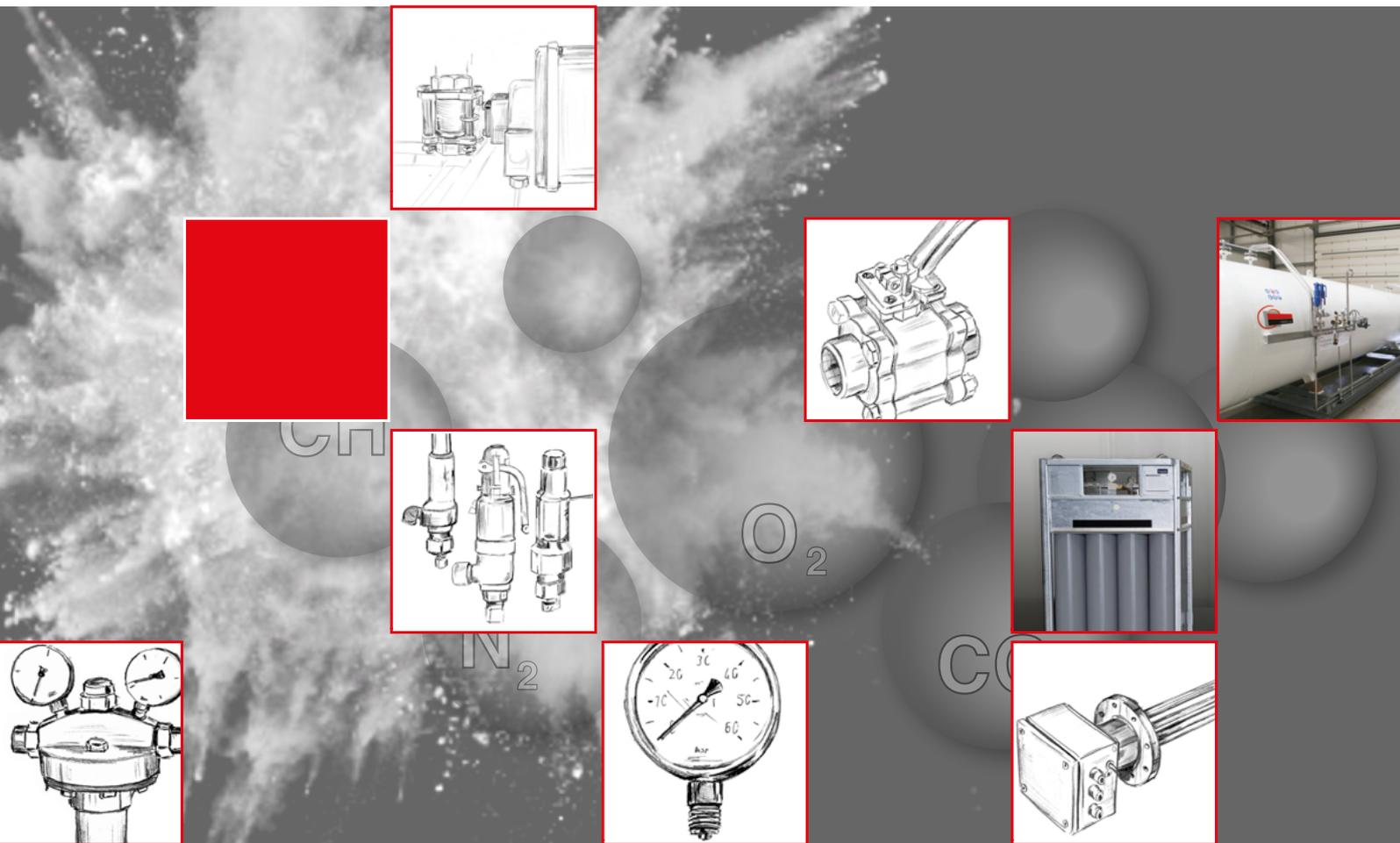




Inerting Technology

Components and Systems



2022



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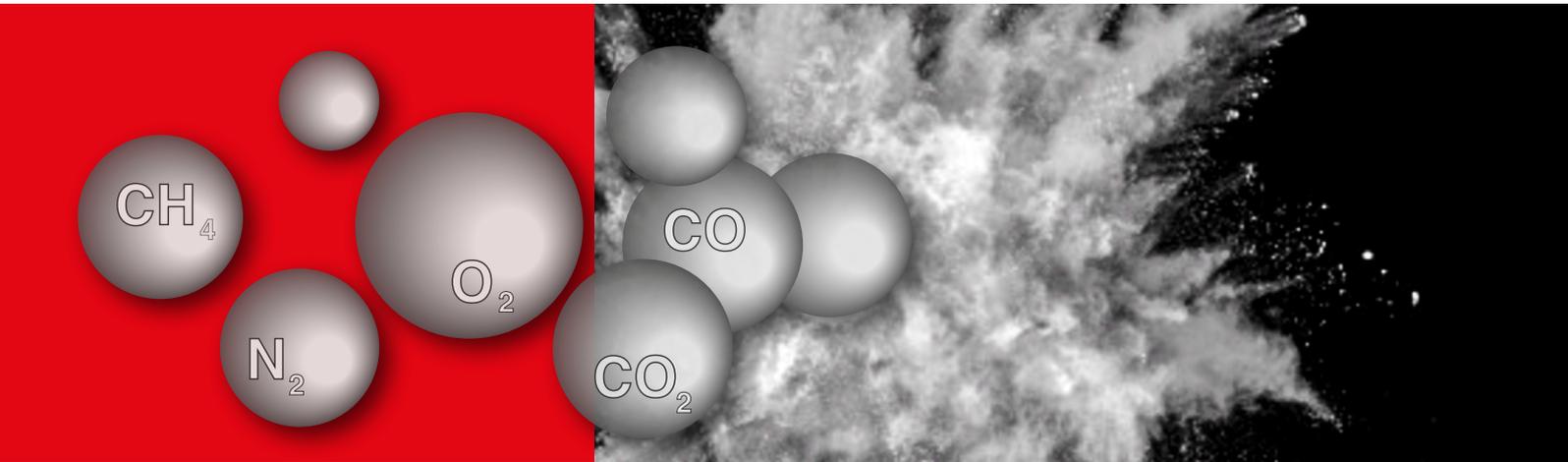


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Inerting Technology



INERTING is an effective method to prevent explosions and fire.

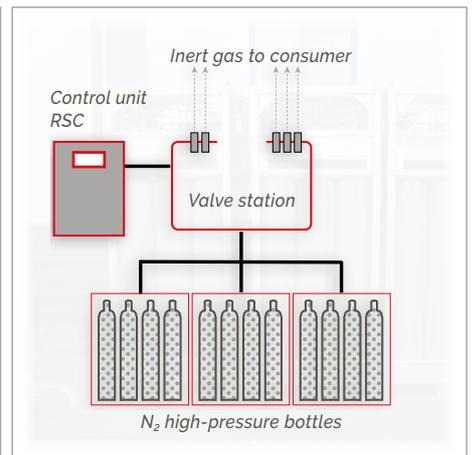
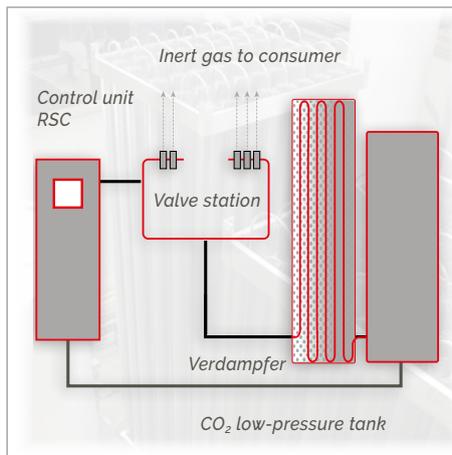
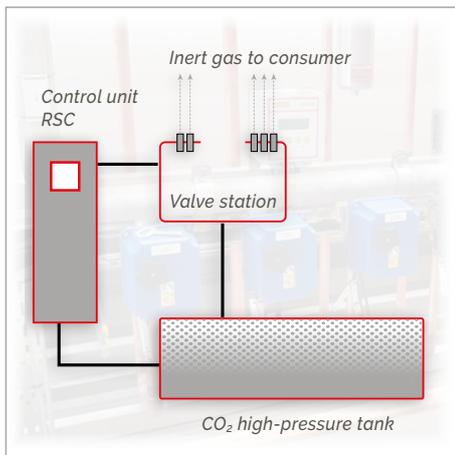
robecco recommends the use of the original robecco spare parts for the inerting systems.

This ensures safe operation of the system, without long idle times.



SYSTEM SOLUTIONS

Overview of the robeco CO₂ / N₂ - Inerting systems.



**HIGH-PRESSURE
CO₂-
INERTING**

robeco INERT



HIGH AMOUNTS OF CO₂-GAS DIRECTLY FROM THE TANK

**LOW-PRESSURE
CO₂-
INERTING**

robeco INERT



TANKS CAN BE FILLED WITH LOW PRESSURE FROM TANK TRUCKS

**HIGH-PRESSURE
N₂-
INERTING**

robeco INERT



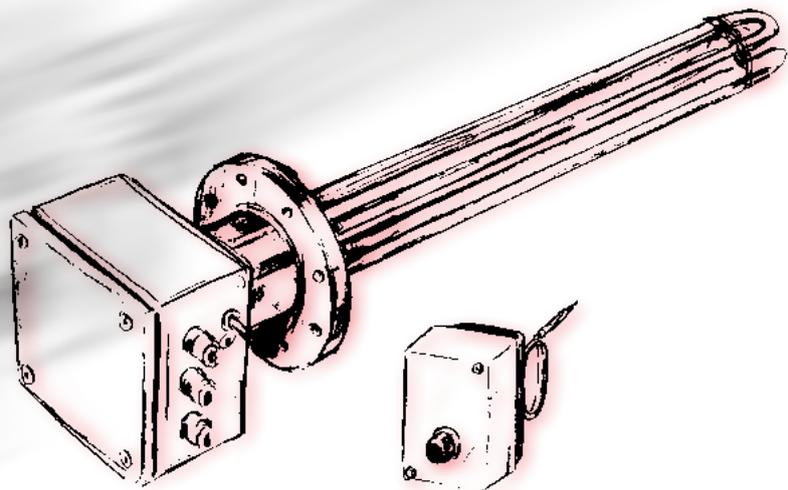
N₂-GAS AVAILABLE DIRECTLY FROM THE PACKS



Vessel heater

Vessel flange heating element BH-S |
Temperature limiter TB-J

Heating and temperature limitation for high-pressure vessels



OPERATIONAL AREA

CO₂ High-pressure inerting systems



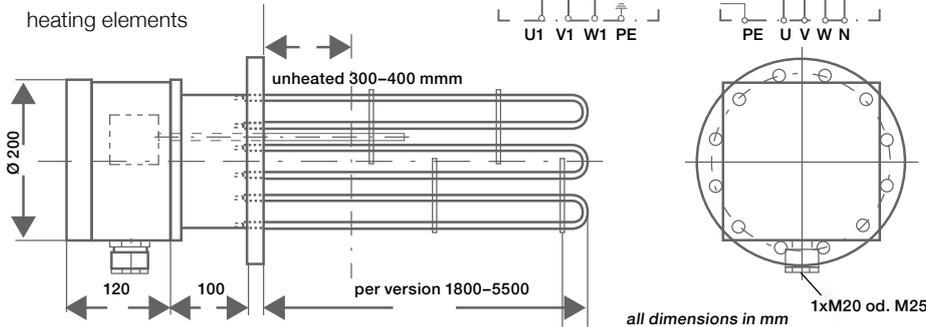
Vessel heater

Vessel flange heating element BH-S | Temperature limiter TB-J

Vessel flange heaters are used for heating liquid or gaseous media.
The temperature limiter monitors and controls the temperature at the heater.

Vessel heater BH-S

- Direct heating of the medium
- Easy to operate
- Low maintenance costs
- Above-average insulation strength
- Depending on the version with 6 or 12 tubular heating elements



Material

Stainless steel

Media

liquid | gaseous

Operating temperature

up to 650°C

Nominal power

varies per type s.b.

Nominal voltage

V, Hz varies per type s.b.

