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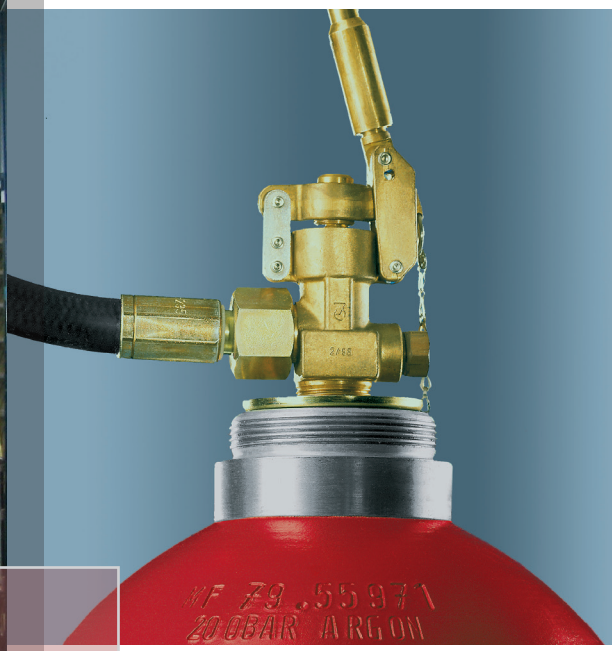
CO_2 High-Pressure Suppression Systems

Product Catalogue 2019 | EMEA



Version: 2019-01

Product Catalog
Gas-Based Suppression System

Carbon Dioxide Extinguishing Systems
Fight fires using CO_2 High 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.

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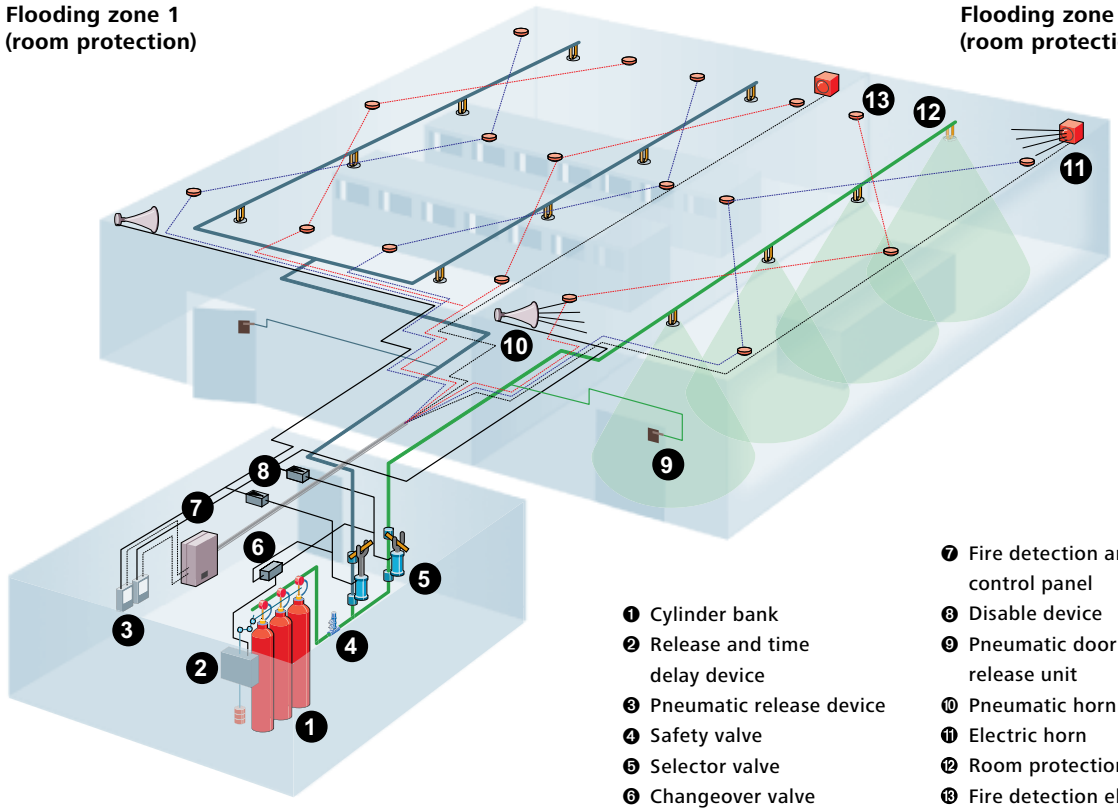

❶ Cylinder bank
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❸ Pneumatic release device
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❺ Selector valve
❻ Changeover valve
❼ Fire detection and control panel
❽ Disable device
❾ Pneumatic door release unit
❿ Pneumatic horn
⓫ Electric horn
⓬ Room protection nozzle
⓭ Fire detection element

Carbon dioxide (CO_2) 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

The high-pressure steel cylinders are consolidated into one cylinder bank at the installation location in special frames with independent suspension.
Arranged in one or more rows, surprisingly large supplies of gas can be stored in a very small space.
The special frames can easily be adapted for extended protection zones or quick replacement of individual cylinders.
Each cylinder suspension is also a weighing unit, which automatically indicates minimal leakage of extinguishing agent.
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 CO_2 HP

Cylinder CO_2 filled

CO_2 - Cylinder EU

Approvals

VdS [1), 2)]

[1)] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)

[2)] 80 l - Cylinder are not part of the VdS system approval

SAP designation

e.g. part no. 888214: Steel cylinder 5,4+3,6kg-CO_2-EU

Maintenance

maintenance-free

Nominal volume	Filling quantity kg (lbs)	Dip-tube	Odorisation	Part no.	Weight approx. kg (lbs)
5.4 l	3.6 (7.9) [3)]	without	-	888214	11.5 / 13 (25 / 29) [4)]
	4 (8.8)	without	5 ml	888215	11.5 / 13 (25 / 29) [4)]
	4 (8.8)	rigid	5 ml	888216	12.5 / 14 (28 / 31) [4)]
10.7 l	7.1 (15.7) [3)]	without	-	888217	24 (53)
	8 (17.6)	without	5 ml	888218	24 (53)
	7.1 (15.7) [3)]	rigid	5 ml	888219	23 (51)
13.4 l	10 (22.1)	rigid	5 ml	888220	29 (64)
40 l	27 (59.5) [3)]	rigid	-	888221	76 / 62 / 78 (168 / 137 / 172) [4)]
	30 (66.1)	without	5 ml	888222	78 / 64 / 80 (172 / 141 / 176) [4)]
	30 (66.1)	rigid	5 ml	888223	79 / 65 / 81 (174 / 143 / 179) [4)]
67.5 l	45 (99.2) [3)]	rigid	-	888224	118 / 102 / 121 (260 / 225 / 267) [4)]
	50 (110.2)	rigid	5 ml	888226	123 / 107 / 128 (271 / 236 / 282) [4)]
80 l	53.4 (117.7) [3)]	rigid	-	888227 [2)]	120 (265)
	60 (132.3)	rigid	5 ml	888228 [2)]	127 (280)

[3)] tropical filling; [4)] depending on manufacturer

Technical data

Extinguishing agent .....carbon dioxide - CO_2
Odorisation .....lemon oil
CO_2 - cylinder valve type K85-20.0-S9 .....see cylinder valve
Cylinder filled .....by a qualified filling centre
Filling report .....with order no. and cylinder no.
Transport .....see safety data sheet
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)

Technical data cylinder CO_2 without valve EU (blank):

Cylinder (seamless) .....acc. to Directive 2010/35/EU (TPED),
.....for liquefied carbon dioxide
Protective cap .....DIN EN ISO 1117, large type
Thread cylinder valve .....DIN EN ISO 11363-1, 25 E
protective cap .....DIN EN ISO 1117, W80
Test pressure .....250 bar (3625 psi)
Finish .....RAL3000 - red

Approval with collective certificate by a notified body in accordance with directive 2010/35/EC.

Caution

Protect the steel cylinders against direct radiation from sun.

Note

Steel cylinders for export come without odorisation.

Extinguishing technology CO_2 HP
Cylinder CO_2 filled

CO_2 - Cylinder EU

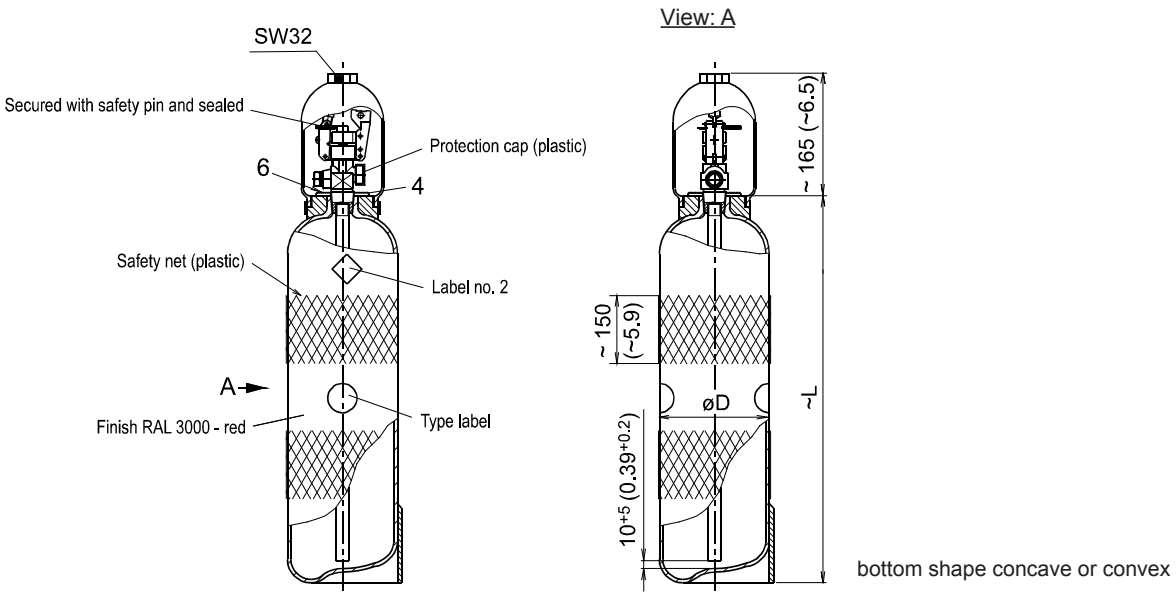
Marking
Type label (de/en)
- Extinguishing agent cylinder with dip tube or pilot cylinder
- Extinguishing agent: carbon dioxide or pilot gas: carbon dioxide
- Filling quantity: ... kg
- Order no.: xxxxxx
- Marking number in acc. with GGVS/ADR: UN 1013
- With odorant (if existent)

Additional marking
- Steel cylinder without dip-tube marked with plate item 4 and label item 6

Marking cylinder CO_2 without valve (blank)
Marking .....acc. to directives 2008/68/EC and RL 2010/35/EC

Additional marking
- Owner marking, **M**inimax **F**euerschutz .....MF
- Owner no. (acc. to order) xxxxxx

Dimension drawing
Dimensions in **mm (inch)**



bottom shape concave or convex

Nominal volume	øD ±3 (±0.12)	L approx.
5.4 l	140 (5.51)	470 / 480 (18.5 / 18.9) [5]
10.7 l		880 / 890 (34.7 / 35) [5]
13.4 l		1075 / 1085 (42.3 / 42.7) [5]
40 l	204 (8.03)	1505 / 1430 / 1535 (59.3 / 56.3 / 60.4) [5]
67.5 l	267 (10.51)	1485 / 1420 / 1500 (58.5 / 55.9 / 59.1) [5]
80 l		1680 (66.1)

[5] depending on manufacturer

Extinguishing technology CO_2 HP

Cylinder CO_2 filled

CO_2 - Cylinder RU

Approvals

TP RU

SAP designation

e.g. part no. 888319: Steel cylinder RU 67,5l+45kg-CO_2 190bar-EU

Maintenance

maintenance-free

Nominal volume	Filling quantity kg (lbs)	Valve type	Part no.	Odorisation	Dip-tube	Weight approx. kg (lbs)
67.5 l	45 (99.2) [1)]	K85-20.0-S59-190 bar	888319	-	rigid	102 (225)
	45 (99.2) [1)]	K85-20.0-S9	888182	-	rigid	102 (225)
	50 (110.2)	K85-20.0-S9	888290	5 ml	rigid	107 (236)

[1)] tropical filling

Technical data

Extinguishing agent .....carbon dioxide - CO_2
Odorisation .....lemon oil
CO_2 - cylinder valve:
- Typ K85-20.0-S59-190 bar .....see cylinder valve
- Typ K85-20.0-S9 .....see cylinder valve

Cylinder filled .....by a qualified filling centre
Filling report .....with order no. and cylinder no.
Transport .....see safety data sheet
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)

Technical data cylinder CO_2 without valve EU (blank):

Cylinder (seamless) .....acc. to Directive 2010/35/EU (TPED),
.....for liquefied carbon dioxide
Protective cap .....DIN EN ISO 1117, large type
Thread cylinder valve .....DIN EN ISO 11363-1, 25 E
protective cap .....DIN EN ISO 1117, W80
Test pressure .....250 bar (3625 psi)
Finish .....RAL3000 - red

Approval with collective certificate by a notified body in accordance with directive 2010/35/EC.

Caution

Protect the steel cylinders against direct radiation from sun.

Note

Steel cylinders for export come without odorisation.

Marking

Type label (de/ru)
- Extinguishing agent cylinder with dip tube
- Extinguishing agent: carbon dioxide
- Project number:
- Empty weight (including valve) kg:
- Date of filling:
- Year of construction:
- Pressure at 20±2°C: 58 bar
- Filling quantity: ... kg
- Order no.: xxxxxx
- Marking number in acc. with GGVS/ADR: UN 1013
- With odorant (if existent)
- Manufacturer: Minimax GmbH & Co. KG

Marking cylinder CO_2 without valve (blank)

Marking acc. to Directives 2008/68/EC and 2010/35/EU

Additional marking
- Owner marking, **M**inimax **F**euerschutz .....MF
- Owner no. (acc. to order) xxxxxx

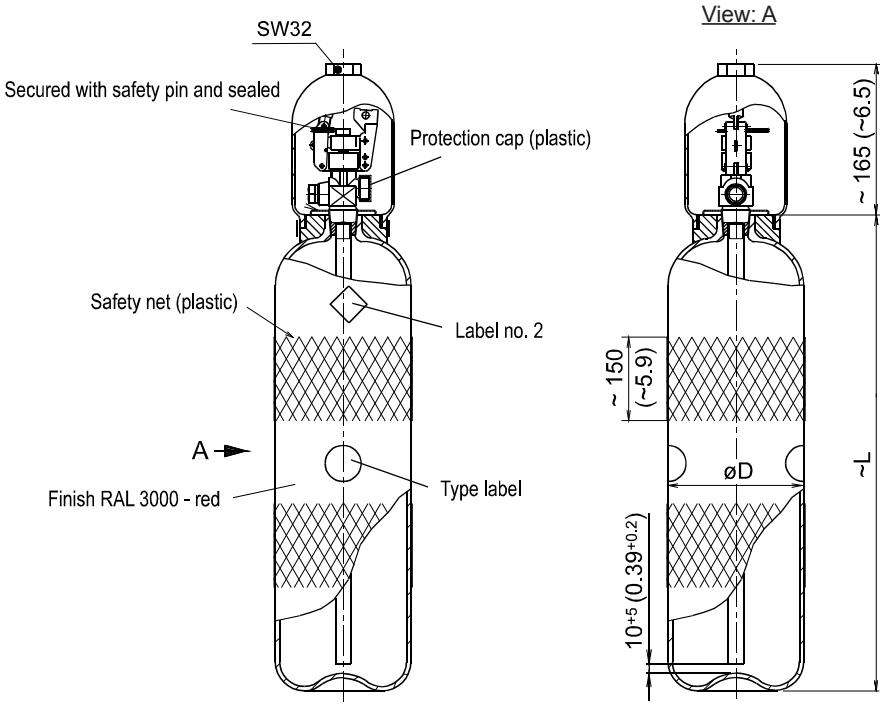
Extinguishing technology CO_2 HP

Cylinder CO_2 filled

CO_2 - Cylinder RU

Dimension drawing

Dimensions in **mm (inch)**



Nominal volume	øD ±3 (±0.12)	L approx.
67.5 l	267 (10.51)	1420 (55.9)

Extinguishing technology CO_2 HP

Cylinder CO_2 filled

CO_2 - Cylinder DOT

Approvals

without approval

SAP designation

e.g. part no. 888300: Cylinder DOT 10,7l+6,8kg-CO_2

Maintenance

maintenance-free

Specification	Nominal volume	Part no.	Filling quantity kg (lbs)	Dip-tube	Odorisation	Weight approx. kg (lbs)
DOT-3AA-1800	10.7 l	888300	6.8 (15)	without	-	19 (42)
	67.5 l	888301	45.4 (100)	rigid	5 ml	117 (258)
	80.5 l	888302	54.4 (120)	rigid	5 ml	130 (287)
DOT-3AA-2175	67.5 l	888303	45.4 (100)	rigid	5 ml	125 (276)

Technical data

Extinguishing agent .....carbon dioxide - CO_2
Odorisation .....lemon oil
CO_2 - cylinder valve K85-20.0-S59-190 bar .....see cylinder valve
Cylinder filled .....by a qualified filling centre
Filling report .....with order no. and cylinder no.
Transport .....see safety data sheet
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)

Technical data cylinder DOT UL CO_2 without valve (blank):

Specification DOT-3AA-1800:
- Name of the gas .....carbon dioxide
- Test pressure .....207 bar (3002 psi)
- Working pressure .....124 bar (1798 psi)

Specification DOT-3AA-2175:
- Name of the gas .....carbon dioxide
- Test pressure .....250 bar (3625 psi)
- Working pressure .....150 bar (2175 psi)

Protective cap .....DIN EN ISO 1117, large type
Thread cylinder valve .....DIN EN ISO 11363-1, 25 E
protective cap .....DIN EN ISO 1117, W80
Finish .....RAL3000 - red

Caution

It is not allowed to transport filled steel cylinder DOT (US Department of Transportation) in Europe.

Protect the steel cylinders against direct radiation from sun.

Note

Steel cylinders for export come without odorisation.

Marking

Type label (de/en)
- Extinguishing agent cylinder with dip tube or pilot cylinder
- Extinguishing agent: carbon dioxide or pilot gas: carbon dioxide
- Filling quantity: ... kg
- Order no.: xxxxxx
- Marking number in acc. with GGVS/ADR: UN 1013

Marking cylinder CO_2 without valve (blank)

Marking in according to DOT regulations.

Additional marking
- Owner marking, **M**inimax **F**euerschutz .....MF
- Owner no. (acc. to order) xxxxxx

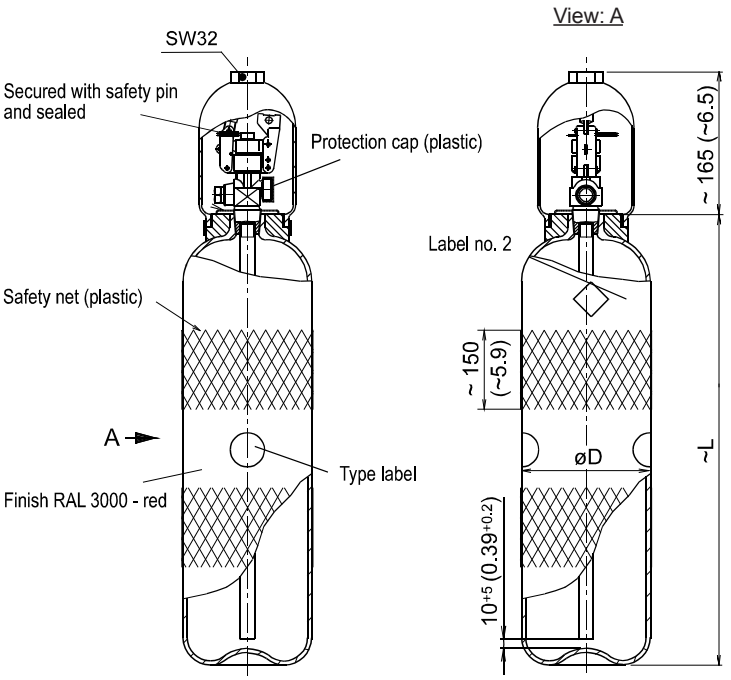
Extinguishing technology CO_2 HP

Cylinder CO_2 filled

CO_2 - Cylinder DOT

Dimension drawing

Dimensions in **mm (inch)**



Specification	Nominal volume	øD ±3 (±0.12)	L ±20 (±0.79)
DOT-3AA-1800	10.7 l	140 (5.51)	850 (34.46)
	67.5 l	267 (10.51)	1420 (55.91)
	80.5 l		1700 (66.93)
DOT-3AA-2175	67.5 l		1500 (59.06)

Extinguishing technology CO_2 HP
Cylinder CO_2 filled

CO_2 - Cylinder K85Ex EU

Approvals / CE marking

1)

1) Conformity in acc. with 94/9/EC (ATEX) valid only in conjunction with pneumatic release device PAE - CO_2 - Ex

SAP designation
e.g. part no. 922427: Steel cylinder K85Ex 5,4L+3,6kg-CO_2-EU

Maintenance
maintenance-free

Nominal volume	Filling quantity kg (lbs)	Part no.	Weight approx. kg (lbs)
5.4 l	3.6 (7.9)	922427	11.5 / 13 (25 / 29) 3)
10.7 l	7.1 (15.7)	922428	24 (53)

3) depending on manufacturer

Technical data
Pilot gas .....carbon dioxide - CO_2
CO_2 - cylinder valve type .....type K85-62.0-S5Ex
Cylinder filled .....by a qualified filling centre
Filling report .....with order no. and cylinder no.
Transport .....see safety data sheet
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)

Technical data cylinder CO_2 without valve EU (blank):
Cylinder (seamless) .....acc. to Directive 2010/35/EU (TPED),
.....for liquefied carbon dioxide
Protective cap .....DIN EN ISO 1117, large type
Thread cylinder valve .....DIN EN ISO 11363-1, 25 E
protective cap .....DIN EN ISO 1117, W80
Test pressure .....250 bar (3625 psi)
Finish .....RAL3000 - red
Approval with collective certificate by a notified body in accordance with directive 2010/35/EU.

Caution
Protect the steel cylinders against direct radiation from sun.

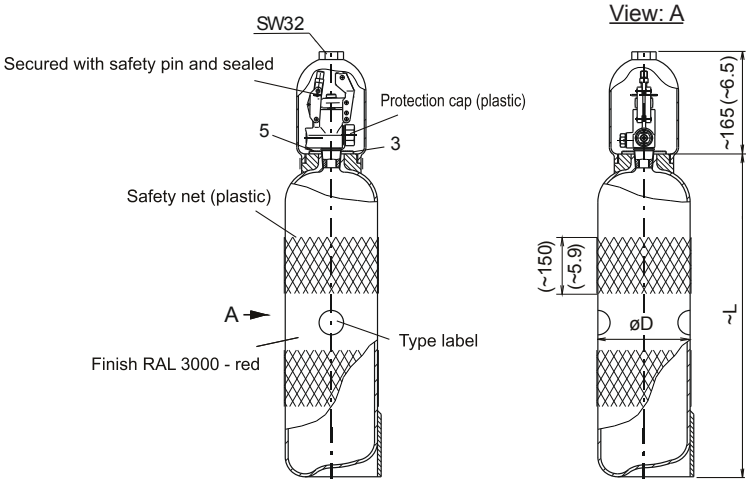
Marking
Type label (de/en)
- Pilot cylinder
- Pilot gas: carbon dioxide
- Filling quantity: ... kg
- Part no.: xxxxxx
- Marking number in acc. with GGVS/ADR: UN 1013

Additional marking
- Steel cylinder without dip-tube marked with plate item 3 and label item 5

Marking cylinder CO_2 without valve (blank)
Marking .....acc. to directives 2008/68/EC and RL 2010/35/EU

Additional marking
- Owner marking, **M**inimax **F**euerschutz .....MF
- Owner no. (acc. to order) xxxxxx

Dimension drawing
Dimensions in **mm (inch)**



Nominal volume	øD ±3 (±0.12)	L approx.
5.4 l	140 (5.51)	470 / 480 (18.5 / 18.9) 3)
10.7 l	140 (5.51)	880 / 890 (34.7 / 35) 3)

3) depending on manufacturer

bottom shape concave or convex

Extinguishing technology CO_2 HP

Cylinder CO_2 filled

CO_2 - Cylinder MX K633 EU

Approvals

without approval

SAP designation

e.g. part no. 922727: Steel cylinder MX K633 13,4l+8,9kg-CO_2-EU

Maintenance

maintenance-free

Spare parts

suspension lug WE4/guard, part no. 922992

Nominal volume	Filling quantity kg (lbs)	Dip-tube	Odorisation	Part no.	Weight approx. kg (lbs)
13.4 l	8.9 (19.6) [1]	rigid	-	922727	36 (79)
	10 (22.1)	rigid	5 ml	922728	37 (82)
40 l	27 (59.5) [1]	rigid	-	922729	85 / 71 / 87 (187 / 157 / 192) [2]
	30 (66.1)	rigid	5 ml	922730	88 / 74 / 90 (194 / 163 / 198) [2]
67.5 l	45 (99.2) [1]	rigid	-	922731	126 / 110 / 129 (278 / 243 / 284) [2]
	50 (110.2)	rigid	5 ml	922732	131 / 115 / 134 (289 / 254 / 295) [2]

[1] tropical filling; [2] depending on manufacturer

Technical data

Extinguishing agent .....carbon dioxide - CO_2
Odorisation .....lemon oil
CO_2 - cylinder valve type MX K633 .....see cylinder valve
Guard MX K633 ..... DIN EN ISO 11117 type VSK150
Cylinder filled .....by a qualified filling centre
Filling report .....with order no. and cylinder no.
Transport .....see safety data sheet
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)

Technical data cylinder CO_2 without valve EU (blank):

Cylinder (seamless) .....acc. to Directive 2010/35/EU (TPED),
.....for liquefied carbon dioxide
Thread cylinder valve .....DIN EN ISO 11363-1, 25 E
protective cap .....DIN EN ISO 11117, W80
Test pressure .....250 bar (3625 psi)
Finish .....RAL3000 - red

Approval with collective certificate by a notified body in accordance with directive 2010/35/EU.

Caution

Protect the steel cylinders against direct radiation from sun.

Note

Steel cylinders for export come without odorisation.

Marking

Type label (de/en)
- Extinguishing agent cylinder with dip tube
- Extinguishing agent: carbon dioxide
- Filling quantity: ... kg
- Part no.: xxxxxx
- Marking number in acc. with GGVS/ADR: UN 1013
- With odorant (if existent)

Marking cylinder CO2 without valve (blank)

Marking acc. to directives 2008/68/EC and RL 2010/35/EU

Additional marking
- Owner marking, **M**inimax **F**euerschutz .....MF
- Owner no. (acc. to order) xxxxxx

Marking guard MX K633

ISO P C / 150kg / -40°C
DIN EN ISO 11117
VSK150 / Art.-Nr.: FB 000-356
www.rapidsystem.de
922991

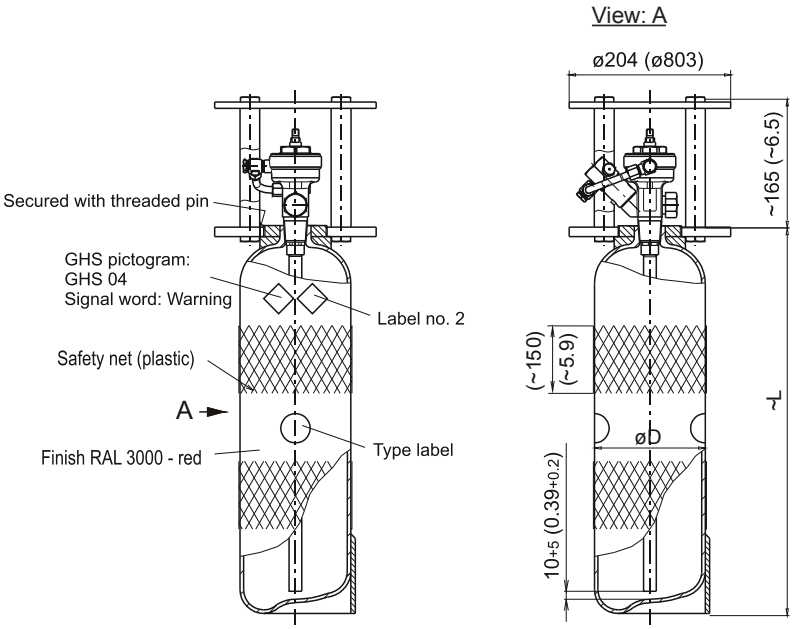
Extinguishing technology CO_2 HP

Cylinder CO_2 filled

CO_2 - Cylinder MX K633 EU

Dimension drawing

Dimensions in **mm (inch)**



Note

Valve with dismantled solenoid device unit (K85-41.2.0)

Solenoid device unit packed separately

Suspension lug (2 pieces) packed separately

bottom shape concave or convex

Nominal volume	øD ±3 (±0.12)	L approx.
13.4 l	140 (5.51)	1075 / 1085 (42.3 / 42.7) [3]
40 l	204 (8.03)	1505 / 1430 / 1535 (59.3 / 56.3 / 60.4) [3]
67.5 l	267 (10.51)	1485 / 1420 / 1500 (58.5 / 55.9 / 59.1) [3]

[3] depending on manufacturer

Extinguishing technology CO_2 HP
Cylinder valve CO_2

CO_2 Cylinder valve

Approvals / CE marking

G392001 | 1) LISTED | RU | 0786-CPD-30079

1) Listed system covered by UL-file EX6388 (CO_2) and UL-file EX5248 (Ar).

SAP designation
part no. 829759: Cylinder valve CO_2-TYP K85-20.0-S9

Maintenance
see manual of instruction VTI (Intranet)

Spare parts
Bursting disc securing K1-154.0, part no. 856600

Designation	Part no.	Weight approx.
CO_2 Cylinder valve type K85-20.0-S9	829759	0.77 kg (1.7 lbs)

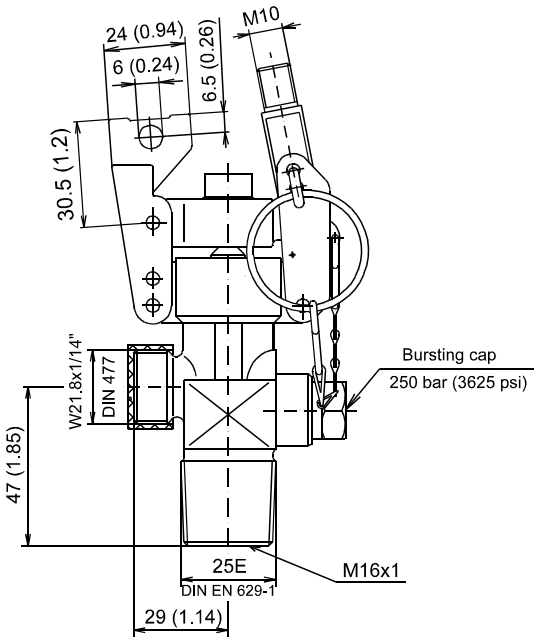
Technical data
Extinguishing agent .....CO_2
Nominal diameter DN12
Bursting pressure (bursting disc) .....250 bar (3625 psi)
Instant of exposure .....max. 8 Nm
.....at operating pressure 235 bar (3408 psi)
Valve type .....type 2 complies with EN 12094-4
CE conformity .....acc. to Construction Products Regulation (EU)
.....No. 305/2011
Pi conformity .....acc. to Directive 2010/35/EU (TPED)

Marking
marking valve body:
manufacturer sign (VTI), year/month of production (XX/XX),
CE mark (CE-0786), Pi mark (π-0589),
type designation (K85-20), VdS, weight (770),
cylinder thread (E25), working pressure (Pmax. 240 bar),
nominal diameter (DN12)
marking bursting cap:
bursting pressure (250)

Not included in delivery
Lever - cylinder valve ..... see control device
Locking nut W21,8 x 1/14" 596276
Dip tube, rigid 2) CO_2 - cylinder 254423
CO_2 - cylinder 80 l.....887848

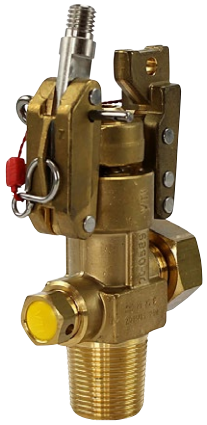
2) Dip tubes are to be shortened as necessary in acc. to specified dimensions given on see cylinder filled.

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
Cylinder valve CO_2

CO_2 Cylinder valve, UL



Approvals / CE marking

UL LISTED [1)] CE 0786-CPD-30079

1) Listed system covered by UL-file EX6388 (CO_2) and UL-file EX5248 (Ar).

SAP designation
part no. 885991: Cylinder valve UL CO2-TYP K85-20.0-S59-190bar

Maintenance
see manual of instruction VTI (Intranet)

Spare parts
Bursting disc securing K1-175.0-S1, part no. 888188

Designation	Part no.	Weight approx.
CO_2 Cylinder valve, UL type K85-20.0-S59-190 bar	885991	0.77 kg (1.7 lbs)

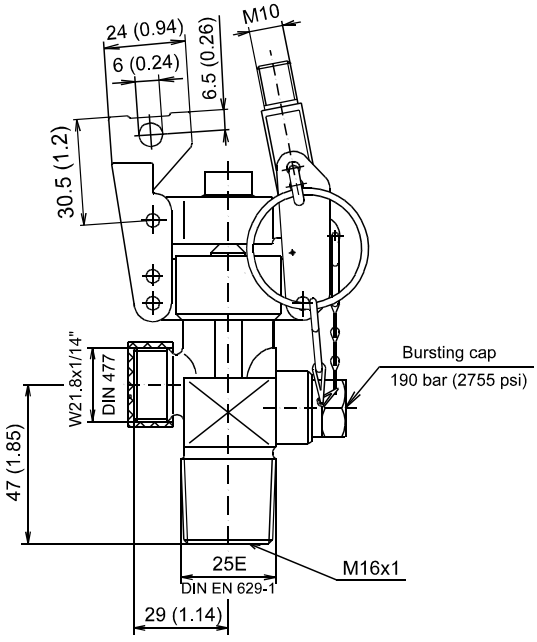
Technical Data
Extinguishing agent .....CO_2
Nominal diameter DN12
Bursting pressure (bursting disc) .....190 bar (2755 psi)
Instant of exposure .....max. 8 Nm
.....at operating pressure 235 bar (3408 psi)
Valve type .....type 2 complies with EN 12094-4
CE conformity .....acc. to Construction Products Regulation (EU)
.....No. 305/2011
Pi conformity .....acc. to Directive 2010/35/EU (TPED)

Marking
manufacturer sign (VTI), year/month of production (XX/XX),
CE mark (CE-0786), Pi mark (π-0589),
type designation (K85-20), cylinder thread (25E),
weight (770), bursting pressure (190)

Not included in delivery
Lever - cylinder valve .....see control device
Locking nut W21,8 x 1/14" [2)] 596276
Dip tube, rigid CO_2 - cylinder 254423
CO_2 - cylinder 80 l.....887848

2) Dip tubes are to be shortened as necessary in acc. to specified dimensions given on see cylinder filled.

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
Cylinder valve CO_2

CO_2 Cylinder valve type K85-62.0-S5Ex

Approvals / CE marking

VdS G392001 | CE 0786-CPD-30079 | Ex [1)]

1) Conformity in acc. with 2014/34/EU (ATEX), only in conjunction with release device for K85.62.0-S5Ex (part no. 924098):
- ⟨Ex⟩ II 2G IIB T4 X

SAP designation
part no. 921260: Cylinder valve CO_2-type K85-62.0-S5Ex

Maintenance
see manual of instruction VTI

Spare parts
Bursting disc securing 250 bar, part no. 856600
(Tightening torque for bursting disc securing: 30 - 35 Nm)

Designation	Part no.	Weight approx.
CO_2 Cylinder valve type K85-62.0-S5Ex	921260	0.92 kg (2.0 lbs)

Technical Data
Extinguishing agent .....CO_2
Nominal diameter DN12
Working pressure (filling pressure) .....200 bar at +15 °C
.....(2030 psi at +59 °F)
Bursting pressure (bursting disc) .....260 bar ±25 bar at +65 °C
.....(3770 psi ±363 psi at +149 °F)
Instant of exposure .....3 - 8 Nm
Filling factor CO_2 ..... 0.75
Valve type .....type 2 complies with EN 12094-4
CE conformity .....acc. to Construction Products Regulation (EU)
.....No. 305/2011
Pi conformity .....acc. to Directive 2010/35/EU (TPED)

Marking
manufacturer sign (VTI), year/month of production (XX/XX),
CE mark (CE-0786), Pi mark (π-0589),
type designation (K85-62), VdS, weight in gram (XXX),
ATR number (ATR D 2/11 Typ C), nominal diameter (DN12),
cylinder thread (25E), outlet (DIN 477 Nr. 6)

ATEX marking
VTI Ventil, Technik GmbH, ⟨Ex⟩, II 2G IIB T4 X, CE

Application
Exclusively in conjunction with release device for
K85.62.0-S5Ex (part no. 924098).

Note
The cylinder valve must only be used in potentially explosive areas of group ⟨Ex⟩ II 2G IIB T4 X.
- ⟨Ex⟩ Logo
- II Device group
- 2 Device category
- G Type of explosive atmosphere: Gases
  (Devices with the marking "II 2G" are only intended to be used in areas in which it is to be expected that an explosive atmosphere comprised of a mixture of air and gases will occasionally occur.)
- IIB Explosion group
- T4 Temperature class
- X Special conditions for safe use
  (see manual of instruction VTI)

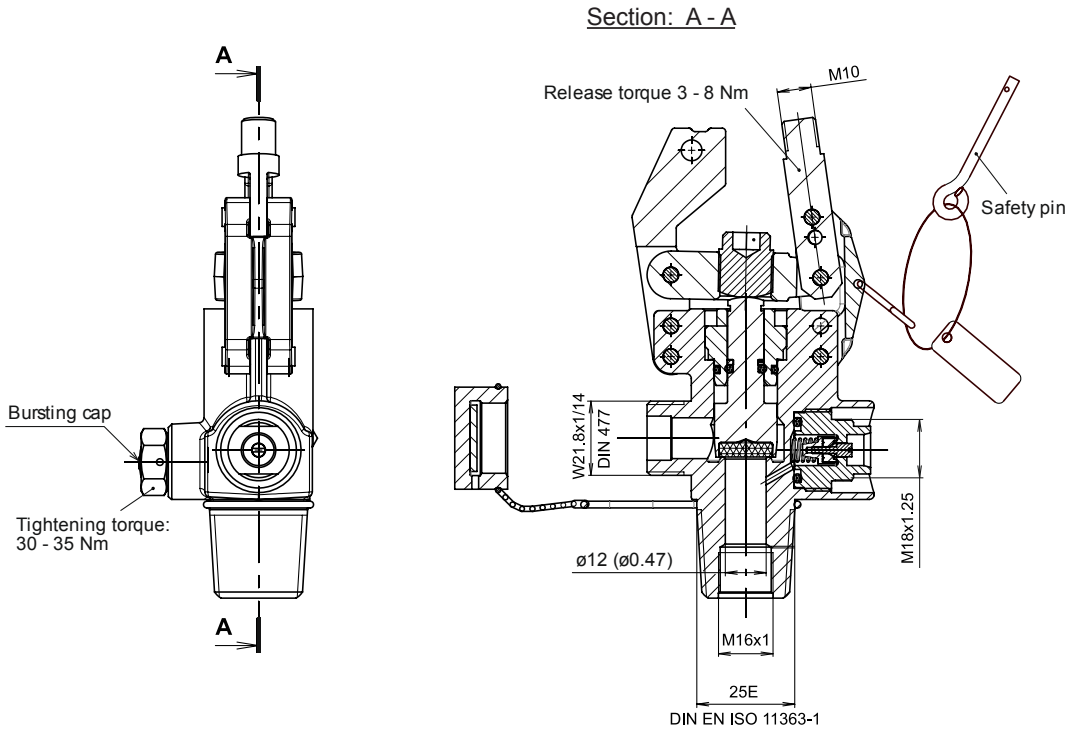
Not included in delivery
Release device for K85.62.0-S5Ex .....see ad-on part cylinder
Dip tube, rigid [2)] CO_2 - cylinder 254423
CO_2 - cylinder 80 l.....887848

2) Dip tubes are to be shortened as necessary in acc. to specified dimensions given on see cylinder filled.

Extinguishing technology CO_2 HP
Cylinder valve CO_2

CO_2 Cylinder valve type K85-62.0-S5Ex

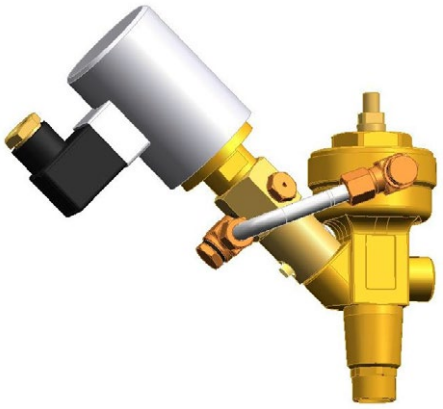
Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Cylinder valve CO_2

CO_2 Cylinder valve MX K633



Approvals

VdS
G313016

SAP designation

part no. 917330: Cylinder valve MX K633

Maintenance

see manual of instruction VTI

Designation	Part no.	Weight approx.
CO_2 Cylinder valve MX K633	917330 [1]	3.0 kg (6.6 lbs)

[1] not orderable

Technical Data

Extinguishing agent .....CO_2, inert gas
Nominal diameter DN9
Working pressure (filling pressure) .....140 bar (2030 psi)
Bursting pressure (bursting disc) .....250 bar ±25 bar at +65 °C
.....(3625 psi ±363 psi at +149 °F)
Operating temperature .....-20 °C to +50 °C (-4 °F to +122 °F)
Filling factor CO_2 ..... min. 0.66 kg/l, max. 0.75 kg/l
Allowable cylinder size .....3.0 l to 80.0 l
Minimum flow cross-sectional area .....62.2 mm²
Valve type .....type 2 complies with EN 12094-4
CE conformity .....acc. to Construction Products Regulation (EU)
.....No. 305/2011
Pi conformity .....acc. to Directive 2010/35/EU (TPED)

Technical data solenoid device unit:

Operating voltage .....24 V DC (±15 %)
Power consumption .....0.75 A
Duration of operation .....100 % duty ratio
Plug socket .....form A, according to DIN EN 175301-803

Application

Pneumatically operated gas cylinder valve with solenoid release suitable for intermittent extinguish

Marking

MX, type designation (K633-12.0-S7),
nominal diameter (DN9), Pi mark (π-0589),
year/month of production (XXXX/XX),
ATR number (ATR D 2/11 Typ C), VdS,
cylinder thread (25E), outlet (DIN 477 Nr. 6)

Not included in delivery

Locking nut W21.8 x 1/14" 596276
Dip tube, rigid [2] CO_2 - cylinder 254423
CO_2 - cylinder 80 l.....887848

[2] Dip tubes are to be shortened as necessary in acc. to specified dimensions given on see cylinder filled.

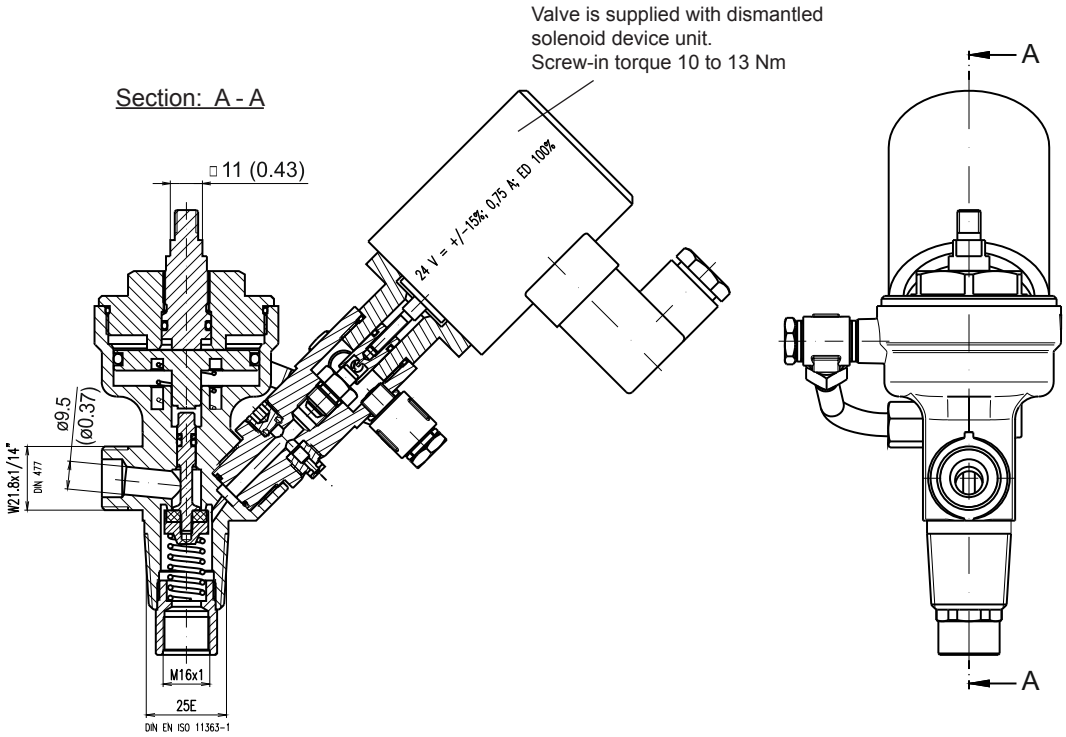
Extinguishing technology CO_2 HP

Cylinder valve CO_2

CO_2 Cylinder valve MX K633

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

CO_2 cylinder accessories

Bursting disc securing 250 bar

Approvals

no approval required

SAP designation
part no. 856600: Burst disc 250bar K1-154.0-S3

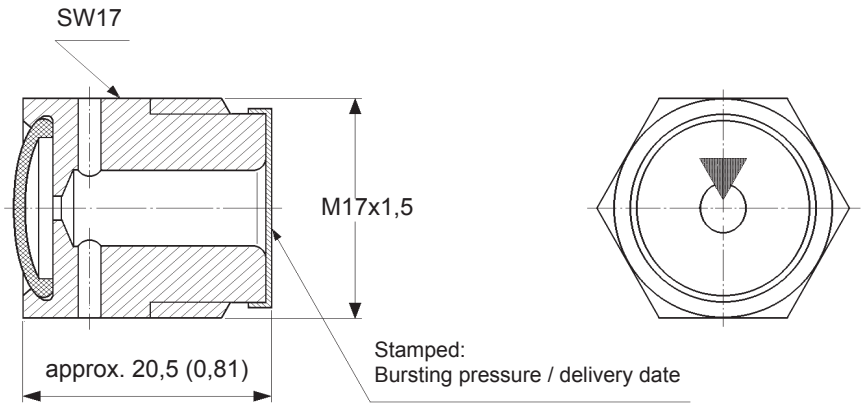
Maintenance
maintenance-free

Designation	Part no.	Weight
Bursting disc securing 250 bar	856600	0.03 kg (0.07 lbs)

Technical data

Type K1-154.0
Operating medium .....CO_2
Response pressure .....250 bar (3625 psi)
Tightening torque .....30 - 35 Nm

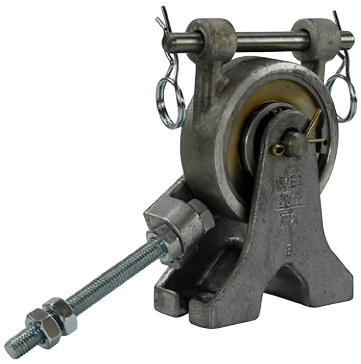
Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Ad-on part cylinder CO_2 HP

Weighing device WE4



Approvals / CE marking

VdS G309012

UL LISTED [1)]

CE 0786-CPD-30110

[1)] Listed system covered by UL-file EX6388 (CO_2) and UL-file EX5248 (Ar).

SAP designation

part no. 888802: Weighing device WE4

Maintenance

see operating instruction weighing device WE4, part no. 888807

Designation	Part no.	Weight
Weighing device WE4	888802	0.94 kg (2.07 lbs)

Technical data

Gross weight of load (cylinder) .....min. 12,5 kg (27,56 lbs)
.....max. 225 kg (496 lbs)
Net weight of load (extinguishing agent) ..min. 3,6 kg (7,94 lbs)
Temperature range .....-20 °C bis +50 °C (-4 °F bis 122 °F)
Weighing device .....complies with EN 12094-11
CE conformity .....acc. to Construction Products Regulation (EU)
.....No. 305/2011

Material / surface

Suspension .....aluminium
Bolts .....steel - 1.4104
Hex. nuts .....steel, galvanized
Threaded bolt .....steel - 4.6 - gal Zn

Application

The weighing device WE4 may only be used in accordance with the “documentation of special extinguishing systems”. The weighing device is used in cylinder racks, single cylinder systems and pneumatic release devices and serves to loss indication of pilot control cylinders and extinguishing cylinders.

Note

The usage under outdoor exposure is not allowed, this means, that the weighing device may not be exposed to rain, snow, severe dust exposure or the like.

Functional description

The weighing device must be adjusted by positioning the counter-weight in such a way that the indication is given at a loss of 5 % - 10 % of the extinguishant. For this purpose, the weighing device must be adjusted to a loss of 5 %. In case of extinguishant loss the counter-weight of the weighing device tilts downward and thus indicates the loss directly.
The loss of extinguishant can also be electrically indicated by using a monitoring.

Not included in delivery

Weights (counter-weight) .....see ad-on part cylinder
Support for weighing device .....see mounting accessories
Support weighing device PAE .....see mounting accessories
Support Argotec 223036
Seal 354170
Seal wire DIN1367-0,5-galvanized 175567

Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier
- Monitoring loss pneumatic activation device (PAE)

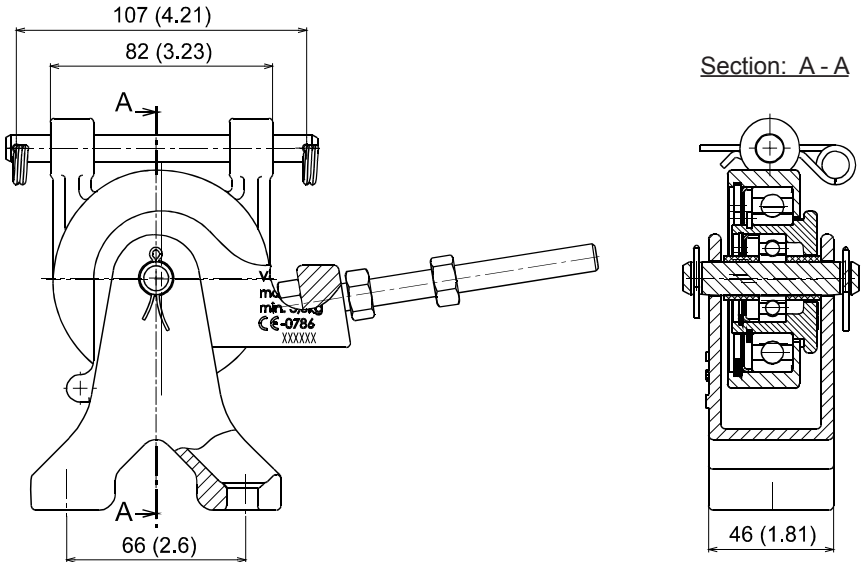
Extinguishing technology CO_2 HP

Ad-on part cylinder CO_2 HP

Weighing device WE4

Dimension drawing

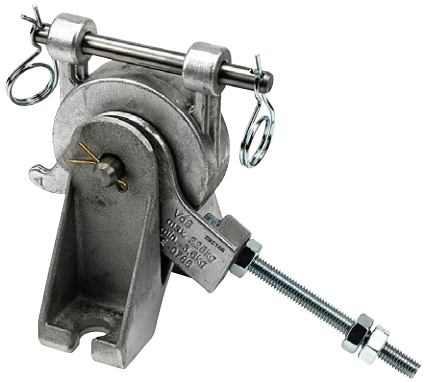
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Ad-on part cylinder CO_2 HP

Weighing device WE4-L



Approvals / CE marking

VdS G309012

UL LISTED [1)]

CE 0786-CPD-30110

[1)] Listed system covered by UL-file EX6388 (CO_2) and UL-file EX5248 (Ar).

SAP designation

part no. 888803: Weighing device WE4-L

Maintenance

see operating instruction weighing device WE4, part no. 888807

Designation	Part no.	Weight
Weighing device WE4-L	888803	0.93 kg (2.05 lbs)

Technical data

Gross weight of load (cylinder) .....min. 12,5 kg (27,56 lbs)
.....max. 225 kg (496 lbs)
Net weight of load (extinguishing agent) ..min. 3,6 kg (7,94 lbs)
Temperature range .....-20 °C bis +50 °C (-4 °F bis 122 °F)
Weighing device .....complies with EN 12094-11
CE conformity .....acc. to Construction Products Regulation (EU)
.....No. 305/2011

Material / surface

Suspension .....aluminium
Bolts .....steel - 1.4104
Hex. nuts .....steel, galvanized
Threaded bolt .....steel - 4.6 - gal Zn

Application

The weighing device WE4-L may only be used in accordance with the “documentation of special extinguishing systems”. The weighing device is used in cylinder racks, single cylinder systems and pneumatic release devices and serves to loss indication of pilot control cylinders and extinguishing cylinders.

Note

The usage under outdoor exposure is not allowed, this means, that the weighing device may not be exposed to rain, snow, severe dust exposure or the like.

Functional description

The weighing device must be adjusted by positioning the counter-weight in such a way that the indication is given at a loss of 5 % - 10 % of the extinguishant. For this purpose, the weighing device must be adjusted to a loss of 5 %. In case of extinguishant loss the counter-weight of the weighing device tilts downward and thus indicates the loss directly.
The loss of extinguishant can also be electrically indicated by using a monitoring.

Not included in delivery

Weights (counter-weight) .....see ad-on part cylinder
Support for weighing device .....see mounting accessories
Support weighing device PAE .....see mounting accessories
Support Argotec 223036
Seal 354170
Seal wire DIN1367-0,5-galvanized 175567

Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier
- Monitoring loss pneumatic activation device (PAE)

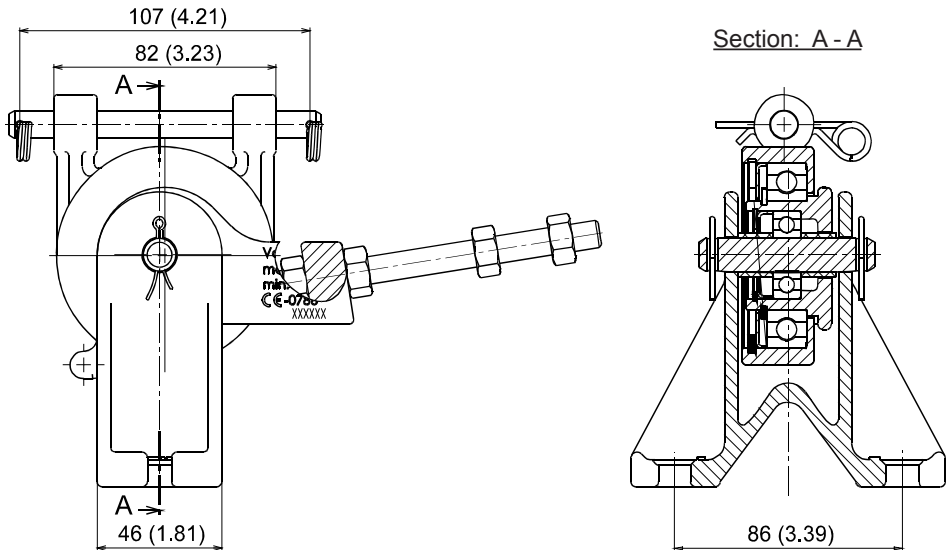
Extinguishing technology CO_2 HP

Ad-on part cylinder CO_2 HP

Weighing device WE4-L

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Ad-on part cylinder CO_2 HP

Weight weighing device

Approvals

no approval required

SAP designation

e.g. part no. 888806: Weight 0,16 kg weighing device

Maintenance

maintenance-free

Weight weighing device	Part no.	Weighing range in kg (lbs)		
		min.	max.	max. [1]
0.16 kg	888806	12 (26.5)	14 (30.8)	-
0.22 kg	812597	12 (26.5)	14 (30.8)	-
0.3 kg	829528	20 (44.1)	28 (61.7)	-
1.0 kg	887753	57 (125.7)	85 (187.3)	80 (176.3)
1.2 kg	772280	65 (143.3)	95 (209.4)	90 (198.4)
1.6 kg	769548	95 (209.5)	130 (286.6)	110 (242.5)
1.8 kg	885587	105 (231.5)	145 (319.6)	125 (275.5)
1.9 kg	772291	110 (242.6)	155 (341.7)	125 (275.5)
2.3 kg	778372	135 (297.7)	185 (407.8)	140 (308.6)

[1] Weighing range with consideration to a cover

Material / surface

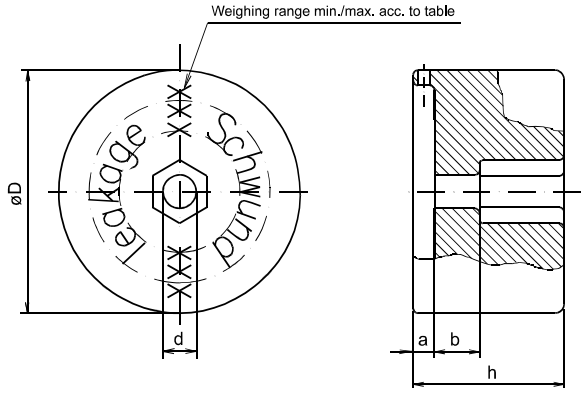
Weights 0.16 up to 0.3 kg .....brass
Weights 1.0 up to 2.3 kg ..cast iron acc. to EN 1561, EN-GJL-200,
.....powder coated RAL3000 - red

Correct choice of weight

see operating instruction weighing device WE4, part no. 888807

Dimension drawing

Dimensions in **mm (inch)**



Weight	øD	d	a	b	h
0.16 kg	50 (1.97)	M10	-	10 (0.39)	10 (0.39)
0.22 kg	80 (3.15)		-	5.4 (0.21)	5.4 (0.21)
0.3 kg			-	7.0 (0.28)	8.5 (0.33)
1.0 kg		11 (0.43)	7 (0.28)	15 (0.59)	35 (1.38)
1.2 kg					39 (1.54)
1.6 kg					50 (1.97)
1.8 kg					58 (2.28)
1.9 kg					61 (2.4)
2.3 kg					72 (2.83)

Extinguishing technology CO_2 HP

Ad-on part cylinder CO_2 HP

Support ARGOTEC

Approvals

no approval required

SAP designation

part no. 223036: Support ARGOTEC

Maintenance

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

Designation	Part no.	Weight
Support ARGOTEC	223036	0.42 kg (0.93 lbs)

Material / surface

Ring cylinder suspension .....aluminum casting alloys .....EN 1706 AC-43000 KF
Rod compl. support .....brass / steel, galvanized
Fork joint DIN71751 A8x16 .....steel, galvanized
Hex. nut DIN555 M8 .....steel, galvanized

Application

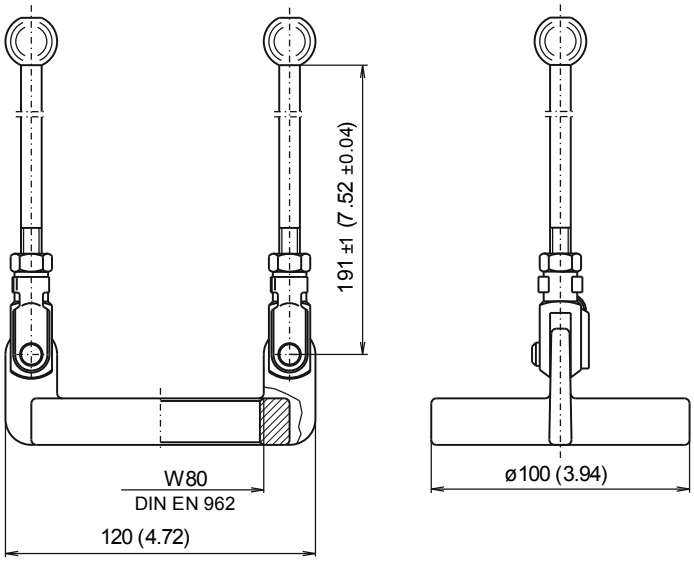
The support ARGOTEC is used in cylinder racks, single cylinder systems and pneumatic release devices mechanical and serves to support of pilot control cylinders and extinguishing cylinders.

Note

The usage under outdoor exposure is not allowed, this means, that the support ARGOTEC may not be exposed to rain, snow, severe dust exposure or the like.

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Ad-on part cylinder CO_2 HP

Release device for K85.62.0-S5Ex

Approvals / CE marking

CE Ex [1)]

[1)] Conformity in acc. with 2014/34/EU (ATEX): see CO_2 cylinder valve type K85-62.0-S5Ex

SAP designation

part no. 924098: Release device for K85.62.0-S5Ex

Maintenance

see manual of instruction VTI

Designation	Part no.	Weight
Release device for K85.62.0-S5Ex	924098	1.3 kg (2.87 lbs)

Technical data

Operating medium ..... carbon dioxide (CO_2)
.....argon (IG-01), nitrogen (IG-100), IG-55, IG-541
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)

Solenoid unit K85-45.1.0-S22:
- Nominal working pressure ...300 bar at +15 °C (4351 psi at +59 °F)
- Operating voltage .....24 V DC (±10%)
- Power .....6,5 W
- Switching duration .....100% ED
- Connection cable .....3x1 mm², 3 m long, PVC
- Marking .....VTI K85-45.1.0, PW300bar
  .....XXXX/XX (year/month)

Connection set K85-45.5.0-S1:
- Hose length .....approx. 630 mm (approx. 24.8 inch)
- Connection .....2x cap nut M16x1,5 internal thread

Release cylinder, see cyl. rack CO_2 components:
- Working pressure .....35 - 240 bar (508 - 3480 psi)
- Connection thread .....G3/8, DIN ISO 228

Lever K85-0.0.55:
- Material .....aluminium, silver anodized
- Lever length .....100 mm (3.97 inch)
- Connection .....M10 internal thread

Note

In accordance with the Directive 2014/34/EU (ATEX), if the commissioning is done outside the German speech area a translation of the technical description and the manual of instruction has to be delivered in the specific language of the country. This must be noted also for the product sale.

Caution

The risk and ignition hazard assessment of the listed unit "K85-ATEX" only considers the interaction of the described assembly consisting of the triggering device and the container valve, see attached manual instruction. A risk and ignition hazard assessment of the overall system into which the unit is installed has additionally to be carried out by the user in his own responsibility.

