factor: 59, angle: 90°	AISI 316L	MS59-90-10626
MS59-90	K-factor: 59, angle: 90°	Titanium Grade 2	MS59-90-10627
MS59-120	K-factor: 59, angle: 120°	Brass + NiSn	MS59-120-10628
MS59-120	K-factor: 59, angle: 120°	Naval brass CuZn35Ni	MS59-120-10629
MS59-120	K-factor: 59, angle: 120°	AISI 316L	MS59-120-10630
MS59-120	K-factor: 59, angle: 120°	Titanium Grade 2	MS59-120-10631

6 VALVES

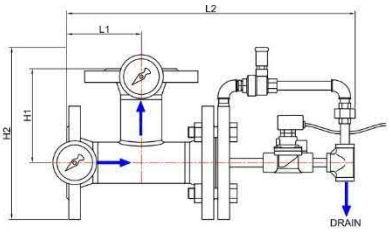
6.1 CONTROL VALVES

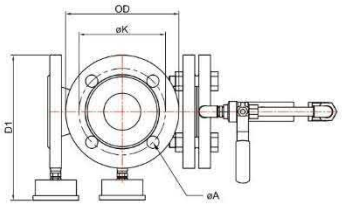
6.1.1 Model C-EL – electrically operated control valve

Model C control valves are designed to control water access to nozzle pipes on sprinkler style and low-pressure water mist systems. Model C control valves are installed in local application systems and deluge systems, in pipe system designed with PN16 pipes. The valves are operated by a 24VDC solenoid valve. The valve in – and outlet are placed in a 90-degree position for easy service and maintenance. The valves are made in Stainless steel 316 and come with flange connection. The valves can be supplied in varied sizes with different pressure loss curves depending on the water flow. Model C-EL valves FM Approved as a part of Model FIRE-KILL™ K6 System.

The valve can are delivered with different operation methods which includes manual release and electrical release through solenoid valve. The valves can be delivered with either normal 24VDC,11W solenoid valve or Impulse 24VDC,10W solenoid valve. As standard they are delivered with normal solenoid valve.

Gaskets and O-rings shall be replaced accordingly to their schedules. Basic gaskets shall be replaced every two years, and full gaskets shall be replaced every four years. Basic and Full gasket kits can be supplied by request.





Type	L1	L2	H1	H2
C-EL 50-50	109 mm	420 mm	137 mm	251 mm
C-EL 2" – 2"	137 mm	449 mm	165 mm	251 mm
C-EL 80-80	132 mm	471 mm	167 mm	322 mm
C-EL 3" – 3"	190 mm	530 mm	225 mm	325 mm
Type	D1	OD	øK	øA
C-EL 50-50	212 mm	165 mm	125 mm	4 x ø18 mm
C-EL 2" – 2"	212 mm	165 mm	125 mm	4 x ø18 mm
C-EL 80-80	250 mm	200 mm	160 mm	8 x ø18 mm
C-EL 3" – 3"	250 mm	200 mm	160 mm	8 x ø18 mm

Materials: AISI SS316L
Valve Design: Valve in angle design with flange and threads in- and outlet ports.
Working pressure: 0.5 bar – 16 bar
Test pressure: Factory tested to maximum 25 bar ½ hour.
Size: DN50/2", DN80/3"
Approval: FM Approved as a part of Model FIRE-KILL™ K6 System.

FM APPROVED

Product	Size	Variant	Sales and order no:
C-EL-50-50	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CEL-10401
C-EL-50-50-Impulse	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CEL-10402
C-EL-80-80	Size: 3", Inlet: DN80 Outlet DN80	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CEL-10403
C-EL-80-80-Impulse	Size: 3", Inlet: DN80 Outlet DN80	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CEL-10404

Product	Size	Variant	Sales and order no:
C-EL-2"-2"	Size: 2", Inlet: 2" NPT Outlet 2" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CEL-10405
C-EL-2"-2"-Impulse	Size: 2", Inlet: 2" NPT Outlet 2" NPT	Stainless steel 316 control valve with, drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CEL-10406
C-EL-3"-3"	Size: 3", Inlet: 3" NPT Outlet 3" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CEL-10425
C-EL-3"-3"-Impulse	Size: 3", Inlet: 3" NPT Outlet 3" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CEL-10426

Options			Sales and order no:
SIL2 Solenoid valve	Fits to all C-EL versions.	24 VDC	C-XY-10438
Dual solenoid kit	Fits to all C-EL versions.	24 VDC	C-XY-10439
Outlet pressure switch	Fits to all C-EL versions.	No	C-XY-10448

Spares	To be used for product types	Includes	Sales and order no:
Basic Gasket Kit for C-EL	For 2" / DN50 C-EL & C-EL-PR valves	1 x Valve Piston O-ring 1 x O-ring Lubricant	CEL-10418
Full Gasket Kit for C-EL	For 2" / DN50 C-EL & C-EL-PR valves	Basic gasket kit + 1 x Valve plate Gasket 1 x Valve Spring	CEL-10419
Basic Gasket Kit for C-EL	For 3" / DN80 C-EL & C-EL-PR valves	1 x Valve Piston O-ring 1 x O-ring Lubricant	CEL-10420
Full Gasket Kit for C-EL	For 3" / DN80 C-EL & C-EL-PR valves	Basic gasket kit + 1 x Valve plate Gasket 1 x Valve Spring	CEL-10421
Model C-EL Valve Wrench	For 3" / DN80 C-EL & C-EL-PR valves	1 x Wrench for use when servicing the 3"/DN80 valve core.	CEL-10422
Model C-EL Core	For 2" / DN50 C-EL & C-EL-PR valves	1 x Valve core for 2" / DN50 size valve. For full servicing instead of changing valve core seals.	CEL-10423
Model C-EL Core	For 3" / DN80 C-EL & C-EL-PR valves	1 x Valve core for 3" / DN80 size valve. For full servicing instead of changing valve core seals.	CEL-10424
Model C Impulse solenoid	For all C-EL and C-EL-PA	Solenoid valve including coil	C-XY-10449
Model C solenoid	For all C-EL and C-EL-PA	Solenoid valve including coil	C-XY-10450
Model C Coil std.	For all C-EL and C-EL-PA	Coil only	C-XY-10452
Model C Coil impulse	For all C-EL and C-EL-PA	Coil only	C-XY-10453
Pressure gauge rear connection	For all C-EL and C-EL-PA	0-25 Bar/0-350 PSI/63 mm/1/4"	C-PI-10460

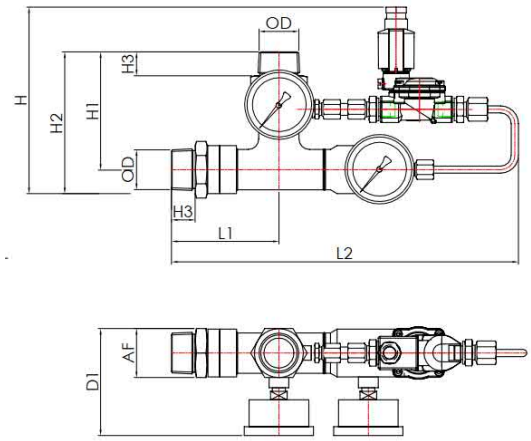
6.1.2 Model C-EL-B-25 electrically operated control valve

Model C-EL-B 25 control valves are designed to control water access to nozzle pipes on sprinkler style and low-pressure water mist systems. Model C control valves are installed in local application systems and deluge systems, in pipe system designed with PN16 pipes. The valves are operated by a 24VDC solenoid valve. The valve in – and outlet are placed in a 90-degree position for easy service and maintenance. The valves are made in Stainless steel 316 and come with flange connection. The valves can be supplied in varied sizes with different pressure loss curves depending on the water flow.

The valve is delivered with different operation methods which includes manual release and electrical release through solenoid valve. The valves are delivered with either normal 24VDC,18W solenoid valve or Impulse 24VDC,18 W solenoid valve. As standard they are delivered with normal solenoid valve.

Gaskets and O-rings shall be replaced accordingly to their schedules. Basic gaskets shall be replaced every two years, and full gaskets shall be replaced every four years. Basic and Full gasket kits can be supplied by request.