Process connection

Flange B80 PN6, DIN 2527

Protection class

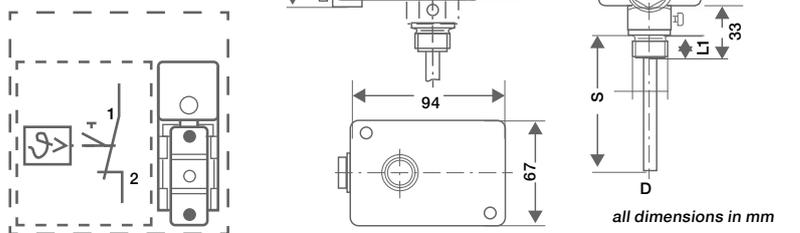
IP 54 | IP 65

Guidelines

2014/68/EU Pressure Equipment Directives
Welding procedure AD2020 HPOI DIN EN ISO

Temperature limiter TB-J

- With capillary, sensor as standard
- Robust housing
- Safety temperature limiter



Operating temperature

-3°C up to +40°C

Max. limit value

500°C

Switching capacity

10A , 230 V

Connection

smooth round sensor

Protection class

IP 54

Guidelines

Pressure Equipment Directives 2014/68/EU
Low Voltage 2014/35/EU
EMV 2014/30/EU

ORDER NUMBERS

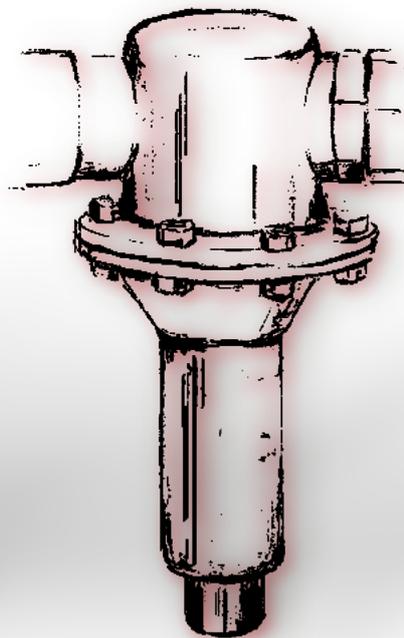
Vessel flange heating element BH-S5	Nominal power 9,5 kW, Nominal voltage 400 V, 60 Hz L1, L2, L3, PE, Triangle connection, Installation length 1800 mm	R002895
Vessel flange heating element BH-S9	Nominal power 9,5 kW, Nominal voltage 525 V, 50 Hz, L1, L2, L3, N, PE, Star connection, Installation length 1800 mm	R002898
Vessel flange heating element BH-S1	Nominal power 19 kW, Nominal voltage 400V, 50 Hz, L1, L2, L3, PE, Triangle connection, Installation length 4350 mm	R002892
Vessel flange heating element BH-S3	Nominal power 19 kW, Nominal voltage 400 V, 50 Hz, L1, L2, L3, N, PE Star connection, Installation length 4350 mm	R002853
Vessel flange heating element BH-S4	Nominal power 9,5 kW, Nominal voltage 400 V, 50 Hz, L1, L2, L3, N, PE Star connection, Installation length 1800 mm	R002894
Vessel flange heating element BH-S6	Nominal power 19 kW, Nominal voltage 400 V, 50 Hz, L1, L2, L3, PE, Triangle connection, Installation length 3350 mm	R002896
Vessel flange heating element BH-S7	Nominal power 19 kW, Nominal voltage 400 V, 50 Hz, L1, L2, L3, N, PE, Star connection, Installation length 3350 mm	R002785
Vessel flange heating element BH-S8	Nominal power 22,5 kW, Nominal voltage 415 V, 50 Hz, L1, L2, L3, N, PE, Star connection, Installation length 3350 mm	R002897
Vessel flange heating element BH-S2	Nominal power 25 kW, Nominal voltage 400 V, 50 Hz, L1, L2, L3, N, PE Triangle connection, Installation length 4350 mm	R002893
Vessel flange heating element BH-S10	Nominal power 27 kW, Nominal voltage 380 V, 50 Hz, L1, L2, L3, N, PE, Star connection, Installation length 5500 mm	R002899
Wooden box for Vessel flange heating element	Sturdy box for delivery abroad	R002900
Temperature limiter TB-J		R002811



Pressure reducer

DM-M1

Pressure reducing for gases



OPERATIONAL AREA

CO₂ High-pressure inerting system

CO₂ Low pressure inerting system

PRODUCT INFORMATION



Pressure reducer

DM-M1

Pressure reducing valves reduce a high and frequently fluctuating pressure to an adjustable constant pressure downstream of the valve.

Pressure reducer DM-M1

- single seated straight-way valve, diaphragm controlled
- New version with PEEK-round cone

Material

Cone gasket: EPDM
 Diaphragm: CR FPM/EPDM
 Body: CrNiMo-steel
 Inner parts: Messing / Cr-steel
 Spring: CrNi-steel
 Valve sealing: EU FPM/EPDM/PTFE

Kvs-value

0,6 – 4,2m³/h

Temperature range

-20°C up to +130°C

Inlet pressure

up to 100 bar

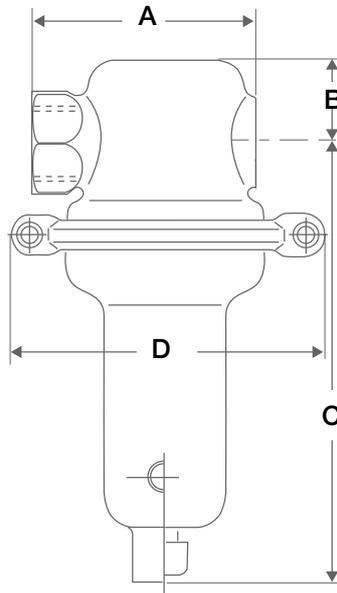
Outlet pressure

0,8 – 16 bar

Inlet connection / Outlet connection

BSP female connection G1/2 – 2"
 Flange connection DN 20–DN 50

TECHNICAL DATA



DIMENSIONS

Nominal size G

		1/2	3/4	1	1 1/4	1 1/2	2
	A	85	95	105	120	130	150
	B	37	48	45	43	50	56
Weight	C	195	200	200	205	205	220
	D				138		
		1,5	2	2	2,5	3	3,5

ORDER NUMBERS

Pressure reducer DM-M1	G 3/4", 4-8 bar	R002713
Pressure reducer DM-M1	G 1", 4-8 bar	R002716
Pressure reducer DM-M1	G 1 1/4", 4-8 bar	R002717
Pressure reducer DM-M1	G 1 1/4", 10-16 bar	R002796
Pressure reducer DM-M1	G 1", 10-16bar	R002715
Pressure reducer DM-M1	G 1 1/2", 10-16 bar	R002719
Pressure reducer DM-M1	G 2", 10-16 bar	R002722

Repairing set for DM-M1	G 3/4"	R002877
Repairing set for DM-M1	G 1"	R002876
Repairing set for DM-M1	G 1 1/4"	R002875
Repairing set for DM-M1	G 1 1/2"	R002878
Repairing set for DM-M1	G 2"	R002879

Pressure reducer - PEEK round cone to retrofit older pressure reducers **R002757**

----- For easy installation retrofit or equipped with flanges -----

Pressure reducer flanges

Welding flanges

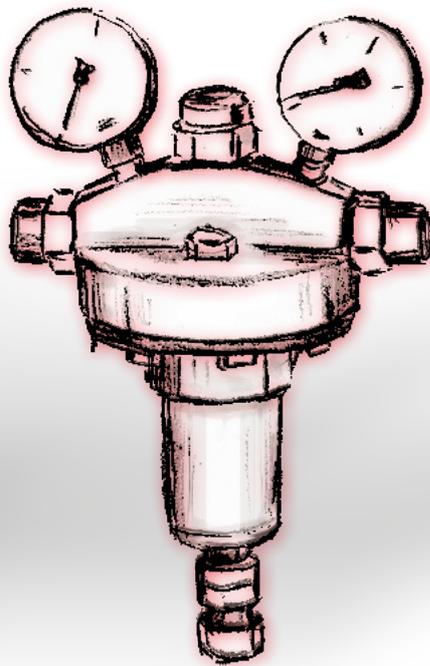
High pressure flange adapter DN20 for DM-M1 3/4" R002863	2x V-flanges DN20 PN100 with 2x special seals 72/31*4, M16x65 8 pieces screws, 8 nuts, 16 washer	R002864
High pressure flange adapter DN25 for DM-M1 1" R002865	2x V-flanges DN25 PN100 with 2x special seals 82/36*4, M16x75 8 pieces screws, 8 nuts, 16 washer	R002866
High pressure flange adapter DN32 for DM-M1 1 1/4" R002867	2x V-flanges DN32 PN100 with 2x special seals 88/46*4, M20x70 8 pieces screws, 8 nuts, 16 washer	R002868
High pressure flange adapter DN40 for DM-M1 1 1/2" R002869	2x V-flanges DN40 PN100 with 2x special seals 103/53*4, M20x75 8 pieces screws, 8 nuts, 16 washer	R002870
High pressure flange adapter DN50 for DM-M1 2" R002871	2x V-flanges DN50 PN100 with 2x special seals 8 pieces screws, 8 nuts, 16 washer	R002872



Pressure reducer

DM-H2

Pressure reduction for non-flammable gases



OPERATIONAL AREA

N₂ High-pressure inerting systems



Pressure reducer

DM-H2

The pressure reducer DM-H2 reduces the max. inlet pressure of 300 bar to a maximum outlet pressure of 20 bar. It is a single-stage, diaphragm-controlled pressure reducer with inlet pressure compensation. The special piston design ensures a high pressure constancy.

Pressure reducer DM-H2

- Use with non-flammable gases
- Integrated dirt filter and pressure gauge
- Designed according to DIN EN738-2 and BAM tested for oxygen
- Single-stage, diaphragm-controlled pressure reducer with inlet pressure compensation
- Large pressure constancy ensured
- Blow-off valve for discharging excess pressure

Material

Body: Brass

Temperature range

-20°C up to +60°C

Adjustment range

0,5 – 20 bar

Inlet pressure

max. 300 bar

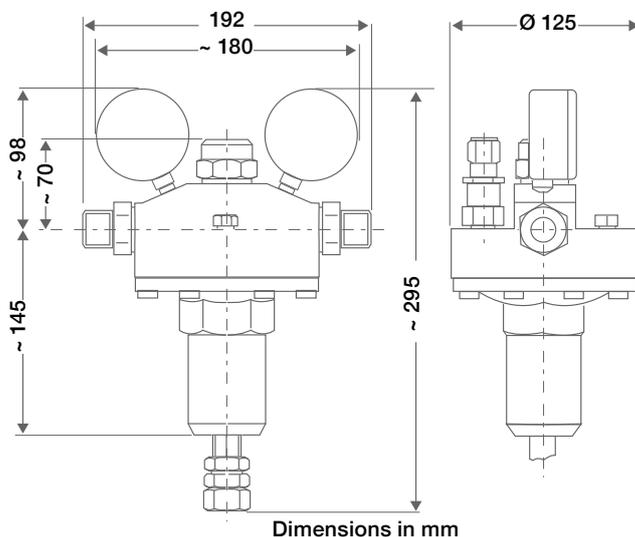
Maximum permissible outlet pressure

20 bar

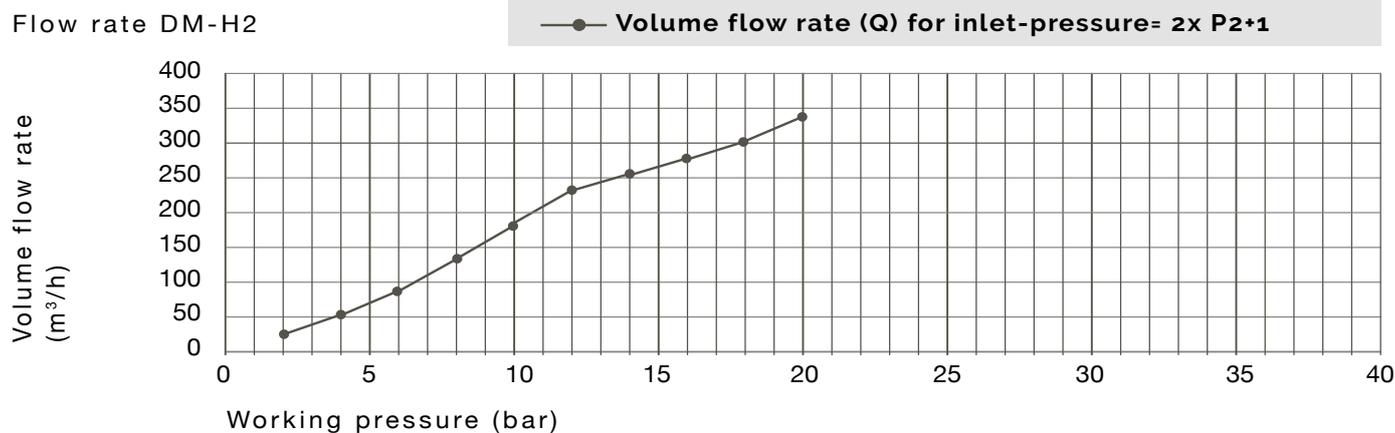
Input / Output:

SP female connection G3/4" / G3/4"

TECHNICAL DATA



Flow rate DM-H2



ORDER NUMBERS

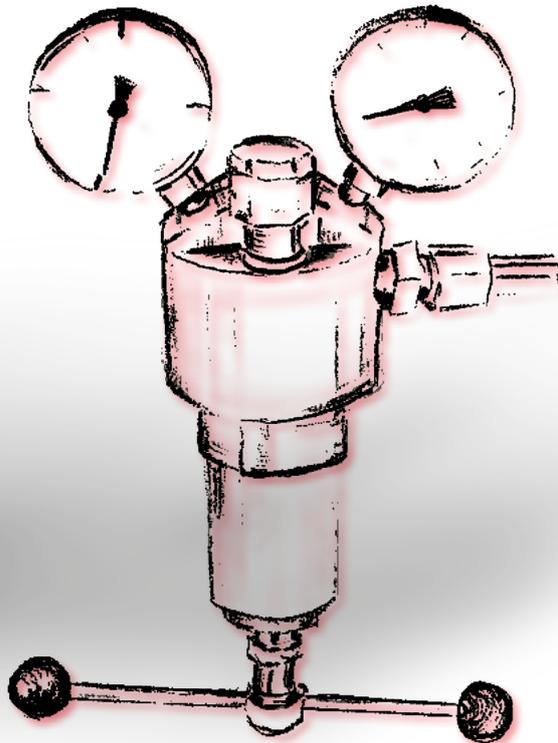
Pressure reducer DM-H2	0,5 – 20 bar	R002728
Repairing set for DM-H2		R002873



Pressure reducer

DM-H3

Pressure reduction for non-flammable gases



OPERATIONAL AREA

N2 High-pressure inerting systems



Pressure reducer

DM-H3

The pressure reducer DM-H3 reduces the inlet pressure from max. 300 bar to a pressure of max. 35 bar and keeps it constant. It is a single-stage pressure reducer with safety valve.

