

CO₂ Low-Pressure Suppression Systems

Product Catalogue 2019 | EMEA





Version: 2019-01

Product Catalog

Gas-Based Suppression System

Carbon Dioxide Extinguishing Systems

Fight fires using CO₂ Low Pressure

This product catalog is intended for sales purposes only. For planning, installation, commissioning and operation, please refer to the corresponding technical documentation, which are enclosed with the products.

**Extinguishing technology**

Carbon dioxide (CO ₂) - extinguishing systems	1
---	---

Tank CO₂ LP

CO ₂ LP storage vessel system with safety gate valve	2
CO ₂ LP storage vessel system without safety gate valve	4

Tank CO₂ LP accessories

Contact pressure gauge 4K 25 bar - G1/2 - 160	6
Safety valve G1/2 - 30 bar nominal overpressure 80 bar	7
Change-over safety valve type 330/462	8
Shut-off valve CO ₂ -LP DN25 - 200	9

Selector valve CO₂ LP

Selector valves KMX CO ₂ - LP piston controlled	11
--	----

Selector valve CO₂ LP accessories

Pressure relief valve	13
Safety valve G1/2 - 30 bar nominal overpressure 40 bar	14
Odorizing device MX 1/2 - 3000	15

Selector valve CO₂ LP complete

Selector valves KMX CO ₂ - LP piston controlled, complete	16
--	----

Nozzle

Local application nozzle ED - 1/2 and 3/4	18
Nozzle MX1/4-H	20
Nozzle type DD	21
Nozzle assembly flush type and insertion type	22
Booth protection nozzle KD 2 - 42,5	23
Nozzle RD 1/2 and 3/4	24
Nozzle RD 1/2 and 3/4 UL-Code	26

Alarm device

Makrofon MX-1	28
Silencer makrofon MX-1	30

Control device

Pneum. time delay device PV-3- ND and PV-3- BND	31
Solenoid valve 3/2-ways DN7 compl.	33
Control device SP4-P pneumatically activation	34
Strainer DN10 - PN50 complete	36
Servo valve unit MX-SVE	37
Pneumatic valve CO ₂ DN7 compl.	38
Control device pneum. SEP-2-E, test-device	39
Non-return valve MX-RSV 4	40
Heat sensor type WF	41



Contents

Catalog Page

Monitoring device

Pressure gauge 40 bar	42
Monitoring shut-off valve DN15, DN100 and DN150/200	43
Monitoring CO ₂ LP selector valve DN25 - 150	44
Limit switch monitoring CO ₂ LP selector valve	45
Limit switch pneum. operated	46
Pressure switch CO ₂ / inert gases	48
Pressure switch CO ₂ / Ar / N ₂	49
Plug socket for pressure switch	50

System accessories

Label - CE CO ₂ low pressure system	51
Label Gaslöschanlage/Lebensgefahr	52

Accessories flange connection LP

Gaskets DIN 2691 for flange with tongue and groove	53
Hex. screw DIN 931 and hex. nut DIN 934 TK (suitable for low temperature).....	54

Pipe welded connection

Pipe welded connection DN50 - 200	55
---	----

Welding fitting and flange

Pipe fittings	56
Welding neck flange DIN 2635 - PN40	58

Pipe threaded connection

Pipe threaded connection DN15 - 80.....	60
---	----

Fitting threaded connection

Fittings - type D, EN 10242 galvanized	61
--	----

Pilot pipe

Pipe for extinguishing pipework and pilot pipes	63
---	----

Fitting pilot pipe

Unions - stock list.....	64
--------------------------	----

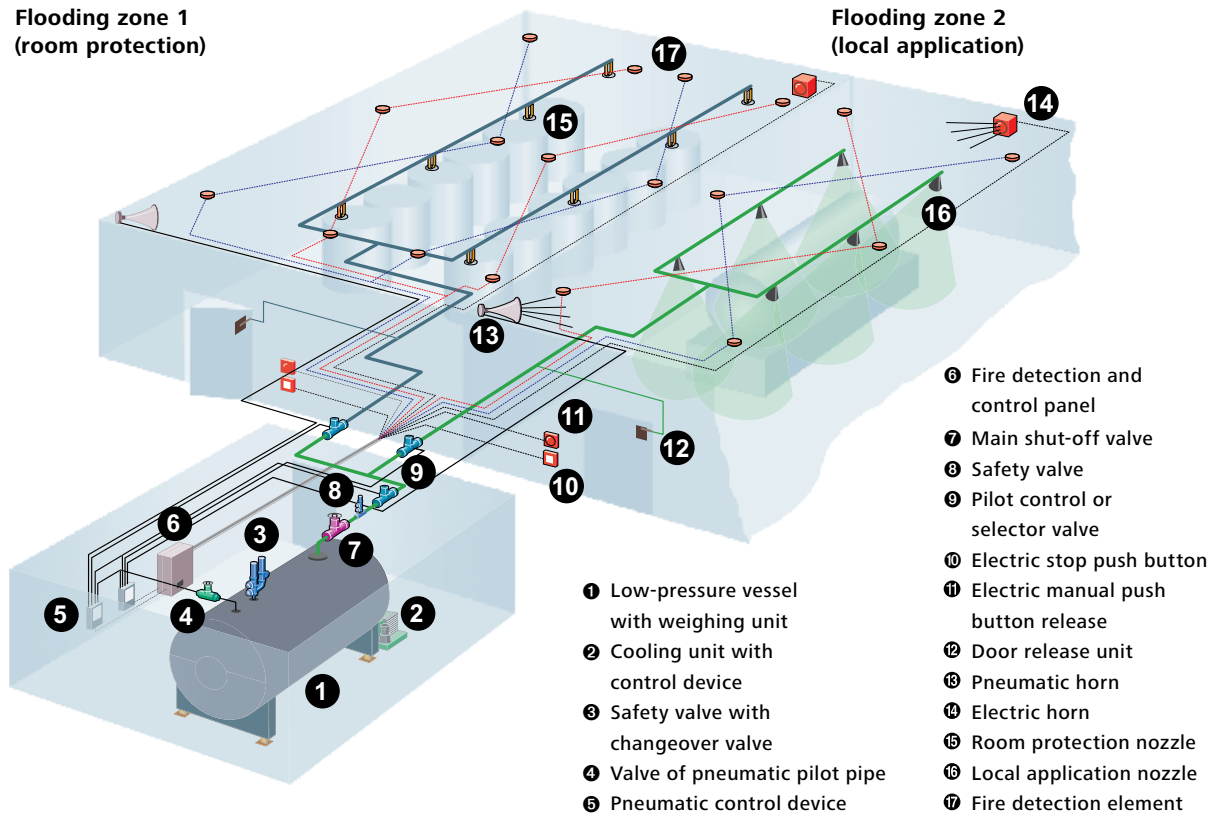
Bracket pilot piping network

Cable clip B16 galv.	70
Hose clip DIN 3017 and pipe clip RSGU1.	71



Extinguishing technology CO₂ LP

Carbon dioxide (CO₂) - extinguishing systems



Carbon dioxide (CO₂) used as extinguishing agent

Extinguishing with carbon dioxide is achieved by displacing the oxygen from a fire source quickly - and thus starving the fire. The high heat binding capacity of the carbon dioxide causes the withdrawal of energy from the source of the fire, which enhances the extinguishing effect.

Carbon dioxide extinguishing systems, due to their special extinguishing agent properties, feature advantages over other inert gas extinguishing systems: Even freestanding objects in a room can be protected. The liquefied carbon dioxide forms a thick aerosol cloud in the flooding zone. Special local application nozzles put the extinguishing agent precisely at the object to be protected.

Supply of extinguishing agent

If large quantities of extinguishing agent are needed for the overall safety concept, a low-pressure vessel is recommended - especially on grounds of economy. The liquefied carbon dioxide is stored in this vessel at a temperature of approx. -20 °C and at an operating pressure of approx. 20 bar. A cooling unit provides a constant low temperature. The operating costs are minimized by an optimum insulation design. The supply vessel is mounted on a calibratable electronic weighing unit, which constantly displays the actual weight and therefore any potential loss of gas due to leaks. If several flooding zones are connected to a common extinguishing agent supply, the gas is released for each zone via selector valves.

Functional readiness and operational safety

Neuralgic functions and components of the extinguishing system, such as the gas quantity, shutoff, release and distribution units, are monitored to ensure the constant functional readiness of the extinguishing system.

Personal safety

The extinguishing process with carbon dioxide reduces the oxygen in the air in the protected zone significantly below the natural level of 21 percent by volume. Carbon dioxide in concentrations that can extinguish fires can be harmful to life, and therefore special safety measures are installed.

The extinguishing process will not start until after a predetermined warning time, so that there is sufficient time to leave the room. All warning components are provided two-fold and are connected to different power sources.

Typical areas of application

Rolling mills, turbines, transformers and substations, warehouses for hazardous materials, machine tools and special metal processing systems, paint and varnish manufacturing and processing areas, painting and powdercoating booths (ESTA), hydraulic systems, false floors and cable shafts, silos and dust filters, printing machines, engine test benches and ship engine compartments, switching and control systems.



Extinguishing technology CO₂ LP

Tank CO₂ LP

CO₂ LP storage vessel system with safety gate valve



Approvals



- 1) Part of the system approval:
- CO₂ extinguishing system ND-1 (S398012), electrical release
 - CO₂ extinguishing system ND-2 (S398013), non-electrical release

SAP designation

e. g. part no. 886439: CO₂ LP-storage vessel 3t with safety gate valve

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

CO ₂ Low pressure vessel					Cooling unit			
Type	Part no.	Weight [t]			Type	Q [W]	P [kW]	I [A]
		G1	G2	G3				
3.2 t	886439	3.2	3.2	6.4	D8-KSL-20X	2200	2.1	4.7
5 t	886440	4.3	5.0	9.3	D8-KSL-20X	2200	2.1	4.7
7.5 t	886441	5.0	7.5	12.5	D8-KSL-20X	2750	2.1	4.7
10 t	886442	6.0	10.0	16.0	H8-LF-30X	3850	2.7	6.8
15 t	886443	8.0	15.0	23.0	H8-LF-30X	3850	2.7	6.8
20 t	886444	10.0	20.0	30.0	H8-LF-30X	3850	2.7	6.8
25 t	927222	12.0	25.0	37.0	H8-LL-30X	5100	3.7	7.3

Weight: G1 = net weight; G2 = filling weight; G3 = total weight

Cooling unit (400 V / 3 ~ / 50 Hz):

Q = cooling capacity; P = electr. power consumption; I = nominal current consumption

Ordering hints

The order has to be specified with riser tube position, see page 2/2 (view: Y)

Included in delivery and technical data

Item ¹⁾	Designation	Feature
1	Storage vessel	manufactured and tested according to Pressure Equipment Directive (2014/68/EU), admissible pressure PS = 23bar (333.59 psi), operating temperature TS = -40 °C up to +45 °C (-40 °F up to +113 °F), medium = low-cold liquid CO ₂
2	Riser tube	DN (see table on page 2) assembled ready for operation with: 1 piece stop valve with flange connection shape D (groove) according to EN 1092-01; 1 piece change-over switch for monitoring the open operating position
3	Gas discharge connection piece	DN15, assembled ready for operation with: 1 piece stop valve, 1 piece change-over switch for monitoring the open operating position
4	Changeover-safety valve	assembled ready for operation, consisting of: 1 piece changeover valve, 2 pieces safety valve
5	Pressure compensation connection piece	DN25, assembled ready for operation with: 1 piece stop valve, 1 piece non-return valve 1 piece coupling plug (make AIROQUIP)
6	Filling connection piece	DN25, assembled ready for operation with: 1 piece gate valve, 1 piece safety gate valve (reset tool optional), 1 piece coupling plug (make AIROQUIP)
7	Heat insulation	polyurethane foam 160 mm (6.3 inch) thick and polystyrol 160 mm (6.3 inch) thick, the temperature difference is 50 °C (122 °F)
8	Cooling unit	assembled ready for operation according to BGV-D4, mainly consisting of: 1 piece liquefier, 1 piece ribbed pipe evaporator, 1 piece control cabinet, 1 piece floating contact for malfunction (vessel pressure 17,5 bar (254 psi) and 21 bar (305 psi)), automatic activation / deactivation in case of 20 bar / 19 bar (390 psi / 275 psi) in the storage tank
9	Scale	assembled ready for operation, electric type, VdS approved, appropriate for verification
-	Documentation	documentation according to Pressure Equipment Directive (2014/68/EU)

¹⁾ Item 1 - Item 9 see drawing on page 2/2



Extinguishing technology CO₂ LP

Tank CO₂ LP

CO₂ LP storage vessel system with safety gate valve

Note

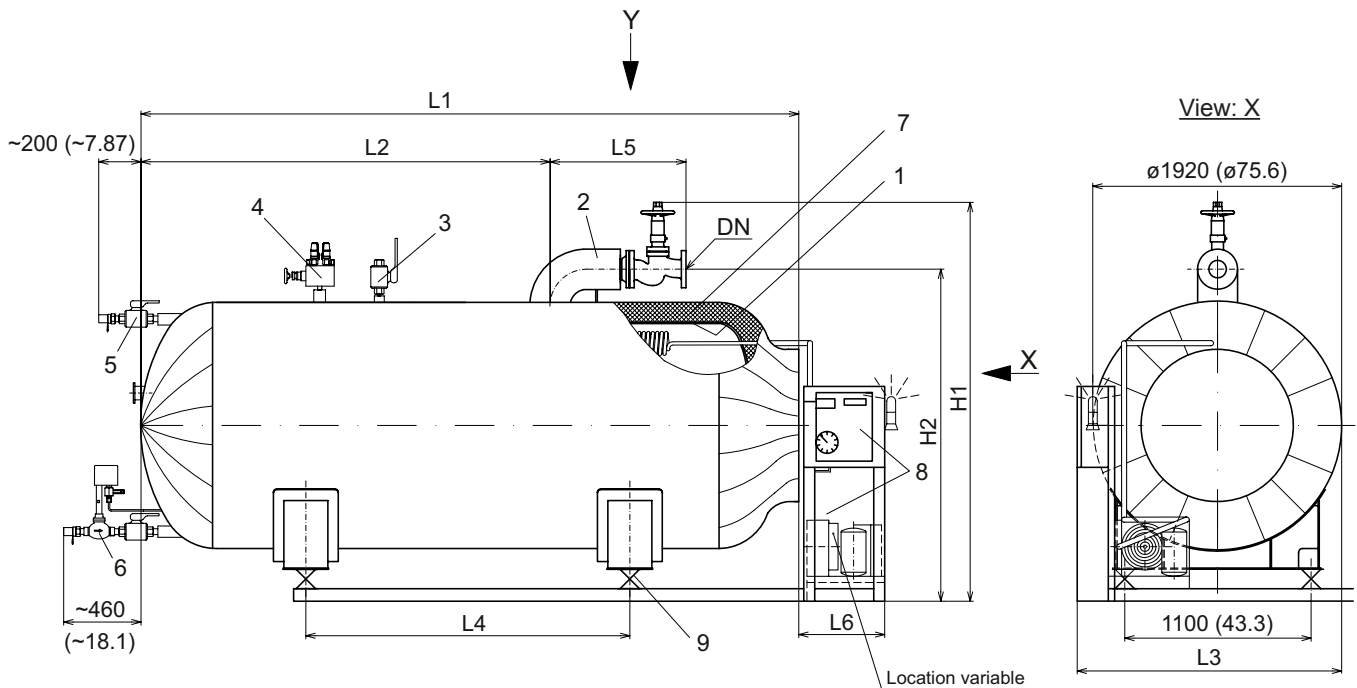
The safety gate valve is used as a safety device for protection against excessive pressure during the filling process.

Not included in delivery

- Log book gas and powder extinguishing systems VdS 2240 (en)924322
- Label CE, CO₂ low pressure system ...886456, see system accessories
- Operating instructions, laminatedsee system accessories
- Temperature switch ÜWA-FMZ4100901055

Dimension drawing

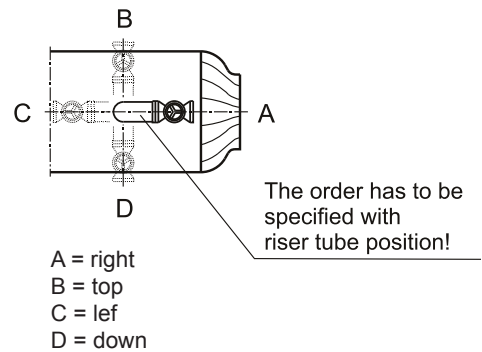
Dimensions in mm (inch)



CO₂ Low pressure vessel

Type	L1	L2	L3	L4	L5	L6	H1	H2	DN				
3.2 t	2560 (100.8)	1405 (55.3)	2030 (79.9)	700 (27.6)	803 (31.6)	635 (25.0)	3055 (120.3)	2579 (101.5)	100				
5 t	3810 (150.0)	1985 (78.2)		1900 (74.8)	1009 (39.7)		3212 (126.5)		150				
7.5 t	5060 (199.2)	2310 (90.9)		2630 (103.5)			3360 (132.3)		3354 (132.1)	2664 (104.9)	200		
10 t	6310 (248.4)	2875 (113.2)		4820 (189.8)	1205 (47.4)		8060 (317.3)	3354 (132.1)			2664 (104.9)	200	
15 t	8810 (346.9)	4370 (172.1)		5560 (218.9)	1205 (47.4)				8060 (317.3)	3354 (132.1)		2664 (104.9)	200
20 t	11310 (445.3)	4915 (193.5)		8060 (317.3)									200
25 t	13810 (543.7)	5035 (198.2)		200									

View: Y



2/2 224-111_001 / A102 / 2018-May-09 / en Technische Änderungen ohne vorherige Ankündigung vorbehalten. Alle Rechte vorbehalten.





Extinguishing technology CO₂ LP

Tank CO₂ LP

CO₂ LP storage vessel system without safety gate valve



Approvals



- 1) Part of the system approval:
- CO₂ extinguishing system ND-1 (S398012), electrical release
 - CO₂ extinguishing system ND-2 (S398013), non-electrical release

SAP designation

e. g. part no. 888008: CO₂ LP-storage vessel 3t without safety gate valve

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

CO ₂ Low pressure vessel					Cooling unit			
Type	Part no.	Weight [t]			Type	Q [W]	P [kW]	I [A]
		G1	G2	G3				
3.2 t	888008	3.2	3.2	6.4	D8-KSL-20X	2200	2.1	4.7
5 t	888009	4.3	5.0	9.3	D8-KSL-20X	2200	2.1	4.7
7.5 t	888010	5.0	7.5	12.5	D8-KSL-20X	2750	2.1	4.7
10 t	888011	6.0	10.0	16.0	H8-LF-30X	3850	2.7	6.8
15 t	888012	8.0	15.0	23.0	H8-LF-30X	3850	2.7	6.8
20 t	888013	10.0	20.0	30.0	H8-LF-30X	3850	2.7	6.8
25 t	927223	12.0	25.0	37.0	H8-LL-30X	5100	3.7	7.3

Weight: G1 = net weight; G2 = filling weight; G3 = total weight

Cooling unit (400 V / 3 ~ / 50 Hz):

Q = cooling capacity; P = electr. power consumption; I = nominal current consumption

Ordering hints

The order has to be specified with riser tube position, see page 2/2 (view: Y)

Included in delivery and technical data

Item ¹⁾	Designation	Feature
1	Storage vessel	manufactured and tested according to Pressure Equipment Directive (2014/68/EU), admissible pressure PS = 23bar (333.59 psi), operating temperature TS = -40 °C up to +45 °C (-40 °F up to +113 °F), medium = low-cold liquid CO ₂
2	Riser tube	DN (see table on page 2) assembled ready for operation with: 1 piece stop valve with flange connection shape D (groove) according to EN 1092-01; 1 piece change-over switch for monitoring the open operating position
3	Gas discharge connection piece	DN15, assembled ready for operation with: 1 piece stop valve, 1 piece change-over switch for monitoring the open operating position
4	Changeover-safety valve	assembled ready for operation, consisting of: 1 piece changeover valve, 2 pieces safety valve
5	Pressure compensation connection piece	DN25, assembled ready for operation with: 1 piece stop valve, 1 piece coupling plug (make AIROQUIP)
6	Filling connection piece	DN25, assembled ready for operation with: 1 piece gate valve, 1 piece coupling plug (make AIROQUIP)
7	Heat insulation	polyurethane foam 160 mm (6.3 inch) thick and polystyrol 160 mm (6.3 inch) thick, the temperature difference is 50 °C (122 °F)
8	Cooling unit	assembled ready for operation according to BGV-D4, mainly consisting of: 1 piece liquefier, 1 piece ribbed pipe evaporator, 1 piece control cabinet, 1 piece floating contact for malfunction (vessel pressure 17,5 bar (254 psi) and 21 bar (305 psi)), automatic activation / deactivation in case of 20 bar / 19 bar (290 psi / 275 psi) in the storage tank
9	Scale	assembled ready for operation, electric type, VdS approved, appropriate for verification
-	Documentation	documentation according to Pressure Equipment Directive (2014/68/EU)

¹⁾ Item 1 - Item 9 see drawing on page 2/2



Extinguishing technology CO₂ LP Tank CO₂ LP

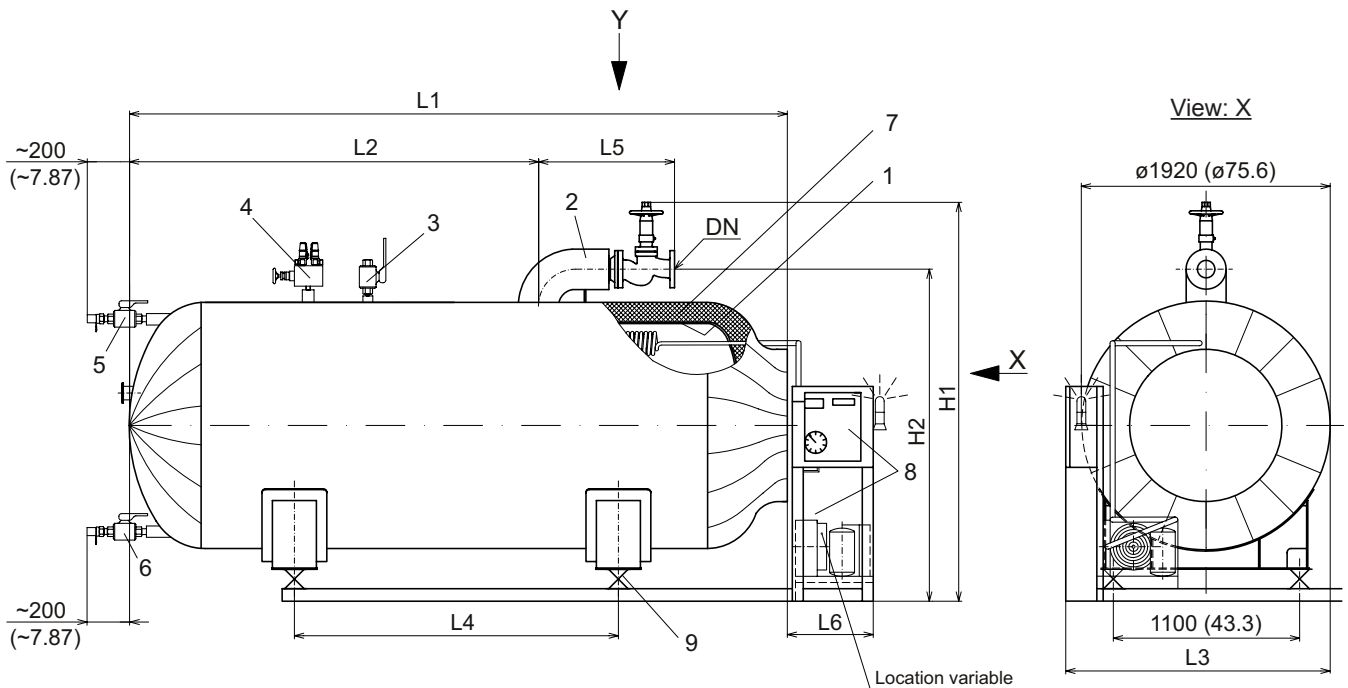
CO₂ LP storage vessel system without safety gate valve

Not included in delivery

- Log book gas and powder extinguishing systems VdS 2240 (en)924322
- Label CE, CO₂ low pressure system ...886456, see system accessories
- Operating instructions, laminatedsee system accessories
- Temperature switch ÜWA-FMZ4100901055

Dimension drawing

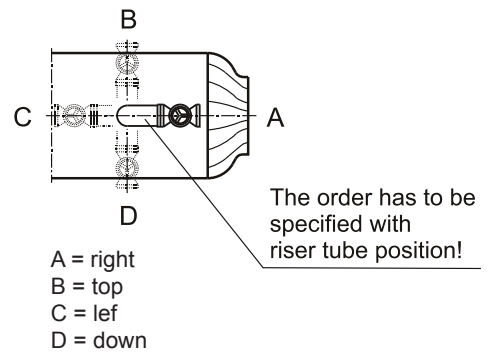
Dimensions in mm (inch)



CO₂ Low pressure vessel

Type	L1	L2	L3	L4	L5	L6	H1	H2	DN
3.2 t	2560 (100.8)	1405 (55.3)	2030 (79.9)	700 (27.6)	803 (31.6)	635 (25.0)	3055 (120.3)	2579 (101.5)	100
5 t	3810 (150.0)	1985 (78.2)		1900 (74.8)	1009 (39.7)		3212 (126.5)		150
7.5 t	5060 (199.2)	2310 (90.9)		2630 (103.5)			4820 (189.8)	3354 (132.1)	2664 (104.9)
10 t	6310 (248.4)	2875 (113.2)		3360 (132.3)					
15 t	8810 (346.9)	4370 (172.1)		4820 (189.8)					
20 t	11310 (445.3)	4915 (193.5)		5560 (218.9)	1205 (47.4)				
25 t	13810 (543.7)	5035 (198.2)	8060 (317.3)						

View: Y



2/2 224-111_002 / A102 / 2018-May-09 / en Technische Änderungen ohne vorherige Ankündigung vorbehalten. Alle Rechte vorbehalten.