	C-EL-B-25-25 Threaded	C-EL-B-25-25 Grooved
L1	90 mm	104 mm
L2	291 mm	304 mm
H	156 mm	165 mm
H1	99 mm	113 mm
H2	118 mm	132 mm
H3	20 mm	34 mm
D1	90 mm	90 mm
OD	1" BSP/BSP-T/NPT	1"
AF	41 mm	41 mm



Materials: AISI SS316L
Valve Design: Valve in angle design with threaded or grooved inlet / outlet.
Working pressure: 0.5 bar – 16 bar
Test pressure: Factory tested to maximum 25 bar.
Size: DN25/1"
Approval: FM Pending

Product	Size	Variant	Sales and order no:
C-EL-B-50-50	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELB-13102

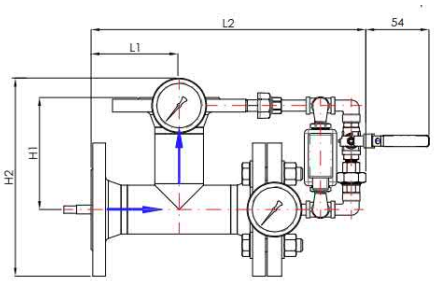
Spares	To be used for product types	Includes	Sales and order no:
Basic service kit	CELB-25	O-Rings and lubricants	CELB-13132
Full service kit	CELB-25	O-Rings, seat, spring and lubricants	CELB-13133
Valve core	CELB-25	Complete core, spring, O-ring and lubricants	CELB-13130

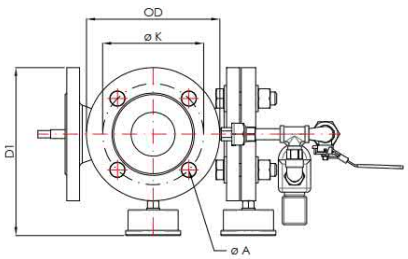
6.1.3 Model C-EL-B – electrically operated control valve

Model C Type B control valves are designed to control water access to nozzle pipes on sprinkler style and low-pressure water mist systems. Model C control valves are installed in local application systems and deluge systems, in pipe system designed with PN16 pipes. The valves are operated by a 24VDC solenoid valve. The valve in – and outlet are placed in a 90-degree position for easy service and maintenance. The valves are made in Stainless steel 316 and come with flange connection. The valves can be supplied in varied sizes with different pressure loss curves depending on the water flow.

The valves are delivered with different operation methods which includes manual release and electrical release through solenoid valve. The valves can be delivered with either normal 24VDC,11W solenoid valve or Impulse 24VDC,10W solenoid valve. As standard they are delivered with normal solenoid valve.

Gaskets and O-rings shall be replaced accordingly to their schedules. Basic gaskets shall be replaced every two years, and full gaskets shall be replaced every four years. Basic and Full gasket kits can be supplied by request.





Type	L1	L2	H1	H2
C-EL-B 50-50	109 mm	335 mm	137 mm	245 mm
C-EL-B 2" – 2"	138 mm	335 mm	137 mm	245 mm
C-EL-B 80-80	137 mm	380 mm	167 mm	330 mm
C-EL-B 3" – 3"	195 mm	413 mm	225 mm	330 mm
Type	D1	OD	øK	øA
C-EL-B 50-50	215 mm	165 mm	125 mm	4 x ø18 mm
C-EL-B 2" – 2"	215 mm	165 mm	125 mm	4 x ø18 mm
C-EL-B 80-80	250 mm	200 mm	160 mm	8 x ø18 mm
C-EL-B 3" – 3"	250 mm	200 mm	160 mm	8 x ø18 mm

Materials: AISI SS316L
Valve Design: Valve in angle design with flange and threads in- and outlet ports.
Working pressure: 0.5 bar – 16 bar
Test pressure: Factory tested to maximum 25 bar ½ hour.
Size: DN50/2", DN80/3"
Approval: FM Pending

Product	Size	Variant	Sales and order no:
C-EL-B-50-50	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELB-13102
C-EL-B-50-50-Impulse	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELB-13103
C-EL-B-80-80	Size: 3", Inlet: DN80 Outlet DN80	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELB-13106
C-EL-B-80-80-Impulse	Size: 3", Inlet: DN80 Outlet DN80	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELB-13107
C-EL-2"-2"	Size: 2", Inlet: 2" NPT Outlet 2" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELB-13104
C-EL-2"-2"-Impulse	Size: 2", Inlet: 2" NPT Outlet 2" NPT	Stainless steel 316 control valve with, drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELB-13105
C-EL-3"-3"	Size: 3", Inlet: 3" NPT Outlet 3" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELB-13108
C-EL-3"-3"-Impulse	Size: 3", Inlet: 3" NPT Outlet 3" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELB-13109

Options			Sales and order no:
SIL2 Solenoid valve	Fits to all C-EL versions.	24 VDC	C-XY-10438
Dual solenoid kit	Fits to all C-EL versions.	24 VDC	C-XY-10439
Outlet pressure switch	Fits to all C-EL versions.	No	C-XY-10448

Spares	To be used for product types	Includes	Sales and order no:
Basic Gasket Kit for C-EL	For 2" / DN50 C-EL & C-EL-PR valves	1 x Valve Piston O-ring 1 x O-ring Lubricant	CEL-10418
Full Gasket Kit for C-EL	For 2" / DN50 C-EL & C-EL-PR valves	Basic gasket kit + 1 x Valve plate Gasket 1 x Valve Spring	CEL-10419
Basic Gasket Kit for C-EL	For 3" / DN80 C-EL & C-EL-PR valves	1 x Valve Piston O-ring 1 x O-ring Lubricant	CEL-10420
Full Gasket Kit for C-EL	For 3" / DN80 C-EL & C-EL-PR valves	Basic gasket kit + 1 x Valve plate Gasket 1 x Valve Spring	CEL-10421
Model C-EL Valve Wrench	For 3" / DN80 C-EL & C-EL-PR valves	1 x Wrench for use when servicing the 3"/DN80 valve core.	CEL-10422
Model C-EL Core	For 2" / DN50 C-EL & C-EL-PR valves	1 x Valve core for 2" / DN50 size valve. For full servicing instead of changing valve core seals.	CEL-10423
Model C-EL Core	For 3" / DN80 C-EL & C-EL-PR valves	1 x Valve core for 3" / DN80 size valve. For full servicing instead of changing valve core seals.	CEL-10424
Model C Impulse solenoid	For all C-EL and C-EL-PA	Solenoid valve including coil	C-XY-10449
Model C solenoid	For all C-EL and C-EL-PA	Solenoid valve including coil	C-XY-10450
Model C Coil std.	For all C-EL and C-EL-PA	Coil only	C-XY-10452
Model C Coil impulse	For all C-EL and C-EL-PA	Coil only	C-XY-10453
Pressure gauge rear connection	For all C-EL and C-EL-PA	0-25 Bar/0-350 PSI/63 mm/1/4"	C-PI-10460

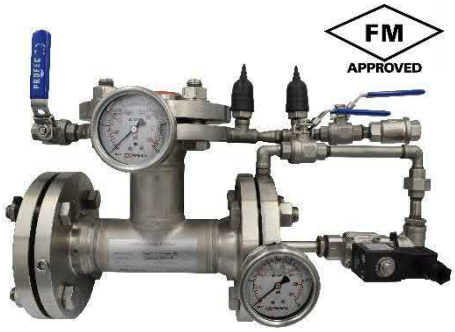
6.2 Pre-Action Valves

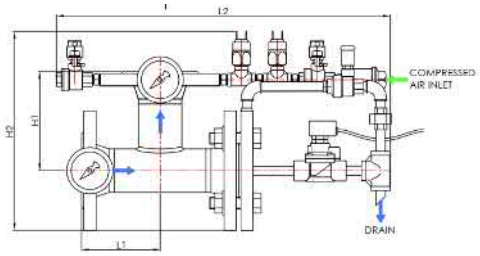
6.2.1 Model C-EL-PR – Pre-action valves

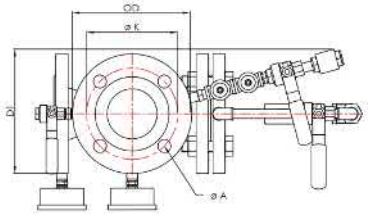
The VID FIRE-KILL Model C-EL-PA Pre-Action Control Valves are a series of robust and reliable pre-action, angle positioned, pilot controlled valves created entirely in Stainless Steel (316L) capable of functioning under harsh conditions and designed to be connected to systems where no corrosion is allowed. The inclusion of the Model C-EL-PA Pre-Action trim, allows the system to monitor dry-pipe pressure drops, creating an additional means of false alarm prevention.

The Model C-EL-PA Control Valve features smaller external trim than other conventional pre-action valves, making the valve easy to install and limits the end-product costs, and greatly diminishes the spatial requirements of such valves.
The Valve can easily be disassembled for easy maintenance and refurbishment, without removing the valve housing from the connected system.

Gaskets and O-rings shall be replaced accordingly to their schedules. Basic gaskets shall be replaced every two years, and full gaskets shall be replaced every four years. Basic and Full gasket kits can be supplied by request.







Type	L1	L2	H1	H2
C-ELPA 50-50	109 mm	465 mm	137 mm	299 mm
C-ELPA 2" – 2"	137 mm	465 mm	165 mm	299 mm
C-ELPA 80-80	132 mm	474 mm	167 mm	349 mm
C-ELPA 3" – 3"	190 mm	532 mm	225 mm	349 mm
Type	D1	OD	øK	øA
C-ELPA 50-50	226 mm	165 mm	125 mm	4 x ø18 mm
C-ELPA 2" – 2"	226 mm	165 mm	125 mm	4 x ø18 mm
C-ELPA 80-80	253 mm	200 mm	160 mm	8 x ø18 mm
C-ELPA 3" – 3"	253 mm	200 mm	160 mm	8 x ø18 mm

Materials: AISI SS316L
Valve Design: Valve in angle design with flange and thread in- and outlet ports.
Working pressure: 0.5 bar – 16 bar
Working air pressure: 4 – 6 bar
Alarm pressure value: 2.5 – 3 bar
Pressure drop signal: Relay NO or NC.
Size: DN50/2", DN80/3"
Approval: FM Approved as a part of Model FIRE-KILL™ Data centre system.