Pressure reducer DM-H3

- Use with non-flammable gases
- Integrated dirt filter and pressure gauger
- Designed according to DIN EN961, BAM tested
- Single-stage, diaphragm-controlled pressure reducer with inlet pressure compensation
- Large pressure constancy ensured

Material

Body: Brass

Temperature range

-20°C up to +60°C

Adjustment range

0 – 10 bar

Inlet pressure

max. 300 bar

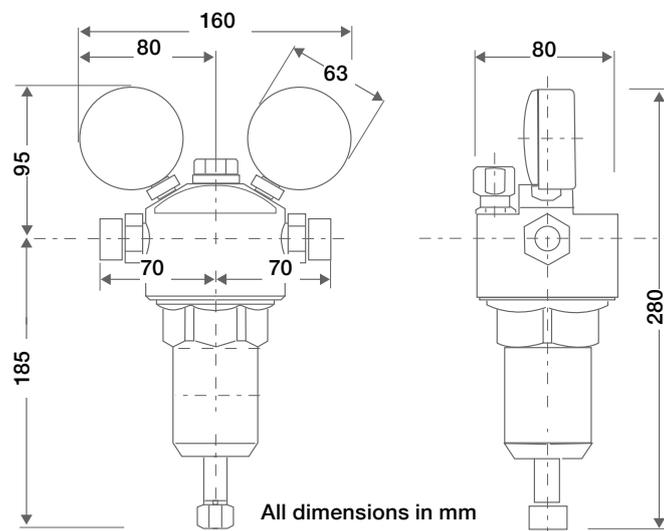
Maximum permissible outlet pressure

35 bar

Input / Output:

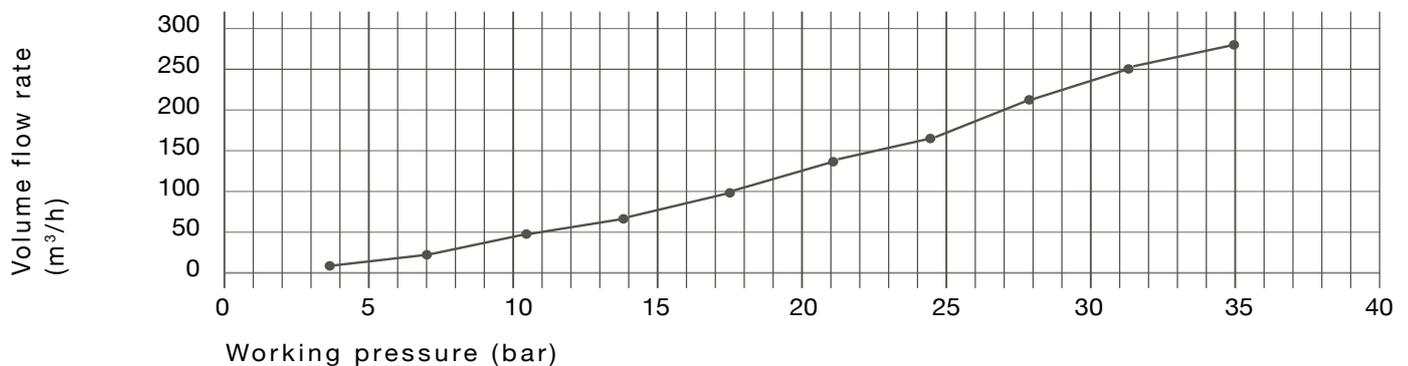
BSP female connection G1/2

TECHNICAL DATA



Flow rate DM-H3

—●— Volume flow rate (Q) for inlet-pressure = 2x P2+1 (m³/h)



ORDER NUMBERS

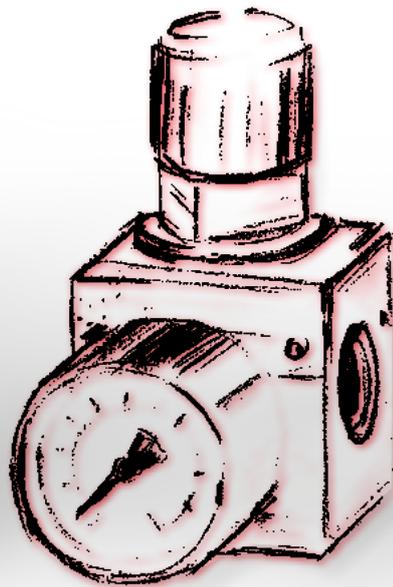
Pressure reducer DM-H3	0–10 bar	R002729
Repairing set for DM-H3		R002874



Pressure reducer

DM-R1

Pressure reduction for gases



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems



Pressure reducer

DM-R1

Pressure reducers reduce a high, often fluctuating pressure to an adjustable, constant pressure downstream of the valve. The DM-R1 is a diaphragm pressure regulator with secondary venting.

Pressure reducer DM-R1

- Block design
- Diaphragm pressure regulator with secondary venting
- Easy interlocking of several individual units
- Pressure setting can be locked in place
- Can be installed in any position
- Inlet pressure independence
- Pressure gauge can be mounted on both sides
- Pressure gauge Ø 50 included in scope of delivery
- Single-seated globe valve, diaphragm-operated

Material

Head piece: Zinc-Z 410
 Spring cap: POM-Ms
 Diaphragm: NBR-Ms
 Pressure spring: Galvanised steel
 Valve cone: NBR-Ms
 Back pressure spring: Niro
 O-ring 50x2: NBR
 Cover: PBTP
 Spring cap lockable: POM-Al
 Locking cylinder lockable: Ms

Medium temperature

max. 60°C

Ambient temperature

max. 60°C

Maximum inlet pressure p1

16 bar

Maximum permissible outlet pressure

0,5 – 10 bar

Connection

G 1/2"

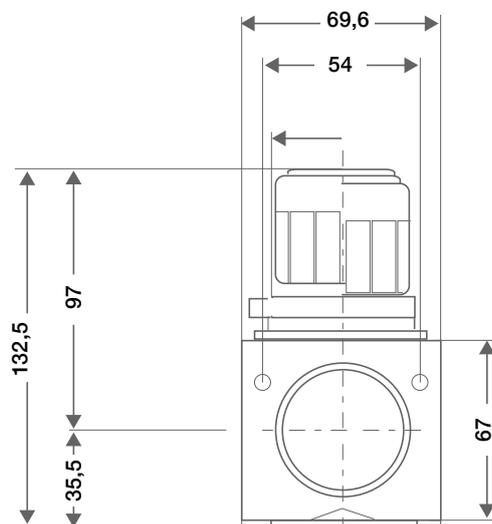
Pressure gauge connection

G 1/4"

Weight

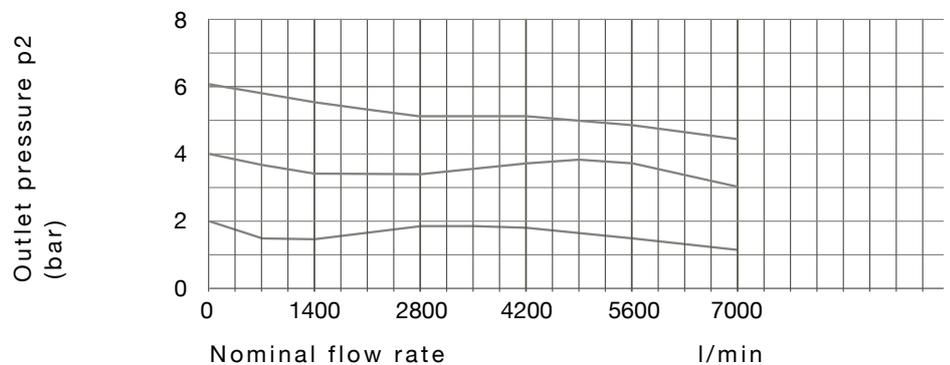
935 g

TECHNICAL DATA



All dimensions in mm

Flow rate



ORDER NUMBERS

Pressure reducer DM-R1

1/2", 0,5–10 bar

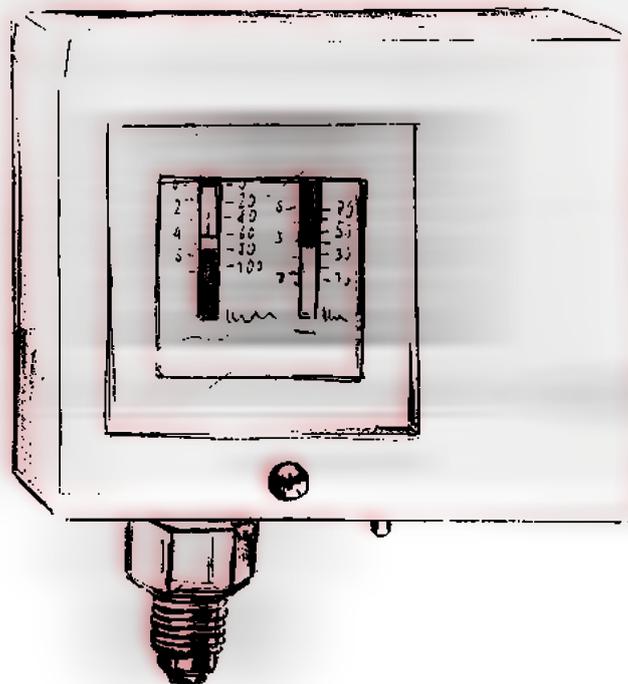
R002725



Pressure switch / limiter

DS-E | DB-E

Safety pressure limiter



OPERATIONAL AREA

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



Pressure switch / limiter

DS-E | DB-E

Adjustable single pressure switches for low pressure applications.

Pressure switch DS-E

- Adjustable pressure range
- Range and differential setting individually sealable
- Change-over contacts with high contact load capacity
- Test lever with front operation for maintenance and system filling
- Automatic pressure switch

Pressure limiter DB-E

- Adjustable pressure range
- Range and differential setting individually sealable
- Change-over contacts with high contact load capacity
- Test lever with front operation for maintenance and system filling
- With manual reset for rising pressure

TECHNICAL DATA

Material

Housing shell: Polycarbonate (PC)
 Housing frame: Steel, ROHS compatible, corrosion protection
 Materials with medium contact: Bronze

Ambient temperature

-50 °C ... +70 °C

Medium temperature

-50 °C ... +70 °C

Permissible operating overpressure

-0.9 bar to 31 bar

Protection class

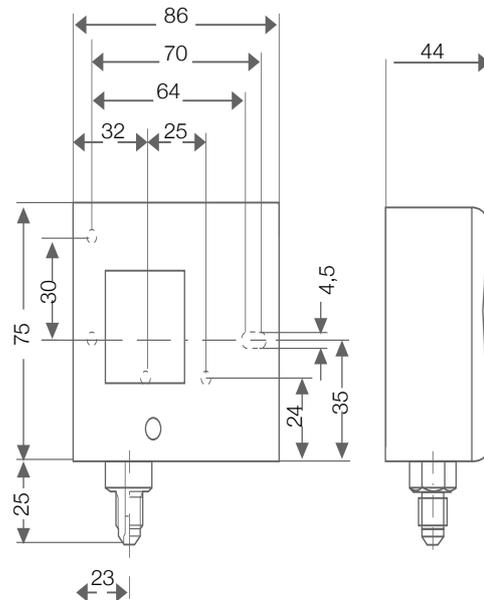
IP44

Weight

ca. 500g

Dimensions

86mm W x 75mm H x 44mm D

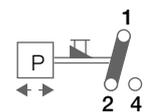
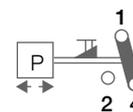
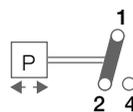


Switch functions:

Automatic
Reset

Manual reset with
falling pressure

Manual reset with
increasing pressure



ORDER NUMBERS

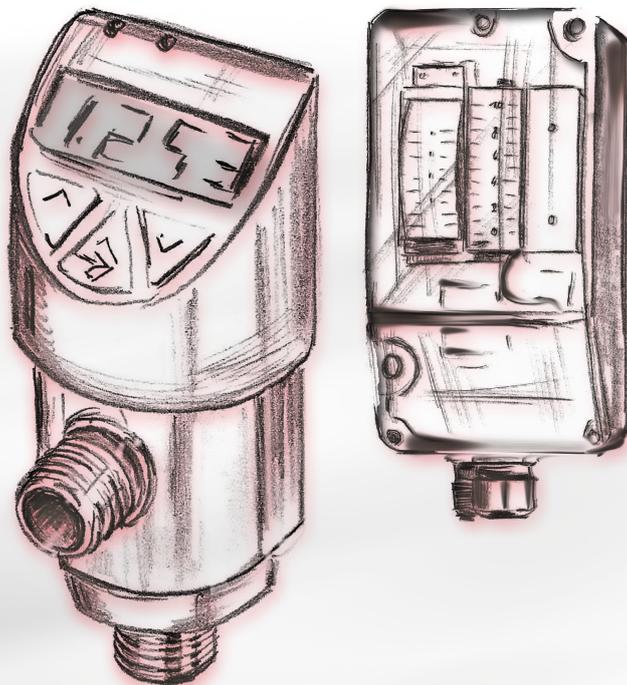
Pressure switch DS-E	6 up to 31 bar, automatic	R002880
Pressure limiter DB-E	6 up to 31 bar, with external manual reset	R002881



Pressure switch

DS-M | DS-P

Detection and monitoring of system pressures



OPERATIONAL AREA

CO₂ High-pressure inerting systems



Pressure switch

DS-M | DS-P

Pressure switches detect and monitor system pressures.