Extinguishing technology CO₂ LP

Tank CO₂ LP accessories

Contact pressure gauge 4K 25 bar - G1/2 - 160

Approvals
no approval required



SAP designation
part no. 875731: Contact pressure gauge 4K 25bar - G1/2

Maintenance
Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation	Part no.	Weight approx.
Contact pressure gauge 4K 25 bar-G1/2-160	875731	1.8 kg (4.0 lbs)

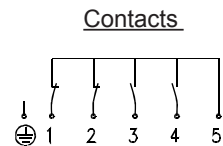
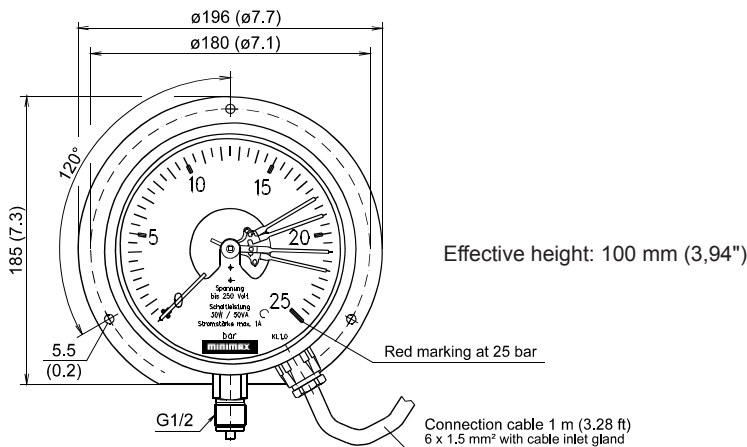
Technical Data

Contacts4 contacts, solenoid spring switching
 Contact materialnickel silver
 Currentmax. 1 A
 Voltagemax. 250 V
 Switched power30 W / 50 VA
 Switched speed actual indicator1 bar / 6 h
 Housingstainless steel with a rear fastening rim

Contacts:	switch pressure	M ¹⁾
- Contact 1 (NC)	18 bar ±0,3 (261 psi ±4,4)	1.
- Contact 2 (NC)	19 bar ±0,3 (276 psi ±4,4)	2.
- Contact 3 (NO)	21 bar ±0,3 (305 psi ±4,4)	3.
- Contact 4 (NO)	22 bar ±0,3 (319 psi ±4,4)	4.
Common lead	-	5.

¹⁾ M = Marking of cable connection wire

Dimension drawing
Dimensions in mm (inch)



224-114_001 / A100_2016de
Technische Änderungen ohne vorherige Ankündigung vorbehalten. Alle Rechte vorbehalten.
1/1





Extinguishing technology CO₂ LP

Tank CO₂ LP accessories

**Safety valve G1/2 - 30 bar
nominal overpressure 80 bar**

Approvals
without approval



SAP designation
part no. 886316: Safety valve G1/2 nominal over pressure

Maintenance
maintenance-free

Designation	Part no.	Weight
Safety valve G1/2 - 30 bar, nominal overpressure 80 bar	886316	1.4 kg (3.09 lbs)

Technical Data

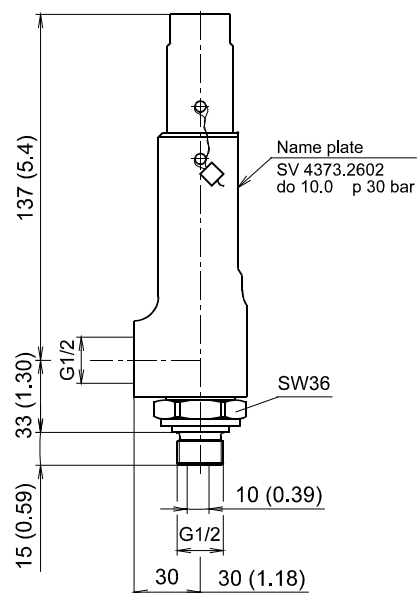
Type4373.2602 but with
.....inlet body and plate in stainless steel 1.4404
MediumCO₂ - gaseous
Nominal overpressure80 bar (1160 psi)
Response pressure.....30 bar (435 psi)
Flow rateapprox. 735 Nm³/h at +20°C (+68 °F)
Position of devicevertical, upright
Metal seal-270 °C to +400 °C (-454 °F to +752 °F)
Threadin acc. to ISO 228
Test certificateEN 10204 - 3.1 (response pressure)
Safety valve according to pressure equipment directive
2014/68/EU category IV.

Application

Safety valve in the filling line (storage vessel).

Dimension drawing

Dimensions in mm (inch)



224-114_002 / A100_2016en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/1



Extinguishing technology CO₂ LP

Tank CO₂ LP accessories

Shut-off valve CO₂-LP DN25 - 200



Approvals

without approval

SAP designation

e.g. part no. 929704: Shut-off valve CO₂-LP DN25

Maintenance

according to operating instructions of the manufacturer

Designation		Part no.	Weight kg (lbs)
Shut-off valve CO ₂ -LP	DN25	929704	6.2 (13.7)
	DN50	929705	12.6 (27.8)
	DN80	929706	26.1 (57.5)
	DN100	929707	35 (77)
	DN150	929708	88 (194)
	DN200	929709	160 (353)

Technical Data

TypeARI Faba Plus 35.046
 Operating mediumCO₂ - liquid
 Nominal pressurePN40 (580 psi)
 Differential pressure> 14 bar (203 psi)
 Operating temperature-50 °C (-58 °F) to +55 °C (+131 °F)
 Flange connectionEN 1092-1 type D, groove
 Position of devicearbitrary, spindle upright preferred

Material / Surface

Housing1.0619+N, coating: Luxoral Aqua,
RAL5002 - blue, layer thickness min. 30 µm
 Seat ring DN25/DN501.4021+QT
 DN80 - DN2001.4551
 Bellows seal1.4571
 Spindle1.4021+QT
 Flat gasketpure graphite (CrNi laminated with graphite)
 Cone1.4021+QT, hardened

Included in delivery

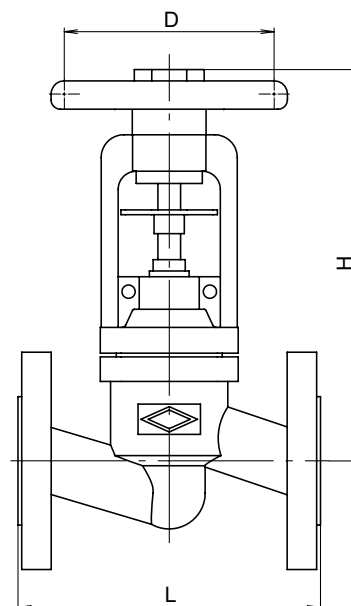
Shut-off valve compl. with operating instructions and
 EU Declaration of Conformity for DN50 - 200
 (DN25 does not fall under the requirements of the Pressure Equipment
 Directive and must not bear the CE mark)

Not included in delivery

Monitoring shut-off valve CO₂-LPsee page 2/2
 as well as flange gaskets and flange screws

Dimension drawing

Dimensions in mm (inch)



DN	D	H	L
25	125 (4.92)	210 (8.27)	160 (6.3)
50	150 (5.91)	230 (9.06)	230 (9.06)
80	225 (8.86)	265 (10.43)	310 (12.2)
100	300 (11.81)	365 (14.37)	350 (13.78)
150	400 (15.75)	430 (16.93)	480 (18.9)
200	520 (20.47)	550 (21.65)	600 (23.62)



Extinguishing technology CO₂ LP

Tank CO₂ LP accessories

Shut-off valve CO₂-LP DN25 - 200

Monitoring shutt-off valve CO₂-LP



parts will be delivered individually

Approvals

no approval required

SAP designation

e.g. part no. 930694: Monitoring shut-off valve CO₂-LP DN25

Maintenance

see technical description monitoring shutt-off valve CO₂-LP, part no. 930726

Designation		Part no.	Weight kg (lbs)
Monitoring shutt-off valve CO ₂ -LP	DN25	930694	0.77 (1.7)
	DN50	930695	
	DN80	930696	
	DN100/DN150	930697	
	DN200	930698	

Application

The monitoring is only used in stationary low pressure CO₂ extinguishing systems according to the system approval. The product is used to monitor the operational position of the shut-off valve ARI Fabra Plus 35.046.

Included in delivery

Limit switch ZS 256-11z828482, see monitoring device
 Brackets/switch plate
 Technical description monitoring shutt-off valve (de)930725
 Technical description monitoring shutt-off valve (en)930726

Functional description

When opening and closing the shut-off valve, the monitoring checks its position in the end positions.
 A switch plate that actuates the limit switches in the respective end position is installed at the valve body. According to the desired application, the open position and/or closed position of the shut-off valve can be monitored.



Extinguishing technology CO₂ LP

Selector valve CO₂ LP

Selector valve KMX CO₂ LP piston controlled



Approvals



G390002



0786-CPD-30013



RU

SAP designation

e. g. part no. 819981: CO₂-LP-selector valve KMX-DN25-PN32

Maintenance

see technical description CO₂-LP-selector valve part no. 886270

DN	Part no.	Equivalent length m (yd)	Weight kg (lbs)
25	819981	9 (9.8)	11.4 (25.1)
50	817480	17 (18.6)	27.4 (60.4)
80	811271	25 (27.3)	45.4 (100.1)
100	792560	45 (49.2)	70.0 (154.3)
150	810102	70 (76.6)	162 (357.2)

Technical Data

MediumCO₂ - liquid, N₂
 Working pressure25 bar (362.6 psi)
from CO₂ - low pressure tank or N₂ - pipework
 Nominal pressure valve housing32 bar (464.1 psi)
 Test pressure valve housing48 bar (696.2 psi)
 Actuation pressuremin. input pressure, max. 25 bar (362.6 psi)
 Temperature range-20 °C to +50 °C (-4 °F to +122 °F)
 Flange connections dimensionacc. to DIN2501 - PN40
 Finishprimer, varnished RAL5010 - gentian blue
 Installation positionany position
 Selector valvecomplies with EN 12094-5
 CE conformity ...acc. to Construction Products Regulations (EU)
No. 305/2011

Material / surface

Housingcast steel, cold - ductile
 Cylinder cover DN25/DN50/DN80S235J2 or S355J2
 DN100/DN150S355J2
 Cylinder pipeAl Mg Si 0,5
 PistonGJL-250
 Piston rod1.4305
 Valve head1.4301, 1.4305
 Gasket valve headNBR - low temperature resistant
 Piston gasketPTFE - NBR
 O-rings, groove ringspolyurethane
 Screws, nuts and accessoriesA2/70

Application

The CO₂ LP selector valves are used in accordance with system approval in stationary CO₂ - and N₂ - low pressure fire extinguishing systems. In case of fire the selector valves are used for flooding selected extinguishing zones. After a fire has been detected in one of the extinguishing zones of a multi-zone system, the selector valve allocated to the extinguishing zone opens allowing the extinguishing agent to flow into the downstream pipework of the extinguishing zone in question.

Performance features

The appropriate number of selector valves are depending on the number of extinguishing zones of a multi-zone system mounted on a manifold. The nominal diameter of the valves are based on a hydraulic calculation system. A pneumatic release device and a corresponding extinguishing control system opens and closes the valves automatically.

Included in delivery

Selector valve KMX CO₂ LP piston controlled
 Technical description CO₂-LP-selector valve part no. 886270

Not included in delivery

Pressure relief valvesee selector valve CO₂ LP accessories



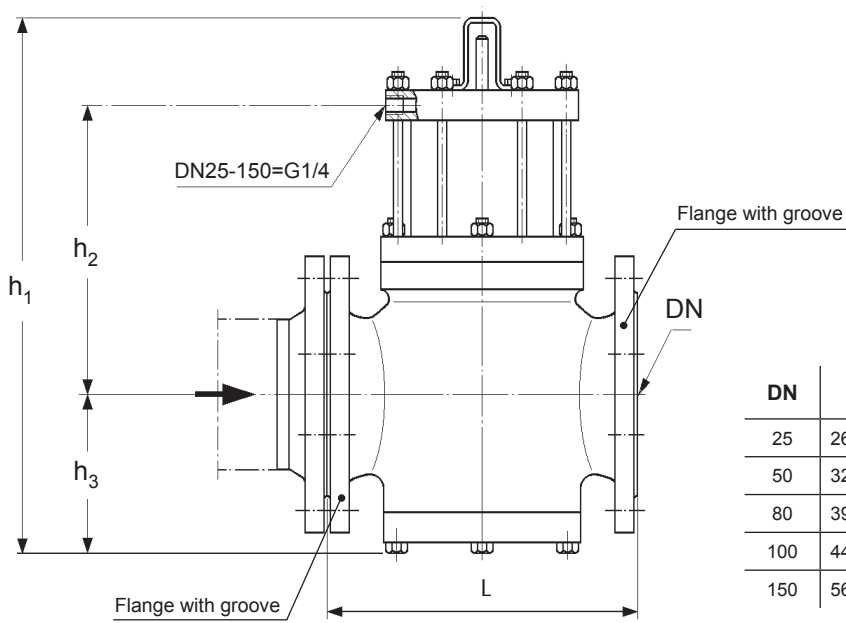
Extinguishing technology CO₂ LP

Selector valve CO₂ LP

Selector valves KMX CO₂ LP piston controlled

Dimension drawing

Dimensions in mm (inch)



DN	h ₁	h ₂	h ₃	L
25	263 (10.4)	140 (5.5)	78 (3.1)	160 (6.3)
50	323 (12.7)	180 (7.1)	98 (3.9)	230 (9.1)
80	394 (15.5)	209 (8.2)	116 (4.6)	310 (12.2)
100	449 (17.7)	240 (9.5)	138 (5.4)	350 (13.8)
150	566 (22.3)	314 (12.4)	178 (7)	480 (18.9)



Extinguishing technology CO₂ LP

Selector valve CO₂ LP accessories

Pressure relief valve



Approvals



¹⁾ VdS approval applies in connection with CO₂ low pressure section valves KMX DN80, DN100 and DN150

SAP designation

part no. 828731: Pressure relief valve

Maintenance

see product information pressure relief valve part no. 828860

Designation	Part no.	Weight
Pressure relief valve	828731	0.56 kg (1.2 lbs)

Technical Data

AgentCO₂ - gaseous
 Operating pressure25 bar (362,5 psi)
 Temperature range-20 °C to +50 °C (-4 °F to +122 °F)
 Materialbrass / steel / NBR
 ConnectionsG1/4, ISO 228

When exhausting the pilot pipe, the non-return ball closes in such a way that a larger decrease of pressure is at the port P than what occurs port A. After reaching a certain difference of pressure the piston is reversed, whereby an increased piston surface comes into effect and the pressure relief bore is held in this way for a long time in an open position, until the piston area of the selector valve and the pilot pipe are approximately vented. Afterwards the pressure relief valve switches automatically again into the starting position. Substantially shorter closing times of the selector valves are reached in this way in long pilot pipes.

Application

For a quicker venting of the piston chamber of CO₂ low pressure section valves

Functional description

The pressure relief valve works according to the principle of a differential piston. In a state of rest and/or during application of pressure in flow direction a spring-tensioned piston is held in closed position.

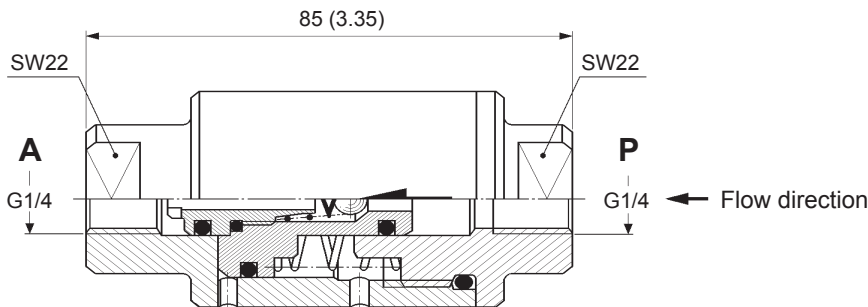
A flow through the pressure relief valve to the selector valve therefor only made possible by means of a non-return ball.

Included in delivery

Pressure relief valve
 Product information pressure relief valve part no. 828860

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Selector valve CO₂ LP accessories

**Safety valve G1/2 - 30 bar
nominal overpressure 40 bar**



Approvals



- 1) Part of the system approval:
 - CO₂ extinguishing system ND-1 (S398012), electrical release
 - CO₂ extinguishing system ND-2 (S398013), non-electrical release

SAP designation

part no. 704084: Safety valve G1/2-30BAR

Maintenance

according to operating instructions of the manufacturer

Designation	Part no.	Weight
Safety valve G1/2 - 30 bar	704084	1.1 kg (2.4 lbs)

Technical Data

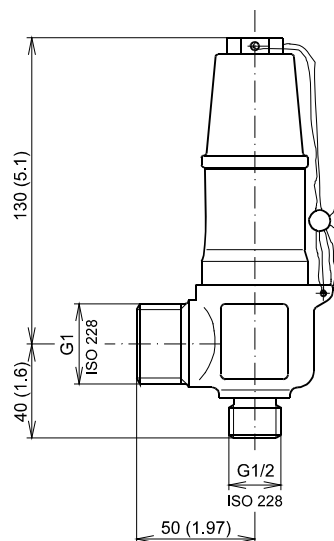
TypeHERL-T21.CO2
 MediumCO₂ - liquid
 Nominal diameterDN12
 Nominal overpressure40 bar (580 psi)
 Response pressure30 bar (435 psi) at -5 °C (+23 °F)
 Lowest temperature...-50 °C (-58 °F) at 5,8 bar (84 psi) overpressure
 Position of devicevertical

Included in delivery

Safety valve compl. with TÜV calibration certificate (p = 30 bar) and test certificate for housing material.

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Selector valve CO₂ LP accessories

Odorizing device MX 1/2 - 3000



Approvals



- 1) Part of the system approval:
 - CO₂ extinguishing system ND-1 (S398012), electrical release
 - CO₂ extinguishing system ND-2 (S398013), non-electrical release

SAP designation

part no. 820471: Odorizing device MX 1/2-3000

Maintenance

see product information odorizing device part no. 820537

Designation	Part no.	Weight
Odorizing device MX 1/2 - 3000	820471	0.28 kg (0.6 lbs)

Technical data

MediumCO₂, argon, nitrogen
 Temperature range-20 °C to +50 °C (-4 °F to +122 °F)
 Materialbrass
 Odor concentrateisopropanol and lemon oil (1:1)
 Filling quantity10 ±0,5 cm³
 Reaction pressure3 bar (43,5 psi) ±10 %
 Working pressure60 bar (870 psi)
 Test pressure90 bar (1305 psi)
 Odorizing devicefor 1000 kg / extinguishing agent max.
 Installation positionaccording to product information

Note

other odor concentrate for example wintergreen upon request

Application

The odorizing device MX1/2-3000 admixes concentrated odor fluid at stationary argon, nitrogen and CO₂ fire extinguishing systems.

Functional description

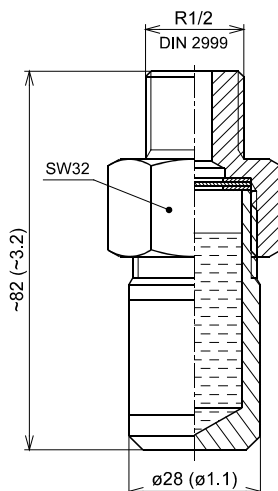
On discharge of argon, nitrogen and CO₂ the bursting disk will be destroyed and odor is added continuously to the flowing gas. Thus it is possible to smell the normal odorless gas.

Included in delivery

Odorizing device MX 1/2 - 3000
 Product information odorizing device part no. 820537

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Selector valve CO₂ LP complete

Selector valves KMX CO₂ LP piston controlled, complete



Approvals



G390002



0786-CPD-30013



RU

SAP designation

e.g. part no. 768878: CO₂-LP-selector valve KMX-DN 25 compl.

Maintenance

see technical description CO₂-LP-selector valve part no. 886270

DN	Part no.	Equivalent length m (yd)	Weight kg (lbs)
25	768878	9 (9.8)	12.5 (27.6)
50	768891	17 (18.6)	29.9 (65.9)
80	768908	25 (27.3)	49.7 (109.6)
100	768910	45 (49.2)	76.1 (167.8)
150	768921	70 (76.6)	184.7 (407.2)

Technical Data

Medium	CO ₂ - liquid, N ₂
Working pressure	25 bar (362.6 psi)
.....from CO ₂ - low pressure tank or N ₂ - pipework	
Nominal pressure valve housing	32 bar (464.1 psi)
Test pressure valve housing	48 bar (696.2 psi)
Actuation pressure	min. input pressure, max. 25 bar (362.6 psi)
Temperature range	-20 °C to +50 °C (-4 °F to +122 °F)
Flange connections dimension	acc. to DIN2501 - PN40
Finish	primer, varnished RAL5010 - gentian blue
Installation position	any position
Selector valve	complies with EN 12094-5
CE conformity	acc. to Construction Products Regulations (EU)
.....	No. 305/2011

Material / surface

Housing	cast steel, cold - ductile
Cylinder cover DN25/DN50/DN80	S235J2 or S355J2
DN100/DN150	S355J2
Cylinder pipe	Al Mg Si 0,5
Piston	GJL-250
Piston rod	1.4305
Valve head	1.4301, 1.4305
Gasket valve head	NBR - low temperature resistant
Piston gasket	PTFE - NBR
O-rings, groove rings	polyurethane
Screws, nuts and accessories	A2/70
Enclosed accessories:	
Flange	C22.8, TK (suitable for low temperatur)
Hex. screws, nuts ...	26CrMo4-2, TK (suitable for low temperatur)
Washer	galvanized
Gasket	Klingersil C4400 asbestos-free, silicone-free

Application

The CO₂ LP selector valves are used in accordance with system approval in stationary CO₂ - and N₂ - low pressure fire extinguishing systems. In case of fire the selector valves are used for flooding selected extinguishing zones. After a fire has been detected in one of the extinguishing zones of a multi-zone system, the selector valve allocated to the extinguishing zone opens allowing the extinguishing agent to flow into the downstream pipework of the extinguishing zone in question.

Performance features

The appropriate number of selector valves are depending on the number of extinguishing zones of a multi-zone system mounted on a manifold. The nominal diameter of the valves are based on a hydraulic calculation system. A pneumatic release device and a corresponding extinguishing control system opens and closes the valves automatically.