FM
APPROVED

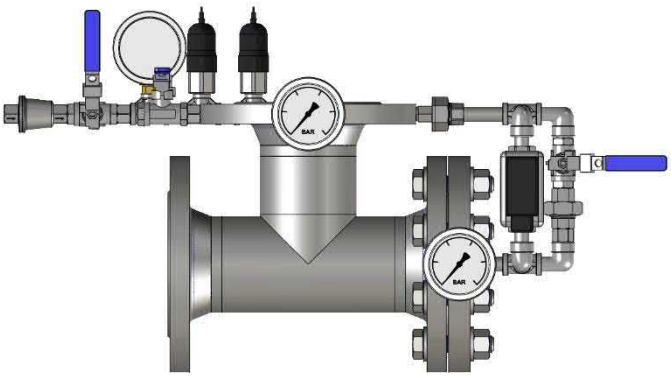
Product	Size	Variant	Sales and order no:
C-ELPA-50-50	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELPA-10440
C-ELPA-50-50-Impulse	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELPA-10441
C-ELPA-80-80	Size: 3", Inlet: DN80 Outlet DN80	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELPA-10442
C-ELPA-80-80-Impulse	Size: 3", Inlet: DN80 Outlet DN80	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELPA-10443
C-ELPA-2"-2"	Size: 2", Inlet: 2" NPT Outlet 2" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELPA-10444
C-ELPA-2"-2"-Impulse	Size: 2", Inlet: 2" NPT Outlet 2" NPT	Stainless steel 316 control valve with, drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELPA-10445
C-ELPA-3"-3"	Size: 3", Inlet: 3" NPT Outlet 3" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELPA-10446

Product	Size	Variant	Sales and order no:
C-ELPA-3"-3"-Impulse	Size: 3", Inlet: 3" NPT Outlet 3" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELPA-10447

Options			Sales and order no:
SIL2 Solenoid valve	Fits to all C-EL versions.	24 VDC	C-XY-10438
Dual solenoid kit	Fits to all C-EL versions.	24 VDC	C-XY-10439
Outlet pressure switch	Fits to all C-EL versions.	No	C-XY-10448

Spares	To be used for product types	Includes	Sales and order no:
Basic Gasket Kit for C-EL	For 2" / DN50 C-EL & C-EL-PR valves	1 x Valve Piston O-ring 1 x O-ring Lubricant	CEL-10418
Full Gasket Kit for C-EL	For 2" / DN50 C-EL & C-EL-PR valves	Includes: Basic gasket kit + 1 x Valve plate Gasket 1 x Valve Spring	CEL-10419
Basic Gasket Kit for C-EL	For 3" / DN80 C-EL & C-EL-PR valves	1 x Valve Piston O-ring 1 x O-ring Lubricant	CEL-10420
Full Gasket Kit for C-EL	For 3" / DN80 C-EL & C-EL-PR valves	Basic gasket kit + 1 x Valve plate Gasket 1 x Valve Spring	CEL-10421
Model C-EL Valve Wrench	For 3" / DN80 C-EL & C-EL-PR valves	1 x Wrench for use when servicing the 3"/DN80 valve core.	CEL-10422
Model C-EL Core	For 2" / DN50 C-EL & C-EL-PR valves	1 x Valve core for 2" / DN50 size valve. For full servicing instead of changing valve core seals.	CEL-10423
Model C-EL Core	For 3" / DN80 C-EL & C-EL-PR valves	1 x Valve core for 3" / DN80 size valve. For full servicing instead of changing valve core seals.	CEL-10424
Model C Impulse solenoid	For all C-EL and C-EL-PA	Solenoid valve including coil	C-XY-10449
Model C solenoid	For all C-EL and C-EL-PA	Solenoid valve including coil	C-XY-10450
Model C Coil std.	For all C-EL and C-EL-PA	Coil only	C-XY-10452
Model C Coil impulse	For all C-EL and C-EL-PA	Coil only	C-XY-10453
Pressure gauge rear connection	For all C-EL and C-EL-PA	0-25 Bar/0-350 PSI/63 mm/1/4"	C-PI-10460
Pressure gauge bottom connection	For C-EL-PA	0-25 Bar/0-350 PSI/63 mm/1/4"	C-PI-10461

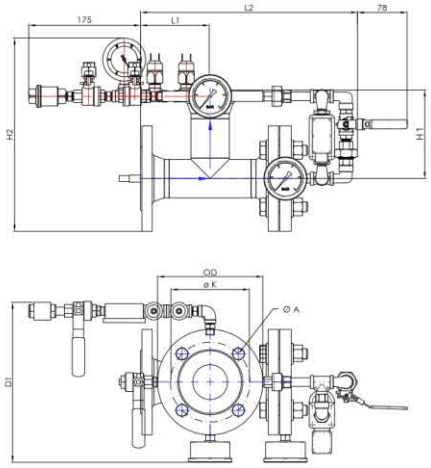
6.2.2 Model C-EL-PR-B – Pre-action valves



The VID FIRE-KILL Model C-EL-PA Type B Pre-Action Control Valves are a series of robust and reliable pre-action, angle positioned, pilot controlled valves created entirely in Stainless Steel (316L) capable of functioning under harsh conditions and designed to be connected to systems where no corrosion is allowed. The inclusion of the Model C-EL-PA Pre-Action trim, allows the system to monitor dry-pipe pressure drops, creating an additional means of false alarm prevention.

The Model C-EL-PA Control Valve features smaller external trim than other conventional pre-action valves, making the valve easy to install and limits the end-product costs, and greatly diminishes the spatial requirements of such valves.
The Valve can easily be disassembled for easy maintenance and refurbishment, without removing the valve housing from the connected system.

Gaskets and O-rings shall be replaced accordingly to their schedules. Basic gaskets shall be replaced every two years, and full gaskets shall be replaced every four years. Basic and Full gasket kits can be supplied by request.



Type	L1	L2	H1	H2
C-ELPA-B 50-50	109 mm	340 mm	137 mm	303 mm
C-ELPA-B 2" – 2"	138 mm	370 mm	166 mm	303 mm
C-ELPA-B 80-80	130 mm	384 mm	150 mm	500 mm
C-ELPA-B 3" – 3"	188 mm	442 mm	208 mm	500 mm
Type	D1	OD	øK	øA
C-ELPA-B 50-50	250 mm	165 mm	125 mm	4 x ø18 mm
C-ELPA-B 2" – 2"	250 mm	165 mm	125 mm	4 x ø18 mm
C-ELPA-B 80-80	250 mm	200 mm	160 mm	8 x ø18 mm
C-ELPA-B 3" – 3"	250 mm	200 mm	160 mm	8 x ø18 mm

Materials: AISI SS316L
Valve Design: Valve in angle design with flange and thread in- and outlet ports.
Working pressure: 0.5 bar – 16 bar
Working air pressure: 4 – 6 bar
Alarm pressure value: 2.5 – 3 bar
Pressure drop signal: Relay NO or NC.
Size: DN50/2", DN80/3"

Product	Size	Variant	Sales and order no:
C-ELPA-50-50	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELPA-10440
C-ELPA-50-50-Impulse	Size: 2", Inlet: DN50 Outlet DN50	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELPA-10441
C-ELPA-80-80	Size: 3", Inlet: DN80 Outlet DN80	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELPA-10442
C-ELPA-80-80-Impulse	Size: 3", Inlet: DN80 Outlet DN80	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELPA-10443

Product	Size	Variant	Sales and order no:
C-ELPA-2"-2"	Size: 2", Inlet: 2" NPT Outlet 2" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELPA-10444
C-ELPA-2"-2"-Impulse	Size: 2", Inlet: 2" NPT Outlet 2" NPT	Stainless steel 316 control valve with, drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELPA-10445
C-ELPA-3"-3"	Size: 3", Inlet: 3" NPT Outlet 3" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x solenoid valve.	CELPA-10446
C-ELPA-3"-3"-Impulse	Size: 3", Inlet: 3" NPT Outlet 3" NPT	Stainless steel 316 control valve with drain, 2 x pressure gauges, 1 x impulse solenoid valve.	CELPA-10447

Options			Sales and order no:
SIL2 Solenoid valve	Fits to all C-EL versions.	24 VDC	C-XY-10438
Dual solenoid kit	Fits to all C-EL versions.	24 VDC	C-XY-10439
Outlet pressure switch	Fits to all C-EL versions.	No	C-XY-10448