Application

Exclusively in conjunction with CO_2 cylinder valve type K85-62.0-S5Ex (part no. 921260)

Included in delivery

Release device consisting of:
- Solenoid unit K85-45.1.0-S22 922857
- Connection set K85-45.5.0-S1 921263
- Release cylinder K19-185.0 ..779340, see cyl. rack components
- Lever K85-0.0.55 921262
- Manual of instructions "K85-ATEX" (de/en)

Not included in delivery

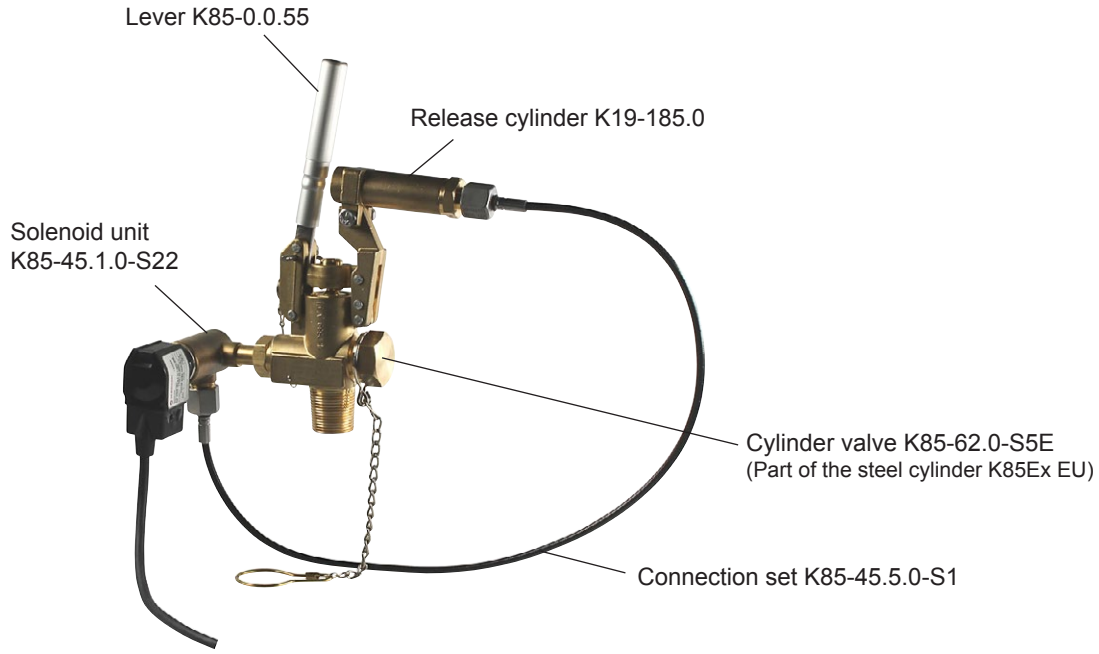
CO_2 cylinder valve type K85-62.0-S5Ex .....see cylinder valve

Extinguishing technology CO_2 HP

Ad-on part cylinder CO_2 HP

Release device for K85.62.0-S5Ex

Installations example: release device mounted on cylinder valve K85-62.0-S5E



Inert gas extinguishing technology

Ad-on part cylinder

Hose CO_2 / IG
W21.8 x 3/4 x 375, 235 bar

Approvals / CE marking

VdS G301002

UL LISTED [1)]

CE 0786-CPD-30113

[1)] Listed system covered by UL-File EX6388 (CO_2) and UL-File EX5248 (Ar)

SAP designation
part no. 859510: Hose CO_2/AR W21,8x3/4x375

Maintenance
see product information hose part no. 886027

Designation	Part no.	Weight
Hose CO_2 / IG W21.8 x 3/4 x 375, 235 bar	859510	0.54 kg (1.19 lbs)

Technical data
Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100) IG-55, IG-541
Nominal diameter DN12
Bending radius .....≥ 160 mm (6,3")
Bending angle .....max. 90°
Temperature range .....- 40 °C to + 50 °C (-40 °F to 122 °F)
Working pressure .....235 bar (3408 psi)
Test pressure .....353 bar (5120 psi)
Bursting strength .....min. 705 bar (10225 psi)
Hose (type 1 connection) .....complies with EN 12094-8
CE conformity ...acc. to Construction Products Regulation (EU) .....No. 305/2011

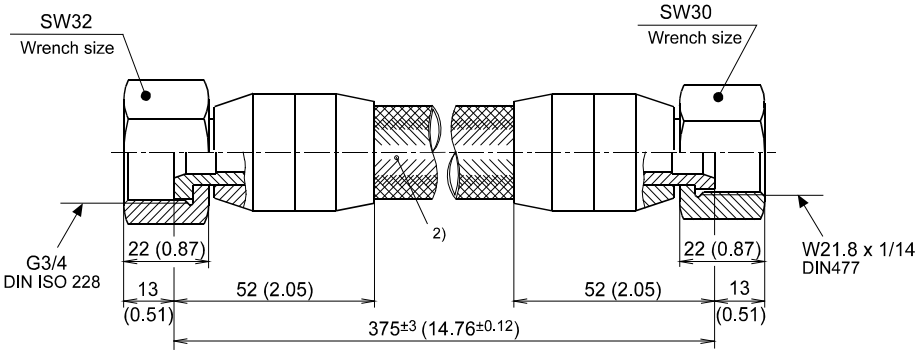
Marking on the fitting
type (MX CO_2/Argon/N_2), approval (VdS), CE, manufacturer sign, working pressure (Pb 235), manufacturing date (month/year)

Application
The hose must only be used in accordance with system approval in stationary CO_2, argon, nitrogen, IG-55 and IG-541 fire extinguishing systems.
The hose is used to connect the extinguishing agent cylinder with the manifold or rather the check valve.

Note operating medium: In combination with operating medium nitrogen (IG-100) for use only with cylinder valve QRV-TD 200 bar (part no. 914041) or cylinder valve B0480 200 bar (part no. 888521).

Not included in delivery
Sealing 23 x 14 x 2 for thread G3/4 149890
Sealing 18,5 x 13 x 2 for thread W21,8 x 1/14 149970
Product information hose .....886027 (included in delivery of the cylinder rack)

Dimension drawing
Dimensions in **mm (inch)**



[2)] Coating pricked or vulcanized porosity according to the manufacturer´s choice.

Extinguishing technology CO_2 HP
Manifold

Manifold 140 bar - M300

Approvals

1) Listed system covered by UL-file EX6388 (CO_2)

SAP designation
e.g. part no. 885301: Manifold CO_2 DN50- 2-M300

Maintenance
see technical description manifold CO_2 DN50-..-M300
part no. 918374

Designation		Part no.	Inlets	Weight kg (lbs)
Manifold 140 bar - M300	DN50 - 2	885301	2	4.9 (10.8)
	DN50 - 3	885302	3	7.3 (16.9)
	DN50 - 4	885304	4	9.8 (21.61)
	DN50 - 5	887726	5	12.3 (27.12)
	DN50 - 6	887727	6	14.8 (32.63)
	DN50 - 7	887728	7	17.3 (38.14)
	DN50 - 8	887711	8	19.8 (43.65)

Technical data
Type .....SAR CO_2 DN50-M300
Operating medium .....CO_2, argon, nitrogen, IG-55, IG-541
Nominal diameter pipe DN50
check valve DN12
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Marking after pressure test .....acc. to MXA 008
Screw coupling .....gas tight
Finish manifold .....powder coated RAL7011 - iron grey
Thread and check valve .....without colour

Product sheets also applying
Check valve KRV-1 .....see manifold

Application
The manifold 140 bar - M300 may only be used in accordance with system approval in:
- stationary CO_2 high pressure fire extinguishing systems
- argon, nitrogen, IG-55, IG-541 extinguishing systems with ConstantFlow (CF).

They are mounted directly on the cylinder rack to connect every extinguishing agent cylinder with the pipework.

Performance features
The manifolds are manufactured with two to eight inlets.
A maximum of 16 inlets can be assembled at random.
Each inlet is equipped with a check valve which releases the extinguishing agent in flow direction and prevents the flow in the opposite direction.

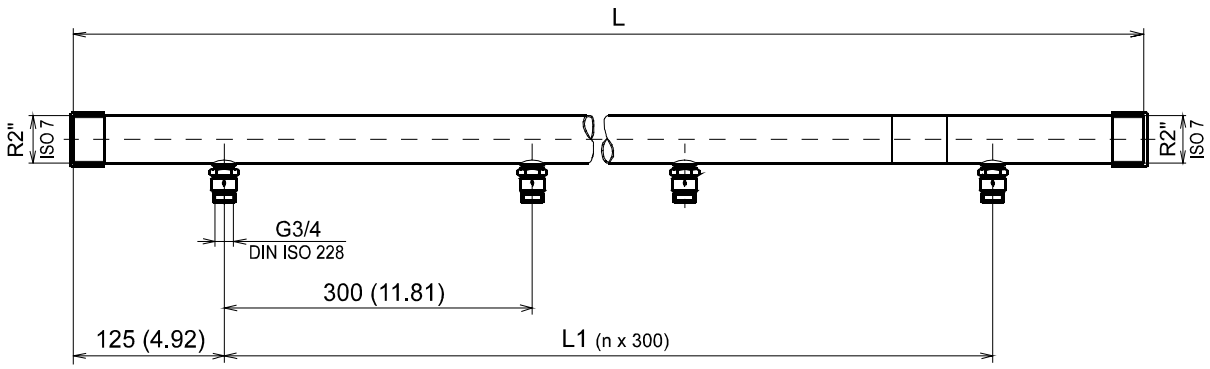
Included in delivery
Manifold complete with check valve
Technical description manifold 140bar M300 (de) 886318
Technical description manifold 140bar M300 (en) 918374
Technical description check valve KRV-1 (de/en) 886309

Not included in delivery
Cap KRV-2 .....see manifold

Extinguishing technology CO_2 HP
Manifold

Manifold 140 bar - M300

Dimension drawing
Dimensions in **mm (inch)**



Features	L	Number of distances n	L_1 (n x 300)
DN50 - 2	550 (21.65)	1	300 (11.81)
DN50 - 3	850 (33.46)	2	600 (23.62)
DN50 - 4	1150 (45.28)	3	900 (35.43)
DN50 - 5	1450 (57.09)	4	1200 (47.24)
DN50 - 6	1750 (68.9)	5	1500 (59.06)
DN50 - 7	2050 (80.71)	6	1800 (70.87)
DN50 - 8	2350 (92.52)	7	2100 (82.68)

Extinguishing technology CO_2 HP
Manifold

Check valve KRV-1 complete

Approvals / CE marking

VdS G300002

UL LISTED [1)]

CE 0786-CPD-30009

[1)] Listed system covered by UL-File EX6388 (CO_2) and UL-File EX5248 (Ar)

SAP designation
part no. 886310: Check valve KRV-1 compl.

Maintenance
see product information check valve KRV-1
part no. 886309

Designation	Part no.	Weight
Check valve KRV-1 complete	886310	0.31 kg (0.68 lbs)

Technical data
Type KRV-1
Operating medium .....CO_2, argon, nitrogen, IG-55, IG-541
Nominal diameter DN12
freier Strömungsquerschnitt .....92 mm² (0,14 square inch)
Working pressure .....235 bar (3408 psi)
Test pressure .....353 bar (5120 psi)
Pressure to open .....< 0,1 bar (1,45 psi)
Leak rate at 20 bar (290 psi) .....≤ 20 bubbles / 1 min
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Screwing torque .....max. 120 Nm
Serial number .....according to MXA08-QW100
Check valve .....complies with EN 12094-13
CE conformity .....acc. to Construction Products Regulation (EU) .....No 305/2011

Material / Surface
Housing .....brass
Ball .....stainless steel
Sealing .....thermoplastic

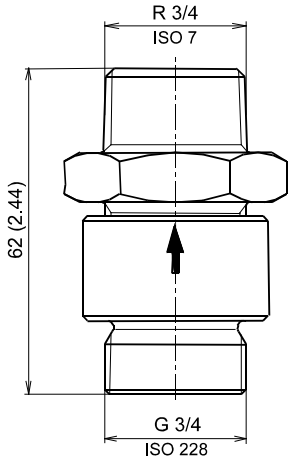
Note
Test certificate EN 10204-2.2 (pressure test) can be ordered separately upon request from QW/OD.

Application
The check valve KRV-1 may only be used in accordance with system approval in stationary CO_2, argon, IG-55, IG-541 and nitrogen fire extinguishing systems.
It is installed between the valve of the extinguishing agent cylinder and the manifold.

Performance features
The check valve KRV-1 release the extinguishing agent in flow direction and prevents the flow in the opposite direction.

Included in delivery
- Check valve KRV-1 (without pressure test) part no. 873930
- Pressure test 353 bar (5120 psi)
- Product information check valve KRV-1 part no. 886309

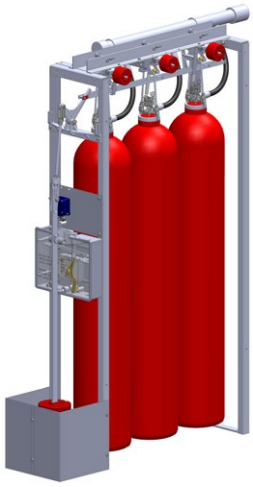
Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - master actuation - M300



Not included: cylinder with valve

Approvals

VdS [1] UL LISTED [2] TP RU

[1] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)

[2] Listed system covered by UL-File EX6388 (CO_2)

SAP designation

e.g. part no. 768520: Battery CO_2-M300-master- 2 cyl.

Maintenance

see operating instruction battery CO_2-master actuation part no. 875408

Number of cylinder	Part no. [3]	Number of release weights	Weight approx. kg (lbs)
2	768520	2	77 (170)
3	768532	2	86 (190)
4	768544	3	101 (223)
5	768556	3	126 (278)
6	768568	4	142 (313)
7	768570	4	150 (331)
8	768581	5	165 (364)
9	773830	5	190 (419)
10	773842	6	206 (454)
11	773854	6	215 (474)
12	773866	7	228 (503)
13	773878	7	252 (556)
14	773880	8	266 (586)
15	773891	8	275 (606)
16	773908	9	291 (642)

[3] Cylinder with valve are not included in delivery, see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 67,5 l

Application

The battery CO_2- master actuation is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant.
The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - master actuation - M300

Functional description

The activation of the battery CO_2 - master actuation takes place either mechanically, pneumatically or electrically. Through this a interlock in the release box VZ3 is released, whereby the adjusted prewarning time begins to run.
After expiration of the pre-warning time the releasemechanics is unlocked and the cylinder valves are opened by a release leverage. The CO_2 flows through flexible hoses into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually by a weighing device on extinguishing agent loss.
If required, the release mechanics can be locked using the disable device release box BEA part no. 886013 (not included in delivery).

Product sheets also applying

Hose CO_2 / Ar / N_2 W21,8 x 3/4 x 375, 200 bar ...see ad-on part cylinder
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,6 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Release box type VZ3 .....see cylinder rack mechn.
Lever - cylinder valve CO_2/Ar .....see control device
Limit switch type UK 432y U=180 .....see monitoring device
Support for weighing device .....see mounting accessories
Earthing clamp 2" M1-09-01
U-bolt DN50 .....M1-16-01

Not included in delivery

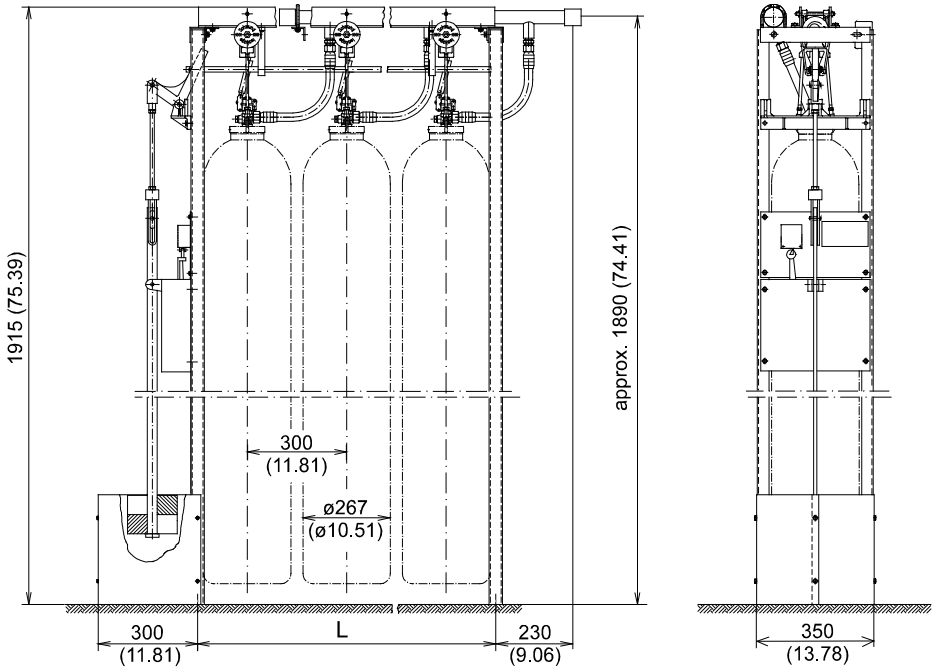
Cylinder with valve 67.5 l:
- CO_2 -Cylinder EU .....see cylinder filled
- CO_2 - Cylinder UL, EU .....see cylinder filled
- CO_2 - Cylinder RU .....see cylinder filled
- CO_2 - Cylinder DOT - UL .....see cylinder filled
- CO_2 - Cylinder DOT .....see cylinder filled

Report CO_2 - high pressure system (de/en) 726052
Cover - M300 .....see cylinder rack mechn.
Disable device release box BEA .....see cylinder rack mechn.
Solenoid CO_2 release box VZ .....see control device
Cylinder Ø 25 x H 30 .....see control device
Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier

Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Temperature switch ÜWA-FMZ4100 .....M2-03-26 part 1

Dimension drawing

Dimensions in **mm (inch)**

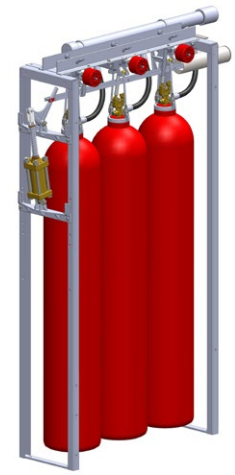


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - slave actuation - M300



Not included: cylinder with valve

Approvals

VdS [1] | UL LISTED [2] | RU

[1] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)

[2] Listed system covered by UL-File EX6388 (CO_2)

SAP designation

e.g. part no. 768593: Battery CO_2-M300-slave- 2 cyl.

Maintenance

see product information cylinder rack CO_2-additional part no. 875410

Number of cylinder	Part no. [3]	Weight approx. kg (lbs)
2	768593	59 (130)
3	768600	68 (150)
4	768611	76 (168)
5	768623	101 (223)
6	768635	110 (243)
7	768647	118 (260)
8	768659	126 (278)
9	773763	151 (333)
10	773775	159 (351)
11	773787	169 (373)
12	773799	176 (388)
13	773805	199 (439)
14	773817	206 (454)
15	773829	215 (474)
16	773910	220 (485)

[3] Cylinder with valve are not included in delivery,
see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 67,5 l

Application

The battery CO_2- slave actuation is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant.
The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Cylinder rack CO_2 - slave actuation - M300

Functional description
The mechanism is triggered pneumatically by pressurising a plunger-operated linkage which opens the valves on the CO_2 cylinders. The CO_2 flows through flexible tubes into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually with a weighing device on extinguishing agent loss.

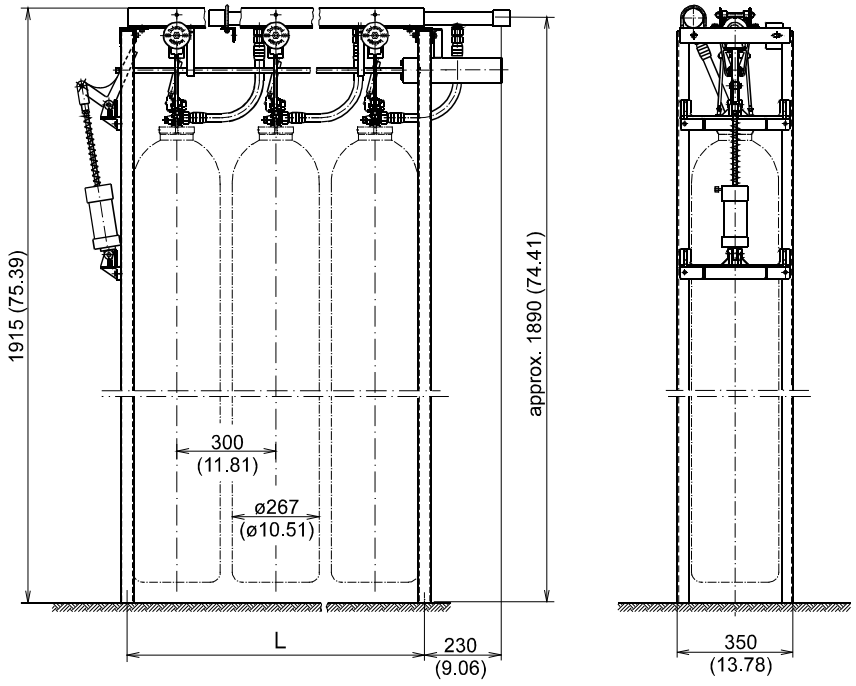
Product sheets also applying
Hose CO_2/Ar/N_2 W21,8 x 3/4 x 375, 200 bar .....see ad-on part cylinder
Release cylinder MX-BV D55-H106 .....see selector valve accessories
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,6 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Lever - cylinder valve CO_2/Ar .....see control device
Support for weighing device .....see mounting accessories
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 67.5 l:
- CO_2 -Cylinder EU .....see cylinder filled
- CO_2 - Cylinder UL, EU .....see cylinder filled
- CO_2 - Cylinder RU .....see cylinder filled
- CO_2 - Cylinder DOT - UL .....see cylinder filled
- CO_2 - Cylinder DOT .....see cylinder filled

Cover - M300 .....see cylinder rack mechn.
CO_2 connection slave release .....see control device
Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier

Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761

Dimension drawing
Dimensions in **mm (inch)**

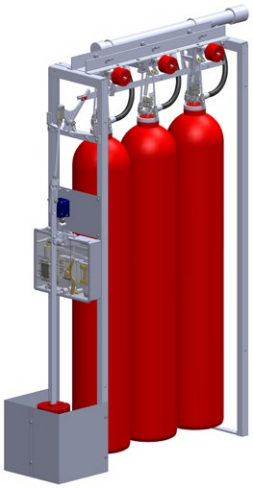


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - master actuation - M300R



Not included: cylinder with valve

Approvals

VdS [1)]

[1)] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)

SAP designation

e.g. part no. 872948: Battery CO_2-M300R-master- 2 cyl.

Maintenance

see operating instruction battery CO_2-master actuation part no. 875408

Number of cylinder	Part no. [2)]	Number of release weights	Weight approx. kg (lbs)
2	872948	2	79 (174)
3	872950	2	88 (194)
4	872961	3	103 (227)
5	872973	3	128 (282)
6	872985	4	144 (318)
7	872997	4	152 (335)
8	873000	5	167 (368)
9	873011	5	192 (423)
10	873023	6	208 (459)
11	873035	6	217 (478)
12	873047	7	231 (509)
13	873059	7	254 (560)
14	873060	8	268 (591)
15	873072	8	277 (611)
16	873084	9	293 (646)

[2)] Cylinder with valve are not included in delivery, see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 67,5 l

Application

The battery CO_2- master actuation is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant.
The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

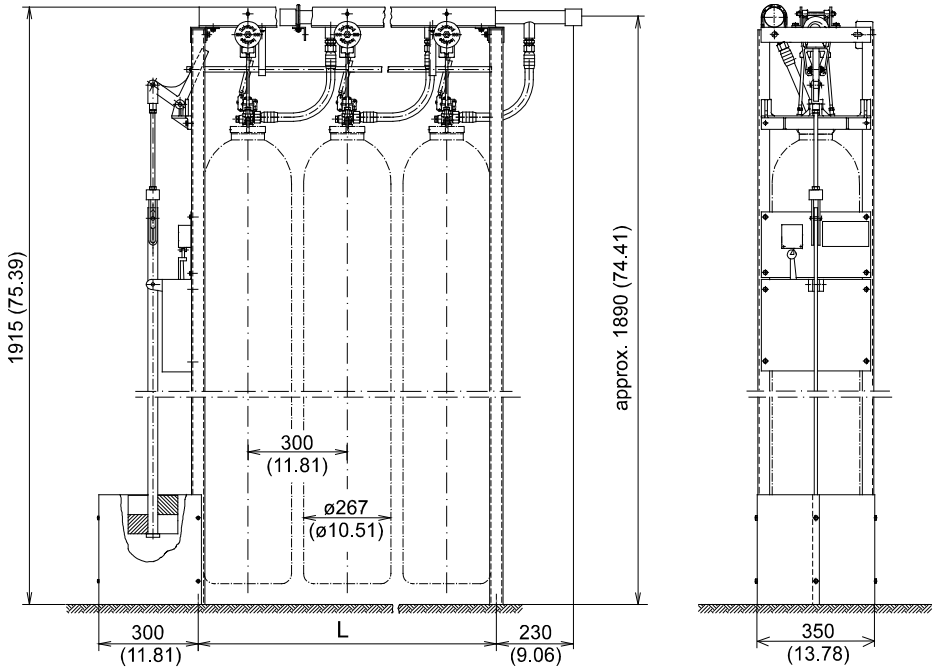
Cylinder rack CO_2 - master actuation - M300R

Functional description
The activation of the battery CO_2 - master actuation takes place either mechanically, pneumatically or electrically. Through this a interlock in the release box VZ3 is released, whereby the adjusted prewarning time begins to run. After expiration of the pre-warning time the releasemechanics is unlocked and the cylinder valves are opened by a release leverage. The CO_2 flows through flexible hoses into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually by a weighing device on extinguishing agent loss.
If required, the release mechanics can be locked using the disable device release box BEA part no. 886013 (not included in delivery).

Product sheets also applying
Hose CO_2 / Ar / N_2 W21,8 x 3/4 x 375, 200 bar .....see ad-on part cylinder Weighing device WE4 .....see ad-on part cylinder Weight for weighing device 1,6 kg .....see ad-on part cylinder Manifolds CO_2 M300 .....see manifold
Release box type VZ3-R 24 V .....see cylinder rack mechn.
Lever - cylinder valve CO_2/Ar .....see control device
Limit switch type UK 432y U=180 .....see monitoring device
Support for weighing device .....see mounting accessories
Earthing clamp 2" M1-09-01
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 67.5 l:
- CO_2 -Cylinder EU .....see cylinder filled
- CO_2 - Cylinder DOT .....see cylinder filled
Report CO_2 - high pressure system (de/en) 726052
Cover - M300 .....see cylinder rack mechn.
Disable device release box BEA .....see cylinder rack mechn.
Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier
Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Temperature switch ÜWA-FMZ4100 .....M2-03-26 part 1

Dimension drawing
Dimensions in **mm (inch)**

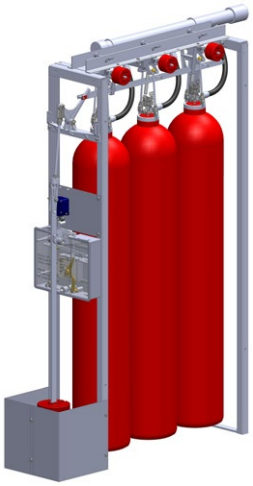


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - master actuation - M300 - 80 l



Not included: cylinder with valve

Approvals

UL LISTED [1)]

Note:
Cylinder racks
without VdS approval

[1)] Listed system covered by UL-File EX6388 (CO_2)

SAP designation

e.g. part no 886528: Battery CO_2-M300-master- 2-80l-cyl.

Maintenance

see operating instruction battery CO_2-master actuation
part no. 875408

Number of cylinder	Part no. [2)]	Number of release weights	Weight approx. kg (lbs)
2	886528	2	77 (170)
3	886529	2	86 (190)
4	886530	3	102 (225)
5	886531	3	125 (276)
6	886532	4	141 (311)
7	886533	4	151 (333)
8	886534	5	167 (368)
9	886535	5	188 (415)
10	886536	6	206 (454)
11	886537	6	217 (478)
12	886539	7	232 (512)
13	886541	7	251 (553)
14	886542	8	267 (589)
15	886543	8	278 (613)
16	886544	9	295 (650)

[2)] Cylinder with valve are not included in delivery, see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 80 l / 80,5 l

Application

The battery CO_2- master actuation is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant.
The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Cylinder rack CO_2 - master actuation - M300 - 80 l

Functional description
The activation of the battery CO_2 - master actuation takes place either mechanically, pneumatically or electrically. Through this a interlock in the release box VZ3 is released, whereby the adjusted prewarning time begins to run. After expiration of the pre-warning time the releasemechanics is unlocked and the cylinder valves are opened by a release leverage. The CO_2 flows through flexible hoses into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually by a weighing device on extinguishing agent loss.
If required, the release mechanics can be locked using the disable device release box BEA part no. 886013 (not included in delivery).

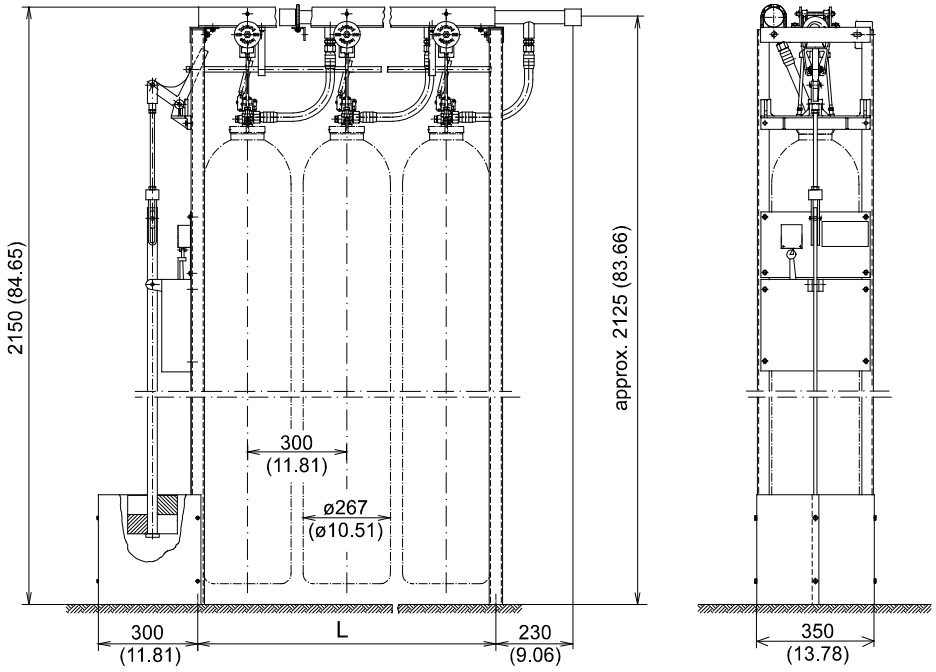
Product sheets also applying
Hose CO_2/Ar/N_2 W21,8 x 3/4 x 375, 200 bar .....see ad-on part cylinder
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,8 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Release box type VZ3 .....see cylinder rack mechn.
Lever - cylinder valve CO_2/Ar .....see control device
Limit switch type UK 432y U=180 .....see monitoring device
Support for weighing device .....see mounting accessories
Earthing clamp 2" M1-09-01
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 80 l / 80,5 l:
- CO_2 -Cylinder EU .....see cylinder filled
- CO_2 - Cylinder UL, EU .....see cylinder filled
- CO_2 - Cylinder DOT - UL .....see cylinder filled
- CO_2 - Cylinder DOT .....see cylinder filled

Report CO_2 - high pressure system (de/en) 726052
Cover - M300 .....see cylinder rack mechn.
Disable device release box BEA .....see cylinder rack mechn.
Solenoid CO_2 release box VZ .....see control device
Cylinder Ø 25 x H 30 .....see control device
Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier

Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Temperature switch ÜWA-FMZ4100 .....M2-03-26 part 1

Dimension drawing
Dimensions in **mm (inch)**

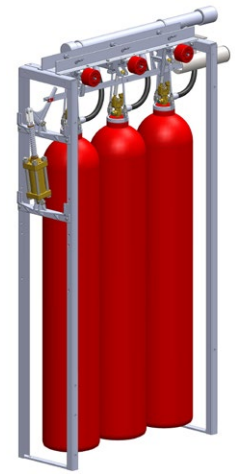


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - slave actuation - M300 - 80 l



Not included: cylinder with valve

Approvals

UL LISTED [1)]

Note:
Cylinder racks
without VdS approval

1) Listed system covered by UL-File EX6388 (CO_2)

SAP designation

e.g. part no. 886545: Battery CO_2-M300-slave- 2-80l-cyl.

Maintenance

see product information cylinder rack CO_2-additional part no. 875410

Number of cylinder	Part no. 2)	Weight approx. kg (lbs)
2	886545	61 (135)
3	886546	71 (157)
4	886547	79 (174)
5	886548	105 (232)
6	886549	114 (251)
7	886550	122 (269)
8	886552	131 (288)
9	886553	157 (346)
10	886554	165 (364)
11	886555	175 (386)
12	886556	182 (401)
13	886557	207 (456)
14	886558	214 (472)
15	886559	223 (492)
16	886560	228 (503)

2) Cylinder with valve are not included in delivery,
see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 80 l / 80,5 l

Application

The battery CO_2- slave actuation is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant.
The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Cylinder rack CO_2 - slave actuation - M300 - 80 l

Functional description
The mechanism is triggered pneumatically by pressurising a plunger-operated linkage which opens the valves on the CO_2 cylinders. The CO_2 flows through flexible tubes into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually with a weighing device on extinguishing agent loss.

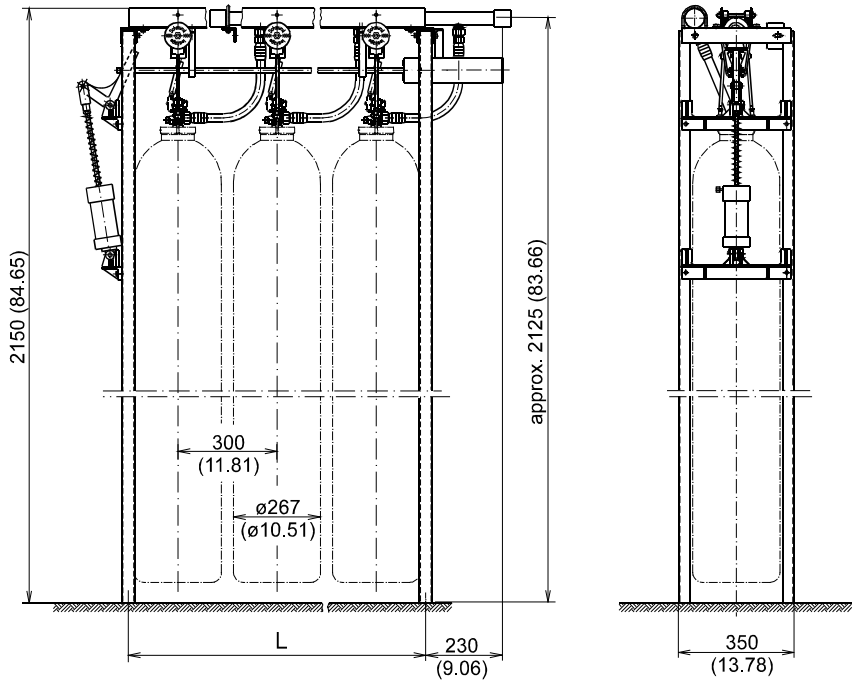
Product sheets also applying
Hose CO_2 / Ar / N_2 W21,8 x 3/4 x 375, 200 bar ...see ad-on part cylinder
Release cylinder MX-BV D55-H106 .....see selector valve accessories
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,8 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Lever - cylinder valve CO_2/Ar .....see control device
Support for weighing device .....see mounting accessories
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 80 l / 80,5 l:
- CO_2 -Cylinder EU .....see cylinder filled
- CO_2 - Cylinder UL, EU .....see cylinder filled
- CO_2 - Cylinder DOT - UL .....see cylinder filled
- CO_2 - Cylinder DOT .....see cylinder filled

Cover - M300 .....see cylinder rack mechn.
CO_2 connection slave release .....see control device
Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier

Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761

Dimension drawing
Dimensions in **mm (inch)**

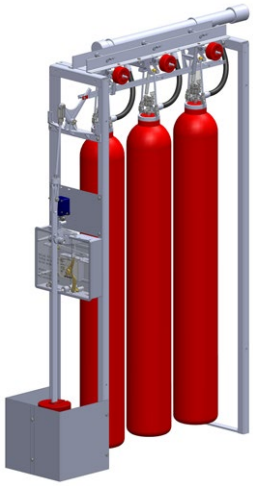


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - 40 l - master actuation



Not included: cylinder with valve

Approvals

VdS [1)]

[1)] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)

SAP designation

e.g. part no. 885389: Battery CO_2-40l-master- 2 cyl.

Maintenance

see operating instruction battery CO_2-master actuation part no. 875408

Number of cylinder	Part no. [2)]	Number of release weights	Weight approx. kg (lbs)
2	885389	2	76 (168)
3	885391	2	84 (185)
4	885392	3	99 (218)
5	885393	3	122 (269)
6	885394	4	137 (302)
7	885395	4	145 (320)
8	885396	5	159 (351)
9	885397	5	184 (406)
10	885398	6	198 (437)
11	885399	6	206 (454)
12	885400	7	220 (485)
13	885401	7	242 (534)
14	885402	8	256 (564)
15	885403	8	263 (580)
16	885404	9	278 (613)

[2)] Cylinder with valve are not included in delivery, see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 40 l

Application

The battery CO_2- master actuation is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant.
The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

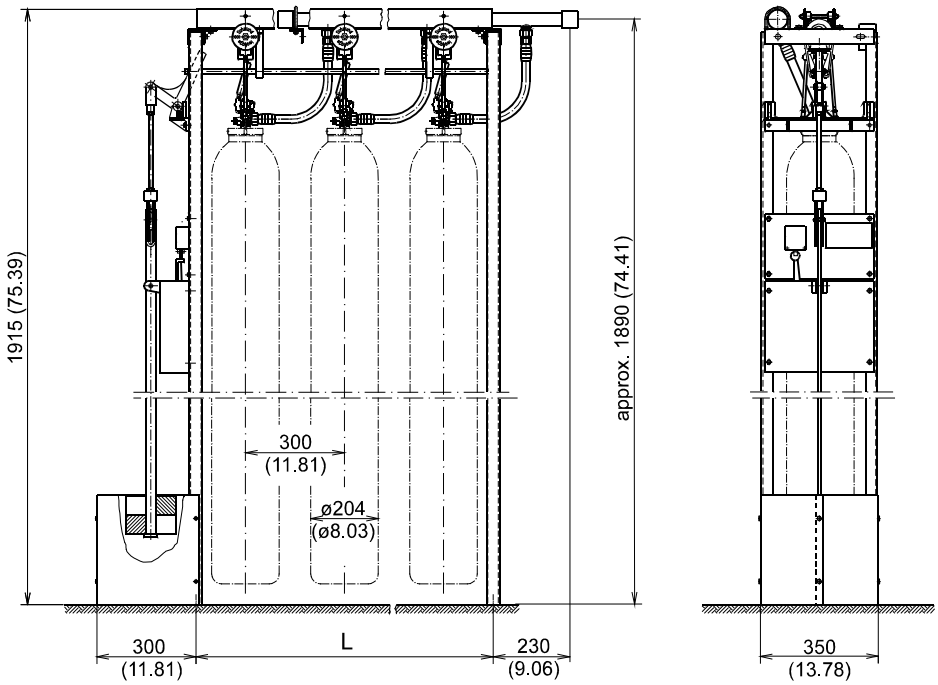
Cylinder rack CO_2 - 40 l - master actuation

Functional description
The activation of the battery CO_2 - master actuation takes place either mechanically, pneumatically or electrically.
Through this a interlock in the release box VZ3 is released, whereby the adjusted prewarning time begins to run.
After expiration of the pre-warning time the releasemechanics is unlocked and the cylinder valves are opened by a release leverage. The CO_2 flows through flexible hoses into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually by a weighing device on extinguishing agent loss.
If required, the release mechanics can be locked using the disable device release box BEA part no. 886013 (not included in delivery).

Product sheets also applying
Hose CO_2/Ar/N_2 W21,8 x 3/4 x 375, 200 bar .....see ad-on part cylinder
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,0 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Release box type VZ3 .....see cylinder rack mechn.
Lever - cylinder valve CO_2/Ar .....see control device
Limit switch type UK 432y U=180 .....see monitoring device
Support for weighing device .....see mounting accessories
Earthing clamp 2" M1-09-01
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 40 l:
- CO_2 -Cylinder EU .....see cylinder filled
Report CO_2 - high pressure system (de/en) 726052
Cover - M300 .....see cylinder rack mechn.
Disable device release box BEA .....see cylinder rack mechn.
Solenoid CO_2 release box VZ .....see control device
Cylinder Ø 25 x H 30 .....see control device
Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier
Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Temperature switch ÜWA-FMZ4100 .....M2-03-26 part 1

Dimension drawing
Dimensions in **mm (inch)**

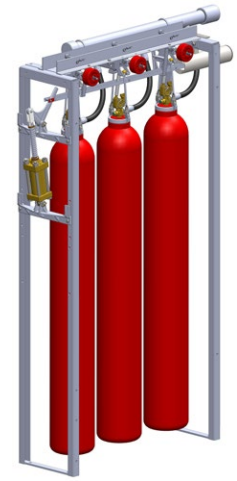


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - 40 l - slave actuation



Not included: cylinder with valve

Approvals

VdS [1)]

[1)] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)

SAP designation

e.g. part no. 885405: Battery CO_2-40l-slave- 2 cyl.

Maintenance

see product information cylinder rack CO_2-additional part no. 875410

Number of cylinder	Part no. [2)]	Weight approx. kg (lbs)
2	885405	58 (128)
3	885407	66 (146)
4	885408	74 (163)
5	885409	97 (214)
6	885410	105 (232)
7	885411	113 (249)
8	885412	120 (265)
9	885413	145 (320)
10	885414	152 (335)
11	885415	160 (353)
12	885416	167 (368)
13	885417	189 (417)
14	885419	196 (432)
15	885421	203 (448)
16	885422	211 (465)

[2)] Cylinder with valve are not included in delivery,
see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 40 l

Application

The battery CO_2- slave actuation is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant.
The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

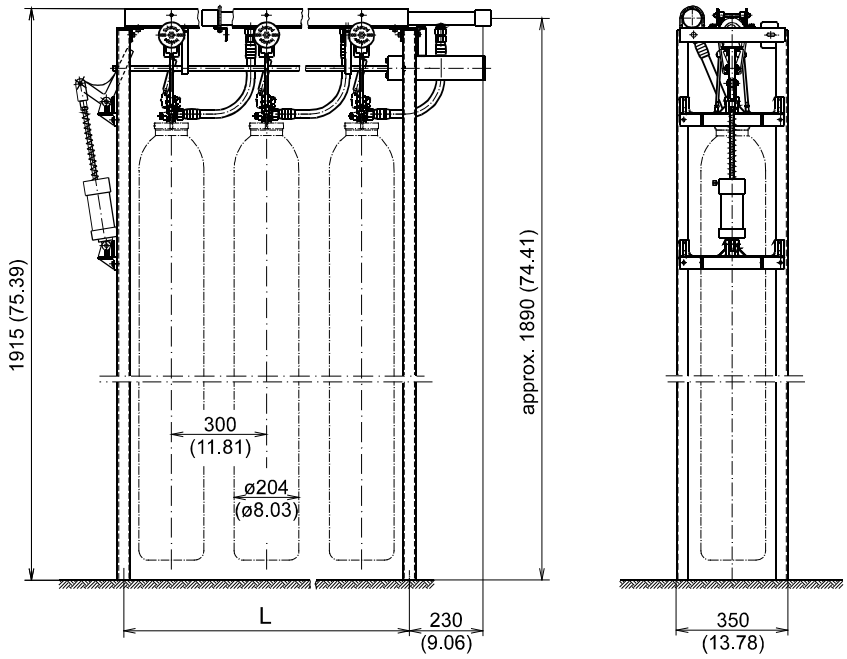
Cylinder rack CO_2 - 40 l - slave actuation

Functional description
The mechanism is triggered pneumatically by pressurising a plunger-operated linkage which opens the valves on the CO_2 cylinders. The CO_2 flows through flexible tubes into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually with a weighing device on extinguishing agent loss.

Product sheets also applying
Hose CO_2 / Ar / N_2 W21,8 x 3/4 x 375, 200 bar ...see ad-on part cylinder
Release cylinder MX-BV D55-H106 .....see selector valve accessories
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,0 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Lever - cylinder valve CO_2/Ar .....see control device
Support for weighing device .....see mounting accessories
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 40 l:
- CO_2 -Cylinder EU .....see cylinder filled
Cover - M300 .....see cylinder rack mechn.
CO_2 connection slave release .....see control device
Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier
Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761

Dimension drawing
Dimensions in **mm (inch)**

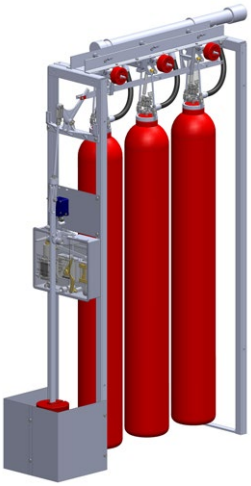


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - 40 l - R - master actuation



Not included: cylinder with valve

Approvals

VdS [1)]

[1)] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)

SAP designation

e.g. part no. 885423: Battery CO_2-40l-R-master- 2 cyl.

Maintenance

see operating instruction battery CO_2-master actuation part no. 875408

Number of cylinder	Part no. [2)]	Number of release weights	Weight approx. kg (lbs)
2	885423	2	78 (172)
3	885424	2	86 (190)
4	885425	3	101 (223)
5	885426	3	124 (273)
6	885427	4	139 (306)
7	885428	4	147 (324)
8	885429	5	161 (355)
9	885430	5	186 (410)
10	885432	6	200 (441)
11	885433	6	208 (459)
12	885434	7	222 (489)
13	885435	7	244 (538)
14	885436	8	258 (569)
15	885437	8	265 (584)
16	885438	9	280 (617)

[2)] Cylinder with valve are not included in delivery, see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 40 l

Application

The battery CO_2- master actuation is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant.
The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - 40 l - R - master actuation

Functional description

The activation of the battery CO_2 - master actuation takes place either mechanically, pneumatically or electrically. Through this a interlock in the release box VZ3 is released, whereby the adjusted prewarning time begins to run. After expiration of the pre-warning time the releasemechanics is unlocked and the cylinder valves are opened by a release leverage. The CO_2 flows through flexible hoses into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually by a weighing device on extinguishing agent loss.
If required, the release mechanics can be locked using the disable device release box BEA part no. 886013 (not included in delivery).

Product sheets also applying

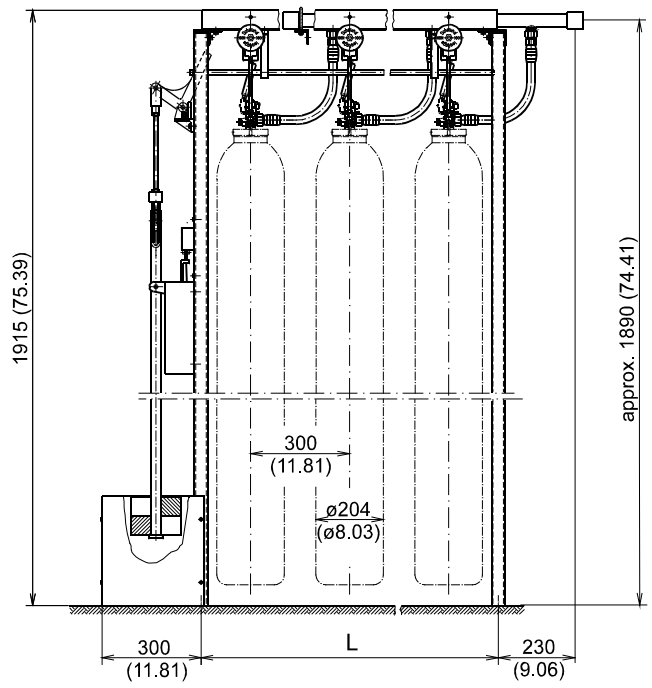
Hose CO_2/Ar/N_2 W21,8 x 3/4 x 375, 200 bar .....see ad-on part cylinder
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,0 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Release box type VZ3-R 24 V .....see cylinder rack mechn.
Lever - cylinder valve CO_2/Ar .....see control device
Limit switch type UK 432y U=180 .....see monitoring device
Support for weighing device .....see mounting accessories
Earthing clamp 2" M1-09-01
U-bolt DN50 .....M1-16-01

Not included in delivery

Cylinder with valve 40 l:
- CO_2 -Cylinder EU .....see cylinder filled
Report CO_2 - high pressure system (de/en) 726052
Cover - M300 .....see cylinder rack mechn.
Disable device release box BEA .....see cylinder rack mechn.
Monitoring loss .....see monitoring device
- Monitoring loss extinguishing agent with reed contact limit switch
- Monitoring loss extinguishing agent with light barrier
Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Temperature switch ÜWA-FMZ4100 .....M2-03-26 part 1

Dimension drawing

Dimensions in **mm (inch)**



Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Release box VZ3

Approvals / CE marking

VdS G306013

UL LISTED [1)]

CE 0786-CPD-30042

1) Listed system covered by UL-File EX6388 (CO_2) and UL-File EX5248 (Ar)

SAP designation
part no. 886160: Release box VZ3

Maintenance
see product information VZ3 part no. 886159

Designation	Part no.	Weight
Release box VZ3	886160	5.7 kg (12.57 lbs)

Technical data
Time delay .....3 - 60 s, adjustable
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Electrical release device:
Operating voltage .....18 - 28 V DC
Pneumatical release device:
Working pressure .....20 - 140 bar (290 - 2030 psi)
Mechanical release device:
Weight.....12 kg (26.5 lbs)
Release box .....complies with EN 12094-2
CE conformity .....acc. to Construction Products Regulation (EU) .....No. 305/2011

Material / Surface
Housing .....aluminium
Cover plate .....plastic - transparent

Application
The release box VZ3 may only be used in accordance with system approval in CO_2, argon and nitrogen extinguishing systems. It is corresponding to the EN 12094-2, a non electrical automatic control and delay device.
The VZ3 is used for delayed actuation of the cylinder battery, so that the extinguishing agent released only after the alarm is activated.

Performance features
The release box can be optional controlled mechanically, pneumatically or electrically. The time delay is adjustable (3-60 s) and can be set to the local needs.

Functional description
In the stand-by position the weight bar is resting on the locked weight lever, the wire-rope is engaged in the weight lever with its upper end and in the cam ratchet with its lower end, the cam ratchet is resting at the cam disk whereby the cam lever in turn is caught by the notch of the release lever.
During an actuation the release lever is lifted at its right hand side out of its resting position. By this the cam lever is freed from the notch of the release lever and starts to turn counter clockwise. The cam disk is turning with the cam lever and allows the cam ratchet to pass it after the set time, thus releasing the lower end of the wire-rope. The weight bar is skidding off from the weight lever. The contact surface of the release lever can act on a limit switch, which can be used to switch on alarm horns or similar at the beginning of an actuation.

Included in delivery
Release box VZ3
Product information VZ3 part no. 886159

Not included in delivery
Release devices:
- electrical, solenoid - release box VZ .....see control device
- pneumatical, cylinder ø25 x H30 .....see control device
- mechanical, fusible link MX5 .....see control device

Fastening material:
- 4 x hex. screw with nut DIN601-M8x25 103616
- 4 x washer DIN125-B8,4 109837

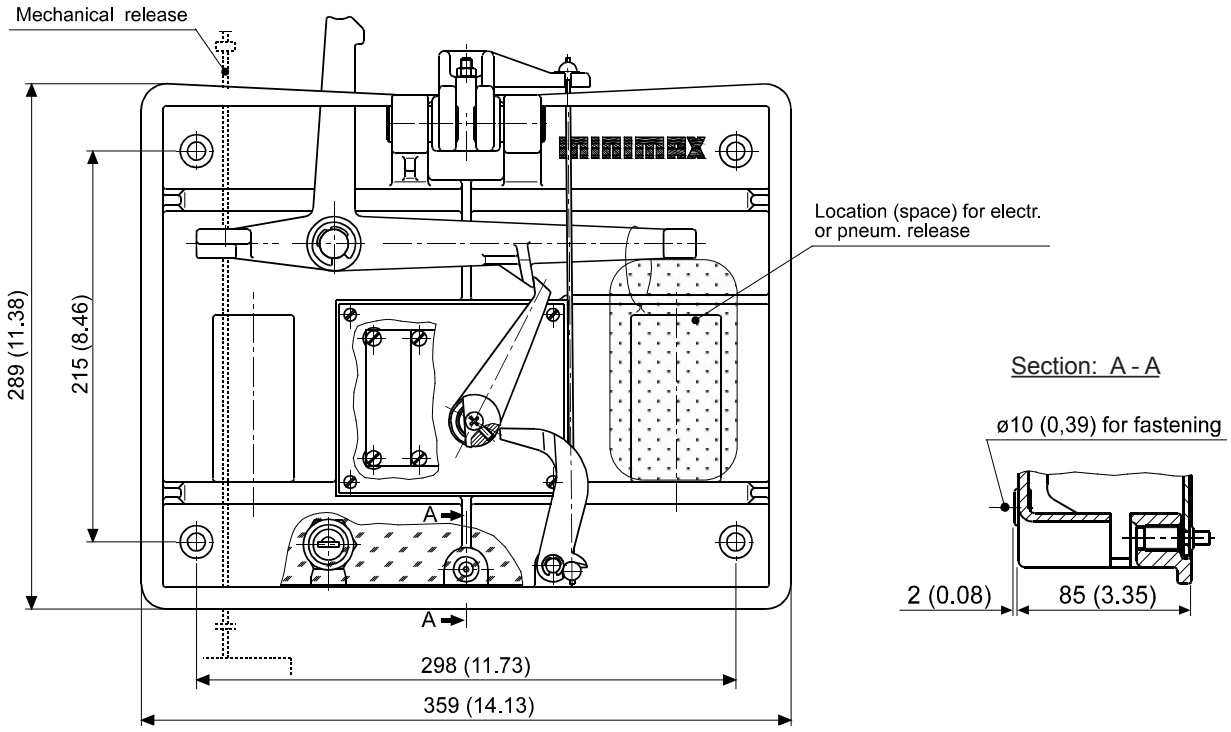
Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Release box VZ3

Dimension drawing

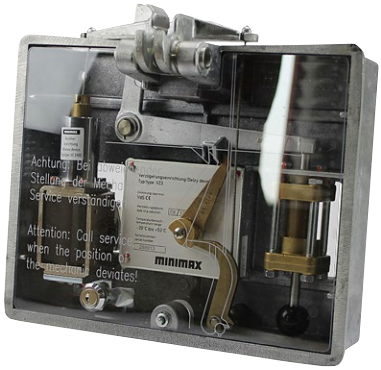
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Release box VZ3-R 24 V complete



Approvals / CE marking

VdS G306013

CE 0786-CPD-30042

SAP designation

part no. 886161: Release box VZ3-R 24V compl.

Maintenance

see Operating instruction VZ3-R 24V part no. 886166

Designation	Part no.	Weight
Release box VZ3-R 24 V complete	886161	7.7 kg (17 lbs)

Technical data

Time delay .....3 - 60 s, adjustable
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Pneumatical release device:
- Cylinder ø25 x H30 .....see control device
- Working pressure .....20 - 140 bar (290 - 2030 psi)
- Connection .....fitting series S acc. to ISO EN 8434-1, ...external – Ø of the pipe: 6 mm

Electrical locking device (solenoid):
- Nominal voltage .....24 V DC
- Operating voltage .....18 - 28 V DC
- Current .....1,04 A
- Switching duration .....100 %
- Magnetic force .....44 N
- IP code .....IP 54
  (by accordingly covering of the pull and pressure rod side)

Release box .....complies with EN 12094-2
CE conformity .....acc. to Construction Products Regulation (EU) .....No. 305/2011

Material / Surface

Housing .....aluminium
Cover plate .....plastic - transparent
Other components .....brass, steel

Application

The release box VZ3-R 24 V may only be used according to the “documentation of special extinguishing systems” of CO_2, argon and nitrogen fire extinguishing systems. According to EN 12094-2 it is defined as a non electrical automatic control and delay device. The function of VZ3-R 24V is to delay the actuation of the cylinder bank, for a defined period after actuation of the alarm devices.

Performance features

Release box with integrated mechanical time delay device. Pneumatical release by the gas pressure piston and an electrical interlock for redundant delay.

Functional description

In the stand-by position the weight bar is resting on the locked weight lever. The wire-rope is engaged in the weight lever with its upper end and in the cam ratchet with its lower end. The cam ratchet is resting at the cam disk. The cam lever is caught by the notch of the release lever. The ball-quick-release is engaged.
In case of actuation the release lever is lifted at its right hand side out of its resting position. The cam lever is freed from the notch of the release lever and starts to turn counter clockwise. The electrical locking device is actuated a short time before the mechanical delay time is over. The cam disk is turning with the cam lever and allows the cam ratchet to pass it after the set time, thus releasing the lower end of the wire-rope. The weight bar is skidding off from the weight lever. At the locating surface of the release lever a limit switch can be applied, to switch on alarm horns or similar at the beginning of an actuation.

Included in delivery

Release box VZ3-R 24 V complete with:
- Card MVA LÖ 782239
- Product information card MVA LÖ 904653

Operating instruction VZ3-R 24V 886166

Not included in delivery

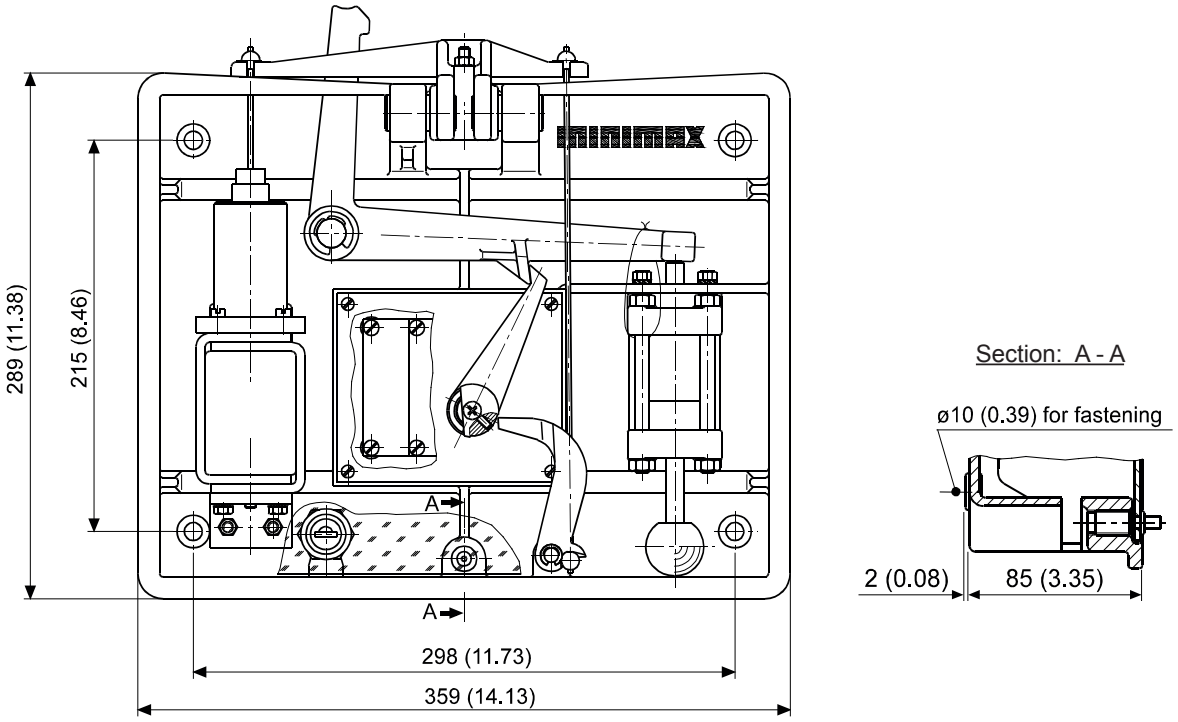
Fastening material:
- 4 x hex. screw with nut DIN601-M8x25 103616
- 4 x washer DIN125-B8,4 109837

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Release box VZ3-R 24 V complete

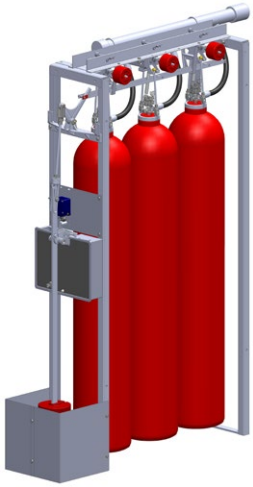
Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - master actuation - Ex



Nicht im Lieferumfang: Flaschen mit Ventil

Approvals / CE marking

VdS [1)] CE

[1)] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)

SAP designation

e.g. part no. 887242: Battery CO_2-master-Ex- 2 cyl.

Maintenance

see operating instruction battery CO_2- master actuation-Ex part no. 887200

Number of cylinder	Part no. [2)]	Number of release weights	Weight approx. kg (lbs)
2	887242	2	79 (174)
3	887243	2	88 (194)
4	887244	3	103 (227)
5	887246	3	128 (282)
6	887247	4	144 (318)
7	887248	4	152 (335)
8	887249	5	167 (368)
9	887250	5	192 (423)
10	887251	6	208 (459)
11	887252	6	217 (478)
12	887253	7	230 (507)
13	887254	7	254 (560)
14	887255	8	268 (591)
15	887256	8	277 (611)
16	887258	9	293 (646)

[2)] Cylinder with valve are not included in delivery, see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 67,5 l
CE conformity .....in accordance with 94/9/EC
explosion protection ..... II 2 G c IIB T4 (zone 1 + 2)

Application

The battery CO_2- master actuation - Ex is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant. It is suitable in explosive areas of the zone 1 and zone 2 type. The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Cylinder rack CO_2 - master actuation - Ex

Functional description
The battery CO_2- master actuation- Ex will be activated pneumatically. Through this a interlock in the release box VZ3-Ex is released, whereby the adjusted pre-warning time begins to run.
After expiration of the pre-warning time the release mechanics is unlocked and the cylinder valves are opened by a release leverage. The CO_2 flows through flexible hoses into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually by a weighing device on extinguishing agent loss.
If required, the release mechanics can be locked using the disable device release box BEA part no. 886013 (not included in delivery).

Caution
Electrical monitoring of the battery in according to the Directive 94/9/EC (ATEX) is not available as standard.

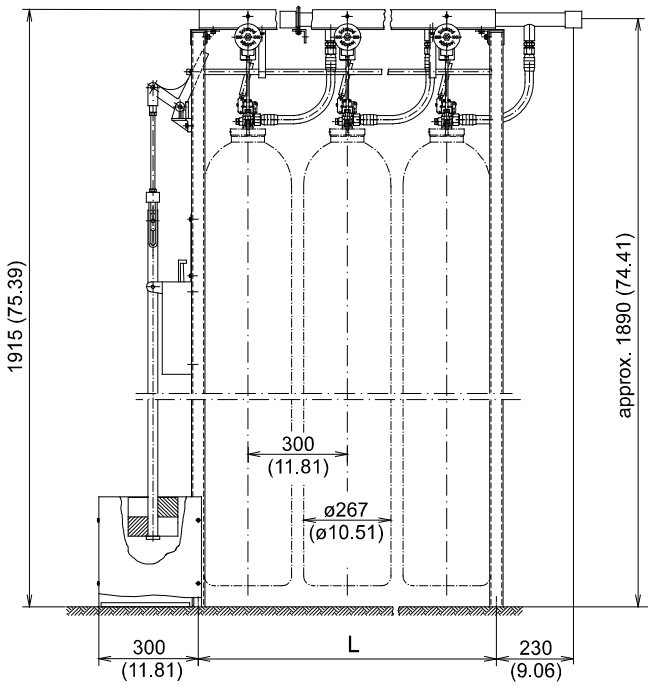
Note
If the commissioning is done outside the German / English speech area a translation of the product information and the installation drawing has to be delivered in the specific language of the country.
This must be noted also for the product sale.