Pressure switch DS-M

- ❑ Measuring range 4, 100, 400 bar
- ❑ Display for current pressure, min/max value memory
- ❑ Manipulation protected by password query
- ❑ Various switching functions programmable
- ❑ LED display

Pressure switch DS-P

- ❑ Measuring range 0 - 100 bar
- ❑ With calibrated setpoint scales
- ❑ With frictionless force balance measuring system
- ❑ With integrated actual value display
- ❑ operating comfort

TECHNICAL DATA

Material

Housing: Lower part steel 316L,
Head: plastic PBT

Ambient temperature

-20°C – +85°C

Measuring range

40, 100 or 400 bar

Auxiliary power supply

15...30 DC

Alarm output

2 x transistor PNP NC/NO contact

Analogue output

0/4...20 mA, freely programmable
and scalable

Protection class

IP 67

Electrical connection

Round connector M12 x 1

Process connection

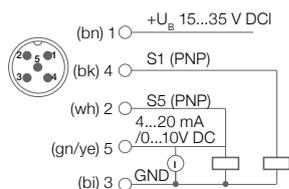
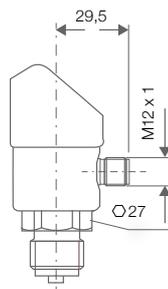
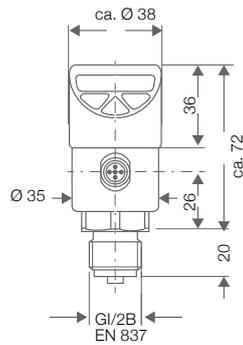
G1/2B External thread

Weight

max. ca. 280g

CE conformity

2004/108/EG, EN 61326, Interference
emission group 1, class B,
Pressure Equipment Directives 2014/68/EU



2 switching outputs
+ analogue output

Material

Housing:
Polycarbonate a. Stainless steel 1.4571
Parts in contact with medium: Brass

Ambient temperature

-20°C – +70°C

Measuring range

0–100 bar

Digital output

Limit switching

Protection class

IP 65

Electrical connection

M20

Process connection

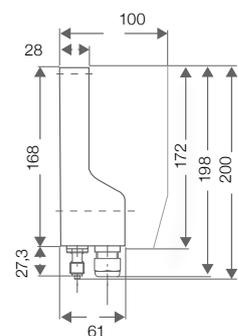
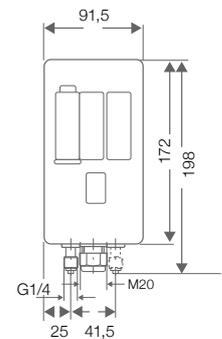
G1/2 outside stainless steel

Weight

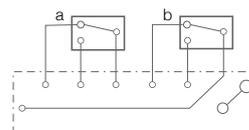
1–1,5 kg

CE conformity

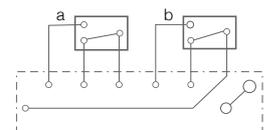
DW 3598-4, 1986 | vd TÜV-100/1
TRD 604
Pressure Equipment Directives 2014/68/EU



Positive overpressure



Negative overpressure



ORDER NUMBERS

Pressure switch DS-M 40, 100 or 400 bar **R002792**

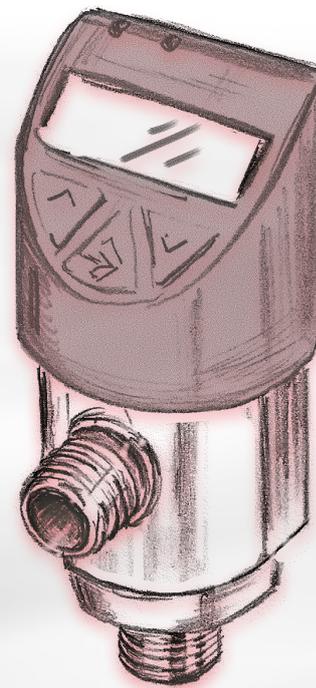
Pressure switch DS-P 0–100 bar **R002806**



Pressure switch

DS-W

Detection and monitoring of system pressures



OPERATIONAL AREA

CO₂ High-pressure inerting systems



Pressure switch

DS-W

Pressure switches detect and monitor system pressures.

Pressure switch DS-W

- Measuring range 0-100 bar
- Display for current pressure, min/max value memory
- 2x overpressure limit
- Various switching functions programmable
- LED display
- shock resistance 50g, 6ms

TECHNICAL DATA

Material

Messstoffberührte Bauteile: CrNi-Stahl 316L + PH-Stahl

Ambient temperature

-20°C – +80°C

Measuring range

0-100 bar

Auxiliary power supply

15...35 DC

Alarm output

2 x switching output (PNP/NPN)

Analogue output

4...20 mA, freely programmable
and scalable

Protection class

IP 65 and IP 67

Electrical connection

Round connector M12 x 1

Process connection

G 1/4 A DIN EN ISO 1179-2

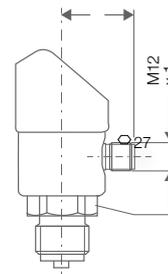
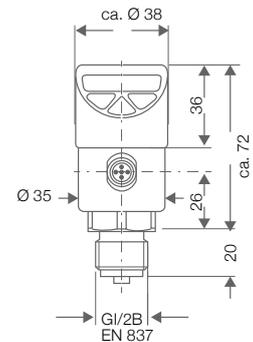
Sealing NRB

Weight

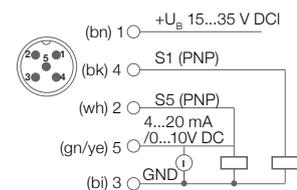
max. ca. 280g

CE conformity

DGRL EMV, EN 61326 Emission (Group 1, Class B)
and Immunity (industrial area)



2 switching outputs
+ analogue output



ORDER NUMBERS

Pressure switch DS-W 0-100 bar
Pressure switch DS-W 0-100 bar incl. 5m cableset

R003170
R003171

PRODUCT INFORMATION

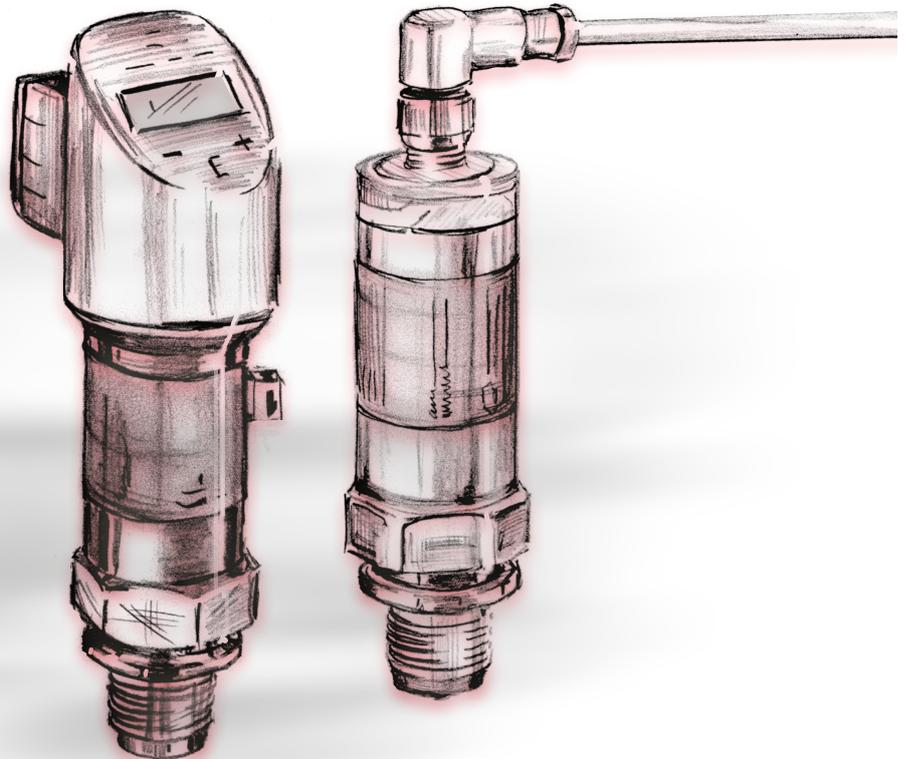




Pressure sensor

DS-C1 | DS-C2 | DS-C3

Process pressure measurement



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



Pressure sensor

DS-C1 | DS-C2 | DS-C3

These pressure sensors are suitable for the safe measurement and monitoring of absolute and relative pressure in gases, vapours, liquids and dusts.

We reserve the right to amend specification

Pressure sensor_DS-C robecco 04/2021

Pressure sensor DS-C1

- Absolute and relative pressure measurable up to 100 bar
- Reference accuracy 0,3%
- Very compact
- For use internationally

Pressure sensor DS-C2

- Absolute and relative pressure measurable up to 400 bar
- Reference accuracy 0,5%
- Very compact
- Integrated switching electronics for decentralized monitoring
- Incl. LED switch display

Pressure sensor DS-C3

- Absolute and relative pressure measurable up to 100 bar
- Reference accuracy 0,5%
- Very compact
- Integrated switching electronics for decentralized monitoring
- Incl. LED switch display

TECHNICAL DATA

Material

Housing of 316L (1.4404)

Process temperature

-40°C up to +100 °C

Ambient temperature

-40°C up to +85 °C

Measuring range

0...+100 bar

Measuring principle

Absolute and gauge pressure

Supply voltage

10...30 VDC

Power consumption / communication

4...20 mA

Protection class

IP 68

Process connection

Thread G1/2, EN 837

Weight

ca. 500g

Valve plug

M16

Material: Housing AISI 316L with electropolished surface

Process temperature

-40°C up to +100 °C

Ambient temperature

-20°C up to +70 °C

Measuring range

0...+400 bar

Measuring principle

Absolute and relative pressure

Supply voltage

10...30 VDC

Power consumption / communication

4...20 mA

Protection class

IP 65 / 67

Process connection

Thread G1/4, G1/2, DIN 13

Weight

ca. 500g

Material: Housing AISI 316L with electropolished surface

Process temperature

-40°C up to +100 °C

Ambient temperature

-20°C up to +70 °C

Measuring range

0...+100 bar

Measuring principle

Absolute and relative pressure

Supply voltage

10...30 VDC

Power consumption / communication

4...20 mA

Protection class

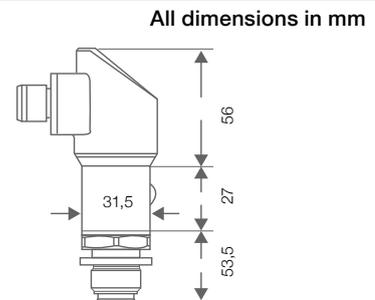
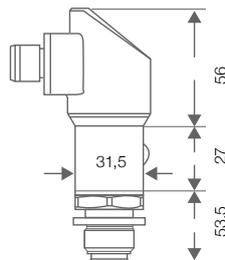
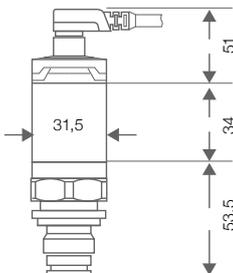
IP 65 / 67

Process connection

Thread G1/4, G1/2, DIN 13

Weight

ca. 500g



ORDER NUMBERS

Pressure sensor DS-C1
100 bar

R002773

Pressure sensor DS-C2
400 bar, incl. digital display

R002703

Pressure sensor DS-C3
100 bar, incl. digital display

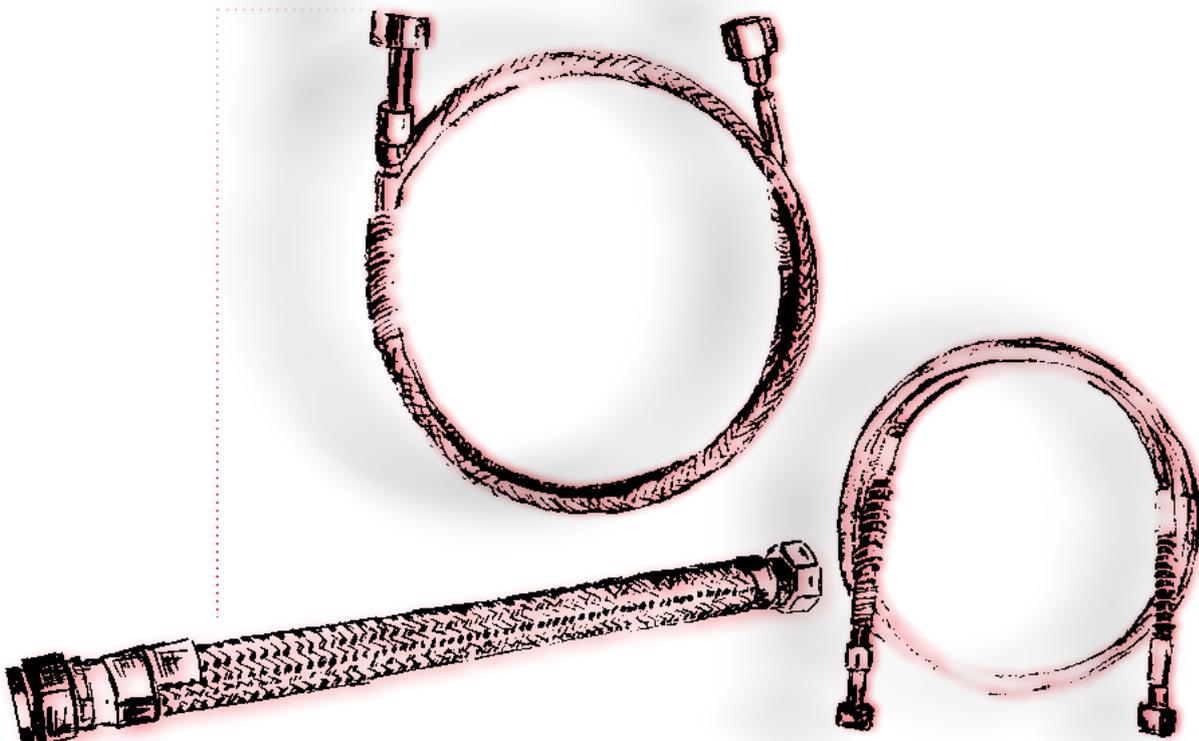
R002742



High pressure hoses

HDS-E | HDWS-E

Gas line for N₂ and CO₂



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



High pressure hoses

HDS-E | HDWS-E

The high-pressure hose systems are characterized by precision and safety. The operator is optimally protected by a fourfold safety at bursting pressure as well as anti-kink springs.