Included in delivery

Selector valve KMX CO₂ LP piston controlled complete with flange, hex. screws, nuts, washers and gasket.
Technical description CO₂-LP-selector valve part no. 886270

Not included in delivery

Pressure relief valvesee selector valve CO₂ LP accessories



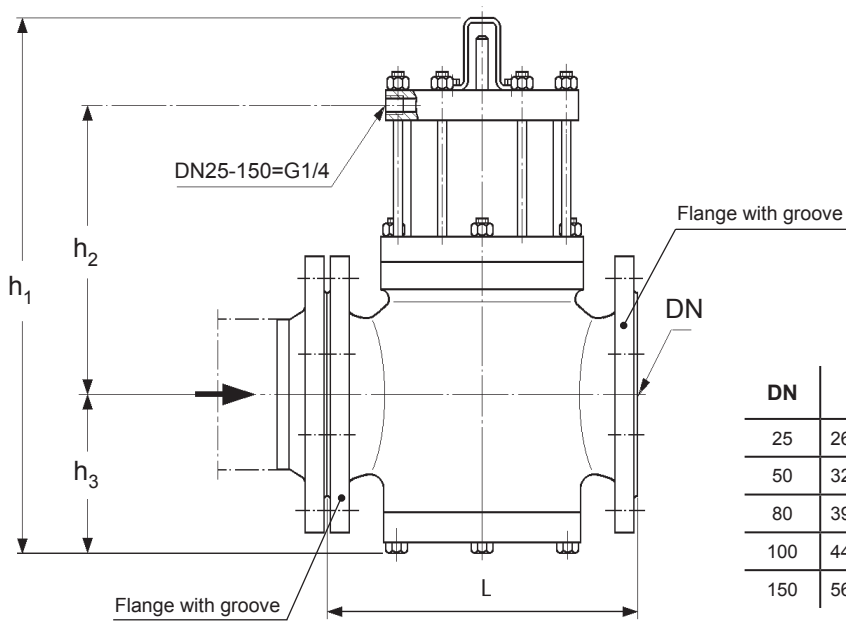
Extinguishing technology CO₂ LP

Selector valve CO₂ LP complete

Selector valves KMX CO₂ LP piston controlled, complete

Dimension drawing

Dimensions in mm (inch)



DN	h ₁	h ₂	h ₃	L
25	263 (10.4)	140 (5.5)	78 (3.1)	160 (6.3)
50	323 (12.7)	180 (7.1)	98 (3.9)	230 (9.1)
80	394 (15.5)	209 (8.2)	116 (4.6)	310 (12.2)
100	449 (17.7)	240 (9.5)	138 (5.4)	350 (13.8)
150	566 (22.3)	314 (12.4)	178 (7)	480 (18.9)



Extinguishing technology CO₂ HP Nozzle

Local application nozzle ED - 1/2 and 3/4



Approvals



G393002

SAP designation

e.g. part no. 133634: Local application nozzle ED-1/2-14

Maintenance

see product information local application nozzle ED 1/2 and ED 3/4 part no. 886254

A ¹⁾ (mm ²)	Part no.		A imaginary (mm ²)	Weight kg (lbs)
	ED - 1/2	ED - 3/4		
14	133634	-	8	ED - 1/2: 0.5 (1.1)
17	133646	133749	10	
21	133658	133750	12.5	
27	133660	133762	16	
34	133671	133774	20	
42.5	133683	133786	25	
54.5	133695	133798	31.5	ED - 3/4: 0.9 (1.98)
68	133701	133804	40	
87	133713	133816	50	
108.5	133725	133828	63	
137.5	133737	133830	80	
169.5	-	133841	100	
218	-	133853	125	

¹⁾ Exhaust aperture through nozzles

Technical data

TypeED
 Operating mediumCO₂
 Working pressuremin. 10 bar (145 psi), max. 60 (870 psi) bar
 Connection threadRp 1/2, Rp 3/4, ISO 7
 Temperature range-20 °C to +50 °C (-4 °F to 122 °F)
 Jet deflectorsheet steel, 1 mm (0,04") thickness
 Finishvarnish, RAL3000 - red
or "Minimax-red", similar to RAL3000
 Nozzle bodybrass

Application

The local application nozzle is used in accordance with the "documentation of special extinguishing systems" in fixed CO₂ fire extinguishing systems.
 The nozzle is especially suitable for the protection of free-standing not enclosed objects. During the protected time the calculated quantity of the pouring out CO₂ forms a densely aerosol cloud in the flooding area. With the local application nozzle this aerosol cloud can aligned exactly to the object.

Marking

manufacturer (MX), type (ED), connection (1/2 or 3/4), exhaust aperture (xxx), approval sign (VdS), serial number

214-360_001 / A/01_2015en
The contents of this publication are subject to modifications without notice. All rights reserved.



Extinguishing technology CO₂ HP

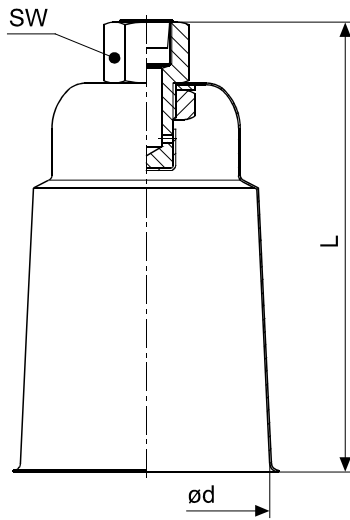
Nozzle

Local application nozzle

ED - 1/2 und 3/4

Dimension drawing

Dimensions in mm (inch)



Nozzle	ød	L	SW
ED - 1/2	100 (3.94)	185 (7.28)	30
ED - 3/4	141 (5.55)	249 (9.8)	36



Extinguishing technology CO₂ HP

Nozzle

Nozzle MX1/4-H



Approvals / CE marking



- 1) VdS approval is only valid for CO₂ high pressure fire extinguishing systems and CO₂ low pressure fire extinguishing systems
- 2) Listed system covered by UL-File EX6388 (CO₂) and UL-File EX5248 (Ar)

SAP designation

Nozzle manufactured of part no. 820604: Nozzle MX1/4-H

Maintenance

see technical description nozzle MX1/4-H part no. 886252

Designation	Part no.	Weight
Nozzle MX1/4-H x d	820604 ³⁾	0.08 kg (0.18 lbs)

³⁾ Ordering hints

The nozzles are manufactured on request.
When ordering, state required nozzle bore diameter **d** (1 mm up to 2,5 mm in 1/10 mm gradation)!

Technical data

TypeMX1/4-H
 Operating medium VdSCO₂
 ULCO₂, argon
 Connection threadG1/4 ISO 228
 Working pressure ..min. 10 bar (145 psi), max. 60 (870 psi) bar
 Temperature range-20 °C to +50 °C (-4 °F to 122 °F)
 Nozzle bodybrass
 Sievestainless steel
 Width of mesh0.5 mm (0.02")
 Wire diameter0.16 mm (0.01")
 Nozzlecomplies with EN 12094-7
 CE conformityacc. to Construction Products Regulation (EU)
No. 305/2011

Application

The nozzle MX1/4-H may only be used as a room protection nozzle. The nozzle is used for the protection of small rooms or small enclosed objects e.g. EDP-equipment, control cabinets or cable floors. They distribute the extinguishing agent evenly in the extinguishing zone in the calculated flooding time.

Marking

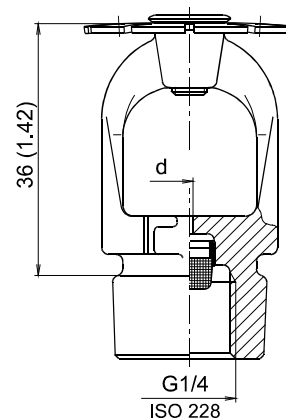
manufacturer / year indication (MX / xx), type (MX1/4-H), bore diameter d (X,X), approval sign (VdS, UL), CE, serial number

Included in delivery

Nozzle MX1/4-H x d
 Technical description nozzle MX1/4-H part no. 886252

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ HP Nozzle

Nozzle type DD

Approvals / CE marking



G393008



¹⁾
LISTED



0786-CPD-30002

¹⁾ Listed system covered by UL-File EX6388 (CO₂)



SAP designation

e.g. part no. 290287: Nozzle DD 1/2- 3

Maintenance

see technical description nozzle DD part no. 886280

Ød mm (inch)	Part no.	A imaginary mm ²
3.0 (0.12)	290287	5
3.7 (0.15)	290299	8
4.6 (0.18)	290317	12.5
5.2 (0.20)	290329	16
6.6 (0.26)	290354	25
7.4 (0.29)	290378	31.5
8.3 (0.33)	290380	40

Weight nozzle DD 1/2: 0,07 kg (0,15 lbs)

Ød mm (inch)	Part no.	A imaginary mm ²
9.2 (0.36)	290408	50
9.8 (0.39)	290410	57
10.3 (0.41)	290421	63
10.9 (0.43)	290433	70
11.5 (0.45)	290457	80
12.0 (0.47)	290469	87
12.7 (0.50)	290470	100

Technical data

TypeDD
 Operating mediumcarbon dioxide (CO₂),
argon (IG-01), nitrogen (IG-100), IG-55, IG-541
 Connecting threadR1/2, DIN 2999
 Working pressuremax. 60 bar (870 psi)
 Nozzle bodybrass
 Temperature range-20 °C to +50 °C (-4 °F to +122 °F)
 Nozzlecomplies with EN 12094-7
 CE conformityacc. to Construction Products Regulation (EU)
No. 305/2011

Application

The nozzle DD may only be used in accordance with system approval in stationary CO₂, argon, nitrogen, IG-55 and IG-541 fire extinguishing systems.

They are provided with threads on the inlet and outlet side so it is possible to mount the nozzle from the outside at e.g. housing and exhaust air channels. The nozzle distribute the extinguishing agent evenly in the extinguishing zone in the calculated flooding time.

Marking

manufacturer (MX), type (DD), bore diameter d (X,X), approval sign (VdS), CE, serial number

Included in delivery

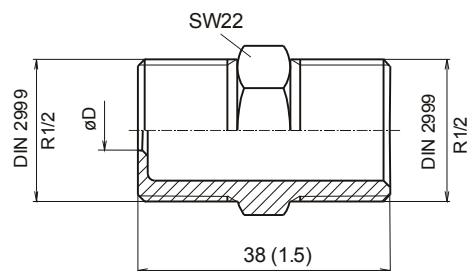
Nozzle DD 1/2
 Technical description nozzle DD part no. 886280

Not included in delivery

Nozzle assembly flush and insertion typesee nozzle

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ HP Nozzle

Nozzle assembly flush type and insertion type

Approvals
no approval required



SAP designation
e.g. part no. 290019: Nozzle assembly flush type

Maintenance
maintenance-free

Designation		Part no.	Weight
Nozzle assembly	flush type	290019	0.67 kg (1.48 lbs)
	insertion type	359544	0.55 kg (1.21 lbs)

Included in delivery

- T B1-1/2 type D, galvanized747982
- Cap T1-1/2 type D, galvanized749887
- Union U12-1/2 type D, galvanized818540
- Pipe nipple flush type / insertion type818289

Not included in delivery

Nozzle type DDsee nozzle

Additionally for flush type:

- Foil 1/2"479377

Additionally for flush type:

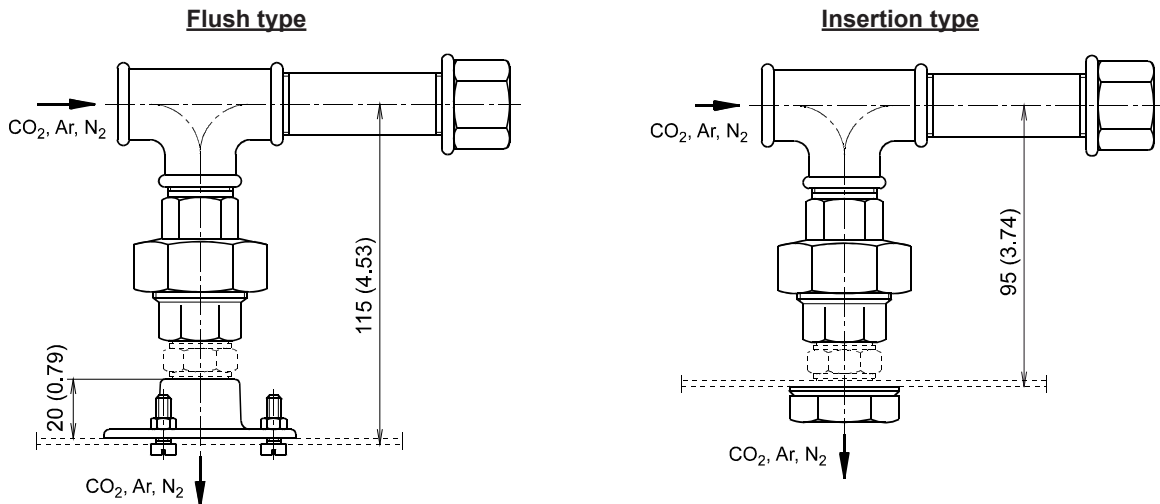
- Mounting socket thermo switch, screw-onsee release device electr.
- 3x hex. screw DIN933-M5x16, galvanized105730
- 3x hex nut DIN934-M5, galvanized108420
- 6x washer DIN125-B5,3, galvanized109758
- 3x spring ring DIN127 B5, galvanized109473

Additionally for insertion type:

- Counter nut P4-1/2, galvanized818551
- Washer DIN125-B21-steel galvanized109941

Dimension drawing

Dimensions in mm (inch)



214-360_004 / A101_2015en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/1



Extinguishing technology CO₂ HP Nozzle

Booth protection nozzle KD 2 - 42,5

Approvals

Component without VdS approval



SAP designation

e.g. part no. 886331: Cabin protection nozzle KD 2

Maintenance

see product information booth protection nozzle part no. 886003

Designation		Part no.	A ¹⁾ (mm ²)	A imaginary (mm ²)	Weight
Booth protection nozzle	KD 2	886331	2	1.2	0.27 kg (0.6 lbs)
	KD 14	822480	14	8	
	KD 17	822492	17	10	
	KD 21	822509	21	12.5	
	KD 27	822510	27	16	
	KD 34	822522	34	20	
	KD 42.5	822534	42.5	25	

¹⁾ Exhaust aperture through nozzles

Technical data

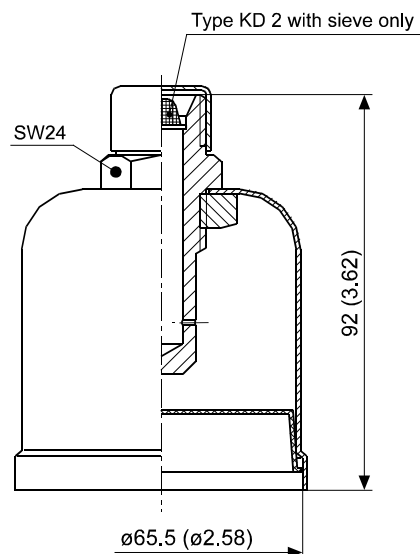
TypeKD
 Operating mediumCO₂
 Working pressure ..min. 10 bar (145 psi), max. 60 (870 psi) bar
 Connection threadR1/2", ISO 7/1
 Nozzle insertbrass
 Deflectorsteel, nickel plated

Included in delivery

Booth protection nozzle KD
 Product information booth protection nozzle part no. 886003

Dimension drawing

Dimensions in mm (inch)



Application

The booth protection nozzle may only be used in accordance with system approval in stationary CO₂ fire extinguishing systems. It is designed for application in enclosed spaces for example protective covers of machine tools and in powder coating booths. After actuating the CO₂ fire extinguishing system the liquid CO₂ flows through a pipe system into the nozzle insert. After leaving the two nozzles holes the CO₂ expands in the jet deflector of the booth protection nozzle. The cone plug is press out from the gaseous CO₂ and the CO₂ streams in a full cone jet out of the nozzle.

Caution

The nozzle is not suitable for use as a local application nozzle to protected open objects. Never align the booth protection nozzle directly to liquids.

Marking

manufacturer's sign (MX), type (KD), serial number

214-360_005 / A101_2015en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/1



Inert gas extinguishing technology

Nozzle

Nozzle RD 1/2 and 3/4



Approvals / CE marking



G392002



LISTED



0786-CPD-30001

¹⁾ Listed system covered by UL-File EX5248 (Ar).
For CO₂ - fire extinguishing systems used nozzle RD with UL-Code, see nozzle.

SAP designation

e.g. part no. 186004: Nozzle RD1/2x 3,0

Maintenance

see product information nozzle RD1/2 and RD3/4
part no. 886279

Nozzle RD	Part no.	A imaginary [mm ²]	Weight
1/2 x 3.0	186004	5	0.07 kg (0.15 lbs)
1/2 x 3.7	186028	8	
1/2 x 4.6	186041	12.5	
1/2 x 5.2	186053	16	
1/2 x 6.6	186077	25	
1/2 x 7.4	186089	31.5	
1/2 x 8.3	186107	40	
1/2 x 9.2	186090	50	
1/2 x 9.8	594840	57	
1/2 x 10.3	186119	63	
1/2 x 10.9	594838	70	
1/2 x 11.5	186120	80	
1/2 x 12.0	594826	87	
1/2 x 12.7	594814	100	0.10 kg (0.22 lbs)
3/4 x 13.7	252621	110	
3/4 x 14.6	186170	125	
3/4 x 15.4	252633	140	
3/4 x 16.4	186181	160	
3/4 x 17.2	252645	180	
3/4 x 17.9	186193	200	

Technical data

TypeRD 1/2, RD 3/4
 Operating mediumCO₂, argon (IG-01), nitrogen (IG-100),
IG-55, IG-541
 Connection threadaccording to EN 10226
 Working pressure ..min. 10 bar (145 psi), max. 60 (870 psi) bar
 Temperature range-20 °C to +50 °C (-4 °F to 122 °F)
 Nozzle bodybrass

Application

The nozzles RD may only be used in as room protection nozzles in stationary CO₂, argon, nitrogen, IG-55 and IG-541 fire extinguishing systems.
 The nozzles distribute the extinguishing agent evenly in the extinguishing zone in the calculated flooding time.

Marking

manufacturer (SFH), type (RD), bore diameter d (X,X),
 approval sign (VdS), CE, serial number



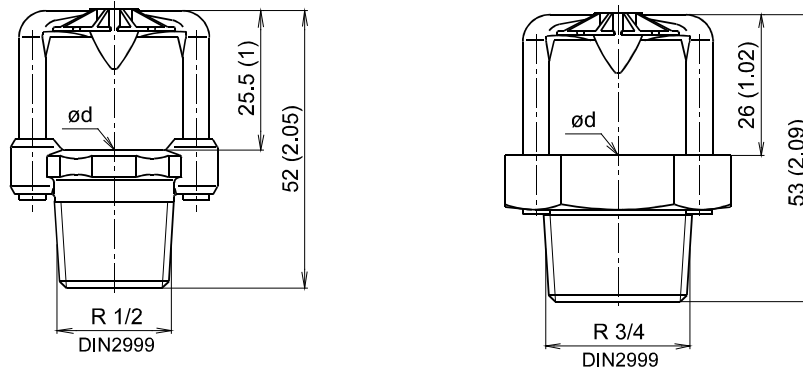
Inert gas extinguishing technology

Nozzle

Nozzle RD 1/2 and 3/4

Dimension drawing

Dimensions in mm (inch)



Nozzle RD	ød
1/2 x 3.0	3.0 (0.12)
1/2 x 3.7	3.7 (0.15)
1/2 x 4.6	4.6 (0.18)
1/2 x 5.2	5.2 (0.2)
1/2 x 6.6	6.6 (0.26)
1/2 x 7.4	7.4 (0.29)
1/2 x 8.3	8.3 (0.33)
1/2 x 9.2	9.2 (0.36)
1/2 x 9.8	9.8 (0.39)
1/2 x 10.3	10.3 (0.41)
1/2 x 10.9	10.9 (0.43)
1/2 x 11.5	11.5 (0.45)
1/2 x 12.0	12.0 (0.47)
1/2 x 12.7	12.7 (0.5)
3/4 x 13.7	13.7 (0.54)
3/4 x 14.6	14.6 (0.57)
3/4 x 15.4	15.4 (0.61)
3/4 x 16.4	16.4 (0.65)
3/4 x 17.2	17.2 (0.68)
3/4 x 17.9	17.9 (0.7)



Extinguishing technology CO₂ HP

Nozzle

Nozzle RD 1/2 and 3/4
UL-Code

Approvals



1) Systemleistung innerhalb UL-File EX6388 (CO₂)



SAP designation

e.g. part no. 887177: Nozzle RD 1/2 UL-Code 3,4

Maintenance

visual check within the framework of system-specific functional test

Nozzle RD	UL-Code	Part no.	Weight
R 1/2	3.4	887177	0.07 kg (0.15 lbs)
	4.2	887179	
	5.2	887181	
	5.8	887182	
	7.4	887183	
	8.3	887184	
	9.2	887185	
	10.2	887186	
	10.8	887187	
	11.4	887188	
	12.2	887189	
	12.9	887190	
R 3/4	14.4	887193	0.10 kg (0.22 lbs)
	15.2	887194	
	16.2	887195	
	17.0	887196	
	18.4	887197	
	19.6	887198	
	20.6	887199	

Technical data

TypeRD 1/2, RD 3/4
 Operating mediumCO₂
 Connection threadaccording to DIN 2999
 Working pressure ..min. 10 bar (145 psi), max. 60 (870 psi) bar
 Temperature range-20 °C to +50 °C (-4 °F to 122 °F)
 Nozzle bodybrass

Application

The nozzles RD with UL-Code may only be used as room protection nozzles in stationary CO₂ fire extinguishing systems. The nozzles distribute the extinguishing agent evenly in the extinguishing zone in the calculated flooding time.

Marking

manufacturer (SFH), type (RD), UL-Code (X,X), serial number

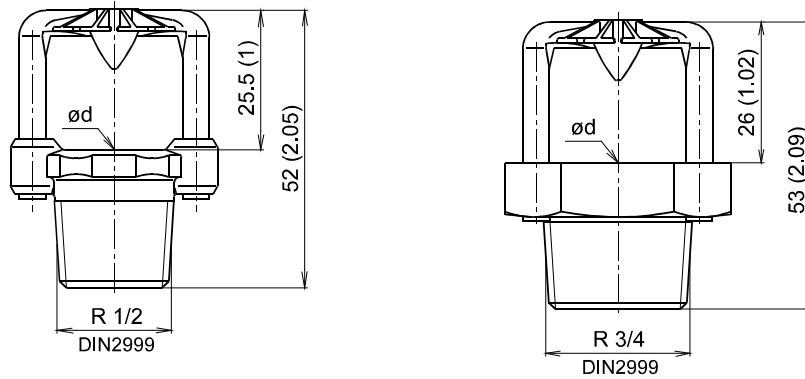
214-360_007 / A101_2015en
The contents of this publication are subject to modifications without notice. All rights reserved.



Extinguishing technology CO₂ HP Nozzle

Nozzle RD 1/2 and 3/4 UL-Code

Dimension drawing Dimensions in mm (inch)



Nozzle RD	UL-Code	ød
R 1/2	3.4	3.0 (0.12)
	4.2	3.7 (0.15)
	5.2	4.6 (0.18)
	5.8	5.2 (0.2)
	7.4	6.6 (0.26)
	8.3	7.4 (0.29)
	9.2	8.3 (0.33)
	10.2	9.2 (0.36)
	10.8	9.8 (0.39)
	11.4	10.3 (0.41)
	12.2	10.9 (0.43)
	12.9	11.5 (0.45)
	13.5	12.0 (0.47)
R 3/4	14.4	12.7 (0.5)
	15.2	13.7 (0.54)
	16.2	14.6 (0.57)
	17.0	15.4 (0.61)
	18.4	16.4 (0.65)
	19.6	17.2 (0.68)
	20.6	17.9 (0.7)



Inert gas extinguishing technology

Alarm device

Makrofon



Approvals / CE marking



1) Listed system covered by UL-File EX6388 (CO₂) and UL-File EX26532 (Ar, VSN 200 und VSN 1230)

2) Part of the system approval (VSN 200 and VSN 1230)

SAP designation

part no. 860050: Makrofon

Maintenance

see product information makrofon part no. 871828

Spare parts

Union GE 6-PSR-EDA3	125578
Bracket (large)	888619
2x Hex. screw DIN933 M6X16-8.8 gal Zn	206261
2x Spring lock washer DIN128-A6-A4	905383
2x Hex. nut DIN934-M6-gal Zn	249230

Designation	Part no.	Weight
Makrofon	860050	1.15 kg (2.54 lbs)

Technical data

Operating medium	CO ₂ , gaseous
Temperature range	-20 to +300 °C (-4 to +572 °F)
Working pressure	8 bar to 70 bar (116 psi to 1015 psi)
.....overpressure-proof up to 140 bar (2030 psi)	
Consumption at constant 70 bar	CO ₂ , 147 g/min
Consumption by using a CO ₂ pilot cylinder (falling pressure)	approx. 2350 g / 30 min, approx. 2950 g / 60 min
Connection	for precision drawn steel pipe 6 x 1
Installation position	sound outlet points downward
Makrofon	complies with EN 12094-12
CE conformity	acc. to Construction Products Regulation (EU) No 305/2011

Application

The makrofon is a pneumatically operated acoustic alarm device for the use in stationary gas extinguishing systems accordance with the system approval.