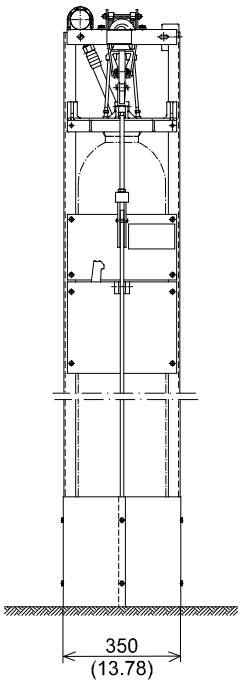
Product sheets also applying
Hose CO_2/Ar/N_2 W21,8 x 3/4 x 375, 200 bar .....see ad-on part cylinder
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,6 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Release box type VZ3-Ex .....see cylinder rack mechn.
Lever - cylinder valve CO_2/Ar .....see control device
Support for weighing device .....see mounting accessories
Earthing clamp 2" M1-09-01
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 67.5 l:
- CO_2 - Cylinder EU .....see cylinder filled
- CO_2 - Cylinder DOT .....see cylinder filled
- CO_2 - Cylinder RU .....see cylinder filled

Report CO_2 - high pressure system (de/en) 726052
Cover - M300 .....see cylinder rack mechn.
Disable device release box BEA .....see cylinder rack mechn.
Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Monitoring Ex for weighing device .....
Limit switch Ex for release lever release box VZ3-Ex .....

Dimension drawing
Dimensions in **mm (inch)**



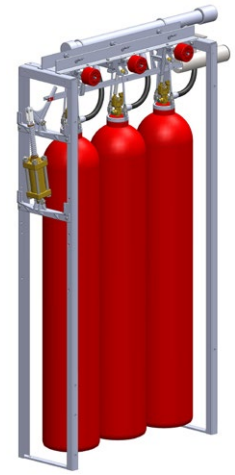


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - slave actuation - Ex



Not included: cylinder with valve

Approvals / CE marking

VdS [1)] CE

[1)] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)

SAP designation

e.g. part no. 887259: Battery CO_2-slave-EX- 2 cyl.

Maintenance

see product information cylinder rack CO_2-additional-Ex part no. 887278

Number of cylinder	Part no. [2)]	Weight approx. kg (lbs)
2	887259	55 (121)
3	887260	64 (141)
4	887261	72 (159)
5	887262	97 (214)
6	887263	106 (234)
7	887264	114 (251)
8	887265	122 (269)
9	887266	147 (324)
10	887267	155 (342)
11	887268	165 (364)
12	887271	172 (379)
13	887272	195 (430)
14	887273	202 (445)
15	887274	211 (465)
16	887275	216 (476)

[2)] Cylinder with valve are not included in delivery,
see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 67,5
CE conformity .....in accordance with 94/9/EC
explosion protection ..... II 2 G c IIB T4 (zone 1 + 2)

Application

The battery CO_2- slave actuation - Ex is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant. It is suitable in explosive areas of the zone 1 and zone 2 type. The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Cylinder rack CO_2 - slave actuation - Ex

Functional description
The mechanism is triggered pneumatically by pressurising a plunger-operated linkage which opens the valves on the CO_2 cylinders. The CO_2 flows through flexible tubes into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually with a weighing device on extinguishing agent loss.

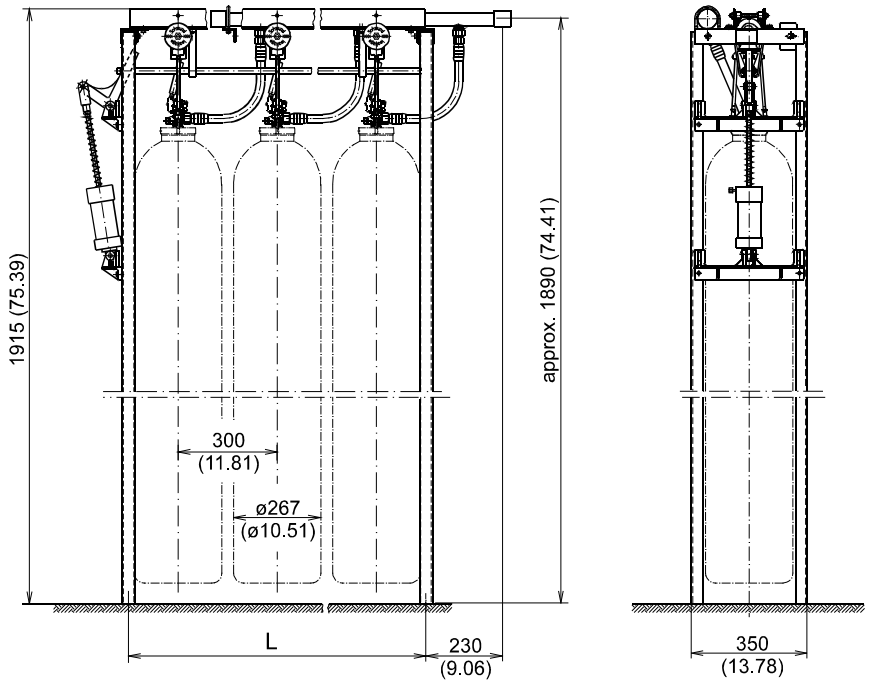
Caution
Electrical monitoring of the battery in according to the Directive 94/9/EC (ATEX) is not available as standard.

Note
If the commissioning is done outside the German / English speech area a translation of the product information and the installation drawing has to be delivered in the specific language of the country.
This must be noted also for the product sale.

Product sheets also applying
Hose CO_2 / Ar / N_2 W21,8 x 3/4 x 375, 200 bar ...see ad-on part cylinder
Release cylinder MX-BV D55-H106 .....see selector valve accessories
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,6 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Lever - cylinder valve CO_2/Ar .....see control device
Support for weighing device .....see mounting accessories
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 67.5 l:
- CO_2 -Cylinder EU .....see cylinder filled
- CO_2 - Cylinder DOT .....see cylinder filled
- CO_2 - Cylinder RU .....see cylinder filled
Cover - M300 .....see cylinder rack mechn.
CO_2 connection slave release .....see cylinder rack mechn.
Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Monitoring Ex for weighing device .....

Dimension drawing
Dimensions in **mm (inch)**

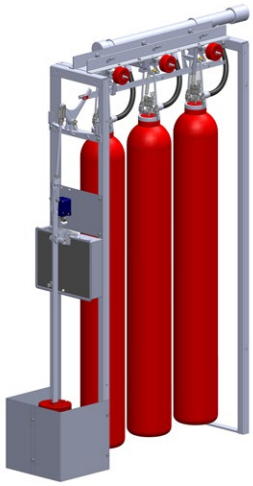


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - 40 l - master actuation - Ex



Not included: cylinder with valve

Approvals / CE marking

VdS [1] CE

[1] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)

SAP designation

e.g. part no. 887293: Battery CO_2-40l-master-EX- 2 cyl.

Maintenance

see operating instruction battery CO_2-master actuation-Ex part no. 887200

Number of cylinder	Part no. [2]	Number of release weights	Weight approx. kg (lbs)
2	887293	2	78 (172)
3	887295	2	87 (192)
4	887296	3	101 (223)
5	887297	3	125 (276)
6	887298	4	141 (311)
7	887299	4	148 (326)
8	887301	5	163 (359)
9	887302	5	187 (412)
10	887303	6	202 (445)
11	887304	6	211 (465)
12	887305	7	223 (492)
13	887306	7	247 (545)
14	887307	8	260 (573)
15	887308	8	268 (591)
16	887309	9	284 (626)

[2] Cylinder with valve are not included in delivery, see on page 2

Technische Daten

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 40 l
CE conformity .....in accordance with 94/9/EC
explosion protection ..... II 2 G c IIB T4 (zone 1 + 2)

Application

The battery CO_2- master actuation - Ex is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant. It is suitable in explosive areas of the zone 1 and zone 2 type. The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - 40 l - master actuation - Ex

Functional description

The battery CO_2- master actuation- Ex will be activated pneumatically. Through this a interlock in the release box VZ3-Ex is released, whereby the adjusted pre-warning time begins to run.
After expiration of the pre-warning time the release mechanics is unlocked and the cylinder valves are opened by a release leverage. The CO_2 flows through flexible hoses into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually by a weighing device on extinguishing agent loss.
If required, the release mechanics can be locked using the disable device release box BEA part no. 886013 (not included in delivery).

Caution

Electrical monitoring of the battery in according to the Directive 94/9/EC (ATEX) is not available as standard.

Note

If the commissioning is done outside the German / English speech area a translation of the product information and the installation drawing has to be delivered in the specific language of the country.
This must be noted also for the product sale.

Product sheets also applying

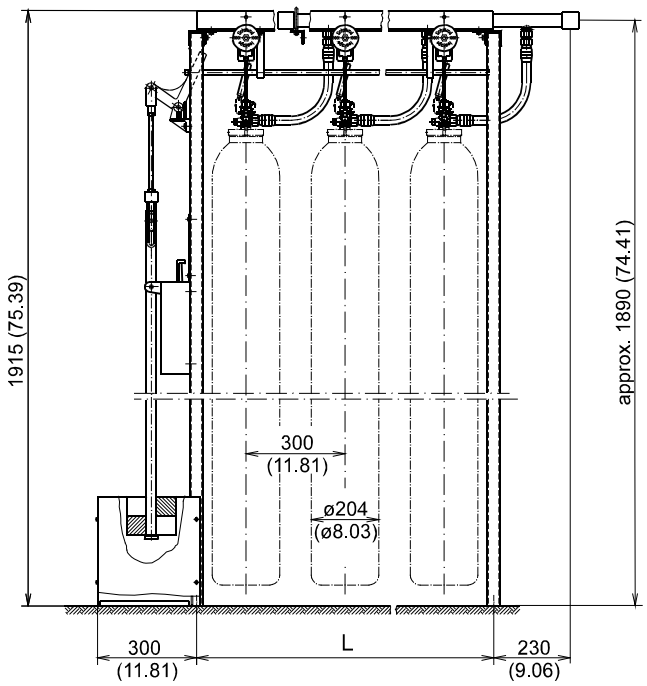
Hose CO_2/Ar/N_2 W21,8 x 3/4 x 375, 200 bar .....see ad-on part cylinder
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,0 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Release box type VZ3-Ex .....cylinder
Lever - cylinder valve CO_2/Ar .....see control device
Support for weighing device .....see mounting accessories
Earthing clamp 2" M1-09-01
U-bolt DN50 .....M1-16-01

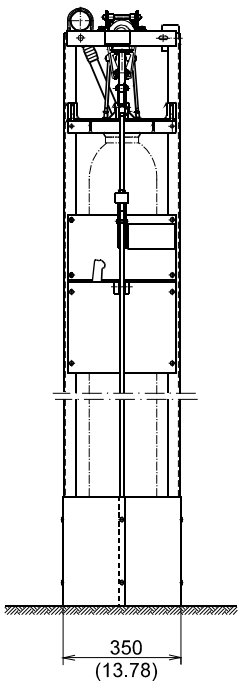
Not included in delivery

Cylinder with valve 40 l:
- CO_2 -Cylinder EU .....see cylinder filled
Report CO_2 - high pressure system (de/en) 726052
Cover - M300 .....see cylinder rack mechn.
Disable device release box BEA .....see cylinder rack mechn.
Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Monitoring Ex for weighing device .....
Limit switch Ex for release lever release box VZ3-Ex .....

Dimension drawing

Dimensions in **mm (inch)**



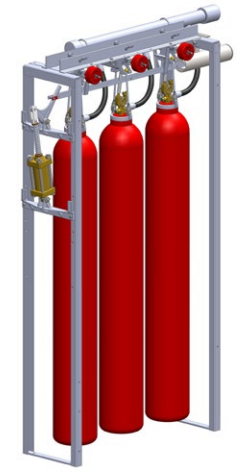


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack CO_2 - 40 l - slave actuation - Ex



Not included: cylinder with valve

Approvals / CE marking

VdS [1)] CE

[1)] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)

SAP designation

e.g. part no. 887310: Battery CO_2-40l-slave-Ex- 2 cyl.

Maintenance

see product information cylinder rack CO_2-additional-Ex part no. 887278

Number of cylinder	Part no. [2)]	Weight approx. kg (lbs)
2	887310	54 (119)
3	887311	63 (139)
4	887313	70 (154)
5	887314	94 (207)
6	887315	103 (227)
7	887316	110 (243)
8	887317	118 (260)
9	887318	142 (313)
10	887319	149 (329)
11	887320	159 (351)
12	887321	165 (364)
13	887322	188 (415)
14	887323	194 (428)
15	887325	202 (445)
16	887326	207 (456)

[2)] Cylinder with valve are not included in delivery,
see on page 2

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack .....to accommodate of steel cylinder 40 l
CE conformity .....in accordance with 94/9/EC
explosion protection ..... II 2 G c IIB T4 (zone 1 + 2)

Application

The battery CO_2- slave actuation - Ex is used in accordance with the “documentation of special extinguishing systems” in fixed fire extinguishing systems using a gas as extinguishant. It is suitable in explosive areas of the zone 1 and zone 2 type. The battery is designed modular and is used to accommodate up to 16 cylinders. The integrated non-electrical control device is used to open the extinguishing cylinders in the event of fire.

Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Cylinder rack CO_2 - 40 l - slave actuation - Ex

Functional description
The mechanism is triggered pneumatically by pressurising a plunger-operated linkage which opens the valves on the CO_2 cylinders. The CO_2 flows through flexible tubes into the manifold and from there into the attached pipework. Every CO_2 cylinder is controlled individually with a weighing device on extinguishing agent loss.

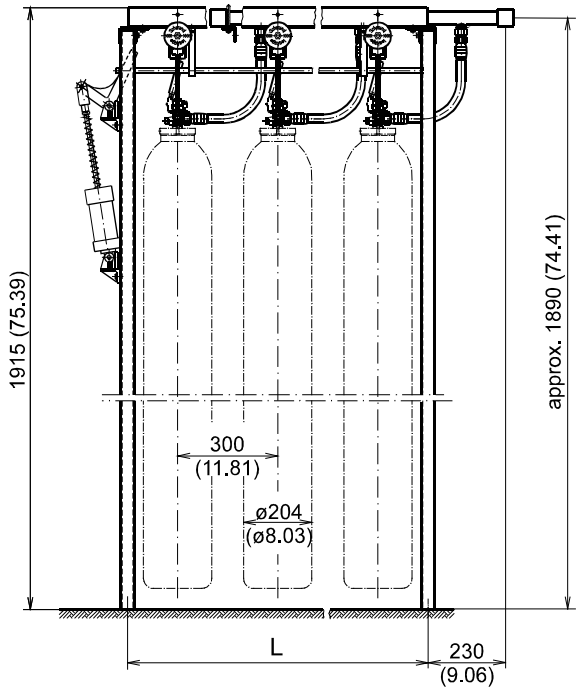
Caution
Electrical monitoring of the battery in according to the Directive 94/9/EC (ATEX) is not available as standard.

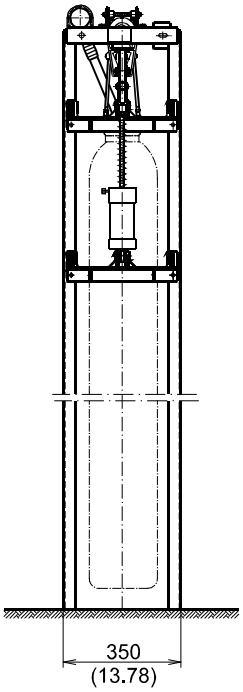
Note
If the commissioning is done outside the German / English speech area a translation of the product information and the installation drawing has to be delivered in the specific language of the country.
This must be noted also for the product sale.

Product sheets also applying
Hose CO_2/Ar/N_2 W21,8 x 3/4 x 375, 200 bar .....see ad-on part cylinder
Release cylinder MX-BV D55-H106 ...see selector valve accessories
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 1,0 kg .....see ad-on part cylinder
Manifolds CO_2 M300 .....see manifold
Lever - cylinder valve CO_2/Ar .....see control device
Support for weighing device .....see mounting accessories
U-bolt DN50 .....M1-16-01

Not included in delivery
Cylinder with valve 40 l:
- CO_2 -Cylinder EU .....see cylinder filled
Cover - M300 .....siehe Batterie mechanisch
CO_2 connection slave release .....see control device
Cylinder lifting device .....see system accessories
Cotter screw M8 x 85 Zn 770210, M1-04-04
Steel strip DIN1016 - 30 x 3 - St37 - Zn 757761
Monitoring Ex for weighing device .....

Dimension drawing
Dimensions in **mm (inch)**





Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)
5	1500 (59.06)
6	1800 (70.87)
7	2100 (82.68)
8	2400 (94.49)
9	2700 (106.3)
10	3000 (118.11)
11	3300 (129.92)
12	3600 (141.73)
13	3900 (153.54)
14	4200 (165.35)
15	4500 (177.17)
16	4800 (188.98)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Release box VZ3-Ex

Approvals / CE marking

VdS G306013

CE 0786-CPD-30042

SAP designation

part no. 888060: Release box VZ3-Ex

Maintenance

see product information VZ3-Ex part no. 888062

Designation	Part no.	Weight
Release box VZ3-Ex	888060	6,8 kg (15 lbs)

Technical data

Time delay .....3 - 60 s, adjustable
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Pneumatical release device:
Working pressure .....20 - 140 bar (290 - 2030 psi)
Release box .....complies with EN 12094-2
CE conformity acc. to:
- Construction Products Regulation (EU) No. 305/2011
- ATEX product directive 94/9/EC, only in combination with
  cylinder rack CO_2 - master actuation - Ex and/or
  cylinder rack CO_2 - 40 l - master actuation - Ex

Material / Surface

Housing .....aluminium
Cover plate .....plastic - transparent

Application

The release box VZ3-Ex may only be used in accordance with system approval in CO_2, argon and nitrogen extinguishing systems. It is corresponding to the EN 12094-2, a non electrical automatic control and delay device.
The VZ3-Ex is used for delayed actuation of the cylinder battery, so that the extinguishing agent released only after the alarm is activated.

Performance features

The release box can be controlled pneumatically. The time delay is adjustable (3-60 s) and can be set to the local needs.

Functional description

In the stand-by position the weight bar is resting on the locked weight lever, the wire-rope is engaged in the weight lever with its upper end and in the cam ratchet with its lower end, the cam ratchet is resting at the cam disk whereby the cam lever in turn is caught by the notch of the release lever.
During an actuation the release lever is lifted at its right hand side out of its resting position. By this the cam lever is freed from the notch of the release lever and starts to turn counter clockwise. The cam disk is turning with the cam lever and allows the cam ratchet to pass it after the set time, thus releasing the lower end of the wire-rope. The weight bar is skidding off from the weight lever. The contact surface of the release lever can act on a limit switch, which can be used to switch on alarm horns or similar at the beginning of an actuation.
Caution: The limit switch must be suitable for use in potentially explosive atmospheres according to the directive 94/9/EC.

Included in delivery

Release box VZ3-Ex
Product information VZ3-Ex part no. 888062

Not included in delivery

Fastening material:
- 4 x hex. screw with nut DIN601-M8x25 103616
- 4 x washer DIN125-B8,4 109837

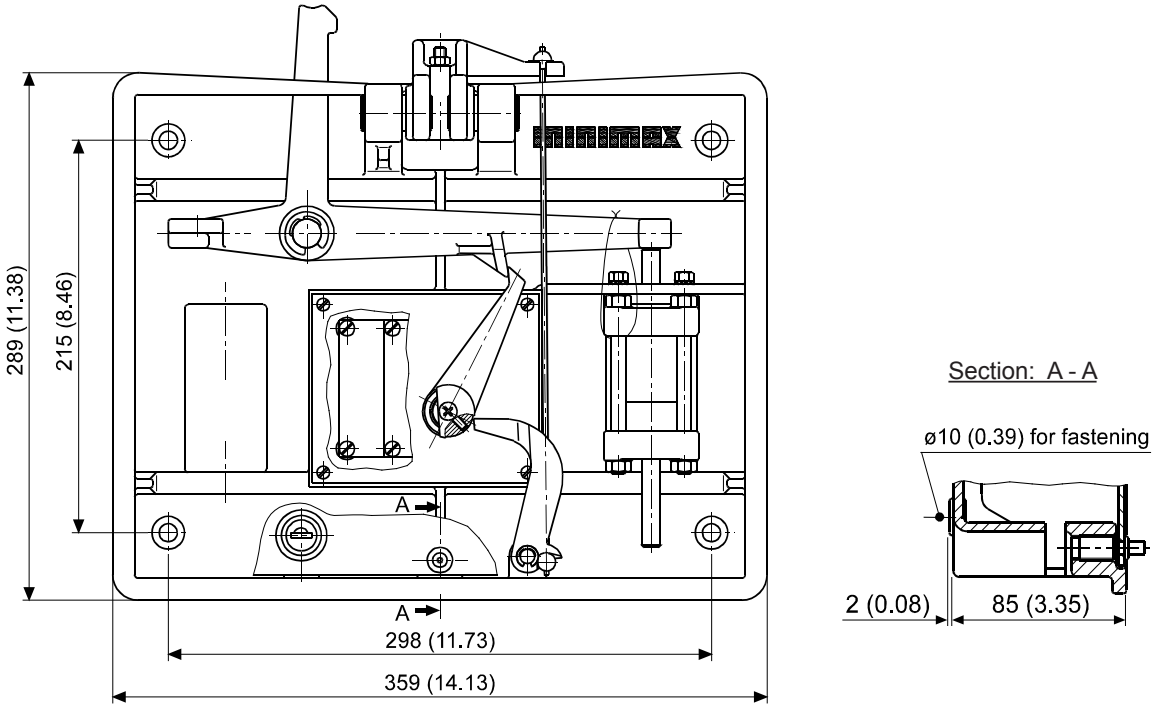
Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Release box VZ3-Ex

Dimension drawing

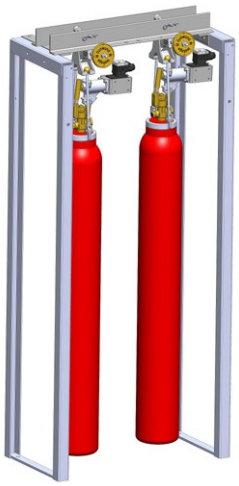
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack - CO_2 single cylinder release for pilot cylinder



Approvals

no approval required

SAP designation

e.g. part no. 855863: Battery CO_2-10,7/13,4l-2
single cylinder release

Maintenance

according to report CO_2 - high pressure systems

Number of cylinder	Part no.	Weight approx. kg (lbs)
2	855863	35.5 (78.26)
3	855875	40.0 (88.18)
4	855887	43.5 (95.9)

Technical data

Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)
Cylinder rack ....to accommodate of steel cylinder 10,7l and 13,4l

Product sheets also applying

Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 0,3 kg .....see ad-on part cylinder
Support for weighing device .....see mounting accessories
Release device EM 24 V DC .....see control device
Lever - cylinder valve EM release .....see control device

Caution

Due to fastening of the "release device EM 24 V DC" the "cylinder valve K85-20.0-S9" part no. 829759 (see cylinder valve) must be used.

Performance feature

Battery CO_2 single cylinder release for 2 up to 4 pilot cylinder consisting of:
battery rack made of steel sections to install the CO_2-cylinders (free location or wall mounting), surface corrosion protection by galvanising, single cylinder release, mechanical weighing unit for each steel cylinder for loss indication at 10% loss of CO_2.

Not included in delivery

CO_2 - Cylinder EU, 10,7 l / 13,4 l with
CO_2 - cylinder valve type K85-20.0-S9 .....see cylinder filled
Cotter screw M8 x 85 Zn 770210, M1-04-04
Adapter connection DN4 - Ermeto .....827325, M1-11-01 part 2
DN8 - Ermeto .....855425, M1-11-01 part 2

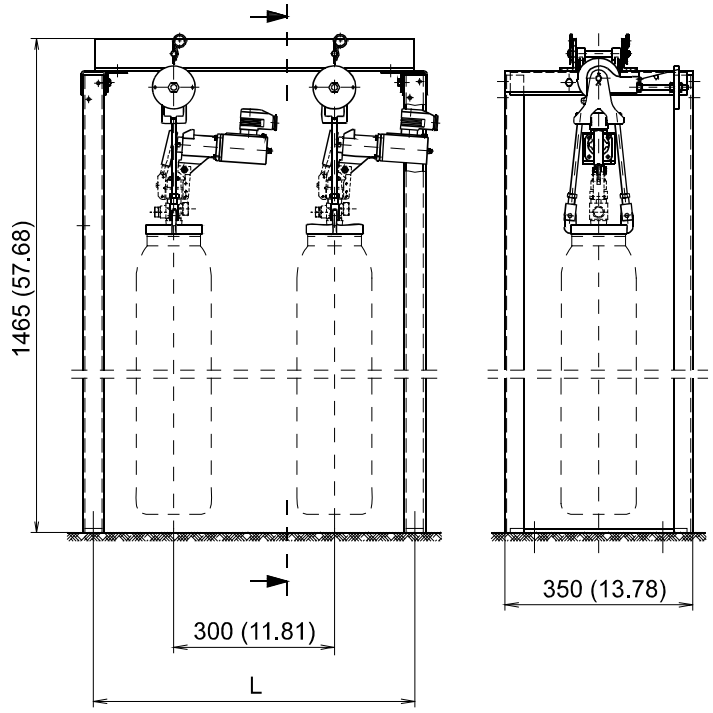
Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cylinder rack - CO_2 single cylinder release for pilot cylinder

Dimension drawing

Dimensions in **mm (inch)**

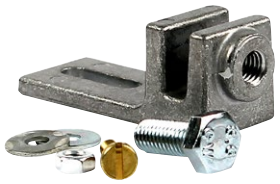


Number of cylinder	L
2	600 (23.62)
3	900 (35.43)
4	1200 (47.24)

Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Accessories cable duct for cylinder banks



Approvals

no approval required

SAP designation

part no. 815355: Accessories cable duct cylinder banks

Maintenance

maintenance-free

Designation	Part no.	Weight
Accessories cable duct for cylinder banks	815355	0.07 kg (0.15 lbs)

Application

For laying electr. cables in cable ducts at cylinder banks.

Included in delivery

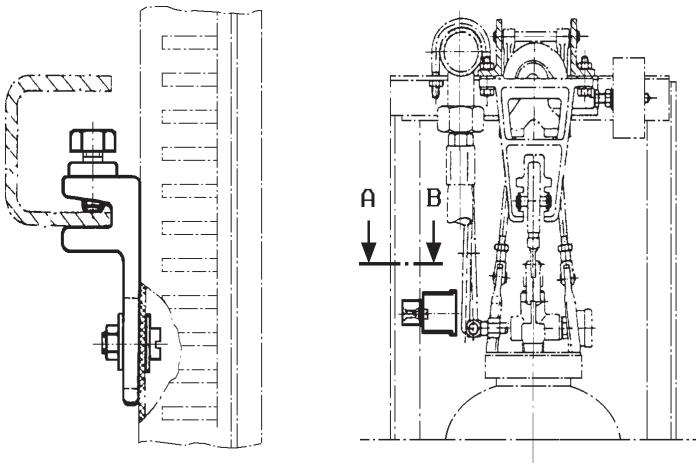
Hex. screw DIN933 - M8x20 galv. 106058
Support for cable duct 815367
Cheese-head screw DIN84 - M5x16 brass 106885
Washer DIN9021 - B5,3 galv. 109990
Hex. nut DIN934 - M5 galv. 108420
Label "Minimax" 790540

Not included in delivery

Cable duct BA6 H 40 x B 40 140187

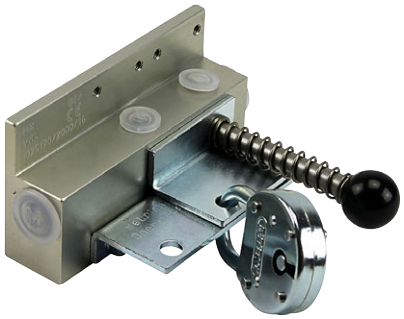
Installations example

Section: A - B



Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Disable device release box BEA



Approvals / CE marking

VdS G302024

CE 0786-CPD-30006

SAP designation
part no. 886013: Disable device release box BEA

Maintenance
see product information disable device release box BEA
part no. 886012

Designation	Part no.	Weight
Disable device release box BEA	886013	0.55 kg (1.21 lbs)

Technical data
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Material housing .....aluminium
blocking pin .....stainless steel
Lock .....see M1-01-07
Vibration .....according to EN 12094-6 for wall installation
Disable device release box .....complies with EN 12094-6
CE conformity .....acc. to Construction Products Regulation (EU) .....No. 305/2011

Marking
manufacturer (MX), type (BEA), approval sign (VdS), CE, serial number

Application
The disable device release box may only be used according to the “documentation of special extinguishing systems” of CO_2, argon and nitrogen fire extinguishing systems.
According to EN 12094-6 it is defined as a non electrical disable device to lock Argotec® cylinder banks. It prevents the extinguishing agent to be released. For repair or maintenance work in the protected area, when the system can be activated unintentionally or people can not leave the area within the pre - warning time, the extinguishing system must be blocked.

Functional description
The blocking pin is moved from the operation position to the isolation position through pushing the handle bar to the left side. The blocking pin rise now above the weight lever of the release box. It prevents the weight lever from tipping over when the extinguishing system is activated.
The extinguishing agent cylinders will not open automatically when the release box is blocked with the disable device.
The disable device release box must be locked in the operation and in the isolation position with the lock.
Only a authorize person from the customer is allowed to actuate the disable device or instruct someone to do this.

Included in delivery
Disable device release box BEA compl. with lock and fastening material

Product information disable device release box BEA
part no. 886012

Not included in delivery
The following must be ordered separately for monitoring of each position (operation / isolation):
Limit switch system monitoring I88-SU1Zw 763261
2 x Cheese-head screw DIN84-M4x25 brass 106745
2 x Washer DIN125-B 4,3 brass 109734

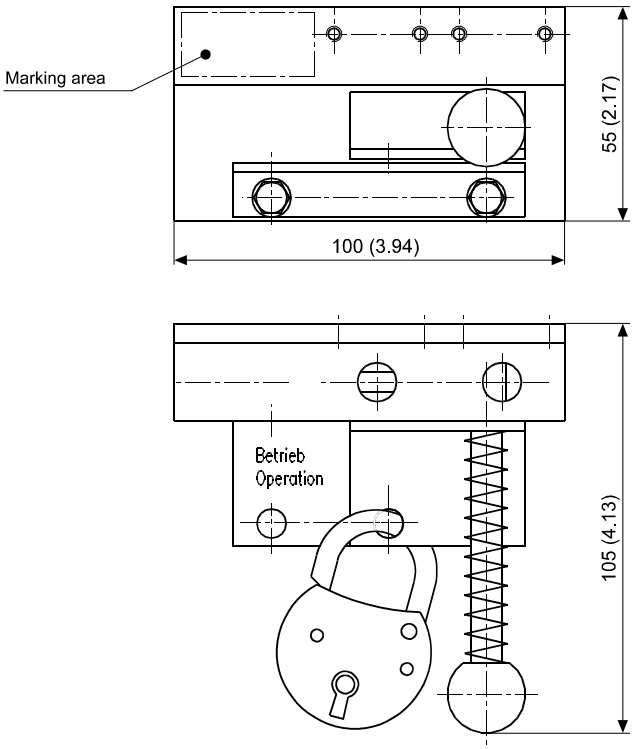
Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Disable device release box BEA

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Release cylinder

Approvals

VdS [1)]
G392001

[1)] VdS approval only in conjunction with this listed valve types K85-20.0-S2, K85-20.0-S3, K85-21.0-S1, K85-21.0-S3, K85-21.0-S4, K85-21.0-S28, K85-21.0-30 und K85-60.0-S1.

SAP designation

part no. 779340: Release cylinder K19-185.0

Maintenance

functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Release cylinder	779340	0.22 kg (0.49 lbs)

Technical data

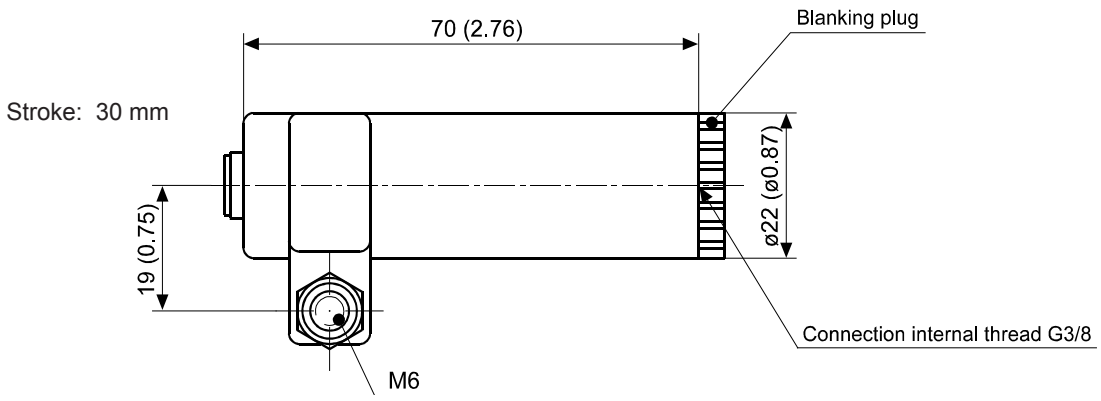
Operating medium .....CO_2, Ar, N_2
Working pressure .....35 - 240 bar (508 - 3480 psi)
Temperature range:
- CO_2 .....0 °C to +50 °C (32 °F to 122 °F)
- Ar, N_2 .....-20 °C to +50 °C (-4 °F to 122 °F)
Connection thread .....G3/8, DIN ISO 228
Housing, piston rod .....brass
Position of device .....as desired

Application

Pneumatic release for cylinder valves.

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
Cylinder rack CO_2 components

Cover - M300

Approvals
no approval required

SAP designation
e.g. part no. 774500: Cover M300-2 compl.

Maintenance
maintenance-free

Cover	Part no.	Weight
M300 - 2	774500	2.31 kg (5.09 lbs)
M300 - 3	775024	3.41 kg (7.52 lbs)
M300 - 4	775012	4.62 kg (10.19 lbs)

Material / Surface
Cover - M300 .....sheet steel, galvanized

Included in delivery
Cover - M300 with
Tapping screw (2 pc) .....DIN7513 - AM6 x 20

Not included in delivery
Label MINIMAX M1-05-11

Required covers, depending on number of cylinders:

Cover	Number of cylinder														
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
M300 - 2	2 x			2 x											
M300 - 3		2 x		2 x	4 x	2 x		6 x	4 x	2 x		6 x	4 x	2 x	
M300 - 4			2 x			2 x	4 x		2 x	4 x	6 x	2 x	4 x	6 x	8 x

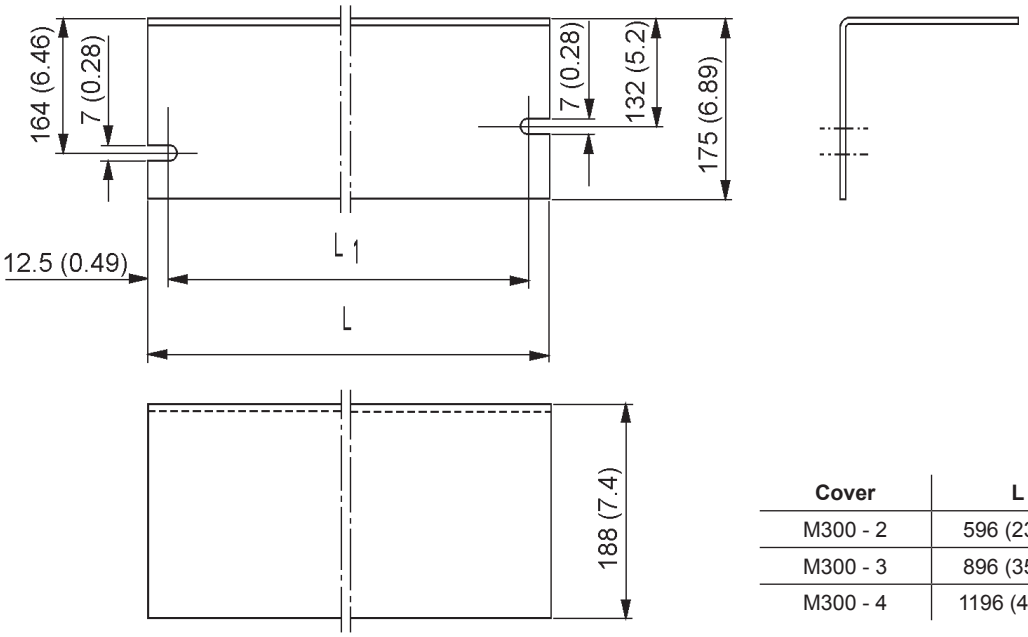
Extinguishing technology CO_2 HP

Cylinder rack CO_2 components

Cover - M300

Dimension drawing

Dimensions in **mm (inch)**

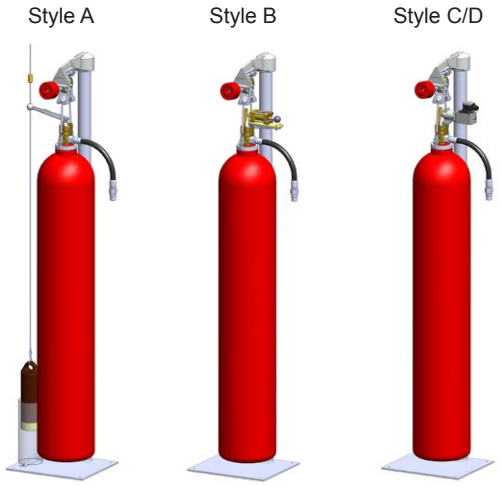


Cover	L	L1
M300 - 2	596 (23.46)	571 (22.48)
M300 - 3	896 (35.28)	871 (34.29)
M300 - 4	1196 (47.09)	1171 (46.1)

Extinguishing technology CO_2 HP

Single cylinder system CO_2

Single cylinder system CO_2 and Argon 67,5 l - 200 bar



Fastening material not shown

Approvals

VdS [1] UL LISTED [2] TP RU [3]

1) Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)
- Oxeo inert gas extinguishing system HD200 (S315011)

2) Listed system only for style C covered by:
UL-File EX6388 (CO_2) and UL-File EX5248 (Ar)

3) Russia approval for style B (CO_2 - 67,5 l) and for style C (CO_2 - 67,5 l) only

SAP designation

e.g. part no. 770660: CO_2-system 1cyl.-40l-mech.

Maintenance

see product information CO_2/Ar/N_2-system-1cyl. part no. 887846

Style (activation)	Application CO_2	Application Ar	Part no.	Counter-weight kg (lbs)	Weight kg (lbs)
A (mechanical)	40 l	-	770660	1.0 (2.2)	38.4 (84.7)
	67.5 l	67.5 l - 200 bar	885384	1.6 (3.5)	39.1 (86.2)
B (pneumatic)	40 l	-	770361	1.0 (2.2)	25.9 (57.1)
	67.5 l	67.5 l - 200 bar	885385	1.6 (3.5)	26.6 (58.6)
C (EM - 24 V / DC)	40 l	-	770348	1.0 (2.2)	26.4 (58.2)
	67.5 l	67.5 l - 200 bar	885386	1.6 (3.5)	27.1 (59.8)
	80 l	-	887842	1.8 (4)	28.2 (62.2)
D (EM - 230 V / AC)	40 l	-	770350	1.0 (2.2)	26.3 (58)
	67.5 l	67.5 l - 200 bar	885387	1.6 (3.5)	27.0 (59.5)

Technical data

Support .....aluminium
Base plate .....grey, varnished or powder coated
Pipe .....hot-dip galvanized
Connecting thread .....external thread R3/4 - ISO7
Working pressure pneumatic piston .....140 bar (2030 psi)
Test pressure pneumatic piston .....210 bar (3045 psi)

CO_2:
Operating medium .....CO_2
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Cylinder volume .....40 l, 67,5 l, 80 l
Amount filled per cylinder:
.....30 kg (66 lbs), 50 kg (110 lbs), 60 kg (132 lbs)
Amount filled per cylinder at tropical filling:
.....27 kg (59.5 lbs), 45 kg (99 lbs), 53.4 kg (117.7 lbs)
Temperature range .....-20 °C to +40 °C (-4 °F to 104 °F)
.....tropical filling: -20 °C to +50 °C (-4 °F to 122 °F)

Argon:
Operating medium .....Ar
Working pressure .....235 bar (3408 psi)
Test pressure .....353 bar (5120 psi)
Cylinder volume .....67.5 l
Amount filled per cylinder .....23.9 kg (52.7 lbs)
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)

Application

The CO_2 / Ar / N_2 single cylinder system may only be used in accordance with system approval in stationary fire extinguishing systems. It serves to accommodate one extinguishing agent cylinder. The integrated release device is used to open the extinguishing agent cylinder in the event of fire.

Extinguishing technology CO_2 HP

Single cylinder system CO_2

Single cylinder system CO_2 and Argon 67,5 l - 200 bar

Functional description

The activation of the CO_2/Ar-system 1 cyl. takes place either mechanically, pneumatically or electrically.
The rocker arm valve of the extinguishing agent cylinder or pilot cylinder is opened via a weight, a pneumatic cylinder or an electrical release device. The extinguishing agent (CO_2/Ar) flows through flexible tubes into the attached pipework.
The extinguishing agent cylinder is controlled with a weighing device on extinguishing agent loss.

Note

The safe guard with limit switch (see control device) may be used the base support part no. 77 3982 is to be ordered additionally.

Not included in delivery

Extinguishing agent cylinder:
- CO_2 - Cylinder EU .....see cylinder filled
- CO_2 - Cylinder UL, EU .....see cylinder filled
- CO_2 - Cylinder RU .....see cylinder filled
- Argon - Cylinder EU 200 bar .....see cylinder filled

Monitoring loss PAE .....see monitoring device
Support weighing device PAE .....see mounting accessories

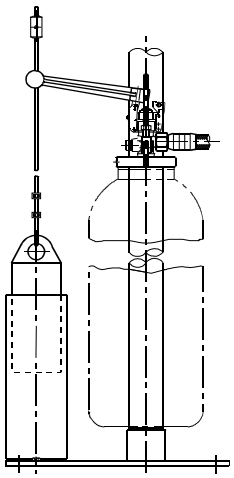
Included in delivery

• = Components for style		A	B	C	D	Part no.
Support for 1 - cyl. system		•	•	•	•	774925
Pipe for 1 - cyl. system	to 67.5 l	•	•	•	•	779303
	for 80 l			•		885281
Base plate for 1 - cyl. system		•	•	•	•	779297
Weighing device WE4		•	•	•	•	871695
Weight for weighing device		•	•	•	•	see ad-on part cylinder
Hose CO_2 / Ar		•	•	•	•	859510
Adapter G3/4 - R3/4 PB365		•	•	•	•	887706
Accessories for 1 - cyl. system		•	•	•	•	779492
Support Argotec		•	•	•	•	223036
Lever for release cylinder		•				841859
Rope catch complete		•				359647
Steel box for release weight, simple		•				225483
Weight complete 12 kg		•				778086
Hex. screw DIN933-M8x10-8.8		•				215102
Lever for EM release			•	•	•	885603
Cylinder D25-H30			•			227303
Support for 1 - cyl. release pneum.			•			779480
Accessories release device EM / VM			•			778293
Hex. screw DIN933-M5x20			•			215035
Hex. nut DIN934-M5			•			108420
Washer DIN125-B5,3			•			760326
Release device EM 24 V DC				•		885738
Release device EM 230 V AC					•	885739

Dimension drawing

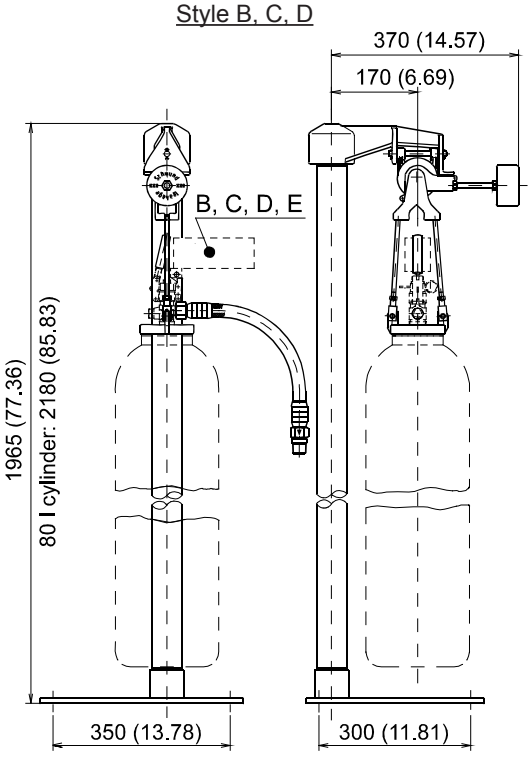
Dimensions in **mm (inch)**

Style A

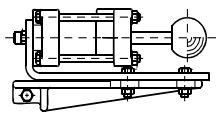


mechanical activation

Style B, C, D

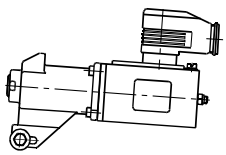


Style B



pneumatic activation

Style C, D



electric activation
24 V / DC, 230 V / AC

Inert gas extinguishing technology

Pipe element

Manifold HD - DN50 PB 235
CO_2 / IG / MX 1230/200

Approvals

no approval required

SAP designation

e.g. part no. 885346: Manifold HD/DN50- 2 CO_2/Argon

Maintenance

visual check within the framework of system-specific functional test

Feature	Part no.	Branches	Weight approx. kg (lbs)
DN50 - 2	885346	2	13 (29)
DN50 - 3	885347	3	19.5 (43)
DN50 - 4	885348	4	26 (57.5)
DN50 - 5	885349	5	32.5 (72)
DN50 - 6	885350	6	39 (86)
DN50 - 7	885351	7	45.5 (100)
DN50 - 8	885353	8	52 (115)
DN50 - 9	885354	9	58.5 (129)
DN50 - 10	885355	10	65 (143)

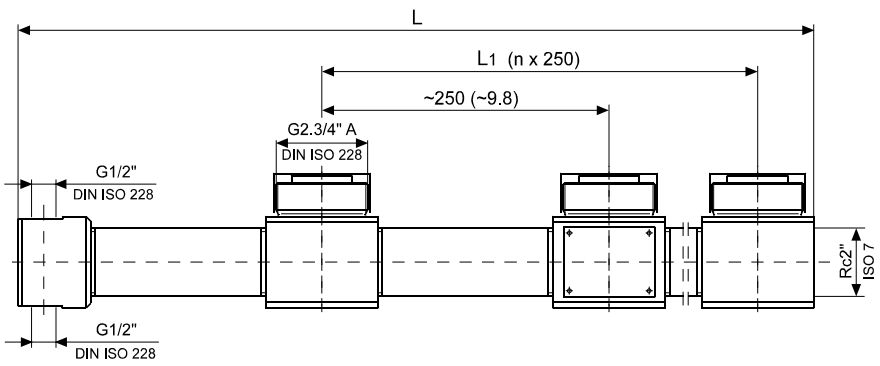
Technical data

Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100), ...IG-55, IG-541, HFC-227ea, FK-5-1-12
Working pressure .....235 bar (3408 psi)
Water pressure test .....353 bar (5120 psi) / 10 min

Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Finish pipe .....coating DIN EN 10240 - t Zn o
tee piece .....coating EN 12329 - Fe / Zn12

Dimension drawing

Dimensions in **mm (inch)**



Feature	L [1]	n [2]	L1 [1] (n x 250)
DN50 - 2	515 (20.3)	1	250 (9.8)
DN50 - 3	765 (30.1)	2	500 (19.7)
DN50 - 4	1015 (40.0)	3	750 (29.5)
DN50 - 5	1265 (49.8)	4	1000 (39.4)
DN50 - 6	1515 (59.7)	5	1250 (49.2)
DN50 - 7	1765 (69.5)	6	1500 (59.1)
DN50 - 8	2015 (79.3)	7	1750 (68.9)
DN50 - 9	2265 (89.2)	8	2000 (78.7)
DN50 - 10	2515 (99.0)	9	2250 (88.6)

[1] Deviation from nominal size because of thread tolerances.

[2] Number of distances.

Inert gas extinguishing technology
Valve

Ball valve BK-MK
DN25, DN40 and DN50

Approvals / CE marking

[1] Listed system covered by UL-file EX6388 (CO_2) and UL-file EX5248 (Ar) for locking the CO_2 pipework

[2] in accordance with directive 2014/68/EU (DN40, DN50)

SAP designation
e.g. part no. 861090: Ball valve TYPE BK/MK DN25

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

Designation		Part no.	Weight kg (lbs)
Ball valve BK-MK	DN25	861090	2.0 (4.4)
	DN40	861119	3.8 (8.4)
	DN50	861120	5.6 (12.4)

Technical data
Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100), ...IG-55, IG-541, HFC-227ea, FK-5-1-12
Working pressure .....235 bar (3408 psi)
Test pressure .....353 bar (5120 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)

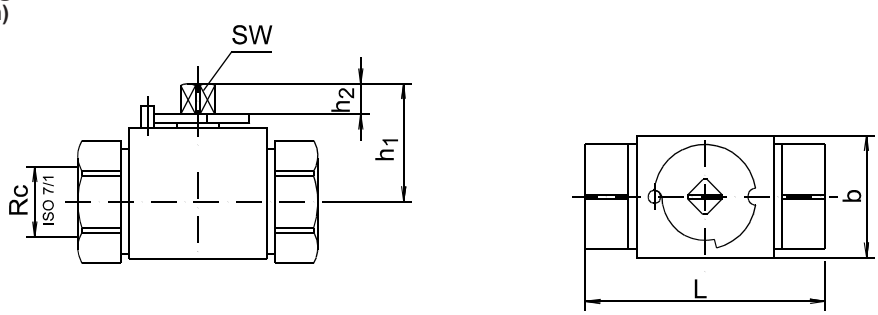
Marking
nominal diameter (DN..), nominal pressuer (PN...), make no., material description, order no., CE (not DN25)

Material / surface
Housing DN25 .....1.0570, galvanized
DN40, DN50 .....1.0460.01, aluminium coating
Ball 1.4006.05
Ball gasket .....POM gasket
Stem .....1.0718 K, galvanized
Stem gasket .....NBR (perbunan)

Note
Use in VdS fire extinguishing systems is not permitted.

Not included in delivery
Lever

Dimension drawing
Dimensions in **mm (inch)**



DN	Rc ISO 7/1	h_1	h_2	SW	L	b
25	Rc 1	54 (2.13)	13.5 (0.53)	14 (0.55)	119 (4.69)	57 (2.24)
40	Rc 1.1/2	72.5 (2.85)	15.5 (0.61)	17 (0.67)	130 (5.12)	85 (3.35)
50	Rc 2	80 (3.15)	15.5 (0.61)	17 (0.67)	140 (5.51)	102 (4.02)

Inert gas extinguishing technology

Pipe coupling

Fittings for CO_2 / IG upstream piping - 200 bar

Approvals
without approval

Designation		DN	Thread	Part no.	Weight kg (lbs)
	Cap	50	Rc 2	910943	1.2 (2.7)
		65	Rc 2.1/2	910944	2.1 (4.6)
	Reducing nipple	65 / 50	Rc 2.1/2 x 2	910936	0.7 (1.5)
	Elbow	50	Rc 2	910941	2.5 (5.5)
		65	Rc 2.1/2	910942	4.5 (9.9)
	Tee - piece	50	Rc 2	910939	3.1 (6.8)
		65	Rc 2.1/2	910940	5.9 (13.0)
	Union	50	Rc 2	910945	2.5 (5.5)
		65	Rc 2.1/2	910946	4.8 (10.6)
	Hex. nipple	50	Rc 2	910954	1.0 (2.2)
		65	Rc 2.1/2	910955	1.8 (4.0)
	Socket	50	Rc 2	910937	1.4 (3.1)
		65	Rc 2.1/2	910938	1.7 (3.8)

Technical data

Working pressure .....3000 psi = 206.9 bar
.....hex. nipple: 6000 psi = 413.7 bar
Finish .....galvanized
Material .....acc. to ASTM A105
Thread .....acc. to ISO 7/1 - Rc, cone
Dimensions .....acc. to ANSI B16.11
Marking .....manufacture´s sign, dimension,
.....batch number, pressure stage and material

Note

Fittings **without** pressure test; fittings with pressure test see
- Fittings "PT" upstream piping - 140 bar
- Fittings "PT" upstream piping - 200 bar / 300 bar

SAP designation

e.g. part no. 910943: Cap Rc 2"-St-ANSI B16.11

Maintenance

maintenance-free

Inert gas extinguishing technology

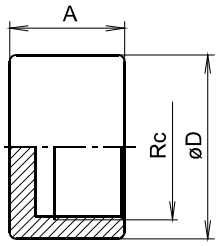
Pipe coupling

Fittings for CO_2 / IG upstream piping - 200 bar

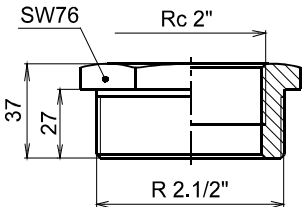
Dimension drawing

Dimensions in **mm (inch)**

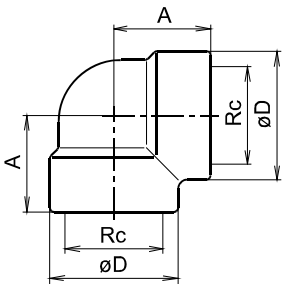
Cap



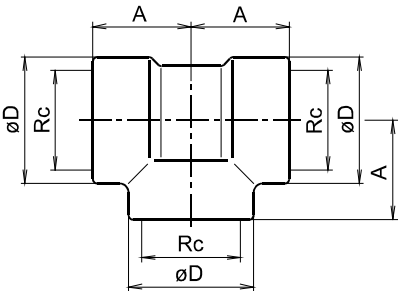
Reducing nipple



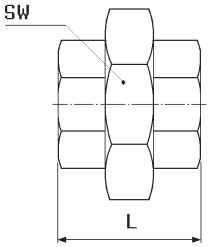
Elbow



Tee - piece

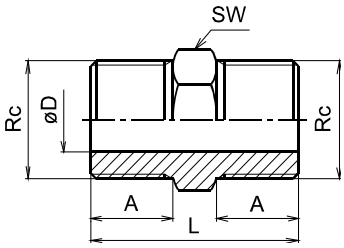


Union



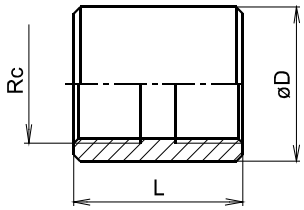
DN50 = SW105
DN65 = SW122

Hex. nipple



DN50 = SW62
DN65 = SW76

Socket



Designation	DN	Thread	A	ød	L
Cap	50	Rc 2	48 (1.89)	78 (3.07)	-
	65	Rc 2.1/2	60 (2.36)	92 (3.62)	-
Reducing nipple	65 / 50	Rc 2.1/2 x 2	-	-	-
Elbow	50	Rc 2	64 (2.52)	84 (3.31)	-
	65	Rc 2.1/2	83 (3.27)	102 (4.02)	-
Tee - piece	50	Rc 2	64 (2.52)	84 (3.31)	-
	65	Rc 2.1/2	83 (3.27)	102 (4.02)	-
Union	50	Rc 2	-	-	91 (3.58)
	65	Rc 2.1/2	-	-	120 (4.72)
Hex. nipple	50	Rc 2	27 (1.06)	39 (1.54)	71 (2.8)
	65	Rc 2.1/2	37 (1.46)	51 (2.01)	94 (3.7)
Socket	50	Rc 2	-	76 (2.99)	86 (3.39)
	65	Rc 2.1/2	-	92 (3.62)	92 (3.62)

Extinguishing technology CO_2 HP

Pipe coupling

Fittings "PT" for CO_2 with pressure test upstream piping - 140 bar

Approvals

without approval

Designation		DN	Thread	Part no.	Weight kg (lbs)
	Cap PT	50	Rc 2	870046	1.2 (2.7)
		65	Rc 2.1/2	870058	2.1 (4.6)
	Reducing nipple PT	65 / 50	Rc 2.1/2 x 2	870060	0.7 (1.5)
	Elbow PT	50	Rc 2	870022	2.5 (5.5)
		65	Rc 2.1/2	870034	4.5 (9.9)
	Tee - piece PT	50	Rc 2	870009	3.1 (6.8)
		65	Rc 2.1/2	870010	5.9 (13.0)
	Union PT	50	Rc 2	870540	2.5 (5.5)
		65	Rc 2.1/2	870472	4.8 (10.6)
	Hex. nipple PT	50	Rc 2	886189	1.0 (2.2)
		65	Rc 2.1/2	886190	1.8 (4.0)
	Socket PT	50	Rc 2	870125	1.4 (3.1)
		65	Rc 2.1/2	870137	1.7 (3.8)

Technical data

Working pressure .....3000 psi = 206.9 bar
.....hex. nipple: 6000 psi = 413.7 bar
Finish .....galvanized
Material .....acc. to ASTM A105
Thread .....acc. to ISO 7/1 - Rc, cone
Dimensions .....acc. to ANSI B16.11
Marking .....manufacture´s sign, dimension,
.....batch number, pressure stage, material and test mark "PT"

Application

CO_2 high pressure systems in application of the procedure specification MXV 044 "Druckprüfungen an Speziallöschanlagen"

SAP designation

part no. 870046: Cap Rc 2"-St-PT

Maintenance

maintenance-free

Extinguishing technology CO_2 HP

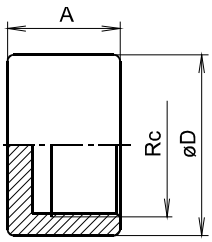
Pipe coupling

Fittings "PT" for CO_2 with pressure test upstream piping - 140 bar

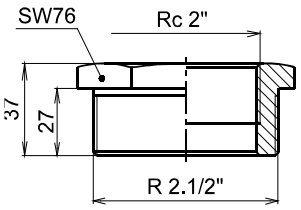
Dimension drawing

Dimensions in **mm (inch)**

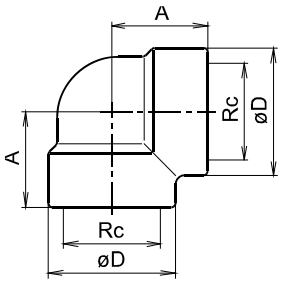
Cap



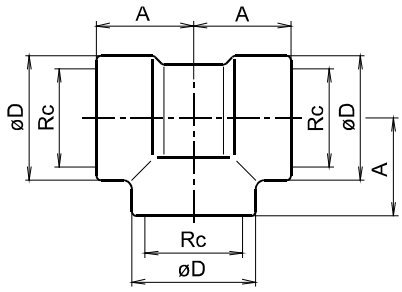
Reducing nipple



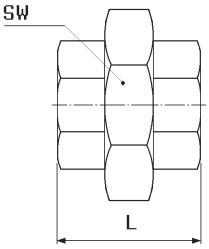
Elbow



Tee - piece

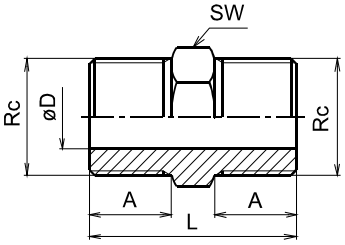


Union



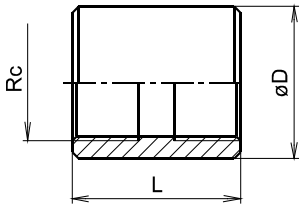
DN50 = SW105
DN65 = SW122

Hex. nipple



DN50 = SW62
DN65 = SW76

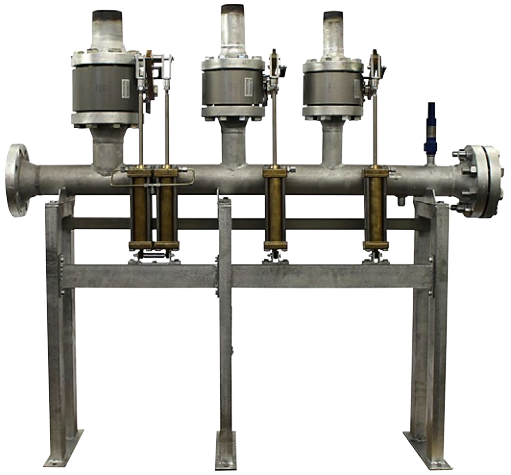
Socket



Designation	DN	Thread	A	ød	L
Cap PT	50	Rc 2	48 (1.89)	78 (3.07)	-
	65	Rc 2.1/2	60 (2.36)	92 (3.62)	-
Reducing nipple PT	65 / 50	Rc 2.1/2 x 2	-	-	-
Elbow PT	50	Rc 2	64 (2.52)	84 (3.31)	-
	65	Rc 2.1/2	83 (3.27)	102 (4.02)	-
Tee - piece PT	50	Rc 2	64 (2.52)	84 (3.31)	-
	65	Rc 2.1/2	83 (3.27)	102 (4.02)	-
Union PT	50	Rc 2	-	-	91 (3.58)
	65	Rc 2.1/2	-	-	120 (4.72)
Hex. nipple PT	50	Rc 2	27 (1.06)	39 (1.54)	71 (2.8)
	65	Rc 2.1/2	37 (1.46)	51 (2.01)	94 (3.7)
Socket PT	50	Rc 2	-	76 (2.99)	86 (3.39)
	65	Rc 2.1/2	-	92 (3.62)	92 (3.62)

Extinguishing technology CO_2 HP
CO_2 Manifold

Manifold selector valve DN65/80/100 complete pneumatic, CO_2 / inert gas (CF) / VSN 1230/200



Approvals / CE marking

G397004 [1] | LISTED [1), 2)] | LISTED [2)] | APPROVED [3)] | RU [1)] | CE [1)] 0786-CPD-30005

[1)] Approvals and CE for selector valve only

[2)] Listed system covered by UL-File EX6388 (CO_2) and covered by UL-File EX26532 (Ar, VSN 200 and VSN 1230)

[3)] Part of the system approval (VSN 200 and VSN 1230)

Maintenance
see operating instruction selector valve BV, part no. 886269

Spare parts
Manual release lever, 600 mm (23.62") long part no. 823976

Ordering hints
Manifolds selctor valve DN65/80/100 pneumatic are manufactured individually for each contract.
Use form C10.40.80 (see documentation special extinguishing systems) for ordering.

Primer coated or powder coated manifolds are to be ordered via order number 40 0015.
Galvanized manifolds are to be ordered via order number 40 0016.