High pressure hose HDS-E

- With anti-kink spring on both sides
- Connection of N₂ bundle or CO₂ batteries to valve station
- 4-fold safety at burst pressure
- Braiding
- Ready for installation
- With gas type-specific fittings

High pressure hose HDWS-E

- Connecting hose for decoupling the tank
- With 2-fold braiding
- Ready for installation
- Extra heavy

TECHNICAL DATA

Usage, medium

Gas line from pipeline to valve station, N₂ / CO₂

Material

Stainless steel | Polyamide

Connection

Hexagon union nut with flat sealing connecting bolt
Details see below, DIN 477-1

Nominal width

DN6

Length

10.000 mm, 3000 mm, 2000 mm, 1.500 mm, 750 mm

Max. operating pressure

200 bar

Usage, medium

Connection from tank to sample point, CO₂

Material

Stainless steel

Connection

on both sides DRF flat sealing 1" with PTFE-seal

Nominal width

DN25

Length

500 mm

Max. operating pressure

100 bar

ORDER NUMBERS

High pressure hose HDS-E1

PA, 750 mm, PN300, on both sides cap nuts W24, 32-RH, bds. St-verz.-hexagonal female threaded sleeve M16x1,5 if with screwed-in brass-connection W24,32x1/14" RH, DIN 477-1, FA 10 for N2-200 bar

R002906

High pressure hose HDS-E2

PA, 1.500 mm, PN300, on both sides cap nuts W24,32-RH, bds. St-verz.-hexagonal female threaded sleeve M16x1,5 if with screwed-in brass-connection W24,32x1/14" RH, DIN 477-1, FA 10 for N2-200 bar

R002904

High pressure hose HDS-E3

PA, 2.000 mm, PN300, on both sides cap nuts W21,8-RH, bds. St-verz.-hexagonal female threaded sleeve M16x1,5 if with screwed-in brass-connection W21,8x1/14" RH, DIN 477-1, FA 6 for Inert-200 bar

R002903

High pressure hose HDS-E4

VA, 750 mm, PN300, on both sides cap nuts W24,32-RH, bds. St-verz.-hexagonal female threaded sleeve M16x1,5 if with screwed-in brass-connection W24,32x1/14" RH, DIN 477-1, FA 10 for N2-200 bar

R002905

High pressure hose HDS-E5

VA, 1.500 mm, PN300, on both sides cap nuts W24,32-RH, bds. St-verz.-hexagonal female threaded sleeve M16x1,5 if with screwed-in brass-connection W24,32x1/14" RH, DIN 477-1, FA 10 for N2-200 bar

R002755

High pressure hose HDS-E6

VA, 3.000 mm, PN300, cap nuts W24,32-RH-ÜM G1/2" RH, fld., es VA-hexagonal female threaded sleeve M16x1,5 if with screwed-in brass-connection W24,32x1/14" RH, DIN 477-1, FA-10 for N2-200 bar, as. VA hexagon nut G1/2" RH

R002754

High pressure hose HDS-E7

VA, 10.000 mm, PN300, cap nuts W24,32 RH-ÜM G 1/2" RH, DIN 477-1, FA 10, VA square nut G1/2" RH

R002902

High pressure hose HDWS-E

VA-1.4404, 500 mm, PN100 - extra heavy - DN25 x 500mm 1.4301

R002756

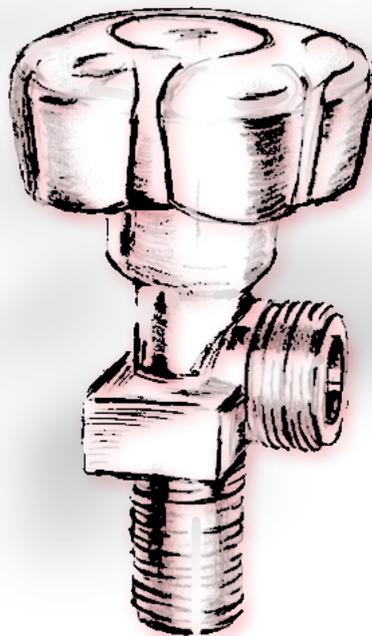
Further information on request



High-pressure angle valve

HDV-K

Release and interruption of gas flows



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



High-pressure angle valve

HDV-K

Angle valves are manually operated shut-off valves for releasing and interrupting gas flows.

High-pressure angle valve HDV-K

- Manual operation by handwheel

TECHNICAL DATA

Material

Housing: Brass

Seal: NBR, EPDM, PVDF

Medium

N₂ or CO₂

Temperature range

-20°C up to +65°C

Operating pressure

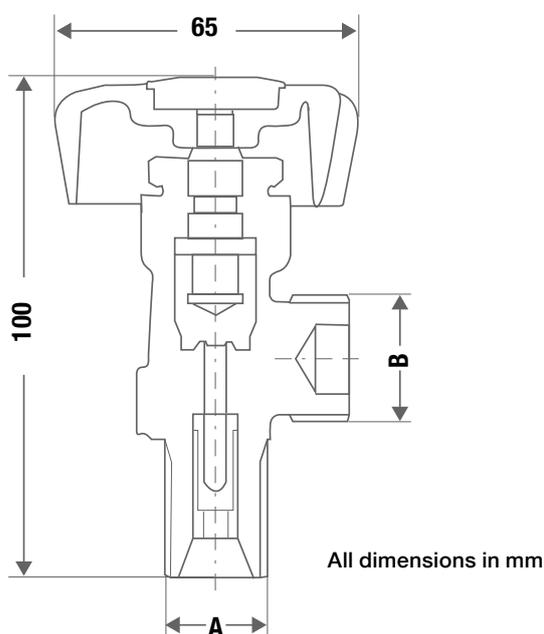
Up to nominal pressure PN 250 bar

Connection

G1/2" | G3/4"

Weight

Ca. 0,5 kg



Medium	Nitrogen	Carbon dioxide
Female thread A	G 1/2",	G 3/4
Male thread B	W24, 32 x 1/14	W21, 80 x 1/14

ORDER NUMBERS

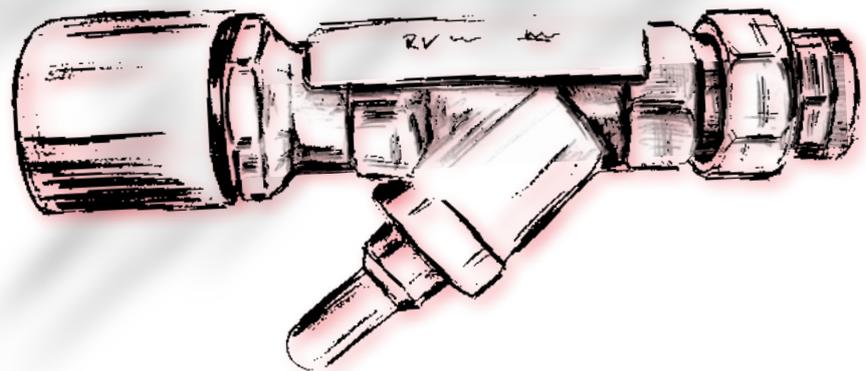
High-pressure angle valve HDV-K	for N ₂	R002801
High-pressure angle valve HDV-K	for CO ₂ , incl. locking nut	R002802



Complete set Inerting nozzle KSI

Flat fan nozzle FSD-L | Non-return valve RSV-E

Set of fittings to regulate the injection of N₂ or CO₂



OPERATIONAL AREA

CO₂ / N₂ Inerting systems



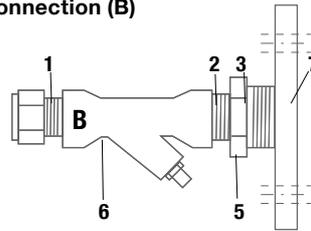
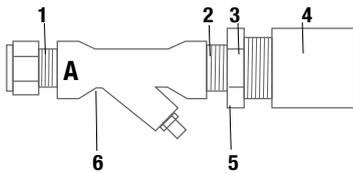
Complete set inerting nozzle KSI

Flat fan nozzle FSD-L | Non-return valve RSV-E

Nozzle set for regulating N₂ or CO₂ injection.

Complete set inerting nozzle KSI

- ❑ Preassembled set consisting Flat spray nozzle and non-return valve
- ❑ Available with **Welding connection (A)** or **Flange connection (B)**



1. Screw connection for copper
2. Double nipple
3. Nozzle inside
4. Welding sleeve R 1 1/2".
5. Reduction non-return valve NW - 1 1/2" D
6. Non-return valve
7. Flange connection

Flat fan nozzle FSD-L

- ❑ Uniform, parabolic liquid distribution
- ❑ Nozzle insensitive to clogging with high spray energy
- ❑ Compact design for confined installation conditions

Material

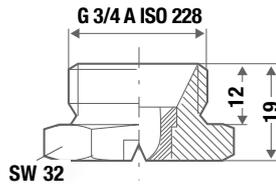
Brass

Angle of beam

60°

Weight

ca. per 75 g



Valve | Volumen (m³/h)

CO₂-valve

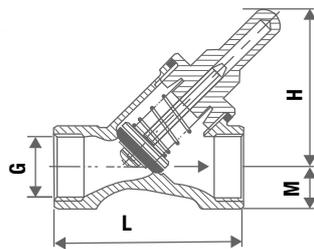
Größe	6 bar	12 bar	16 bar
3 x 60	13	30	45
4 x 60	20	50	70
5 x 60	45	85	115
6 x 60	70	135	190
8 x 60	120	225	310
9 x 60	150	290	390
10 x 60	185	360	480
12 x 60	290	550	730

N₂-valve

Größe	6 bar	12 bar	16 bar
3 x 60	27	53	71
4 x 60	48	96	128
5 x 60	78	156	209
6 x 60	127	255	340
8 x 60	191	382	509
10 x 60	300	600	800
12 x 60	440	880	1173

Non-return valve RSV-E

- ❑ Body consists of two screwed parts
- ❑ Al desired, please refer to flow direction



G	1/2	3/4	1
Dimensions in mm:			
L	65	76	90
H	46	58	76
M	14	16	21
Weight ca. kg:			
	0,3	0,4	0,6

Material

Housing: Brass | Bonnet: Brass (Ms.58)

Spring: Stainless steel 1.4310 | Seal: NBR

Temperature range

-20°C up to max +90°C

Pressure range

max. 16 bar

Connection

B.S.P. thread, G1/2 - G1 (DIN ISO 228 T1)

ORDER NUMBERS

Complete set inerting nozzle KSI

preassembled socket 1 1/2"

preassembled flange DN65_PN10

preassembled flange DN50_PN10

preassembled flange DN100_PN10

R002834

R002835

R002836

R002837

Ersatzteile

Flat spray nozzle

Flat fan nozzle 3x60	R002838
Flat fan nozzle 4x60	R002839
Flat fan nozzle 5x60	R002840
Flat fan nozzle 6x60	R002841
Flat fan nozzle 8x60	R002842
Flat fan nozzle 9x60	R003035
Flat fan nozzle 10x60	R003036
Flat fan nozzle 12x60	R002843

Non-return valve

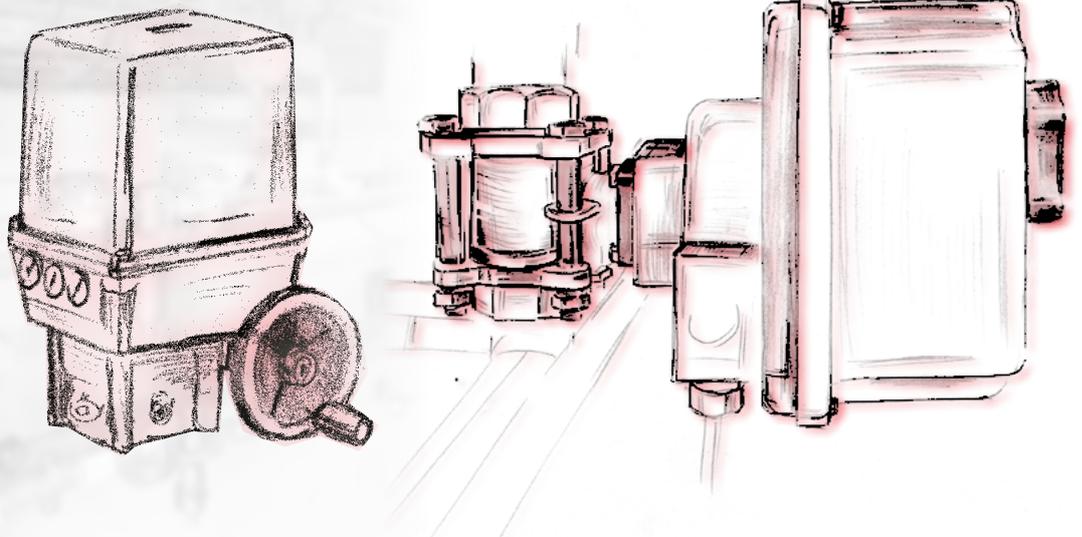
Non-return valve 1/2"	R000656
Non-return valve 3/4"	R002372
Non-return valve 1"	R002976



Complete set Inerting valve

IVS-H | IVS-B with ball valve and actuator

Inerting



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems



Complete set Inerting valve

IVS-H | IVS-B with ball valve and actuator

The inert gas reaches the corresponding consumers or system parts via the electrically driven inerting valves.