This alarm device warns persons being present prior to flooding of the area with extinguishing gas by a loud sound and constant frequency.

Caution: At operating pressure the makrofon generates at a distance of 1 m a sound level which may cause hearing disorder.

Note

For indoor use only

Not included in delivery

Clamping bolt for wall mounting
silencer makrofon877120, see alarm device

Included in delivery

Makrofon with bracket (small and large)
Product information makrofon part no. 871828



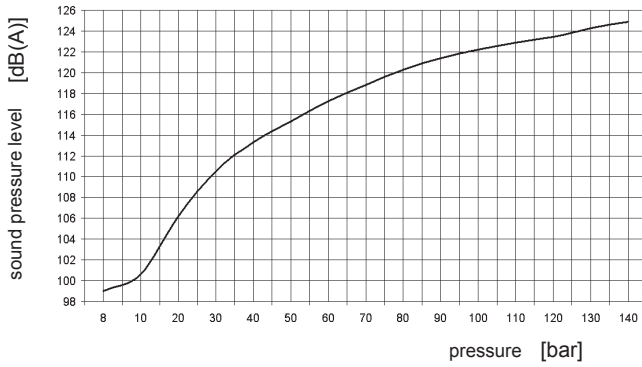
Inert gas extinguishing technology

Alarm device

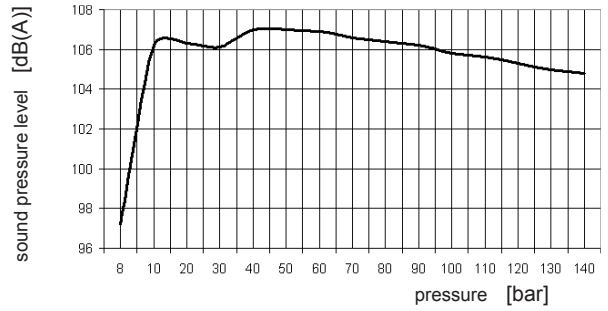
Makrofon

A-weighted sound pressure level over the pressure range

without silencer



with silencer

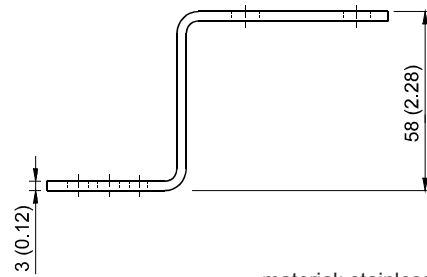
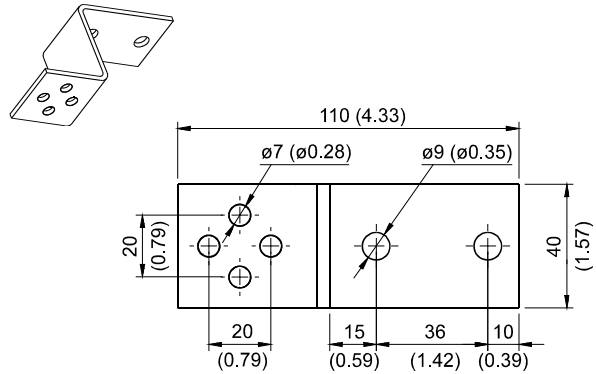
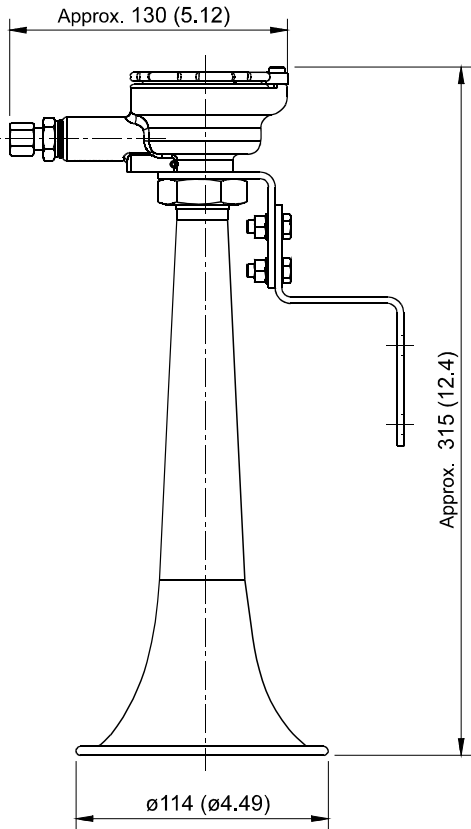


Note: The above shown curves were determined in the laboratory. Due to the influencing factors given in situ, the real values may deviate from the curves.

Dimension drawing

Dimensions in mm (inch)

Makrofon dimensions and bracket (large) dimensions



material: stainless steel



Inert gas extinguishing technology

Alarm device

Silencer makrofon MX-1

Approvals

no approval required



SAP designation

part no. 877120: Schalldämpfer Makrofon MX-1

Maintenance

maintenance-free

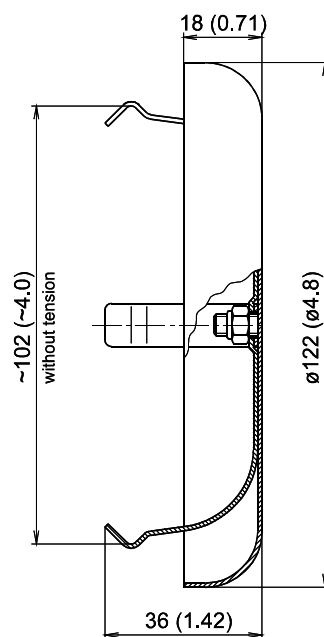
Designation	Part no.	Weight
Silencer makrofon MX-1	877120	0.12 kg (0.26 lbs)

Technical data

Materialstainless steel

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Control device CO₂

Pneum. time delay device PV-3-ND and PV-3-BND



PV-3-BND

Approvals



G301004



0786-CPD-30039

SAP designation

e. g. part no. 885127: Pneum. time delay device PV-3-ND

Maintenance

see product information PV-3 (de/en) part no. 885126

Designation		Part no.	Weight approx.
Pneum. time delay device	PV-3-ND	885127	18 kg (39.7 lbs)
	PV-3-BND	885957	

Technical Data

AgentCO₂
 Operating pressure25 bar (362,6 psi)
 Delay time3 s up to 100 s
 Temperature range0 °C to +50 °C (+32 °F to +122 °F)
 Dimensions(WXHXD)...400x500x200mm (15,75"x19,69"x7,87")
 FinishRAL7032 - pebble grey, stove enamelled
 IP codeIP54
 Thread connectionfor precision-drawn steel pipe
 Nominal voltage, solenoid valve24 V DC
 Nominal current, solenoid valve10 W
 Duration of operation, solenoid valve100%
 Door switch1 x change-over

Additionally at PV-3-BND:

Disable device3/2-ways ball valve
 2x limit switch1 x change-over

Application

The pneumatic time delay device may only be used in accordance with system approval in stationary CO₂/N₂- low pressure -fire extinguishing systems. In a event of fire, the PV-3 is used for delay the beginning of the flooding. The time delay is necessary to leave the flooding area on time.

Functional description

It is possible to set the pneumatic timer continuously variable for a time delay of 3 to 100 sec. Additional a electricly time delay is possible.

Caution: The electrically controlled time delay always has to be adjusted 10% longer than the pneumatic one.

The electrical activation of the PV3-ND/BND is made by an electric control device. The electric control impulse of the electric control device must be operate without delay and remains as a permanent signal. The extinguishing time is also controlled electricly by an electric control device. It must allow a flooding time up to 240 sec..

If necessary the pneumatic alarm device can be switched off by the shut off valve.The PV3-BND includes a disable device is used for closing the pilot pipe to the selector valve.

Note

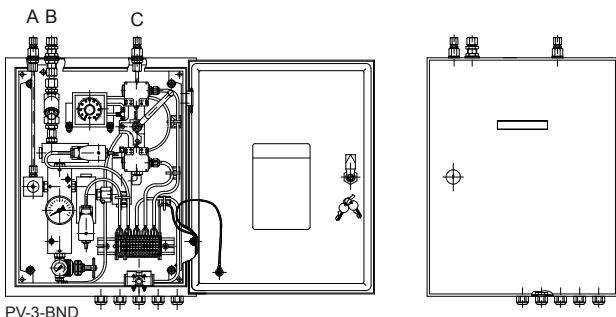
This pneumatic time delay device PV-3-ND/BND is to be used with the systems FMZ 4100 and FMZ 5000 only

Included in delivery

Pneum. time delay device PV-3-ND / PV-3-BND
 Product information PV-3 (de/en) part no. 885126

Not included in delivery

Fixing lever E1240870400
 (ease of installation of the pneum. time delay device at wall)



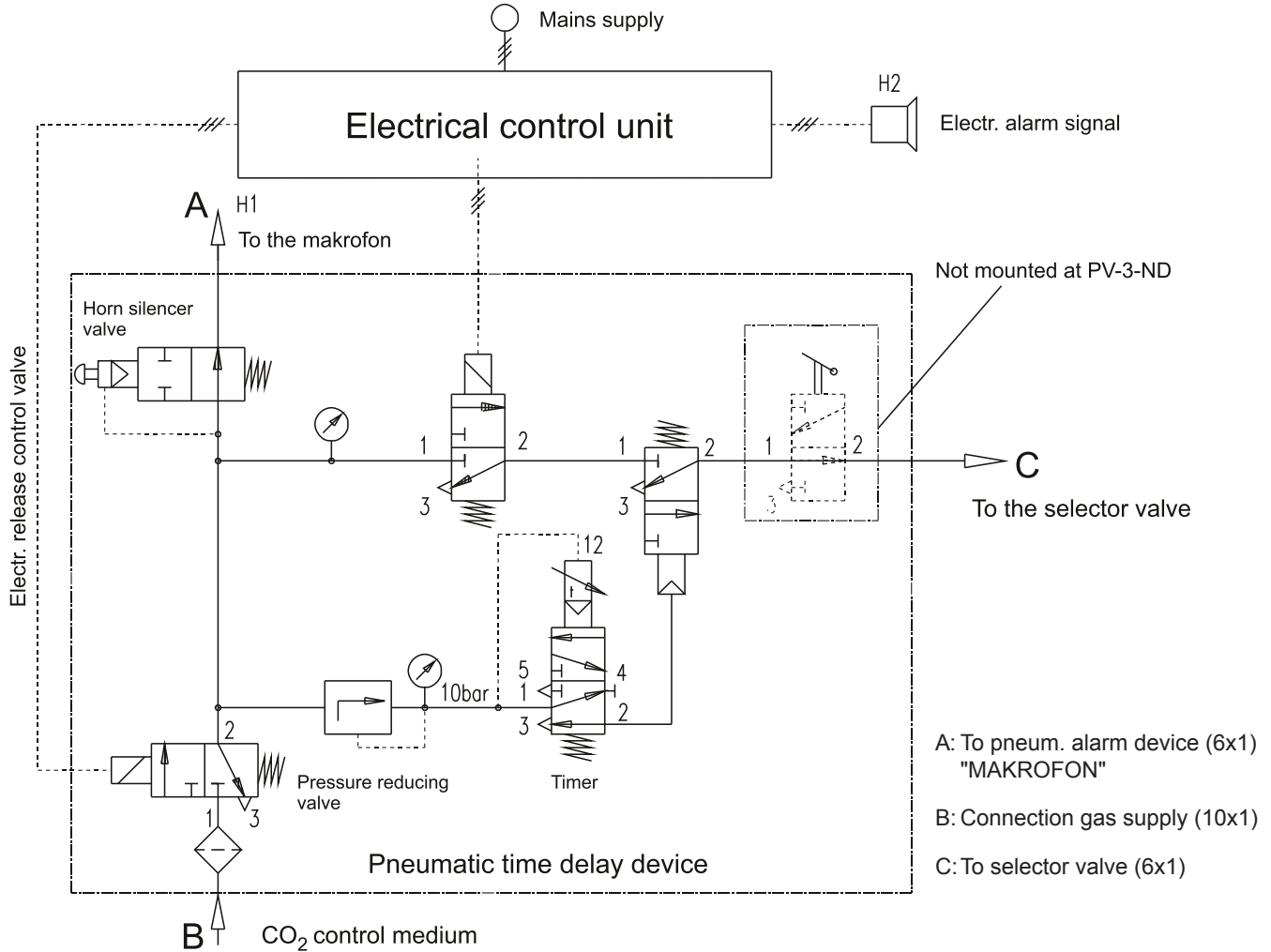
Circuit diagram see page 2



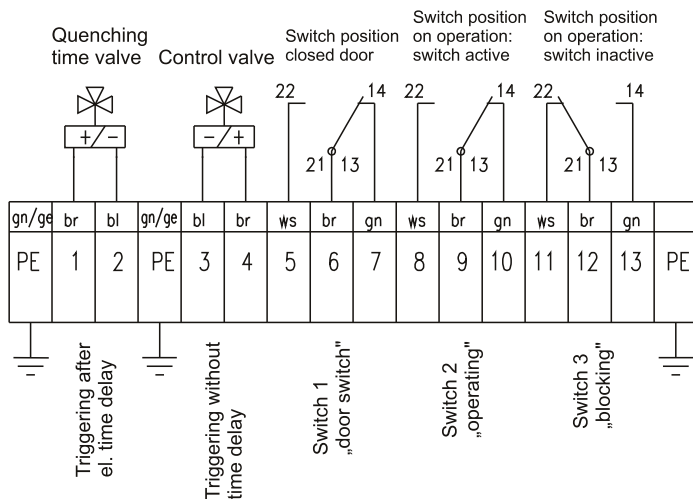
Extinguishing technology CO₂ LP

Control device CO₂

Pneum. time delay device PV-3-ND and PV-3-BND



Note: adjust electr. pre-warning time to be 10% longer than mech. pre-warning time



Switch 2 and 3 not mounted at PV-3-ND



Extinguishing technology CO₂ LP

Control device CO₂

Solenoid valve 3/2-ways DN7 compl.



Approvals



¹⁾ Part of the system approval:
- CO₂ extinguishing system ND-1 (S398012), electrical release

SAP designation

part no. 815392: Solenoid valve CO₂-DN7-compl.

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation	Part no.	Weight
Solenoid valve 3/2-ways DN7 compl.	815392	1.9 kg (4.2 lbs)

Technical Data

Type231 B
 Operating mediumCO₂
 Nominal diameterDN7
 Operating pressure5 - 25 bar (72,5 - 362,6 psi)
 Kv factor18
 Ambient temperature-20 °C to +45 °C (-4 °F to +113 °F)
 IP codeIP54
 Type of coil1 Z 27 - 20 V / DC
 Power consumption0,4 A
 Duration of operation100%

Material / surface

Housingaluminium
 Internal partsstainless steel and brass
 GasketNBR
 Valvesilicone-free

Included in delivery

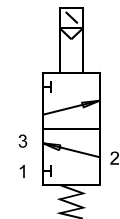
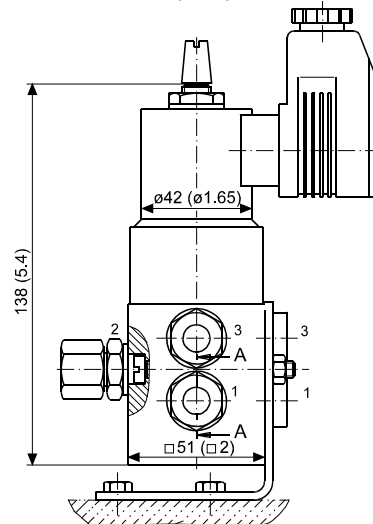
Solenoid valve 3/2-ways DN7-DG-20V/DC.....815586
 Plug GDME 3013761094
 Union GE 10-PLR-EDA3C (2x)174666
 Locking screw VSTI R1/4-EDA3C (2x)776387
 Filter type 5/43-1 B80821128
 Union GE10 - G1/4 filter887394
 Washer Sika-B200 9x3 (filter)878252
 Circlip B9816463
 Cheese-head screw DIN912-M6x55-8.8 (2x)829929
 Hex. nut DIN934-M6-gal Zn (2x)249230
 Support 3/2-ways valve-DN7815422
 as well as fastening material

Application

Control of pilot control valves in CO₂ - low pressure systems

Dimension drawing

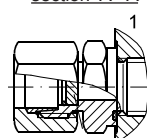
Dimensions in mm (inch)



1 = pressure connection
 2 = operating connection
 3 = vent connection

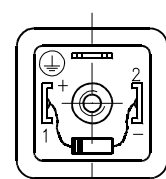
current free of 2 - 3 opening
 control onflow of 2 - 1 opening

section A - A



connection 1 with filter (washer)

electr. connection incl. quenching diode

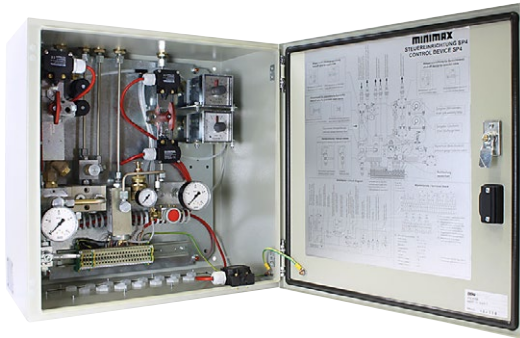




Extinguishing technology CO₂ LP

Control device CO₂

Control device SP4-P pneumatically activation



Approvals / CE marking



G304012



0786 - CPD - 30040

¹⁾ At extinguishing times < 60 s order the control device with extinguishing timer type "t3-100s" order no. 88 5152 via prod. eng.

SAP designation

part no. 886435: Control device SP4-P

Maintenance

see product information control device part no. 886471

Designation	Part no.	Weight
Control device SP4-P	886435	31 kg (68.3 lbs)

Technical Data

AgentCO₂ - gaseous
 Operating pressure25 bar (362,6 psi)
 Temperature range0 °C to +50 °C (+32 °F to +122 °F)
 FinishRAL7032 - pebble grey
 IP codeIP54
 Thread connectionfor precision-drawn steel pipe
 Cable glandM20 x 1,5

Included in delivery

Control device SP4-P with strainer and fastening material
 product information control device SP4-P part no. 886471

Sheets also applying

Limit switch (4x)see Monitoring device (for door switch, operation, blocking and supply pipe)
 Pressure switch style 0180 and style 0190see Monitoring device
 Hooter shut-off valve PV-3 / SP4see Control device
 Strainer DN10 - PN50see Control device
 Disable device style MX DN6see Control device

Application

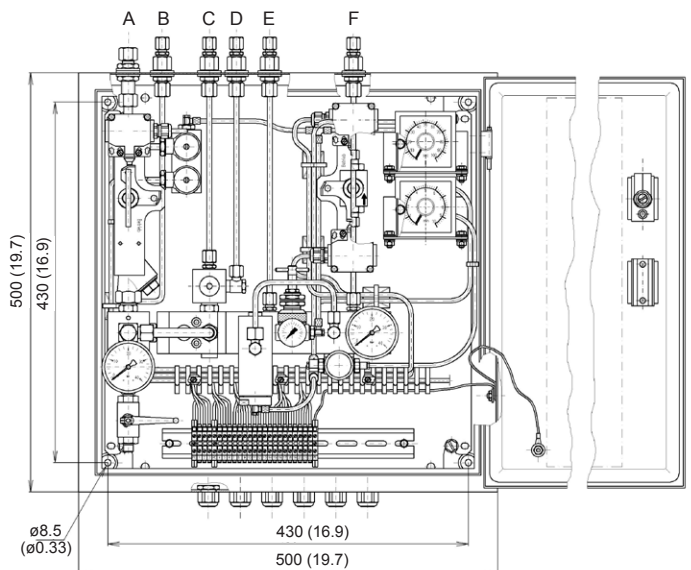
The pneumatic control device controls the automatic extinguishing operation of CO₂ vessel systems. The control medium is gaseous CO₂ that is taken from the CO₂ vessel and is fed to the control cabinet. In which the fire detection is done by a pneumatic release piping.

Performance features

- Pneumatically activation via pneumatic release piping
- Manual release pneum.
- Delay time pneum. (timer 0 - 100 s, adjustable)
- Discharge time pneum. (timer 0.3 - 10 min., adjustable)
- Extended discharge pneum.