Technical data
Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100) IG-55, IG-541, FK-5-1-12, HFC-227ea
Working pressure / test pressure:
- Manifold, selector valves .....140 bar / 210 bar .....(2030 psi / 3045 psi)
- Pneumatic release device .....20 to 140 bar / 210 bar .....(290 to 2030 psi / 3045 psi)

Flow characteristics (high pressure selector valve):
- DN65 .....equivalent length 0.43 m (16.93")
- DN80 .....equivalent length 0.55 m (21.65")
- DN100 .....equivalent length 0.67 m (26.38")

Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Actuation .....by 24 V DC

Application
The manifold selector valve BV DN65/80/100 pneumatic is used in accordance with “documentation of special extinguishing systems” in:
- fixed CO_2- high pressure fire extinguishing systems
- argon-, nitrogen, IG-55-, IG-541 extinguishing systems with Constant Flow (CF)
- VSN 1230/200 fire extinguishing systems, maximum number of selector valves: 15.

In case of fire the selector valve DN65/80/100 is used for flooding selected extinguishing zones.

Functional description
After a fire has been detected in one of the extinguishing zones of a multi- zone system, the appropriate selector valve opens and the extinguishing agent flows into the relevant downstream pipe work of the extinguishing zone.
For recommissioning the selector valve has to be closed manually by using the reset lever. The right position of selector valve may monitored by one or two limit switches.

Main components
Ball valves DN65 - 100 .....see selector valve accessories
Release cylinder section valve .....see selector valve accessories
Safety valve, depending from operating medium:
- Valve G1/2 - 140 bar (CO_2) .....see safety valve
- Valve G1/2 - 66 bar (inert gas / MX 1230/200) ...see safety valve

Limit switch type US 432y and US 434y .....see monitoring device
Manifold rack - left 817728
Manifold rack - right 822583

Included in delivery
Manifold selector valve complete, pneumatic
Operating instruction selector valve BV part no. 886269

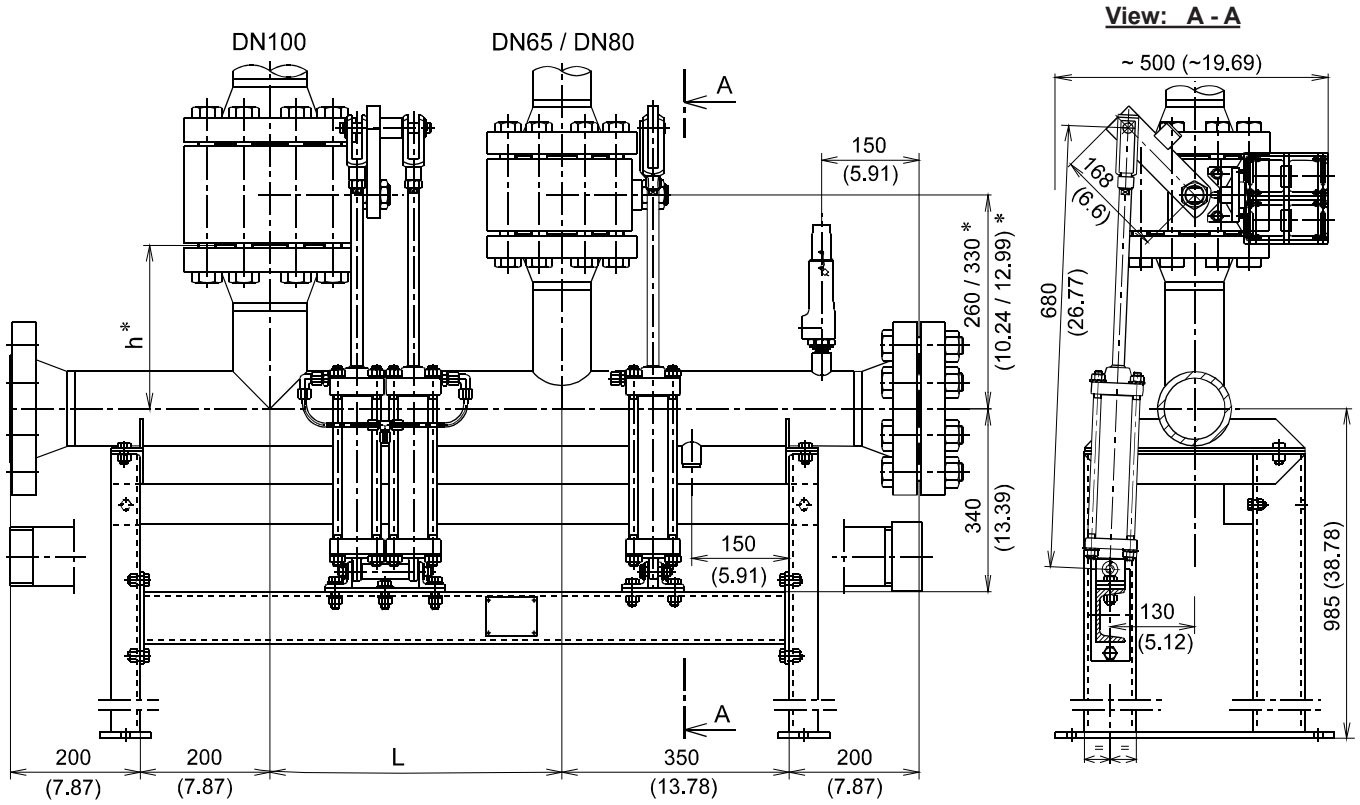
Extinguishing technology CO_2 HP

CO_2 Manifold

Manifold selector valve DN65/80/100 complete pneumatic, CO_2 / inert gas (CF) / VSN 1230/200

Dimension drawing

Dimensions in mm (inch)



DN	L	h *
65	350 (13.78)	203 / 270 (7.99 / 10.63)
80	350 (13.78)	200 / 267 (7.87 / 10.51)
100	450 (17.72)	250 (9.84)

* The longer dimensions are valid for manifolds with min. one selector valve DN100.

Inert gas extinguishing technology

Selector valve

Selector valve BV DN25 - 50 complete PB 235, pneumatic, CO_2 / IG / MX 1230/200

Approvals

see individual components

Maintenance

see operating instruction selector valve MX-BV DN25/40/50 part no. 886333

Ordering hints

The manifold sets with pneumatic release can be put together individually.
The components can be ordered from stock using the part no.

Item [1]	Designation		Part no.	Weight
1	Selector valve MX-BV DN25 - 50		see selector valve	
2	Manifold HP		see pipe element	
3	Limit switch type US 432y		see monitoring device	
4	Safety valve	IG	see safety valve	
		CO_2	see safety valve	
		MX 1230/200	see safety valve	
5	Plug		774822	0.05 kg (0.11 lbs)
-	Pipe support B DN50 compl. (M1-16-00)		774639	0.77 kg (1.7 lbs)
-	Manual release lever, 497 mm long		860346	1.2 kg (2.65 lbs)
-	Installation instruction		860863	-

[1] Item 1 - 5 see drawing on page 2

Application

The selector valve MX-BV DN 25/40/50 is used in accordance with the “documentation of special extinguishing systems” in fixed CO_2, argon, nitrogen, IG-55 and IG-541 high pressure fire extinguishing systems or MX 1230/200 fire systems respectively. In case of fire the selector valve DN 25/40/50 is used for flooding selected extinguishing zones.

Note

To closure of a manifold branch are needed following components:
- Blind cap DN50 873746
- O-ring 54 x 3 NBR 70 Shore 847059
- Cap nut DN50 870630

Functional description

After a fire has been detected in one of the extinguishing zones of a multi- zone system, the appropriate selector valve opens. The extinguishing agent, CO_2, argon, nitrogen, IG-55, IG-541 or MX 1230/200, flows into the relevant downstream pipe work of the extinguishing zone.

A safety valve is mounted on the manifold in order to release any excessive pressure.

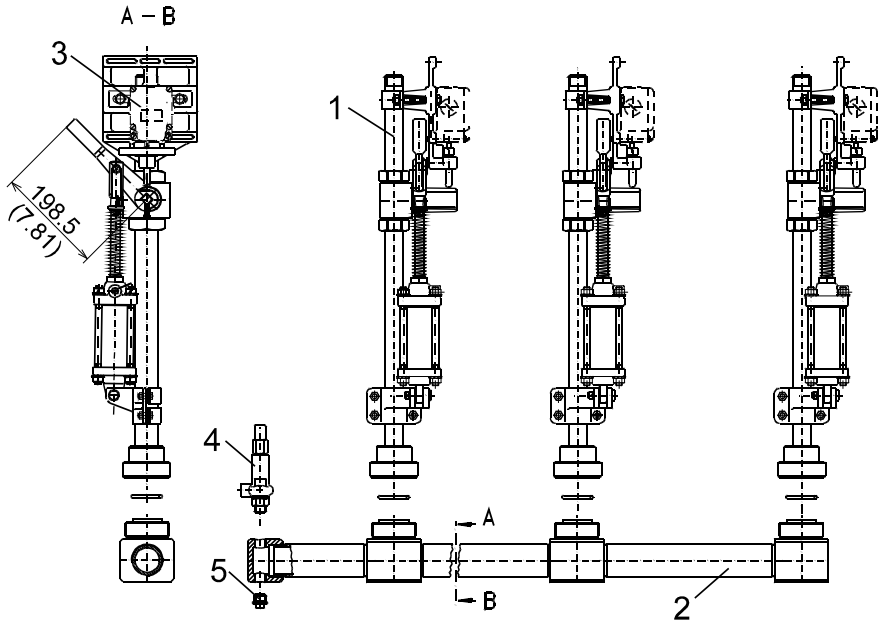
For recommissioning, the selector valve has to be closed manually by using the reset hand lever. The right position of selector valve may monitored by one or two limit switches.

Inert gas extinguishing technology

Selector valve

Selector valve MX-BV DN25 - 50 compl. pneum., CO_2 / IG / MX 1230/200

Dimension drawing
Dimensions in **mm (inch)**



Inert gas extinguishing technology

Selector valve

Selector valve MX-BV DN25 - 50 PB235, CO_2 / IG / VSN 1230/200

Approvals / CE marking

G393001 LISTED[1] LISTED[1] APPROVED[2] RU 0786-CPD-30004

[1] Listed system covered by UL-File EX6388 (CO_2) and UL-File EX26532 (Ar, VSN 200 and VSN 1230)

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

SAP designation

e.g. part no. 885189: Selector valve BV 25 PB235

Maintenance

see operating instruction selector valve BV DN25/40/50 part no. 886333

Designation		Part no.	Weight kg (lbs)
Selector valve BV	DN25	885189	17.0 (37.5)
	DN40	885191	20.5 (45.2)
	DN50	885192	24.8 (54.7)
	DN25 - NPT	912052	17.0 (37.5)
	DN40 - NPT	912053	20.5 (45.2)
	DN50 -NPT	912054	24.8 (54.7)

Technical data

Type .....MX-BV
Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100), ...IG-55, IG-541, HFC-227ea, FK-5-1-12
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)
Working pressure:
- manifold, selector valves .....235 bar (3408 psi)
- pneumatic release device .....20 to 140 bar (290 to 2030 psi)

Test pressure:
- manifold, selector valves .....353 bar (5120 psi)
- pneumatic release device .....210 bar (3045 psi)

Flow characteristics (selector valve):
- DN25 .....equivalent length 0.18 m (0.59 ft)
- DN40 .....equivalent length 0.27 m (0.89 ft)
- DN50 .....equivalent length 0.37 m (1.21 ft)

Test certificate .....in acc. with EN 10204 - 3.1 (pressure test)
Selector valve .....complies with EN 12094-5
CE conformity .....acc. to Construction Products Regulation (EU) .....No 305/2011

Product sheets also applying

Cylinder D55-H106 .....see selector valve accessories
Ball valves BV DN25, DN40 and DN50 ...see selector valve accessories

Marking

Type (MX-BV ..), VdS no. (G393001), MX test no.
additonal marking for selector valve with NPT thread: thread (NPT)

Application

The selector valve BV DN 25/40/50 is used in accordance with the “documentation of special extinguishing systems” in fixed CO_2, argon, nitrogen, IG-55 and IG-541 high pressure fire extinguishing systems or VSN 1230/200 fire systems respectively.
In case of fire the selector valve DN 25/40/50 is used for flooding selected extinguishing zones.

Functional description

After a fire has been detected in one of the extinguishing zones of a multi- zone system, the appropriate selector valve opens. The extinguishing agent, CO_2, argon, nitrogen, IG-55, IG-541 or VSN 1230/200, flows into the relevant downstream pipe work of the extinguishing zone.

A safety valve is mounted on the manifold in order to release any excessive pressure.

For recommissioning, the selector valve has to be closed manually by using the reset hand lever. The right position of selector valve may monitored by one or two limit switches.

Not included in delivery

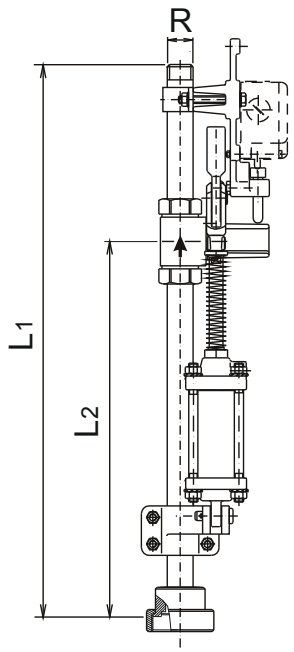
Limit switch US 432y, 2 contacts .....724420, see monitoring device
Manual release lever BV <DN65, 497 mm long 860346

Inert gas extinguishing technology

Selector valve

Selector valve BV DN25 - 50
CO_2 / IG / VSN 1230/200

Dimension drawing
Dimensions in **mm (inch)**



DN	R	L_1 ±15 (0.6)	L_2 ±15 (0.6)
25	R1 - DIN 2999	810 (31.9)	579 (22.8)
40	R1.1/2 - DIN 2999	795 (31.3)	575 (22.6)
50	R2 - DIN 2999	805 (31.7)	584 (23.0)
25 - NPT	1 - 11.5 NPT	810 (31.9)	579 (22.8)
40 - NPT	1.1/2 - 11.5 NPT	795 (31.3)	575 (22.6)
50 - NPT	2 - 11.5 NPT	805 (31.7)	584 (23.0)

Inert gas extinguishing technology

Selector valve accessories

Release cylinder MX-BV for cylinder rack, section valve

Approvals

1) Listed system covered by UL-File EX6388 (CO_2) and UL-File EX5248 (Ar)

SAP designation

e.g. part no. 847199: Cylinder MX-BV D55-H106

Maintenance

see applicable product informations
cyl. battery slave actuation, selector valve and manifold set

Designation		Part no.	Cylinder stroke	Weight kg (lbs)
Cylinder MX-BV D55	H106	847199	106 mm (4.17“)	5.0 (11.0)
	H206	822613	206 mm (8.11“)	6.7 (14.9)

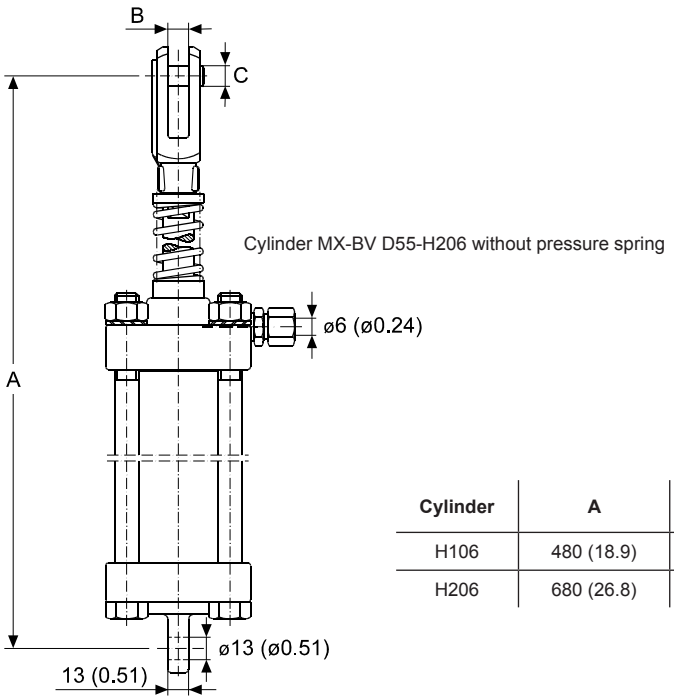
Technical data

Operating medium .....CO_2 - gaseous, argon (IG-01), ...nitrogen (IG-100), IG-55, IG-541
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)

Traction H106 .....3850 N at 20 bar (290 psi)
H206 .....4240 N at 20 bar (290 psi)

Dimension drawing

Dimensions in **mm (inch)**



Cylinder	A	B	C
H106	480 (18.9)	12 (0.47)	12 (0.47)
H206	680 (26.8)	16 (0.63)	16 (0.63)

Inert gas extinguishing technology

Selector valve accessories

Ball valve MX-BV
DN25, DN40 and DN50

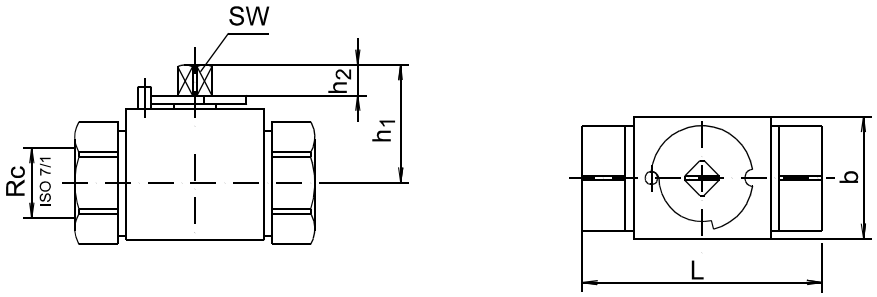
SAP designation
e.g. part no. 860590: Ball valve DN25 MX-BV25 / PB235

Maintenance
see operating instruction selector valve MX-BV DN25/40/50
part no. 886333

Designation		Part no.	Type no.	Weight kg (lbs)
Ball valve MX-BV	DN25	860590	591069	2.0 (4.4)
	DN40	860619	598332	3.8 (8.4)
	DN50	860620	598333	5.6 (12.4)

Technical data
Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100),
.....IG-55, IG-541, HFC-227ea, FK-5-1-12
Working pressure .....235 bar (3408 psi)
Test pressure .....353 bar (5120 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)

Dimension drawing
Dimensions in **mm (inch)**



DN	Rc ISO 7/1	h_1	h_2	SW	L	b
25	Rc 1	54 (2.13)	13.5 (0.53)	14 (0.55)	119 (4.69)	57 (2.24)
40	Rc 1.1/2	72.5 (2.85)	15.5 (0.61)	17 (0.67)	130 (5.12)	85 (3.35)
50	Rc 2	80 (3.15)	15.5 (0.61)	17 (0.67)	140 (5.51)	102 (4.02)

Inert gas extinguishing technology

Selector valve accessories

Manifold support complete - manifold 365 bar

Approvals

nicht zulassungspflichtig

SAP designation

part no. 886355: Manifold support compl.- manifold 365bar

Maintenance

maintenance-free

Designation	Part no.	Weight
Manifold support complete - manifold 365 bar	886355	7.7 kg (17.0 lbs)

Technical data

Material .....steel, galvanized

Application

Manifold support for manifold set DN50 (floor fastening).
After each third selector valve a manifold support is to be set.

Included in delivery

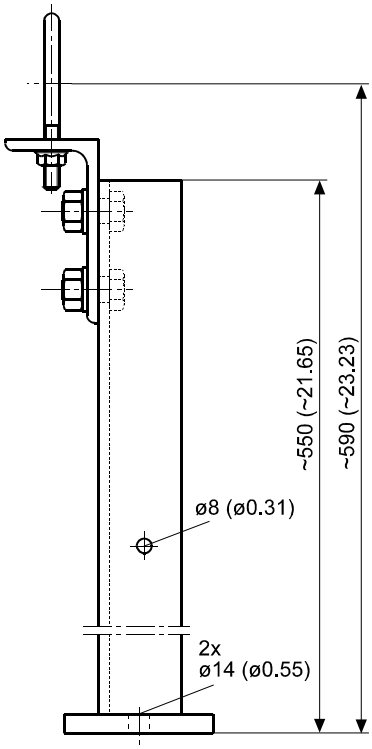
Manifold support for manifold 365 bar 886354
Angle manifold support compl. 886351
U-bolt DN50 125050
2x Hex. screw DIN601-M12x30 with nut 842562
2x Washer DIN125-B13 109886

Not included in delivery

Material for floor fastening

Dimension drawing

Dimensions in **mm (inch)**



Inert gas extinguishing technology

Selector valve accessories

Push-button selector valve

Approvals

VdS [1] · UL LISTED [2] · ULC LISTED [2] · FM APPROVED [3]

[1] Part of the system approval VSN 1230 (S314012) und VSN 200 (S313007)

[2] Listed system covered by UL-File EX26532 (Ar, VSN 200 and VSN 1230)

[3] Part of the system approval (VSN 200 and VSN 1230)

SAP designation

part no. 822674: Push-button selector valve

Maintenance

see product information push-button selector valve
part no. 886501

Designation	Part no.	Weight
Push-button selector valve	822674	0.16 kg (0.35 lbs)

Technical data

Operating medium .....CO_2 - gaseous, argon (IG-01), ...nitrogen (IG-100), IG-55, IG-541, HFC-227ea, FK-5-1-12
Working pressure .....2 to 365 bar (29 to 5294 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Thread connection .....for precision-drawn steel pipe 10 x 1
Position of device .....as desired

Material / Surface

Knurled screw .....brass, nickel plated
Non-return valve .....steel, galvanized

Application

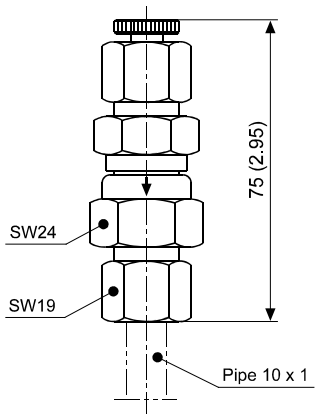
The push-button is used in accordance with the project-specific system schema in fixed fire extinguishing systems.
The push-button is used to manually vent pilot lines. This ensures that the pilot lines can be pressure-relieved without having to dismount them.

Included in delivery

Push-button selector valve
Product information push-button selector valve part no. 886501

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Safety valve CO_2

Safety valve G1/2 - 140 bar

Approvals

1) VdS
2) UL LISTED
2) ULC LISTED
3) FM APPROVED

1) Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)
- 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)
- VSN 1230 (S314012) / VSN 200 (S313007)

2) Listed system covered by:
UL-File EX6388 (CO_2) 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. 886282: Safety valve G1/2-140bar

Maintenance
maintenance-free

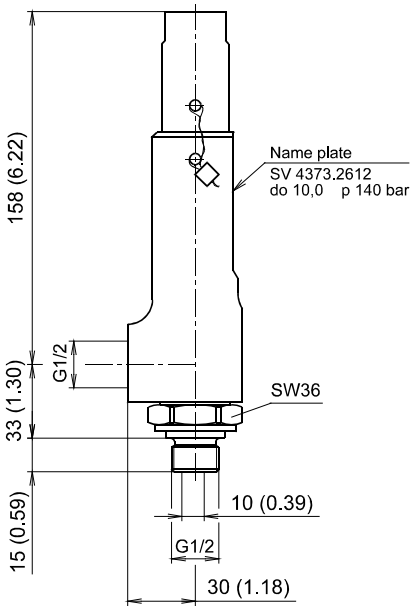
Designation	Part no.	Weight
Safety valve G1/2 - 140 bar	886282	1.4 kg (3.09 lbs)

Technical data
Type 4373.2612
Operating medium .....CO_2 - gaseous
Response pressure .....140 bar (2030 psi) at +50 °C (122 °F)
Flow rate .....approx. 3014 Nm³/h, gaseous
Thread .....in acc. to ISO 228
Metal seal .....-270 °C to +220 °C (-454 °F to 428 °F)
Position of device .....vertical

Safety valve according to pressure equipment directive 97/23/EC category IV

Application
- Upstream piping in stationary CO_2 fire extinguishing systems
- Pilot pipe in stationary CO_2, argon and nitrogen fire extinguishing systems and/or in VSN 1230/200 fire extinguishing systems

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Safety valve CO_2

Safety valve G1/2 - 120 bar

Approvals

without approval

SAP designation

part no. 644511: safety valve G1/2-120bar

Maintenance

maintenance-free

Designation	Part no.	Weight
Safety valve G1/2 - 120 bar	644511 [1]	1.4 kg (3.09 lbs)

[1] for spare only

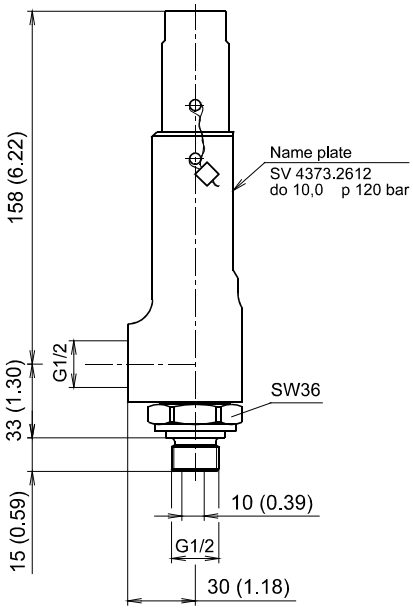
Technical data

Type 4373.2612
Operating medium .....CO_2 - gaseous
Response pressure .....120 bar (1740 psi) at +34 °C (93 °F)
Flow rate .....approx. 2650 Nm³/h, gaseous
Thread .....in acc. to ISO 228
Metal seal .....-270 °C to +220 °C (-454 °F to 428 °F)
Position of device .....vertical

Safety valve according to pressure equipment directive 97/23/EC category IV

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
Nozzle

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

Approvals

VdS
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] (mm²)	Part no.		A imaginary (mm²)	Weight kg (lbs)
	ED - 1/2	ED - 3/4		
14	133634	-	8	ED - 1/2: 0.5 (1.1) ED - 3/4: 0.9 (1.98)
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	
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
Type .....ED
Operating medium .....CO_2
Working pressure ....min. 10 bar (145 psi), max. 60 (870 psi) bar
Connection thread .....Rp 1/2, Rp 3/4, ISO 7
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Jet deflector .....sheet steel, 1 mm (0,04") thickness
Finish .....varnish, RAL3000 - red
.....or "Minimax-red", similar to RAL3000
Nozzle body .....brass

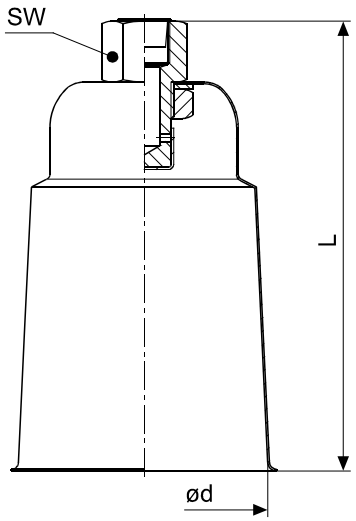
Marking
manufacturer (MX), type (ED), connection (1/2 or 3/4), exhaust aperture (xxx), approval sign (VdS), serial number

Application
The local application nozzle is used in accordance with the “documentation of special extinguishing systems” in fixed CO_2 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 CO_2 forms a densely aerosol cloud in the flooding area. With the local application nozzle this aerosol cloud can aligned exactly to the object.

Extinguishing technology CO_2 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 CO_2 HP
Nozzle

Nozzle MX1/4-H

Approvals / CE marking

VdS [1] G389007

UL [2] LISTED

CE 0786-CPD-30003

[1] VdS approval is only valid for CO_2 high pressure fire extinguishing systems and CO_2 low pressure fire extinguishing systems

[2] Listed system covered by UL-File EX6388 (CO_2) 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)!

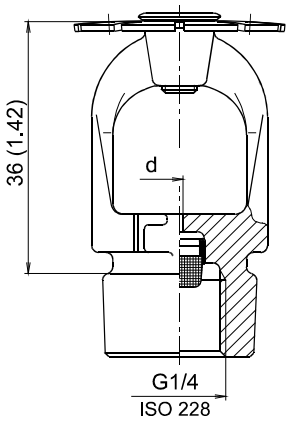
Technical data
Type MX1/4-H
Operating medium VdS .....CO_2
UL .....CO_2, argon
Connection thread .....G1/4 ISO 228
Working pressure ..min. 10 bar (145 psi), max. 60 (870 psi) bar
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Nozzle body .....brass
Sieve .....stainless steel
Width of mesh .....0.5 mm (0.02")
Wire diameter .....0.16 mm (0.01")
Nozzle .....complies with EN 12094-7
CE conformity .....acc. 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 CO_2 HP
Nozzle

Nozzle type DD

Approvals / CE marking

VdS G393008

UL LISTED [1)]

CE 0786-CPD-30002

[1)] Listed system covered by UL-File EX6388 (CO_2)

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 mm²
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

Ød mm (inch)	Part no.	A imaginary mm²
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

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

Technical data
Type .....DD
Operating medium .....carbon dioxide (CO_2), ...argon (IG-01), nitrogen (IG-100), IG-55, IG-541
Connecting thread .....R1/2, DIN 2999
Working pressure .....max. 60 bar (870 psi)
Nozzle body .....brass
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)
Nozzle .....complies with EN 12094-7
CE conformity .....acc. to Construction Products Regulation (EU) .....No. 305/2011

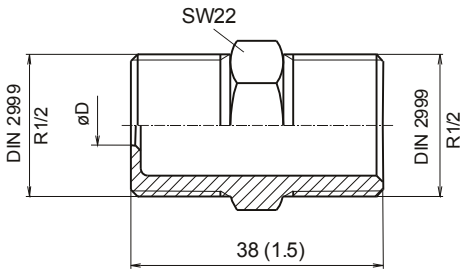
Application
The nozzle DD may only be used in accordance with system approval in stationary CO_2, argon, nitrogen, IG-55 and IG-541 fire extinguishing systems.
They is provided with threads on the inlet and outlet side so it is possible to mount the nozzle from the outside at e.g. housing and exhaust 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 type .....see nozzle

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 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, galvanized 747982
Cap T1-1/2 type D, galvanized 749887
Union U12-1/2 type D, galvanized 818540
Pipe nipple flush type / insertion type 818289

Additionally for flush type:
- Mounting socket thermo switch, screw-on .....see release device electr.
- 3x hex. screw DIN933-M5x16, galvanized 105730
- 3x hex nut DIN934-M5, galvanized 108420
- 6x washer DIN125-B5,3, galvanized 109758
- 3x spring ring DIN127 B5, galvanized 109473

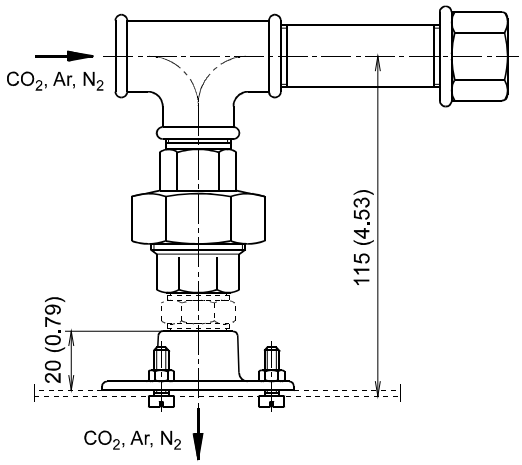
Additionally for insertion type:
- Counter nut P4-1/2, galvanized 818551
- Washer DIN125-B21-steel galvanized 109941

Not included in delivery
Nozzle type DD .....see nozzle

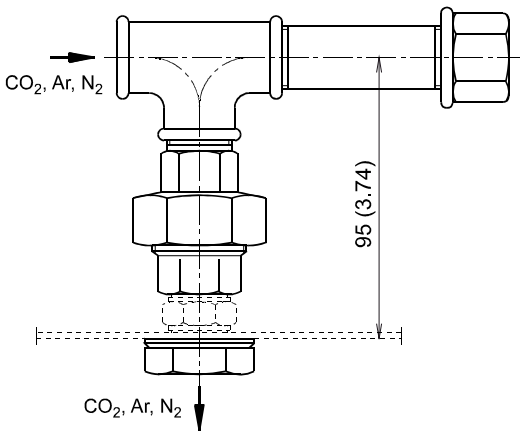
Additionally for flush type:
- Foil 1/2" 479377

Dimension drawing
Dimensions in **mm (inch)**

Flush type



Insertion type



Extinguishing technology CO_2 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] (mm²)	A imaginary (mm²)	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
Type .....KD
Operating medium .....CO_2
Working pressure ..min. 10 bar (145 psi), max. 60 (870 psi) bar
Connection thread .....R1/2", ISO 7/1
Nozzle insert .....brass
Deflector .....steel, nickel plated

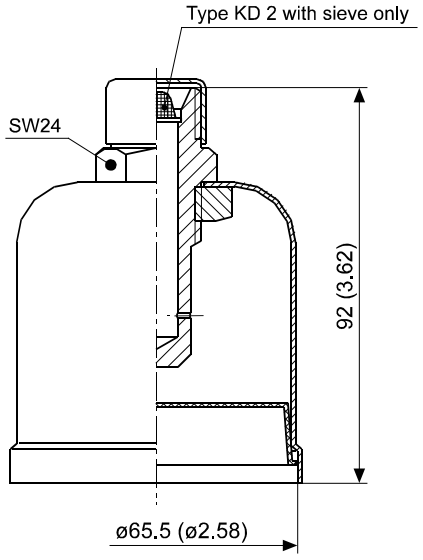
Application
The booth protection nozzle may only be used in accordance with system approval in stationary CO_2 fire extinguishing systems. It is designed for application in enclosed spaces for example protective covers of machine tools and in powder coating booths. After actuating the CO_2 fire extinguishing system the liquid CO_2 flows through a pipe system into the nozzle insert. After leaving the two nozzles holes the CO_2 expands in the jet deflector of the booth protection nozzle. The cone plug is press out from the gaseous CO_2 and the CO_2 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

Included in delivery
Booth protection nozzle KD
Product information booth protection nozzle part no. 886003

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Nozzle

CO_2 nozzle deep-fat fryers CSD

Approvals

VdS
G399012

SAP designation

Part no. 818423: CO_2 nozzle deep-fat fryers CSD

Maintenance

see product information CO_2 nozzle CSD, part no. 886255

Designation	Part no.	Weight
CO_2 nozzle deep-fat fryers CSD	818423	0.94 kg (2.07 lbs)

Technical data

Type .....CSD
Operating medium .....CO_2
Working pressure .....max. 60 (870 psi) bar
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Distance between nozzle and liquid surface ...min. 150 mm (5.91")
Connection thread .....R1/2, DIN 2999
Nozzle insert, strainer .....stainless steel
Deflector .....steel, nickel plated
Strainer width of mesh .....0.5 mm (0.2")
wire diameter .....0.16 mm (0.01")
Coverage area .....0,46 m²
Mass flow rate .....7.5 kg/min (high pressure CO_2 systems)
The calculation is carried out via the Minimax calculation program as a nozzle RD 1/2x3.0 with a mass flow rate of 7.5 kg/min

Application

The CO_2 nozzle CSD may only be used in accordance with system approval in stationary CO_2 kitchen protection fire extinguishing systems. After actuating the fire extinguishing system the CO_2 leave the nozzle insert in the form of snow. The CO_2 snow lays itself on the surface of the burning liquid (e.g. cooking grease). By the evaporation of the snow the liquid is cooled down under the auto ignition point and the flames are suffocated by the gaseous CO_2.

Marking

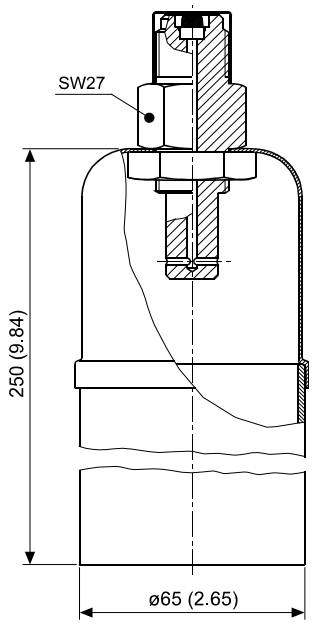
Manufacturer´s sign (MX), type (CSD), approval sign (VdS), serial number

Included in delivery

CO_2 nozzle deep-fat fryers CSD
Product information CO_2 nozzle CSD part no. 886255

Dimension drawing

Dimensions in **mm (inch)**



Inert gas extinguishing technology
Nozzle

Nozzle RD 1/2 and 3/4

Approvals / CE marking

VdS G392002

UL[1)] LISTED

CE 0786-CPD-30001

[1)] Listed system covered by UL-File EX5248 (Ar).
For CO_2 - 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 [mm²]	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	
3/4 x 13.7	252621	110	0.10 kg (0.22 lbs)
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
Type .....RD 1/2, RD 3/4
Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100), ...IG-55, IG-541
Connection thread .....according 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 body .....brass

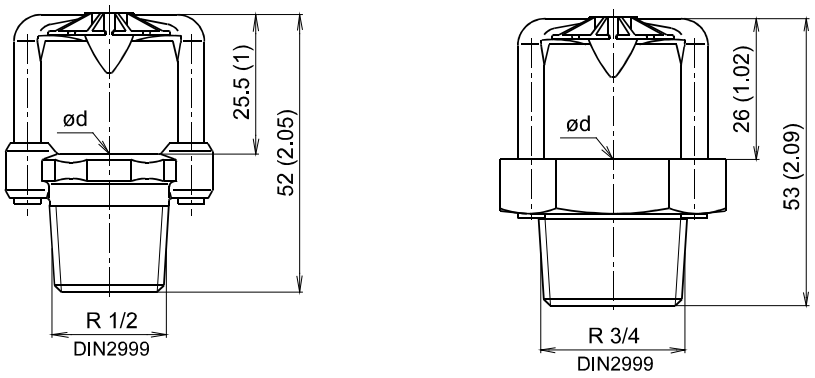
Marking
manufacturer (SFH), type (RD), bore diameter d (X,X), approval sign (VdS), CE, serial number

Application
The nozzles RD may only be used in as room protection nozzles in stationary CO_2, 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.

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 CO_2 HP
Nozzle

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

Approvals

1)

1) Systemlistung innerhalb UL-File EX6388 (CO_2)

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	
	13.5	887192	
	14.4	887193	
R 3/4	15.2	887194	0.10 kg (0.22 lbs)
	16.2	887195	
	17.0	887196	
	18.4	887197	
	19.6	887198	
	20.6	887199	

Technical data
Type .....RD 1/2, RD 3/4
Operating medium .....CO_2
Connection thread .....according 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 body .....brass

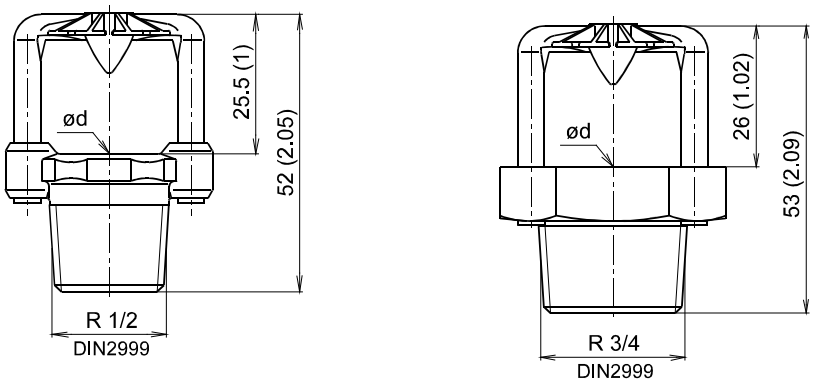
Marking
manufacturer (SFH), type (RD), UL-Code (X,X), serial number

Application
The nozzles RD with UL-Code may only be used as room protection nozzles in stationary CO_2 fire extinguishing systems. The nozzles distribute the extinguishing agent evenly in the extinguishing zone in the calculated flooding time.

Extinguishing technology CO_2 HP
Nozzle

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

Dimension drawing
Dimensions in **mm (inch)**

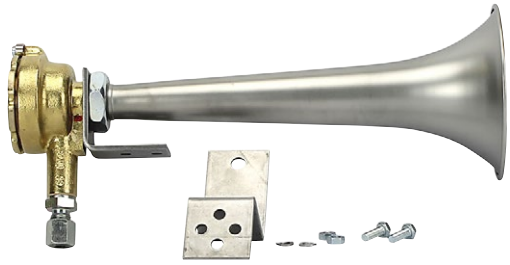


Nozzle RD	UL-Code	ød
R 1/2	3.4	3.0 (0.12)
	4.2	3.7 (0.15)
	5.2	4.6 (0.18)
	5.8	5.2 (0.2)
	7.4	6.6 (0.26)
	8.3	7.4 (0.29)
	9.2	8.3 (0.33)
	10.2	9.2 (0.36)
	10.8	9.8 (0.39)
	11.4	10.3 (0.41)
	12.2	10.9 (0.43)
	12.9	11.5 (0.45)
	13.5	12.0 (0.47)
	14.4	12.7 (0.5)
R 3/4	15.2	13.7 (0.54)
	16.2	14.6 (0.57)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

G310017 | LISTED [1)] | LISTED [1)] | APPROVED [2)] | 0786-CPD-30126

[1)] Listed system covered by UL-File EX6388 (CO_2) 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-ED A3 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 makrofon .....877120, see alarm device

Included in delivery

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

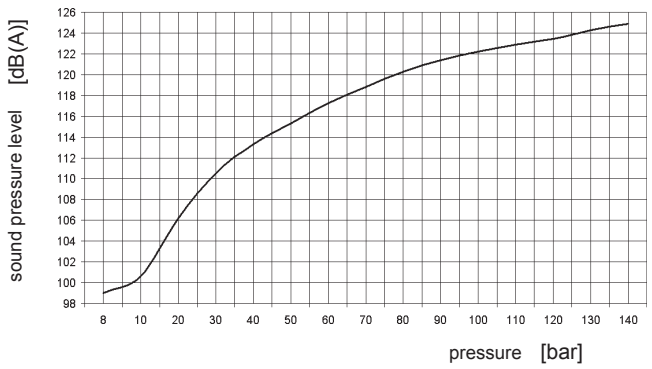
Inert gas extinguishing technology

Alarm device

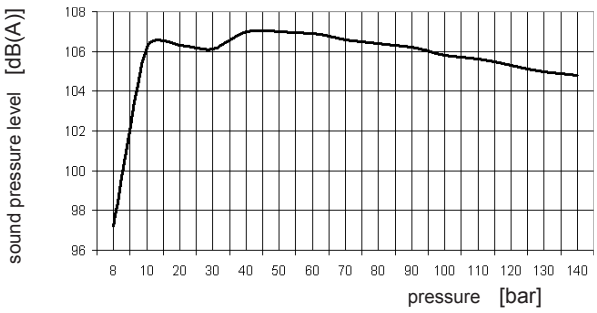
Makrofon

A-weighted sound pressure level over the pressure range

without silencer



with silencer

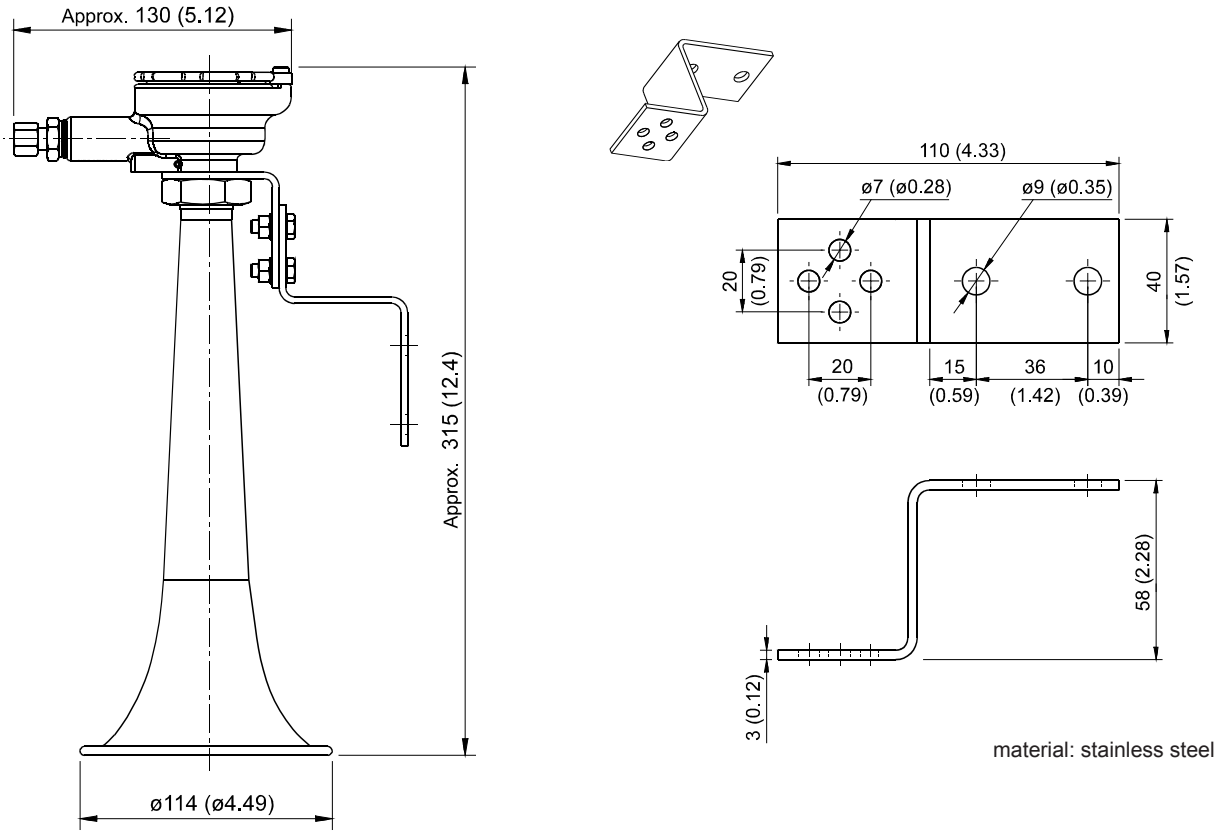


Note: The above shown curves were determined in the laboratory. Due to the influencing factors given in situ, the real values may deviate from the curves.

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

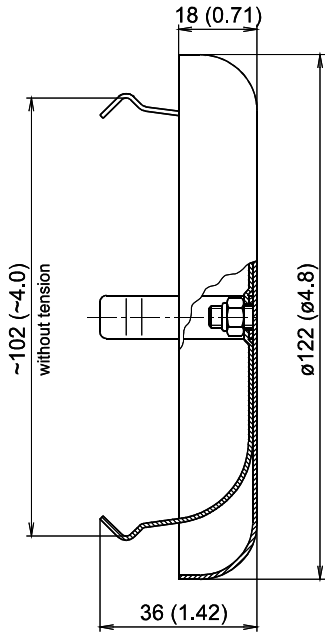
Designation	Part no.	Weight
Silencer makrofon MX-1	877120	0.12 kg (0.26 lbs)

Technical data

Material .....stainless steel

Dimension drawing

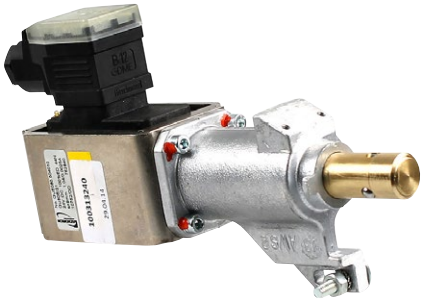
Dimensions in **mm (inch)**



1/1

Inert gas extinguishing technology
Control device

Release device EM



Approvals

VdS [1] · UL LISTED [2] · ULC LISTED [2] · FM APPROVED [3]

[1] Part of the system approval (release device 24 V DC only):
- 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)

[2] Listed system for release device 24 V DC only
covered by UL-File EX6388 (CO_2) and
covered by UL-File EX26532 (Ar, VSN 200 and VSN 1230)

[3] Part of the system approval (VSN 200 and VSN 1230)
release device EM 24 V DC only

SAP designation
e.g. part no. 885738: Release device EM 24V-DC

Maintenance
see operating instruction release device EM, part no. 885744

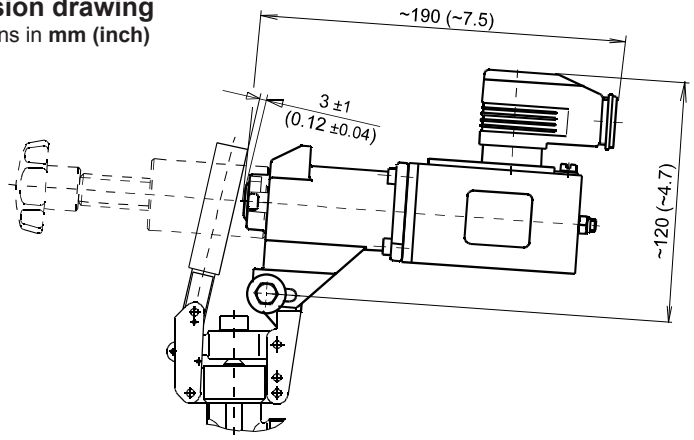
Designation		Part no.	Weight
Release device EM	24 V DC	885738	1.8 kg (4.0 lbs)
	230 V AC	885739	

[4] Release device EM 230 V AC without approval

Technical data
Temperature range
Solenoid .....-20 °C to +50 °C (-4 °F to 122 °F)
Magnetic force .....44 N
Switching duration .....100 %
Voltage .....24 V DC (18 - 28 V DC) / 230 V AC
Current .....1.04 A / 0.12 A
Stroke .....9 mm (0.35")
IP code .....IP 54
(by accordingly covering of the pull and pressure rod side)

Application
The release device EM may be used only in accordance with the “documentation of special extinguishing systems” in fixed CO_2, argon, nitrogen, IG-55 and IG-541fire extinguishing systems. It is used for electrical release of lever valve.

Dimension drawing
Dimensions in **mm (inch)**



Functional description
The solenoid of the release device EM is triggered by an electrical signal whereby the spring loaded release bolt is unlokked. The release bolt pushes against the lever of the valve, which turns around by approx. 90°.

Included in delivery
Release device EM with fastening material
Operating instruction release device EM part no. 885744

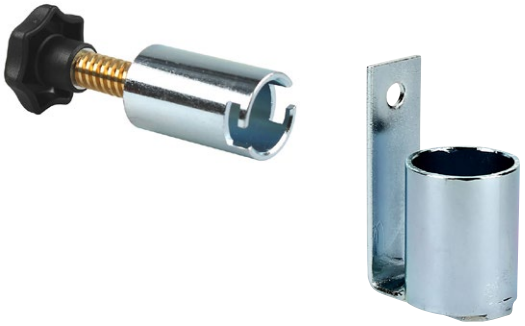
Additionally for release device EM 24 V DC:
- Card MVA LÖ 782239
- Product information card MVA LÖ 904653

Not included in delivery
Reset tool for release device EM .....885530, see control device
Bracket for reset tool release device EM .....886367, see control device
Monitoring for release device EM ....885740, see monitoring device

Inert gas extinguishing technology
Control device

Reset tool for release device EM and bracket for reset tool

Approvals
no approval required



SAP designation
e.g. part no. 885530: Reset tool release device EM

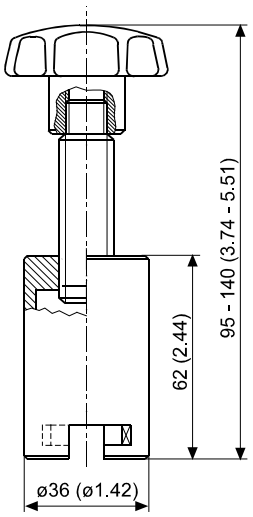
Maintenance
maintenance-free

Designation	Part no.	Weight kg (lbs)
Reset tool for release device EM	885530	0.31 (0.68)
Bracket for reset tool	886367	0.32 (0.71)

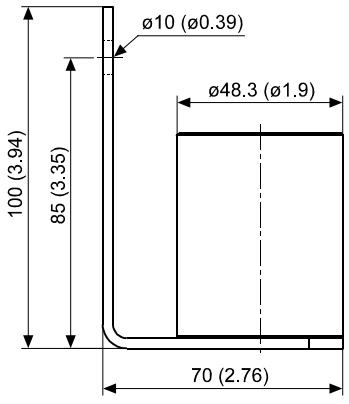
Technical data
Bracket for reset tool release device EM .....steel, galvanized

Dimension drawing
Dimensions in **mm (inch)**

Reset tool for release device EM



Bracket for reset tool release device EM



Inert gas extinguishing technology
Control device

Lever - cylinder valve EM-release

Approvals
no approval required

SAP designation
e.g. part no. 885603: Lever EM-release

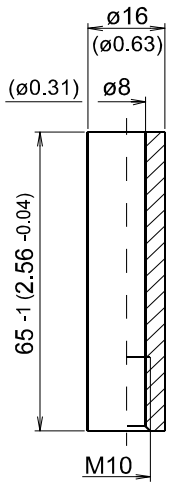
Maintenance
maintenance-free

Style	Designation	Part no.	Application	Weight kg (lbs)
1	Lever - cylinder valve EM-release	885603	CO_2 / Ar single cylinder system, pilot control valve DN15	0.08 (0.04)
2	Lever - cylinder valve EM-release D=25	915159	PAE - CO_2 - electrical, pilot cylinder	0.08 (0.04)

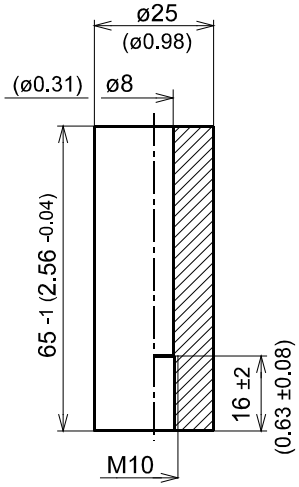
Technical data
Material style 1 .....brass
style 2 .....aluminium

Dimension drawing
Dimensions in **mm (inch)**

Style 1



Style 2



Inert gas extinguishing technology
Control device

Adapter connection CO_2 DN4 and DN8

Approvals
no approval required

SAP designation
part no. 827325: Adapter connection CO_2-ERMETO

Maintenance
maintenance-free

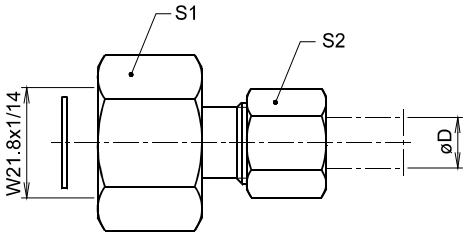
Spare parts
Flat gasket 18.5 x 13 x 2 part no. 149970

Designation		Part no.	Weight kg (lbs)
Adapter connection CO_2	DN4	827325	0.13 (0.29)
	DN8	855425	0.14 (0.31)

Technical data
Operating medium .....argon (IG-01), nitrogen (IG-100), ...IG-55, IG-541, carbon dioxide (CO_2) / gaseous
Working pressure .....200 bar (2900 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Material .....brass, steel

Application
- for the connection of precision-drawn steel pipe at CO_2 pilot cylinder or extinguishing agent cylinder
- connection of the cylinder valve to test connection LCP or to pressure reducer 200/10 bar N_2 (Oxeo inert gas extinguishing system with ConstantFlow HD300-LCP)

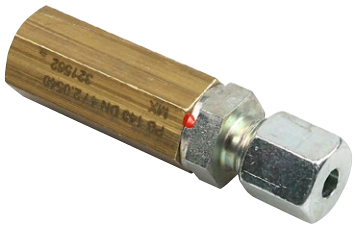
Dimension drawing
Dimensions in **mm (inch)**



Nominal diameter	S1	S2	øD
DN4	SW30	SW14	6 (0.24)
DN8		SW19	10 (0.39)

Inert gas extinguishing technology
Control device

Safety device malfunction pressure SFD DN4



Approvals

VdS [1] · UL LISTED [2] · ULC LISTED [2] · FM APPROVED [3]

[1] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)
- 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)
- CO_2 extinguishing system ND-1 (S398012), electrical release
- CO_2 extinguishing system ND-2 (S398013), non-electrical release
- Oxeo Nitrogen low pressure extinguishing system (S310016)
- VSN 1230 (S314012) / VSN 200 (S313007)

[2] Listed system covered by UL-File EX26532 (Ar, VSN 200 and VSN 1230)

[3] Part of the system approval (VSN 200 and VSN 1230)

SAP designation
part no. 885869: Safety device malfunction pressure SFD DN4

Maintenance
see Product information safety device malfunction pressure SFD DN4 part no. 885867

Designation	Part no.	Weight
Safety device malfunction pressure SFD DN4	885869	0.15 kg (0.33 lbs)

Technical data
Operating medium .....argon (IG-01), nitrogen (IG-100), ...IG-55, IG-541, carbon dioxide (CO_2) / gaseous, ...HFC 227 ea, FK 5-1-12
Working pressure ..... 140 bar (2030 psi)
Test pressure ..... 210 bar (3045 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)
Connection DN4 .....pipe 6 x 1
Installation position .....vertical, see page 2

Material / Surface
Housing .....brass
Gasket .....NBR
Ball 1.4301

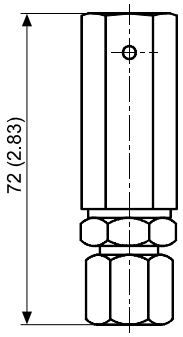
Application
The safety device malfunction pressure is used in accordance with the project-specific system schema in fixed fire extinguishing systems. The safety device malfunction pressure is intended only for releasing small amounts of leakage in pneumatic pilot lines. The safety device closes automatically on higher pressure.

Note
The safety device malfunction pressure **has to be** installed upright into the pilot lines as well an installation nearby a potential leakage (e.g. pilot gas tank) is recommended.

Included in delivery
Safety device malfunction pressure SFD DN4
Product information safety device malfunction pressure SFD DN4 part no. 885867

Not included in delivery
Unions and pipe for extinguishing pipework and pilot pipes
see page 2/2

Dimension drawing
Dimensions in **mm (inch)**

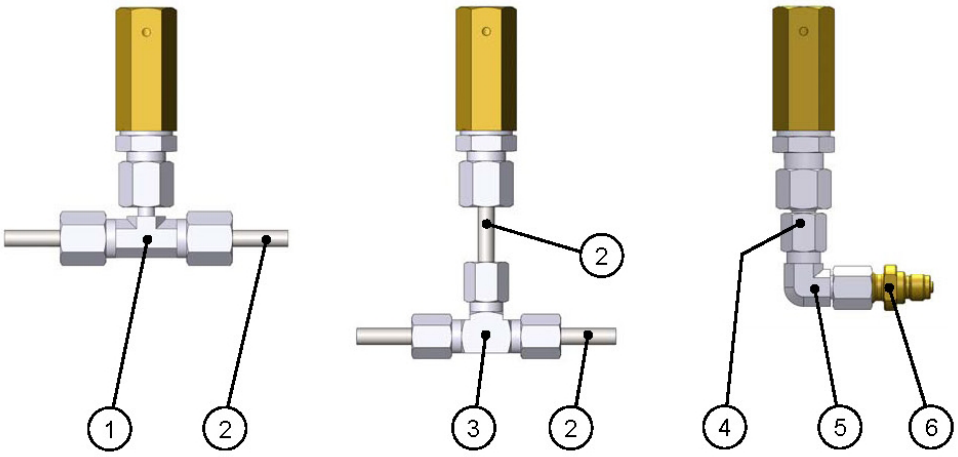


Inert gas extinguishing technology

Control device

Safety device malfunction pressure
SFD DN4

Installations examples

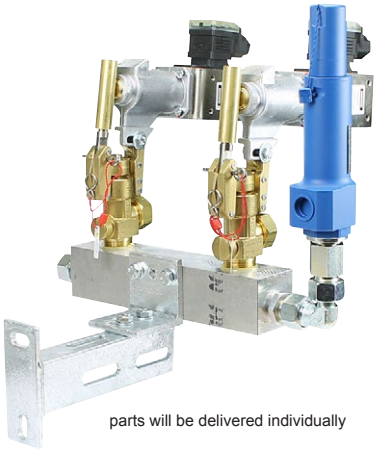


Not included in delivery

Item 1: Union EVT 06 S A3C .....part no. 886406
Item 2: Pipe 6 x 1 mm (0.236 x 0.039 inch) .....part no. 823563
Item 3: Union T 6-PLA3C .....part no. 125633
Item 4: Union GZR06L/06SCF .....part no. 910650
Item 5: Union EW 06 L CF .....part no. 889145
Item 6: Adapter M12x1.5 – G1/8 .....part no. 887644
(for release device pneumatic or pneumatic/manual)

Inert gas extinguishing technology
Control device

Pilot control manifold CO_2 - DN15



parts will be delivered individually

Approvals

VdS [1] · UL LISTED [2] · ULC LISTED [2] · FM APPROVED [3]

[1] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)
- 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)
- CO_2 extinguishing system ND-1 (S398012), electrical release
- VSN 1230 (S314012) / VSN 200 (S313007)

[2] Listed system covered by UL-File EX6388 (CO_2) and UL-File EX26532 (Ar, VSN 200 and VSN 1230)

[3] Part of the system approval (VSN 200 and VSN 1230)

SAP designation
e.g. part no. 830778: Pilot control manifold CO_2 - DN15 - 2

Maintenance
see technical description pilot control manifold DN15
part no. 876772

Branches	Part no.	Weight approx. kg (lbs)
2	830778	9.7 (21.4)
3	830791	14.2 (31.3)
4	830808	17.7 (39.0)
5	830833	22.2 (48.9)
6	830857	26.8 (59.1)
7	830870	30.2 (66.6)
8	830894	34.7 (76.5)

Branches	Part no.	Weight approx. kg (lbs)
9	830912	39.3 (86.6)
10	830936	42.7 (94.1)
11	830950	47.3 (104.3)
12	830973	51.8 (114.2)
13	830985	55.2 (121.7)
14	830997	59.8 (131.8)
15	834115	64.3 (141.8)

Technical data
Operating medium .....carbon dioxide (CO_2)
Working pressure .....140 bar (2030 psi)
Test pressure .....235 bar (3408 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)
Connected voltage .....24 V DC

Product sheets also applying
Safety valve G1/2 - 140 bar .....886282, see safety valve
Argon cylinder valve K85-20.0-S49 .....871014, see cylinder valve
Lever - cylinder valve .....885603, see control device
Release device EM 24 V DC .....885738, see control device

Application
The pilot control manifold DN 15 may only be used in accordance with system approval in stationary CO_2, argon, nitrogen, IG-55, IG-541 and VSN 1230/200 fire extinguishing systems. It is used as a pilot control valve in the pneumatic activation of fire extinguishing systems or as a CO_2 extinguishing agent manifold for small design quantity, for example local protection for electrical devices.

Functional description
The release device EM is triggered by an electrical activation. The release bolt of the release device is released and actuates the valve lever, which turns around by approx. 90° and opens the valve.
The safety valve prevents an undue exceeding of the operating pressure.