Complete set Inerting valve IVS-H

- Set completely pre-assembled
- Set consisting of rotary drive incl. position indicator, and ball valve

Actuator SA-H

- Designed for harsh industrial use
- Electrical activation
- Emergency operation with handwheel
- High positioning accuracy
- Any mounting position (NOT COVER DOWN)

Complete set Inerting valve IVS-B

- Set completely pre-assembled
- Set consisting of rotary drive incl. position indicator, and ball valve

Actuator SA-B

- Electrical activation
- Emergency operation with handwheel
- Any mounting position (NOT COVER DOWN)

TECHNICAL DATA OF ACTUATOR

Ambient temperature

-20°C up to +60 °C

Wight

ca. 5,5–6 kg

Supply voltage

24 VDC, 230 VAC, 110VAC,
further on request

Electr. Connection

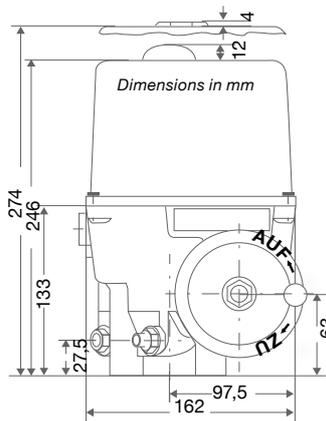
Terminal strip inside

Mech. Connection

Flange ISO 5211

Protection class

IP 67



Dimension of actuator incl. ball valve
ca.: 180b x 229h x 324–386d

Ambient temperature

-25°C up to +70 °C

Wight

ca. 2,5–3 kg

Supply voltage

24 VDC, 230 VAC, 110VAC,
further on request

Electr. Connection

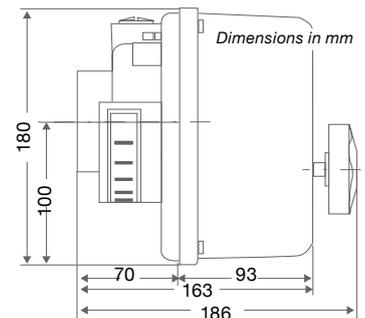
Terminal strip inside

Mech. Connection

Flange ISO 5211

Protection class

IP 65



Dimension of actuator incl. ball valve
ca.: 146b x 180h x 265–327d

ORDER NUMBERS

Complete set Inerting valve IVS-H1	Voltage 24VDC, DN 20 PN63	R002736
Complete set Inerting valve IVS-H2	Voltage 24VDC, DN 25 PN63	R002737
Complete set Inerting valve IVS-H3	Voltage 24VDC, DN 32 PN63	R002738
Complete set Inerting valve IVS-H4	Voltage 24VDC, DN 40 PN63	R002739
Complete set Inerting valve IVS-H5	Voltage 24VDC, DN 50 PN63	R002740
Complete set Inerting valve IVS-H6	Voltage 230VAC, DN 20 PN63	R002933
Complete set Inerting valve IVS-H7	Voltage 230VAC, DN 25 PN63	R002934
Complete set Inerting valve IVS-H8	Voltage 230VAC, DN 32 PN63	R002935
Complete set Inerting valve IVS-H9	Voltage 230VAC, DN 40 PN63	R002936
Complete set Inerting valve IVS-H10	Voltage 230VAC, DN 50 PN63	R002937
Complete set Inerting valve IVS-H11	Voltage 110VAC, 60 Hz, DN 25 PN63	R002777
Complete set Inerting valve IVS-H12	Voltage 110VAC, 60 Hz, DN 32 PN63	R002743
Complete set Inerting valve IVS-H13	Voltage 110VAC, 60 Hz, DN 40 PN63	R002938
Complete set Inerting valve IVS-B1	Voltage 24VDC, DN 15 PN63	R002908
Complete set Inerting valve IVS-B2	Voltage 24VDC, DN 20 PN63	R002860
Complete set Inerting valve IVS-B3	Voltage 24VDC, DN 25 PN63	R002820
Complete set Inerting valve IVS-B4	3-way, Voltage 24VDC, DN 25 PN63	R002909
Complete set Inerting valve IVS-B5	Voltage 24VDC, DN 32 PN63	R002819
Complete set Inerting valve IVS-B6	Voltage 24VDC, DN 40 PN63	R002818
Complete set Inerting valve IVS-B7	Voltage 24VDC, DN 50 PN63	R002910

Equipment

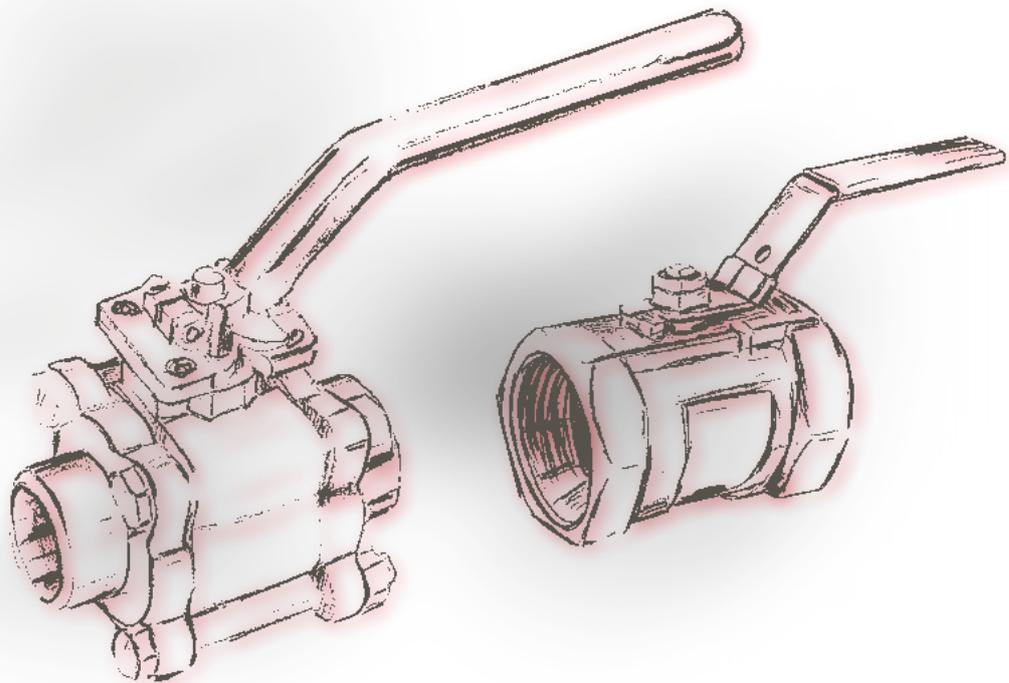
Sealing kit for ball valve	DN20	R002888
Sealing kit for ball valve	DN25	R002891
Sealing kit for ball valve	DN32	R002890
Sealing kit for ball valve	DN40	R002889
Electrical actuator SA-H		R002939
Double bracket & shaft extension for electrical ball valve SA-H		R002925
Electrical actuator SA-B		R002911
Double bracket & shaft extension for electrical ball valve SA-B		R002912



Ball valve

KH-G | KH-B | KH-E

For shutting off pipelines



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



Ball valve

KH-G | KH-B

Ball valves are used to shut off and open ball valves. The robecco ball valves are all made of stainless steel.

Ball valve KH-G for use in CO₂ High-pressure systems !

- Ball valve for welding in
- Short version
- Three-piece housing
- Operation by hand lever
- Pressure rating up to PN 125 bar
- Nominal width DN up to 40
- Ball with floating bearing
- Vacuum-tight

Material

Stainless steel 1.4408

Medium

Liquid and gaseous

Pressure range

PN 125 bar

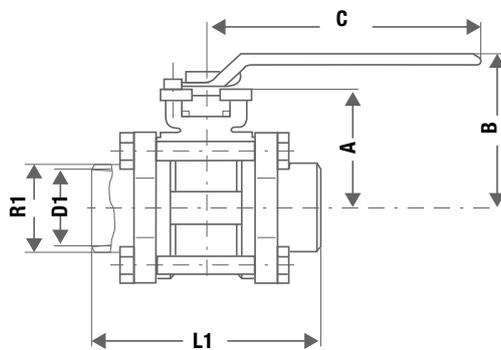
Connection

Welding ends

Nominal width

DN 20, 25, 32, 40

TECHNICAL DATA



	DN 20	DN25	DN32	DN40
Dimensions in mm:				
A	46	50	61	66
B	65	70	80	85
C	40	140	150	150
ØD1	22,3	28	37	42,8
L1	90	100	110	125
ØR1	28	34	43	49

Wight:

Kg ca.	1,0	1,5	2	3
--------	-----	-----	---	---

Ball valve KH-B for use in N₂ High-pressure systems !

- Use for inerting with nitrogen
- DN 20 / DN 25

Material

Housing: Steel | Ball: Stainless steel AISI 316

Control shaft: Stainless steel AISI 316

Medium

Liquid and gaseous

Temperature range

-30°C – + 100°C

Pressure range

PN 315 bar

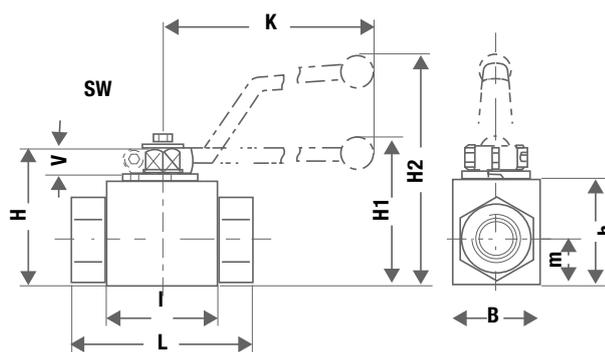
Connection

Sleeves

Wight

ca. 1,5 / 2,5 kg

TECHNICAL DATA



	DN 20	DN25
Dimension in mm:		
L	95	113
l	62	66
B	49	58
H	75	83
h	57	65
m	24,5	29,5
V	14	14
SW	14	14
K	200	200
H1	79	87
Wight:		
Kg ca.	1,5	2,5

ORDER NUMBERS

Ball valve KH-G	DN20	R002704
Ball valve KH-G	DN25	R002705
Ball valve KH-G	DN32	R002706
Ball valve KH-G	DN40	R002707
Sealing kit for ball valve KH-G	DN20	R002961
Sealing kit for ball valve KH-G	DN25	R002816
Sealing kit for ball valve KH-G	DN32	R002810
Sealing kit for ball valve KH-G	DN40	R002926
Ball valve KH-B	DN20	R002858
Ball valve KH-B	DN25	R002859

Ball valve

KH-E

Ball valves are used to shut off and open ball valves. The robecco ball valves are all made of stainless steel.

Ball valve KH-E-1 for use in CO₂ Low-pressure systems !

- Ball valve for welding in or with screw thread
- Three-piece housing
- Operation by hand lever
- Pressure rating up to PN 64 bar
- Two way ball valve

TECHNICAL DATA

Material

Stainless steel 1.4408

Medium

Gaseous

Temperature range

-30°C – +180°C

Pressure range

up to PN 40 bar or up to PN 64 bar

Connection

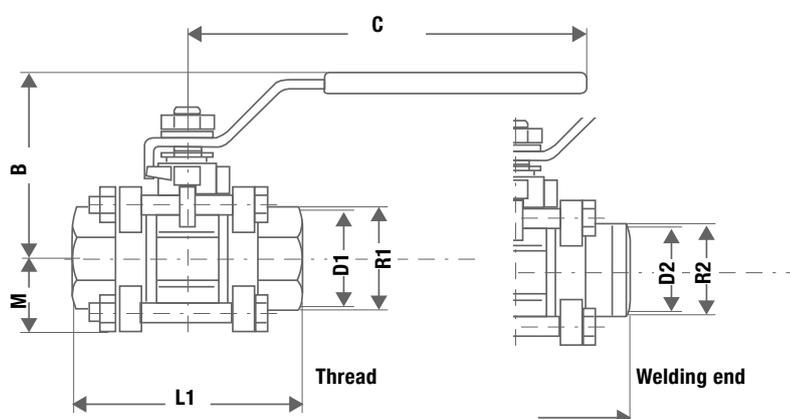
Welding ends | Screw thread

Connection size

3/4", 1", 1 1/4", 1 1/2", 2" | DN 20, 25, 32, 40, 50

Wight

1–3,5 kg je typ



Dimensions of thread:

ØR1	3/4"	1"	1 1/4"	1 1/2"	2"
-----	------	----	--------	--------	----

B	59	70	76	90	99
---	----	----	----	----	----

C	101,5	126,5	126,5	161,5	161,5
---	-------	-------	-------	-------	-------

ØD1	20	24,5	32	38	50
-----	----	------	----	----	----

L1	80	90	110	120	140
----	----	----	-----	-----	-----

M	25	29	33	39	46
---	----	----	----	----	----

PN	64	64	40	40	40
----	----	----	----	----	----

kg ca.	0,6	0,9	1,3	2,1	3,5
--------	-----	-----	-----	-----	-----

Dimensions of welding end:

Nominal width:	DN20	DN25	DN32	DN40	DN50
----------------	------	------	------	------	------

B	59	70	76	90	99
---	----	----	----	----	----

C	101,5	126,5	126,5	161,5	161,5
---	-------	-------	-------	-------	-------

ØD2	20	24,5	32	38	50
-----	----	------	----	----	----

L1	90	100	110	125	150
----	----	-----	-----	-----	-----

M	25	29	33	39	47
---	----	----	----	----	----

R2	26,9	33,7	42,4	28,3	60,3
----	------	------	------	------	------

PN	64	64	40	40	40
----	----	----	----	----	----

kg ca.	0,6	0,9	1,3	2,1	3,3
--------	-----	-----	-----	-----	-----

ORDER NUMBERS

Ball valve KH-E-1 3/4"	PN64 threaded connection	R002954
Ball valve KH-E-1 1"	PN64 threaded connection	R002710
Ball valve KH-E-1 1 1/4"	PN40 threaded connection	R002711
Ball valve KH-E-1 1 1/2"	PN40 threaded connection	R002821
Ball valve KH-E-1 2"	PN40 threaded connection	R002709

Ball valve KH-E-1 DN20	PN64 welded connection	R002957
Ball valve KH-E-1 DN25	PN64 welded connection	R002956
Ball valve KH-E-1 DN32	PN40 welded connection	R002955
Ball valve KH-E-1 DN40	PN40 welded connection	R002712
Ball valve KH-E-1 DN50	PN40 welded connection	R002822

Ball valve

KH-E

Ball valves are used to shut off and open ball valves. The robecco ball valves are all made of stainless steel.