Dimension drawing

Dimensions in mm (inch)



Circuit diagram see page 2

224-420_003 / A/00_2016en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/2

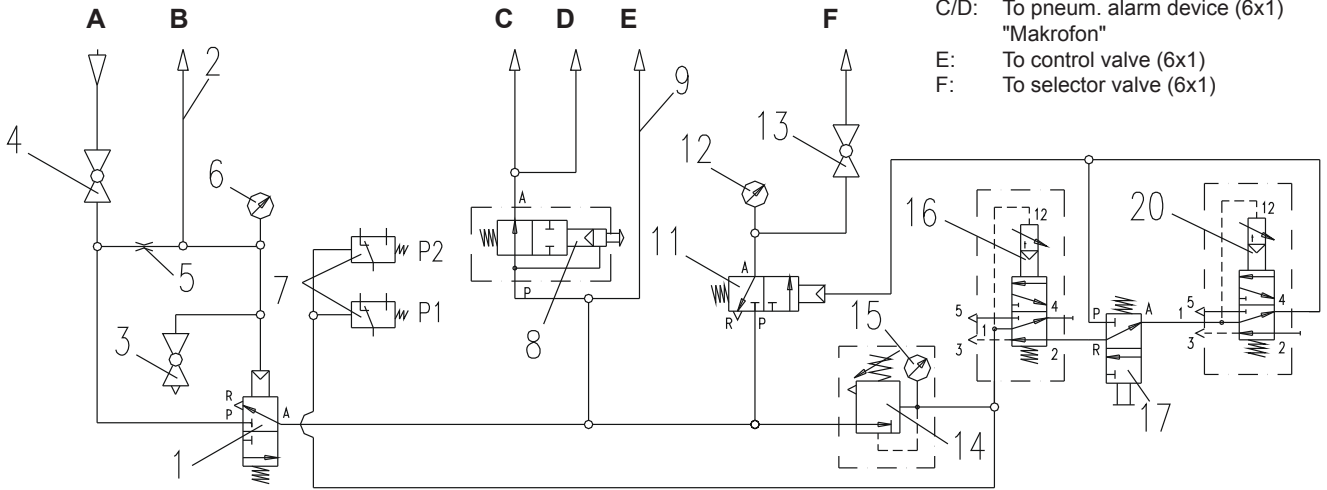


Extinguishing technology CO₂ LP

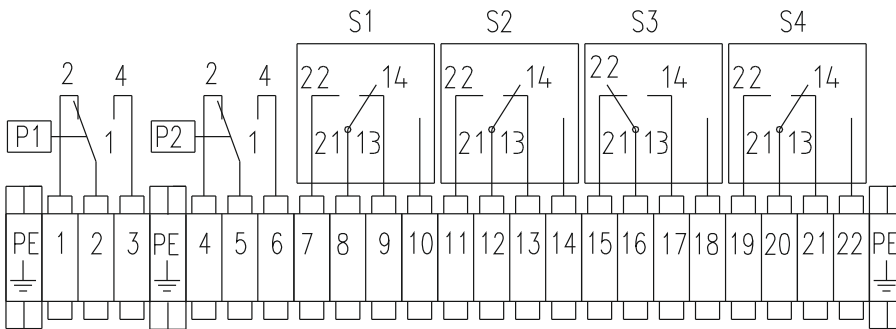
Control device CO₂

Control device SP4-P pneumatically activation

- A: Connection gas supply (10x1)
- B: To pneum. release piping (6x1)
- C/D: To pneum. alarm device (6x1)
"Makrofon"
- E: To control valve (6x1)
- F: To selector valve (6x1)

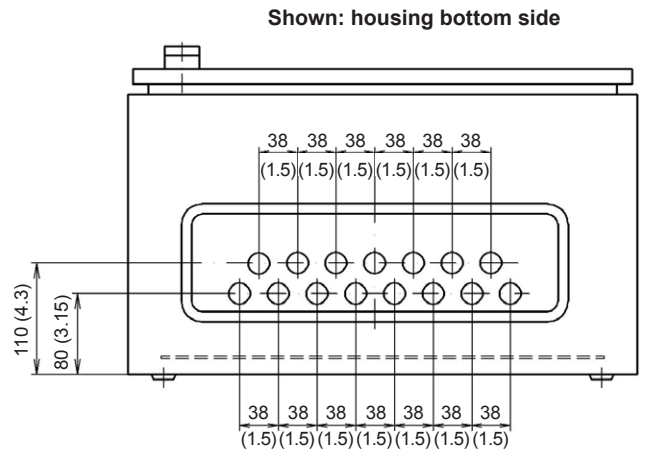
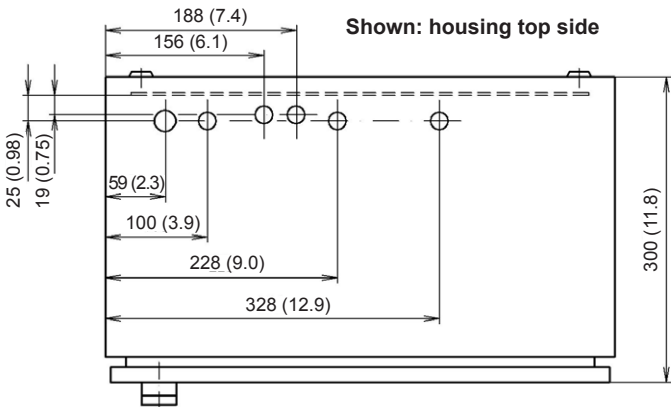


- 1: Pneumatic valve (3/2)
- 2: Release piping
- 3: Manual release
- 4: Shut-off valve (supply line)
- 5: Diaphragm 0.35
- 6: Pressure gauge (release piping)
- 7: Pressure switch
- 8: Shut-off valve (2/2)
(pneumatic alarm device)
- 9: Pilot pipe (control valve)
- 11: Pneumatic valve (3/2)
- 12: Pressure gauge (selector valve)
- 13: Shut-off valve (selector valve)
- 14: Pressure reducing valve
- 15: Pressure gauge
- 16: Timer
(time delay for pre-warning)
- 17: Pneumatic valve (3/2)
(second flush mech./pneum.)
- 20: Timer (discharge time)



- green-yellow: PE
 - black 1: 7 | 11 | 15 | 19
 - black 2: 8 | 12 | 16 | 20
 - black 3: 9 | 13 | 17 | 21
 - white: 10 | 14 | 18 | 22
 - yellow: 11 | 15 | 19 | 23
 - red: 12 | 16 | 20 | 24
- P1/P2: pressure switch
S1-S4: limit switch

Hole size for connections





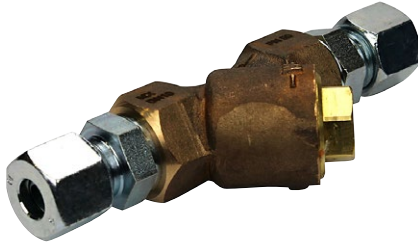
Extinguishing technology CO₂ LP

Control device CO₂

Strainer DN10 - PN50 complete

Approvals

no approval required



SAP designation

part no. 885561: Strainer DN10-PN50 compl.

Maintenance

see product information strainer part no. 885559

Designation	Part no.	Weight
Strainer DN10 - PN50 complete	885561	0.31 kg (0.68 lbs)

Technical Data

AgentCO₂-gaseous, dry
 Nominal pressurePN50 (725 psi)
 Nominal diameterDN10
 Operating temperature-50 °C to +110 °C (-58 °F to +230 °F)
 Mesh aperture0,3 mm (0,01")
 Connectionprecision steel pipe 10x1
 Installation positionhorizontal / vertical
(strainer drain facing downwards)

Application

Filter element for pneumatic pilot pipes in low pressure systems.

Included in delivery

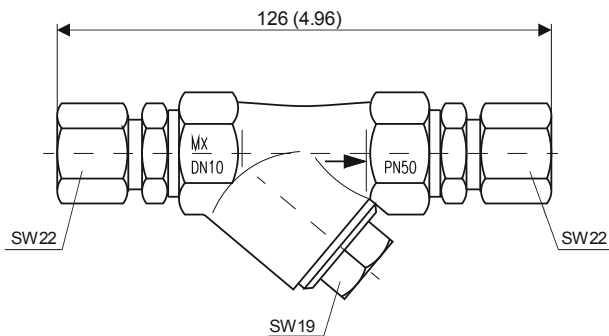
Strainer DN10 - PN50885557
 2x union GE 10.PSR-ED-A3C125608
 Product information strainer885559

Material / surface

Housinggunmetal
 Headerbrass
 Sievestainless steel, 1.4310

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Control device CO₂

Servo valve unit MX-SVE



Approvals



G300001

SAP designation

part no. 885862: Servo valve unit MX-SVE

Maintenance

see product information servo valve unit MX-SVE part no. 886140

Designation	Part no.	Weight
Servo valve unit MX-SVE	885862	10 kg (22.1 lbs)

Technical Data

Operating mediumCO₂
 Operating pressure25 bar (362,6 psi)
 Temperature range0 °C to +45 °C (+32 °F to +113 °F)
 Dimensions (HxWxD)...400x500x200 mm (15,75"x19,69"x7,87")
 IP codeIP54
 Thread connectionfor precision-drawn steel pipe
 FinishRAL7032 - pebble grey, stove enamelled
 Door contact switch1 x changeover contact

Application

The servo valve unit controls as required a great number of pneumatic alarm devices for CO₂ low pressure systems. The servo valve unit consists of a maximum of 3 pneumatically operated 3/2-way valves that are accommodated in a protective housing. The servo valve unit can be triggered by all versions of the pneumatic control device PV-3 and SP4 and may only be supplied via the gas connection of a CO₂ low pressure vessel or N₂ pipework with pressure reducer using a 15x1 piping with gas phase. Each valve of the servo valve unit may only trigger a maximum of 4 pneumatic alarm devices (examine connection sketch). The length of the pilot line from the servo valve unit to the pneumatic alarm device must not exceed 200 m at a tube size of 10x1 and 150 m at a tube size of 6x1.

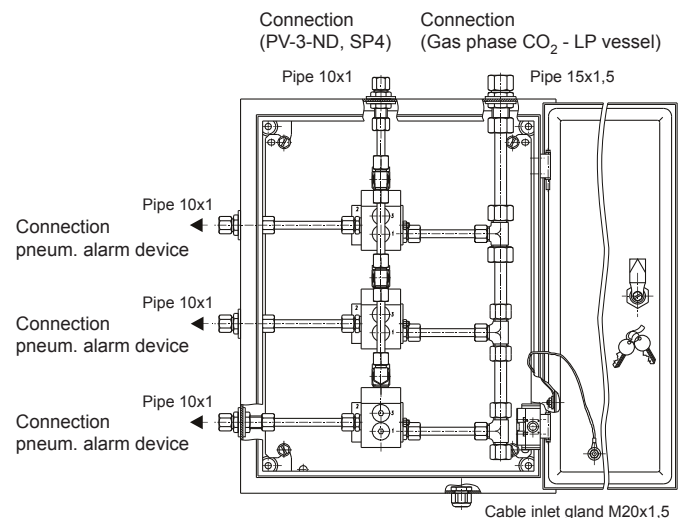
Functional description

The 3/2-way valves are closed without pressure. In case of triggering via the pneumatic control device (PV-3, SP4), the 3/2-way valves automatically open the supply pipe to the alarm devices. This supply pipe will be closed automatically the latest when the delay device is again ready for operation.

Included in delivery

Servo valve unit MX-SVE

Product information servo valve unit MX-SVE part no. 886140



224-420_005 / A/00_2016en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/1



Extinguishing technology CO₂ LP

Control device CO₂

Pneumatic valve CO₂ DN7 compl.

Approvals

no approval required

SAP designation

part no. 815616: Pneumatic valve CO₂-DN7-compl.

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Spare parts

Metall sieve (delivery until 06.97):

- Sieve 6 mm214523
- Sieve 10 mm214511

Filter plate (delivery from 06.97 on):

- Washer Sika-B200 5x2878240
- Circlip B5878264
- Washer Sika-B200 9x3878252
- Circlip B9816463



Designation	Part no.	Weight
Pneumatic valve CO ₂ -DN7-compl.	815616	0.9 kg (2 lbs)

Technical Data

- Operating mediumCO₂
- Nominal diameterDN7
- Operating pressuremax. 25 bar (362,6 psi)
- Control pressuremax. 25 bar (362,6 psi)
- Ambient temperature-20 °C to +45 °C (-4 °F to +133 °F)
- ConnectionsG1/4

Material / Surface

- Housingaluminium, anodised
- Internal partsstainless steel and brass
- GasketsNBR
- Lubricantsilicone-free

Main components

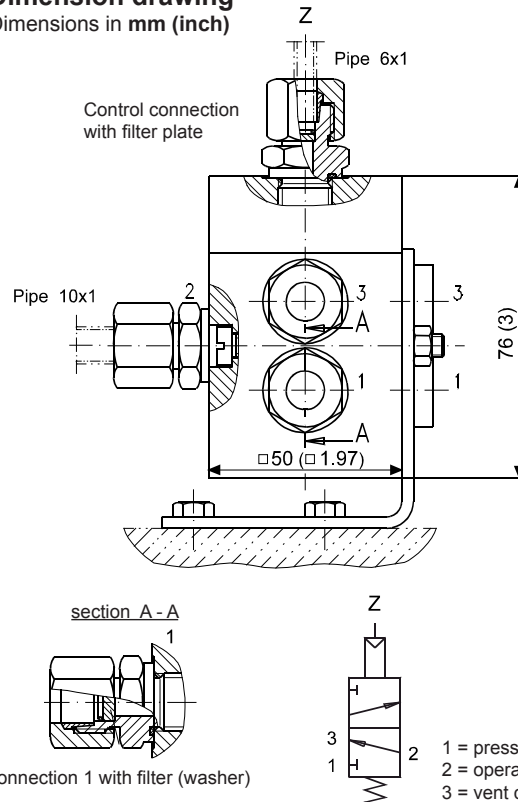
- Pneumatic valve 3/2-ways DN7-DG type 337755272
- Support 3/2-ways valve-DN7815422

Application

Control of piston valves and sounders in CO₂ - low pressure systems

Dimension drawing

Dimensions in mm (inch)



224-420_006 / A/00_2016en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/1



Extinguishing technology CO₂ LP

Control device CO₂

**Control device pneum.
SEP-2-E, test-device**

Approvals
no approval required



SAP designation
part no. 827891: Control unit pneumatic SEP-2-E

Maintenance
see product information SEP-2-E part no. 827921

Designation	Part no.	Weight
Control device pneum. SEP-2-E	827891	3.8 kg (8.4 lbs)

Technical Data

AgentCO₂
 Operating pressuremax. 140 bar (2030,5 psi)
 Dimensions (W X H X D) ...220x220x 120 mm (8,66" x 8,66" x 4,72")
 FinishRAL7032 - pebble grey, stove enamelled
 Thread connectionfor precision-drawn steel pipe 6x1

Functional description

The pneumatic control device is used in CO₂ low pressure systems for the testing of the pneumatic actuation of pilot control valves. To achieve this the valve lever must be turned with the socket spanner anticlockwise into the position "test". The closed position of the door will be supervised with limit switch.

Application

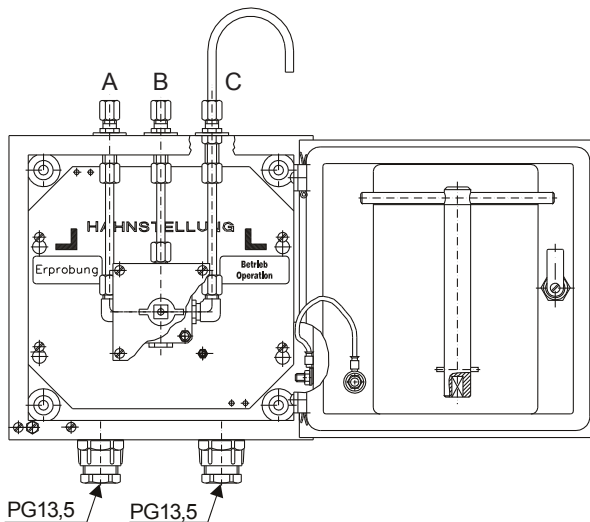
The pneumatic control device SEP-2-E may be used only in accordance with system approval in stationary CO₂-low pressure systems. It is installed in the pilot pipe to the pilot control valve.

Included in delivery

Control unit pneumatic SEP-2-E
 Product information SEP-2-E part no. 827921

Not included in delivery

Fixing lever FD 15870393
 (ease of installation of the control device at wall)



- A: Input control medium CO₂-gaseous (6x1)
- B: Output control medium CO₂-gaseous (6x1)
- C: Venting pipe (to be kept open)

224-420_007 / A 00_2016en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/1



Extinguishing technology CO₂ LP

Control device CO₂

Non-return valve MX-RSV 4

Approvals / CE marking



G300010



0786-CPD-30011



SAP designation

part no. 848891: Non-return valve MX-RSV 4

Maintenance

see product information check valve MX-RSV 4 part no. 870721

Spare parts:

Sieve 6 mm (delivery until 06.97) part no. 214523

Designation	Part no.	Weight
Non-return valve MX-RSV 4	848891	0.165 kg (0.4 lbs)

Technical Data

AgentCO₂ - gaseous
 Nominal diameterDN4
 Operating pressure2 up to 25 bar (29 up to 362,6 psi)
 Test pressure38 bar (551 psi)
 Connectionsfor precision-drawn steel pipe 6 x 1
 Installation positionaccording to product information
 Non-return valvecomplies with EN 12094-13
 CE conformityacc. to Construction Products Regulation (EU)
No. 305/2011

Note

Use the non-return valve MX-RSV 4 only in pneumatic release piping of CO₂ low pressure fire extinguishing systems, if the maximum distance to the heat sensor type „WF“, VdS-approval number G396001, is 100 cm (39.37 inch). The maximum release temperature of the heat sensor is 96 °C (204.8 °F).

Material / Surface

Housingbrass
 Ball1.4301

Included in delivery

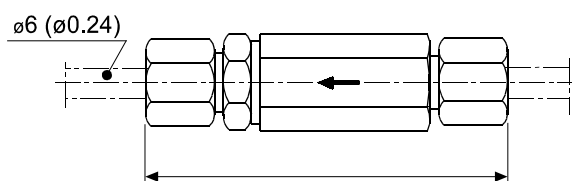
Non-return valve MX-RSV 4
 Product information check valve MX-RSV 4 Art.-Nr. 870721

Application

Automatic stop valve to facilitate a quicker venting of pneum. release piping in conjunction with the SP3 as well as for test connection.

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Control device CO₂

Heat sensor type WF



Approvals / CE marking



G396001



0786-CPD-30053

SAP designation

part no. 123867: Heat sensor WF-60C

Maintenance

see product information heat sensor WF-...C part no. 886490

Designation		Part no.	Release temp.	Colour coding	Weight
Heat sensor	WF-60C	123867	60 °C (140 °F)	yellow	0.05 kg (0.1 lbs)
	WF-72C	123879	72 °C (161.6 °F)	yellow	
	WF-96C	123880	96 °C (204.8 °F)	white	
	WF-133C	123892	133 °C (271.4 °F)	blue	

Technical Data

Working pressure5 bar up to 25 bar (72,5 bis 362,6 psi)
 Test pressure50 bar (725 psi) - test acc. to PAA116
 Temperature range
 - Type WF-60C, WF-72C-20 °C to +42 °C (-4 °F to +107,6 °F)
 - Type WF-96C-20 °C to +66 °C (-4 °F to +150,8 °F)
 - Type WF-133C-20 °C to +103 °C (-4 °F to +217,4 °F)
 RTI-classstandard
 Connection ...pipe 6x1 for screwed pipe connections (light series)
according to DIN 2353 and DIN EN ISO 8434-1
 Position of devicevertical, cap pendent
 Heat sensorcomplies with EN 12094-9
 CE conformityacc. to Construction Products Regulation (EU)
No. 305/2011

Application

Heat sensors are automatic release elements for CO₂ low pressure systems and deluge valve sets with pneumatic actuation. They are fitted to pneumatic pilot pipes and open when release temperature is exceeded.

Functional description

When the heat of a fire is rising, one or more heat sensors open. This effected a pressure drop inside the pilot pipe and activated a pneumatic control device. This pneumatic control device can be used for the activation of a fire extinguishing system.

Marking

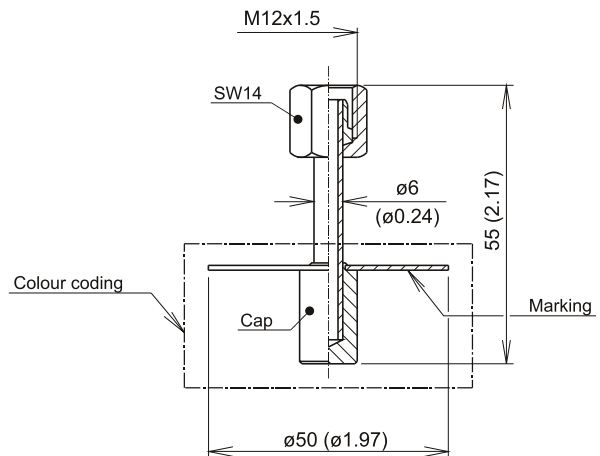
Type (WF - ...C), manufacturer's sign/year of production (MX/xx), serial number, approval sign (VdS), CE

Included in delivery

Wärmefühler Typ WF
 Product information heat sensor WF-...C part no. 886490

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Monitoring device CO₂ LP

Pressure gauge 40 bar

Approvals

no approval required



Style ER 63

SAP designation

e.g. part no. 126236: Pressure gauge 40BAR-NG 100-CO₂

Maintenance

Visual check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation	Part no.	Weight
Pressure gauge 40 bar CO ₂	AR 100	126236 0.32 kg (0.71 lbs)
	ER 63	126224 0.14 kg (0.31 lbs)

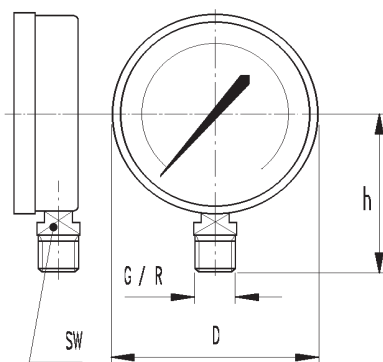
Technical Data

Housingsteel, varnished black
 Scale facewhite
 Scale and inscriptionblack
 Class of accuracy1.6

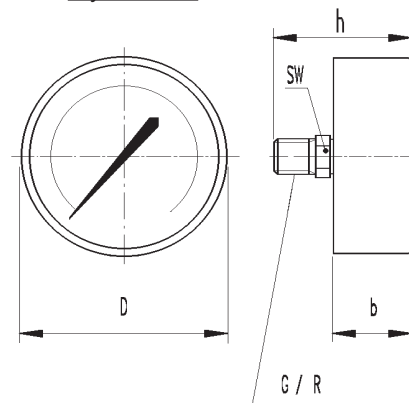
Dimension drawing

Dimensions in mm (inch)

Style AR 100



Style ER 63



Pressure gauge	D	b	h	G / R	SW
AR 100	100 (3.9)	35 (1.4)	87 (3.4)	G1/2	27 (1.1)
ER 63	63 (2.5)	33 (1.3)	-	G1/4	17 (0.7)



Extinguishing technology CO₂ LP

Monitoring device CO₂ LP

Monitoring shut-off valve DN15, DN100 and DN150/200

Approvals
no approval required



SAP designation
e.g. part no. 876700: Monitoring gate valve DN15

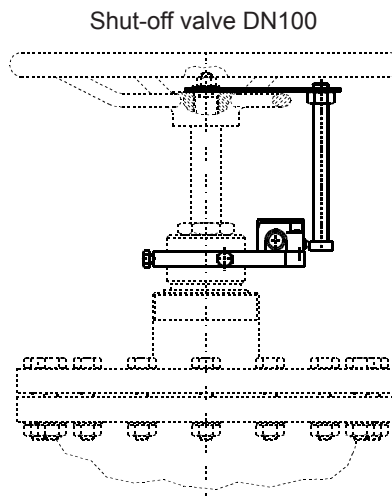
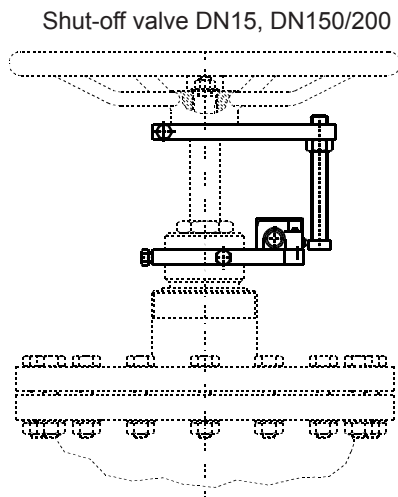
Maintenance
Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation		Part no.	Weight kg (lbs)
UEWA shut-off valve	DN15	876700	0.91 (2.01)
	DN100	875871	1.74 (3.84)
	DN150/200	875500	2.50 (5.51)

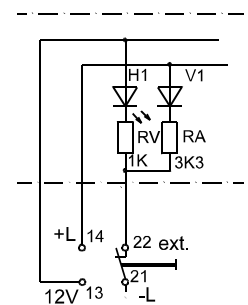
Application
The UEWA shut-off valve enables the monitoring of the open operating state of the manual shut-off valves on low pressure storage vessel.
When the valve closes a limit switch is actuated which sends a fault signal to the monitoring control panel. A LED indicator gives a local indication of the fault.

Included in delivery
Limit switch monitoring FMZ4100 - M20x1,5790400
Bracket for limit switch DN15876358
DN100876048
DN150/200.....876012
Actuator bracket DN15876360
DN100885274
DN150/200876024
Product information UEWA shut-off valve part no. 874817
as well as screws, nuts and washers

Mounting example



Wiring diagram limit switch



Contacts normally closed!



Extinguishing technology CO₂ LP

Monitoring device CO₂ LP

Monitoring CO₂ LP selector valve DN25 - 150

Approvals

no approval required

SAP designation

part no. 886390: Monitoring CO₂-LP-selector valve DN25-DN150

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.



Designation	Part no.	Weight kg (lbs)
Monitoring CO ₂ LP selector valve DN25 - 150	886390	0.45 (0.99)

Technical Data

Limit switch monitoring CO₂-LP-selector valve:
 TypeT4S 256-01z-M20-2397
 Limit switchaccording to IEC 60947-5-1
 Housingplastic - glass fiber reinforced
 Connectionmax. 1,5 mm² (0,0023 square inch)
 Contactssilver
 Ambient temperature-30 °C to +80 °C (-22 °F to +176 °F)
 IP codeIP67
 Switching systemslow action, 1 NC, 30 V DC / 1 A
 Fault indicationLED - yellow
 Nominal currentload controlled, adapted to the
MINIMAX monitoring systems

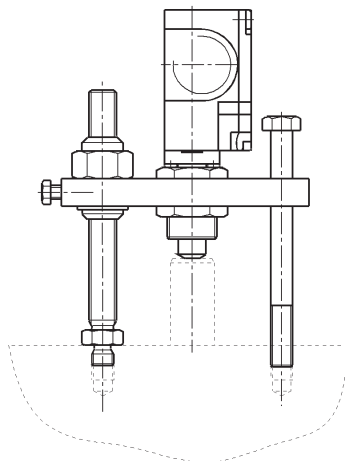
Application

The monitoring CO₂-LP-selector valve DN25-150 may only be used in accordance with system approval in stationary CO₂ low pressure systems. It facilitates the electrical monitoring of the closed position of the piston-controlled selector valves in low pressure systems. The limit switch (1 slow acting contact, NC) can be adjusted finely to respond to a very slight movement of the valve piston. Actuation of the limit switch sends a fault signal to the monitoring control panel. The fault is indicated locally by LED.