Included in delivery
Pilot control manifold CO_2 - DN15 (not pre-assembled)
Techn. description pilot control manifold DN15 part no. 876772
Installation drawing pilot control manifold DN15 part no. 827301

Not included in delivery
Connection to valve:
Adapter for connecting CO_2 - Ermeto DN4 827325
DN8 855425
Monitoring for release device EM ...885740, see monitoring device

Inert gas extinguishing technology

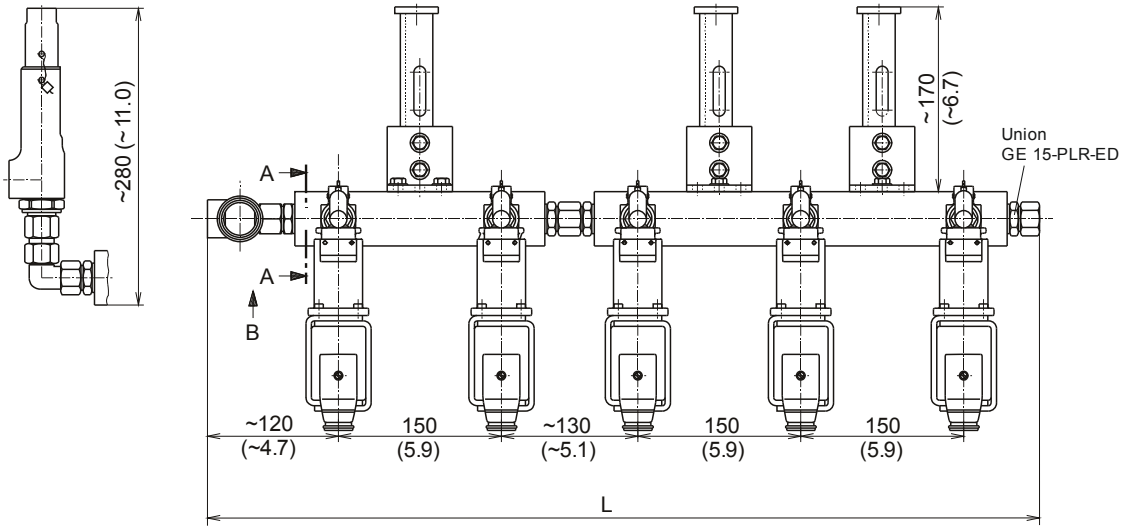
Control device

Pilot control manifold CO_2 - DN15

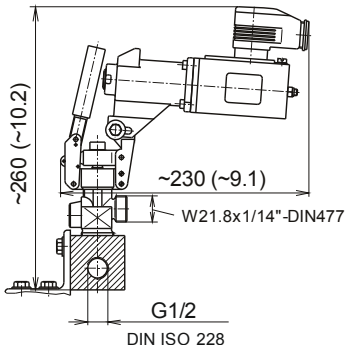
Dimension drawing

Dimensions in **mm (inch)**

View: B



Section: A-A



Branches	L
2	340 (13.4)
3	490 (19.3)
4	620 (24.4)
5	770 (30.3)
6	920 (36.2)
7	1050 (41.3)
8	1200 (47.2)
9	1350 (53.2)
10	1480 (58.3)
11	1630 (64.2)
12	1780 (70.1)
13	1910 (75.2)
14	2060 (81.1)
15	2210 (87.0)

Inert gas extinguishing technology
Control device

Disable device complete

Approvals / CE marking

VdS G301010 | UL LISTED [1] | ULC LISTED [1] | FM APPROVED [2] | CE 0786-CPD-30007

[1] Listed system covered by UL-File EX6388 (CO_2) and UL-File EX26532 (Ar, VSN 200 and VSN 1230)

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

SAP designation
part no. 878070: Disable device complete

Maintenance
see product information disable device complete part no. 878069

Designation	Part no.	Weight
Disable device complete	878070	0.8 kg (1.8 lbs)

Technical data
Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100), ...IG-55, IG-541
Working pressure ..... 140 bar (2030 psi)
Nominal diameter DN6
Connection threads .....M12 x 1.5
Temperature range .....-30 °C to +80 °C
Connection .....cone for 6 mm steel pipe
Disable device .....complies with EN 12094-6
CE conformity .....acc. to Construction Products Regulation (EU) .....No. 305/2011

Application
The disable device may only be used in accordance with system approval in stationary CO_2, argon, nitrogen, IG-55, IG-541 or in VSN 1230/200 fire extinguishing systems.
The disable device is corresponding to the german rules BGR 134 of the workmen compensations board, a non electrical disable device to lock Argotec® extinguishing fire system. It prevents the extinguishing agent to be released in the extinguishing area. For repair or maintenance work in the protected area, when the system can be activated unintentionally or people can not leave the area within the pre - warning time, the extinguishing
system must be blocked.

Functional description
The ball valve enables the pilot pipe to be shut off.
At the same time the pilot pipe is vented to preclude an uncontrolled rise of pressure.
When the system is in normal operation the ball valve is lokked with a padlock in the eyelet so that the marking „Betrieb“ (operation) is visible.
To block the pilot pipe, the padlock is removed and the handle of the ball valve turned clockwise to the stop. The ball valve is then locked in position by fastening the padlock in the eyelet so that the marking „Blockiert“ (isolation) is visible.
The resetting of the ready status is carried out in reversed order so that the marking "Betrieb" (operating) is visible again. For monitoring the operating and isolation position a limit switch for every position must be mounted (not included in delivery).

Included in delivery
Disable device type DN6 885375
Padlock 635/40 131777
Retainer shuttle valve 873497
2x Cap nut M 6-L A3C 173959
2x Progressive ring DPR 6-L/S-A3D 208208
Product information disable device complete 878069
as well as fastening material

Not included in delivery
The following must be ordered separately for monitoring of each ball valve position:
Limit switch type ZS 256-11Z .....828482, see monitoring device
2x Cheese-head screw DIN84-M4x25-brass 106745
2x Washer DIN125-B 4,3 brass 109734

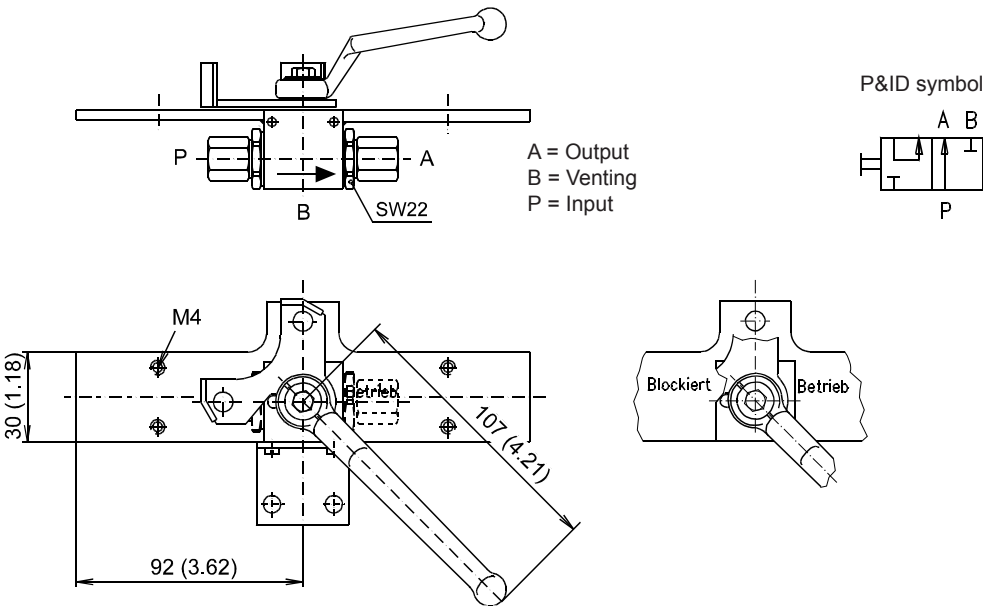
Inert gas extinguishing technology

Control device

Disable device complete

Dimension drawing

Dimensions in **mm (inch)**



Inert gas extinguishing technology
Control device

Shuttle non-return valves WRV DN4 and DN8

Approvals / CE marking

VdS G303002 | UL LISTED [1] | ULC LISTED [1] | FM APPROVED [2] | CE 0786-CPD-30008

[1] Listed system covered by UL-File EX6388 (CO_2) and UL-File EX26532 (Ar, VSN 200 and VSN 1230)

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

SAP designation
e.g. part no. 886247: Shuttle non-return valve WRV 4

Maintenance
see product information shuttle non-return valve part no. 886246

DN	Part no.	For pipe	Weight
4	886247	6 x 1	0.25 kg (0.55 lbs)
8	886248	10 x 1	0.24 kg (0.53 lbs)

Technical data
Operating medium .....carbon dioxide (CO_2) - gaseous
.....argon (IG-01), nitrogen (IG-100), IG-55, IG-541
Working pressure .....2 to 140 bar (29 to 2030 psi)
Test pressure .....210 bar (3045 psi)
Rate of pressure rise .....min. 3 bar/s (43,5 psi/s)
Installation position .....feedings only horizontal
Shuttle non-return valves .....complies with EN 12094-13
CE conformity .....acc. to Construction Products Regulation (EU)
.....No. 305/2011

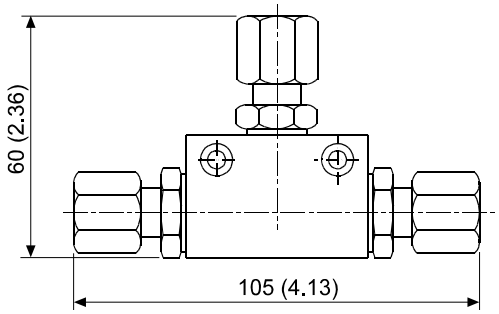
Material / Surface
Housing .....aluminium
Gasket .....NBR
Ball .....stainless steel

Application
The shuttle non-return valve is used in fixed high pressure CO_2, argon, nitrogen, IG-55 and IG-541 fire extinguishing systems or in VSN 1230/200 fire extinguishing systems according the system approval.

Functional description
The shuttle non-return valve for the pneumatic control allows the differential directly control of pneumatic units with two pressure sources.

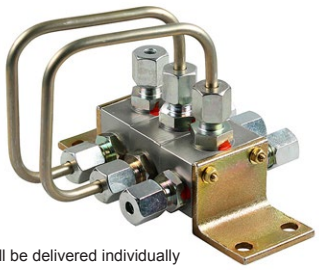
Included in delivery
Shuttle non-return valves WRV
Product information shuttle non-return valve part no. 886246

Dimension drawing
Dimensions in **mm (inch)**



Inert gas extinguishing technology
Control device

Shuttle non-return valve block



parts will be delivered individually

Approvals
see shuttle non-return valves MX-WRV

SAP designation
e.g. part no. 873850: Shuttle non-return valve block 4/1

Maintenance
see product information shuttle non-return valve block part no. 873849

Designation	Inputs / Outputs	Part no.	Weight kg (lbs)
Shuttle non-return valve block	4 / 1	873850	1.5 (3.3)
	5 / 1	873862	2.0 (4.4)
	6 / 1	873874	2.5 (5.5)
	7 / 1	873886	3.0 (6.6)
	8 / 1	873898	3.5 (7.7)

Technical data
Operating medium .....carbon dioxide (CO_2) - gaseous
.....argon (IG-01), nitrogen (IG-100), IG-55, IG-541
Working pressure .....2 to 140 bar (29 to 2030 psi)
Test pressure .....210 bar (3045 psi)
Rate of pressure rise .....min. 3 bar/s (43,5 psi/s)
Connection DN4 .....pipe 6 x 1
Installation position .....feedings only horizontal

Application
The shuttle non- return valve blocks are used in accordance with system approval in stationary high pressure CO_2, argon, nitrogen, IG-55, IG-541 fire extinguishing systems.

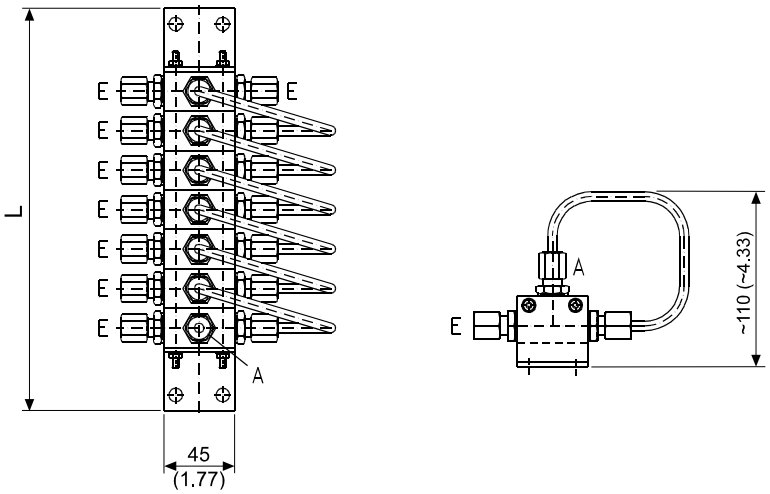
Functional description
The shuttle non- return valve blocks allows the differential directly control of pneumatic units with several pressure sources.

Included in delivery
Shuttle non-return valve block
(delivered in individual components)

Product inform. shuttle non-return valve block part no. 873849

Dimension drawing
Dimensions in **mm (inch)**

Inputs / Outputs	L
4 / 1	155 (6.1)
5 / 1	180 (7.1)
6 / 1	205 (8.1)
7 / 1	230 (9.1)
8 / 1	255 (10.0)



Inert gas extinguishing technology
Control device

Control device pneumatic SEP-2

Approvals

VdS [1] UL LISTED [2]

[1] Part of the system approval Argotec HD-1

[2] Listed system covered by UL-File EX6388 (CO_2) and UL-File EX5248 (Ar)

SAP designation
part no. 827878: Control unit pneumatic SEP-2

Maintenance
see product information SEP-2 part no. 827751

Designation	Part no.	Weight approx.
Control device pneumatic SEP-2	827878	3.8 kg (8.4 lbs)

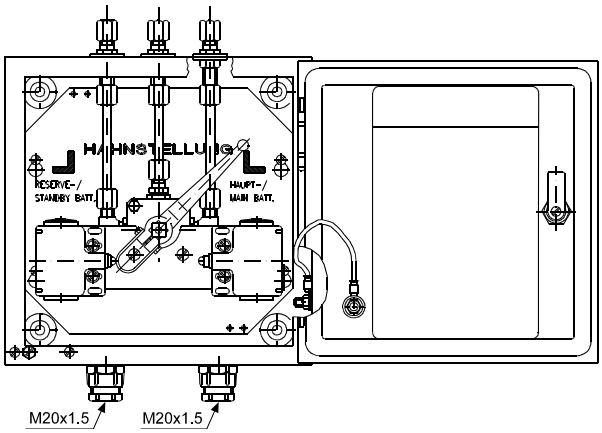
Technical data
Operating medium .....carbon dioxide (CO_2)
Working pressure .....max. 140 bar (2030 psi)
Dimensions (W x H x D) .....220 x 220 x 120
Finish .....RAL7032 - pebble grey, stove enammelled
Thread connection .....for precision-drawn steel pipe 6 x 1
Limit switch ZS 256-11z .....see monitoring device

Application
The pneumatic control device SEP-2 may be used only in accordance with system approval in stationary CO_2, argon, nitrogen, IG-55, IG-541 fire extinguishing systems. It installed in the pilot pipe to the cylinder rack.

Functional description
The pneumatic control device is used in stationary gas extinguishing systems as a manual switch-over device to be able to activate a main or a standby battery alternative.
Both ball valve positions are monitored electrically by means of limit switch. After actuation of the main battery (fire case) the ball valve must be turned in position “standby battery”.

Included in delivery
Control device pneumatic SEP-2 with
Fastening material (4x dowel S7, 4x wood screw 5x30)
Product information SEP-2 part no. 827751

Not included in delivery
Fixing lever FD 15 870393
(ease of installation of the control device at wall)



Inert gas extinguishing technology
Control device

Control device pneumatic SEP-2-B blocking

Approvals
component without VdS approval [1]
and without CE according to
Construction Products Directive

[2] LISTED

[1] **Caution:**
This control device is no longer admissible as disable device for stationary fire fighting plants with gaseous fire extinguishing agents in the European Economic Area.

[2] Listed system covered by UL-File EX6388 (CO_2) and
UL-File EX5248 (Ar)

SAP designation
part no. 827933: Control unit pneumatic SEP-2-B

Maintenance
see product information SEP-2-B part no. 827957

Designation	Part no.	Weight approx.
Control device pneumatic SEP-2-B	827933	3.8 kg (8.4 lbs)

Technical data
Operating medium .....carbon dioxide (CO_2)
Working pressure .....max. 140 bar (2030 psi)
Dimensions (W x H x D) .....220 x 220 x 120
Finish .....RAL7032 - pebble grey, stove enammelled
Thread connection .....for precision-drawn steel pipe 6 x 1
Limit switch ZS 256-11z .....see monitoring device

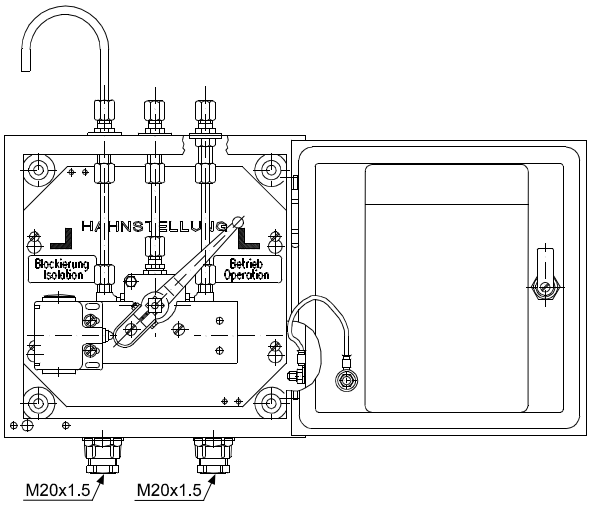
Application
The pneumatic control device SEP-2-B may be used only in accordance with system approval in stationary CO_2, argon, nitrogen, IG-55 and IG-541 fire extinguishing systems. It installed in the pilot pipe to the selector valve.

Functional description
The pneumatic control device is used in stationary gas extinguishing systems as a pneumatic blocking device.
With this device it is possible to block the pneumatic actuation of a selector valve and simultaneously ensuring that there will be no accidental pressure rise by venting the pilot pipe.
To achieve this the valve lever must be turned anticlockwise into the position "Isolation". The mode of operation will be supervised with limit switch.

Included in delivery
Control device pneumatic SEP-2-B with
Fastening material (4x dowel S7, 4x wood screw 5x30)
Product information SEP-2-B part no. 827957

Not included in delivery
Fixing lever FD 15 .....::.....870393
(ease of installation of the control device at wall)

if a second limit switch is to be used to indicate the disabled state:
Limit switch ZS 256-11z .....828482,see monitoring device
2 x cheese-head screw DIN84-M4x25-brass 106745
2 x washer DIN125-B 4.3 brass 109734



Inert gas extinguishing technology
Control device

Solenoid valve 2/2-ways compl. 0 - 150 bar, NW1.5

Approvals

VdS [1)]

1) Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)
- MX 1230 (S308003) / MX 200 (S307004)

SAP designation
part no. 887378: Solenoid valve compl. 2/2-way 0-150bar

Maintenance
see product information solenoid valve compl. part no. 887395

Designation	Part no.	Weight
Solenoid valve 2/2-ways compl. 0 - 150 bar, NW1.5	887378	0.66 kg (1.46 lbs)

Technical data
Type .....SV 04
Operating medium .....CO_2, argon (IG-01), nitrogen (IG-100)
Medium temperature .....-20 °C to +50 °C (-4 °F to +122 °F)
Ambient temperature .....-20 °C to +40 °C (-4 °F to +104 °F)
Nominal diameter .....1.5 mm (0.06")
permissible working pressure .....0 - 150 bar (0 - 2175 psi)
Connections .....for precisions-drawn steel pipe 10 x 1
Position of device .....as desired
Resting position .....NC, normally closed

Electrical data
Magnet coil .....M20 in acc. to VDE 0580
Electr. connection .....connector plug in acc. to DIN 43650
IP code IP54
Voltage .....24 V / DC
Power .....14 W
Power consumption .....0.58 A
Duration of operation .....100 %

Material / Surface
Housing .....brass
Internal parts .....stainless steel
Gaskets .....polyurethane
Unions .....steel, galvanized
Filter .....sintered bronze

Application
The solenoid valve compl. may only be used in accordance with system approval for electrical actuation of selector valves in stationary CO_2, argon and nitrogen fire extinguishing systems.

Functional description
The solenoid valve compl. is normally closed. It opens when an electric voltage is applied. The solenoid valve is fitted with a filter on the inlet side in order to prevent contamination of the valve seat.

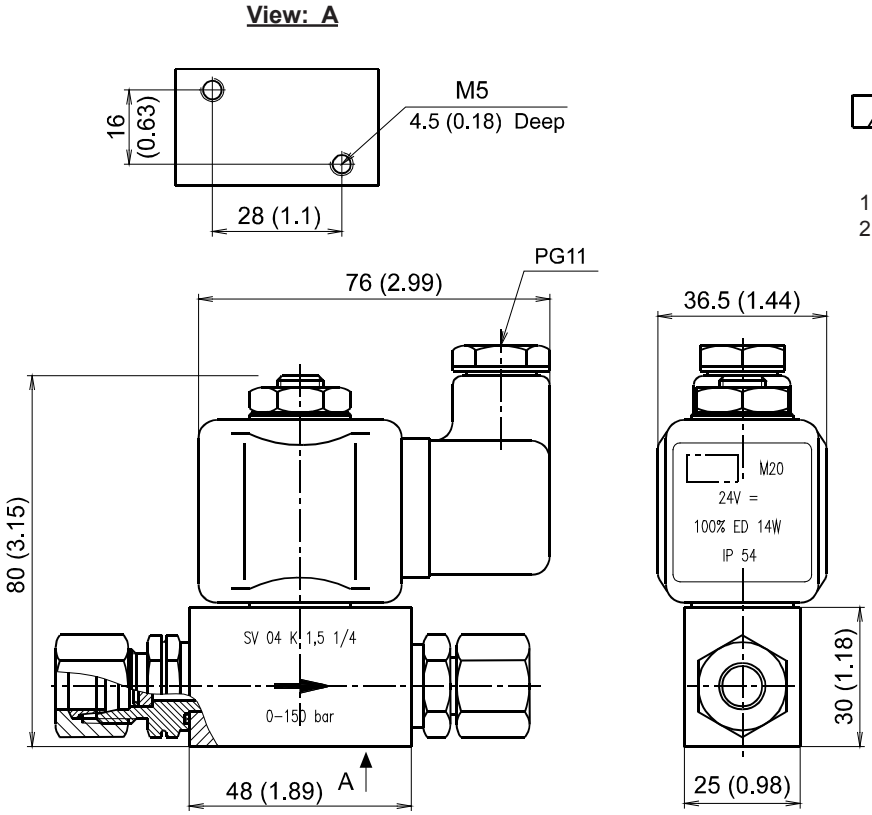
Not included in delivery
Solenoid valve 2/2-ways compl. 0 - 150 bar, NW1.5
Product information solenoid valve compl. part no. 887395

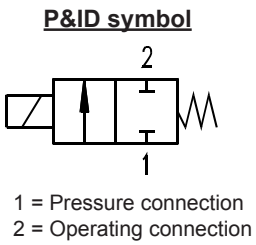
Inert gas extinguishing technology

Control device

Solenoid valve 2/2-ways compl.
0 - 150 bar, NW1.5

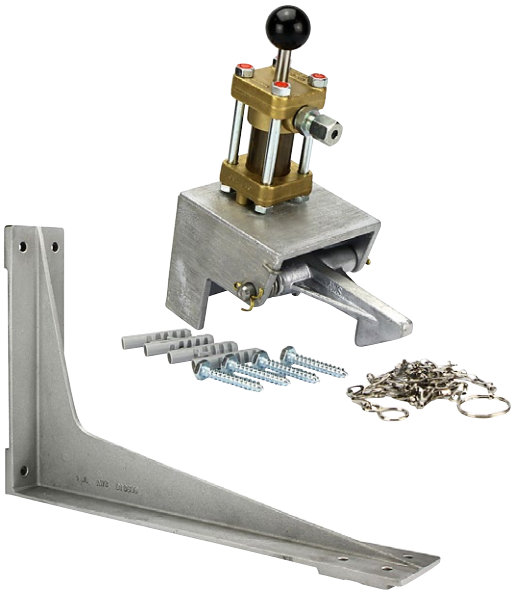
Dimension drawing
Dimensions in **mm (inch)**





Inert gas extinguishing technology
Control device

Door release unit FH and angle bracket door release unit FH



Approvals
no approval required

SAP designation
part no. 779443: Door release unit FH

Maintenance
functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Door release FH	779443	1.8 kg (4.0 lbs)
Angle bracket door release FH	810588	2.7 kg (6.0 lbs)

Caution
The door release unit type FH is not a hold-open system or a door hold-open system in terms of German building law. It is not allowed to keep open doors which are classified as fire doors by law.

Technical data
Operating medium .....carbon dioxide (CO_2), ...argon (IG-01), nitrogen (IG-100), IG-55, IG-541
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Cylinder stroke .....30 mm (1.18")
Piston .....ø25 mm (ø0.98")
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Material angle bracket ...DIN EN 1706 AC - AlSi10Mg(a) SF/KF

Included in delivery
Cylinder ø25 x H30 .....227303, see control device
Bracket for door release FH 779420
Ratchet for door release FH 775000
Spring for door release FH 779431
Bolt DIN1443 12H11x122x112 1.4104 769627
Chain for door release 815290
Union GE 6-PSR-ED A3C 125578
2x Cotter DIN94-3,2x25-Ms 247323
4x Wood screw DIN571-8x50 gal Zn 105420
4x Rawl plug S10 129493

Not included in delivery
Pipe 6 x 1 B-210 2394/1 .....M1-02-04 part 2

Inert gas extinguishing technology

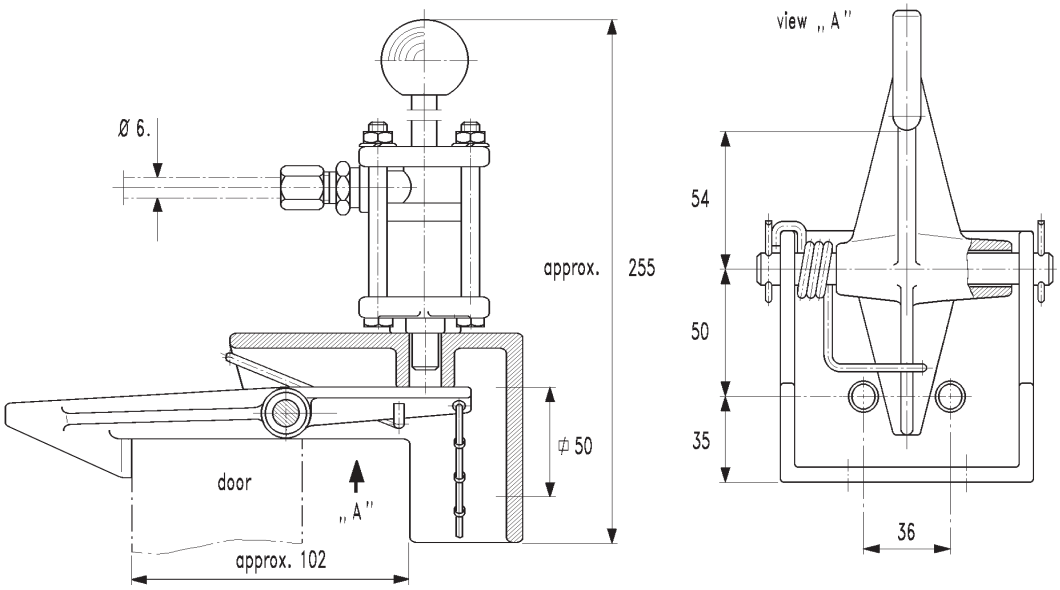
Control device

Door release unit FH and angle bracket door release unit FH

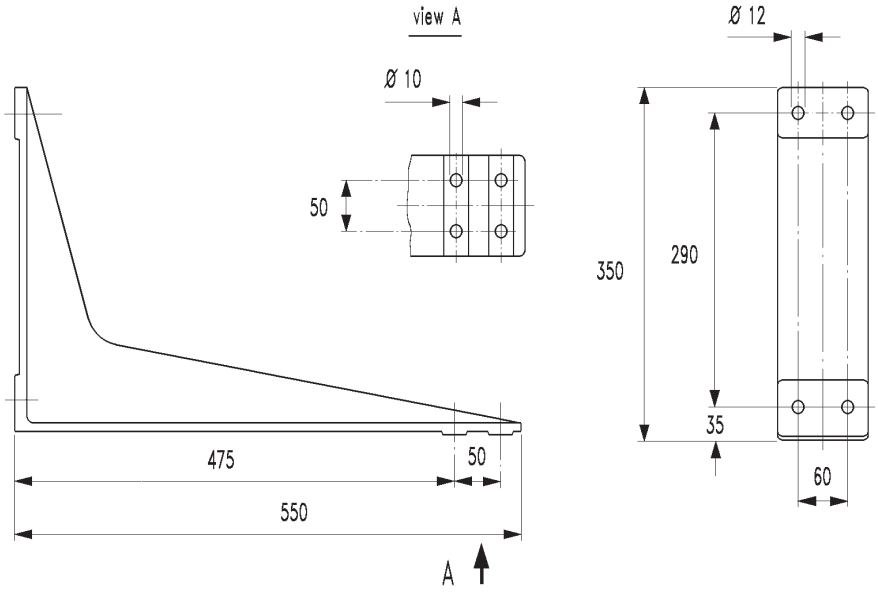
Dimension drawing

Dimensions in **mm**

Door release unit FH



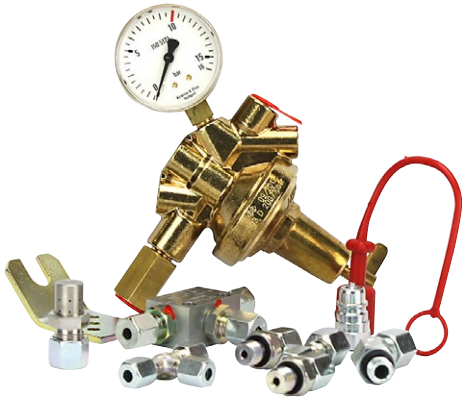
Angle bracket door release unit FH



Inert gas extinguishing technology

Control device

Triggering unit for pneumatic pressure relief flap



Approvals

no approval required

SAP designation

part no. 886147: Triggering unit pneum. pressure relief flap

Maintenance

see technical description triggering unit pneumatic pressure relief flap part no. 886146

Designation	Part no.	Weight
Triggering unit for pneumatic pressure relief flap	886147	2.3 kg (5.1 lbs)

Technical data

Operating medium ...argon (IG-01), nitrogen (IG-100), IG-55, IG-541 .....carbon dioxide (CO_2) / gaseous, HFC 227 ea, FK 5-1-12
Inlet pressure ...min. 10 bar (145 psi) / max. 140 bar (2030 psi)
Outlet pressure .....max. 10 bar (145 psi)
Temperature range .....-20°C to +50°C (-4 °F to 122 °F)

Application

Enclosures protected by gas extinguishing systems are exposed to overpressure during flooding. Enclosures of this type must be fitted with pressure relief openings in order to avoid impermissible pressure loads. The pressure relief openings are, for example, pneumatically controlled and sealed, due to spring force, by means of self-closing pressure relief flaps. In order to ensure pressure relief for the flooded enclosure, these pressure relief flaps must be opened at the start of flooding and closed once flooding is complete.

The triggering unit is used to trigger pressure relief flaps in a timely manner.

The triggering unit must only be used in stationary argon, nitrogen, carbon dioxide, IG-55, IG-541, HFC-227ea and FK-5-1-12 fire extinguishing systems

Functional description

When flooding of the enclosure begins, the triggering unit is pressurized via connection “A” in the nozzle pipe system.
The triggering medium (operating medium) flows via the shuttle non-return valve to the pressure reducer and from there with reduced pressure to connection "C" of the pneumatic actuating element of the pressure relief flap.
The pressure relief flap is opened and remains open until the requisite pressure for triggering exists in the nozzle pipe system.

After flooding of the enclosure has ended, the pressure in the nozzle pipe system drops and at connection “A” accordingly. The pneumatic actuating element is vented via the pressure relief unit and the spring-loaded pressure relief flap closes automatically when there is a lack of triggering pressure.

For a function check, pressurization can occur via the test connection.

Caution: property damage due to rapid pressure build-up in fire extinguishing systems with argon, nitrogen, IG-55, IG-541, carbon dioxide, HFC-227ea and FK-5-1-12!
An overpressure arises immediately after release of the fire extinguishing system. This may cause damage to the walls of the extinguishing zone. Make sure that the pressure relief flap opens within 1 second.

Included in delivery

Pressure reducer 200 bar / 10 bar .....886145, see control device
Shuttle non-return valve MX-WRV DN4 .....886247, see control device
Test connection pneumatic activation .....887431, see test device
Nozzle ARGE 1,0 .....886276, see nozzle
Unions, see fitting pilot pipe:
- 2x GE 6-PSR-ED A3C 125578
- 1x T 6-PL A3C.....125633
- 1x KOR 10/6-PL A3C.....755260

Technical description triggering unit pneumatic pressure relief flap 886146

Not included in delivery

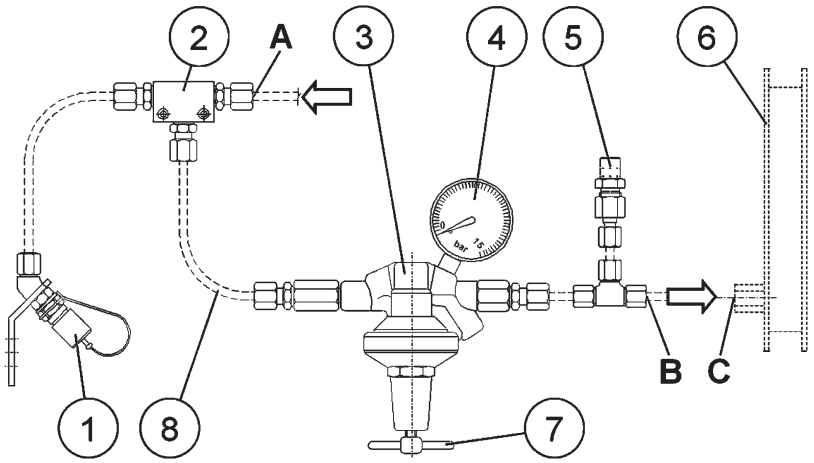
Test device pneum. control .....see test device
Pipe for pilot pipes 6x1 B-210-2394/1 .....823563, see pilot pipe
Pneumatic pressure relief flap .....

Inert gas extinguishing technology

Control device

Triggering unit for pneumatic pressure relief flap

Installations example



1 Test connection
2 Shuttle non-return valve
3 Pressure reducer
4 Pressure gauge (outlet pressure)
5 Pressure relief unit
6 Pressure relief flap (not included in the delivery)
7 Set-screw
8 Precision steel pipe 6x1 (not included in the delivery)

A: Connection to the nozzle pipe system (min. 10 bar (145 psi) / max. 140 bar (2030 psi))
B: Connection to the pressure relief flap (max. 10 bar (145 psi))
C: Connection for the actuating element (e.g. pneumatic cylinder) of the pressure relief flap

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE - CO_2 mechanical

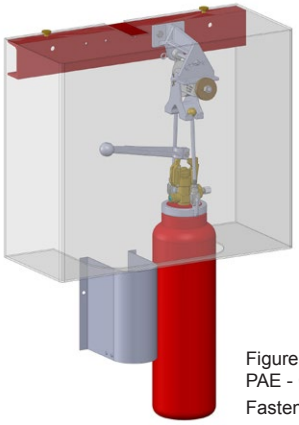


Figure:
PAE - CO_2 mechanical with protective cover
Fastening material not shown

Approvals

VdS [1)]

1) Part of the system approval:
- CO_2 extinguishing system HD-2 (S398011)

SAP designation

e.g. part no. 885331: PAE-CO_2-mech.-4kg kompl.

Maintenance

see operating instructions PAE-CO_2 part no. 885374

Pneumatic release device			Part no.	Amount filled	Weight approx.
PAE - CO_2 mechanical	with protective cover	4 kg	885331	4 kg (8.82 lbs)	29 kg (64 lbs)
		8 kg	885333	8 kg (17.64 lbs)	39 kg (86 lbs)
	without protective cover	4 kg	885330	4 kg (8.82 lbs)	25 kg (55 lbs)
		8 kg	885332	8 kg (17.64 lbs)	35 kg (77 lbs)

Technical data

Operating medium .....CO_2 - gaseous
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)
Pilot cylinder volume .....5.4 l or 10.7 l
Thread connection .....for precision steel pipe 6x1

Product sheets also applying

Cylinder with valve 5.4 l / 10.7 l:
- CO_2 - Cylinder EU .....see cylinder filled
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 0.16 kg / 0.3 kg .....see ad-on part cylinder

Application

The release device PAE mechanical must only be used in accordance with system approval in stationary carbon dioxide fire extinguishing systems. The release device PAE provides all pneumatic system parts with carbon dioxide (CO_2) as work medium and is used to activate:
- Cylinder batteries
- Selector valves
- Pneumatic control elements and alarm components (makrofon)
- Pneumatic door closing devices
- Pneumatic pressure relief dampers.

Note

Each PAE has to be installed complete with protective cover only. Exception: If an additional protecting guard is provided (for example enclosure).

Functional description

The activation of the release device PAE occurs mechanically (weight). Thus the toggle valve on the pilot cylinder is opened and the carbon dioxide (CO_2) flows through the connected pipe assembly respectively the hose to the pneumatic system components of the fire extinguishing system.
Depending on the version a 5.4 l (1.43 US.liq.gal) or 10.7 l (2.83 US.liq.gal) pilot cylinder is used.
The entire release device PAE is fastened onto a bearing structural element via a U-profile.

Included in delivery

Pneumatic release device PAE - CO_2 mechanical with operating instructions PAE-CO_2 as well as fastenings

additionally for PAE with protective cover:
Protective cover PAE 885322

Not included in delivery

Pre-assembled connection pipe ...see operating instructions PAE
Support weighing device PAE ...886350, see mounting accessories
Weight 8 kg 738423
Rope accessories .....see control device
Monitoring loss pneum. actuat. device ...888998, see monitoring device
Monitoring rope pneum. actuat. device ...886379, see monitoring device

Extinguishing technology CO_2 HP

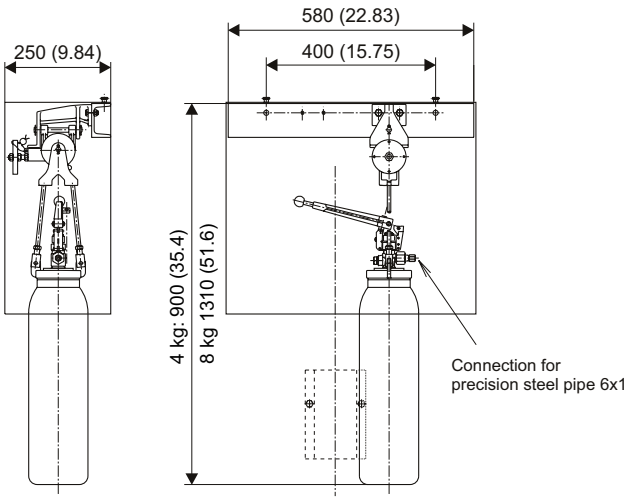
Control device CO_2 HP components

Pneumatic release device PAE - CO_2 mechanical

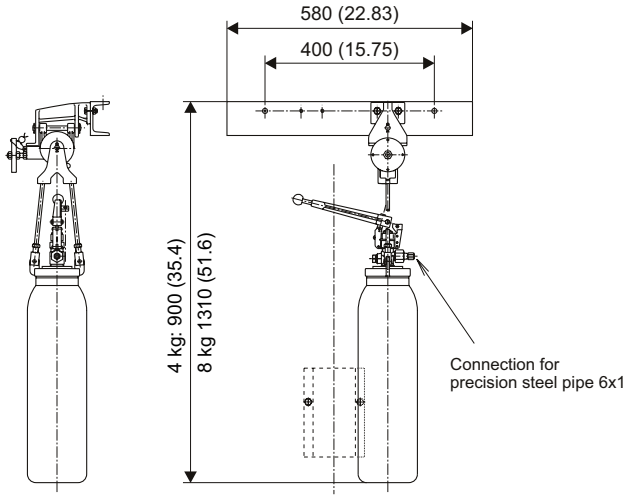
Dimension drawing

Dimensions in **mm (inch)**

PAE - CO_2 mechanical with protective cover



PAE - CO_2 mechanical without protective cover



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE - CO_2 electrical

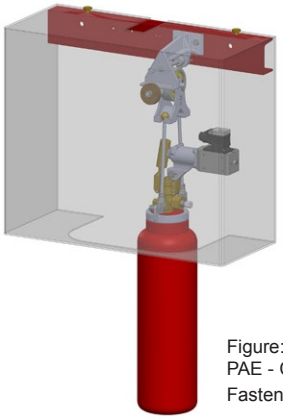


Figure:
PAE - CO_2 electrical with protective cover
Fastening material not shown

Approvals

VdS [1), 2)]

1) Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)
- 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)
- VSN 1230 (S314012) / VSN 200 (S313007)

SAP designation

e.g. part no. 885335: PAE-CO_2-EM-4kg compl.

Maintenance

see operating instructions PAE-CO_2 part no. 885374

Pneumatic release device			Part no.	Amount filled	Weight approx.
PAE - CO_2 electrical	with protective cover	4 kg	885335	4 kg (8.82 lbs)	28 kg (62 lbs)
		8 kg	885341 2)	8 kg (17.64 lbs)	38 kg (84 lbs)
	without protective cover	4 kg	885334	4 kg (8.82 lbs)	24 kg (53 lbs)
		8 kg	885338	8 kg (17.64 lbs)	34 kg (75 lbs)
PAE - CO_2 electrical with reserve	with protective cover	4 kg	885337	2x 4 kg (2x 8.82 lbs)	48 kg (106 lbs)
		8 kg	885343 2)	2x 8 kg (2x 17.64 lbs)	66 kg (146 lbs)
	without protective cover	4 kg	885336	2x 4 kg (2x 8.82 lbs)	44 kg (97 lbs)
		8 kg	885342 2)	2x 8 kg (2x 17.64 lbs)	62 kg (137 lbs)

2) not listed in the Oxeo inert gas extinguishing systems

Technical data

Operating medium .....CO_2 - gaseous
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)
Pilot cylinder volume .....5.4 l or 10.7 l
Thread connection .....for precision steel pipe 6x1

Product sheets also applying

Cylinder with valve 5.4 l / 10.7 l:
- CO_2 - Cylinder EU .....see cylinder filled
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 0.16 kg / 0.3 kg .....see ad-on part cylinder
Release device EM 24 V DC .....see control device
Lever - cylinder valve EM release .....see control device

Application

The release device PAE must only be used in accordance with system approval in stationary carbon dioxide, IG-01 (argon), IG-100 (nitrogen), IG-55-, IG-541-, VSN 1230 and VSN 200 fire extinguishing systems.
The release device PAE provides all pneumatic system parts with carbon dioxide (CO_2) as work medium and is used to activate:
- Cylinder batteries
- Selector valves
- Pneumatic control elements and alarm components (makrofon)
- Pneumatic door closing devices
- Pneumatic pressure relief dampers.

Functional description

The activation of the release device PAE occurs electrically (release device EM). Thus the toggle valve on the pilot cylinder is opened and the carbon dioxide (CO_2) flows through the connected pipe assembly respectively the hose to the pneumatic system components of the fire extinguishing system.
Depending on the version a 5.4 l (1.43 US.liq.gal) or 10.7 l (2.83 US.liq.gal) pilot cylinder is used. The PAE with reserve has an additional pilot cylinder (reserve). The entire release device PAE is fastened onto a bearing structural element via a U-profile.

Note

Each PAE has to be installed complete with protective cover only. Exception: If an additional protecting guard is provided (for example enclosure).

Included in delivery

Pneumatic release device PAE - CO_2 electrical with operating instructions PAE-CO_2 as well as fastenings
additionally for PAE with protective cover:
Protective cover PAE 885322

Not included in delivery

Pre-assembled connection pipe ...see operating instructions PAE
Support weighing device PAE ...886350, see mounting accessories
Reset tool .....885530, see control device
Monitoring loss pneum. actuat. device ...888998, see monitoring device
Monitoring for release device EM .....885740, see monitoring device

Extinguishing technology CO_2 HP

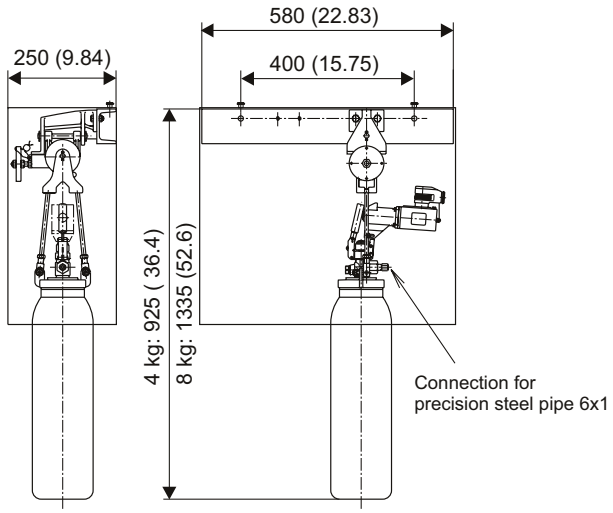
Control device CO_2 HP components

Pneumatic release device PAE - CO_2 electrical

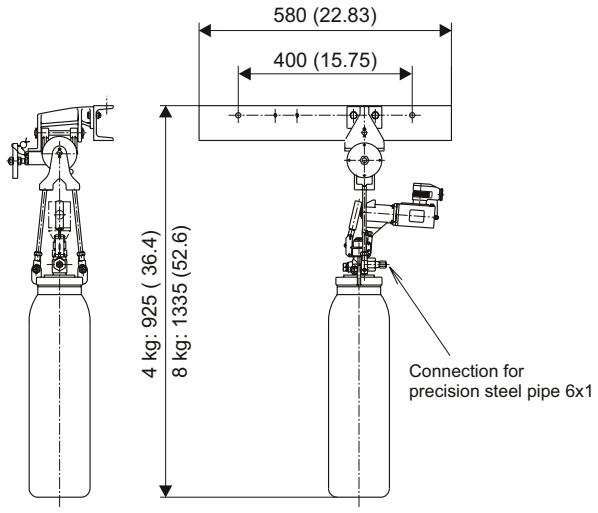
Dimension drawing

Dimensions in **mm (inch)**

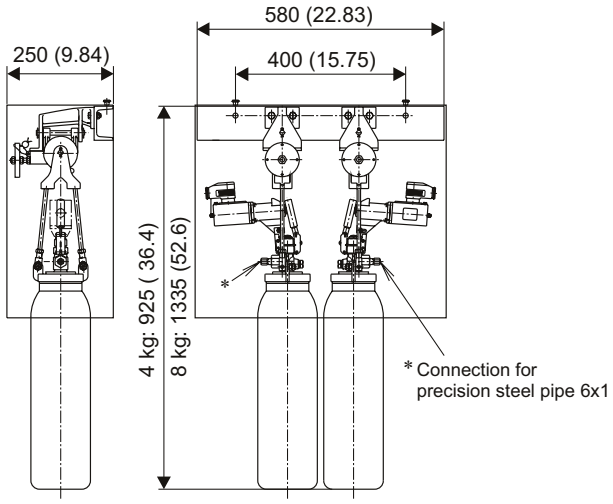
PAE - CO_2 electrical with protective cover



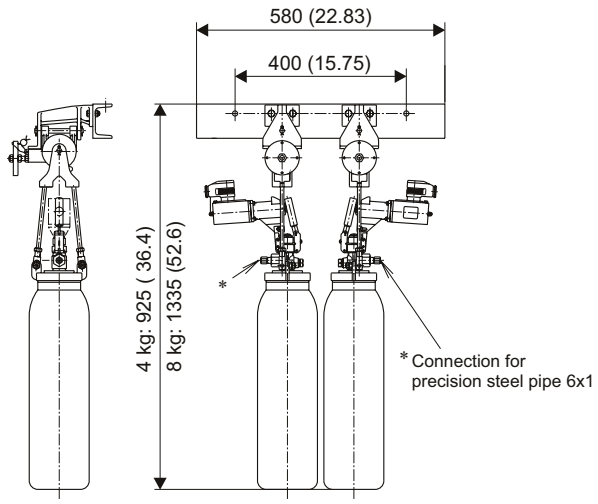
PAE - CO_2 electrical without protective cover



PAE - CO_2 electrical with reserve with protective cover



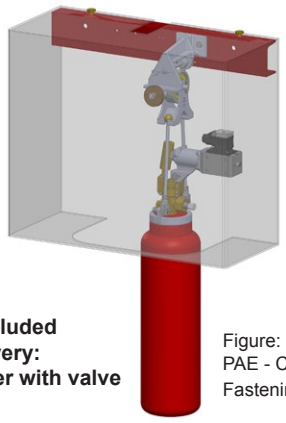
PAE - CO_2 electrical with reserve without protective cover



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE - CO_2 electrical FM/UL



Not included in delivery: Cylinder with valve

Figure:
PAE - CO_2 electrical with protective cover
Fastening material not shown

Approvals

VdS [1] | FM APPROVED [2] | UL LISTED [3] | ULC LISTED [3]

[1] Part of the system approval:
- VSN 1230 (S314012) / VSN 200 (S313007)

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

[3] Listed system covered by:
- UL-File EX6388 (CO_2)
- UL-File EX26532 (Ar, VSN 200 and VSN 1230)

SAP designation

e.g. part no. 911751: PAE-CO_2-EM-3,6kg compl. FM/UL

Maintenance

see operating instruction PAE-CO_2 part no. 885374

Pneumatic release device FM/UL			Part no.	Amount filled [4]	Weight [5] approx.
PAE - CO_2 electrical	with protective cover	3,6 kg	911751	3.6 kg (7.9 lbs)	28 kg (62 lbs)
		7,1 kg	911759	7.1 kg (15.7 lbs)	38 kg (84 lbs)
	without protective cover	3,6 kg	911750	3.6 kg (7.9 lbs)	24 kg (53 lbs)
		7,1 kg	911758	7.1 kg (15.7 lbs)	34 kg (75 lbs)
PAE - CO_2 electrical with reserve	with protective cover	3,6 kg	911753	2x 3.6 kg (2x 7.9 lbs)	48 kg (106 lbs)
		7,1 kg	911761	2x 7.1 kg (2x 15.7 lbs)	66 kg (146 lbs)
	without protective cover	3,6 kg	911752	2x 3.6 kg (2x 7.9 lbs)	44 kg (97 lbs)
		7,1 kg	911760	2x 7.1 kg (2x 15.7 lbs)	62 kg (137 lbs)

[4] Cylinder with valve are not included in delivery
[5] Weight: PAE compl. with cylinder

Technical data

Operating medium .....CO_2 - gaseous
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)
Pilot cylinder volume .....5.4 l or 10.7 l
Thread connection .....for precision steel pipe 6x1

Product sheets also applying

Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 0.16 kg / 0.3 kg .....see ad-on part cylinder
Release device EM 24 V DC .....see control device
Lever - cylinder valve EM release .....see control device

Application

The release device PAE must only be used in accordance with system approval in stationary carbon dioxide, IG-01 (argon), IG-100 (nitrogen), VSN 1230 and VSN 200 fire extinguishing systems. The release device PAE provides all pneumatic system parts with carbon dioxide (CO_2) as work medium and is used to activate:
- Cylinder batteries
- Selector valves
- Pneumatic control elements and alarm components (makrofon)
- Pneumatic door closing devices
- Pneumatic pressure relief dampers.

Functional description

The activation of the release device PAE occurs electrically (release device EM). Thus the toggle valve on the pilot cylinder is opened and the carbon dioxide (CO_2) flows through the connected pipe assembly respectively the hose to the pneumatic system components of the fire extinguishing system.
Depending on the version a 5.4 l (1.43 US.liq.gal) or 10.7 l (2.83 US.liq.gal) pilot cylinder is used. The PAE with reserve has an additional pilot cylinder (reserve). The entire release device PAE is fastened onto a bearing structural element via a U-profile.

Note

Each PAE has to be installed complete with protective cover only. Exception: If an additional protecting guard is provided (for example enclosure).

Included in delivery

Pneumatic release device PAE - CO_2 electrical with adapter connection NPT (911762), operating instructions PAE-CO_2 as well as fastenings

additionally for PAE with protective cover:
Protective cover PAE 885322

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE - CO_2 electrical with protective cover, FM/UL

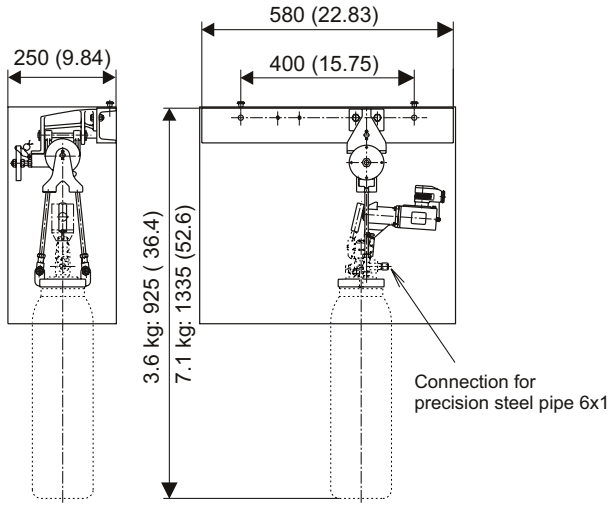
Not included in delivery

Cylinder with valve 5.4 l / 10.7 l:
- CO_2 - Cylinder UL, EU .....see cylinder filled
Pre-assembled connection pipe ...see operating instructions PAE
Support weighing device PAE ...886350, see mounting accessories
Reset tool .....885530, see control device
Monitoring loss pneum. actuat. device ...888998, see monitoring device
Monitoring for release device EM .....885740, see monitoring device

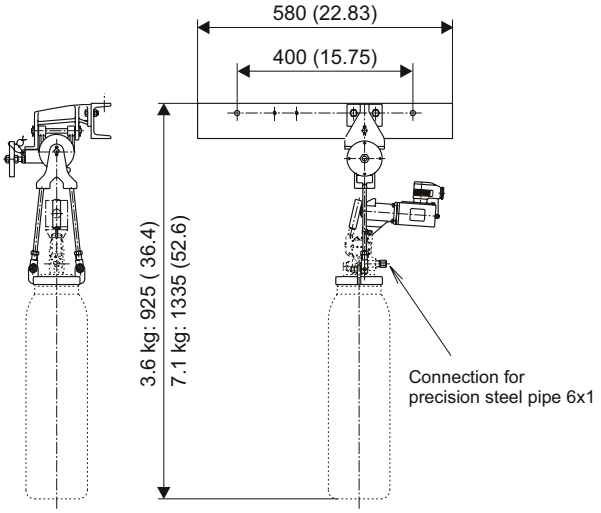
Dimension drawing

Dimensions in **mm (inch)**

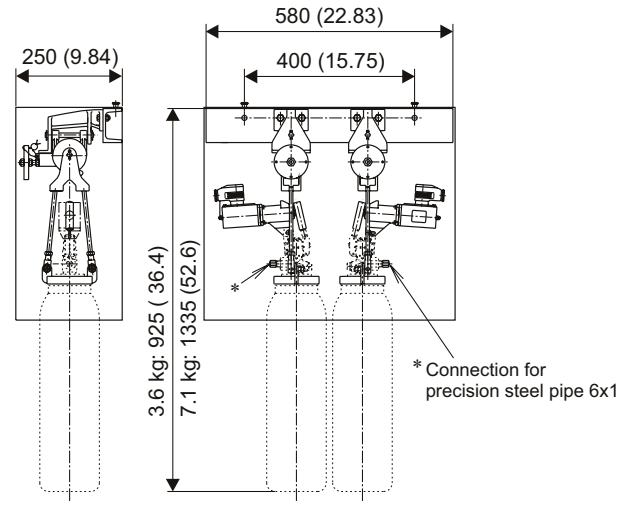
PAE - CO_2 electrical with protective cover



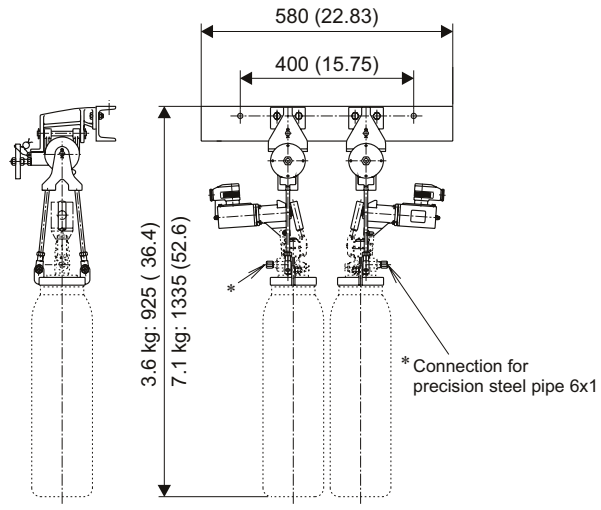
PAE - CO_2 electrical without protective cover



PAE - CO_2 electrical with reserve with protective cover



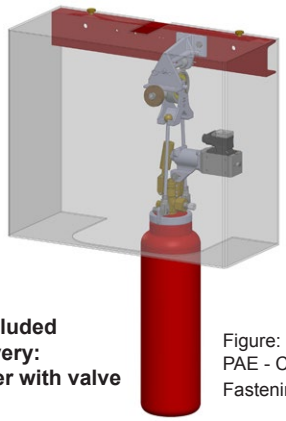
PAE - CO_2 electrical without reserve with protective cover



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE - CO_2 electrical DOT FM/UL



Not included in delivery: Cylinder with valve

Figure:
PAE - CO_2 electrical with protective cover
Fastening material not shown

Approvals

VdS [1] | FM APPROVED [2] | UL LISTED [3] | ULC LISTED [3]

[1] Part of the system approval:
- VSN 1230 (S314012) / VSN 200 (S313007)

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

[3] Listed system covered by:
- UL-File EX6388 (CO_2)
- UL-File EX26532 (Ar, VSN 200 and VSN 1230)

SAP designation

part no. 911755: PAE-CO_2-EM-6,8kg compl. DOT FM/UL

Maintenance

see operating instructions PAE-CO_2 part no. 885374

Pneumatic release device DOT FM/UL		Part no.	Amount filled [4]	Weight [5] approx.
PAE - CO_2 electrical	with protective cover	911755	6.8 kg (15.0 lbs)	38 kg (84 lbs)
	without protective cover	911754		34 kg (75 lbs)
PAE - CO_2 electrical with reserve	with protective cover	911757	2x 6.8 kg (2x 15.0 lbs)	66 kg (146 lbs)
	without protective cover	911756		62 kg (137 lbs)

[4] Cylinder with valve are not included in delivery
[5] Weight: PAE compl. with cylinder

Technical data

Operating medium .....CO_2 - gaseous
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to +122 °F)
Pilot cylinder volume .....10.7 l (2.83 US.liq.gal)
Thread connection .....for precision steel pipe 6x1

Product sheets also applying

Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 0.3 kg .....see ad-on part cylinder
Release device EM 24 V DC .....see control device
Lever - cylinder valve EM release .....see control device

Application

The release device PAE must only be used in accordance with system approval in stationary carbon dioxide, IG-01 (argon), IG-100 (nitrogen), VSN 1230 and VSN 200 fire extinguishing systems. The release device PAE provides all pneumatic system parts with carbon dioxide (CO_2) as work medium and is used to activate:
- Cylinder batteries
- Selector valves
- Pneumatic control elements and alarm components (makrofon)
- Pneumatic door closing devices
- Pneumatic pressure relief dampers.

Note

Each PAE has to be installed complete with protective cover only. Exception: If an additional protecting guard is provided (for example enclosure).

Functional description

The activation of the release device PAE occurs electrically (release device EM). Thus the toggle valve on the pilot cylinder is opened and the carbon dioxide (CO_2) flows through the connected pipe assembly respectively the hose to the pneumatic system components of the fire extinguishing system.
The PAE with reserve has an additional pilot cylinder (reserve).
The entire release device PAE is fastened onto a bearing structural element via a U-profile.