Spares	To be used for product types	Includes	Sales and order no:
Basic Gasket Kit for C-EL	For 2" / DN50 C-EL & C-EL-PR valves	1 x Valve Piston O-ring 1 x O-ring Lubricant	CEL-10418
Full Gasket Kit for C-EL	For 2" / DN50 C-EL & C-EL-PR valves	Includes: Basic gasket kit + 1 x Valve plate Gasket 1 x Valve Spring	CEL-10419
Basic Gasket Kit for C-EL	For 3" / DN80 C-EL & C-EL-PR valves	1 x Valve Piston O-ring 1 x O-ring Lubricant	CEL-10420
Full Gasket Kit for C-EL	For 3" / DN80 C-EL & C-EL-PR valves	Basic gasket kit + 1 x Valve plate Gasket 1 x Valve Spring	CEL-10421
Model C-EL Valve Wrench	For 3" / DN80 C-EL & C-EL-PR valves	1 x Wrench for use when servicing the 3"/DN80 valve core.	CEL-10422
Model C-EL Core	For 2" / DN50 C-EL & C-EL-PR valves	1 x Valve core for 2" / DN50 size valve. For full servicing instead of changing valve core seals.	CEL-10423
Model C-EL Core	For 3" / DN80 C-EL & C-EL-PR valves	1 x Valve core for 3" / DN80 size valve. For full servicing instead of changing valve core seals.	CEL-10424
Model C Impulse solenoid	For all C-EL and C-EL-PA	Solenoid valve including coil	C-XY-10449
Model C solenoid	For all C-EL and C-EL-PA	Solenoid valve including coil	C-XY-10450
Model C Coil std.	For all C-EL and C-EL-PA	Coil only	C-XY-10452
Model C Coil impulse	For all C-EL and C-EL-PA	Coil only	C-XY-10453
Pressure gauge rear connection	For all C-EL and C-EL-PA	0-25 Bar/0-350 PSI/63 mm/1/4"	C-PI-10460
Pressure gauge bottom connection	For C-EL-PA	0-25 Bar/0-350 PSI/63 mm/1/4"	C-PI-10461

6.3 Alarm Check Valves for wet pipe systems.

6.3.1 Model WAC - wet alarm check valve

Model WAC Valves are designed for installation in wet pipe sprinkler and low pressure water mist systems. The valves are available in DN 50 & DN 40 sizes for PN 16 bar working pressure. The valves perform as clapper check with electric flow alarm. Flow alarm is inductive without direct contact to moving parts. The valves have built in alarm test, drain and electrical anti false alarm, in the form of a in time delay relay (8 sec) to avoid false alarms from water pressure surges in the pipe system. The valves are designed as wafer style.

The valves come in a type A and Type B version. Type A version detects flow rates of 5 l/min while Type B version detects flow rates of 35 l/min.

Model WAC Type B valves are FM Approved as a part of Model FIRE-KILL™ OH-OS and OH-VSO System.

Type	L	L1	H1	H2	H3	OD	ID	D1
WAC DN 40	105 mm	153 mm	288 mm	130 mm	64 mm	94 mm	42 mm	146
WAC DN 50	112 mm	160 mm	300 mm	130 mm	64 mm	106 mm	54 mm	160

Materials: Bronze
Valve Design: Valve is wafer Style design to be installed between flanges.
Working pressure: 0.5 bar – 16 bar
Test pressure: Factory tested to maximum 25 bar ½ hour.

FM APPROVED

	TYPE A	**TYPE B**
Flow rate detection:	15 l/min	35 l/min

Approval: Model WAC Type B is FM Approved as a part of Model FIRE-KILL™ OH-OS and OH-VSO System.

Product	Variant:	Sales and order no:
Model WAC Type A (15 l/min)	DN50	WAC-10407
Model WAC Type A(15 l/min)	DN40	WAC-10408
Model WAC Type B (35 l/min)	DN50	WAC-10438
Model WAC Type B(35 l/min)	DN40	WAC-10439
Spares		
Gasket kit	DN50	WAC-10409
Gasket kit	DN40	WAC-10410
Inductive alarm kit (house & sensor)	DN40 & DN 50	WAC-10411
Spindel & hangers	DN 50	WAC-10412
Spindel & hangers	DN 40	WAC-10413
Anti-false alarm unit (print)	DN 40 & DN 50	WAC-10414
DN50 – DN65 installation adapters	DN 65 (1 set is 8 pcs for 1 valve)	WAC-10429
Pressure gauge bottom connection	0-25 Bar/0-350 PSI/63 mm/1/4"	C-PI-10461

6.3.2 Model WAC – isolation butterfly valve

Model WAC Isolation butterfly valve is fitted when there is a requirement to isolate the zone. The valve is supplied with a limit switch NO/NC for alarm if the valve is in closed position. Dimension to be specified.

Product	Variant:	Sales and order no:
Model butterfly with switch	DN50 / DN40	WAC-10440

6.4 ONE-SHOT DELUGE VALVES.

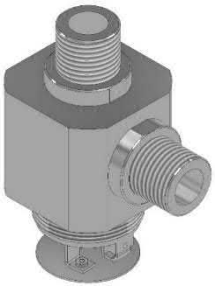
6.4.1 Model SUFA100 – Thermal and electrical activated one-shot valves.

VID Model SUFA 100 control valves are a series of small robust one shot valves, which are designed for control of water from wet supply pipes to nozzle pipes with water spray or low pressure water mist systems. For thermal activation, the nominal release temperature should be specified at order.

Materials: Brass CuZn58
Finish: NiSn.
KV-Factor (SUFA 1x): 70 liter/minute/√bar ± 3%, measured with 1m ¾" pipes on both outlet ports.
KV-Factor (SUFA 2x): 97 liter/minute/√bar ± 3%, measured with 1m ¾" pipes on both outlet ports.
Valve Design: Valve in angel/tee design with one/two ¾" BSP inline outlet ports and one ¾" centrally positioned inlet port.
Working pressure: 0.5 bar – 10 bar
Test pressure: Factory tested to maximum 28 bar ½ hour.
Operation bulb temp.: 57,68,93°C

Product	Variant:	Sales and order no:
Model SUFA 100-1X	SUFA valve with one outlet port and heat activation	SUFA-10415
Model SUFA 100-2X	SUFA valve with two outlet ports and heat activation	SUFA-10416
Model SUFA 100-1X-EL	SUFA valve with one outlet port and heat and electric activation	SUFA-10417
Model SUFA 100-2X-EL	SUFA valve with two outlet ports and heat and electric activation	SUFA-10418

6.5 OH PILOT VALVE



The FIREKILL™ Low Pressure Water pilot valve OH-PILOT is an automatic, pendent low-pressure water mist valve ideal for installation where there are typically baffle ceilings. The OH-Pilot valve is used above the baffle ceiling with a flexible connection to an open OH nozzle installed in/below the baffle ceiling.

Materials: Brass MS58
Finish: NiSn.
KV-Factor 53 liter/minute/√bar ± 3%,
Valve Design: Valve in angel design with one ½" inline ports and one ½" outlet port.
Working pressure: 2 bar – 16 bar
Test pressure: Factory tested to 30 bar.
Operation bulb temp.: 57°C, 68°C, 79°C, 93°C.
Weight.: 0.78 Kg

Product	Variant:	Sales and order no:
OH Pilot valve	For OHO Nozzles	OH-PILOT-12235

7 STRAINERS MODEL F

The VID FIRE-KILL Model F is a patented system of compact high capacity in-line style filters, for protection of small openings and orifices and small capacity filters and clearances against clogging, and for protection against abrasive wear of internal surfaces in pipe systems transporting liquids. Also with a unique feature of either visual or electronic alarm for when it's time to clean it.
The Model F filters have been tested with full contamination load in water to the International Maritime Organization (IMO) clogging test standard for water mist systems MSC 1165 and IMO MSC 265(84).
The Model F is to be used with all VID FIRE-KILL open and automatic nozzles to ensure that no clogging will occur.

7.1 BASIC STRAINER MODEL F

7.1.1 Model F – Basic strainer no accessories

The Model F Strainer in basic version is supplied without any visual and/or electronic alarm.
It is a plain strainer which shall be installed between two DIN PN16 flanges.

Type	H2	OD	øK	øA
DN50	220 mm	165 mm	125 mm	4 x ø 18 mm
DN80	300 mm	200 mm	160 mm	8 x ø 18 mm

Product	Description	Sales and order no:
DN 50	Basic, AISI 316, 1000 micron filter	F-10800
DN 80	Basic, AISI 316, 1000 micron filter	F-10801

7.1.2 Model F –Strainer with differential pressure gauge and switch

The Model F Strainer with differential pressure gauge and switch is supplied with visual and electronic indication measuring the differential pressure between the inlet and the outlet. This will indicate if the strainer has to be removed for maintenance. The strainer shall be installed between two DIN PN16 flanges.

Type	H1	H2	OD	L1	øK	øA	øG
DN50	204mm	220mm	165mm	165mm	125mm	4xø18mm	79 mm
DN80	384mm	300mm	200mm	233mm	160mm	8xø18mm	79 mm

7.1.2.1 Land applications

Product	Description	Sales and order no:
DN 50	Basic with differential pressure gauge and switch, AISI 316, 1000 micron filter	F-10804
DN 80	Basic with differential pressure gauge and switch, AISI 316, 1000 micron filter	F-10805

7.1.2.2 Marine applications

Product	Description	Sales and order no:
DN 50	Basic with differential pressure gauge and switch, AISI 316, 310 micron filter	F-10808
DN 80	Basic with differential pressure gauge and switch, AISI 316, 310 micron filter	F-10809

7.2 ISOLATION BUTTERFLY VALVE FOR MODEL F

7.2.1 Model F – isolation butterfly valve

The Model F isolation butterfly valve is an add-on to the Model F filter. The dimension shown below is the dimensions when the butterfly valve is fitted to the filter

Type	H2	L2	OD	øK	øA
DN50	312 mm	232 mm	165 mm	125 mm	4 x ø 18 mm
DN80	392 mm	232 mm	200 mm	160 mm	8 x ø 18 mm

Product	Description	Sales and order no:
DN 50	Butterfly valve, AISI 316, DIN PN 16, 1 set is 2 valves	F-10806
DN 80	Butterfly valve, AISI 316, DIN PN 16, 1 set is 2 valves	F-10807

8 Detection Systems

8.1 Flame detectors

8.1.1 8.1.1 Type DeFlameTec, model VFK-FD1 Flame detector.