Included in delivery

Limit switch monitoring CO₂-LP-selector valve886345
 Adjustment monitoring CO₂-valve875603
 Hex. screw DIN931 M8x90-8.8 gal Zn/B860322
 Technical description monitoring CO₂-LP-selector valve DN25 - 150, part no. 886389

Mounting example



224-430_006 / A/00_2016en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/1



Extinguishing technology CO₂ LP

Monitoring device CO₂ LP

Limit switch monitoring CO₂ LP selector valve

Approvals
no approval required



SAP designation
part no. 886345: Limit switch monitoring CO₂-LP-selector

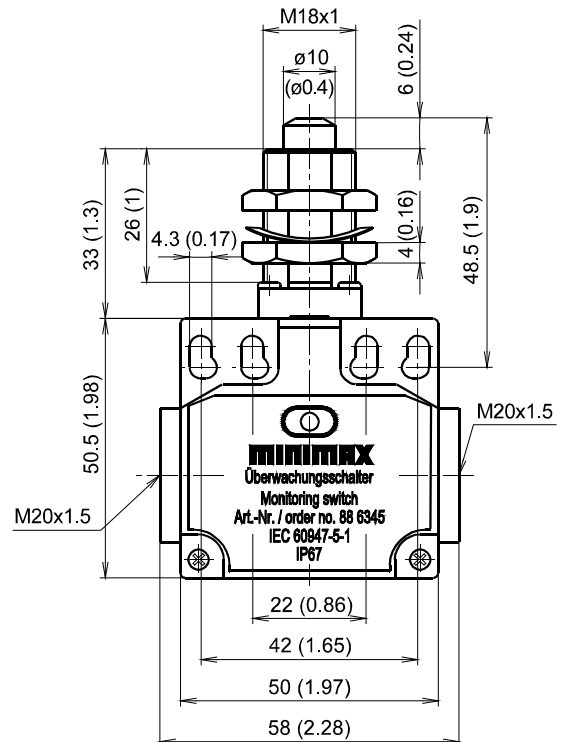
Maintenance
Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation	Part no.	Weight
Limit switch monitoring CO ₂ -LP-selector valve	886345	0.14 kg (0.31 lbs)

Technical Data

TypeT4S 256-01z-M20-2397
 Limit switchaccording to IEC 60947-5-1
 Housingplastic - glass fiber reinforced
 Connectionmax. 1,5 mm² (0,0023 square inch)
 Contactssilver
 Ambient temperature-30 °C to +80 °C (-22 °F to +176 °F)
 IP codeIP67
 Switching systemslow action, 1 NC, 30 V DC / 1 A
 Fault indicationLED - yellow
 Nominal currentload controlled, adapted to the
MINIMAX monitoring systems

Dimension drawing
Dimensions in mm (inch)



Note

This reed contact limit switch with monitoring module is to be used with the monitoring systems SUZ and FMZ only. For the use of the FMZ with ring bus Loop AP the SUX5000 AP monitoring system is needed.

Included in delivery

Limit switch monitoring with 2 pieces cable glands M20x1,5

Not included in delivery

SUX5000 AP monitoring system part no. 906973



Inert gas extinguishing technology

Monitoring device

Limit switch pneumatically operated



Approvals



- 1) Part of the system approval:
 - Oxeo inert gas extinguishing system HD200 (S315011) / HD300 (S315010)
 - Oxeo inert gas extinguishing system with ConstantFlow HD200 (S315012)
 - Oxeo inert gas extinguishing system with ConstantFlow HD300 (S315013)
 - Oxeo inert gas exting. system with ConstantFlow HD300-LCP (S316006)
 - CO₂ extinguishing system HD-1 (S398010) / HD-2 (S398011)
 - CO₂ extinguishing system ND-1 (S398012), electrical release
 - CO₂ extinguishing system ND-2 (S398013), non-electrical release
 - Oxeo Nitrogen low pressure extinguishing system (S310016)
- 2) Listed system covered by UL-File EX6388 (CO₂) and UL-File EX26532 (Ar, VSN 200 and VSN 1230)
- 3) Part of the system approval (VSN 200 and VSN 1230)

SAP designation

part no. 826758: Limit switch pneumatically operated

Maintenance

see technical description limit switch pneumatically operated part no. 926951

Designation	Part no.	Weight
Limit switch pneumatically operated	826758	1.5 kg (3.31 lbs)

Technical data

Operating mediumIG-01 (argon), IG-100 (nitrogen),
 IG-55, IG-541, CO₂, FK-5-1-12, HFC-227ea
 Working pressure140 bar (2030 psi)
 Temperature range -20 °C to +50 °C (-4 °F to 122 °F)
 Pressure connection..... for precision steel pipe 6x1

Product sheets also applying

Cylinder ø25 x H30see control device
 Limit switch US 432ysee monitoring device

Application

The limit switch pneumatically operated may only be used in stationary IG-01, IG-100, IG-55, IG-541, CO₂, FK-5-1-12 and HFC-227ea extinguishing systems. The limit switch is used to generate electrical signals which can be used for varying purposes.

Function description

In the event of fire, the extinguishing agent floods the corresponding pipeline system. Present pressure actuates the cylinder that in turn actuates the limit switch. The contacts of the limit switch are, depending on the respective connection, opened or closed. The activated signal is, e.g., used as an alarm signal for fire department control panels. The electrical signal can also be activated manually for test purposes using a push button.

Included in delivery

Cylinder ø25 x H30227303, see control device
 Limit switch type US 432y724420, see monitoring device
 Support limit switch pneum. activated827866
 Union GE 6-PSR-EDA3C125578, M1-11-01
 2x Cheese-head screw DIN84-M5x25-Ms106915
 2x Hex. nut DIN934-M5-Ms108444
 2x Washer DIN125-B-5,3-Ms109771
 Technical description limit switch pneumatic (en)926951
 as well as fastening material



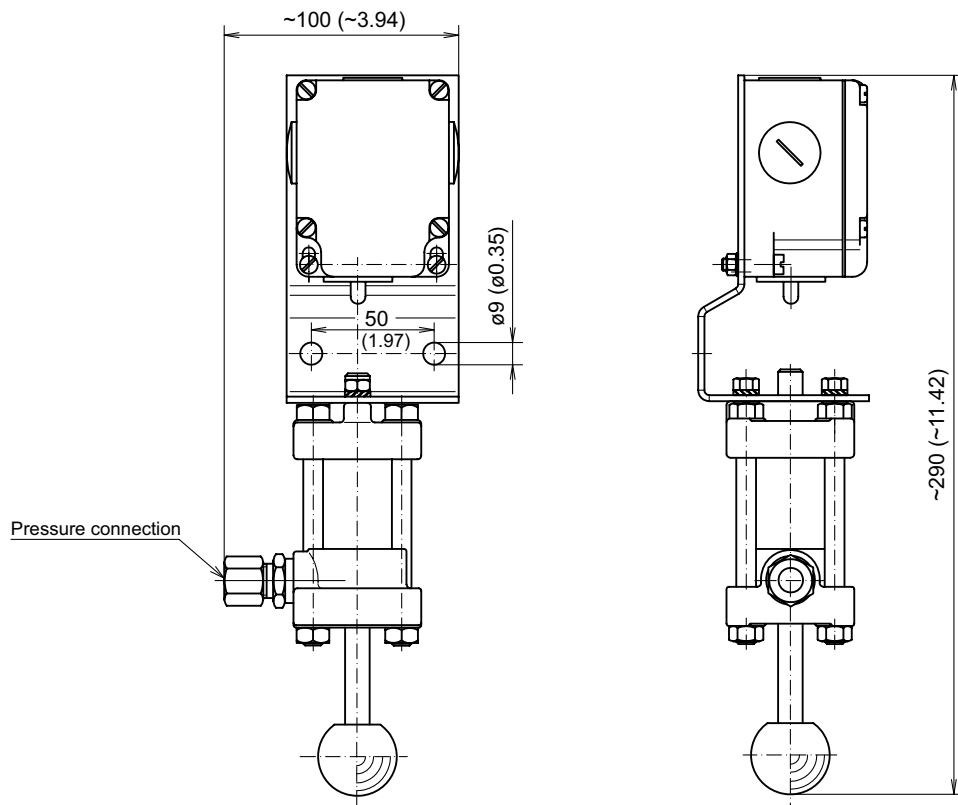
Inert gas extinguishing technology

Monitoring device

Limit switch pneumatically operated

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Monitoring device CO₂ LP

Pressure switch CO₂ / inert gases



Approvals

no approval required

SAP designation

part no. 926828: Pressure switch CO₂/Inert gases

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation	Part no.	Weight
Pressure switch CO ₂ / inert gases	926828	0.13 kg (2.87 lbs)

Technical data

Type0194
 Pressure mediumcarbon dioxide (CO₂)
argon (IG-01), nitrogen (IG-100), IG-55, IG-541
 Safe up to300 bar (4351 psi)
 Switching pressure falling2 bar (29 psi)
 rising3 bar (43,5 psi)
 Switching tolerance± 0,5 bar (7,25 psi)
 Temperature range-40 °C to +100 °C (-40 °F to +212 °F)
 IP codeIP65 with plug socket
 Plug socketsimilar DIN EN 175301
 Tightening torque G1/4max. 40 Nm
 Installation positionany position

Electrical data

Rated supply voltage5 - 24 V DC
 Rated current (DC 12, AC 12)3 - 50 mA
 Switching contactgold contacts
 Cross-section of conducting wiremax. 1,5 mm²

Material / surface

Housingsteel galvanized
 DiaphragmNBR

Note

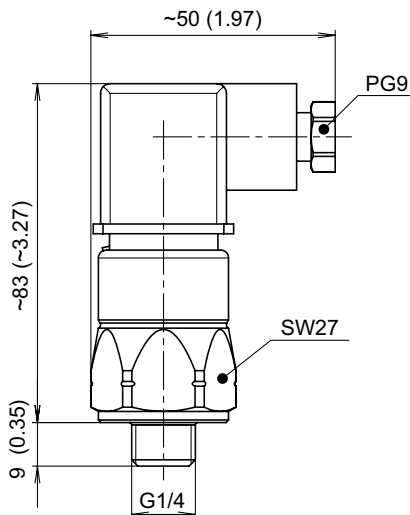
Further pressure switch upon request.

Included in delivery

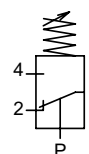
Pressure switch with operating instructions of the manufacturer (de/en/fr).

Dimension drawing

Dimensions in mm (inch)



P&ID symbol





Extinguishing technology CO₂ LP

Monitoring device CO₂ LP

Pressure switch CO₂ / Ar / N₂



Approvals

no approval required

SAP designation

e.g. part no. 811684: Pressure switch CO₂/Ar/N₂ type 0180

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation	Style	Part no.	Voltage	Switching current	Weight
Pressure switch CO ₂ / Ar / N ₂	0180	811684	max. 250 V	min. 50 mA	0.09 kg (0.2 lbs)
	0190	885589	max. 24 V	min. 5 mA	

Technical Data

Pressure mediumcarbon dioxide (CO₂)
argon (IG-01), nitrogen (IG-100), IG-55, IG-541
 Safe up to100 bar (1450.4 psi)
 Switching pressure falling2 bar (29 psi)
 rising3 bar (43,5 psi)
 Switching tolerance± 0,5 bar (7,25 psi)
 Switching power style 0180.....250 V AC max. 4A
 style 0190.....24 V max. 50 mA
 Marking style 0180.....blue
 style 0190.....green
 Temperature range-30 °C to +100 °C (-22 °F to +212 °F)
 IP codeIP65 with plug socket

Material / surface

Housingsteel galvanized
 DiaphragmEPDM

Note

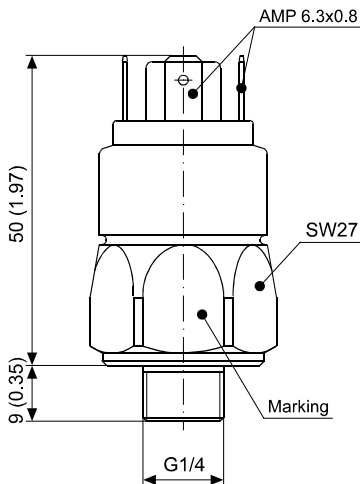
Further pressure switch upon request.

Not included in delivery

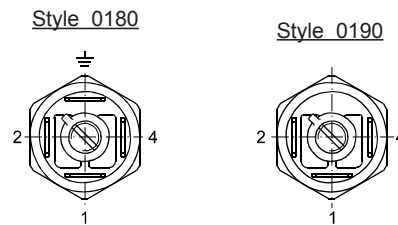
Plug socketsee monitoring device

Dimension drawing

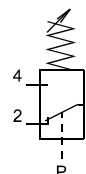
Dimensions in mm (inch)



Connection diagram



P&ID symbol





Extinguishing technology CO₂ LP

Monitoring device CO₂ LP

Plug socket for pressure switch

Approvals

no approval required

SAP designation

part no. 811696: Plug socket pressure switch

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.



Designation	Part no.	Weight
Plug socket for pressure switch	811696	0.08 kg (0.2 lbs)

Application

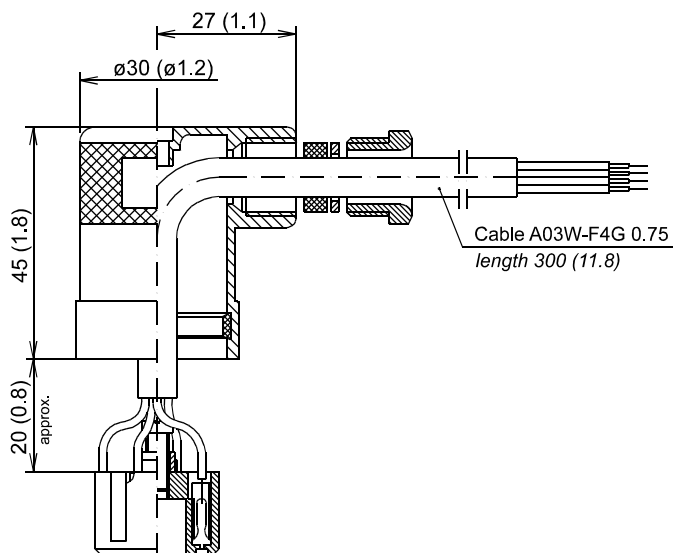
For use with pressure switch CO₂ / Ar / N₂ style 0180 and style 0190.

Caution

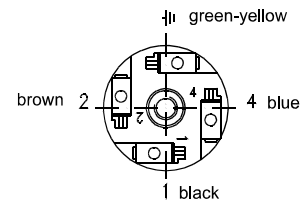
After installation check for electrical conductivity.

Dimension drawing

Dimensions in mm (inch)



Connection diagram terminal block:



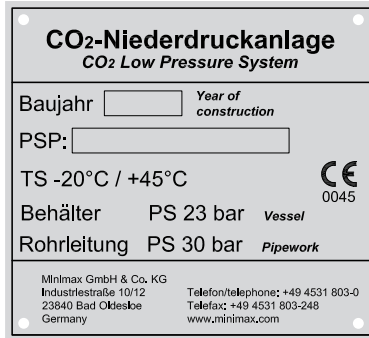


Extinguishing technology CO₂ LP

System accessories CO₂ LP

Label CE
CO₂ low pressure system

Approvals
no approval required



SAP designation
part no. 886456: Sign CE CO₂-low pressure system

Maintenance
maintenance-free

Designation	Part no.	Weight
Label CE CO ₂ low pressure system	886456	0.04 kg (0.09 lbs)

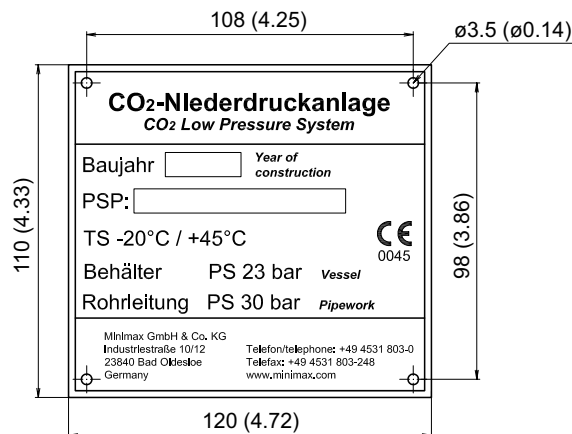
Odering hints
The order has to specified with year of construction and PSP element.

Application
To the CE marking of the fire extinguishing system e.g. in accordance with Pressure Equipment Directive 2014/68/EU.

Technical data
Materialaluminium plate 1 mm (0.04") thickness
Groundaluminium (colour)
Script / linesblack
Script typeHelvetica

Not included in delivery
Fastening material

Dimension drawing
Dimensions in mm (inch)





Inert gas extinguishing technology

System accessories

Label Gaslöschanlage/Lebensgefahr

Approvals

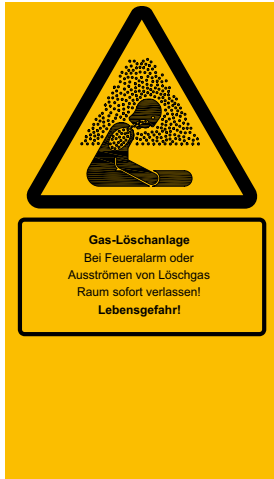
no approval required

SAP designation

part no. 930906: Label Gaslöschanlage/Lebensgefahr

Maintenance

maintenance-free



Label	Part no.	Weight
Label Gaslöschanlage/Lebensgefahr	930906	0.02 kg (0.04 lbs)

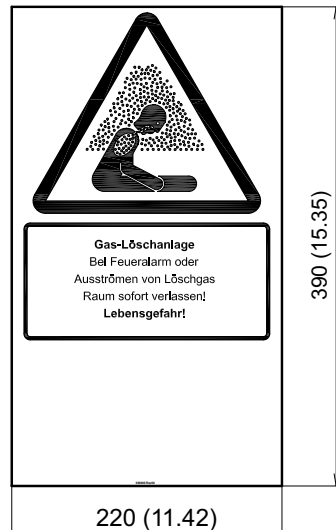
Technical data

MaterialPVC self adhesive 0.2 mm (0.01") thickness
 GroundRAL1003 - yellow
 PictureRAL9004 - black
 SscriptRAL9004 - black
 Script type ...Akzidenz-Grotesk, medium faced DIN1451 - 2 C 7
 Script height7 mm (0.28")

Temperature range-20 °C to +80 °C (-4 °F to +176 °F)
 Gluesticking firmly
 Storage of glue layermin. 3 years
 Finishbrilliant
 For glass, plastic structured cast metal, and varnished surfaces.

Dimension drawing

Dimensions in mm (inch)





Extinguishing technology CO₂ LP

Accessories flange connection LP

Gaskets DIN 2691
for flange with tongue and groove

Approvals
no approval required



SAP designation
e.g. part no. 871180: Sealing DIN 2691-DN20

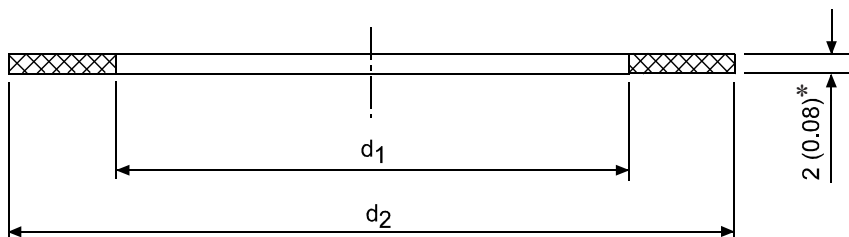
Maintenance
Visual check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation	DN	Part no.	Weight kg (lbs)
Gasket DIN 2691	20	871180	0.003 (0.01)
	25	127605	0.004 (0.01)
	32	750067	0.006 (0.01)
	40	127617	0.006 (0.01)
	50	127629	0.008 (0.02)
	65	603837	0.009 (0.02)
	80	127630	0.010 (0.02)
	100	127642	0.016 (0.04)
	125	127654	0.018 (0.04)
	150	127666	0.024 (0.05)
	200	127678	0.027 (0.06)

Material
Klingersil C4400 asbestos-free, silicone-free

Application
Flanges with tongue and groove in accordance with DIN 2512 for CO₂ low pressure systems

Dimension drawing
Dimensions in mm (inch)



d ₁	d ₂
36 (1.4)	50 (1.97)
43 (1.7)	57 (2.24)
51 (2.0)	65 (2.56)
61 (2.4)	75 (2.95)
73 (2.87)	87 (3.43)
95 (3.74)	109 (4.29)
106 (4.17)	120 (4.72)
129 (5.08)	149 (5.87)
155 (6.1)	175 (6.89)
183 (7.2)	203 (7.99)
239 (9.4)	259 (10.2)

*** Note**
Dimensions for tongue and groove in accordance with DIN 2512.
Dimensions d₁ and d₂ of this sheet correspond to the dimensions d₄₂ and d₄₃ of DIN 2512. Larger thickness can be delivered upon request.



224-810_001 / A/00_2016en
The contents of this publication are subject to modifications without notice. All rights reserved.
1/1



Extinguishing technology CO₂ LP

Accessories flange connection LP

Hex. screw DIN 931 and hex. nut DIN 934
TK (suitable for low temperature)

Bezeichnung	Dimension	Part no.	SW ¹⁾	Weight kg (lbs)
 Hex. screw DIN931 TK	M12 x 55	166227	19	0.062 (0.14)
	M16 x 55	166239	24	0.114 (0.25)
	M16 x 60	166240	24	0.122 (0.27)
	M16 x 70	166252	24	0.138 (0.30)
	M20 x 70	166264	30	0.228 (0.50)
	M20 x 90	886312	30	0.273 (0.60)
	M24 x 80	166276	36	0.370 (0.82)
	M27 x 100	166290	41	0.588 (1.30)
 Hex. nut DIN934 TK	M12	166586	19	0.014 (0.03)
	M16	166598	24	0.030 (0.07)
	M20	166604	30	0.054 (0.12)
	M24	166616	36	0.094 (0.21)
	M27	166628	41	0.144 (0.32)

¹⁾ SW = wrench size

Technical data

Material26CrMo4-2

Application

For pipings of CO₂ low pressure fire extinguishing systems, suitable for low temperature.



Pipe element (Special)

Pipe welded connection

Pipe welded connection DN50 - 200



SAP designation

e.g. part no. 786520: Pipe 60,3x2,3 St37.0-A-50-2458

Maintenance

functional check within the framework of system-specific functional test

DN	Application									Part no.	Test pressure bar (psi)	Test certificate	Surface ¹⁾	Colour coding
	1	2	3	4	5	6	7	8	9					
50	•	•							•	786520	50 (725)	2.2	A	gold
	1	2	3	4	5	6	7	8	9					
65	•	•							•	247396	50 (725)	2.2	A	gold
	1	2	3	4	5	6	7	8	9					
80					•					841150	210 (3046)	3.1	A	orange
	1	2	3	4	5	6	7	8	9					
100	•									860115	50 (725)	2.2	A	gold
		•							•	773209	50 (725)	2.2	A	gold
	1	2	3	4	5	6	7	8	9					
125	•									860127	50 (725)	3.1	A	gold
	1	2	3	4	5	6	7	8	9					
150	•									858281	50 (725)	3.1	A	gold
		•							•	773210	50 (725)	3.1	A	gold
	1	2	3	4	5	6	7	8	9					
200	•									102429	50 (725)	3.1	A	gold
									•	773222	50 (725)	3.1	A	gold

¹⁾ A= steel pipe, black (blank)

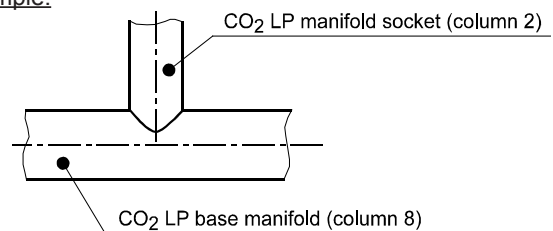
Application

- 1= CO₂ LP system30 bar (435 psi)
- 2= CO₂ LP manifold socket30 bar (435 psi)
- 3= CO₂ HD / Ar / N₂ / IG-55 / IG-541 downsystem piping and Halocarbon / ConstantFlow (CF) system60 bar (870 psi)
- 4= CO₂ HP shipbuilding100 bar (1450 psi)
- 5= CO₂ HP upstream piping140 bar (2031 psi)
- 6= Ar / N₂ / IG-55 / IG-541 - upstream piping ...235 bar (3408 psi)
- 7= Ar / N₂ / IG-55 / IG-541 - 300 bar HP upstream piping365 bar (5294 psi)
- 8= CO₂ LP base manifold30 bar (435 psi)
- 9= CO₂ HP base manifold140 bar (2031 psi)

Note

With CO₂ LP systems may be welded branches only from a combination of pipes of the column 2 and 8.