Included in delivery

Pneumatic release device PAE - CO_2 electrical with adapter connection NPT (911762), operating instructions PAE-CO_2 as well as fastenings

additionally for PAE with protective cover:
Protective cover PAE 885322

Not included in delivery

Cylinder with valve 10.7 l:
- CO_2 - Cylinder DOT - UL .....
(Filled DOT cylinders may not be transported in Europe)
Pre-assembled connection pipe ...see operating instructions PAE
Support weighing device PAE ...886350, see mounting accessories
Reset tool .....885530, see control device
Monitoring loss pneum. actuat. device ...888998, see monitoring device
Monitoring for release device EM .....885740, see monitoring device

Extinguishing technology CO_2 HP

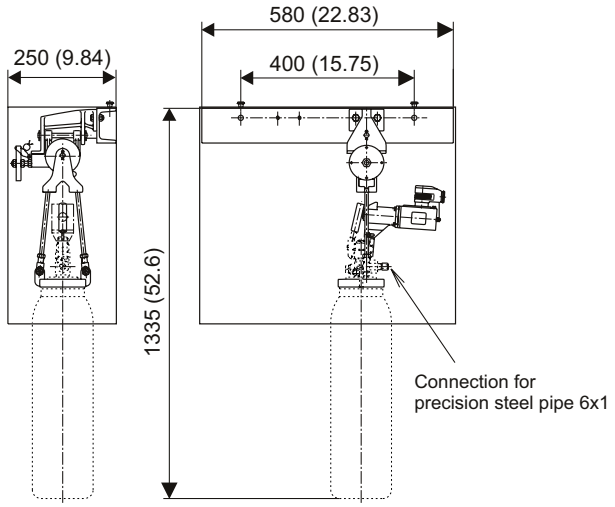
Control device CO_2 HP components

Pneumatic release device PAE - CO_2 electrical DOT FM/UL

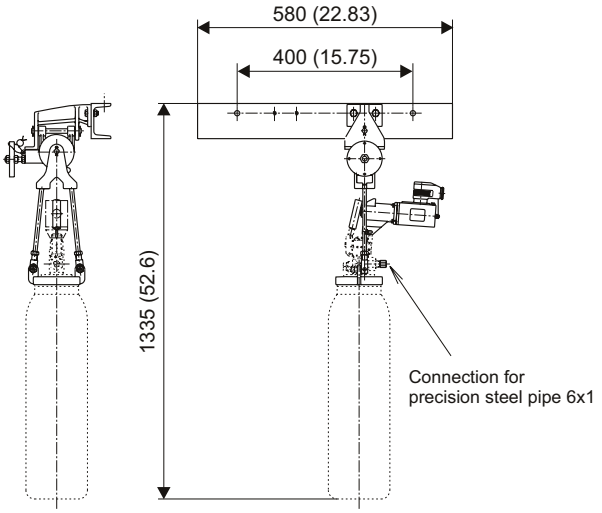
Dimension drawing

Dimensions in **mm (inch)**

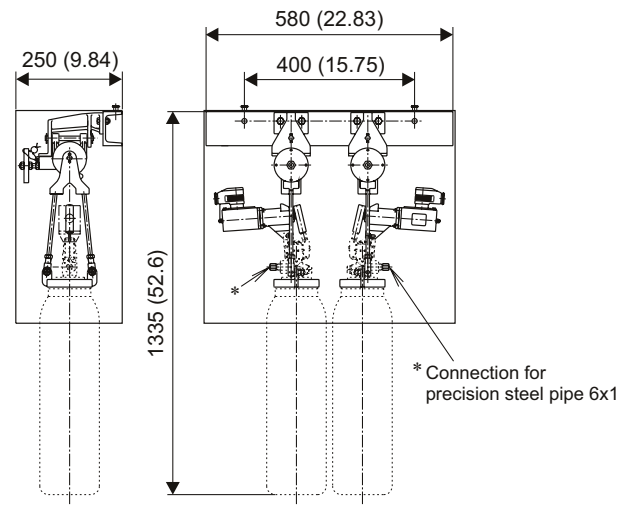
PAE - CO_2 electrical with protective cover



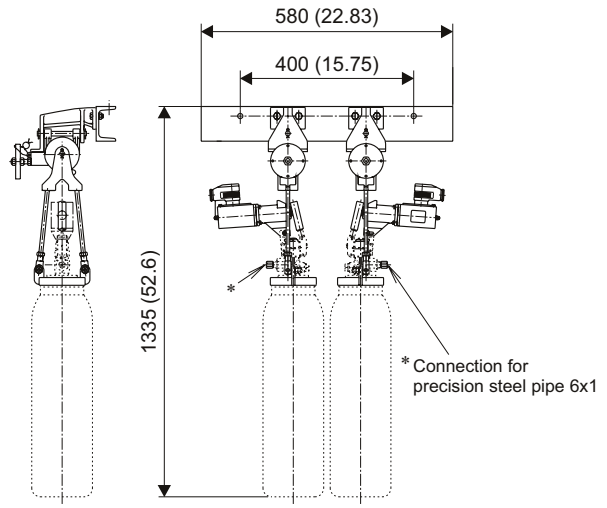
PAE - CO_2 electrical without protective cover



PAE - CO_2 electrical with reserve with protective cover



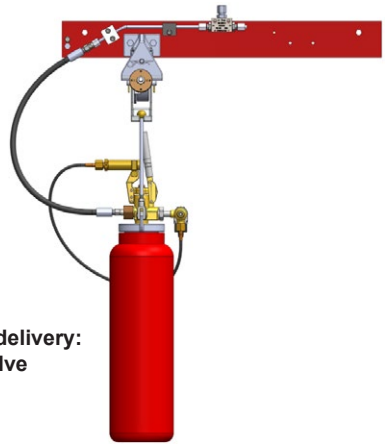
PAE - CO_2 electrical without reserve with protective cover



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE - CO_2 - Ex - S
electrical, without protective cover



Not included in delivery:
Cylinder with valve

Fastening material not shown

Approvals / CE marking

1)

1) Conformity in acc. with 94/9/EC (ATEX):
- ⟨Ex⟩ II 2G IIB T4 X

SAP designation
e.g. part no. 922297: PAE-CO_2-Ex-S-5.4 l

Maintenance
see operating instructions PAE-CO_2-Ex part no. 921641

Designation		Part no. 2)	Amount filled	Weight approx.
Pneumatic release device PAE - CO_2 - Ex - S electrical, without protective cover	5.4 l	922297	1x 3.6 kg (2x 7.9 lbs)	24 kg (53 lbs)
	10.7 l	922298	1x 7.1 kg (2x 15.7 lbs)	35 kg (77 lbs)

2) Cylinder with valve are not included in delivery

Technical data
Operating medium .....CO_2 - gaseous
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Pilot cylinder volume .....5.4 l or 10.7 l
Temperature range .....-20 °C to 40 °C (-4 °F to 104 °F)
Thread connection .....for precision steel pipe 6x1
Nominal voltage electrical coil .....24 V DC ±10 %
Nominal power electrical coil .....8 W
Duty ratio electrical coil .....100 %

Product sheets also applying
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 0.16 kg / 0.3 kg ...see ad-on part cylinder
Shuttle non-return valves MX-WRV .....see control device
Hose DN4x... MX PH300 .....see ad-on part cylinder

Application
The release device PAE is used in stationary carbon dioxide, IG-01, IG-100, IG-55, IG-541, HFC-227ea and FK-5-1-12 fire extinguishing systems. The release device PAE must only be used within the set parameters and the descriptions in accordance with operating instructions PAE-CO_2-Ex.
The release device PAE provides all pneumatic system parts with carbon dioxide (CO_2) as work medium and is used to activate:
Cylinder batteries, selector valves, pneumatic control elements and alarm components (makrofon), pneumatic door closing devices and pneumatic pressure relief dampers.

Functional description
The release device PAE is triggered electrically. In the event of being triggered, the solenoid unit opens and carbon dioxide (CO_2) is discharged from the pilot cylinder, via the connection set, to the release cylinder. The release cylinder actuates the cylinder valve on the pilot cylinder and the CO_2 flows through the connected hose and through the pipeline to the pneumatic system parts of the fire extinguishing system.
Depending on requirements, one 5.4 l (1.43 US.liq.gal) or one 10.7 l (2.83 US.liq.gal) pilot cylinder is used.
The entire release device PAE is fastened to a load-bearing building section via a U-profile and must be connected to the potential equalization system of the building.

Note
The release device PAE must only be used in potentially explosive areas of group ⟨Ex⟩ II 2G IIB T4 X.
- ⟨Ex⟩ Logo
- II Device group
- 2 Device category
- G Type of explosive atmosphere: Gases
  (Devices with the marking "II 2G" are only intended to be used in areas in which it is to be expected that an explosive atmosphere comprised of a mixture of air and gases will occasionally occur.)
- IIB Explosion group
- T4 Temperature class
- X Special conditions for safe use
  (see operating instructions PAE-CO_2-Ex)

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE - CO_2 - Ex - S

electrical, without protective cover

Marking

- Typ (PAE-CO_2-Ex-S-5,4 l / PAE-CO_2-Ex-S-10,7 l)
- Part no. (922297 / 922298)
- Operating temperature (-20 / 40 °C)
- Serial number
- Year of construction (MM/YY)
- Working pressure (140 bar)
- Approval (⟨Ex⟩ II 2G IIB T4 X; CE)
- Company (address, telephone, fax, internet)

Note

In accordance with the Directive 94/9/EC (ATEX), if the commissioning is done outside the German speech area a translation of the product information and the operating instructions has to be delivered in the specific language of the country. This must be noted also for the product sale.

Included in delivery

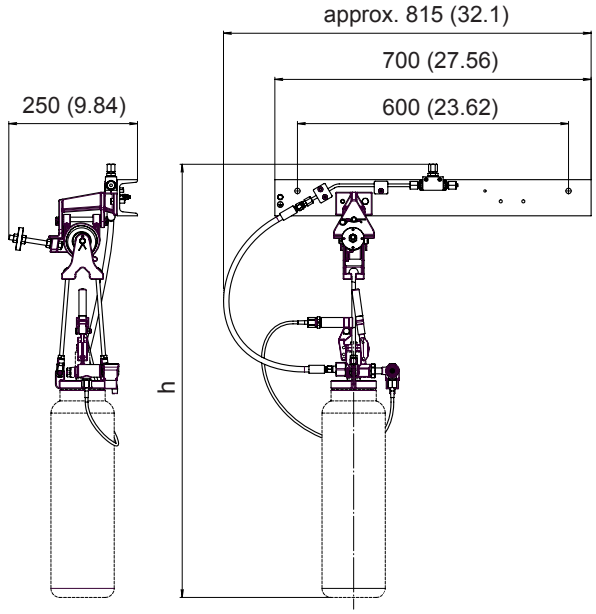
Pneumatic release device PAE - CO_2 - Ex - S compl. with
Adapter connection NPT 911762
Operating instructions PAE-CO_2-Ex (de) 921640
Operating instructions PAE-CO_2-Ex (en) 921641
as well as fastenings

Not included in delivery

Cylinder with valve 5.4 l / 10.7 l:
- CO_2 - Cylinder K85Ex EU .....see cylinder filled
Support weighing device PAE ....886350, see mounting accessories

Dimension drawing

Dimensions in **mm (inch)**



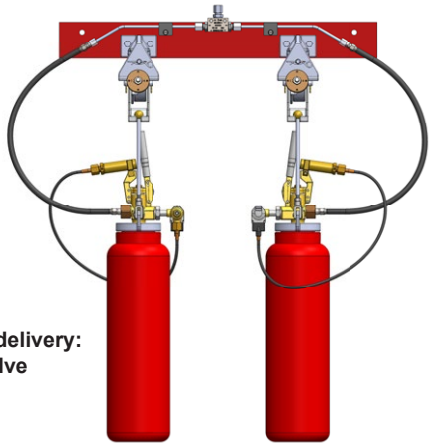
PAE	h approx.
5,4 l	960 (37.8)
10,7 l	1340 (52.8)

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE-CO_2-Ex-M/R

electrical, without protective cover, with reserve



Not included in delivery:
Cylinder with valve

Fastening material not shown

Approvals / CE marking

1)

1) Conformity in acc. with 94/9/EC (ATEX):
- ⟨Ex⟩ II 2G IIB T4 X

SAP designation

e.g. part no. 921637: PAE-CO_2-Ex-M/R-5.4 l

Maintenance

see operating instructions PAE-CO_2-Ex part no. 921641

Designation		Part no. 2)	Amount filled	Weight approx.
Pneumatic release device PAE-CO_2-Ex-M/R electrical, without protective cover, with reserve	5.4 l	921637	2x 3.6 kg (2x 7.9 lbs)	40 kg (88 lbs)
	10.7 l	921638	2x 7.1 kg (2x 15.7 lbs)	63 kg (139 lbs)

2) Cylinder with valve are not included in delivery

Technical data

Operating medium .....CO_2 - gaseous
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Pilot cylinder volume .....5.4 l or 10.7 l
Temperature range .....-20 °C to 40 °C (-4 °F to 104 °F)
Thread connection .....for precision steel pipe 6x1
Nominal voltage electrical coil .....24 V DC ±10 %
Nominal power electrical coil .....8 W
Duty ratio electrical coil .....100 %

Product sheets also applying

Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 0.16 kg / 0.3 kg ...see ad-on part cylinder
Shuttle non-return valves MX-WRV .....see control device
Hose DN4x... MX PH300 .....see ad-on part cylinder

Application

The release device PAE is used in stationary carbon dioxide, IG-01, IG-100, IG-55, IG-541, HFC-227ea and FK-5-1-12 fire extinguishing systems. The release device PAE must only be used within the set parameters and the descriptions in accordance with operating instructions PAE-CO_2-Ex.
The release device PAE provides all pneumatic system parts with carbon dioxide (CO_2) as work medium and is used to activate:
Cylinder batteries, selector valves, pneumatic control elements and alarm components (makrofon), pneumatic door closing devices and pneumatic pressure relief dampers.

Functional description

The release device PAE is triggered electrically. In the event of being triggered, the solenoid unit opens and carbon dioxide (CO_2) is discharged from the pilot cylinder, via the connection set, to the release cylinder. The release cylinder actuates the cylinder valve on the pilot cylinder and the CO_2 flows through the connected hose and through the pipeline to the pneumatic system parts of the fire extinguishing system.
Depending on requirements, one 5.4 l (1.43 US.liq.gal) or one 10.7 l (2.83 US.liq.gal) pilot cylinder is used.
The release device PAE has a reserve cylinder. The entire release device PAE is fastened to a load-bearing building section via a U-profile and must be connected to the potential equalization system of the building.

Note

The release device PAE must only be used in potentially explosive areas of group ⟨Ex⟩ II 2G IIB T4 X.
- ⟨Ex⟩ Logo
- II Device group
- 2 Device category
- G Type of explosive atmosphere: Gases
  (Devices with the marking "II 2G" are only intended to be used in areas in which it is to be expected that an explosive atmosphere comprised of a mixture of air and gases will occasionally occur.)
- IIB Explosion group
- T4 Temperature class
- X Special conditions for safe use
  (see operating instructions PAE-CO_2-Ex)

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE-CO_2-Ex-M/R

electrical, without protective cover, with reserve

Marking

- Typ (PAE-CO_2-Ex-M/R-5,4 l / PAE-CO_2-Ex-M/R-10,7 l)
- Part no. (921637 / 921638)
- Operating temperature (-20 / 40 °C)
- Serial number
- Year of construction (MM/YY)
- Working pressure (140 bar)
- Approval (⟨Ex⟩ II 2G IIB T4 X; CE)
- Company (address, telephone, fax, internet)

Note

In accordance with the Directive 94/9/EC (ATEX), if the commissioning is done outside the German speech area a translation of the product information and the operating instructions has to be delivered in the specific language of the country. This must be noted also for the product sale.

Included in delivery

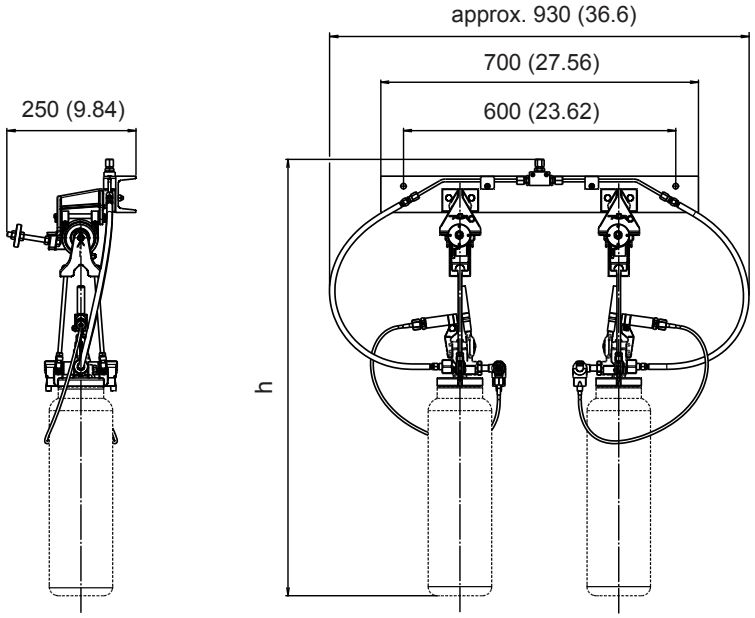
Pneumatic release device PAE-CO_2-Ex-M/R compl. with
Adapter connection NPT 911762
Operating instructions PAE-CO_2-Ex (de) 921640
Operating instructions PAE-CO_2-Ex (en) 921641
as well as fastenings

Not included in delivery

Cylinder with valve 5.4 l / 10.7 l:
- CO_2 - Cylinder K85Ex EU .....see cylinder filled
Support weighing device PAE ....886350, see mounting accessories

Dimension drawing

Dimensions in **mm (inch)**



PAE	h approx.
5.4 l	960 (37.8)
10.7 l	1340 (52.8)

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device PAE - CO_2 / BM

Approvals

VdS [1] UL [2] LISTED

[1] Part of the system approval:
- CO_2 extinguishing system HD-1 (S398010)

[2] Listed system covered by UL-File EX6388 (CO_2) and UL-File EX5248 (Ar)

SAP designation

e.g. part no. 886403: PAE CO_2-EM-4kg / BM

Maintenance

see product information PAE-CO_2 / BM part no. 886405

Designation		Part no.	Weight approx.
Pneumatic release device PAE - CO_2 / BM	4 kg	886403	22 kg (49 lbs)
	8 kg	886404	30 kg (66 lbs)

Technical data

Operating medium .....CO_2 - gaseous
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Amount filled .....4 kg (8.82 lbs) or 8 kg (17.64 lbs)
Pilot cylinder volume .....5.4 l or 10.7 l
Thread connection .....for precision steel pipe 6x1

Product sheets also applying

CO_2 - Cylinder EU 5.4 l / 10.7 l .....see cylinder filled
CO_2 - Cylinder valve type K85-20.0-S9 .....see cylinder valve
Weighing device WE4 .....see ad-on part cylinder
Weight for weighing device 0.16 kg / 0.3 kg .....see ad-on part cylinder
Release device EM 24 V DC .....see control device
Lever - cylinder valve EM release .....see control device

Application

The pneumatic release device PAE- CO_2 -BM is used in accordance with the “documentation of special extinguishing systems” in stationary CO_2, argon and nitrogen fire extinguishing systems. They provide all pneumatic system parts with CO_2 as a work medium and is used to activate:
- Cylinder batteries
- Selector valves
- Pneumatic control elements and alarm components (makrofon)
- Pneumatic door closing devices
- Pneumatic pressure relief dampers.

Functional description

The activation of the release device PAE occurs electrically (release device EM). Thus the toggle valve on the pilot cylinder is opened and the carbon dioxide (CO_2) flows through the connected pipe assembly respectively the hose to the pneumatic system components of the fire extinguishing system.
Depending on the version a 5.4 l (1.43 US.liq.gal) or 10.7 l (2.83 US.liq.gal) pilot cylinder is used.
The entire release device is mounted directly to the frame of a Minimax cylinder bank

Included in delivery

Pneumatic release device PAE - CO_2 / BM
Product information PAE-CO_2 / BM part no. 886405

Not included in delivery

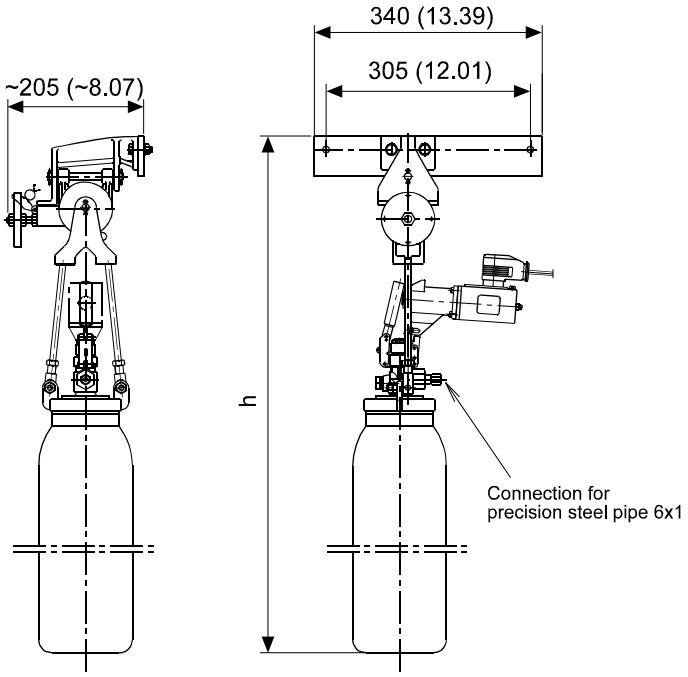
Pre-assembled connection pipe .....see product info. PAE-CO_2 / BM
Support weighing device PAE .....886350, see mounting accessories
Reset tool .....885530, see control device
Monitoring loss pneum. actuation device ....888998, see monitoring device
Monitoring for release device EM .....885740, see monitoring device

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Pneumatic release device
PAE - CO_2 / BM

Dimension drawing
Dimensions in **mm (inch)**



PAE	h approx.
4 kg	925 (36.42)
8 kg	1335 (52.56)

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Lever - cylinder valve

Approvals

no approval required

SAP designation

e.g. part no. 885973: Lever cylinder valve CO_2/Ar

Maintenance

maintenance-free

Style	Designation	Part no.	Application	Weight
1	Lever Cylinder valve CO_2/Ar	885973	Cylinder bank	0.03 kg (0.07 lbs)
2	Lever SB-CO_2-cylinder valve	750249	Shipbuilding	0.17 kg (0.37 lbs)
3	Lever 1cyl.-CO_2-cylinder valve	779509 [1)]	CO_2 / Ar - System 1 cylinder, release device FM	0.29 kg (0.64 lbs)

Technical data

Material style 1 .....aluminium
style 2 and 3 .....brass

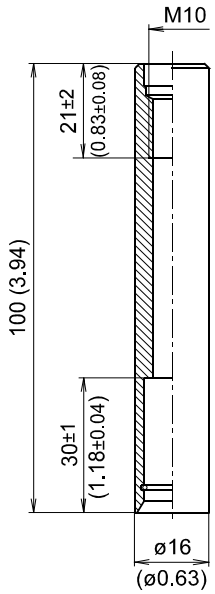
[1)] **Not included in delivery**

Threaded rod M6 x 8 729697

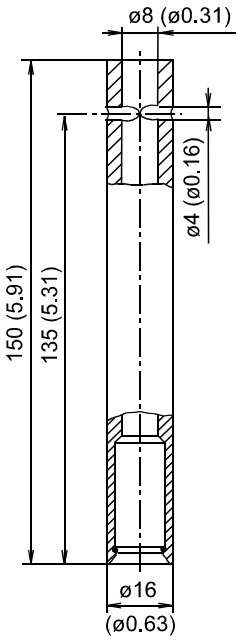
Dimension drawing

Dimensions in **mm (inch)**

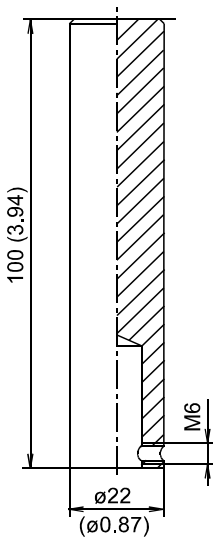
Style 1



Style 2



Style 3



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Connection CO_2 slave release

Approvals

no approval required

SAP designation

part no.742030: Connection CO_2 slave release

Maintenance

visual check according to report CO_2 - high pressure systems

Designation	Part no.	Weight
Connection CO_2 slave release	742030	1.2 kg (2.65 lbs)

Application

Pilot pipe at CO_2 - cylinder batteries from collecting manifold to the slave release piston.

Included in delivery

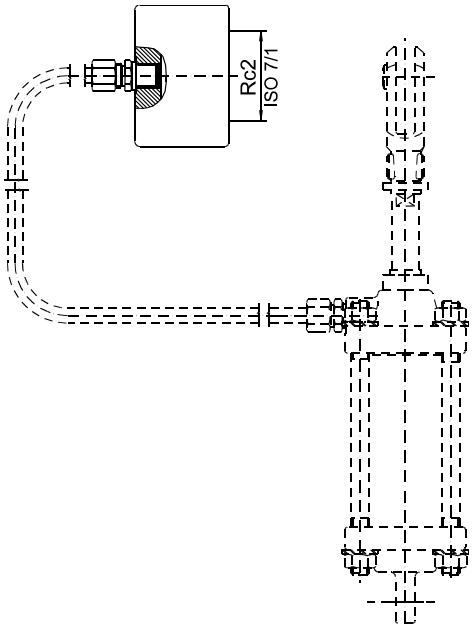
Cap 875597
Union GE 6 - PSR-ED A3C galvanized 125578

Not included in delivery

Pipe 6 x 1 .....M1-02-04 part 2

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Solenoid release box VZ

Approvals

1) Part of the system approval, for solenoid VZ 24 V DC only:
- CO_2 extinguishing system HD-1 (S398010)
  (in conjunction with release box VZ3 or VZ3-R 24 V only)
- Oxeo inert gas extinguishing system HD200 (S315011) / HD300 (S315010)
- Oxeo inert gas extinguishing system with ConstantFlow HD200 (S315012)

2) Solenoid VZ 24 V DC only:
Listed system covered by UL-File EX6388 (CO_2) and UL-File EX5248 (Ar).

SAP designation

e.g. part no. 887363: Solenoid VZ-24-DC with card

Maintenance

functional check within the framework of system-specific functional test according to technical description
release box VZ3 part no. 886159

Designation		Part no.	Solenoid power	Current	Weight
Solenoid release box VZ	24 V DC	887363	25 N	1.04 A	1.5 kg (3.31 lbs)
	230 V AC	254381	30 N	0.13 A	1.4 kg (3.09 lbs)

Technical data

Solenoid type 24 V DC .....GU 80 E/22
230 V AC .....GU 80 E/10
Switching duration .....100 %
Operating temperature .....-20 °C to +50 °C (-4 °F to +122 °F)
Stroke .....15 mm (0.59")
IP code .....
IP54 (by accordingly covering of the pull and pressure rod side)

Included in delivery

Solenoid VZ 24 V DC with card:
- solenoid VZ 24 V DC 254370
- card MVA LÖ 782239
- technical description card MVA LÖ 904653

Not included in delivery

Mounting material:
- 2x hex. screw DIN933-M6x16-8.8 206261
- 2x washer DIN6798-A6 764307

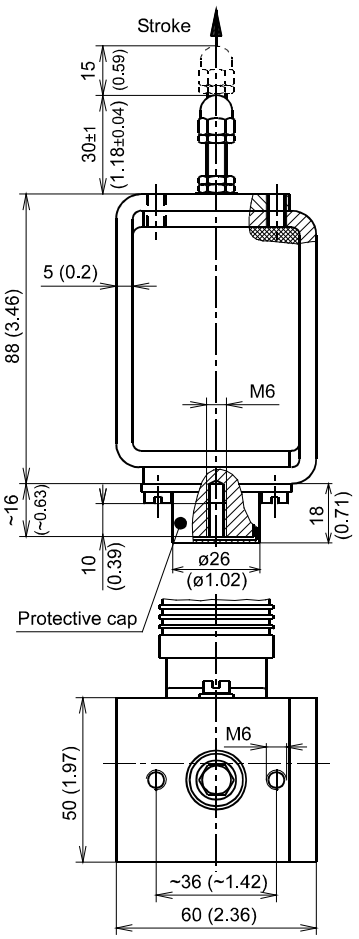
Extinguishing technology CO_2 HP

Control device CO_2 HP components

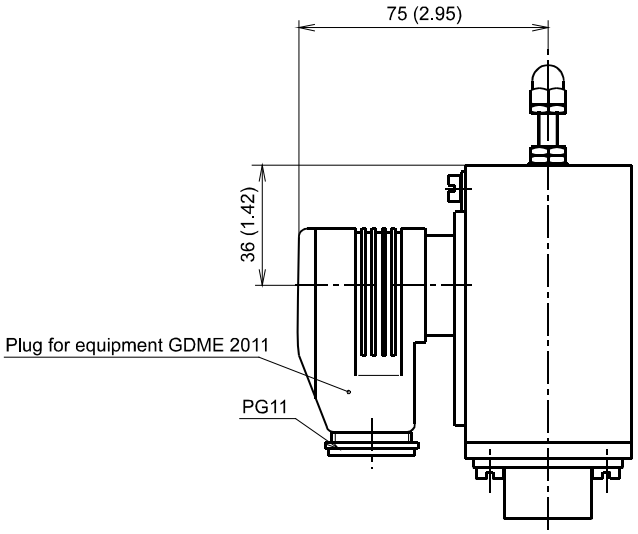
Solenoid release box VZ

Dimension drawing

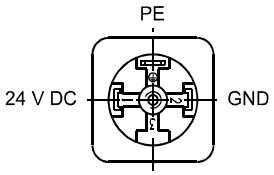
Dimensions in **mm (inch)**



Note:
type 230 V AC
without protective
cap



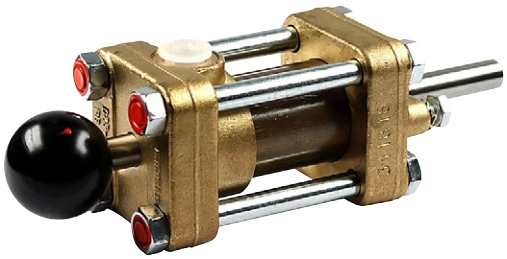
Connection diagram terminal block type 24 V DC:



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Cylinder ø25 x H30



Approvals

VdS [1] UL LISTED [2]

[1] Part of the system approval:
CO_2 extinguishing system HD-1 (S398010)
- Oxeo inert gas extinguishing system HD200 (S315011) / HD300 (S315010)

[2] Listed system covered by:
UL-File EX6388 (CO_2) and UL-File EX5248 (Ar, MX 200 and MX 1230)

SAP designation

part no. 227303: Piston D25-H30

Maintenance

functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Cylinder ø25 x H30	227303	1.1 kg (2.43 lbs)

Technical data

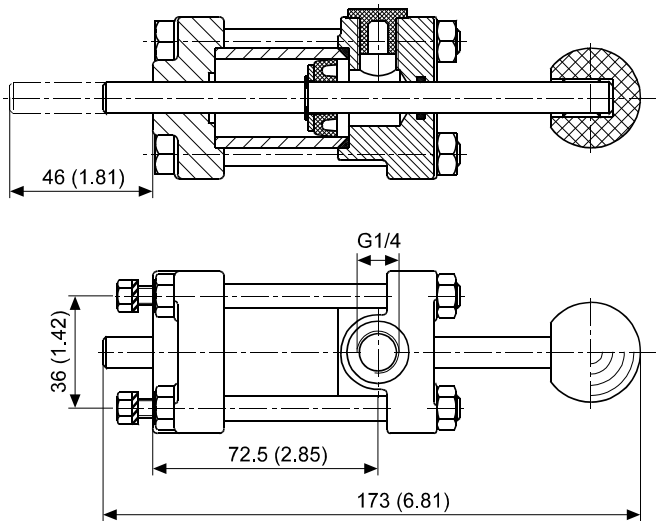
Operating medium .....CO_2, Argon, Nitrogen IG-55, IG-541, FK-5-1-12, HFC-227ea
Working pressure .....140 bar (2030 psi)
Test pressure .....210 bar (3045 psi)
Cylinder stroke .....30 mm (1,18")
Piston .....ø25 mm (ø0,98")
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)

Application

Release cylinder for pneumatic activation e.g. release box VZ, door release - type FH, limit switch pneum. operated, CO_2/Ar 1 - cylinder system pneum.

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Fusible link MX5

Approvals / CE marking

VdS G387009

CE 0786-CPD-30047

SAP designation

e.g. part no. 816025: Fusible link MX5-57C

Maintenance

see product information fusible link MX5
part no. 812809

Nominal release temperature	Part no.	Index of colour	Weight
57 °C (134.6 °F)	816025	orange	0.08 kg (0.18 lbs)
68 °C (154.4 °F)	811945	red	
93 °C (199.4 °F)	816049	green	
141 °C (285.8 °F)	816050	blue	

Technical data

Min. traction force .....10 N
Max. permissible traction force .....400 N
Temperature range ...-20 °C (-4 °F) to max. 30 °C (86 °F) below .....nominal release temperature
Material .....brass chromed, nickel plated, glass bulb
Fusible link .....complies with EN 12094-9
CE conformity .....acc. to Construction Products Regulation (EU) .....No. 305/2011

Application

The fusible links are used for the mechanical separation of the wire rope tackles or bar linkages when exposed to the heat of a fire. Through spring-loading or weights, the separation can used for the actuation of extinguishing systems or the initiation of alarm, control of machines and vent clappers, door looking etc.

Performance feature

Depending on case of application or the necessary release temperature the integrated glass bulb breaks apart by thermal stress and thus takes place the separation of the rope wire.

Marking

Type (MX5-...C), serial number, VdS, CE

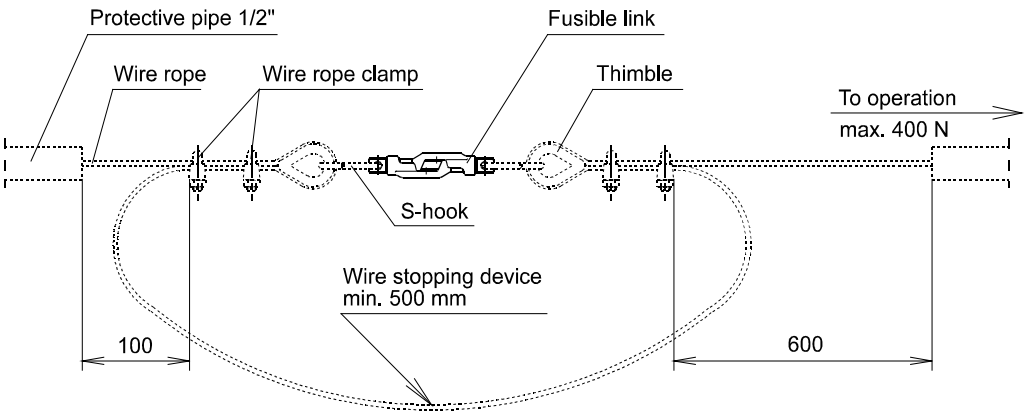
Included in delivery

Fusible link MX5
Product information fusible link MX5 part no. 812809

Not included in delivery

1x Wire rope similar DIN3055-3-Fe galv. ....134122, see control device
4x Wire rope clamp DIN741-3-galv. .....197109, see control device
2x S-hook, steel galvanized 812937
2x Thimble DIN6899-A3-galv. .....197092,see control device

Installations example



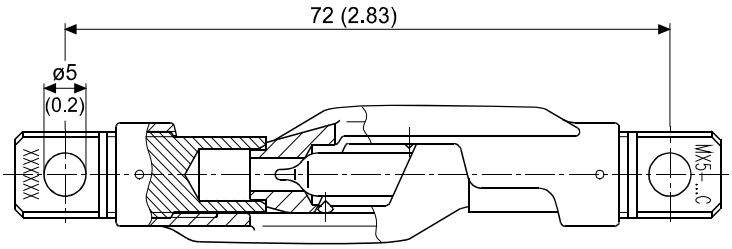
Extinguishing technology CO_2 HP

Control device CO_2 HP components

Fusible link MX5

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Manual release box mechanical type MX-HAKM

Approvals / CE marking

VdS G305010

CE 0786-CPD-30035

SAP designation

Part no. 221088: Manual release box mech. type MX-HAKM

Maintenance

see product information manual release box part no. 886898

Designation	Part no.	Weight
Manual release box mechanical type MX-HAKM	221088	1.2 kg (2.65 lbs)

Technical data

Type .....MX-HAKM
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Permissible rope load .....max. 200 N
Housing .....plastic, red-orange
Components .....stainless steel / brass
Manual release box .....complies with EN 12094-3
CE conformity .....acc. to Construction Products Regulation (EU) .....No. 305/2011

Application

The manual release box can be used for the manual release of a stationary CO_2 fire extinguishing system. The use of this manual release box presupposes fire extinguishing system released by means of push pull cables and drop weights.

Performance feature

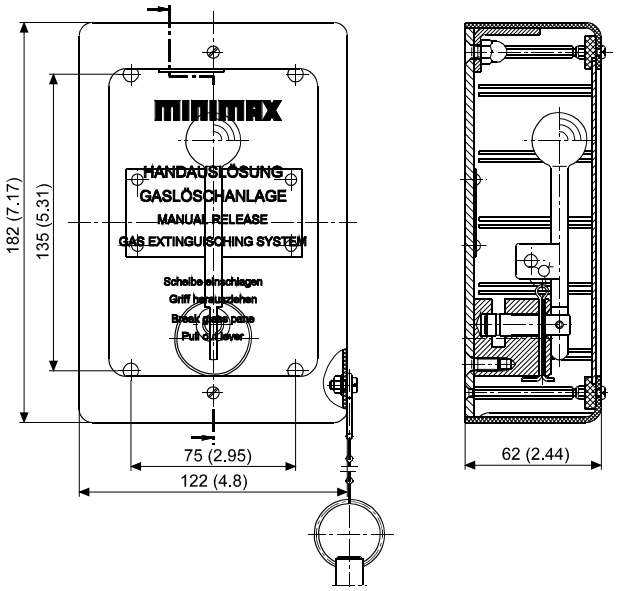
In the hand release box is integrated a rope separation mechanics. A strained rope through weights can be separated by the manipulation of a lever, with which is released the fall of a weight.

Included in delivery

Manual release box complete with fastening material
Thimble 197092
Rope clamp 3 mm (2x) 197109
Product information manual release box part no. 886898

Dimension drawing

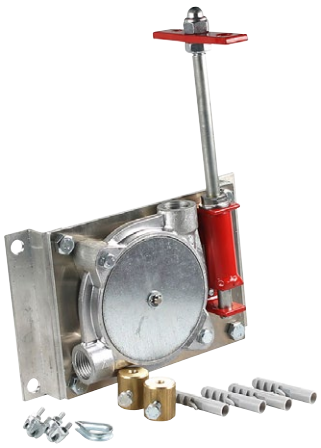
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Rope disconnection right and left



Approvals

VdS [1)]

[1)] Part of the system approval:
- CO_2 extinguishing system HD-2 (S398011)

SAP designation

part no. 221027: Rope disconnection left and right

Maintenance

functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Rope disconnection right and left	221027	1.9 kg (4.19 lbs)

Application

CO_2 - high pressure systems. The rope disconnection is used in mechanical triggering systems with more than 8 pulleys.

A mechanical triggering system can be fitted with several manual releases in combination (see page 2).

Included in delivery

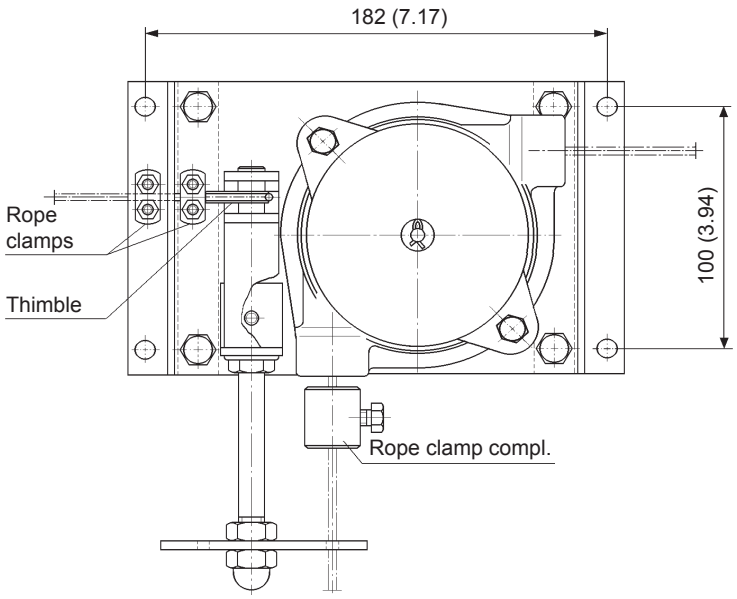
Rope pulley A .....see control device
Support for rope disconnection 225239
Rope clamp compl. 133294
Rope clamp 3 mm (2x) 197109
Thimble 197092
Release device for rope disconnection, plate, as well as fastening material

Not included in delivery

Weight 12 kg .....see control device

Dimension drawing

Dimensions in **mm (inch)**

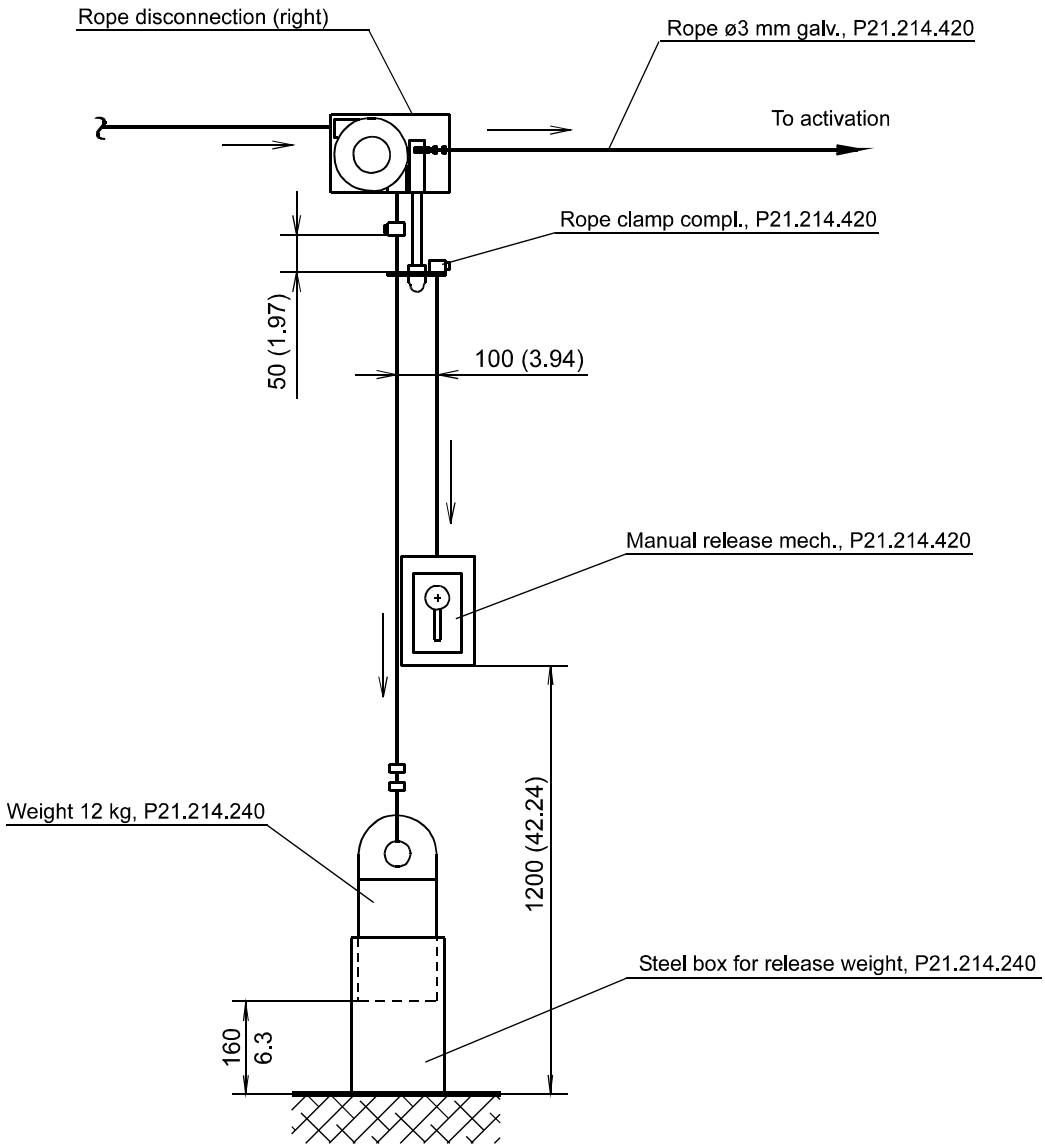


Extinguishing technology CO_2 HP

Control device CO_2 HP components

Rope disconnection right and left

Mounting example: rope disconnection with manuel release



Extinguishing technology CO_2 HP
Control device CO_2 HP components

Wire rope pulley A and B

Approvals

VdS [1)]

[1)] Part of the system approval:
- CO_2 extinguishing system HD-2 (S398011)

SAP designation
e.g. part no. 359714: Wire rope pully A

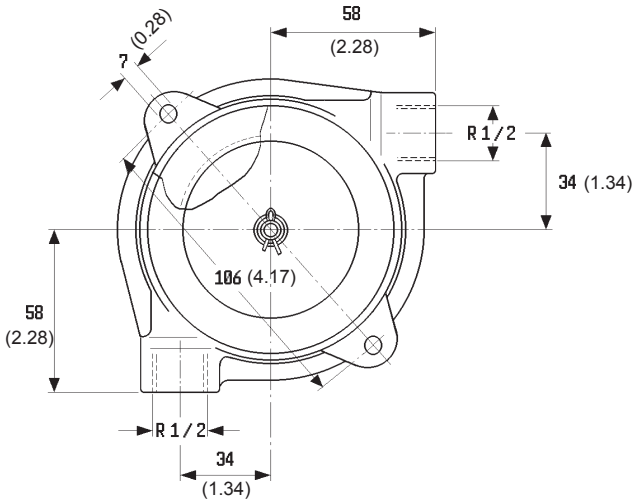
Maintenance
functional check within the framework of system-specific functional test

Designation		Part no.	Weight
Wire rope pulley	A	359714	0.54 kg (1.19 lbs)
	B	225756	0.36 kg (0.79 lbs)

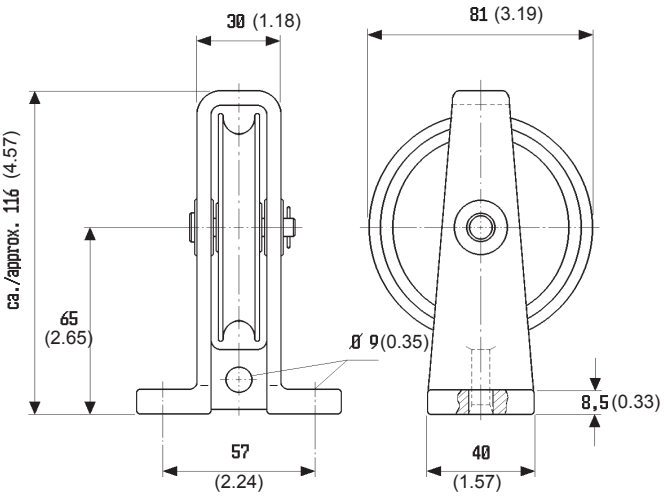
Technical data
Housing and pulley support .....aluminium
Pulleys .....cast steel, galvanized
Bolt .....steel, nickel plated

Dimension drawing
Dimensions in **mm (inch)**

Style: A



Style: B



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Ropes and accessories

Approvals

no approval required

SAP designation

e.g. part no. 197092: Thimble DIN6899-A3-verz.

Maintenance

visual check within the framework of system-specific functional test

Item	Designation		Part no.	Material	Weight kg (lbs)
1	Thimble DIN6899 A3 galvanized		197092	Hot dip galvanized	0.003 (0.0066)
2	Rope clamp similar DIN741-galv.	3 mm	197109	Galvanized	0.014 (0.0309)
		5 mm	209377		0.015 (0.0331)
3	Rope DIN3055-FE-ZNK 1770 SZ	2 mm	682750 [1]	Rope 6 x 7 with synthetic reinforcement galvanized	0.014 (0.0309)
		3 mm	134122 [1]		0.032 (0.0706)
		4 mm	730163 [1]		0.057 (0.1257)
4	Press clamp DIN3093-AL	3 mm	755340 [2]	Aluminium	0.001 (0.0022)
		4 mm	748524 [2]		0.002 (0.0044)
5	Rope dog (clamp) compl.		133294	Brass	0.100 (0.2205)
6	Rope dog (sleeve) compl.		359647	Brass	0.120 (0.2646)
7	Rope dog (nut) 6631/21		241126	Screw - Ms Nut - gal Zn	0.050 (0.1102)

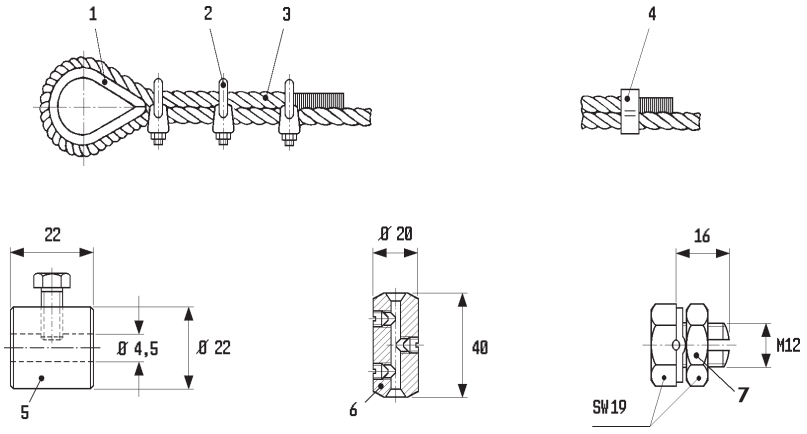
For spare only!

[1] By the meter, unit for order = meter weight = kg/m

[2] Press clamp at least twice in direction fasten with clamp irons. Pincer type Nicopress No. 64 - CGMP (not included in delivery).

Dimension drawing

Dimensions in **mm (inch)**



1/1

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Weight 12 kg - complete

Approvals

no approval required

SAP designation

part no. 778086: Weight 12kg compl.

Instandhaltung

visual check within the framework of system-specific functional test

Designation	Part no.	Weight
Weight 12 kg - complete	778086	12 kg (26.46 lbs)

Technical data

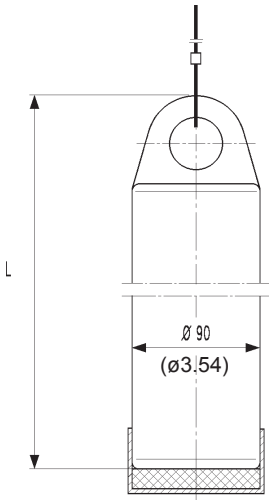
Finish of weight .....primer, red brown

Included in delivery

Rope 3 m (9,84 ft) 730163
Ferrule 748524
Weight 12 kg 738435
Protecting cap yellow 673354
Buffer for weight 12 kg 811507

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Steel boxes with limit switch for release weight

Approvals

no approval required

SAP designation

part no. 226852: Catchpit with limit switch

Maintenance

visual check within the framework of system-specific functional test

Designation	Part no.	Weight
Steel boxes with limit switch for release weight	226852	3.2 kg (7.05 lbs)

Application

High pressure systems with mechanical release.

Included in delivery

Hull steel box 221120
Bracket door release unit - FH 779420
Hex. screw DIN933-M10x70-8.8 gal Zn 157672
Cap nut DIN986-M10 128350
O-ring 11x3 821281
2x hex. screw DIN933 M6x16-8.8 gal Zn 206261
2x hex. nut DIN555 M6 gal Zn 175671
Limit switch type EM 41 D 1Ö/1S ....722990, see monitoring device
Fastening for bracket door release:
- 2x wood screw DIN571-8x50 gal Zn 105420
- 2x rawl plug S10 129493
Fastening for limit switch:
- 2x cheese-head screw DIN84-M5x25 Ms 106915

Not included in delivery

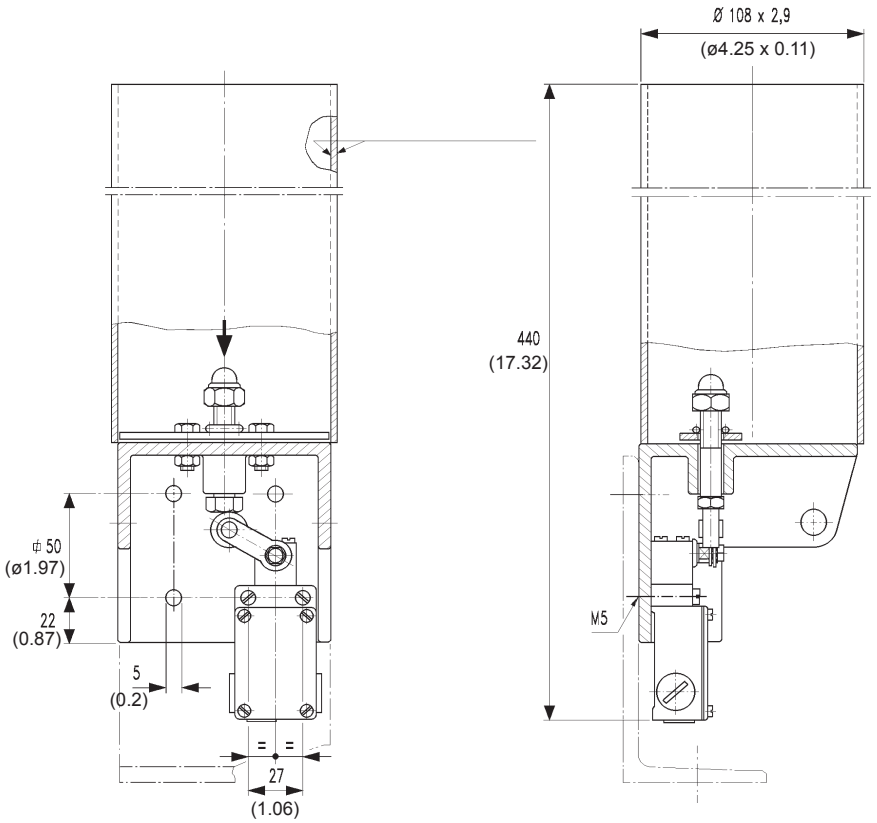
Weight 12 kg - complete .....778086, see alarm device
Support for bracket steel box 773982
as well as fastening material

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Steel boxes with limit switch for release weight

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Steel box for release weight

Approvals

no approval required

SAP designation

Part no. 225483: Steel box for weight

Instandhaltung

visual check within the framework of system-specific functional test

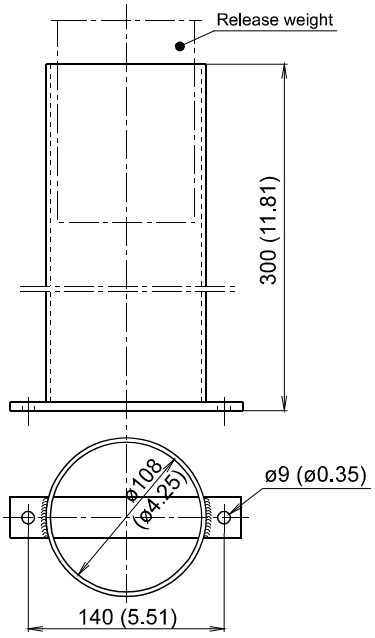
Designation	Part no.	Weight
Steel box for release weight	225483	2.3 kg (5.07 lbs)

Technical data

Material .....steel pipe
Finish .....primer, red brown

Dimension drawing

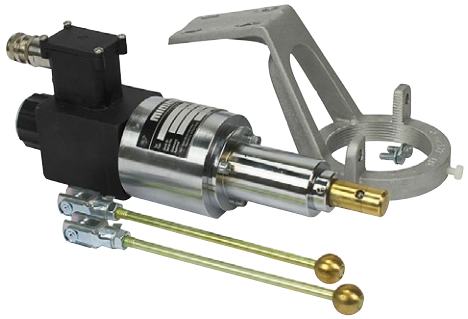
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

Control device CO_2 HP components

Release device EM-Ex T55



Approvals

1)

1) Conformity in acc. with 2014/34/EU (ATEX):
- ⟨Ex⟩ II 2G Ex IIC T4 Gb X

SAP designation

part no. 927600: Release device EM-Ex T55

Maintenance

see technical description release device EM-Ex T55
part no. 927496

Designation	Part no.	Weight
Release device EM-Ex T55	927600	6.65 kg (14.66 lbs)

Technical data

Type .....EM-Ex T55
Release bolt force .....max. 223 N (50.1 lbf)
Release bolt stroke .....45 mm (1,77")
Temperature range .....-20 °C to +55 °C (-4 °F to +131 °F)

Solenoid Ex-release:
- Single stroke solenoid type GMCE060K01D01
- Nominal voltage .....24 V DC ±10 %
- Nominal power .....9.1 W
- Rated current .....0.38 A
- IP code solenoid body IP65
  tube IP54
- Duration of operation .....S1 (100% ED)

Electr. connection

Connection cable:
- cable diameter 6 - 12 mm (0.24" - 0.47")
- 3-wire with protective earth conductor
- heat resistance min. 90 °C (194 °F)

Connecting terminals, internal:
- 2-pole connecting terminal up to 2.5 mm^2 (AWG14),
- protective earth connection fine-wire up to 1.5 mm^2 (AWG 16)
  single-wire up to 2.5 mm^2 (AWG 14)

Connecting terminal, external (equipotential bonding):
- protective earth connection up to 4 mm^2 (AWG 12)

Material / surface

Housing .....brass, nickel-plated and chrome dulled
Bush .....brass, nickel-plated and chrome dulled
Bolt (sleeve) .....brass

Solenoid EM-Ex T55:
- Cable gland .....brass, nickel-plated
- Terminal box / cover .....steel, nickel-plated
- Casing / washer .....steel, nickel-plated
- Tube / core .....steel, galvanized

Application

The release device EM-Ex T55 is used in stationary carbon dioxide, IG-01, IG-100 , IG-55, IG-541, HFC-227ea, and FK-5-1-12 fire suppression systems for the direct electric release of pilot cylinder valves and extinguishing agent cylinder valves in areas with explosive atmosphere (zone 1 and 2, group of equipment II, category 2 in accordance with directive 2014/34/EU).

The release device EM-Ex T55 must only be used in combination with the following levers:
- Lever EM-release 885603
- Lever cylinder valve CO_2/Ar 885973
- Lever EM release D=25 915159

Note

The cylinder valve must only be used in potentially explosive areas of group ⟨Ex⟩ II 2G Ex IIC T4 Gb X.
- ⟨Ex⟩ Logo
- II Device group
- 2 Device category
- G Type of explosive atmosphere: Gases
  (Devices with the marking "II 2G" are only intended to be used in areas in which it is to be expected that an explosive atmosphere comprised of a mixture of air and gases will occasionally occur.)
- IIC Explosion group
- T4 Temperature class (T4 ≤ 135 °C (275 °F))
- Gb Equipment protection level (EPL)
- X Special conditions for safe use
  (see technical description release device EM-Ex T55)

If the commissioning is done outside the German speech area a translation of the technical description has to be delivered in the specific language of the country.

Marking

type (EM-Ex T55), part no. (927600), serial-no.,
year of construction (MM/YY), operating temperature (-20/+55°C),
approval (⟨Ex⟩ II 2G Ex IIC T4 Gb X), CE
manufacturer's data (Minimax GmbH & Co. KG, address,
telephone number and telefax number, web address)

Extinguishing technology CO_2 HP

Control device CO_2 HP components

Release device EM-Ex T55

Functional description

In case of activation, the solenoid (2) is electrically activated via a fire alarm control panel. This way, the solenoid pulls the locking bolt (3) out of the spring-loaded release bolt (1). The unlocked release bolt actuates the lever (7), thus opening the valve (6). This releases the medium stored in the cylinder (5) which then flows through the hose (4).