The CE marked DeFlameTec flame detector is a patented, robust and reliable flame detector which has been successfully tested to the EN54-10 for flame detectors. The Deflametec flame detector is an ATEX class 2 approved flame detector.

DeFlameTec detectors provide the means of reducing risks of false alarms to a minimum. DeFlameTec detects fires exclusively from the narrow spectral range, which equals the light radiated from carbon oxidation.

Further, a time delay can be set so the alarm signal first is transferred after it has seen a flame for a certain time.
The DeFlameTec detector is housed in a stainless steel casing, which is water and dust proof for IP class 67.
All output signals are supplied from either Normally Open (NO) or Normally Closed (NC) signal.

Material house: AISI 316L
Power supply: 24VDC
Housing: IP67
Output Signal: NO/NC
Angle Horizontal: 140°
Angle Vertical: 140°
Visibility: Approximately 30m
Delay options: FD1: 3 impulses in 30 seconds, FD2: 50 impulses in 5 seconds, FD3: 5 impulses in 1 second
FD4: Customer defined.

Product	Variant:	Sales and order no:
VFK-FD1-NO	Normally Open (NO)	DEFLAMETEC-10701
VFK-FD1-NC	Normally Closed (NC)	DEFLAMETEC-10702
VFK-FD2-NO	Normally Open (NO)	DEFLAMETEC-10704
VFK-FD2-NC	Normally Closed (NC)	DEFLAMETEC-10705
VFK-FD3-NO	Normally Open (NO)	DEFLAMETEC-10706
VFK-FD3-NC	Normally Closed (NC)	DEFLAMETEC-10707
VFK-FD4-NO	Normally Open (NO)	DEFLAMETEC-10708
VFK-FD4-NC	Normally Closed (NC)	DEFLAMETEC-10709

8.2 Heat detectors

8.2.1 8.2.1 Model DA-1 – Thermal "Rate of Rise" detector.

The VID FIRE-KILL Model DA1 system is an automatic, reliable and safe detection and activation system.
The system consists of a small electrical panel, a power-supply and a thermocouple.
The electrical panel is powered with 12V DC / 2A, and has a built in 24 hour back-up power supply. The power supply, which comes with the Model DA1, is a 230V AC – 12V DC power supply.
The thermocouple is 5 meter long, but can be made in lengths according to the customer's wish. The thermocouple should be placed, where the risk of fire is highest, or in the centre of the room. In case of fire, the panel can send a 12VDC signal as well as one NO/NC relay signal.
Thermocouple: Type K
Temperature area: 50-100 °C
Standard ROR value: 0.25°C/sec over 3 seconds
Power supply: 1 x 12VDC
Alarm Outputs: 1 x relay signal NC

Product	Variant – Alarm temperature	Sales and order no:
Model DA-1	50°C	DA1-10710
Model DA-1	60°C	DA1-10711
Model DA-1	70°C	DA1-10712
Model DA-1	80°C	DA1-10713
Model DA-1	90°C	DA1-10714
Model DA-1	100°C	DA1-10715

9 ACCESSORIES

This section incudes various accessories available for the different products such as special tools, cabinets etc.

9.1 OH NOZZLE GUARD

The FIRE KILLTM Model OH-RNG is a series of nozzle guards designed for the protection of the automatic Model OH bulbs and related nozzle components. The Model OH-RNG is to be used, when additional protection of sensitive components is required for Model OH nozzles. The nozzle guard is a combined OH-2RT rosette and a guard.

General Description	
Material	SS 316
Weight	0,046 Kg
Standard finish	Natural or RAL 9010
Other finish	Other RAL

Product	Material	Sales and order no:
Model OH-RNG	Stainless steel polished	OHRNG-10089
Model OH-RNG	Stainless steel White RAL 9010	OHRNG-10088

9.2 OH ROSETTE

9.2.1 Model Fire-Kill™ OH-ALR2TH rosette for type OH Anti-Ligature automatic nozzles

The stainless steel rosette forms a fine finish between the semi concealed nozzles and the ceiling and wall surfaces. The rosette is available in various finishes and RAL colours. The rosette is screwed on the nozzles by thread connection. The rosette for Anti-Ligature nozzles is fixed with four screw to lock the rosette to the ceiling.

Product	Variant cover plate	Sales and order no:
Model OH-ALRTH	Stainless steel plating	OHALRTH-12232
Model OH-ALRTH	RAL 9010 (pure white)	OHALRTH-12234

9.2.2 Model Fire-Kill™ OH-R3T rosette for type OH automatic nozzles

The Model OH-R3-T is made in IXEF Back plane and stainless steel cover plate and can be supplied with its natural stainless-steel finish or with any RAL colour finish. This allows the rosette and nozzle to easily blend into the surroundings. The cover plate is with snap on after the back plane is fixed. The screws if required will be hidden behind the cover plate.

Product	Variant cover plate	Sales and order no:
Model OH-R3-T	OH R3T Back plane with cover plate Chrome	OHR3T-12220
Model OH-R3-T	OH R3T Back plane with cover plate RAL9010	OHR3T-12222
Model OH-R3-T	OH R3T Back plane with cover plate Other RAL	OHR3T-12224
Model OH-R3-T	OH R3T Back plane with cover plate Foil	OHR3T-12226
Model OH-R3-T	OH R3T Fixing bracket	OHR3T-12228

9.3 TOOLS

9.3.1 9.1.1 Model C80 Wrench

The FIREKILL™ C-Wrench is a wrench created for servicing the core part in Model C-EL and C-EL-PA 3"/DN80 valves.

Product	Variant:	Sales and order no:
C-EL Valve Wrench 3"/DN80	C-EL80 / C-EL-PA80	CEL-10422

9.3.2 Model C80 Core Extraction Tool

The FIREKILL™ Extraction tool is a tool designed for servicing the core part in Model C-EL and C-EL-PA 3"/DN80 valves.

Product	Variant:	Sales and order no:
CEL-80 Core removal tool	C-EL80 / C-EL-PA80	CEL80-TOOL-10490

9.3.3 Model C50 Core Extraction Tool

The FIREKILL™ Extraction tool is a tool designed for servicing the core part in Model C-EL and C-EL-PA 2"/DN50 valves.

Product	Variant:	Sales and order no:
CEL-50 Core removal tool	C-EL50 / C-EL-PA50	CEL50-TOOL-10491

9.3.4 Model CELB-25 Core Extraction Tool

The FIREKILL™ Extraction tool is a tool designed for servicing the core part in Model CELB-25 valves.

Product	Variant:	Sales and order no:
CELB-25 Core removal tool	CELB-25	CELB-13135

9.3.5 Model CELB-25 End-cap spanner.

The FIRE KILL™ Endcap spanner is a tool designed for servicing the core part in Model CELB-25 valve.

Product	Variant:	Sales and order no:
CELB-25 End-cap spanner	CELB-25	CELB-13134

9.3.6 Model OH-S42 installation nozzle spanner for type OH automatic nozzles

The OH-S42 is an installation tool for the OH-automatic nozzle series and should be used for nozzle installations in walls and ceilings.

Product	Material	Sales and order no:
Model OH-S42	C35 Chrome plated	OHS42-10096

9.4 Flow test unit

The FIRE KILLTM FLT Unit has been designed to assist inspectors when undertaking the single nozzle flow alarm testing of the WAC Alarm valve. The FLT Unit is calibrated to the flows from the system low pressure water mist nozzles. The specific FLT unit size should be selected based on the low-pressure water mist nozzle having the lowest K-value. The unit can also be used as a drain connection to evacuate air in the system to avoid air pockets.

General description	
Minimum water pressure	2 bar
Maximum water pressure	16 bar
K-factor (metric)	Depending on nozzle fitted
Material housing	Naval brass
Material sight glass	Acryl
Inlet	½" BSP / BSP-T / NPT
Outlet	½" BSP / BSP-T / NPT
Finish	NiSn plating
Weight	0,28 Kg

Type	Nozzle K-factor (metric)	FLT K-factor (metric)	Orifice dia. (mm)
FLT-7	7,0 – 10,9	7,0	Ø 4,20
FLT-11	11,0-16,9	11,1	Ø 4,90
FLT-17	17,0-23,9	17,0	Ø 6,30

Product	Material	Sales and order no:
Model OH-FLT-7	Naval brass NiSn plated	OHFLT-10090
Model OH-FLT-11	Naval brass NiSn plated	OHFLT-10091
Model OH-FLT-17	Naval brass NiSn plated	OHFLT-10092

9.5 Cabinet for spare OH Nozzles

9.5.1 2.6.1 Model FireKill™ OH-SPCA Cabinet for spare OH automatic nozzles

The OH-SPCA is a cabinet for spare OH-automatic nozzle series as required by NFPA 13 and EN-12845.
The OH-SPCA can accommodate 16 pcs OH Nozzles and 1 Pcs OH-S42Nozzle spanner.

Product	Material	Sales and order no:
Model OH-SPCA	Stainless steel, powder coated	OHSPCA-10099

9.6 Test manifold

9.6.1 Test manifold with nozzles

The FireKill™ Automatic Nozzle Test Manifold incorporates 6 pcs OH Test Nozzles. To simplify the requirement for test of nozzles as required by EN12845 nozzles to be tested every 25 years. VID Fire-Kill have decided to specify 2 nozzles every 5 years for land based installations to increase the quality level and minimize the risk for non-operating systems. The unit is complete with 2 x ¼" ball valves, 1 x pressure gauge and 6 x OH Test nozzles.