Example:



CO₂ LP pipes without welding branches are to be taken from column 1.



Pipe element (Special)

Welding fitting and flange

Pipe fittings

Designation	DN	Application		Part no.	Style ¹⁾	Test certificate EN 10204	Weight kg (lbs)
		1	2				
Bottom DIN 28011 	50 / 60.3	-	•	123284	VA	2.2	0.16 (0.35)
	65 / 76.1	-	•	123296	VA	2.2	0.22 (0.49)
	80 / 88.9	-	•	123302	VA	2.2	0.33 (0.73)
	80 / 88.9	•	-	886349	VA	3.1	0.68 (1.50)
	100 / 114.3	-	•	830572	VA	2.2	0.66 (1.46)
	100 / 114.3	•	-	888964	VA	3.1	1.44 (3.17)
	125 / 139.7	-	•	830584	VA	3.1	0.95 (2.09)
	150 / 168.3	-	•	660434	VA	3.1	1.5 (3.31)
	200 / 219.1	-	•	660446	VA	3.1	2.8 (6.17)
Elbow 90° DIN 2605 T1 	32 / 42.4	-	•	122036	OF	2.2	0.20 (0.44)
	40 / 48.3	-	•	122048	OF	2.2	0.27 (0.6)
	50 / 60.3	-	•	122061	OF	2.2	0.45 (0.99)
	65 / 76.1	-	•	122097	OF	2.2	0.80 (1.76)
	65 / 76.1	•	-	810620	MF	3.1	1.45 (3.20)
	80 / 88.9	-	•	123041	MF	2.2	1.3 (2.87)
	80 / 88.9	•	-	810631	MF	3.1	2.9 (6.39)
	100 / 114.3	-	•	830596	MF	2.2	2.5 (5.51)
	100 / 114.3	•	-	888965	MF	3.1	5.5 (12.13)
	125 / 139.7	-	•	830602	MF	3.1	4.4 (9.7)
	150 / 168.3	-	•	830614	MF	3.1	6,7 (14,77)
	200 / 219.1	-	•	123235	MF	3.1	14.7 (32.41)
Elbow 90° DIN 2605 T1  blasted	50 / 60.3	-	•	842846	OF	2.2	0.45 (0.99)
	65 / 76.1	-	•	842493	OF	2.2	0.80 (1.76)
	80 / 88.9	-	•	842494	MF	2.2	1.3 (2.87)
	100 / 114.3	-	•	842495	MF	2.2	2.5 (5.51)
	125 / 139.7	-	•	842496	MF	3.1	4.4 (9.7)
	150 / 168.3	-	•	842497	MF	3.1	6.7 (14.77)
	200 / 219.1	-	•	842498	MF	3.1	14.7 (32.41)

¹⁾ VA = chamfer external, OF = without chamfer, MF= with chamfer

Application

- 1 = CO₂ HP upstream piping140 bar (2030 psi)
- CO₂ HD - manifold140 bar (2030 psi)
- Ar/N₂/IG-55/IG-541 ConstantFlow (CF) - manifold ..60 bar (870 psi)
- Halocarbon (HFC 227ea) - manifold60 bar (870 psi)
- Halocarbon (FK-5-1-12) - manifold60 bar (870 psi)
- 2 = CO₂ LP system30 bar (435 psi)
- Finishblack (blank)

SAP designation

part no. 123284: Bottom DIN28011-60,3x3-VA

Maintenance


functional check within the framework of system-specific functional test



Pipe element (Special)

Welding fitting and flange

Pipe fittings

Designation	DN	Application		Part no.	Style ¹⁾	Test certificate EN 10204	Weight kg (lbs)
		1	2				
Reducer DIN 2616 T2 	76.1 x 60.3	–	•	123259	OF	2.2	0.46 (1.01)
	88.9 x 48.3	–	•	591886	MF	2.2	0.56 (1.23)
	88.9 x 60.3	–	•	205220	MF	2.2	0.56 (1.23)
	88.9 x 76.1	–	•	123417	MF	2.2	0.54 (1.19)
	114.3 x 60.3	–	•	830766	MF	2.2	1.0 (2.2)
	114.3 x 76.1	–	•	830730	MF	2.2	1.0 (2.2)
	114.3 x 88.9	–	•	123442	MF	2.2	0.95 (2.09)
	139.7 x 60.3	–	•	830780	MF	3.1	1.6 (3.53)
	139.7 x 76.1	–	•	830810	MF	3.1	1.7 (3.75)
	139.7 x 88.9	–	•	830821	MF	3.1	1.7 (3.75)
	139.7 x 114.3	–	•	830845	MF	3.1	1.7 (3.75)
	168.3 x 60.3	–	•	830869	MF	3.1	2.5 (5.51)
	168.3 x 76.1	–	•	830882 ²⁾	MF	3.1	2.5 (5.51)
	168.3 x 88.9	–	•	830900	MF	3.1	2.5 (5.51)
	168.3 x 114.3	–	•	830948	MF	3.1	2.5 (5.51)
168.3 x 139.7	–	•	215497	MF	3.1	2.6 (5.73)	

¹⁾ VA = chamfer external, OF = without chamfer, MF= with chamfer

²⁾ similar DIN 2616



Pipe element (Special)

Welding fitting and flange

Welding neck flange DIN 2635 - PN40



SAP designation

part no. 111873: Flange DIN2635-N 20X 26,9-C22.3/22.8-TK 3.1 according EN 10204

Maintenance

Visual check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

Designation	DN	Part no.	Weight kg (lbs)
Flange DIN2635- PN40 with groove	20	111873	1.06 (2.34)
	25	111885	1.22 (2.69)
	32	111897	1.87 (4.12)
	40	111903	2.08 (4.59)
	50	111915	2.63 (5.80)
	65	215618	3.49 (7.70)
	80	111927	4.70 (10.4)
	100	111940	5.95 (13.1)
	125	830640	7.60 (16.8)
	150	111952	11.3 (24.9)
	200	111964	20.8 (45.9)

Designation	DN	Part no.	Weight kg (lbs)
Flange DIN2635- PN40 with tongue	20	111976	1.06 (2.34)
	25	111988	1.07 (2.36)
	32	111990	1.60 (3.53)
	40	112002	1.79 (3.95)
	50	112014	2.45 (5.40)
	65	215620	3.22 (7.10)
	80	112026	4.27 (9.41)
	100	112040	6.03 (13.3)
	125	830638	8.30 (18.3)
	150	112051	10.6 (23.4)
	200	112063	19.2 (42.3)

Technical Data

Welding neck flangeacc. to DIN2635 - PN40 (580 psi)
 Flange connectionacc. to DIN2501 - PN40 (580 psi)
 MaterialC22.8, TK (suitable for low temperature)
 all assemblies with test certificate acc. to DIN EN 10204 - 3.1

Note

Flanges without protective varnish and without coating.

Welded joints

Electrode TK 2,5759873
 Electrode TK 3,25759885

Application

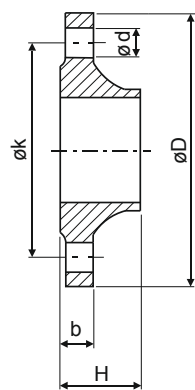
Welding neck flange DIN 2635 - PN40 for flange connection in CO₂- low pressure fire extinguishing systems.

Not included in delivery

hex. screws TK, hex. nuts TK, gasket and washer see selection table (page 2/2)

Dimension drawing

Dimensions in mm



groove / tongue not shown

DN	PN40					
	ØD	ød	b	ØK	H	screws
20	105	14	18	75	40	4 x M12
25	115	14	18	85	40	4 x M12
32	140	18	18	100	42	4 x M16
40	150	18	18	110	45	4 x M16
50	165	18	20	125	48	4 x M16
65	185	18	22	145	52	8 x M16
80	200	18	24	160	58	8 x M16
100	235	22	24	190	65	8 x M20
125	270	26	26	220	68	8 x M24
150	300	26	28	250	75	8 x M24
200	375	30	34	320	88	12 x M27

280-120_002 / A101_2017en
The contents of this publication are subject to modifications without notice. All rights reserved.

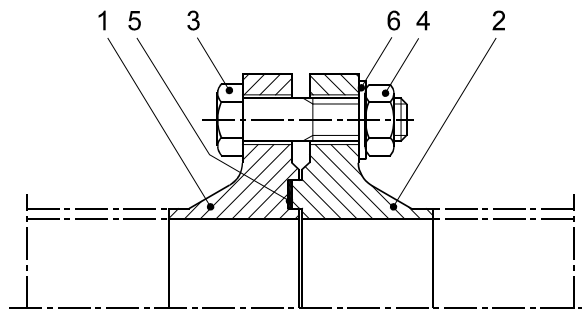


Pipe element (Special)

Welding fitting and flange

Welding neck flange DIN2635-PN40

Selection table for flange connections PN40



Pos.	1	2	3	4	5	6
DN	Flange with groove DIN2635 TK - w. certific.	Flange with tongue DIN2635 TK - w. certific.	Hex. screw DIN931 TK - w. certific.	Hex. nut DIN934 TK - w. certific.	Gasket DIN2691 Klingersil	Washer DIN6798
20	111873 N 20 - 26.9	111976 F 20 - 26.9	166227 4x M12x55	166586 M12	871180	109620 A12.5
25	111885 N 25 - 33.7	111988 F 25 - 33.7			127605	
32	111897 N 32 - 42.4	111990 F 32 - 42.4	166239 4x M16x55	166598 M16	750067	109679 A16.5
40	111903 N 40 - 48.3	112002 F 40 - 48.3			127617	
50	111915 N 50 - 60.3	112014 F 50 - 60.3			127629	
65	215618 N 65 - 76.1	215620 F 65 - 76.1	166252 8x M16x70		603837	
80	111927 N 80 - 88.9	112026 F 80 - 88.9			127630	
100	111940 N100 - 114.3	112040 F 100 - 114.3	166264 8x M20x70	166604 M20	127642	204100 A21
125	830640 N 125 - 139.7	830638 F 125 - 139.7	166276 8x M24x80	166616 M24	127654	109680 A25
150	111952 N 150 - 168.3	112051 F 150 - 168.3			127666	
200	111964 N 200 - 219.1	112063 F 200 - 219.1	166290 12x M27x100	166628 M27	127678	775760 A28



Pipe element (Special)

Pipe threaded connection

Pipe threaded connection DN15 - 80



SAP designation

e.g. part no. 776685: Pipe 21,3x2,6 St37.0-B-90-2458

Maintenance

Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

DN	Application									Part no.	Test pressure bar	Test certificate	Surface ¹⁾	Colour coding
	1	2	3	4	5	6	7	8	9					
15	•		•							776685	90	3.1	B	blue
15				•						840958	210	3.1	B	orange
	1	2	3	4	5	6	7	8	9					
20	•		•							776697	90	3.1	B	blue
	1	2	3	4	5	6	7	8	9					
25	•	•								872766	50	3.1	A	gold
25	•		•							776703	90	3.1	B	blue
25					•					840983	210	3.1	B	orange
	1	2	3	4	5	6	7	8	9					
32	•		•							776715	90	3.1	B	blue
32	•	•								872778	50	3.1	A	gold
	1	2	3	4	5	6	7	8	9					
40	•	•								872780	50	3.1	A	gold
40	•		•							776727	90	3.1	B	blue
	1	2	3	4	5	6	7	8	9					
50	•		•							776739	90	3.1	B	blue
50					•					841057	210	3.1	A	orange
50					•					886346	210	3.1	B	orange
50						•				885208	353	3.1	B	red
50							•			886126	548	3.1	B	purple
	1	2	3	4	5	6	7	8	9					
65	•		•							776740	90	3.1	B	blue
65					•					857616	210	3.1	A	orange
65					•					886347	210	3.1	B	orange
65						•				885209	353	3.1	B	red
65							•			886124	548	3.1	B	purple
	1	2	3	4	5	6	7	8	9					
80	•		•							847874	90	3.1	B	blue
80	•	•						•		776788	50	3.1	A	gold
80			•							841148	90	3.1	A	blue

¹⁾A = Steel pipe, black (blank)

B = Steel pipe, thermal galvanized

Application

1= CO₂ LP system30 bar (435 psi)

2= CO₂ LP manifold socket30 bar (435 psi)

3= CO₂ HD / Ar / N₂ / IG-55 / IG-541 downsystem piping and Halocarbon / ConstantFlow (CF) system60 bar (870 psi)

4= CO₂ HP shipbuilding100 bar (1450 psi)

5= CO₂ HP upstream piping140 bar (2031 psi)

6= Ar / N₂ / IG-55 / IG-541 - upstream piping ...235 bar (3408 psi)

7= Ar / N₂ / IG-55 / IG-541 - 300 bar HP upstream piping365 bar (5294 psi)

8= CO₂ LP base manifold30 bar (435 psi)





9= CO₂ HP base manifold140 bar (2031 psi)








Pipe element (Special)

Fitting threaded connection

Fittings - type D, EN 10242 galvanized

Designation	Feature	Part no.	Weight kg (lbs)
Elbow A1 	1/2	747921	0.09 (0.20)
	3/4	747933	0.14 (0.31)
	1	747945	0.19 (0.42)
	1.1/4	747957	0.35 (0.77)
	1.1/2	747969	0.38 (0.84)
	2	747970	0.59 (1.30)
	2 x 1	790307	0.54 (1.14)
	2.1/2	757694	0.94 (2.07)
	3	886833	1.63 (3.59)
Elbow A4-45° 	1/2	886491	0.08 (0.18)
T B1 	1/2	747982	0.12 (0.26)
	3/4	747994	0.17 (0.37)
	1	749516	0.30 (0.66)
	1.1/4	749530	0.44 (0.97)
	1.1/2	749577	0.50 (1.10)
	2	749590	0.92 (2.03)
	2.1/2	777422	1.56 (3.44)
	3	886097	2.19 (4.83)
	3/4 x 1/2 x 3/4	748007	0.15 (0.33)
	1 x 1/2 x 1	888063	0.32 (0.71)
	1 x 3/4 x 1	749528	0.26 (0.57)
	1.1/4 x 3/4 x 1	749541	0.27 (0.60)
	1.1/4 x 1/2 x 1.1/4	888064	0.40 (0.88)
	1.1/4 x 3/4 x 1.1/4	749553	0.29 (0.64)
	1.1/4 x 1 x 1.1/4	749565	0.33 (0.73)
	1.1/2 x 1/2 x 1.1/2	888065	0.47 (1.04)
	1.1/2 x 3/4 x 1.1/2	749589	0.36 (0.79)
	2 x 1/2 x 2	888066	0.72 (1.59)
	2 x 3/4 x 2	888068	0.70 (1.54)
	2 x 1 x 2	749607	0.55 (1.21)
2 x 1.1/4 x 2	790186	0.61 (1.34)	
2 x 1.1/2 x 2	790198	0.65 (1.43)	
Plug T9 	1/2	817984	0.05 (0.11)
	1	818654	0.12 (0.26)
	1.1/4	818666	0.20 (0.44)
	1.1/2	818678	0.23 (0.51)
	2	759800	0.37 (0.82)



Designation	Feature	Part no.	Weight kg (lbs)
Cap T1 	1/2	749887	0.05 (0.11)
	3/4	749899	0.08 (0.18)
	1	749905	0.11 (0.24)
	1.1/4	749917	0.17 (0.37)
	1.1/2	749929	0.23 (0.51)
	2	749930	0.38 (0.84)
	2.1/2	757724	0.62 (1.37)
	3	764800	0.84 (1.85)
Union U11 	1/2	757669	0.22 (0.49)
	3/4	749942	0.27 (0.6)
	1	749954	0.36 (0.79)
	1.1/4	749966	0.61 (1.34)
	1.1/2	749978	0.75 (1.65)
	2	749980	1.24 (2.73)
Union U12 	2.1/2	819040	1.84 (4.06)
	3	886837	2.50 (5.51)
	1/2	818540	0.20 (0.44)
Reducing nipple N4 	1/2 x 1/4	749644	0.04 (2.29)
	3/4 x 1/2	749656	0.05 (2.31)
	1 x 3/8	768994	0.10 (0.22)
	1 x 1/2	749668	0.10 (0.22)
	1 x 3/4	749670	0.08 (0.18)
	1.1/4 x 3/4	749681	0.16 (0.35)
	1.1/4 x 1	749693	0.13 (0.29)
	1.1/2 x 3/4	749700	0.22 (0.49)
	1.1/2 x 1	749711	0.20 (0.44)
	1.1/2 x 1.1/4	749723	0.13 (0.29)
	2 x 1	749735	0.41 (0.90)
	2 x 1.1/4	749747	0.35 (0.77)
	2 x 1.1/2	749759	0.27 (0.6)
	2.1/2 x 2	757980	0.49 (1.08)
3 x 2.1/2	886835	0.65 (1.43)	
Hex. nipple, reduced N8 	1/2 x 1/4	857008	0.05 (0.11)




Pipe element (Special)

Fitting threaded connection

Fittings - type D, EN 10242 galvanized

Designation	Feature	Part no.	Weight kg (lbs)
Hex. nipple N8 	1/2	749826	0.07 (0.15)
	3/4	749838	0.10 (0.22)
	1	749840	0.15 (0.33)
	1.1/4	749851	0.23 (0.51)
	1.1/2	749863	0.30 (0.66)
	2	749875	0.48 (1.06)
Socket, reduced M2 	1 x 3/4	749619	0.12 (0.26)
	1.1/4 x 3/4	749620	0.19 (0.42)
	2 x 1.1/4	749632	0.45 (0.99)

Designation	Feature	Part no.	Weight kg (lbs)
Socket M2 	1/2	749760	0.06 (0.13)
	3/4	749772	0.08 (0.18)
	1	749784	0.12 (0.26)
	1.1/4	749796	0.19 (0.42)
	1.1/2	749802	0.26 (0.57)
	2	749814	0.42 (0.93)
	2.1/2	762372	0.66 (1.46)
	3	886834	1.10 (2.43)

Technical Data

Test pressure160 bar (2320 psi), single test
or 300 bar (4351 psi), type test
 Operating temperatureup to -50 °C (-58 °F)
 Materialmalleable cast iron, galvanized
EN-GJMB-350-10 oder EN-GJMW-400-5
 Test certificateEN 10204 - 2.2
 Markingwith stamped D and red colour point

Application

- CO₂ high pressure downstream piping60 bar (870 psi)
- CO₂ low pressure system30 bar (435 psi)
- Ar / N₂ / IG-55 / IG-541:
 - downstream piping (after pressure reducer)60 bar (870 psi)
 - ConstantFlow (CF) system60 bar (870 psi)
- Halocarbon (HFC 227ea) system60 bar (870 psi)
- Halocarbon (FK-5-1-12) system60 bar (870 psi)



Pipe element (Special)

Pilot pipe

Pipe for extinguishing pipework and pilot pipes



SAP designation

part no. 823563: Pipe 6x1 B-210-2394/1

Maintenance

functional check within the framework of system-specific functional test

Designation		Part no.	Nominal diameter	Test pressure bar (psi)	Weight kg (lbs)
Pipe	6x1 B-210-2394/1	823563 ¹⁾	DN4	210 (3045)	0.3 (0.06)
	10x1 B-210-2394/1	823575 ¹⁾	DN8	210 (3045)	0.22 (0.10)
	15x1.5 B-90-2391	240020	DN12	90 (1305)	0.50 (0.23)

¹⁾ Marked by black heat shrink sleeve at both pipe ends

Technical Data

Materialsteel, galvanized
 Pipe 6 x 1 and 10 x 1acc. to DIN2394
 15 x 1.5acc. to DIN2391
 Test certificateEN 10204 - 3.1 (material and pressure test)

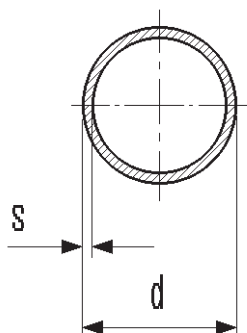
Application

Precision steel pipe are used for extinguishing pipework and pilot pipes in:

- CO₂- high pressure fire extinguishing systems
- CO₂- low pressure fire extinguishing systems
- Argon-, Nitrogen-, IG-55-, IG-541 fire extinguishing systems
- Halocarbon fire extinguishing systems

Dimension drawing

Dimensions in mm (inch)



Pipe	d	s
6x1	6 (0.24)	1 (0.04)
10x1	10 (0.39)	1 (0.04)
15x1.5	15 (0.59)	1.5 (0.06)



Pipe element (Special)

Fitting pilot pipe

Unions - stock list

Feature		Part no.	Series	Pipe o.d.	Weight kg (lbs)
G - Union 	G 06-PL A3C	125920	L PN315	06	0.034 (0.07)
	G 10-PL A3C	125943		10	0.062 (0.14)
	G 15-PL A3C	125931		15	0.138 (0.3)
SV - Bulkhead union 	SV 06-PL Ms	822900	L PN315	06	0.064 (0.14)
	SV 10-PL Ms	822893		10	0.114 (0.25)
	SV 10-PL A3C	212010		10	0.106 (0.23)
W - Elbow union 	W 06-PL A3C	125797	L PN315	06	0.052 (0.11)
	W 10-PL A3C	174678		10	0.096 (0.21)
	W 15-PL A3C	125815		15	0.160 (0.35)
T - Union tee 	T 06-PL A3C	125633	L PN315	06	0.070 (0.15)
	T 10-PL A3C	125645		10	0.126 (0.28)
	T 15-PL A3C	125669		15	0.230 (0.51)
K - Union cross 	K 10-PL A3C	841744	L PN315	10	0.134 (0.3)
RHD - Non-return valve 	RHD 06-PL A3K	125980	L PN250	06	0.068 (0.15)
	RHD 10-PL A3K	125992		10	0.142 (0.31)
MAV - Pressure gauge connector 	MAV 06-PLR A3C	126054	L PN315	06	0.046 (0.1)
	MAV 10-PSR A3C	126078	S PN630	10	0.120 (0.26)
GE - Male stud connector 	GE 06-PLR-ED A3C	125566	L PN315	06	0.026 (0.06)
	GE 10-PLR-ED A3C	174666		10	0.048 (0.11)
	GE 15-PLR-ED A3C	125610		15	0.116 (0.26)
	GE 06-PSR-ED A3C	125578	S PN630	06	0.054 (0.12)
	GE 10-PSR-ED A3C	125608		10	0.088 (0.19)

280-320_001 / A/00_2015en
The contents of this publication are subject to modifications without notice. All rights reserved.