Ball valve KH-E-2 | KH-E-3

- Ball valve with screw thread
- One-piece housing | Two-piece housing
- Operation by hand lever
- Pressure rating up to PN 63 bar
- 2 way ball valve

TECHNICAL DATA

Material

Stainless steel 1.4408

Medium

Gaseous

Temperature range

-25°C – +180°C

Pressure range

up to PN 63 bar

Connection

Screw thread

Dimension of connection

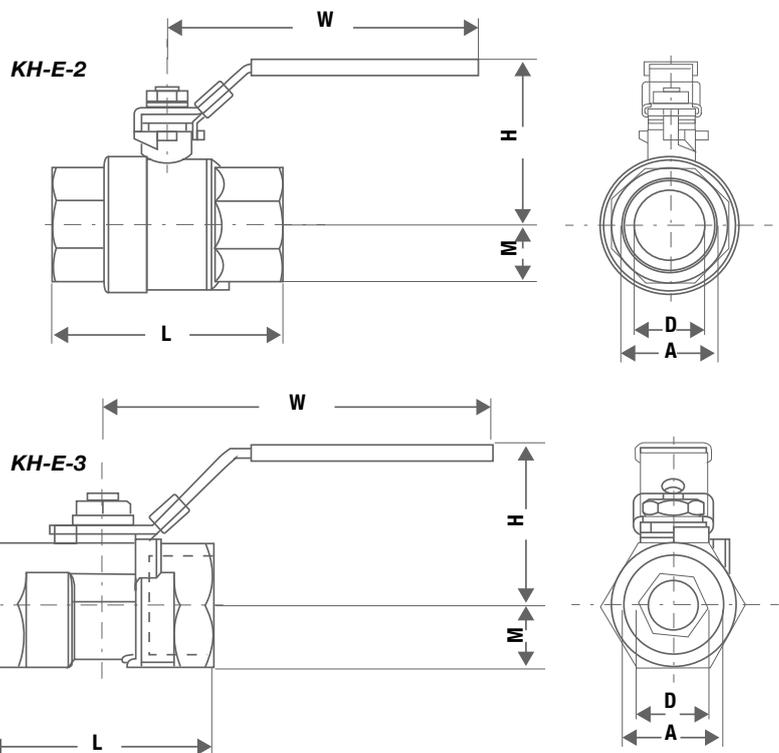
1/2"

Wight

0,32 kg | 0,16 kg

Dimensions:

	KH-E-2	KH-E-3
A	1/2"	1/2"
DØ	15	9
L	75	55,6
H	62	34,4
M	17	12,5
W	123	95
PN	64	64
Kg ca.	0,32	0,16



ORDER NUMBERS

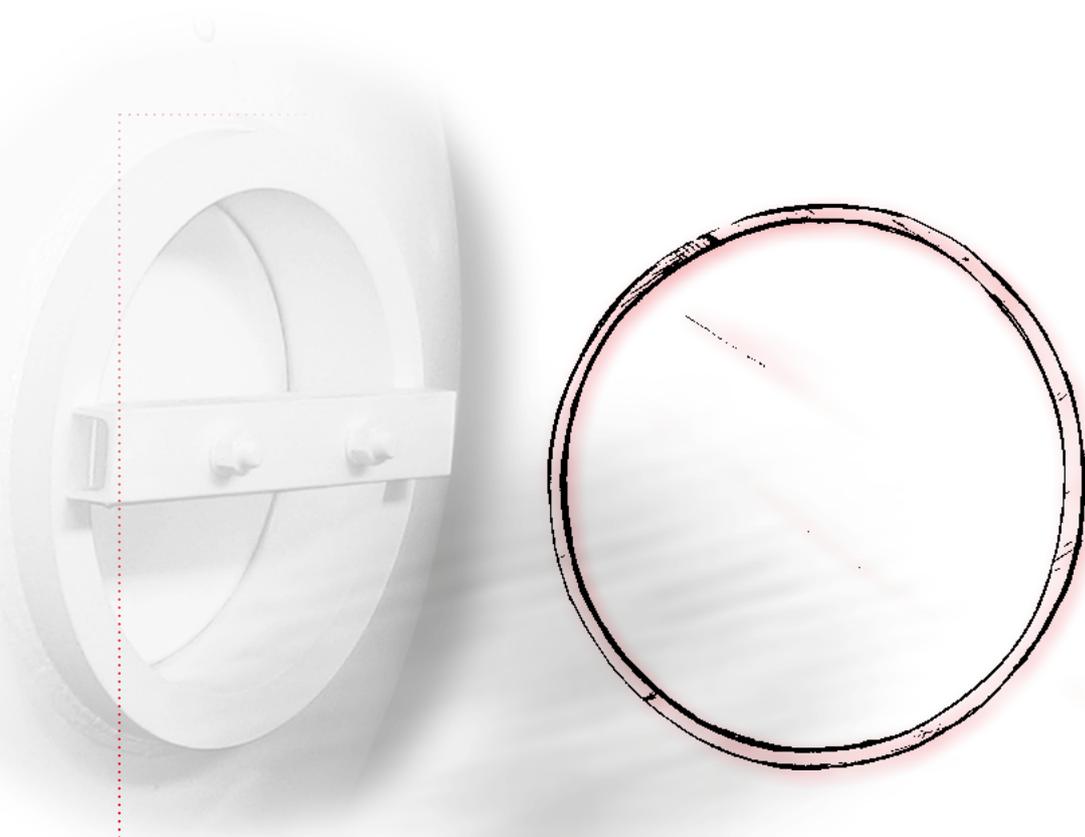
Ball valve KH-E-2	1/2" PN64 threaded connection	R002708
Ball valve KH-E-3	1/2" PN64 threaded connection	R002825



Manhole seal

BMD

Seals for use on high-pressure vessels



OPERATIONAL AREA

CO₂ High-pressure inerting systems



Manhole seal

BMD



Spare part for high pressure vessels

Manhole seal BMD

Very durable

Dimensions standard:

x: \varnothing 480 mm inner diameter

y: \varnothing 492 mm outer diameter

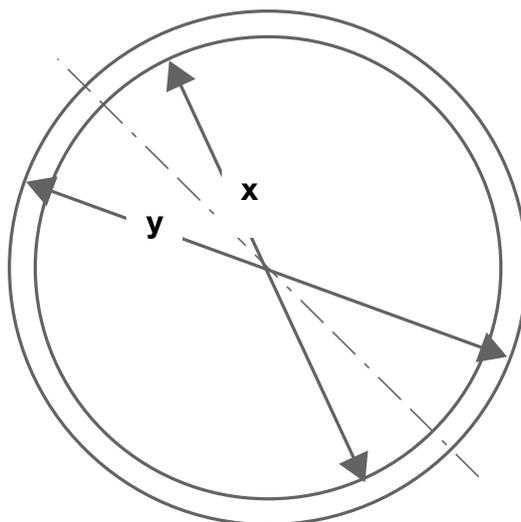
Dimensions 450/510:

x: \varnothing 450 mm inner diameter

y: \varnothing 510 mm outer diameter

Material

Klinger C 4430



ORDER NUMBERS

Manhole seal BMD-1

for high-pressure vessel standard

R002799

Manhole seal BMD-2

for high-pressure vessel; diameter 450/510

R002800





Pressure gauge

MM-P

Pressure monitoring in pipelines



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



Pressure gauge

MM-P

The pressure gauge is used to monitor the pressure of gaseous and liquid, non-crystallizing and not highly viscous media. It can be used for low pressure, normal pressure and high pressure.

Pressure gauge MM-P

- Equipped with a mechanical Bourdon tube measuring element
- Stainless steel
- Display range 0 – 160 bar selectable

TECHNICAL DATA

Material

Housing: Stainless steel, CrNi-steel 1.4301

Material dial and pointer: Aluminium

Wetted Parts Stainless Steel: CrNi-steel 1.4571

Cover glass: Safety laminated glass

Medium

Liquid and gaseous media

Permissible medium temperature

-20 ° – +130°C

Permissible ambient temperature

-20 ° – +60°C

Process connection

NG 100 G 1/2" B, radial

Protection class (EN 60529)

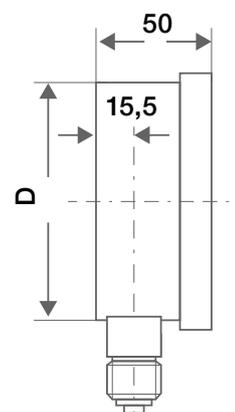
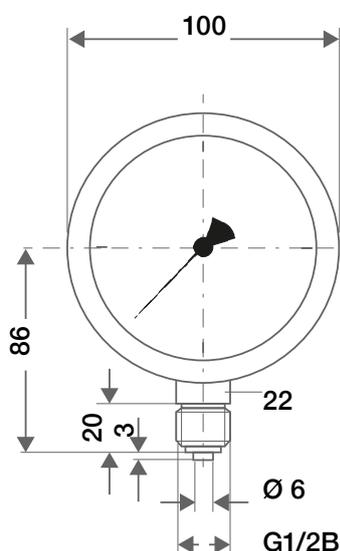
IP 54

Wight

ca. 0,6 kg

Measuring accuracy (EN 837)

Class 1,0



Dimensions in mm indication

ORDER NUMBERS

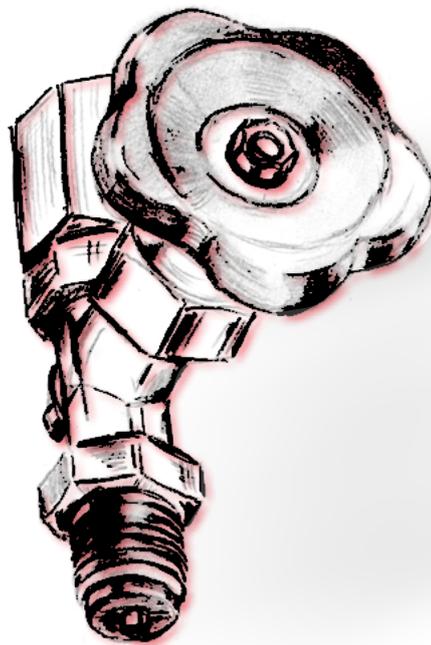
Pressure gauge MM-P	Vacuum ranges 0 - 5 bar	R002970
Pressure gauge MM-P	Vacuum ranges 0 - 10 bar	R002817
Pressure gauge MM-P	Vacuum ranges 0 - 25 bar	R002815
Pressure gauge MM-P	Vacuum ranges 0 - 40 bar	R002971
Pressure gauge MM-P	Vacuum ranges 0 - 100 bar	R002809
Pressure gauge MM-P	Vacuum ranges 0 - 160 bar	R002972



Pressure gauge valve

MMV-B

Shutting off pressure measuring devices
in emergencies and for repairs



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems
CO₂ Low-pressure inerting systems



Pressure gauge valve

MMV-B

robecco pressure gauge valves are used to shut off pressure gauges in inerting systems.