Product	Material	Sales and order no:
Model OHTM	Brass, NiSn Coated	OHTM-10098

9.7 Dry nozzle pipe for OH in frost area.

The FireKill™ Dry Nozzle Unit (OH-DPD) can be used in connection with the FIRE-KILL OH series of low pressure water mist nozzles.
The OH-DPD Unit is typically installed on wet pipe systems where pipe connections are exposed to freezing conditions such as low pressure water mist drops from wet pipe systems into freezers or horizontal piping extensions to protected unheated areas, typically balconies in cold climate.
The OH-DPD unit has gone through an extensive component test in accordance with the requirements for low pressure water mist nozzles as described in IMO Re. A.800. The test is carried out in an ISO 17025 accredited laboratory.

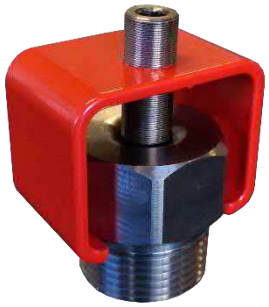
Type: Pendent/Horizontal
Materials: Brass / stainless steel
Nozzle body finish: NiSn / Natural
Water pressure: 4 – 16 bars
K-factor: Depending on nozzle
Connection/thread: ½" BSP or ½" NPT
Pressure drop 0,5 Bar

NOTE: The sales and order no. does not include the OH Nozzle. This must be specified separate.

Product	Material	Sales and order no:
OH-DPD-150	Brass + NiSn and Stainless steel	OH-DPD-10041
OH-DPD-300	Brass + NiSn and Stainless steel	OH-DPD-10042
OH-DPD-450	Brass + NiSn and Stainless steel	OH-DPD-10043
OH-DPD-600	Brass + NiSn and Stainless steel	OH-DPD-10044
OH-DPD-750	Brass + NiSn and Stainless steel	OH-DPD-10045

9.8 Pressure test unit for Model HS

The Model IC2-HS is used to pressure-test an entire water spray firefighting system including VID FIRE-KILL HS high velocity nozzles and nozzle pipes connecting the nozzles to the rest of the system (E.g. pumps, risers etc.).
Model IC2-HS are as standard supplied with red color to ensure that it is visible from distance. This is to ensure that no units are left on the nozzles after a pressure test have been conducted.
The Model IC2-HS unit has been designed to be able to be installed fast and safe without the use of a lot of force. The unit has furthermore been designed to be installed on standard VID FIRE-KILL Model HS nozzles without having to make any modifications to the nozzles.

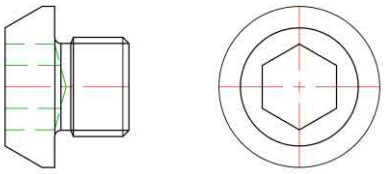


Type: IC2-HS
Normal application: Off-shore installations, transformers, refineries
Materials: Steel galvanized, brass screw with NiSn.
Finish: Red powder coated.
Water pressures: 0 – 30 bars
Seal: O-Ring NB70.

Variant	Materials	Sales and order no:
Pressure test unit for model HS nozzle	Steel galvanized painted RED with Brass screw w/NiSn. O-Ring NBR70	HS-IC2-10533

9.9 N-PIPE TEST PLUG

The FIREKILL™ Model N-pipe plug is used to seal off unused N-Pipe nozzle connections or when the N-pipes shall be pressure tested.



Variant	Materials	Sales and order no:
M10 Test plug	Brass NiSn plating	NPIPE-10390
M8 Test plug	Brass NiSn plating	NPIPE-10391

9.10 FM NAME PLATE

All systems installed in FM Incurred buildings shall be fitted with a name plate with system information.

Variant	Materials	Sales and order no:
FM Name plate	Aluminium	SIGNFM-10890

10 Low pressure water mist pump package.

The VID FIRE-KILL low pressure water mist package is an electrical pump station which can be supplied in various configurations to suit the actual need for the specific project. The pump package is built together and installed in a robust steel frame, making the pump station simple to install and transport. The station comes with different pumps which can supply different water flows and water pressures. The pump package are supplied with stainless steel piping, PN16.

The FireKill™ Model Helix SC/FFS low pressure watermist pump set is a complete assembled unit. Helix SC/FFS is an electrical pump station with one or multiple single multistage pumps. The water pump can supply the required water capacity and water pressure. Controllers, valves, and pumps are built together and installed in a robust steel frame, making the pump station simple to install and transport.
The Helix SC/FFS system is controlled by a micro-controller, which is used to control and regulate pressure boosting systems with up to 4 single pumps. The pressure is measured with corresponding signal transmitters and controlled load-sensitively. Each pump is equipped with an integrated frequency converter, with only the baseload pump undertaking the speed control (in standard operating mode).
Depending on the load requirement, the controlled peak-load pumps are switched on or off automatically (in standard operating mode). In fire mode, the control device performs safety functions based on a separate algorithm.
Required flow and pressure are calculated for each project.

Product	Description	Sales and order no:
COR-1 Helix VF XXXX/SC-FFS	Pump skid with 1 pump. 1 x 100 % capacity.	PUMP-COR1-12801
COR-2 Helix VF XXXX/SC-FFS	Pump skid with 2 pumps. 2 x 50% or 2 x 100% (1 main and 1 back-up)	PUMP-COR2-12802
COR-3 Helix VF XXXX/SC-FFS	Pump skid with 3 pumps. 3 x 33% or 3 x 50% (2 main and 1 back-up)	PUMP-COR3-12803
COR-4 Helix VF XXXX/SC-FFS	Pump skid with 4 pumps. 4 x 25% or 4 x 33% (3 main and 1 back-up)	PUMP-COR3-12804

10.1 COR-1 PUMP SKID

COR-1			
2863856	COR-1Helix VF604/SC-FFS	2863882	COR-1Helix VF1012/SC-FFS
2863857	COR-1Helix VF606/SC-FFS	2863883	COR-1Helix VF1013/SC-FFS
2863858	COR-1Helix VF608/SC-FFS	2863885	COR-1Helix VF1015/SC-FFS
2863859	COR-1Helix VF609/SC-FFS	2863886	COR-1Helix VF1019/SC-FFS
2863860	COR-1Helix VF610/SC-FFS	2863887	COR-1Helix VF1603/SC-FFS
2863861	COR-1Helix VF611/SC-FFS	2863888	COR-1Helix VF1604/SC-FFS
2863862	COR-1Helix VF612/SC-FFS	2863889	COR-1Helix VF1605/SC-FFS
2863863	COR-1Helix VF613/SC-FFS	2863890	COR-1Helix VF1608/SC-FFS
2863864	COR-1Helix VF614/SC-FFS	2863891	COR-1Helix VF1609/SC-FFS
2863865	COR-1Helix VF615/SC-FFS	2863892	COR-1Helix VF1610/SC-FFS
2863866	COR-1Helix VF616/SC-FFS	2863893	COR-1Helix VF1611/SC-FFS
2863867	COR-1Helix VF618/SC-FFS	2863894	COR-1Helix VF1612/SC-FFS
2863868	COR-1Helix VF620/SC-FFS	2863895	COR-1Helix VF1613/SC-FFS
2863869	COR-1Helix VF621/SC-FFS	2863896	COR-1Helix VF1616/SC-FFS
2863870	COR-1Helix VF623/SC-FFS	2863897	COR-1Helix VF2205/SC-FFS
2863871	COR-1Helix VF625/SC-FFS	2863898	COR-1Helix VF2207/SC-FFS
2863874	COR-1Helix VF1002/SC-FFS	2863899	COR-1Helix VF2208/SC-FFS
2863875	COR-1Helix VF1004/SC-FFS	2863900	COR-1Helix VF2209/SC-FFS
2863876	COR-1Helix VF1006/SC-FFS	2863901	COR-1Helix VF2210/SC-FFS
2863877	COR-1Helix VF1007/SC-FFS	2863902	COR-1Helix VF2211/SC-FFS
2863878	COR-1Helix VF1008/SC-FFS	2863903	COR-1Helix VF2213/SC-FFS
2863879	COR-1Helix VF1009/SC-FFS	2863904	COR-1Helix VF2214/SC-FFS
2863880	COR-1Helix VF1010/SC-FFS	2863905	COR-1Helix VF2215/SC-FFS
2863881	COR-1Helix VF1011/SC-FFS		