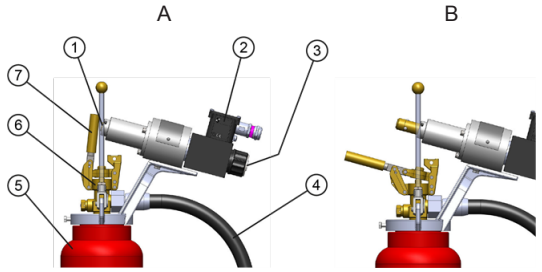


Abb. 1: Release device EM-Ex T55, A = tensioned, B = activated

Included in delivery

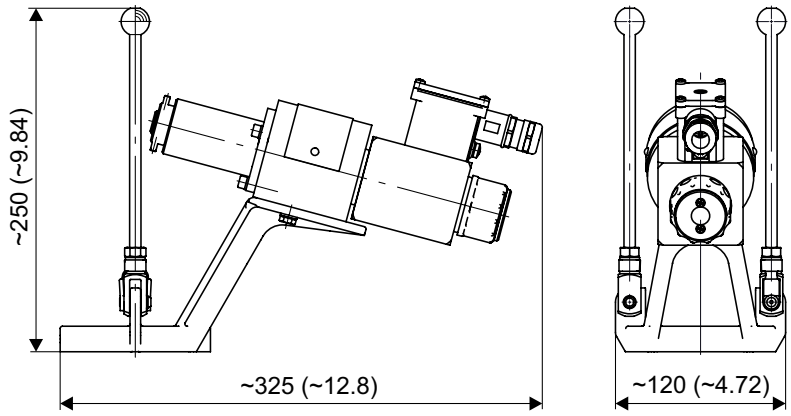
Release device EM-Ex T55
Manuals:
- Techn. description release device EM-Ex T55 (de) 927495
- Techn. description release device EM-Ex T55 (en) 927496
- Declaration of Conformity (de/en) 928182
- Operating instruction solenoid EM-Ex T55 (de/en)

Not included in delivery

Reset tool release device EM EM .....see control device
Connection cable .....see electr. connection

Dimension drawing

Dimensions in **mm (inch)**



Inert gas extinguishing technology

Monitoring device

Limit switch ZS 256-11z

Approvals

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

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

SAP designation

part no. 828482: Limit switch ZS 256-11Z-M20-2219

Maintenance

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

Designation	Part no.	Weight
Limit switch ZS 256-11z	828482	0.14 kg (0.2 lbs)

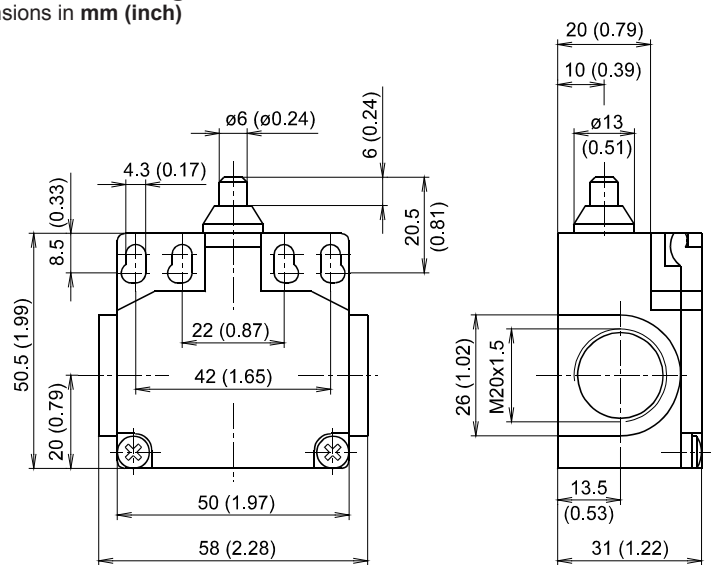
Technical data

Type .....ZS 256-11z-M20-2219
Housing .....thermopl. glass fiber concentrated, self-quenching
IP code IP67
Contact material .....silver
Contacts .....1 NC, 1 NO
.....galvanically isolated contact bridges
Operating temperature .....-30 °C to +80 °C (-22 °F to 176 °F)
Switch system .....spring control with
.....twofold brake contacts, forced opener

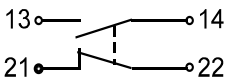
Nominal isolation voltage .....500 V
Permanent current .....10 A
Nominal operation current / voltage .....4 A (230 V AC);
.....2,5 A (400 V AC); 1 A (500 V AC)
Short-circuit protection .....10 A slow blow, 16 A quick blow
Actuation force .....min. 9 N
Mechn. durability .....20x10^6 switching cycles
Operation speed .....max. 1 m/s, min. 0,01 m/s
Time on in percent .....max. 5000 / h

Dimension drawing

Dimensions in **mm (inch)**



Circuit diagram:



Inert gas extinguishing technology

Monitoring device

Limit switch Typ US 432y, 2 contacts

Approvals

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

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

SAP designation

part no. 724420: Limit switch US 432Y-M20-2352 2 contacts

Maintenance

see mounting and wiring instructions of the manufacturer

Designation	Part no.	Weight
Limit switch type US 432y, 2 contacts	724420	0.31 kg (0.68 lbs)

Technical data

Type .....US 432y-M20-2352
Housing .....alloy die-cast metal, chrome dulled and varnished
IP code IP65
Contact material .....silver
Switch system .....slow action
.....with twofold brake contacts
Ambient temperature .....-20 °C to +60 °C (-4 °F to 140 °F)
Nominal isolation voltage .....500 V
Permanent current .....16 A
Nominal operation current .....6 A, 400 V AC
Short-circuit protection .....16 A slow blow, 20 A quick blow

Actuation force .....max. 7 N
(effeciency of the switch way)
Operation speed .....max. 1 m/s, min. 0.001 m/s
Time on in percent.....max. 3000 / h
Mechn. durability .....$10x10^6$ switching cycles
Contact spud durability .....$2x10^6$ switching cycles
.....at 6 A / 400 V AC, cos φ = 0.4

Application

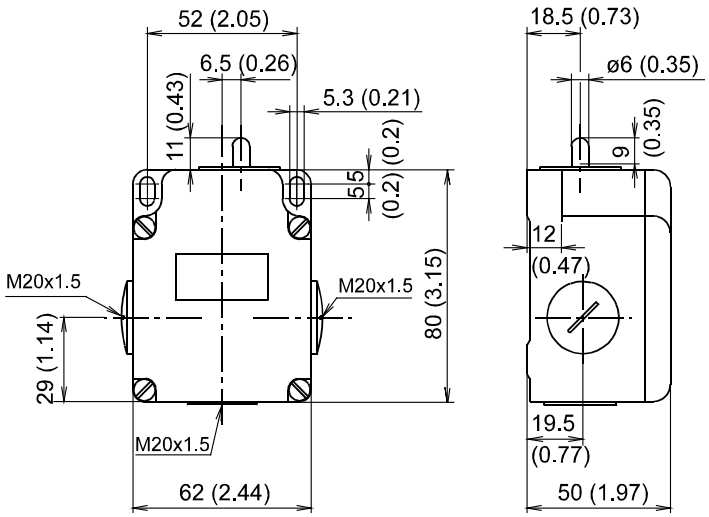
limit switch pneum. operated, manifold set, selector valve

Included in delivery

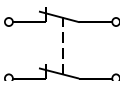
Limit switch type US 432y with mounting and wiring instructions

Dimension drawing

Dimensions in **mm (inch)**



Wiring diagram



contacts shown not operated

changing of the contact type from NC to NO contact and vice versa is adjustable

note: actuate limit switch axially

Inert gas extinguishing technology

Monitoring device

Limit switch US 434y, 4 contacts

Approvals

without approval

SAP designation

part no. 224831: Limit switch US 434Y-M20-2352 4 contacts

Maintenance

see mounting and wiring instructions of the manufacturer

Designation	Part no.	Weight
Limit switch US 434y, 4 contacts	224831	0.42 kg (0.93 lbs)

Technical data

Type .....US 434y-M20-2352
Housing .....alloy die-cast metal, chrome dulled and varnished
IPcode IP65
Contact material .....silver
Switch system .....slow action
.....with twofold brake contacts
Ambient temperature .....-20 °C to +60 °C (-4 °F to 140 °F)
Nominal isolation voltage .....500 V
Permanent current .....16 A
Nominal operation current .....6 A, 400 V AC
Short-circuit protection .....16 A slow blow, 20 A quick blow

Actuation force .....max. 100 N
(effeciency of the switch way)
Operation speed .....max. 1 m/s, min. 0.001 m/s
Time on in percent.....max. 3000 / h
Mechn. durability .....$10x10^6$ switching cycles
Contact spud durability .....$2x10^6$ switching cycles
.....at 6 A / 400 V AC, cos φ = 0.4

Application

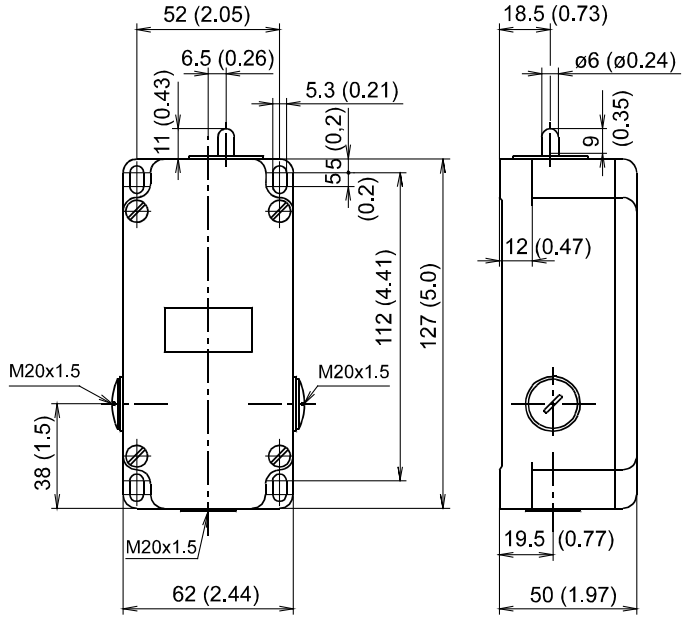
limit switch pneum. operated, manifold set, selector valve

Included in delivery

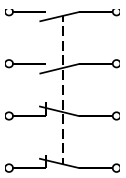
Limit switch US 434y with mounting and wiring instructions

Dimension drawing

Dimensions in **mm (inch)**



Wiring diagram



contacts shown not operated

changing of the contact type from NC to NO contact and vice versa is adjustable

Note: actuate limit switch axially

Inert gas extinguishing technology
Monitoring device

Limit switch EM 41 D 1Ö/1S

Approvals
no approval required

SAP designation
part no. 722990: Limit switch EM 41 D 1Ö/1S

Maintenance
functional check within the framework of system-specific functional test

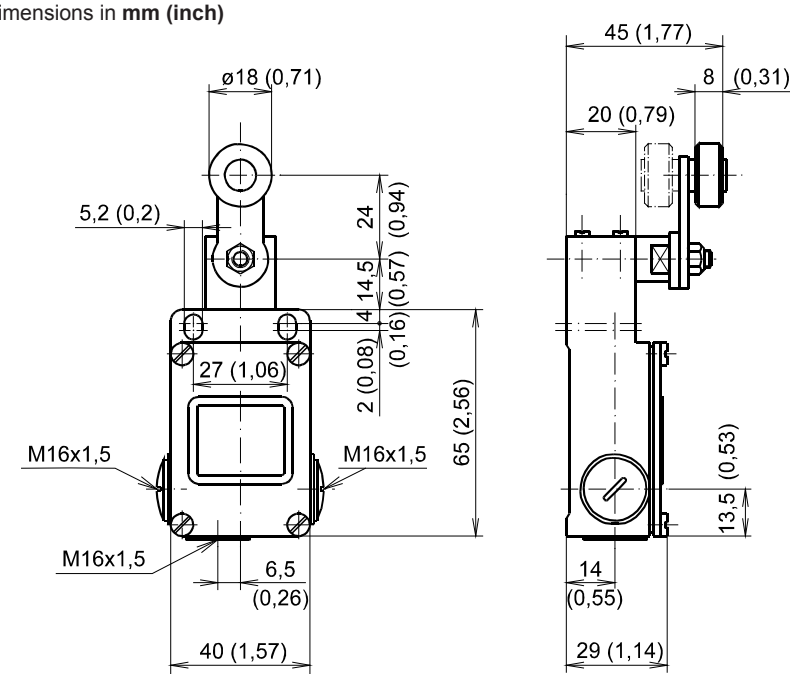
Designation	Part no.	Weight
Limit switch EM 41 D 1Ö/1S	722990	0.22 kg (0.49 lbs)

Technical data
Type .....EM 41 D 1Ö/1S
Housing .....aluminium, colour finish
Turning lever .....steel, galvanized
Insert switch and pulley .....thermoplastic
IP code IP65
Contact material .....silver
Contacts .....1 NC / 1 NO
Switch system .....spring control
.....with twofold brake contacts
Connection .....max. 2,5 mm²

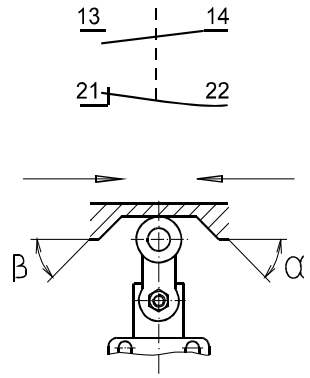
Ambient temperature .....-20 °C to +80 °C (-4 °F to 140 °F)
Permanent curent .....6 A
Nominal operation current .....6 A, 400 V AC
Nominal contact rating, V=0.2 m/s ...10 A, 400 V AC cos φ = 0.7
.....2 A, 24 V DC inductive
.....7 A, 24 V DC low inductance
Time on in percent .....max. 3600 / h
Durability .....10 x 10⁶ switching cycles

Application
Steel box with limit switch for release weights

Dimension drawing
Dimensions in **mm (inch)**



Circuit diagram



V=m/s	0,5	1	2	
α	45°	45°	40°	30°
β	45°	45°	40°	30°

Switching speed and switching angle

Inert gas extinguishing technology
Monitoring device

Monitoring release device EM

Approvals

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

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

SAP designation
part no. 885740: EM-release supervision

Maintenance
see product information monitoring EM-release
part no. 885742

Designation	Part no.	Weight
Monitoring release device EM	885740	0.09 kg (0.2 lbs)

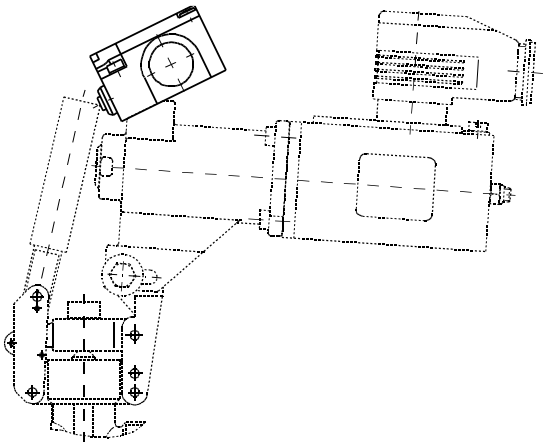
Application
The monitoring release device EM may be used only in accordance with system approval in stationary CO_2, argon and nitrogen fire extinguishing systems.

Function description
The monitoring EM-release device is used for electrical monitoring of the EM-release incl. cylinder valve lever in operation.

Product sheets also applying
Limit switch ZS 256-11z .....see monitoring device

Included in delivery
Limit switch ZS 256-11z .....828482, see monitoring device
2x Cheese-head screw ISO4762-M4x25-8.8-A2E 917743
2x Washer DIN125-A 4.3-St-gal. Zn 896019
Product information monitoring EM-release 885742

Installations example



Inert gas extinguishing technology

Monitoring device

Limit switch pneumatically operated

Approvals

VdS [1] UL LISTED [2] FM APPROVED [3]

[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)
- CO_2 extinguishing system HD-1 (S398010) / HD-2 (S398011)
- CO_2 extinguishing system ND-1 (S398012), electrical release
- CO_2 extinguishing system ND-2 (S398013), non-electrical release
- Oxeo Nitrogen low pressure extinguishing system (S310016)

[2] Listed system covered by UL-File EX6388 (CO_2) 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 medium .....IG-01 (argon), IG-100 (nitrogen), ... IG-55, IG-541, CO_2, FK-5-1-12, HFC-227ea
Working pressure .....140 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 H30 .....see control device
Limit switch US 432y .....see monitoring device

Application

The limit switch pneumatically operated may only be used in stationary IG-01, IG-100, IG-55, IG-541, CO_2, 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.

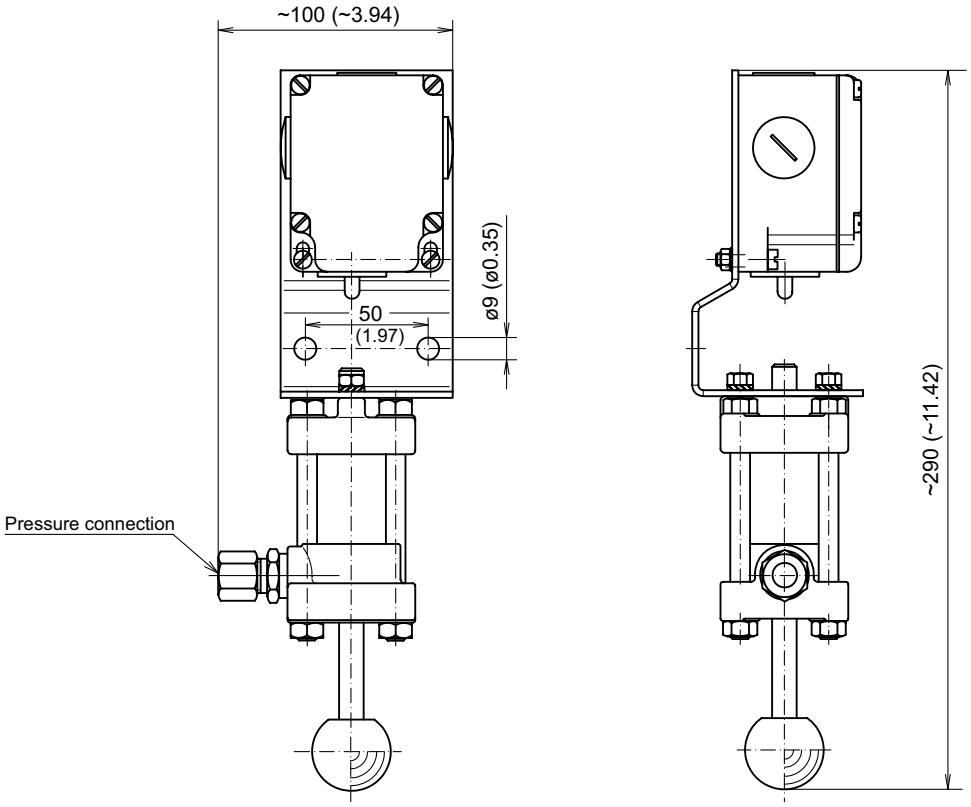
Included in delivery

Cylinder ø25 x H30 .....227303, see control device
Limit switch type US 432y .....724420, see monitoring device
Support limit switch pneum. activated 827866
Union GE 6-PSR-ED A3C 125578, M1-11-01
2x Cheese-head screw DIN84-M5x25-Ms 106915
2x Hex. nut DIN934-M5-Ms 108444
2x Washer DIN125-B-5,3-Ms 109771
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 CO_2 HP
Monitoring device CO_2

Monitoring loss extinguishing agent with reed contact limit switch

Approvals
no approval required

SAP designation
part no. 886376: Monitoring loss of extinguishing agent

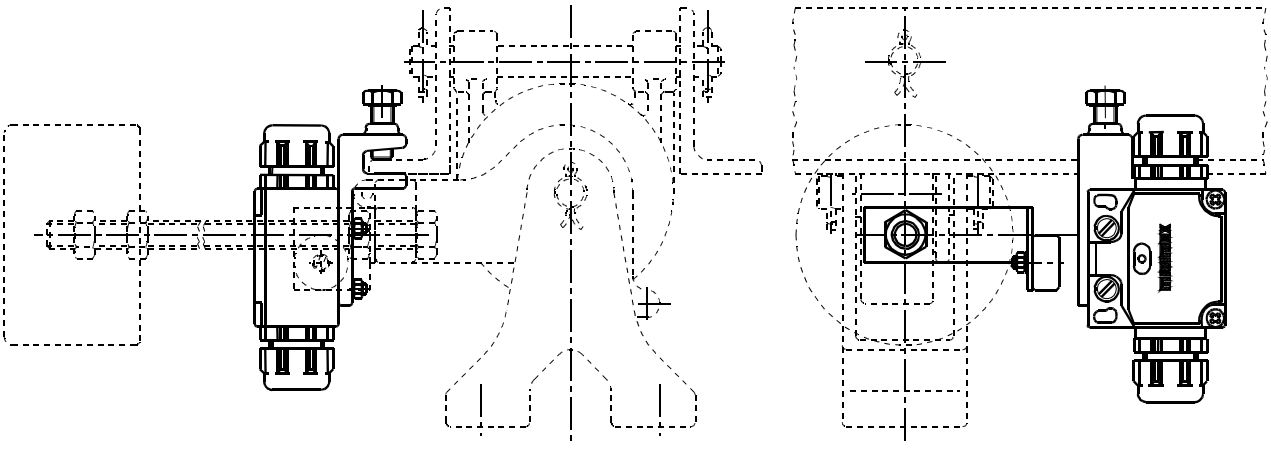
Maintenance
see technical description monitoring loss of extinguishing agent part no. 926943

Designation	Part no.	Weight
Monitoring loss extinguishing agent with reed contact limit switch	886376	0.25 kg (0.55 lbs)

Application
The monitoring loss pneumatic activation device may only be used in accordance with system approval in stationary CO_2, IG-01 (argon), IG-100 (nitrogen), IG-55 and IG-541 extinguishing systems. It facilitates monitoring of permissible loss (10% of CO_2 supply) in a cylinder of extinguishing agent. If the permissible margin of loss is exceeded, a reed contact limit switch is actuated, sending a fault message to the monitoring control panel.
The fault is indicated locally via LED.
Preferably with cylinder quantity ≤ 3 pieces.

Included in delivery
Reed contact limit switch .....886343, see monitoring device
Bracket monitoring loss of extinguishing 886375
Support for cable duct 815367
Techn. description monitoring loss of exting. agent 926943
as well as screws, nuts and washers

Mounting example



Extinguishing technology CO_2 HP
Monitoring device CO_2

Reed contact limit switch

Approvals
no approval required

SAP designation
part no. 886343: Reed contact limit switch

Maintenance
functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Reed contact limit switch	886343	0.14 kg (0.31 lbs)

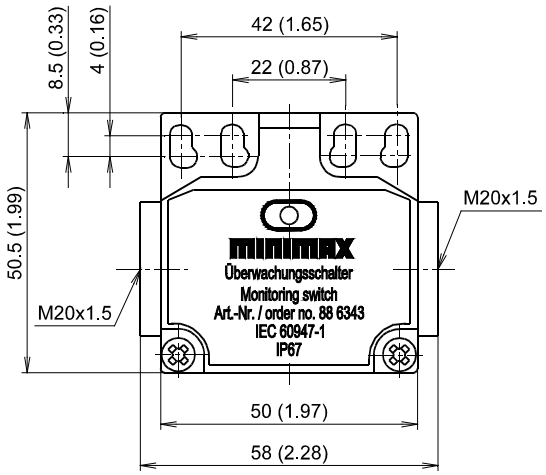
Technical data
Type .....BN 256-11z-M20-2284
Housing .....plastic - glass fiber reinforced
Standards .....IEC 60947 - 1
Connection .....max. 1.5 mm² (0,0023 square inch)
Contacts .....rhodium
Ambient temperature .....-30 °C to +80 °C (-22 °F to 176 °F)
IP code IP67
Switching system .....reed contact
Contact rating .....30 V DC, 0.5 A, max. 10 W
Fault indication .....LED - yellow
External indicator .....max. 12 V DC / 50 mA
Nominal current .....load controlled, adapted to the .....MINIMAX monitoring systems
Limits (I_{max}, U_{max}) .....100 mA, 16.5 V DC

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 FMZ4100 with ring bus MxLoop® the card SUX50 monitoring system is needed.

Included in delivery
Reed contact limit switch complete with actuator magnet and 2 pieces cable glands M20x1.5
Productinformation reed contact limit switch part no. 886369

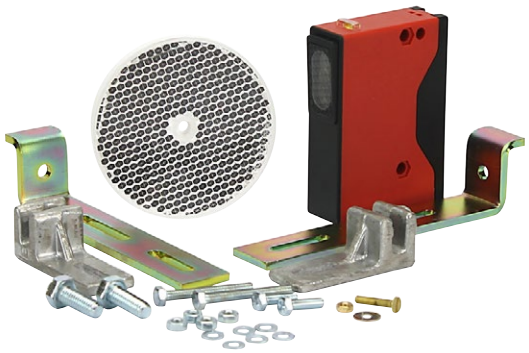
Not included in delivery
Card SUX50 monitoring system part no. 800952

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
Monitoring device CO_2

Monitoring loss extinguishing agent with light barrier



Approvals
no approval required

SAP designation
part no. 876530: Monitoring loss ext.agent light barrier

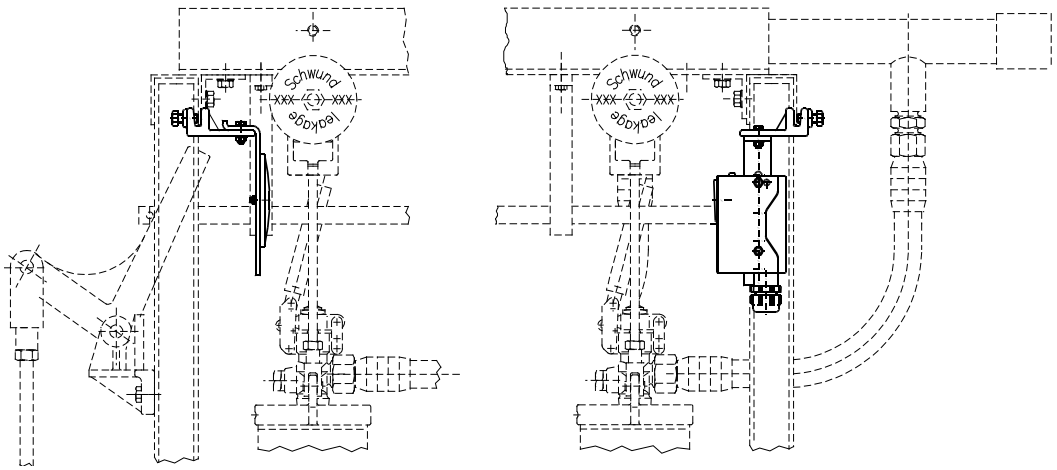
Maintenance
see product information UEWA HP system loss of agent with light barrier part no. 876553

Designation	Part no.	Weight
Monitoring loss extinguishing agent with light barrier	876530	0.56 kg (1.23 lbs)

Application
The UEWA high pressure system loss unit with light barrier facilitates monitoring of permitted loss (10% of extinguishing agent supply per high pressure cylinder). When a fault message is given (permissible loss exceeded) the beam weight drops and the reflected beam of light is broken.
The fault message is sent to the monitoring control panel.
Local indication of the fault is by LED.
Preferably with cylinder quantity > 3 pieces.

Included in delivery
Light barrier for monitoring loss .....876541, siehe Überwachungselement
2x bracket for light barrier 876371
2x bracket for cable duct cylinder bank 815367
Product information UEWA HP system loss of agent with light barrier 876553
as well as screws, nuts and washers

Mounting example



Extinguishing technology CO_2 HP
Monitoring device CO_2

Light barrier for monitoring loss

Approvals
no approval required

SAP designation
part no. 876541: Monitoring loss pneumatic activation

Maintenance
functional check within the framework of system-specific functional test

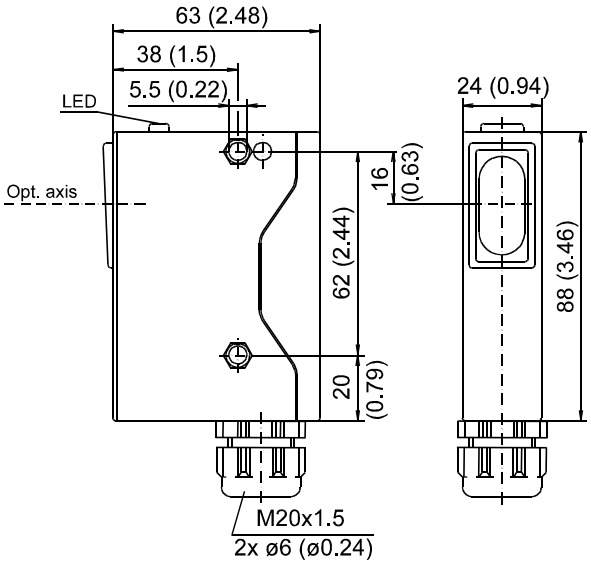
Designation	Part no.	Weight
Light barrier for monitoring loss	876541	0.18 kg (0.4 lbs)

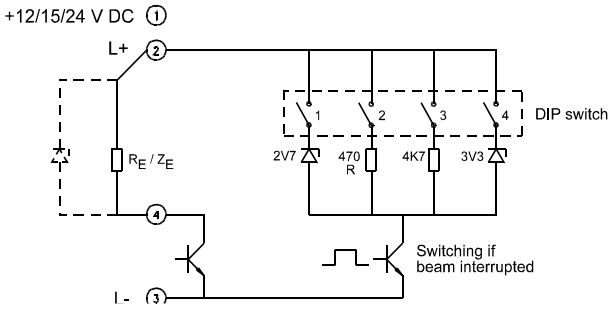
Technical data
Type OR20PS-DDSN-06.0-ALETX
Sensor type .....in acc. with DIN44030, reflected light barrier
Type of light .....red 660 nm, polarised
Resistance to outside light .....> 5000 Lux
Enclosure material .....PA 6.6 red
Material of light aperture .....glass
IP code IP65
Operating temperature .....-20 °C to +70 °C (-4 °F to 158 °F)
Storage temperature .....-20 °C to +80 °C (-4 °F to 176 °F)
Range .....$S_n \geq 6$ m (19,7 ft) on triple reflector ø80 mm (ø3,15")
Hysteresis .....H ≈ 15 %

Power supply .....U_b = 12 V to 30 V DC
Standby current .....I_0 < 5 mA at U_b = 15 V DC
Switching circuit .....$I_{max.}$ = 100 mA
Output function .....dark
Indicator .....LED yellow
Switching frequency .....≥ 15 Hz
Response .....t_r < 30 ms from light to dark
Availability delivery ....t_v < 60 ms at U_b = 12 V; T = 20 °C (68 °F)
On delay .....t_e = 0 up to 3 s, potentiometer adjustable

Included in delivery
Light barrier with reflector type RTS-D83KK and
double cable gland M20x1,5 (2 bores ø6 mm)
Product information reflected light barrier part no. 876759

Dimension drawing
Dimensions in **mm (inch)**





Extinguishing technology CO_2 HP
Monitoring device CO_2

Monitoring loss pneum. activation device PAE

Approvals
without approval

SAP designation
part no. 888998: Monitoring loss pneumatic activation device

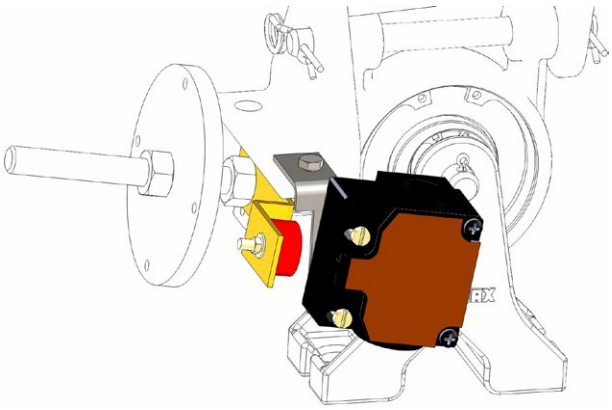
Maintenance
see technical description monitoring loss pneumatic activation device part no. 926945

Designation	Part no.	Weight
Monitoring loss pneumatic activation device PAE	888998	0.20 kg (0.44 lbs)

Application
The monitoring loss pneumatic activation device may only be used in accordance with system approval in stationary CO_2, IG-01 (argon), IG-100 (nitrogen), IG-55, IG-541, FK-5-1-12 and HFC-227ea extinguishing systems.
It facilitates monitoring of the permissible loss (5% - 10% supply per control cylinder). If the permissible margin of loss is exceeded the beam weight falls and actuates a reed contact limit switch. The limit switch sends a fault message to the monitoring control panel and the fault is indicated locally via LED.

Included in delivery
Reed contact limit switch .....886343, see monitoring device
Magnet bracket for ÜWA loss PAE 876875
Bracket limit switch monitoring loss PAE WE4 888986
Technical description monitoring loss pneumatic activation device 926945
as well as screws, nuts and washers

Mounting example



Extinguishing technology CO_2 HP
Monitoring device CO_2

Monitoring for non electrical control device HP systems

Approvals
no approval required

SAP designation
part no. 886373: Monitoring non-electrical control device for high pressure systems

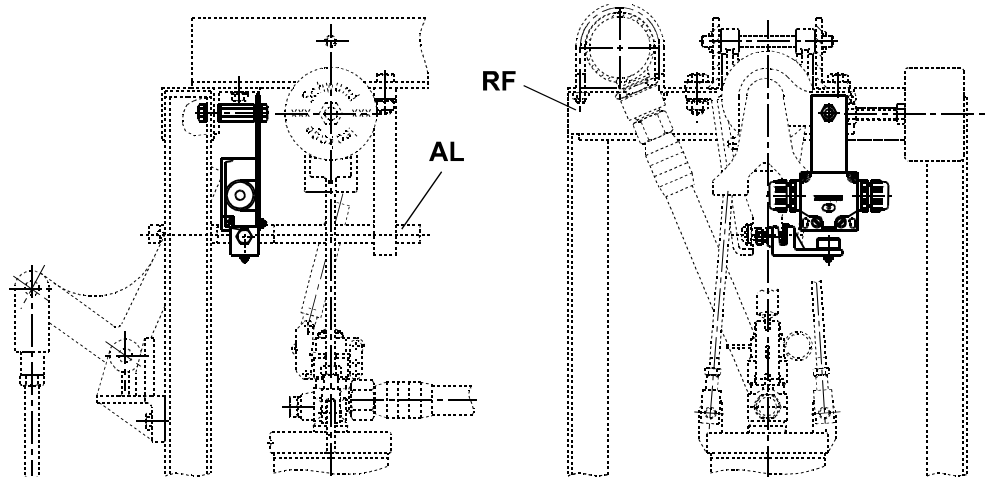
Maintenance
see technical description non electrical control device for high pressure systems part no. 926942

Designation	Part no.	Weight
Monitoring for non electrical control device HP systems	886373	0.31 kg (0.68 lbs)

Application
The monitoring non-electrical control device may only be used in accordance with system approval in stationary CO_2, IG-01 (argon), IG-100 (nitrogen), IG-55 and IG-541 extinguishing systems. It facilitates monitoring of the correct setting of the time delay device (VZ2/VZ3) component. The correct setting depends on the correct end position of the release bar. When the release bar is actuated a reed contact limit switch sends a fault message to the monitoring control panel. The fault is indicated locally by LED.

Included in delivery
Reed contact limit switch .....886343, see monitoring device
Bracket for UEWA released cylinder bank 876851
Bracket for cable duct cylinder bank 815367
Technical description monitoring non electrical control device for high pressure systems 926942
as well as screws, nuts and washers

Mounting example



RF = frame cylinder bank, AL = release bar

Extinguishing technology CO_2 HP
Monitoring device CO_2

Monitoring rope pneumatic activation device PAE

Approvals
no approval required

SAP designation
part no. 886379: Monitoring rope pneumatic activation device

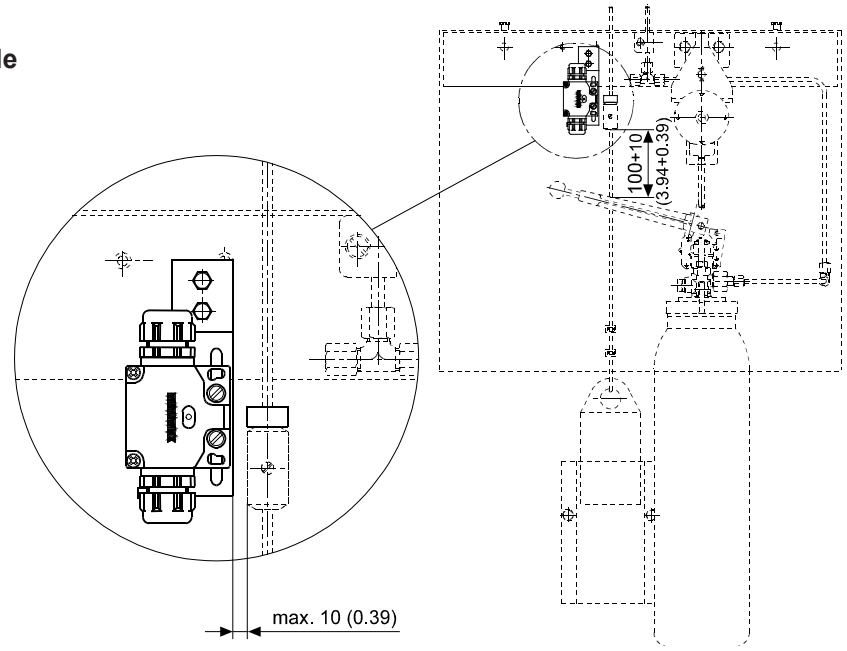
Maintenance
see technical description monitoring rope pneumatic activation device part no. 926944

Designation	Part no.	Weight
Monitoring rope pneumatic ativation device PAE	886379	0.23 kg (0.51 lbs)

Application
The monitoring rope pneumatic activation device may only be used in accordance with system approval in stationary CO_2, IG-01 (argon), IG-100 (nitrogen), IG-55, IG-541, FK-5-1-12 and HFC-227ea extinguishing systems. It facilitates electrical monitoring of the correct position of the release rope in the pneumatic pilot activation device (PAE). When the rope changes its position a reed contact limit switch is actuated, sending a fault message to the monitoring control panel. The fault is indicated locally by LED.

Included in delivery
Limit switch reed contact .....886343, see monitoring device
Bracket for UEWA rope PAE 886378
Techn. description monitoring rope pneum. activat. device ...926944
as well as screws, nuts and washers

Mounting example



Extinguishing technology CO_2 HP
Monitoring device CO_2

Limit switch
system monitoring / I88-SU1Zw

Approvals

1) Listed system covered by UL-File EX5248 (Ar, MX 200 and MX 1230)

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

SAP designation
part no. 763261: Limit switch system monitor./I88-SU1Zw

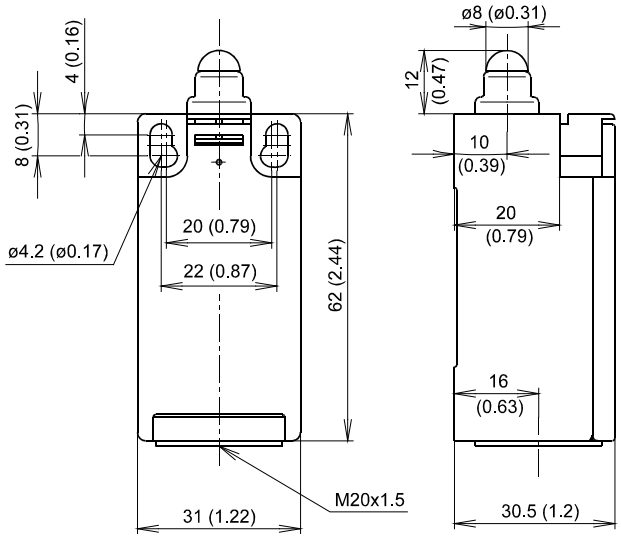
Maintenance
functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Limit switch system monitoring / I88-SU1Zw	763261	0.06 kg (0.13 lbs)

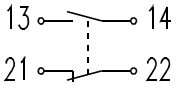
Technical data
Type I88-SU1Zw
Housing, cover .....thermopl. glass fiber concentrated
Actuation .....tappet (thermoplastic)
IP code IP65
Contacts .....1 NC, 1 NO
Ambient temperature .....-30 °C to +80 °C (-22 °F to 176 °F)
Rated insulation voltage U_i .....250 V / AC
Continuous current I_{the}.....max. 10 A
Switch-on current .....in acc. with IEC 60947-5-1, AC 15, A300
Utilization category .....AC 15, A300, Ue / Ie 240 V / 3 A
Assembly .....in acc. with EN 60947-1, EN 60947-5-1
Short-circuit protection .....blowout fuse 2 A gl/gG

Application
Disable device release box BEA

Dimension drawing
Dimensions in **mm (inch)**



Circuit diagram



Extinguishing technology CO_2 HP
Monitoring device CO_2

Limit switch type UK 432y U=180

Approvals
no approval required

SAP designation
part no. 886616: Limit switch UK 432y-M20-U180-2352 2 contacts

Maintenance
functional check within the framework of system-specific functional test

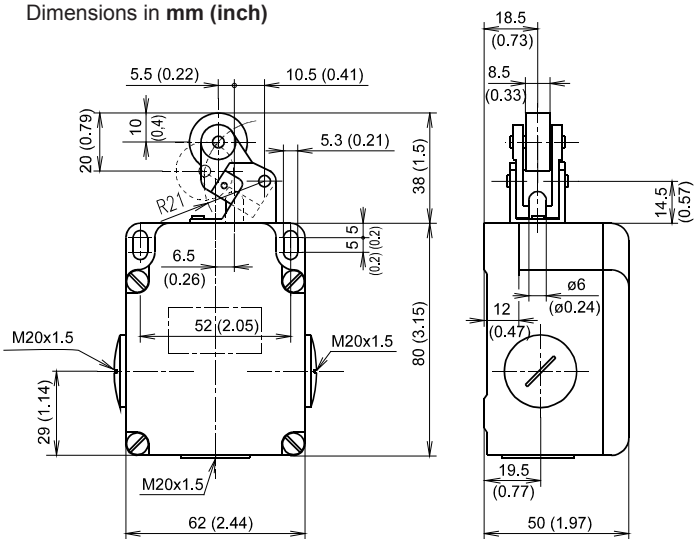
Designation	Part no.	Weight
Limit switch type UK 432y U=180	886616	0.34 kg (0.75 lbs)

Technical data
Type .....UK 432y-M20-U180-2352
Housing .....alloy die-cast metal, chrome dulled and varnished
IP code IP65
Contact material .....silver
Contacts .....2, optional adjustable
Switch system .....slow action
.....with twofold brake contacts
Ambient temperature .....-20 °C to +60 °C (-4 °F to 140 °F)
Nominal isolation voltage .....500 V
Permanent current .....16 A
Nominal operation current .....6 A, 400 V AC
Short-circuit protection .....16 A slow blow, 20 A quick blow
actuation force .....max. 7 N at effeciency of the switch way
operation speed .....max. 1 m/s, min. 0,001 m/s
time on in percent.....max. 3000 / h
mechn. durability .....$10x10^6$ switching cycles
contact spud durability .....$2x10^6$ switching cycles
.....at 6 A / 400 V AC, cos φ = 0,4

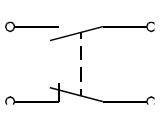
Application
Release box VZ3 resp. VZ3-R 24 V

Included in delivery
Limit switch type UK 432y U=180
Mounting and wiring instructions of the manufacturer

Dimension drawing
Dimensions in **mm (inch)**

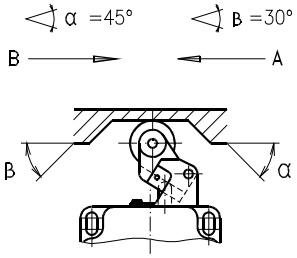


Wiring diagram



contacts shown not operated

Switching speed max. 0,5 m/s at:

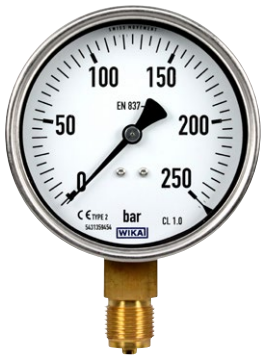


1/1

Extinguishing technology CO_2 HP

Monitoring device CO_2 HP

Pressure gauge 250 bar - AR 100



Approvals / CE marking

CE

SAP designation

part no. 126250: Pressure gauge 250bar-Ar 100-CO_2

Maintenance

functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Pressure gauge 250 bar - AR 100	126250	0.62 kg (1.4 lbs)

Technical Data

Type 212.20
Nominal size 100
Indicating range .....0 up to 250 bar
Accuracy class 1.0
Ambient temperature .....-40 °C to +60 °C (-40 °F to 140 °F)
IP code IP54
CE conformity .....according to Pressure Equipment Directive
.....module A, pressure accessory

Material / Surface

Housing .....stainless steel
Movement .....cu-alloy, wear parts argentan
Dial .....aluminium, white, black lettering
Pointer ..... aluminium, black
Window .....instrument glass
Bezel ring .....cam ring (bayonet type), stainless steel

Application

Industrial pressure gauge designed in compliance with the operational safety requirements of EN 837-1. For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts.

Marking

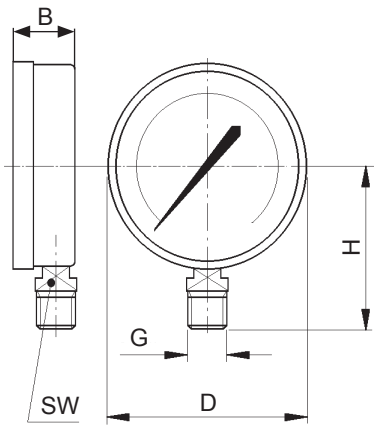
manufacturer code (WIKA), bar, accuracy class (1.0), design (EN 837-1), CE (Type2)

Included in delivery

pressure gauge 250 bar - AR 100 with protective cap (thread) as well as operating instructions of the manufacturer (de/en/fr/es)

Dimension drawing

Dimensions in **mm (inch)**



pressure gauge	D	b	h	G / R	SW
250 bar - AR 100	100 (3.9)	49,5 (1.95)	87 (3.4)	G1/2	22

Extinguishing technology CO_2 HP
Monitoring device CO_2 HP

Shut-off valve PN250 for pressure gauges

without test connection

with test connection

Approvals
no approval required

SAP designation
part no. 131789: Gate valve DIN16270-AG-20Ms

Maintenance
functional check within the framework of system-specific functional test

Designation	Part no.	Test connection	Weight
Shut-off valve DIN16270	131789	without	0.63 kg (1.39 lbs)
Shut-off valve DIN16271	131790	with	0.76 kg (1.68 lbs)

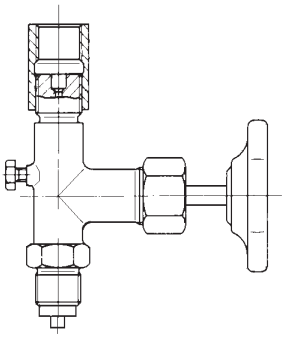
Technical Data
Working pressure .....max. 250 bar (3625 psi)
Material .....brass, stamped brass including screw cap and tightening socket

Note
Only for pressure gauges with cylindrical thread and guide pilot for the sealing

Not included in delivery
Washer for pressure gauge connection G1/2"
washer DIN16258-B-Pb 128907

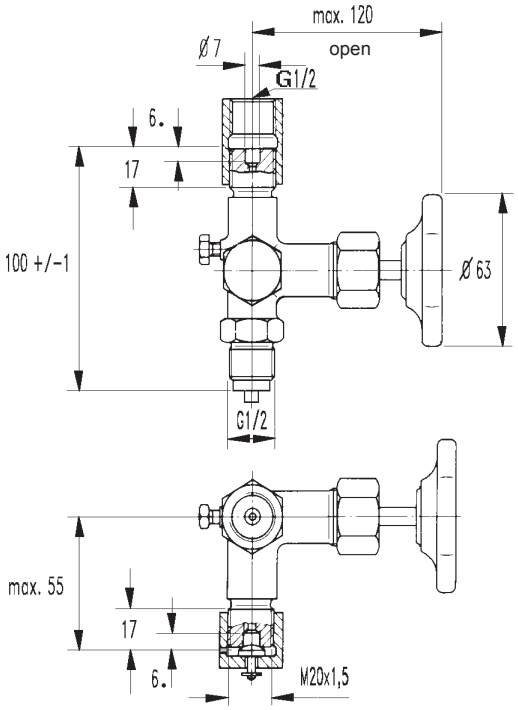
Dimension drawing
Dimensions in **mm (inch)**

Shut-off valve DIN 16270



Dimensions as style DIN16271

Shut-off valve DIN 16271



Extinguishing technology CO_2 LP
Monitoring device CO_2 LP

Pressure switch CO_2 / inert gases

Approvals
no approval required

SAP designation
part no. 926828: Pressure switch CO_2/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
Type 0194
Pressure medium .....carbon dioxide (CO_2)
.....argon (IG-01), nitrogen (IG-100), IG-55, IG-541
Safe up to .....300 bar (4351 psi)
Switching pressure falling .....2 bar (29 psi)
rising .....3 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 code .....IP65 with plug socket
Plug socket .....similar DIN EN 175301
Tightening torque G1/4 .....max. 40 Nm
Installation position .....any position

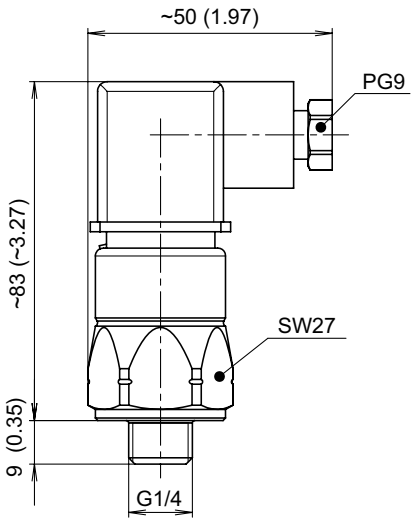
Electrical data
Rated supply voltage .....5 - 24 V DC
Rated current (DC 12, AC 12) .....3 - 50 mA
Switching contact .....gold contacts
Cross-section of conducting wire .....max. 1,5 mm²

Material / surface
Housing .....steel galvanized
Diaphragm .....NBR

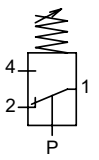
Note
Further pressure switch upon request.

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 CO_2 LP
Monitoring device CO_2 LP

Pressure switch CO_2 / Ar / N_2

Approvals
no approval required

SAP designation
e.g. part no. 811684: Pressure switch CO_2/Ar/N_2 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	

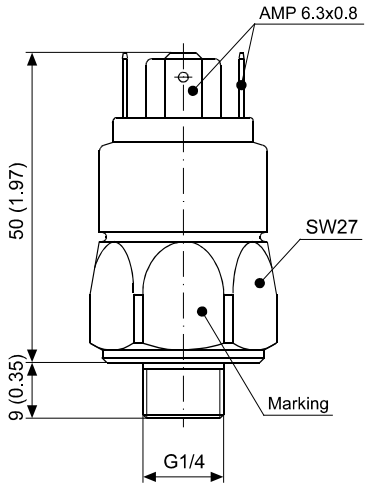
Technical Data
Pressure medium .....carbon dioxide (CO_2)
.....argon (IG-01), nitrogen (IG-100), IG-55, IG-541
Safe up to .....100 bar (1450.4 psi)
Switching pressure falling .....2 bar (29 psi)
rising .....3 bar (43,5 psi)
Switching tolerance .....± 0,5 bar (7,25 psi)
Switching power style 0180.....250 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 code .....IP65 with plug socket

Material / surface
Housing .....steel galvanized
Diaphragm .....EPDM

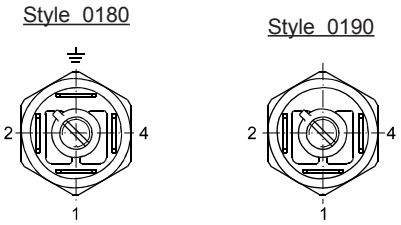
Note
Further pressure switch upon request.

Not included in delivery
Plug socket .....see monitoring device

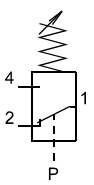
Dimension drawing
Dimensions in **mm (inch)**



Connection diagram

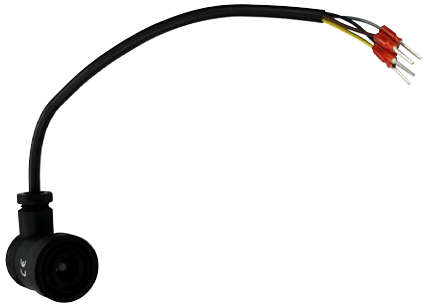


P&ID symbol



Extinguishing technology CO_2 LP
Monitoring device CO_2 LP

Plug socket for pressure switch



Approvals
no approval required

SAP designation
part no. 811696: Plug socket pressure switch

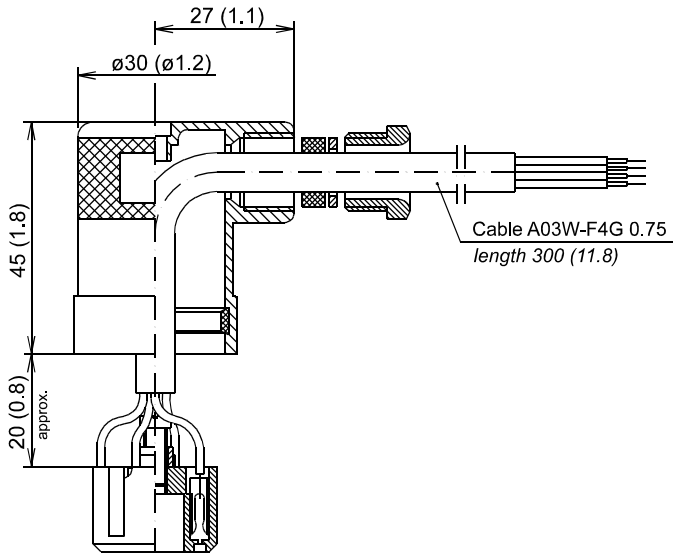
Maintenance
Functional check during the maintenance intervals specific to the fire extinguishing system, but at least annually.

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

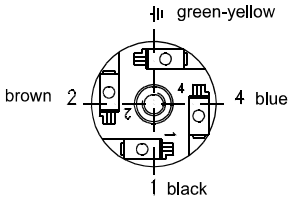
Application
For use with pressure switch CO_2 / Ar / N_2 style 0180 and style 0190.

Caution
After installation check for electrical conductivity.

Dimension drawing
Dimensions in **mm (inch)**



Connection diagram terminal block:



Inert gas extinguishing technology

Release device electrical

Thermo switch STS - 1

Approvals

VdS
G387004

SAP designation

e.g. part no. 817194: Thermo-switch 57°C-100-STS1

Maintenance

see produktinformation temperature switch STS-1
part no. 811751

Spare parts

Spare glass bulbs 5 mm, individually packed complete with enclosed test certificate according to EN 10204-2.2:
- Release temperature 57 °C colour code - orange 819877
- Release temperature 68 °C colour code - red 819889
- Release temperature 93 °C colour code - green 819890
- Release temperature 141 °C colour code - blue 819907
- Release temperature 182 °C colour code - violet 819919
- Release temperature 260 °C colour code - black 819920

Probe length	Release temperature	Part no.	Colour	Weight
100	57 °C (134.6 °F)	817194	orange	0.25 kg (0.55 lbs)
	68 °C (154.4 °F)	817200	red	
	93 °C (199.4 °F)	817224	green	
	141 °C (285.8 °F)	817236	blue	
	182 °C (359.6 °F)	817248	violet	
	260 °C (500 °F)	817250	black	
200	57 °C (134.6 °F)	816335	orange	0.35 kg (0.77 lbs)
	68 °C (154.4 °F)	811738	red	
	93 °C (199.4 °F)	816359	green	
	141 °C (285.8 °F)	816360	blue	
	182 °C (359.6 °F)	816372	violet	
	260 °C (500 °F)	816384	black	
350	57 °C (134.6 °F)	816396	orange	0.45 kg (0.99 lbs)
	68 °C (154.4 °F)	816402	red	
	93 °C (199.4 °F)	816426	green	
	141 °C (285.8 °F)	816438	blue	
	182 °C (359.6 °F)	816440	violet	
	260 °C (500 °F)	816451	black	

Inert gas extinguishing technology

Release device electrical

Thermo switch STS - 1

Technical data

Probe .....brass, nickel-plated

Limit switch STS-1:
Type .....ENM2-SU1Z IW
Contakts .....1 NC, 1 NO
Rated insulation voltage U_i .....400 V / AC
Conv. thermal current I_{the} .....10 A
Max. switch-on current .....AC 15, A300 acc. to IEC 60947-5-1
Utilization category .....AC 15, A300, U_e/I_e 240 V / 3 A
Short-circuit protection .....melting fuse 2 A
Ambient temperature .....-30 °C to + 80 °C (-22 °F to 176 °F)
IP code IP65
Housing .....al-die casting

Application

The Thermo-switch STS-1 may only be used in accordance with system approval for activation of fire extinguishing systems. The Thermo switch is used as a electrical fire detection element.

Functional description

The Thermo-switch STS-1 is a electrical fire detection element. Due to its design it can be put with the release part from the outside through walls or housing.
At a temperature rise the warmed medium flow through the bores in the housing and heated the glass bulb. After reaching a specific temperature the glass bulb bursts.
Through this the pressure spring can relief. The pressure spring push away the rod from the limit switch. Through this the limit switch can operate. The Thermo-switch is made in three length and six different temperatures. Alternatively one or two cables can be installed.

Included in delivery

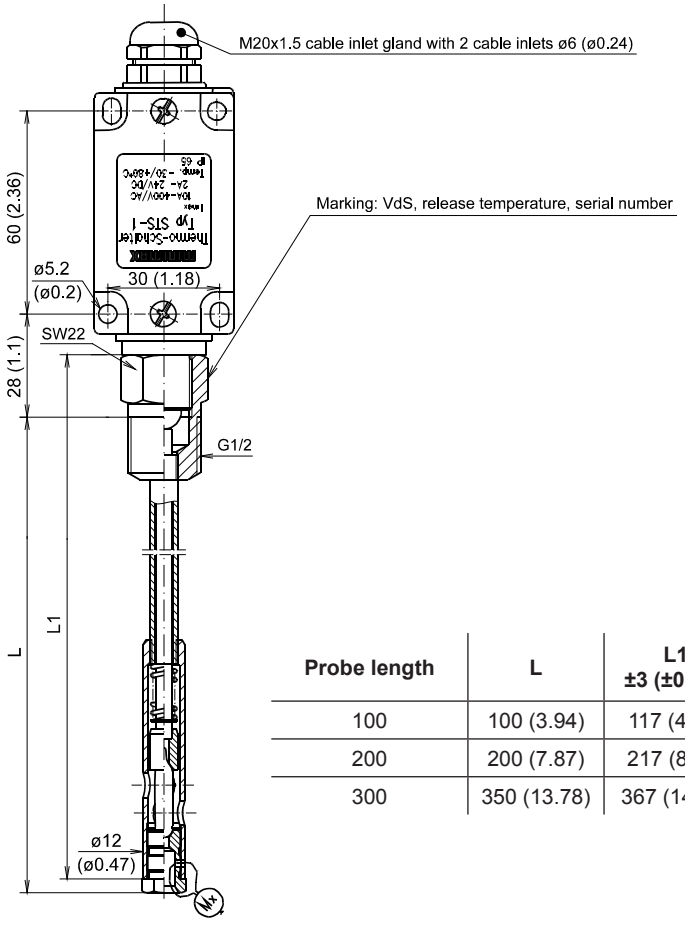
Thermo switch STS - 1
Produktinformation temperature switch STS-1 part no. 811751

Not included in delivery

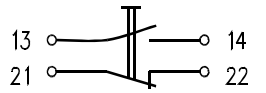
Mounting socket for thermo switch STS .....see release device electr.

Dimension drawing

Dimensions in **mm (inch)**



wiring diagram



contacts shown not operated

Probe length	L	L1 ±3 (±0.12)
100	100 (3.94)	117 (4.61)
200	200 (7.87)	217 (8.54)
300	350 (13.78)	367 (14.45)

Inert gas extinguishing technology

Release device electrical

Mounting socket for thermo switch STS

Approvals

no approval required

SAP designation

e.g. part no. 812664: Mounting socket thermo switch screwed

Maintenance

maintenance-free

Designation	Style	Part no.	Weight
Mounting socket for thermo switch STS	screw-on	812664	0.14 kg (0.31 lbs)
	plug-in	812640	

Technical data

Material .....brass, chrome-plated

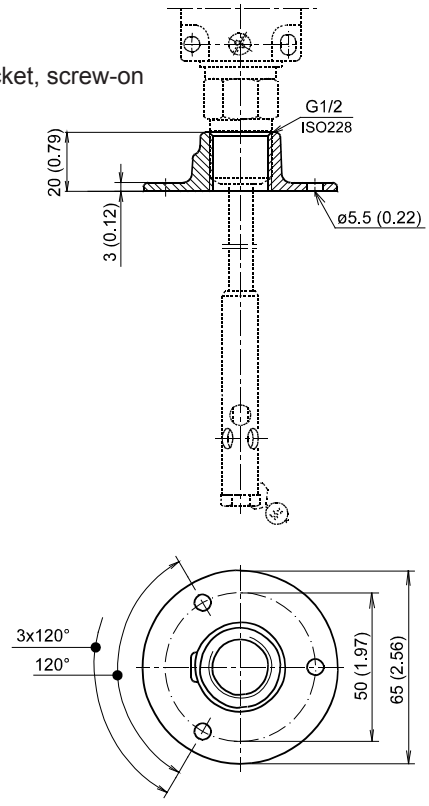
Not included in delivery

Fastening material

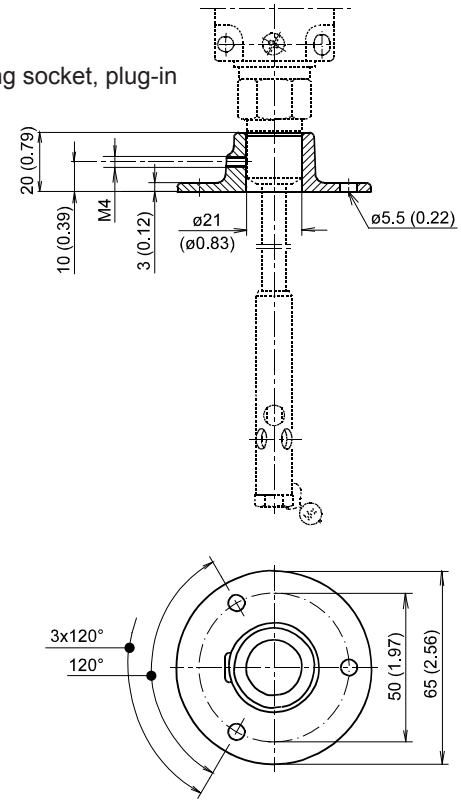
Dimension drawing

Dimensions in **mm (inch)**

Mounting socket, screw-on



Mounting socket, plug-in



Inert gas extinguishing technology

Release device electrical

Key switch K2

Approvals

no approval required

SAP designation

part no. 595521: Schlüsselschalter K2

Maintenance

functional check within the framework of system-specific functional test

Designation	Part no.	Weight
Key switch K2	595521	0.87 kg (1.92 lbs)

Technical data

Housing type .....MBG 422
IP code, housing IP65
Standards .....IEC 947 EN 60947

Key selector switch:
Type ASS21S1 with 2 lock positions, operating angle 1x 45°, key can be removed in left lock position only
Contacts .....2 NO, type 2x AF02
Light element .....with series resistance type ALV
Indicator light .....type AML RT red, ...with light element ALV incl. lamp (L130/9)

Contact elements
Rated voltage Ue .....440 V
Rated current Ie .....6 A, AC 15, 250 V AC
.....3 A, DC 13, 24 V DC
Category .....AC 13, DC 15, DIN VDE 0660 part 200
Thermal nominal current .....10 A
Short-circuit protection .....gG 10 A
IP code IP20
Temperature range .....-25 °C to +60 °C (-13 °F to 140 °F)

Light elements:
Rated voltage Ue .....250 V
Thermal rated power .....2 W
Short-circuit protection .....gG 10 A
IP code IP20
Temperature range .....-25 °C to +40 °C (13 °F to 104 °F)

Application

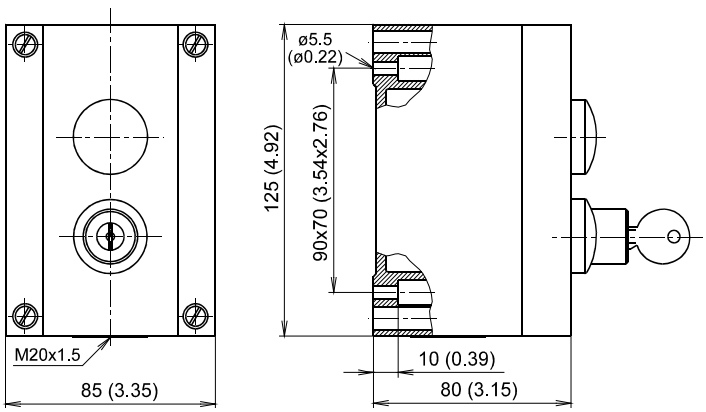
To bridges isolation during control panel test complete in lockable housing, incl. control lamp.

Not included in delivery

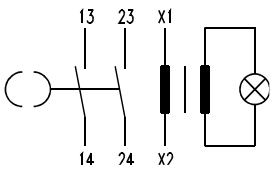
Fastening material

Dimension drawing

Dimensions in **mm (inch)**



circuit diagram



Inert gas extinguishing technology

Release device electrical

Emergency push-button H compl.

Approvals

no approval required

SAP designation

part no. 582236: Emergency push-button H compl.

Maintenance

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

Designation	Part no.	Weight
Emergency push-button H compl.	582236	0.55 kg (1.21 lbs)

Technical data

Type XAPM1201S9
IP code IP65
Push-button .....push-button red, locked in pressed position
.....unlocked by clockwise rotation
Contacts .....2 NO
Voltage .....max. 500 V
Current .....max. 8 A at 240 V

Application

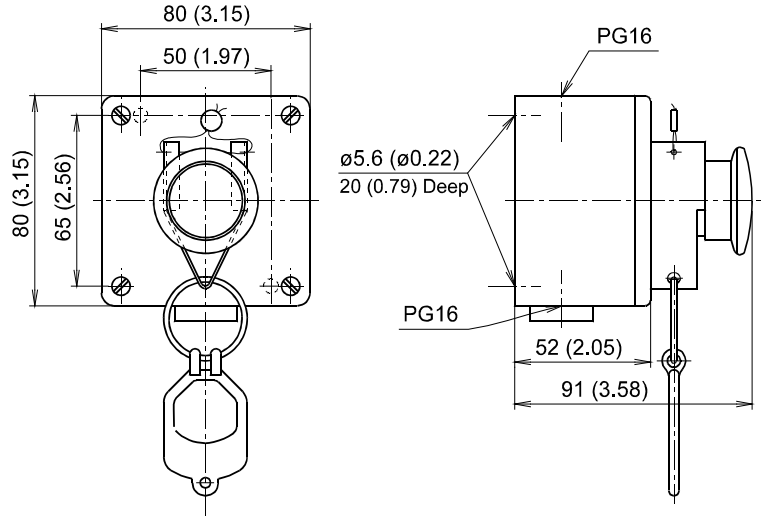
Emergency shut-downs or switching-on of electrical circuits coherently with the function of a fire-extinguishing system.

Included in delivery

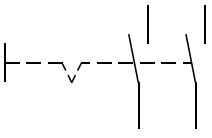
Emergency push-button H 657443
Accessories for emergency push-button compl. 814764
- safety device, key ring, towing ring, seal, seal wire, label emergency push-button as well as fastening material
- techn. description emergency push-button (de/en) 786038

Dimension drawing

Dimensions in **mm (inch)**



Circuit diagram



Extinguishing technology CO_2 HP

Release device electrical CO_2

Thermo switch STS-Ex

Approvals

VdS
G387006

SAP designation

e.g. part no. 886851: Thermo switch 57°C-100-STS-Ex

Maintenance

see product information thermo switch STS-Ex
part no. 886521

Spare parts

Spare glass bulbs 5 mm, individually packed compl. with enclosed test certificate according to EN 10204-2.2:

- Release temperature 57 °C colour code - orange 819877
- Release temperature 68 °C colour code - red 819889
- Release temperature 93 °C colour code - green 819890
- Release temperature 141 °C colour code - blue 819907
- Release temperature 182 °C colour code - violet 819919
- Release temperature 260 °C colour code - black 819920

Probe length	Release temperatur	Part no.	Colour code	Weight
100	57 °C (134.6 °F)	886851	orange	0.45 kg (0.99 lbs)
	68 °C (154.4 °F)	886852	rot	
	93 °C (199.4 °F)	886853	grün	
	141 °C (285.8 °F)	886854	blau	
	182 °C (359.6 °F)	886855	violett	
	260 °C (500 °F)	886856	schwarz	
200	57 °C (134.6 °F)	886634	orange	0.55 kg (1.21 lbs)
	68 °C (154.4 °F)	886635	rot	
	93 °C (199.4 °F)	886636	grün	
	141 °C (285.8 °F)	886637	blau	
	182 °C (359.6 °F)	886638	violett	
	260 °C (500 °F)	886639	schwarz	
350	57 °C (134.6 °F)	886640	orange	0.65 kg (1.43 lbs)
	68 °C (154.4 °F)	886641	rot	
	93 °C (199.4 °F)	886643	grün	
	141 °C (285.8 °F)	886644	blau	
	182 °C (359.6 °F)	886645	violett	
	260 °C (500 °F)	886646	schwarz	

Extinguishing technology CO_2 HP

Release device electrical CO_2

Thermo switch STS-Ex

Technical data

Explosion protection .....Ⓔx II 2G c IIC T6 (zone 1 + 2)
.....Ⓔx II 2D c T 80 °C (zone 21 + 22)
Limit switch STS-Ex .....see release device electr.
Probe .....brass, nickel-plated

Technical data limit switch

Type .....EEx 335 S - 1Ö/1S
Contacts .....1 NC, 1 NO
Contact material .....fine silver
Switching system .....slow action, positive break
Electrical design .....IEC 60947-5-1
Perm. electrical load .....250 V AC - 6 A (AC-15)
.....230 V DC - 0,25 A (DC-13)
Min. load.....24 V AC/DC - 10 mA
Back-up fuse .....6 A (delay)
Explosion protection .....Ⓔx II 2G Ex de IIC T6/T5
.....Ⓔx II 2D Ex tD A21 IP67 - T 80 °C / T 95 °C
Test certificate .....DMT 01 ATEX E 178, IEC Ex BVS 07.0014
Temperature range .....-20 °C to + 60 °C (-4 °F to 140 °F)
IP code IP67
Actuation .....plunger
Cable entry .....M20 x 1,5
Housing .....zinc die-cast, coated

Application

The thermo-switch STS-Ex may only be used in accordance with system approval for activation of fire extinguishing systems. The Thermo switch is used as an electrical fire detection element and is designed for the explosive areas of zone 1 and zone 2 as well as zone 21 and zone 22.