Pipe element (Special)

Fitting pilot pipe

Unions - stock list



Feature		Part no.	Series	Pipe o.d.	Weight kg (lbs)
EVGE - Swivel connector 	EVGE 10-PLR-ED A3C	841732	L	10	0.047 (0.1)
	EVGE 15-PLR-ED A3C	886237	PN250	15	0.123 (0.27)
WE - Male stud elbow 	WE 06-PLR A3C	125761	L PN315	06	0.040 (0.09)
	WE 10-PLR A3C	125750		10	0.082 (0.18)
	WE 15-PLR Ms-DPR	840752		15	0.150 (0.33)
	WE 06-PSR A3C	125773	S PN400	06	0.074 (0.16)
TE - Male stud branch 	TE 15-PLR A3C	814971	L PN315	15	0.200 (0.44)
LE - Male stud run tee 	LE 06-PLR A3C	125876	L PN315	06	0.051 (0.11)
	LE 10-PLR A3C	125890		10	0.112 (0.25)
EVW - Standpipe elbow 	EVW 15-PL A3C	886238	L PN315	15	0.165 (0.36)
EVT - Standpipe branch tee 	EVT 06-S A3C	886406	S PN630	06	0.102 (0.22)
EVL - Standpipe run tee 	EVL 06-PL A3C	786956	L PN315	06	0.058 (0.13)
M - Nut 	M 06-L A3C	173959	L	06	0.010 (0.020)
	M 10-L A3C	126133		10	0.016 (0.04)
	M 15-L Ms	861820		15	0.045 (0.1)
	M 06-S A3C	829656	S	06	0.017 (0.04)



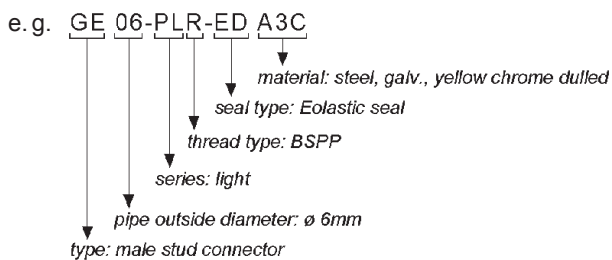
Pipe element (Special)

Fitting pilot pipe

Unions - stock list

Feature		Part no.	Series	Pipe o.d.	Weight kg (lbs)
DPR - Progressive ring 	DPR 06-L/S A3D	208208	L/S	06	0.002 (0.0044)
	DPR 10-L/S A3D	126091		10	0.002 (0.0044)
VKA - Blanking plug for cones 	VKA 06-L A3C	885373	L	06	0.005 (0.001)
	VKA 10-L A3C	815008		PN315	0.014 (0.0031)
	VKA 15-L A3C	814983		15	0.030 (0.07)
VSTI - Blanking plug for ports 	VSTI R1/4-ED A3C	776387	PN400	-	0.018 (0.04)
	VSTI R1/2-ED A3C	774822		-	0.045 (0.1)
RI - Thread reducer/expander 	RI 1/2 x 3/4 A3C	751060	PN400	-	0.180 (0.4)
	RI 1/2 x 1 A3C	704059		-	0.164 (0.36)
KOR - Tube end reducer 	KOR 08/06-PL A3C	886263	L PN315	08/06	0.039 (0.09)
	KOR 10/06-PL A3C	755260		10/06	0.044 (0.1)
	KOR 15/10-PL A3C	755259		15/10	0.088 (0.19)
EDKOR - Straight reducer connection with taper 	EDKOR 10L/15L A3C	886612	L PN400	10/15	0.094 (0.21)

Explanation Feature



- Series Llight
- Sheavy
- Material A3Csteel, galvanized, yellow chrome dulled
- A3Ksteel, galvanized, blue chrome dulled
- A3Dsteel, galvanized, green chrome dulled
- Msbrass



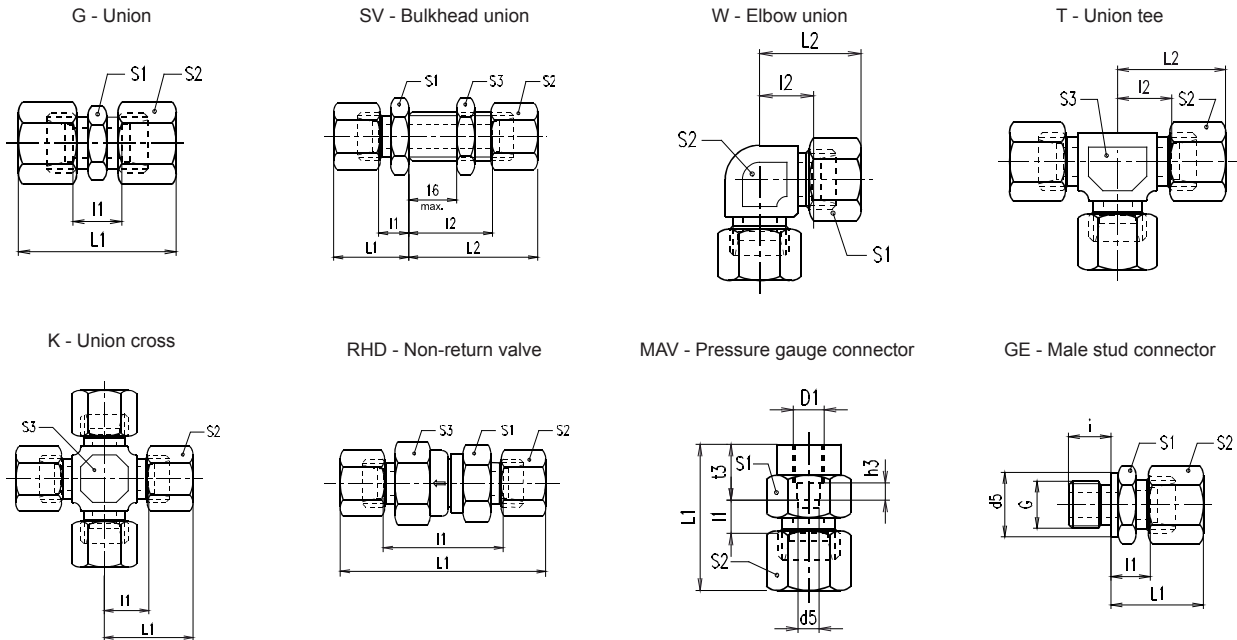
Pipe element (Special)

Fitting pilot pipe

Unions - stock list

Dimension drawing

Dimensions in mm (inch)



Feature	S1	S2	S3	L1	I1	L2	I2
G 06-PL A3C	12 (0.47)	14 (0.55)	-	39 (1.54)	10 (0.39)	-	-
G 10-PL A3C	17 (0.67)	19 (0.75)	-	42 (1.65)	13 (0.51)	-	-
G 15-PL A3C	24 (0.94)	27 (1.06)	-	46 (1.81)	16 (0.63)	-	-
SV 06-PL Ms	17 (0.67)	14 (0.55)	17 (0.67)	22 (0.87)	7 (0.28)	42 (1.65)	27 (1.06)
SV 10-PL Ms	22 (0.87)	19 (0.75)	22 (0.87)	25 (0.98)	10 (0.39)	43 (1.69)	28 (1.10)
SV 10-PL A3C	22 (0.87)	19 (0.75)	22 (0.87)	25 (0.98)	10 (0.39)	43 (1.69)	28 (1.10)
W 06-PL A3C	14 (0.55)	12 (0.47)	-	-	-	27 (1.06)	12 (0.47)
W 10-PL A3C	19 (0.75)	17 (0.67)	-	-	-	30 (1.18)	15 (0.59)
W 15-PL A3C	27 (1.06)	19 (0.75)	-	-	-	36 (1.42)	21 (0.83)
T 06-PL A3C	-	14 (0.55)	12 (0.47)	-	-	27 (1.06)	12 (0.47)
T 10-PL A3C	-	19 (0.75)	17 (0.67)	-	-	30 (1.18)	15 (0.59)
T 15-PL A3C	-	27 (1.06)	19 (0.75)	-	-	36 (1.42)	21 (0.83)

Feature	S1	S2	L1	S3/ D1	I1/d1	t3/G	h3/i	d5
K 10-PL A3C	-	19 (0.75)	30 (1.18)	14 (0.55)	15 (0.59)	-	-	-
RHD 06-PL A3K	17 (0.67)	24 (0.94)	58 (2.28)	17 (0.67)	29 (1.14)	-	-	-
RHD 10-PL A3K	22 (0.87)	19 (0.75)	69.5 (2.74)	24 (0.94)	40.5 (1.59)	-	-	-
MAV 06-PLR A3C	19 (0.75)	14 (0.55)	37 (1.46)	G1/4	7.5 (0.3)	14.5 (0.57)	4.5 (0.18)	2.5 (0.1)
MAV 10-PSR A3C	27 (1.06)	22 (0.87)	47 (1.85)	G1/2	10.5 (0.41)	20 (0.79)	5 (0.197)	7.0 (0.28)
GE 06-PLR-ED A3C	14 (0.55)	14 (0.55)	23 (0.91)	-	8.5 (0.33)	G1/8	8 (0.31)	14 (0.55)
GE 10-PLR-ED A3C	19 (0.75)	19 (0.75)	26 (1.02)	-	11 (0.43)	G1/4	12 (0.47)	19 (0.75)
GE 15-PLR-ED A3C	27 (1.06)	27 (1.06)	29 (1.14)	-	14 (0.55)	G1/2	14 (0.55)	27 (1.06)
GE 06-PSR-ED A3C	19 (0.75)	17 (0.67)	-	28 (1.10)	-	-	-	-
GE 10-PSR-ED A3C	22 (0.87)	22 (0.87)	-	31 (1.22)	-	-	-	-

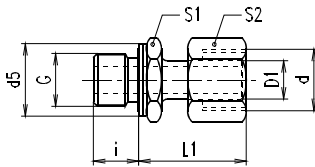


Pipe element (Special)

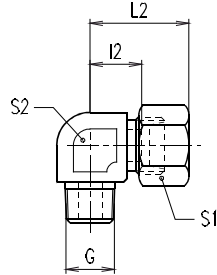
Fitting pilot pipe

Unions - stock list

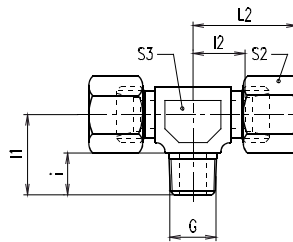
EVGE - Swivel connector



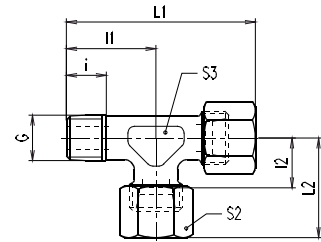
WE - Male stud elbow



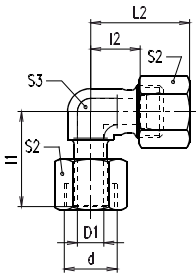
TE - Male stud branch



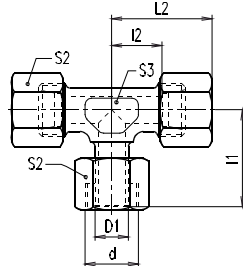
LE - Male stud run tee



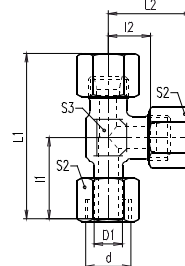
EVW - Standpipe elbow



EVT - Standpipe branch tee



EVL - Standpipe run tee



Feature	S1	S2	L1	S3 /D1	t3/G	h3/i	d5
EVGE 10-PLR-ED A3C	19 (0.75)	19 (0.75)	27.5 (1.08)	10 (0.39)	G1/4	12 (0.47)	19 (0.75)
EVGE 15-PLR-ED A3C	27 (1.06)	27 (1.06)	31 (1.22)	15 (0.59)	G1/2	14 (0.55)	27 (1.06)

Feature	S1	S2	S3	L1	I1	L2	I2	G/D1	i/d1
WE 06-PLR A3C	14 (0.55)	12 (0.47)	-	-	-	27 (1.06)	12 (0.47)	R1/8	-
WE 10-PLR A3C	19 (0.75)	17 (0.67)	-	-	-	30 (1.18)	15 (0.59)	R1/4	-
WE 15-PLR Ms-DPR	27 (1.06)	19 (0.75)	-	-	-	36 (1.42)	21 (0.83)	R1/2	-
WE 06-PSR A3C	17 (0.67)	14 (0.55)	-	-	-	31 (1.22)	16 (0.63)	R1/4	-
TE 15-PLR A3C	-	27 (1.06)	19 (0.75)	-	34 (1.34)	36 (1.42)	21 (0.83)	R1/2	14 (0.55)
LE 06-PLR A3C	-	14 (0.55)	12 (0.47)	47 (1.85)	20 (0.78)	27 (1.06)	12 (0.47)	R1/8	8 (0.31)
LE 10-PLR A3C	-	19 (0.75)	17 (0.67)	57 (2.24)	27 (1.06)	30 (1.18)	15 (0.59)	R1/4	12 (0.47)
EVW 15-PL A3C	-	27 (1.06)	19 (0.75)	-	32,5 (1.28)	36 (1.42)	21 (0.83)	15 (0.59)	-
EVT 06-S A3C	-	17 (0.67)	12 (0.47)	-	27 (1.06)	31 (1.22)	16 (0.63)	6 (0.24)	-
EVL 06-PL A3C	-	14 (0.55)	12 (0.47)	53 (2.09)	26 (1.02)	27 (1.06)	12 (0.47)	6 (0.24)	-
M 06-L A3C	-	14 (0.55)	-	-	-	-	-	-	-
M 10-L A3C	-	19 (0.75)	-	-	-	-	-	-	-
M 15-L Ms	-	27 (1.06)	-	-	-	-	-	-	-
M 06-S A3C	-	17 (0.67)	-	-	-	-	-	-	-

S/280-320_001 / A/00_2015en
The contents of this publication are subject to modifications without notice. All rights reserved.

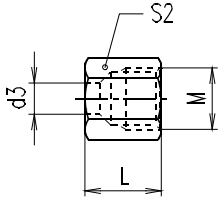


Pipe element (Special)

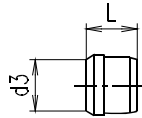
Fitting pilot pipe

Unions - stock list

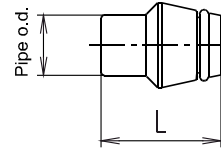
M - Nut



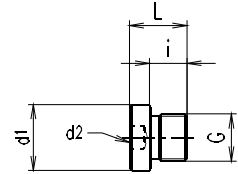
DPR - Progressive ring



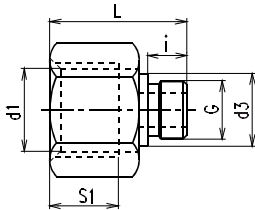
VKA - Blanking plug for cones



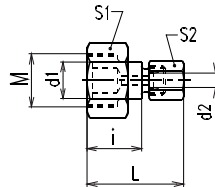
VSTI - Blanking plug for ports



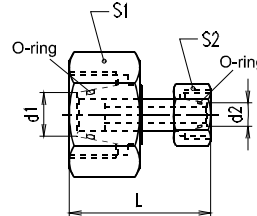
RI - Thread reducer/expander



KOR - Tube end reducer



EDKOR - Straight reducer connection with taper



Feature	S1	S2	M/G	i	L	d1	d2	d3
M 06-L A3C	-	14 (0.55)	M12x1,5	-	9.5 (0.37)	-	-	6 (0.24)
M 10-L A3C	-	19 (0.75)	M16x1,5	-	10 (0.39)	-	-	10 (0.39)
M 15-L Ms	-	27 (1.06)	M22x1,5	-	10 (0.39)	-	-	15 (0.59)
M 06-S A3C	-	17 (0.67)	M14x1,5	-	9.5 (0.37)	-	-	6 (0.24)
DPR 06-L/S A3D	-	-	-	-	9.5 (0.37)	-	-	6 (0.24)
DPR 10-L/S A3D	-	-	-	-	10 (0.39)	-	-	10 (0.39)
VKA 06-L A3C	-	-	-	-	18.5 (0.73)	-	-	-
VKA 10-L A3C	-	-	-	-	20 (0.79)	-	-	-
VKA 15-L A3C	-	-	-	-	20.5 (0.81)	-	-	-
VSTI R1/4-ED A3C	-	-	G1/4 A	12 (0.47)	17 (0.67)	19 (0.75)	6 (0.24)	-
VSTI R1/2-ED A3C	-	-	G1/2 A	14 (0.55)	19 (0.75)	27 (1.06)	10 (0.39)	-
RI 1/2 x 3/4 A3C	24.5 (0.96)	-	G1/2 A	14 (0.55)	46 (1.81)	G3/4	-	26 (1.02)
RI 1/2 x 1 A3C	26.5 (1.04)	-	G1/2 A	14 (0.55)	49 (1.93)	G1	-	26 (1.02)
KOR 08/06-PL A3C	17 (0.67)	14 (0.55)	M14x1,5	23.5 (0.93)	38 (1.5)	8 (0.31)	6 (0.24)	-
KOR 10/06-PL A3C	19 (0.75)	14 (0.55)	M16x1,5	23.5 (0.93)	38 (1.5)	10 (0.39)	6 (0.24)	-
KOR 15/10-PL A3C	27 (1.06)	19 (0.75)	M22x1,5	24.5 (0.96)	39 (1.54)	15 (0.59)	10 (0.39)	-
EDKOR 10L/15L A3C	27 (1.06)	19 (0.75)	-	-	~36 (~1.42)	15 (0.59)	10 (0.39)	-



Pipe element (Special)

Bracket pilot piping network

Cable clip B16 galv.



SAP designation

part no. 813589: Cable clamp B 16 galvanized

Maintenance

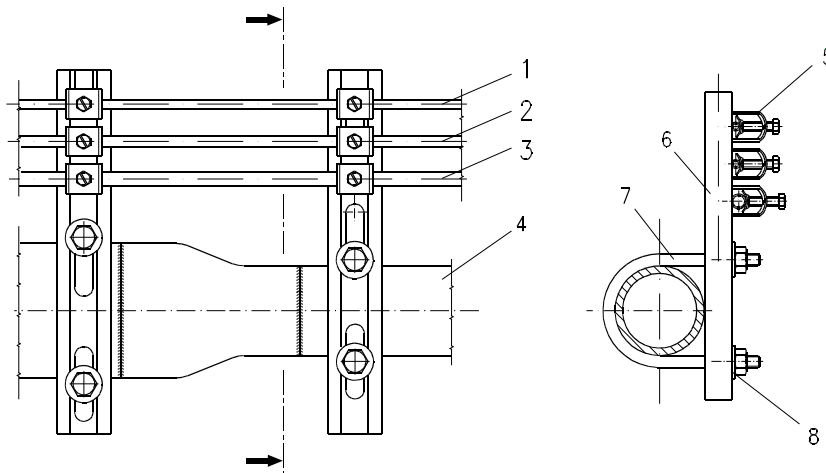
functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Cable clip B16 galvanized	813589	0.023 kg (0.05 lbs)

Technical Data

ApplicationCO₂ - systems
 Installationvertical or horizontal

Installation example:



Pos.	Designation	Part no.	Gewicht kg (lbs)
1	steel pipe 6 x 1 - Zista	823563 ¹⁾	0.13 (0.29)
2	steel pipe 10 x 1 - Zista	823575 ¹⁾	0.22 (0.49)
3	steel pipe 15 x 1,5 - Zista	240020 ¹⁾	0.5 (1.1)
4	pipe system	DN20 - DN200	
5	cable clip B16 galv.	813589	0.023 (0.05)

¹⁾ length on stock 6 m (19.7 ft)

Pos.	Designation	Part no.	Gewicht kg (lbs)
6	profil type HM 315-FV-L	811465 ²⁾	1.2 (2.65)
7	U - bolt	M1-16-01	
8	washer DIN9021 - B8,4	110029	0.006 (0.01)
	washer DIN9021 - B10,5	110042	0.012 (0.03)
	washer DIN9021 - B13	116123	0.023 (0.05)

²⁾ length on stock 2 m (6,6 ft)



Pipe element (Special)

Bracket pilot piping network

Hose clip DIN 3017 and pipe clip RSGU1.

Pos.	Designation	Extinguishing Pipe	Part no.	Weight kg (lbs)	
1	 Hose clip DIN 3017	S 34/15	DN25	886839	0.01 (0.02)
		S 43/9	DN32	870150	0.01 (0.02)
		S 49/9	DN40	870162	0.01 (0.02)
		S 61/15	DN50	870174	0.03 (0.07)
		S 77/15	DN65	870186	0.04 (0.09)
		S 89/15	DN80	870198	0.04 (0.09)
		S 115/20	DN100	870204	0.10 (0.22)
2	 Pipe clip RSGU1.	6/15	DN25	870230	0.008 (0.02)
		10/15		870241	0.01 (0.02)
		6/9	DN32 / DN40	870216	0.003 (0.01)
		10/9		870228	0.004 (0.01)
		6/15	DN50 / DN65 / DN80	870230	0.008 (0.02)
		10/15		870241	0.01 (0.02)
		6/20	DN100	870253	0.017 (0.04)
		10/20		870265	0.02 (0.04)

Technical Data

Finishgalvanized
 Hose clip e.g. S 34/15clamping range 34 mm (1,34")
clip band with 15 mm (0,59")
 Pipe clip RSGU1. e.g. 6/15for control pipe 6x1,
clip band with 15 mm (0,59")

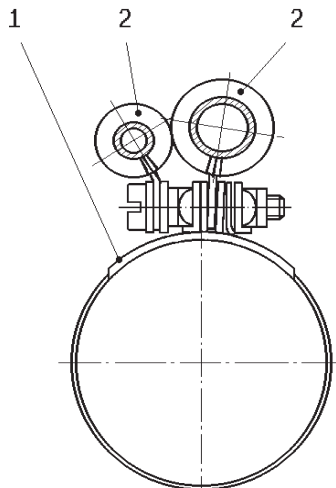
SAP designation

part no. 886839: Hose clip DIN3017-S 34/15 gal Zn

Maintenance

functional check within the framework of system-specific functional test

Mounting illustration:



Pos. 1 hose clip DIN 3017 type S
for extinguishing pipe DN25 - 100

Pos. 2 pipe clip typ RSGU1.
for control pipe 6x1 and 10x1

Europe, Middle East & Africa

BENELUX

Hinmanweg 11d
NL-7575 BE Oldenzaal
The Netherlands
Tel.: +31 (0)541 573233
Fax: +31 (0)541 573234
vikingnetherlands@viking-emea.com

IBÉRICA

Calle Picos de Europa 4A
San Fernando de Henares
E-28830 Madrid
Spain
Tel.: +34 91 677 8352
Fax: +34 91 677 8498
vikingspain@viking-emea.com

NORDIC

Staffans Väg 5
S-192 78 Sollentuna
Sweden
Tel.: +46 (0)8 594 415 90
Fax: +46 (0)8 591 280 18
vikingsweden@viking-emea.com

TURKEY

İnönü Cad. Sümer Sok.
Zitaş İş Merkezi D2 Blok K:5, D:12
34742 Kozyatağı, Kadıköy, İstanbul
Turkey
Tel.: +90 (0)216 403 18 00
Fax: +90 (0)216 403 18 03
vikingturkey@viking-emea.com

CENTRAL & EASTERN EUROPE

Industriestr. 10/12
D-23843 Bad Oldesloe
Germany
Tel.: +49 (0)4531 803 8087
Fax: +49 (0)4531 803 137
vikinggermany@viking-emea.com

ITALY

Via Pavia, 76
I-27042 Bressana Bottarone (PV)
Italy
Tel.: +39 0383 80071
vikingitaly@viking-emea.com

POLAND

ul. Piaskowickiej Filipiny 46/33
PL-02 778 Warsaw
Poland
Tel.: +48 22 403 57 90
Fax: +48 22 403 57 69
vikingpoland@viking-emea.com

UK & IRELAND

Unit 2 - Byram House, Newborn Court
Chapel Street
Epworth DN9 1HQ
United Kingdom
Tel.: +44 (0)1427 871 000
Fax: +44 (0)1427 873 917
vikinguk@viking-emea.com

FRANCE

Centre d'Affaires CESCO
4, rue Marconi
BP 25180
F-57075 Metz Cedex 03
France
Tel.: +33 (0)800 10 29 23
Fax: +33 (0)800 88 70 46
vikingfrance@viking-emea.com

MIDDLE EAST

LOB 19 Office #2506
Post Box No. 17531
Jebel Ali Free Zone, Dubai
United Arab Emirates
Tel.: +971 (0)4 8895 561
Fax: +971 (0)4 8895 562
vikingdubai@viking-emea.com

ROMANIA & BULGARIA

MODERN Business Center
B-dul Carol I nr. 34-36
RO-020922 Bucharest
Romania
Tel.: +40 21 311 51 48
vikingromania@viking-emea.com

For further information,
please visit
www.viking-emea.com