10.2 COR-2 PUMP SKID

COR-2 (2 pumps)			
2863906	COR-2Helix VF604/SC-FFS	2863932	COR-2Helix VF1012/SC-FFS
2863907	COR-2Helix VF606/SC-FFS	2863933	COR-2Helix VF1013/SC-FFS
2863908	COR-2Helix VF608/SC-FFS	2863934	COR-2Helix VF1015/SC-FFS
2863910	COR-2Helix VF609/SC-FFS	2863935	COR-2Helix VF1019/SC-FFS
2863911	COR-2Helix VF610/SC-FFS	2863936	COR-2Helix VF1603/SC-FFS
2863912	COR-2Helix VF611/SC-FFS	2863937	COR-2Helix VF1604/SC-FFS
2863913	COR-2Helix VF612/SC-FFS	2863938	COR-2Helix VF1605/SC-FFS
2863914	COR-2Helix VF613/SC-FFS	2863939	COR-2Helix VF1608/SC-FFS
2863915	COR-2Helix VF614/SC-FFS	2863940	COR-2Helix VF1609/SC-FFS
2863916	COR-2Helix VF615/SC-FFS	2863941	COR-2Helix VF1610/SC-FFS
2863917	COR-2Helix VF616/SC-FFS	2863942	COR-2Helix VF1611/SC-FFS
2863918	COR-2Helix VF618/SC-FFS	2863943	COR-2Helix VF1612/SC-FFS
2863919	COR-2Helix VF620/SC-FFS	2863944	COR-2Helix VF1613/SC-FFS
2863920	COR-2Helix VF621/SC-FFS	2863945	COR-2Helix VF1616/SC-FFS
2863921	COR-2Helix VF623/SC-FFS	2863946	COR-2Helix VF2205/SC-FFS
2863922	COR-2Helix VF625/SC-FFS	2863947	COR-2Helix VF2207/SC-FFS
2863924	COR-2Helix VF1002/SC-FFS	2863948	COR-2Helix VF2208/SC-FFS
2863925	COR-2Helix VF1004/SC-FFS	2863949	COR-2Helix VF2209/SC-FFS
2863926	COR-2Helix VF1006/SC-FFS	2863950	COR-2Helix VF2210/SC-FFS
2863927	COR-2Helix VF1007/SC-FFS	2863951	COR-2Helix VF2211/SC-FFS
2863928	COR-2Helix VF1008/SC-FFS	2863952	COR-2Helix VF2213/SC-FFS
2863929	COR-2Helix VF1009/SC-FFS	2863953	COR-2Helix VF2214/SC-FFS
2863930	COR-2Helix VF1010/SC-FFS	2863954	COR-2Helix VF2215/SC-FFS
2863931	COR-2Helix VF1011/SC-FFS		

10.3 COR-3 PUMP SKID

COR-3 (3 Pumps)			
2863955	COR-3Helix VF604/SC-FFS	2863980	COR-3Helix VF1012/SC-FFS
2863956	COR-3Helix VF606/SC-FFS	2863981	COR-3Helix VF1013/SC-FFS
2863957	COR-3Helix VF608/SC-FFS	2863982	COR-3Helix VF1015/SC-FFS
2863958	COR-3Helix VF609/SC-FFS	2863983	COR-3Helix VF1019/SC-FFS
2863959	COR-3Helix VF610/SC-FFS	2863984	COR-3Helix VF1603/SC-FFS
2863960	COR-3Helix VF611/SC-FFS	2863985	COR-3Helix VF1604/SC-FFS
2863961	COR-3Helix VF612/SC-FFS	2863986	COR-3Helix VF1605/SC-FFS
2863962	COR-3Helix VF613/SC-FFS	2863987	COR-3Helix VF1608/SC-FFS
2863963	COR-3Helix VF614/SC-FFS	2863988	COR-3Helix VF1609/SC-FFS
2863964	COR-3Helix VF615/SC-FFS	2863989	COR-3Helix VF1610/SC-FFS
2863965	COR-3Helix VF616/SC-FFS	2863990	COR-3Helix VF1611/SC-FFS
2863966	COR-3Helix VF618/SC-FFS	2863991	COR-3Helix VF1612/SC-FFS
2863967	COR-3Helix VF620/SC-FFS	2863992	COR-3Helix VF1613/SC-FFS
2863968	COR-3Helix VF621/SC-FFS	2863993	COR-3Helix VF1616/SC-FFS
2863969	COR-3Helix VF623/SC-FFS	2863994	COR-3Helix VF2205/SC-FFS
2863970	COR-3Helix VF625/SC-FFS	2863995	COR-3Helix VF2207/SC-FFS
2863972	COR-3Helix VF1002/SC-FFS	2863996	COR-3Helix VF2208/SC-FFS
2863973	COR-3Helix VF1004/SC-FFS	2863997	COR-3Helix VF2209/SC-FFS
2863974	COR-3Helix VF1006/SC-FFS	2863998	COR-3Helix VF2210/SC-FFS
2863975	COR-3Helix VF1007/SC-FFS	2863999	COR-3Helix VF2211/SC-FFS
2863976	COR-3Helix VF1008/SC-FFS	2864000	COR-3Helix VF2213/SC-FFS
2863977	COR-3Helix VF1009/SC-FFS	2864003	COR-3Helix VF2214/SC-FFS
2863978	COR-3Helix VF1010/SC-FFS	2864004	COR-3Helix VF2215/SC-FFS
2863979	COR-3Helix VF1011/SC-FFS		

10.4 COR-4 PUMP SKID

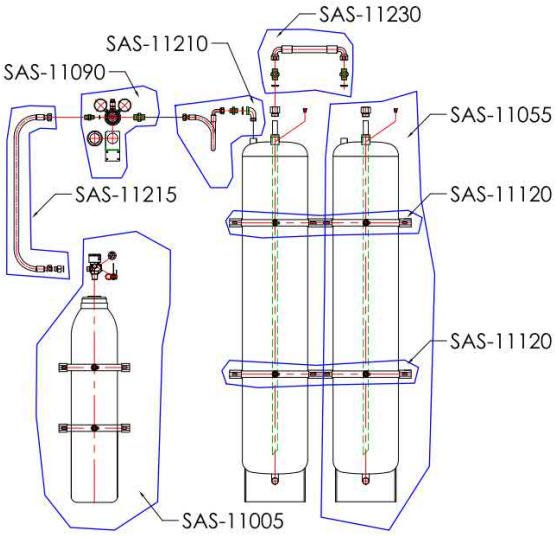
COR-4 (4 Pumps)			
2864005	COR-4Helix VF604/SC-FFS	2864030	COR-4Helix VF1012/SC-FFS
2864006	COR-4Helix VF606/SC-FFS	2864031	COR-4Helix VF1013/SC-FFS
2864007	COR-4Helix VF608/SC-FFS	2864032	COR-4Helix VF1015/SC-FFS
2864008	COR-4Helix VF609/SC-FFS	2864033	COR-4Helix VF1019/SC-FFS
2864009	COR-4Helix VF610/SC-FFS	2864034	COR-4Helix VF1603/SC-FFS
2864010	COR-4Helix VF611/SC-FFS	2864035	COR-4Helix VF1604/SC-FFS
2864011	COR-4Helix VF612/SC-FFS	2864036	COR-4Helix VF1605/SC-FFS
2864012	COR-4Helix VF613/SC-FFS	2864037	COR-4Helix VF1608/SC-FFS
2864013	COR-4Helix VF614/SC-FFS	2864038	COR-4Helix VF1609/SC-FFS
2864014	COR-4Helix VF615/SC-FFS	2864039	COR-4Helix VF1610/SC-FFS
2864015	COR-4Helix VF616/SC-FFS	2864040	COR-4Helix VF1611/SC-FFS
2864016	COR-4Helix VF618/SC-FFS	2864041	COR-4Helix VF1612/SC-FFS
2864017	COR-4Helix VF620/SC-FFS	2864042	COR-4Helix VF1613/SC-FFS
2864018	COR-4Helix VF621/SC-FFS	2864043	COR-4Helix VF1616/SC-FFS
2864019	COR-4Helix VF623/SC-FFS	2864044	COR-4Helix VF2205/SC-FFS
2864020	COR-4Helix VF625/SC-FFS	2864045	COR-4Helix VF2207/SC-FFS
2864022	COR-4Helix VF1002/SC-FFS	2864046	COR-4Helix VF2208/SC-FFS
2864023	COR-4Helix VF1004/SC-FFS	2864047	COR-4Helix VF2209/SC-FFS
2864024	COR-4Helix VF1006/SC-FFS	2864048	COR-4Helix VF2210/SC-FFS
2864025	COR-4Helix VF1007/SC-FFS	2864049	COR-4Helix VF2211/SC-FFS
2864026	COR-4Helix VF1008/SC-FFS	2864050	COR-4Helix VF2213/SC-FFS
2864027	COR-4Helix VF1009/SC-FFS	2864051	COR-4Helix VF2214/SC-FFS
2864028	COR-4Helix VF1010/SC-FFS	2864052	COR-4Helix VF2215/SC-FFS
2864029	COR-4Helix VF1011/SC-FFS		

11 STANDALONE SYSTEM

In addition to the traditional pumped system, a cylinder bank system can be supplied. The FIREKILL™ Model SAS (Stand Alone System) consisting of stainless steel cylinders prepared for fresh water, nitrogen cylinders, valves, flexible hoses, pressure regulators etc. All low pressure flexible hoses and fittings are made from stainless steel. All water cylinders are manufactured from stainless steel AISI 304 to avoid corrosion problems when water is stored for a long time.