Note

In accordance with the Directive 94/9/EC (ATEX), if the commissioning is done outside the German / English speech area a translation of the product information has to be delivered in the specific language of the country.
This must be noted also for the product sale.

Functional description

The thermo-switch STS-Ex is an electrical fire detection element. Due to its design it can be put with the release part from the outside through walls or housing.
At a temperature rise the warmed medium flow through the bores in the housing and heated the glass bulb. After reaching a specific temperature the glass bulb bursts.
Through this the pressure spring can relief. The pressure spring push away the rod from the limit switch. Through this the limit switch can operate. The thermo-switch is made in three length and six different temperatures. Alternatively one or two cables can be installed.

Included in delivery

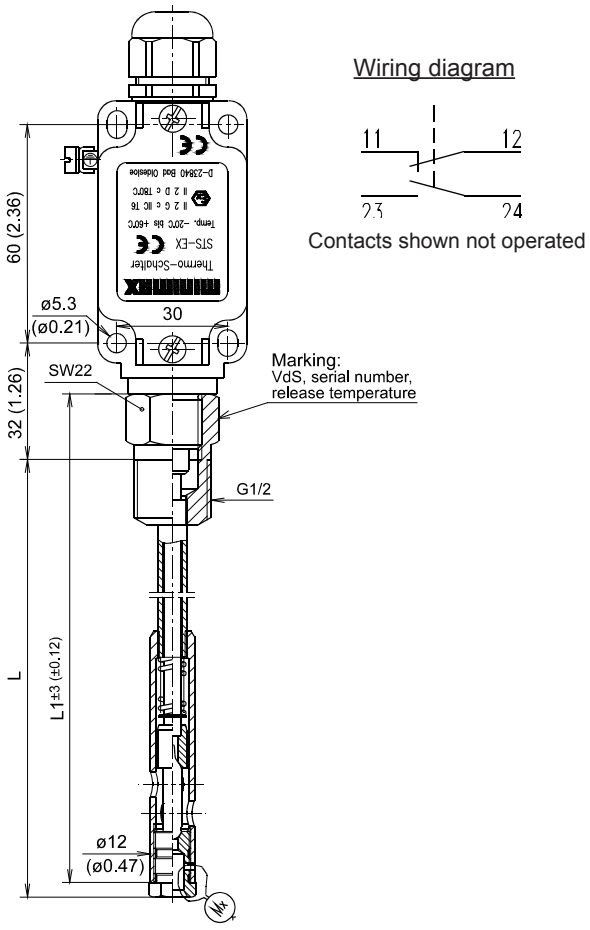
Thermo switch STS-Ex
Cable gland M20x1,5/PG16 for 2 cable entries enclosed
Product information thermo switch STS-Ex part no. 886521

Not included in delivery

Mounting socket for thermo switch STS .....see release device electr.

Dimension drawing

Dimensions in **mm (inch)**



Probe length	L	L1 ±3 (±0.12)
100	100 (3.94)	117 (4.61)
200	200 (7.87)	217 (8.54)
300	350 (13.78)	367 (14.45)

Inert gas extinguishing technology

Test device

Test device pneumatic activation

Approvals

no approval required

SAP designation

e.g. part no. 826746: Test device pneum. control 3,6kg

Maintenance

see product information test device part no. 827283

Spare parts

- Flat gasket 18,5x13x2 Fiber part no. 149970 (gasket cylinder valve / cap nut)
- Protective cap socket plug-in coupling PVC DN6 part no. 827556

Designation		Part no.	CO_2 Filling quantity	Weight approx.
Test device pneumatic activation	3.6 kg	826746	3.6 kg (7.9 lbs)	15 kg (33.1 lbs)
	7.1 kg	827260	7.1 kg (15.7 lbs)	21.5 kg (47.4 lbs)

Technical data

Operating medium .....CO_2
Working pressure .....max. 140 bar (2030 psi)
Pressure gauge display range .....0 to 250 bar (0 to 3625 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Socket plug-in coupling test device .....see test device

Application

The test device is used for testing pneumatically operated system components and control systems in stationary CO_2, argon and nitrogen fire extinguishing systems.

Functional description

With the test device it is possible to test pneumatic actuating elements, alarm devices and control systems. The test device is provide with a CO_2 cylinder, a venting facility to vent the system after the test, a pressure gauge, approx. 1.5 m hose and a plug-in coupling to connecting the test device with the system. Depending on the size of the extinguishing system the test device is supplied with CO_2 cylinder in two sizes (filling quantity 3.6 kg CO_2 or 7.1 kg CO_2). For the protection of the system components before liquid CO_2, the CO_2 cylinders are without dip tube so that only gaseous CO_2 can be used.

Included in delivery

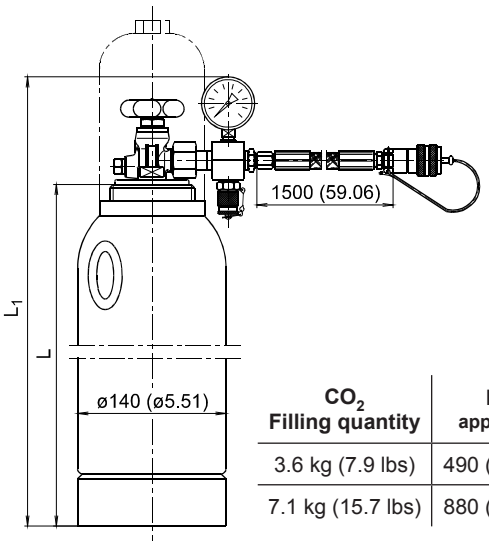
Connection line test device 827453
Steel cylinder 5.4L+3.6kg-CO_2 827271
10.7L+7.1kg-CO_2 827441
Product information test device 827283

Not included in delivery

Adapter plug coupling test connection .....826709, see test device
or
Test connection pneumatic activation .....887431, see test device

Dimension drawing

Dimensions in **mm (inch)**



CO_2 Filling quantity	L approx.	L_1 approx.
3.6 kg (7.9 lbs)	490 (19.3)	590 (23.2)
7.1 kg (15.7 lbs)	880 (34.7)	980 (38.6)

Inert gas extinguishing technology

Test device

Adapter plug coupling test connection and socket plug-in coupling test connection

Approvals

no approval required

SAP designation

e.g. part no. 826709: Adapter plug coupling test connection

Maintenance

maintenance-free

Designation	Part no.	Weight
Adapter plug coupling test connection	826709	0.04 kg (0.09 lbs)
Socket plug-in coupling test connection	826710	0.10 (0.22 lbs)

Technical data

Type adapter plug ST-NV04BSP06S
socket ST-NV04BSP06M
Operating medium .....CO_2
Working pressure .....max. 560 bar (8120 psi)
Flow cross-section .....24 mm² (0,04 square inch)
Temperature range .....-20 °C to +120 °C (-4 °F to 248 °F)
Thread .....BSP ISO 228
Gasket .....NBR

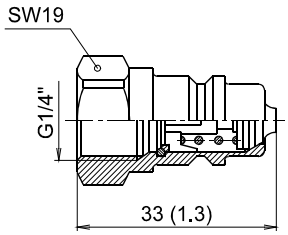
Not included in delivery

Protection cap adapter plug coupling PVC DN6 827544
socket plug-in coupling PVC DN6 827556

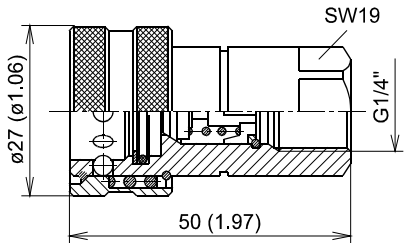
Dimension drawing

Dimensions in **mm (inch)**

Adapter plug



Socket



The socket complete with protection cap is included in the delivery of the test device.

Inert gas extinguishing technology

Test device

Test connection pneumatic activation

Approvals

no approval required

SAP designation

part no. 887431: Test connection pneumatic activation

Maintenance

see product information test connection pn. activation
part no. 887430

Designation	Part no.	Weight
Test connection pneumatic activation	887431	0.26 kg (0.57 lbs)

Technical data

Operating medium .....CO_2
Working pressure .....max. 140 bar (2030 psi)
Temperature range .....-20 °C to +50 °C (-4 °F to 122 °F)
Connection .....precision steel pipe 10 x 1
Material .....steel, galvanized

Application

The test connection is used for the connection of the test device pneumatic control (3.6 kg / 7.1 kg) to pilot pipes.

Functional description

With the test connection it is possible to connect the test device pneumatic control in an easy way.
Because of the robust bracket with the three bores ø7mm it is possible to screw the test connection with one or two screws e.g. on a wall or the cylinder rack.

Included in delivery

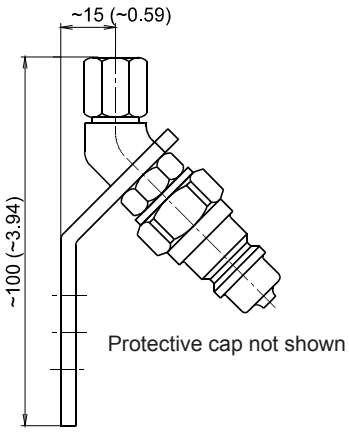
Union VEE 10 LR A3C 887428
Adapter plug coupling test connection 826709
Bracket test connection pneum. 887429
Protective cap PVC DN6 TF14NV06 827544
Product information test connection pn. activation 887430

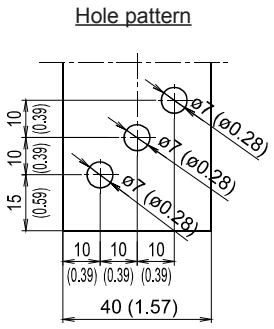
Not included in delivery

Union KOR 10/6-PL A3C 755260
(reduction on to precision steel pipe 6 x 1)
as well as fastening material

Dimension drawing

Dimensions in **mm (inch)**





Inert gas extinguishing technology

System accessories

Cylinder lifting device

Approvals

no approval required

SAP designation

part no. 578022: Cylinder lifting device

Maintenance

maintenance-free

Designation	Part no.	Weight
Cylinder lifting device	578022	1.0 kg (2.2 lbs)

Technical data

Lift without extension .....approx. 70 mm (2.76")
with extension .....approx. 120 mm (4.72")
Material .....aluminium

Application

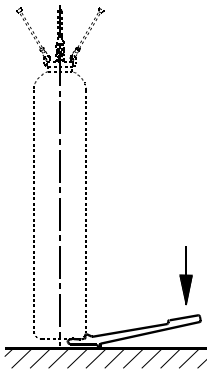
Assembly tool for assembly and disassembly of steel cylinders in cylinder racks.

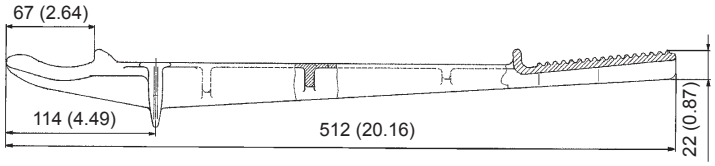
Not included in delivery

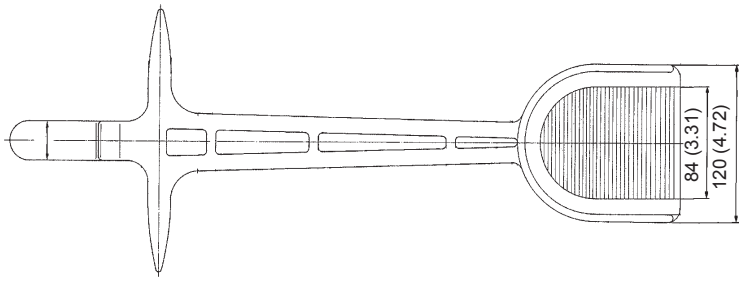
Extension cylinder lifting device .....886288, see system accessories

Dimension drawing

Dimensions in **mm (inch)**







Inert gas extinguishing technology

System accessories

Extension cylinder lifting device

Approvals

no approval required

SAP designation

part no. 886288: Extension cylinder lifting device

Maintenance

maintenance-free

Designation	Part no.	Weight
Extension cylinder lifting device	886288	0.8 kg (1.8 lbs)

Technical data

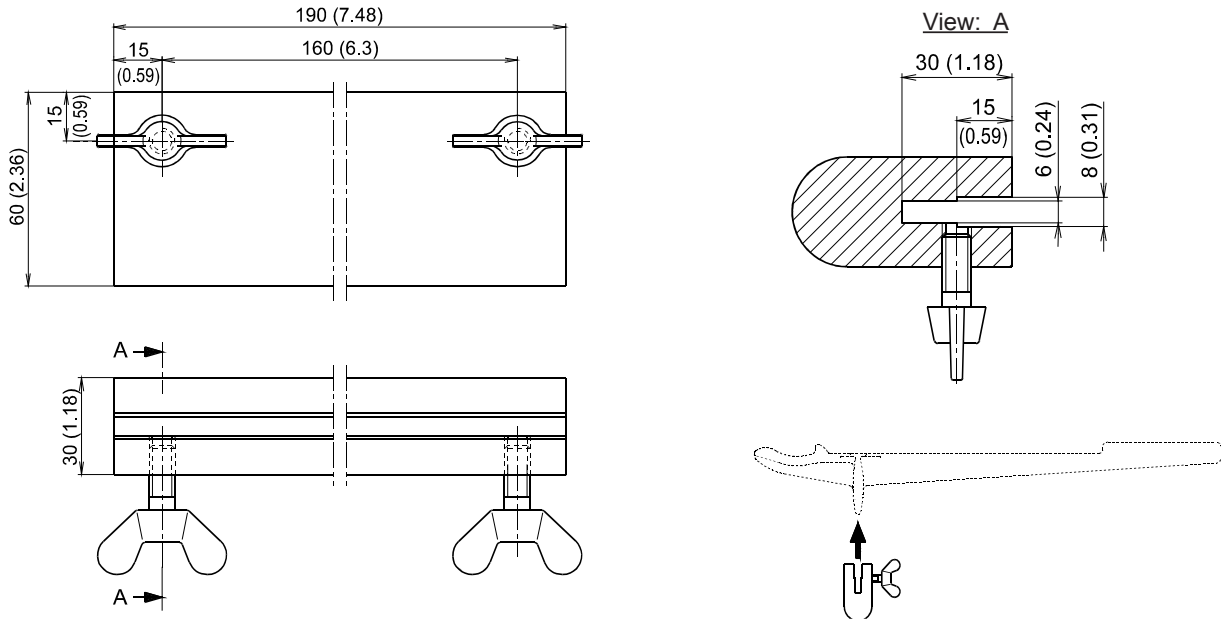
Material .....aluminium

Included in delivery

Extension cylinder lifting device complete with wing nuts DIN 316 - M8x20

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
System accessories CO_2

Label
CO_2 - Feuerlöschanlage

Approvals
no approval required

SAP designation
e.g. part no. 240754: sign CO_2-Feuerlöschanlage-Alu

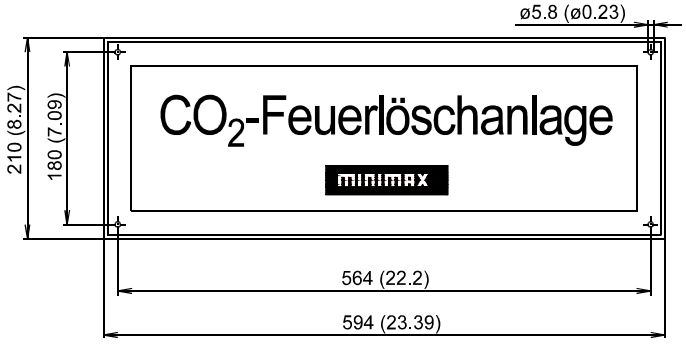
Maintenance
maintenance-free

Designation	Material	Directional marker	Part no.	Weight kg (lbs)
Label CO_2 - Feuerlöschanlage	Alu	without	240754	0.34 (0.75)
		with	245790	
	PVC	without	860292	0.03 (0.07)
		with	861673	
Directional marker (for spare)	PVC	-	247803	-

Technical data
Material .....aluminium plate 1 mm (0.04") thickness or
.....PVC self adhesive 0.2 mm (0.008") thickness
Ground .....RAL9002 - white
Script .....RAL9005 - black
Script type .....faced DIN1451
Margin .....25 mm (0.98"), RAL3000 - red

Style PVC self adhesive:
Temperature range .....-20 °C to +80 °C (-4 °F to 176 °F)
Glue .....permanent, sticking firmly
Storage of glue layer .....min. 3 years
Finish .....brilliant
For glass, plastic structured cast metal, and varnished surfaces.

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
System accessories CO_2

Label
MINIMAX

Approvals
no approval required

SAP designation
e.g. part no. 352070: Sign MINIMAX PVC self-adhesive

Maintenance
maintenance-free

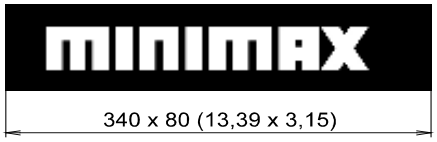
Designation	Part no.	Weight kg (lbs)
Label Minimax PVC - selbstklebend	352070	0.008 (0.018)
Label Minimax (100x20)	759897	0.001 (0.002)
Label Minimax	664889	0.001 (0.002)

Technical data
Material .....PVC self adhesive 0.2 mm (0.008") thickness
.....label Minimax (100x20) 0.1 mm (0.004") thickness
Ground .....RAL3000 - red
Script .....white
Temperature range .....-20 °C to +80 °C (-4 °F to 176 °F)

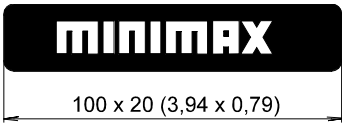
Glue .....permanent, sticking firmly
Storage of glue layer .....min. 3 years
For structured cast metal surfaces, and powdered/varnished surfaces.

Dimension drawing
Dimensions in **mm (inch)**

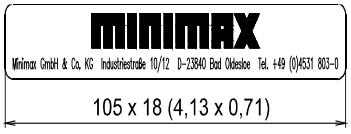
Label Minimax PVC - selbstklebend



Label Minimax (100x20)

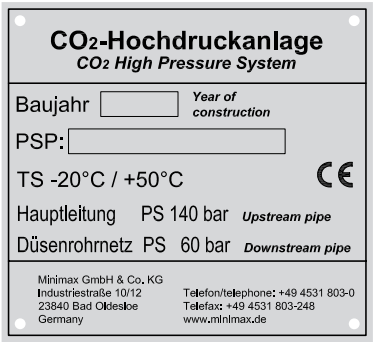


Label Minimax



Extinguishing technology CO_2 HP
System accessories CO_2

Label CE
CO_2 high pressure system



Approvals
no approval required

SAP designation
part no. 886457: Sign CE CO_2-high pressure system

Maintenance
maintenance-free

Designation	Part no.	Weight
Label CE CO_2 high pressure system	886457	0.04 kg (0.09 lbs)

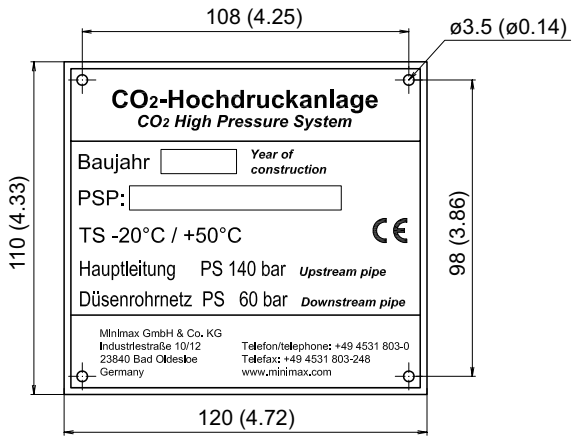
Odering hints
The order has to specified with year of construction and PSP element.

Technical data
Material .....aluminium plate 1 mm (0.04") thickness
Ground .....aluminium (colour)
Script / lines .....black
Script type .....Helvetica

Application
To the CE marking of the fire extinguishing system in accordance with EC-Directives e.g. Pressure Equipment Directive 97/23/EC.

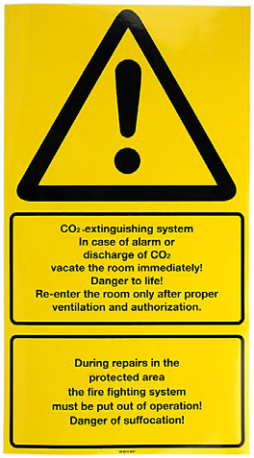
Not included in delivery
Fastening material

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
System accessories CO_2

Label
for CO_2 protected area - PVC



Approvals
no approval required

SAP designation
part no. 858300: Label f.CO_2-gesch.Raum-PVC

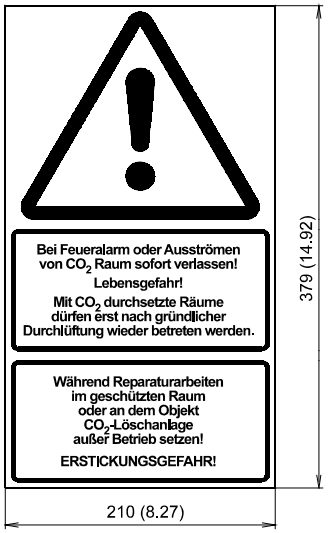
Maintenance
maintenance-free

Designation	Part no.	Weight
Label für CO_2 - geschützten Raum - PVC	858300	0.02 kg (0.04 lbs)
Label für CO_2 protected area - PVC	886613	

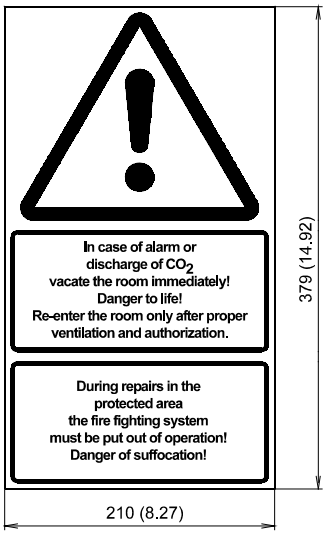
Technical data
Material .....PVC self adhesive 0.2 mm (0.01") thickness
Ground .....RAL1004 - yellow
Picture .....RAL9011 - black
Sscript .....RAL9011 - black
Script type .....modern times-onamental type,
.....medium faced DIN30640 part 2
Script height .....8 mm (0.315")
Margin .....RAL9011 - black
Temperature range .....-20 °C to +80 °C (-4 °F to 176 °F)
Glue .....permanent, sticking firmly
Storage of glue layer .....min. 3 years
Finish .....brilliant
For glass, plastic structured cast metal, and varnished surfaces.

Dimension drawing
Dimensions in **mm (inch)**

Label for CO_2 geschützten Raum - PVC



Label for CO_2 protected area - PVC



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

Material .....PVC self adhesive 0.2 mm (0.01") thickness
Ground .....RAL1003 - yellow
Picture .....RAL9004 - black
Sscript .....RAL9004 - black
Script type ...Akzidenz-Grotesk, medium faced DIN1451 - 2 C 7
Script height .....7 mm (0.28")

Temperature range .....-20 °C to +80 °C (-4 °F to +176 °F)
Glue .....sticking firmly
Storage of glue layer .....min. 3 years
Finish .....brilliant
For glass, plastic structured cast metal, and varnished surfaces.

Dimension drawing

Dimensions in **mm (inch)**

Extinguishing technology CO_2 HP
System accessories CO_2

Label W9 - Alu
Warning of danger

Approvals
no approval required

SAP designation
part no. 858293: Sign W9 ALU-GEPRÄGT

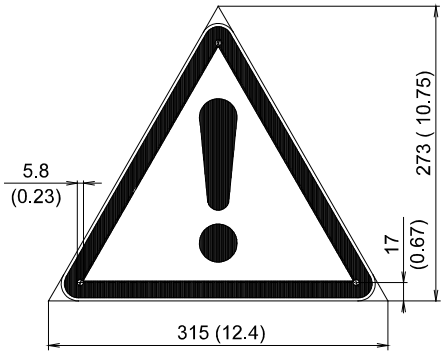
Maintenance
maintenance-free

Designation	Part no.	Weight
Label W9 - Alu Warning of danger	858293	0.07 kg (0.15 lbs)

Technical data
Material .....aluminium plate 0,5 mm (0,02") thickness
Ground .....RAL1004 - yellow
Picture .....RAL9011 - black
Border .....17 mm (0,67"), RAL9011 - black

Style .....striked
Type W9 "Warning of danger", DIN4844 part 1 sheet 14.

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

System accessories CO_2

Label - CO_2- Alu für CO_2- geschützten Raum

Approvals

no approval required

SAP designation

part no.114928: Sign f.CO2-gesch.Raum-Alu

Maintenance

maintenance-free

Designation	Part no.	Weight
Label - CO_2 - Alu für CO_2 - geschützten Raum	114928	0.8 kg (1.76 lbs)

Technical data

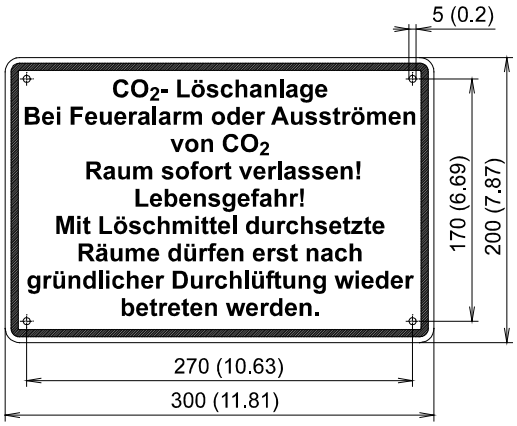
Material .....aluminium plate 0.5 mm (0.02") thickness
Ground .....RAL1004 - yellow
Script .....RAL9011 - black
Script type .....ornamental type, faced DIN1451
Script height .....16 mm (0.63")
Margin .....RAL9011 - black

Not included in delivery

Fastening material

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
System accessories CO_2

Label - CO_2- Alu Reparaturarbeiten CO_2

Approvals
no approval required

SAP designation
part no. 115088: Sign Reparaturarbeiten CO_2-Alu

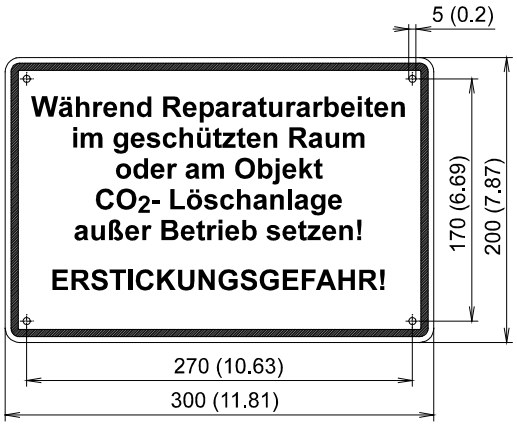
Maintenance
maintenance-free

Designation	Part no.	Weight
Label - CO_2 - Alu Reparaturarbeiten CO_2	115088	0.08 kg (0.18 lbs)

Technical data
Material .....aluminium plate 0.5 mm (0.02") thickness
Ground .....RAL1004 - yellow
Script .....RAL9011 - black
Script type .....ornamental type, faced DIN1451
Script height .....16 mm (0.63")
Margin .....RAL9011 - black

Not included in delivery
Fastening material

Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

System accessories CO_2

Labels - CO_2- Alu
Carbon Dioxide

Approvals

no approval required

SAP designation

e.g. part no. 886486: Sign "Carbon Dioxide ... vacate immediately"

Maintenance

maintenance-free

Designation	Part no.	Text	Weight
Cabone Dioxide ... vacate immediately	886486	WARNING - CARBON DIOXIDE GAS - WHEN ALARM OPERATES VACATE IMMEDIATELY.	0.8 kg (0.18 lbs)
Cabone Dioxide ... until ventilated	886487	WARNING - CARBON DIOXIDE GAS - WHEN ALARM OPERATES DO NOT ENTER UNTIL VENTILATED.	
Cabone Dioxide ... vacate immediately	886488	CAUTION CARBON DIOXIDE DISCHARGE INTO A NEARBY SPACE MAY COLLECT HERE. WHEN ALARM OPERATES VACATE IMMEDIATELY.	

Technical data

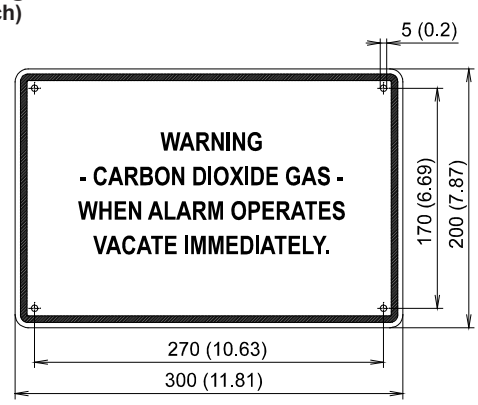
Material .....aluminium plate 0.5 mm (0.02") thickness
Ground .....RAL1004 - yellow
Script .....RAL9011 - black
Script type .....ornamental type, faced DIN1451
Script height .....16 mm (0.63")
Margin .....RAL9011 - black

Not included in delivery

Fastening material

Dimension drawing

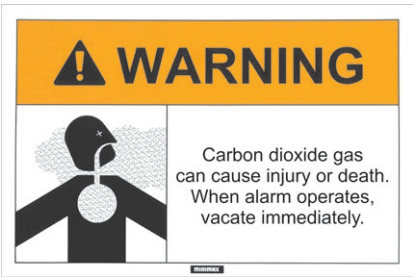
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

System accessories CO_2

Label NFPA 12



Approvals

no approval required

SAP designation

e.g. part no. 887803: Label NFPA 12 Every protected space - PVC

Maintenance

maintenance-free

Designation	Material	Part no.	Text	Weight kg (lbs)
Label NFPA 12 "Every protected space"	PVC	887803	Carbon dioxide gas can cause injury or death. When alarm operates, vacate immediately.	0.08 (0.18)
	Alu	887810		0.13 (0.29)
	XCrNi	887817		0.38 (0.84)
Label NFPA 12 "Every entrance"	PVC	887805	Carbon dioxide gas can cause injury or death. When alarm operates, do not enter until ventilated.	0.08 (0.18)
	Alu	887811		0.13 (0.29)
	XCrNi	887818		0.38 (0.84)
Label NFPA 12 "Every entrance wintergreen"	PVC	887806	Carbon dioxide gas can cause injury or death. When alarm operates or wintergreen scent is detected, do not enter until ventilated.	0.08 (0.18)
	Alu	887812		0.13 (0.29)
	XCrNi	887819		0.38 (0.84)
Label NFPA 12 "Every nearby space"	PVC	887807	Carbon dioxide gas discharge into nearby space can collect here. When alarm operates, vacate immediately. Carbon dioxide gas can cause injury or death.	0.08 (0.18)
	Alu	887813		0.13 (0.29)
	XCrNi	887820		0.38 (0.84)
Label NFPA 12 "Outside each entrance"	PVC	887808	Carbon dioxide gas can cause injury or death. Ventilate the area before entering. A high carbon dioxide gas concentration can occur in this area and can cause suffocation.	0.08 (0.18)
	Alu	887814		0.13 (0.29)
	XCrNi	887821		0.38 (0.84)
Each manual actuation station	PVC	887809	Carbon dioxide gas can cause injury or death. Actuation of this device causes carbon dioxide to discharge. Before actuating, be sure personnel are clear of the area.	0.08 (0.18)
	Alu	887815		0.13 (0.29)
	XCrNi	887822		0.38 (0.84)

Technical data

Material PVC ....PVC self adhesive 0,2 mm (0,008") thickness
Alu .....aluminium plate 1 mm (0,04") thickness
XCrNi ..stainless steel (1.4571) 1 mm (0,04") thickness
Ground .....RAL9003 - white
Script / lines .....RAL9004 - black
Script type .....Helvetica semi-bold

Style PVC self adhesive:
Temperature range .....-20 °C to +80 °C (-4 °F to 176 °F)
Glue .....permanent, sticking firmly
Storage of glue layer.....min. 3 years
For glass, plastic structured cast metal, and varnished surfaces.

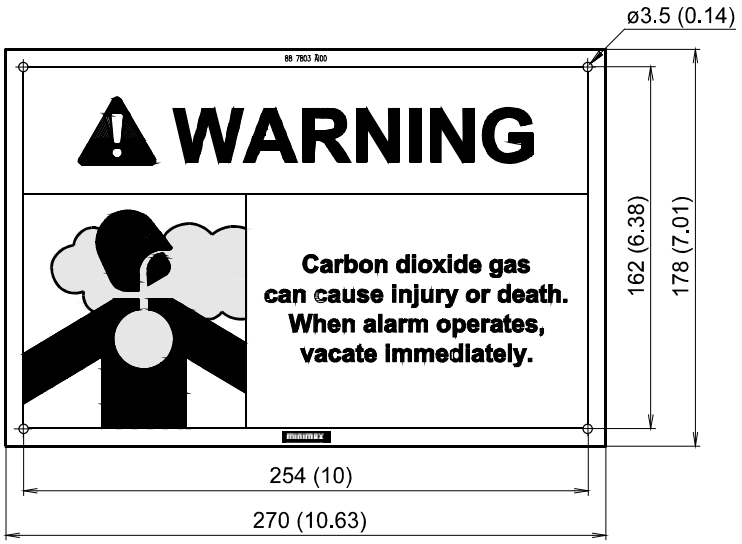
Not included in delivery

Label Alu / XCrNi: fastening material

Extinguishing technology CO_2 HP
System accessories CO_2

Label NFPA 12

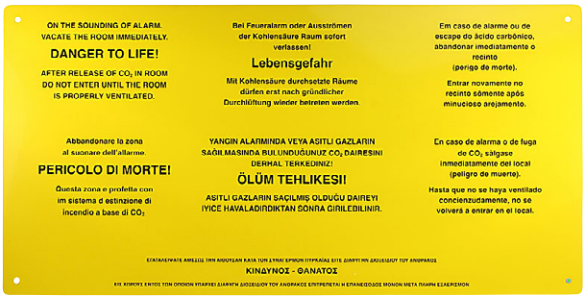
Dimension drawing
Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP

System accessories CO_2

Label 260 danger to life



Approvals

no approval required

SAP designation

part no. 597505: Sign 260 LEBENSGEFAHR

Maintenance

maintenance-free

Designation	Part no.	Weight
Label 260 danger to life	597505	0.5 kg (1.1 lbs)

Technical data

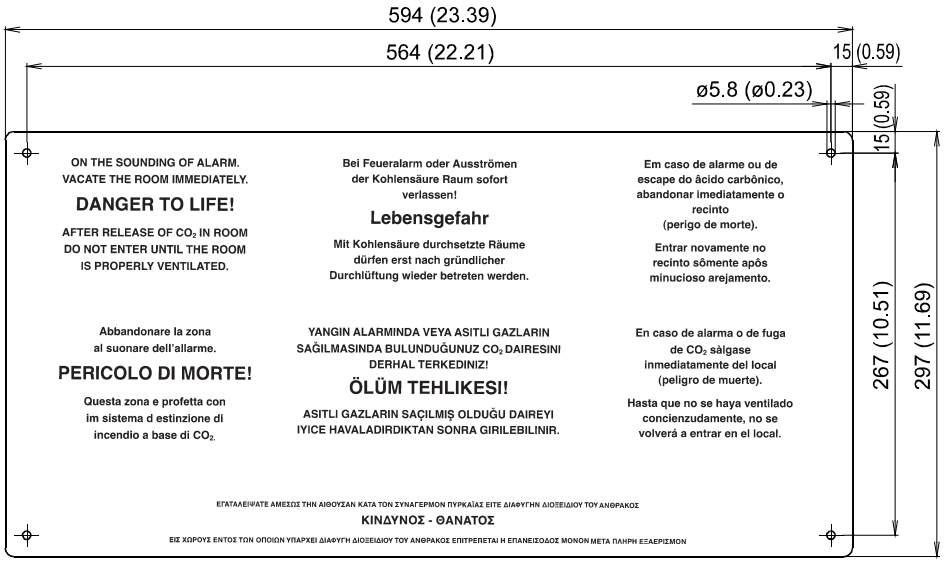
Material .....aluminium plate 1 mm (0,04") thickness
Ground .....RAL1012 - yellow
Script .....black
Script type .....Helvetica, medium faced DIN 1451

Not included in delivery

Fastening material

Dimension drawing

Dimensions in **mm (inch)**



Extinguishing technology CO_2 HP
System accessories CO_2

Label
locking pin - valve lever

Approvals
no approval required

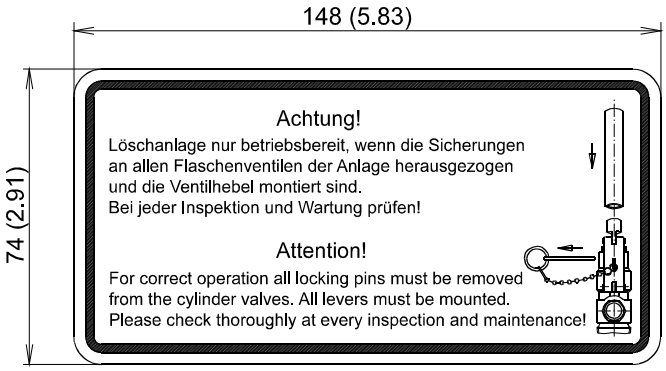
SAP designation
e.g. part no. 858220: Sign Sicherung - Ventilhebel

Maintenance
maintenance-free

Designation	Part no.	Weight
Label locking pin - valve lever	858220	0.003 kg (0.006 lbs)

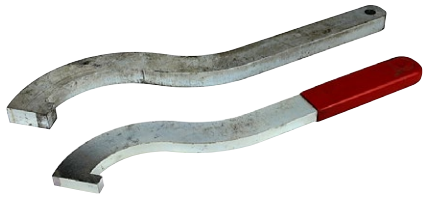
Technical data
Material .....PVC self adhesive 0,1 mm (0,04") thickness
Ground .....RAL1004 - yellow
Script .....RAL9011 - black
Script type .....Helvetica medium face
Margin .....RAL9011 - black

Dimension drawing
Dimensions in **mm (inch)**



Inert gas extinguishing technology
Mounting accessories

Hoocked wrench for coupling HD



Approvals
no approval required

SAP designation
e.g. part no. 886283: Hooked wrench for coupling HD DN50

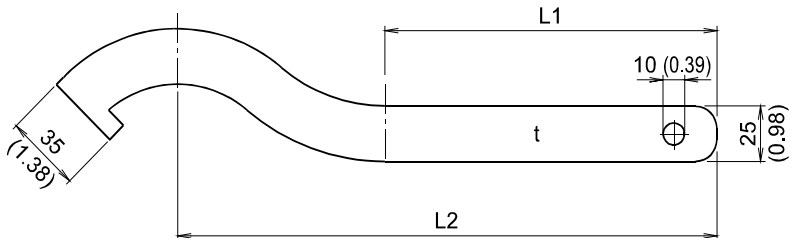
Maintenance
maintenance-free

Bezeichnung		Art.-Nr.	Gewicht
Hakenschlüssel für Kupplung HD	DN50	886283	0,6 kg (1,3 lbs)
	DN65	886284	1,1 kg (2,4 lbs)

Technical data
Material .....steel, galvanized

Application
Assembly tool for coupling HD DN50 part no. 886187 and coupling HD DN65 part no. 886188 (see pipe coupling).

Dimension drawing
Dimensions in **mm (inch)**

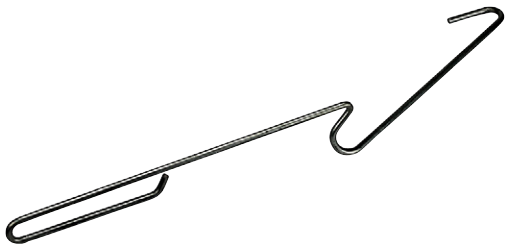


DN	L1	L2	L1
50	154 (6.1)	250 (9.8)	10 (0.39)
65	153 (6.0)	275 (10.8)	15 (0.59)

Extinguishing technology CO_2 HP

Assembly accessories CO_2

Support for weighing device



Approvals

no approval required

SAP designation

Part no. 771328: Support weighing device

Maintenance

maintenance-free

Designation	Part no.	Weight
Support for weighing device	771328	0.012 kg (0.026 lbs)

Technical data

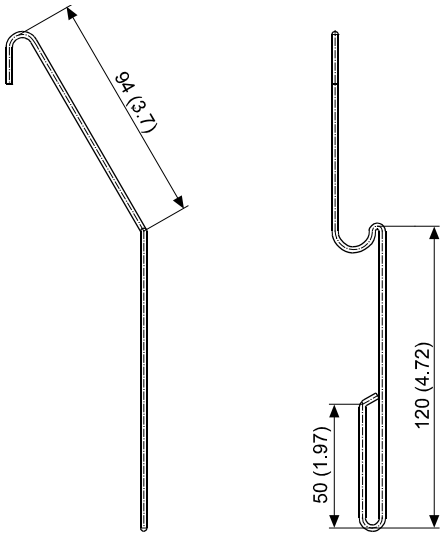
Material .....wire 2,5A DIN2076 - 1.0500

Application

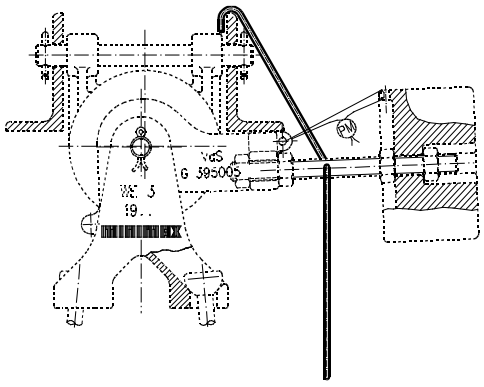
- Ease of assembling / disassembling of the steel cylinder
- Prevention of loss indication during cylinder assembling / cylinder disassembling

Dimension drawing

Dimensions in **mm (inch)**



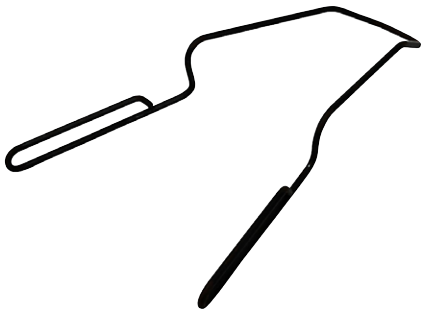
Mounting example



1/1

Extinguishing technology CO_2 HP
Assembly accessories CO_2

Support weighing device PAE



Approvals
no approval required

SAP designation
part no. 886350: Support weighing device PAE

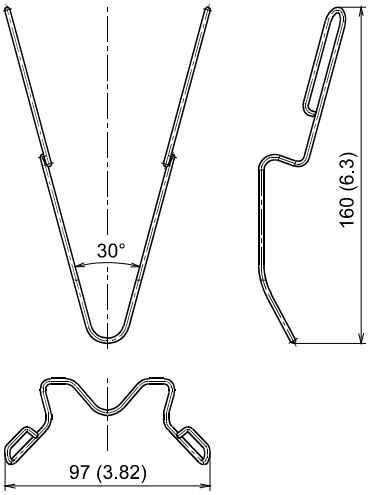
Maintenance
maintenance-free

Designation	Part no.	Weight
Support weighing device PAE	886350	0.02 kg (0.04 lbs)

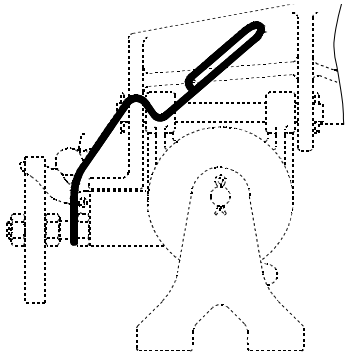
Technical data
Material .....spring wire, EN 10270-1-2,5 Z

Application
- Ease of assembling / disassembling of the pilot cylinder (PAE) resp. extinguishing agent cylinder (one-cylinder system)
- Prevention of loss indication during cylinder assembling / cylinder disassembling

Dimension drawing
Dimensions in **mm (inch)**



Mounting example



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

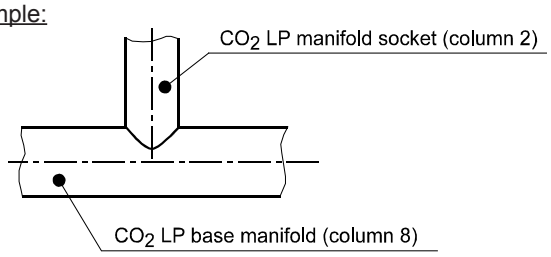
DN	Application									Part no.	Test pressure bar (psi)	Test certificate	Surface[1)]	Colour coding
	1	2	3	4	5	6	7	8	9					
50	•	•						•		786520	50 (725)	2.2	A	gold
	1	2	3	4	5	6	7	8	9					
65	•	•						•		247396	50 (725)	2.2	A	gold
	1	2	3	4	5	6	7	8	9					
80					•					841150	210 (3046)	3.1	A	orange
	1	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= CO_2 LP system .....30 bar (435 psi)
2= CO_2 LP manifold socket .....30 bar (435 psi)
3= CO_2 HD / Ar / N_2 / IG-55 / IG-541 downsystem piping and Halocarbon / ConstantFlow (CF) system .....60 bar (870 psi)
4= CO_2 HP shipbuilding .....100 bar (1450 psi)
5= CO_2 HP upstream piping .....140 bar (2031 psi)
6= Ar / N_2 / IG-55 / IG-541 - upstream piping ...235 bar (3408 psi)
7= Ar / N_2 / IG-55 / IG-541 - 300 bar HP upstream piping .....365 bar (5294 psi)
8= CO_2 LP base manifold .....30 bar (435 psi)
9= CO2 HP base manifold .....140 bar (2031 psi)

Note
With CO_2 LP systems may be welded branches only from a combination of pipes of the column 2 and 8.

Example:



CO_2 LP pipes without welding branches are to be taken from column 1.

Pipe element (Special)

Welding fitting and flange

Pipe fittings

Designation	DN	Application 1	Application 2	Part no.	Style [1]	Test certificate EN 10204	Weight kg (lbs)
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= CO_2 HP upstream piping .....140 bar (2030 psi)
CO_2 HD - manifold .....140 bar (2030 psi)
Ar / N_2 / IG-55 / IG-541 ConstantFlow (CF) - manifold ..60 bar (870 psi)
Halocarbon (HFC 227ea) - manifold .....60 bar (870 psi)
Halocarbon (FK-5-1-12) - manifold .....60 bar (870 psi)
2= CO_2 LP system .....30 bar (435 psi)
Finish .....black (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 1	Application 2	Part no.	Style [1]	Test certificate EN 10204	Weight kg (lbs)
Reducer DIN 2616 T2  concentric style	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 2638 - PN160

SAP designation
part no. 786592: Flange DIN2638-E65x76,1-C22.8

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

Designation	DN	Part no.	Weight kg (lbs)
Welding neck flange DIN2638 - PN160	65	786592	8.4 (18.5)
	80	810618	9.8 (21.6)
	100	888963	14.8 (32.6)

Technical Data
Welding neck flange.....acc. to DIN2638 - PN160 (2320 psi)
Flange connection.....acc. to DIN2501 - PN160 (2320 psi)
Material C22.8
all assemblies with test certificate acc. to DIN EN 10204 - 3.1

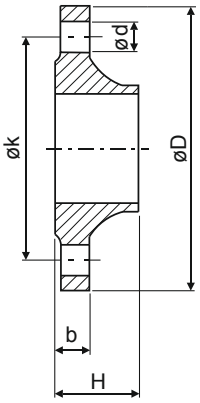
Note
Flanges without protective varnish and without coating.

Welded joints
Electrode TK 2,5 759873
Electrode TK 3,25 759885

Application
Welding neck flange DIN 2638 - PN160 for flange connection in:
- CO_2- high pressure fire extinguishing systems
- Argon-, Nitrogen-, IG-55-, IG-541- fire extinguishing systems with ConstantFlow (CF)
- Halocarbon fire extinguishing systems

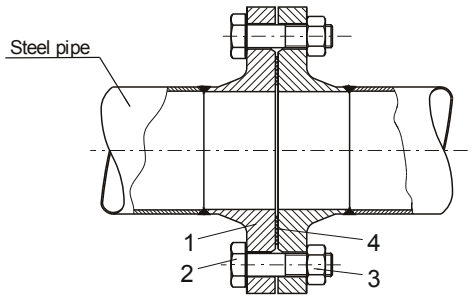
Not included in delivery
hex. screws, hex. nuts and gasket see selection table

Dimension drawing
Dimensions in mm



DN	PN160					
	ØD	ød	b	ØK	H	Screws
65	220	26	34	170	82	8 x M24
80	230	26	36	180	86	8 x M24
100	265	30	40	210	100	8 x M27

Selection table flange connections PN160



Pos.	1	2	3	4
DN	Flange DIN2638	Hex. srew DIN931	Hex. nut DIN934	Gasket PN160
65	786592 E65x76,1–C22.8	789556 M24 x 100	786610 M24	773647 C4400
80	810618 E80x88,8–C22.8			773659 C4400
100	888963 E100x114,3–C22.8	888959 M27 x 130	810680 M27	773684 C4400

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= CO_2 LP system .....30 bar (435 psi)
2= CO_2 LP manifold socket .....30 bar (435 psi)
3= CO_2 HD / Ar / N_2 / IG-55 / IG-541 downsystem piping and Halocarbon / ConstantFlow (CF) system .....60 bar (870 psi)
4= CO_2 HP shipbuilding .....100 bar (1450 psi)
5= CO_2 HP upstream piping .....140 bar (2031 psi)
6= Ar / N_2 / IG-55 / IG-541 - upstream piping ...235 bar (3408 psi)
7= Ar / N_2 / IG-55 / IG-541 - 300 bar HP upstream piping .....365 bar (5294 psi)
8= CO_2 LP base manifold .....30 bar (435 psi)
9= CO_2 HP base manifold .....140 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)
	2.1/2	819040	1.84 (4.06)
	3	886837	2.50 (5.51)
Union U12 	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 pressure .....160 bar (2320 psi), single test
.....or 300 bar (4351 psi), type test
Operating temperature .....up to -50 °C (-58 °F)
Material .....malleable cast iron, galvanized
.....EN-GJMB-350-10 oder EN-GJMW-400-5
Test certificate .....EN 10204 - 2.2
Marking .....with stamped D and red colour point

Application

- CO_2 high pressure downstream piping .....60 bar (870 psi)
- CO_2 low pressure system .....30 bar (435 psi)
- Ar / N_2 / IG-55 / IG-541:
  - downstream piping (after pressure reducer) .....60 bar (870 psi)
  - ConstantFlow (CF) system .....60 bar (870 psi)
- Halocarbon (HFC 227ea) system .....60 bar (870 psi)
- Halocarbon (FK-5-1-12) system .....60 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

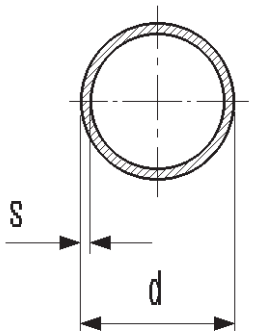
Designation		Part no.	Nominal diameter	Test pressure bar (psi)	Weight kg (lbs)
Pipe	6x1 B-210-2394/1	823563 [1)]	DN4	210 (3045)	0.3 (0.06)
	10x1 B-210-2394/1	823575 [1)]	DN8	210 (3045)	0.22 (0.10)
	15x1.5 B-90-2391	240020	DN12	90 (1305)	0.50 (0.23)

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

Technical Data
Material .....steel, galvanized
Pipe 6 x 1 and 10 x 1 .....acc. to DIN2394
15 x 1.5 .....acc. to DIN2391
Test certificate .....EN 10204 - 3.1 (material and pressure test)

Application
Precision steel pipe are used for extinguishing pipework and pilot pipes in:
- CO_2- high pressure fire extinguishing systems
- CO_2- 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)

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 PN250	10	0.047 (0.1)
	EVGE 15-PLR-ED A3C	886237		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

e.g. GE 06-PLR-ED A3C

- material: steel, galv., yellow chrome dulled
- seal type: Eolastic seal
- thread type: BSPP
- series: light
- pipe outside diameter: ø 6mm
- type: male stud connector

Series L .....light
S .....heavy

Material A3C .....steel, galvanized, yellow chrome dulled
A3K .....steel, galvanized, blue chrome dulled
A3D .....steel, galvanized, green chrome dulled
Ms .....brass

Pipe element (Special)

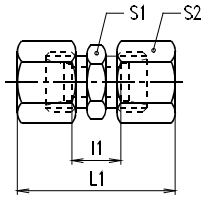
Fitting pilot pipe

Unions - stock list

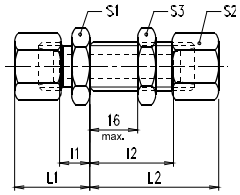
Dimension drawing

Dimensions in **mm (inch)**

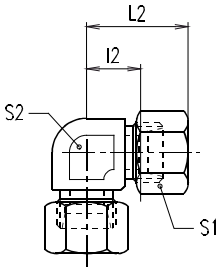
G - Union



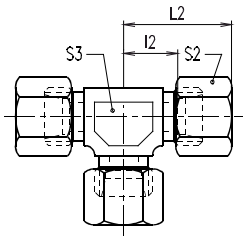
SV - Bulkhead union



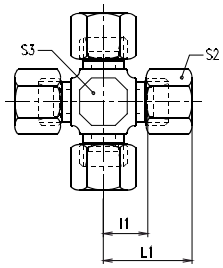
W - Elbow union



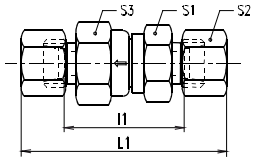
T - Union tee



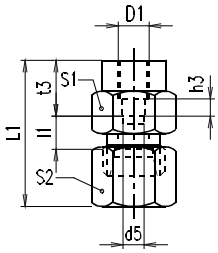
K - Union cross



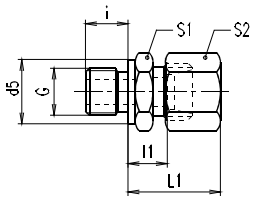
RHD - Non-return valve



MAV - Pressure gauge connector



GE - Male stud connector



	Feature	S1	S2	S3	L1	l1	L2	l2
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)

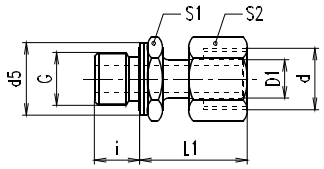
	Feature	S1	S2	L1	S3/ D1	l1/d1	t3/G	h3/i	d5
K	10-PL A3C	-	19 (0.75)	30 (1.18)	14 (0.55)	15 (0.59)	-	-	-
RHD	06-PL A3K	17 (0.67)	24 (0.94)	58 (2.28)	17 (0.67)	29 (1.14)	-	-	-
RHD	10-PL A3K	22 (0.87)	19 (0.75)	69.5 (2.74)	24 (0.94)	40.5 (1.59)	-	-	-
MAV	06-PLR A3C	19 (0.75)	14 (0.55)	37 (1.46)	G1/4	7.5 (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)

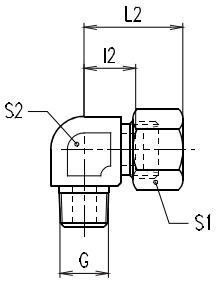
Fitting pilot pipe

Unions - stock list

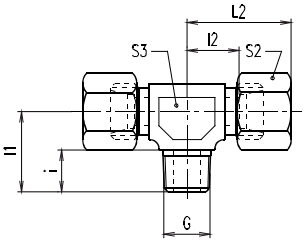
EVGE - Swivel connector



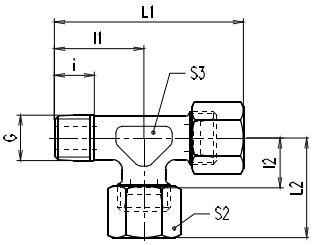
WE - Male stud elbow



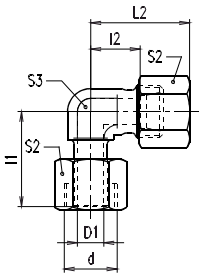
TE - Male stud branch



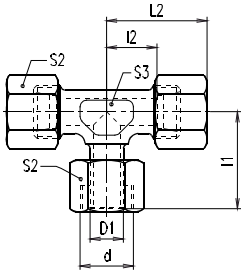
LE - Male stud run tee



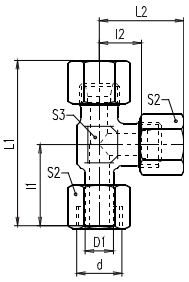
EVW - Standpipe elbow



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)

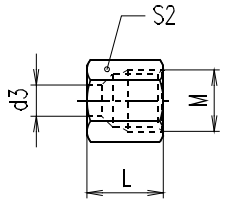
Feature		S1	S2	S3	L1	l1	L2	l2	G/D1	i/d1
WE	06-PLR A3C	14 (0.55)	12 (0.47)	-	-	-	27 (1.06)	12 (0.47)	R1/8	-
WE	10-PLR A3C	19 (0.75)	17 (0.67)	-	-	-	30 (1.18)	15 (0.59)	R1/4	-
WE	15-PLR Ms-DPR	27 (1.06)	19 (0.75)	-	-	-	36 (1.42)	21 (0.83)	R1/2	-
WE	06-PSR A3C	17 (0.67)	14 (0.55)	-	-	-	31 (1.22)	16 (0.63)	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)	-	-	-	-	-	-	-

Pipe element (Special)

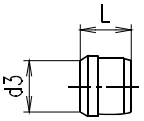
Fitting pilot pipe

Unions - stock list

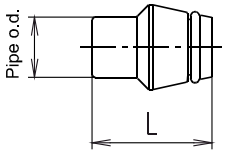
M - Nut



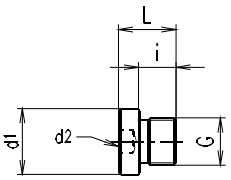
DPR - Progressive ring



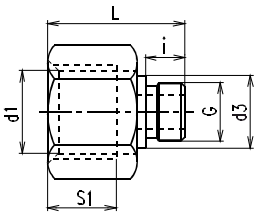
VKA - Blanking plug for cones



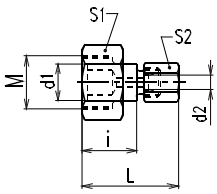
VSTI - Blanking plug for ports



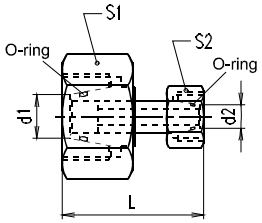
RI - Thread reducer/expander



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.

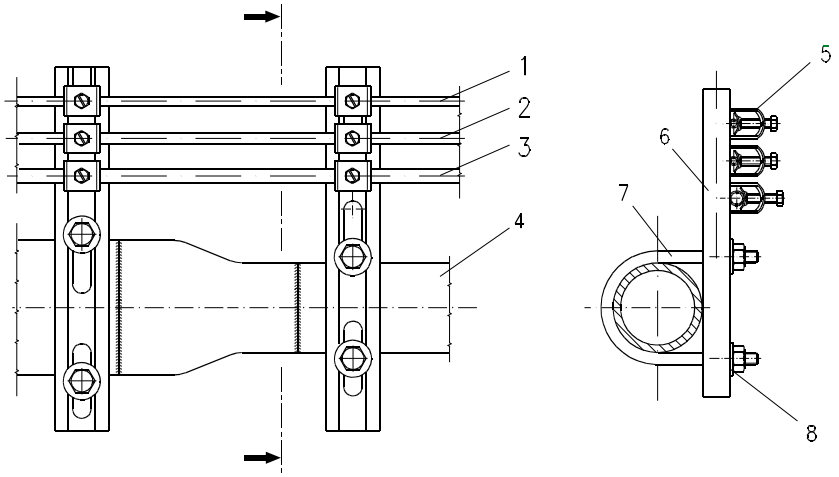
SAP designation
part no. 813589: Cable clamp B 16 galvanized

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
Application .....CO_2 - systems
Installation .....vertical 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

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

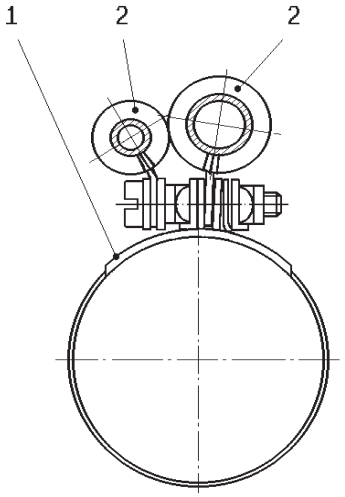
SAP designation

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

Maintenance

functional check within the framework of system-specific functional test

Mounting illustation:



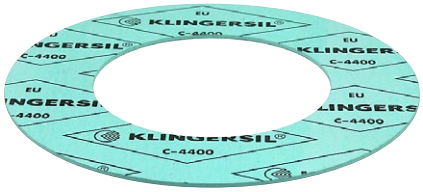
Pos. 1 hose clip DIN 3017 type S
for extinguishing pipe DN25 - 100

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

Pipe element (Special)

Accessories flange connection

Gaskets PN160



SAP designation
part no. 773647: Sealing DN65-PN160

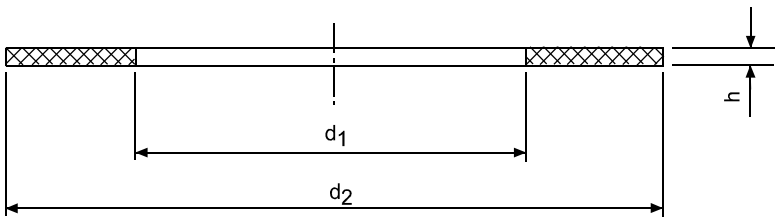
Maintenance
functional check within the framework of system-specific functional test

Designation	DN	Part no.	Weight kg (lbs)
Gasket PN160	65	773647	0.03 (0.07)
	80	773659	0.04 (0.09)
	100	773684	0.04 (0.09)

Material
Klingersil C4400 asbestos-free, silicone-free

Application
Welding-neck flanges according to DIN2638 - PN160 (2320 psi)

Dimension drawing
Dimensions in **mm (inch)**



DN	d_1	d_2	h
65	70 (2.76)	122 (4.80)	1.5 ±0.2 (0.06 ±0.01)
80	82 (3.23)	138 (5.43)	
100	106 (4.17)	162 (6.38)	

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