11.1 STANDALONE BOM

The standalone system consist of several pre-designed packages depending on number of cylinders required. This to simplify the ordering and production process.
To order a standalone system requiring 3 x H2O cylinders with level indicator and 1 x 33 l N2 cylinder, the following items is required:

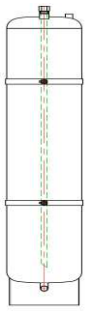


Sales and order no:	Description	Qty
SAS-11055	120 l H2O Cylinder with level indicator including:	3 set
SAS-11005	33 l N2 Cylinder w/regulator, actuator, gauge, and switch	1 set
SAS-11090	N2-Pressure regulator	1 set
SAS-11230	DN20 Hose connection between cylinders	2 set
SAS-11215	DN15 HP Hose connection	1 set
SAS-11210	DN15 Hose connection N2 pilot line	1 set
SAS-11120	Cylinder clamp wall bracket 1350 mm 3 x H2O cylinder	1 set

11.2 Water Cylinder

The water cylinders are produced from stainless steel AIS 304 which makes them reliable without the possibility to get foreign particles such as rust or internal liner which is normally used in steel cylinders into the pipe work.

Materials: AISI 304
Finish: Natural
Max working pressure: 16 bar
Testy pressure: 24 bar
Net volume: 126,00 l
Outside diameter: ø 323,90 mm
Height: 1885 mm
Weight: 57 kg
Inlet / Outlet: ¾" BSP Female
Drain: 1" BSP Male
Approval: EN 13445 +H1 CE (PED)



Product	Description		Sales and order no:
Model 120 L	120 l H2O Cylinder without level indicator including:		SAS-11050
	1 pcs	Water cylinder 120 l	
	1 pcs	1" BSP Water cylinder adapter	
	1 pcs	Safety disc 3/8" BSP	
	1 pcs	Syphon tube 25 mm	
	1 pcs	1" BSP Plug	
Model 120 L	120 l H2O Cylinder with level indicator including:		SAS-11055
	1 pcs	Water cylinder 120 l	
	1 pcs	1" BSP Water cylinder adapter	
	1 pcs	Safety disc 3/8" BSP	
	1 pcs	Syphon tube 25 mm	
	1 pcs	1" BSP Plug	
	1 pcs	Level indicator, float with 3 switches	

11.3 Pressure Regulator

The nitrogen regulator are produced from Brass. The regulator is produced in accordance with the european PED directive.

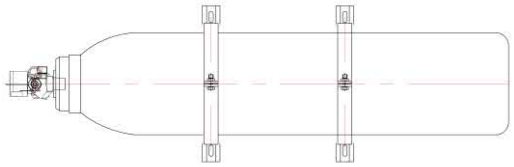
Materials: Brass
Finish: Natural
Max working pressure: 220 bar
Outlet pressure: 1,5 bar to 15 bar
Inlet 3/8" BSP Female
Outlet: 3/8" BSP Female

Product	Description		Sales and order no:
Model N2 Pressure regulator	N2-Pressure regulator		SAS-11090
	1 pcs	Pressure regulator	
	1 pcs	Bracket	
	1 pcs	3/8" BSP x 1/2" BSP Hex nipple	
	1 pcs	M50 Nut	
	1 pcs	3/8" BSP x 1/2" BSP Hex nipple for inlet	
	1 pcs	O-Ring ø10,50 x 2,00	

11.4 Nitrogen Cylinder

The nitrogen cylinders are produced from CrMo steel. They are regular high pressure gas cylinders produced in accordance with the european TPED directive.

Materials: CrMo Steel
Finish: Black
Max working pressure: 200 bar
Testy pressure: 300 bar
Outlet: 25E DIN EN629-1 (W28,8)
Approval: TPED EN 1964-2
Volume: 33 l and 67,5 l
Height: 1020 mm / 1410 mm
OD: 229 mm / 267 mm
Empty weight: 43,5 Kg / 54 Kg



Product	Description		Sales and order no:
Model N2 33 L	33 l N2 Cylinder w/regulator, actuator, gauge, and switch		SAS-11005
	1 pcs	N2 Cylinder 33 l	
	1 pcs	N2 Cylinder valve with manual actuator	
	1 pcs	Pressure gauge with switch	
	2 pcs	M1148 Cylinder clamp for OD 229 mm	
	2 pcs	P3300T Channel for cylinder clamp l = 350	
Model N2 67 L	67,5 l N2 Cylinder w/regulator, actuator, gauge, and switch		SAS-11010
	1 pcs	N2 Cylinder 67,5 l	
	1 pcs	N2 Cylinder valve with manual actuator	
	1 pcs	Pressure gauge with switch	
	2 pcs	M1151 Cylinder clamp for OD 267 mm	
	2 pcs	P3300T Channel for cylinder clamp l = 350	

11.5 DN20 Flexible Hose Between Cylinders

The water cylinders are interconnected with a DN20 parallel corrugated stainless steel hose including stainless steel hexagon nipples with 60 dg sealing surface.

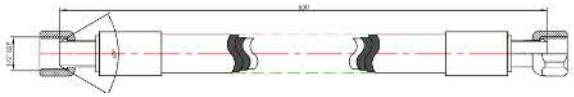
Hose Materials: Stainless steel
Hose ID: 18,8 mm
Hose OD: 26,2 mm
Max working pressure: 40 bar at 20 dgC
Bending radius static: 70 mm
Hex nipple material: Stainless steel
Dimension: ¾" BSP
Bonded seal material: Stainless steel / NBR

Product	Description		Sales and order no:
DN20 hose	DN20 Hose connection between cylinders including:		SAS-11230
	1 pcs	Flexible hose 3/4" l = 350 mm 2 x 90 dg	
	2 pcs	3/4" BSP Hex nipple	
	2 pcs	3/4" Hydraulic gasket	

11.6 DN15 N2 High pressure hose

The Nitrogne cylinder is connected to the nitrogen pressure regulator through a DN 15 High pressure hose..

Hose Materials: Rubber with 2 layers of stainless steel a braiding
Hose ID: 12,2 mm
Max working pressure: 275 bar at 20 dgC
Bending radius static: 100 mm
Hex nipple material: Stainless steel
Dimension: ½" BSP
Bonded seal material: Stainless steel / NBR

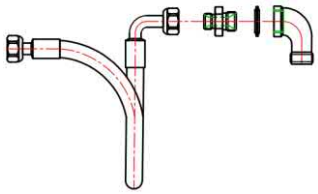


Product	Description		Sales and order no:
DN15 HP N2 Hose, 650 mm	DN20 Hose connection last cylinder		SAS-11215
	1 pcs	Flexible hose 1/2" l = 650 mm	
	1 pcs	Adapter W21,8 x 1/14" F x 1/2" BSP M	
	1 pcs	PTFE Gasket 19,5 mm	

11.7 DN15 Flexible Hose Between N2-Regulator and H2O Cylinder

The water cylinders are connected to the piping with a DN20 parallel corrugated stainless steel hose including stainless steel hexagon nipples with 60 dg sealing surface.

Hose Materials: Stainless steel
Hose ID: 15,6 mm
Hose OD: 22,1 mm
Max working pressure: 65 bar at 20 dgC
Bending radius static: 58 mm
Hex nipple material: Stainless steel
Bonded seal material: Stainless steel / NBR

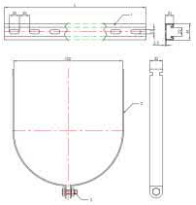


Product	Description		Sales and order no:
DN15 hose	DN15 Hose connection N2 pilot line		SAS-11210
	1 pcs	Flexible hose 1/2" l = 500 mm 1 x 90 dg	
	1 pcs	1/2" BSP x 3/4" BSP Hex nipple	
	1 pcs	3/4" Hydraulic gasket	
	1 pcs	3/4" Elbow male / female	

11.8 Cylinder Clamp Wall Bracket H2O Cylinder

The water cylinders are fastened to the wall by cylinder clamps and wall brackets.

Materials: Stainless steel
Weight: 1,76 kg/m



Product	Description		Sales and order no:
P3300T + M1155	Cylinder clamp wall bracket 450 mm 1 x H2O cylinder		SAS-11110
	2 pcs	P3300 T UNI-Channel 450 mm	
	2 pcs	M1155 Cylinder clamp for OD 329 mm	
P3300T + M1155	Cylinder clamp wall bracket 900 mm 2 x H2O cylinder		SAS-11115
	2 pcs	P3300 T UNI-Channel 900 mm	
	4 pcs	M1155 Cylinder clamp for OD 329 mm	
P3300T + M1155	Cylinder clamp wall bracket 1350 mm 3 x H2O cylinder		SAS-11120
	2 pcs	P3300 T UNI-Channel 1350 mm	
	6 pcs	M1155 Cylinder clamp for OD 329 mm	

Product	Description		Sales and order no:
P3300T + M1155	Cylinder clamp wall bracket 1800 mm 4 x H2O cylinder		SAS-11125
	2 pcs	P3300 T UNI-Channel 1800 mm	
	8 pcs	M1155 Cylinder clamp for OD 329 mm	
P3300T + M1155	Cylinder clamp wall bracket 2250 mm 5 x H2O cylinder		SAS-11130
	2 pcs	P3300 T UNI-Channel 2250 mm	
	10 pcs	M1155 Cylinder clamp for OD 329 mm	
P3300T + M1155	Cylinder clamp wall bracket 2700 mm 6 x H2O cylinder		SAS-11135
	2 pcs	P3300 T UNI-Channel 2700 mm	
	12 pcs	M1155 Cylinder clamp for OD 329 mm	

VID Fire-Kill ApS | Svalbardvej 13 | 5700 Svendborg | Denmark
Tel.: 6262 1024 | www.vidfirekill.com | sales@vidfirekill.com