Pressure gauge valve MMV-B

- Internal stem thread
- Stem with cold rolled surface and non-rotating needle tip
- Valves are operated by hand

TECHNICAL DATA

Pressure gauge valve MMV-B

Material

Body: Messing
 Valve stem and valve tip: Stainless steel 1.4104
 Union nut and adjusting nut: Steel
 Swivel nut: Brass
 Handwheel: plastic

Temperature range

-10°C up to max. +120°C

Operation pressure

Up to nominal pressure PN 250 bar

Connection

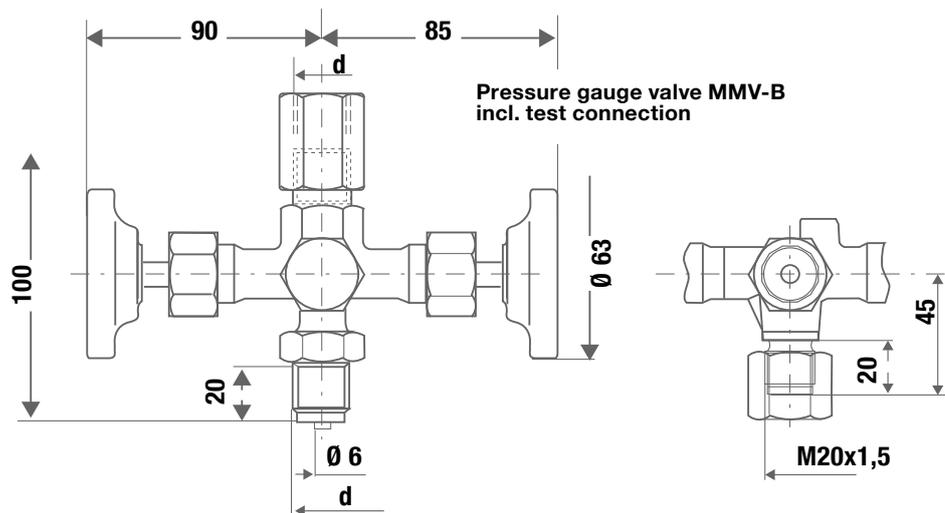
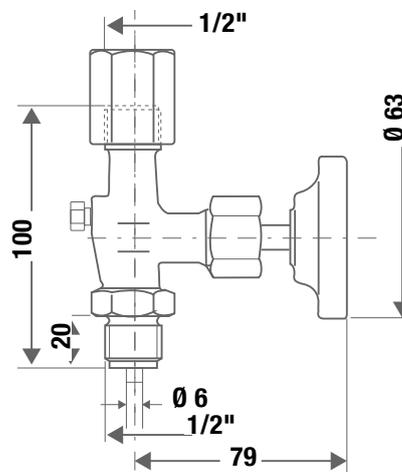
G1/2"

Wight

ca. 0,8 kg

Actuation

Turning the handwheel
 Clockwise closing



Dimensions in mm specification

ORDER NUMBERS

Pressure gauge valve MMV-B
 Pressure gauge valve MMV-B

G 1/2"
 G 1/2", incl. test connection

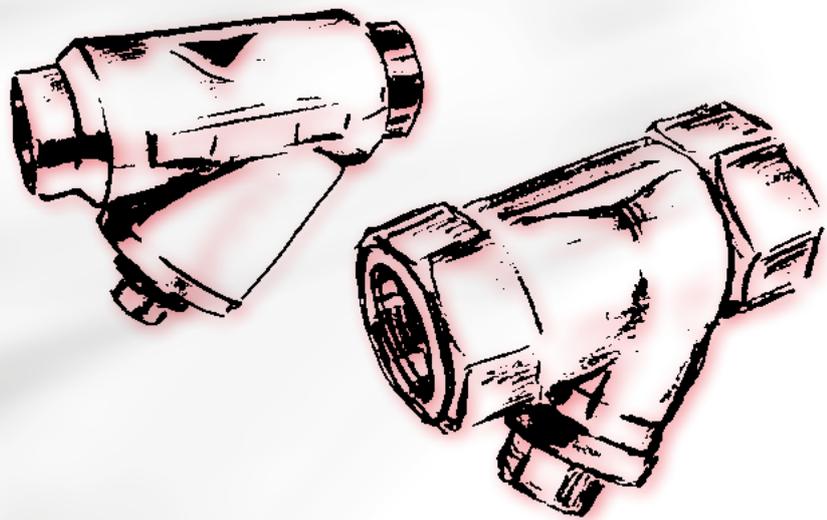
R002844
 R002845



Strainer

SF-E | SF-G

Filtration of impurities from pipelines



OPERATIONAL AREA

CO₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



Strainer

SF-E | SF-G

Strainers are used to filter out impurities from pipelines.
The cleaning effect of these types depends on the size of the mesh.

Strainer SF-E (LOW PRESSURE)

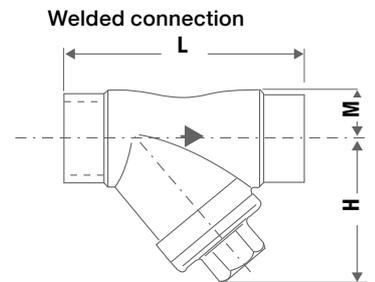
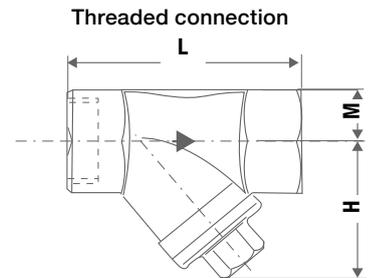
- Body exists of two (screwed) parts
- Stainless steel
- Bonnet upside down, please refer to flow direction
- Use after pressure reduction in LOW PRESSURE systems

Material
Entry housing: Stainless steel
Bonnet: Stainless steel
Mesh: Stainless steel
Seal: PTFE

Permissible temperature range
-30°C up to max. +180°C

Mesh size
0,25

Nominal pressure
max. 40 bar



Nominal size DN	Thread G	Length L	Height H	M
25	1"	90	57,5	18,5
32	1 1/4"	110	65	23
40	1 1/2"	120	74	26,5

Strainer SF-G (HIGH PRESSURE)

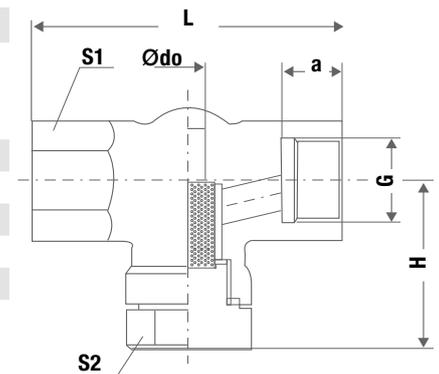
- Stainless steel
- High-pressure fitting
- Use after pressure reduction in HIGH PRESSURE systems

Material
Housing: Chrome steel 1.4021
Stake: 1.0715.07
Filter: 1.43011

Permissible temperature range
-40°C– +400°C

Mesh size
0,25

Nominal pressure
250 bar



Nominal size DN	Thread G	Face to face dim.L	Height H	Soccet depth a	flow diam. do	widht across flats S1	widht across flats S2	Wight
20	1"	130	65	19,1	18	46	41	ca. 1,5 kg
25	1 1/4"	160	80	21,4	25	60	50	ca. 3,3 kg

ORDER NUMBERS

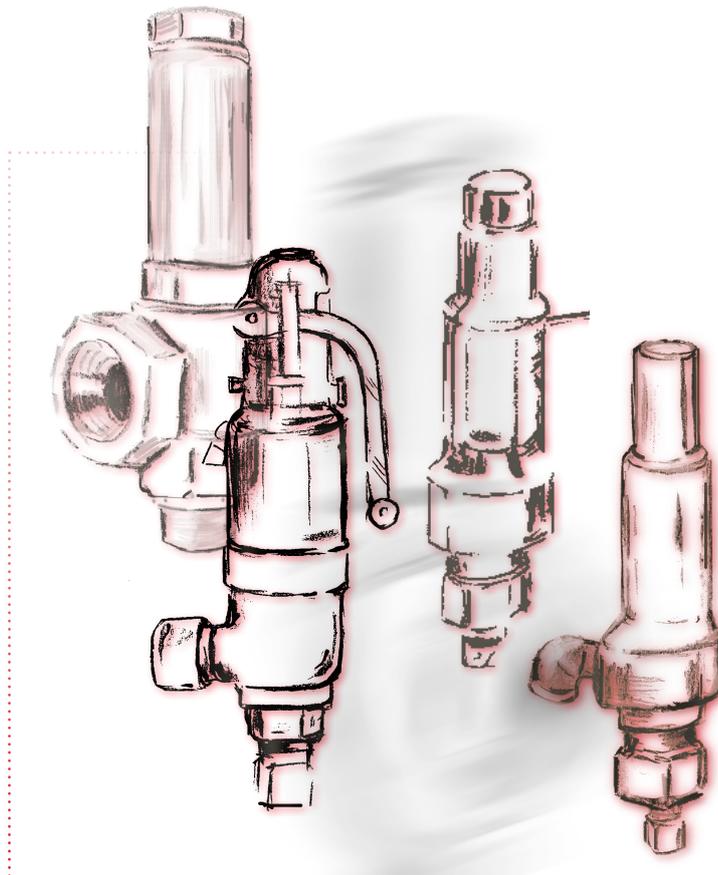
Strainer SF-E	1", with Screw connection	R002980
Strainer SF-E	1 1/4", with Screw connection	R002979
Strainer SF-E	1 1/2", with Screw connection	R002982
Strainer SF-E	1 1/4", with welded connection	R002981
Strainer SF-G	1"	R002700
Strainer SF-G	1 1/4"	R002702



Safety valves

SV-H1 | SV-L1 | SV-L2 | SV-L3

Valves for protection against pressure rise



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



Safety valves

SV-L1 | SV-H1

A safety valve is a valve which opens automatically to prevent a predetermined gauge pressure being exceeded and which recloses after decrease in pressure. Intended as a safety device against impermissible excess pressure in stationary and mobile pressurized gas containers. **In closed rooms, blow-off lines must be led from all safety valves to the outside, and robecco gas warning systems must be installed.** Each robecco safety valve is delivered with a valid acceptance certificate from the ZÜS. (Zugelassene Überwachungsstelle)

Safety valve SV-H1

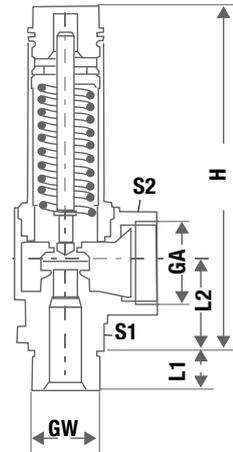
- Closed bonnet
- Permitted for cryogenic gases such as oxygen and nitrogen

Material	Brass PN 40
Inletbody:	Stainless steel
Obturator with coal filled PTFE valve seal	
Permissible temperature range	-196°– +185°C
Wight	ca. 0,80 kg

Pressure stages

- 10 bar
- 20 bar
- 25 bar
- 32 bar
- 40 bar

Dimensions	
Nom. size GW:	3/4" Key size S1: ca. 30 mm
Hight H:	ca. 140 mm Key size S2: ca. 41 mm
Length L1:	ca.16 mm Outlet GA: ca.1"
Length L2:	ca.36 mm



Safety valve SV-L1

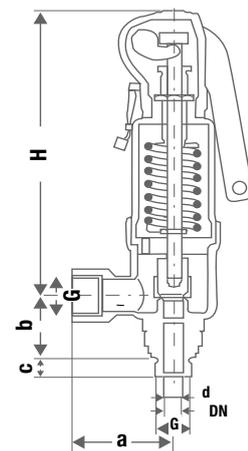
- Bonnet
- Permitted for gases and steam

Material	Bronze PN 40
Inletbody:	Stainless steel
Obturator with coal filled PTFE valve seal	
Permissible temperature range	-10°– +300°C
Wight	ca. 2,6 kg

Dimensions

- Hight H: ca. 230 mm
- together with bellows 45 mm
- Centre to face: a 75 mm | b 50 mm
- Pin lenght: c 16 mm

Pressure stages	80 bar
Nominal diameter:	DN 15
Entrance cone	G 3/4"
Outlet socket	G 1"



ORDER NUMBERS

Safety valve SV-H1	3/4", d07, 10 bar	R002776
Safety valve SV-H1	3/4", d07, 20 bar	R002775
Safety valve SV-H1	3/4", d07, 25 bar	R002928
Safety valve SV-H1	3/4", d07, 32 bar	R002774
Safety valve SV-H1	3/4", d07, 40 bar	R002732
Safety valve SV-L1	3/4", VA, 80 bar	R002734

Safety valves

SV-L2 | SV-L3

A safety valve is a valve which opens automatically to prevent a predetermined gauge pressure being exceeded and which recloses after decrease in pressure. Intended as a safety device against impermissible excess pressure in stationary and mobile pressurized gas containers. **In closed rooms, blow-off lines must be led from all safety valves to the outside, and robecco gas warning systems must be installed.** Each robecco safety valve is delivered with a valid acceptance certificate from the ZÜS. (Zugelassene Überwachungsstelle)

Safety valve SV-L2

- Closed bonnet
- Permitted for gases and steam

Material
Stainless steel
Inletbody: Stainless steel
Permitted temperature range
-10 – +300°C

Pressure stages

10 bar
20 bar
40 bar

Wight
ca. 1,6 kg
Max. set pressure
180 bar

Dimensions

Hight H: ca. 158 mm
Centre to face: a 30 mm | b 33 mm
Pin lenght: c 16 mm

Nominal diameter: DN 10
Entrance cone G₁ 1/2 | G₁ 3/4
Outlet socket G₂ 1/2

Safety valve SV-L3

- Closed bonnet
- Permitted for gases and steam

Material
Stainless steel, corrosion-proof
Inletbody: Stainless steel
Permitted temperature range
-270 – +400°C

Pressure stages

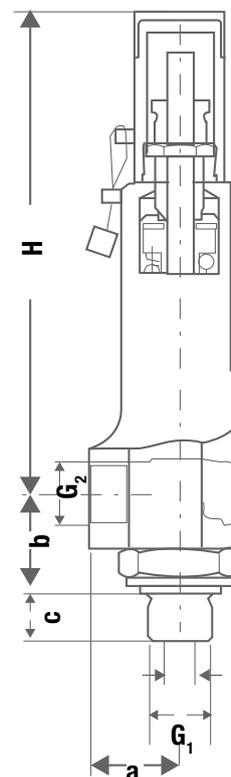
240 bar

Wight
ca. 1,6 kg

Dimensions

Hight H: ca. 158 mm
Centre to face: a 30 mm | b 33 mm
Pin lenght: c 16 mm

Nominal diameter DN 6
Entrance cone G₁ 1/2 | G₁ 3/4
Outlet socket G₂ 1/2
Smallest Flow area 28,3 mm²
Smallest Flow diameter 6 mm



ORDER NUMBERS

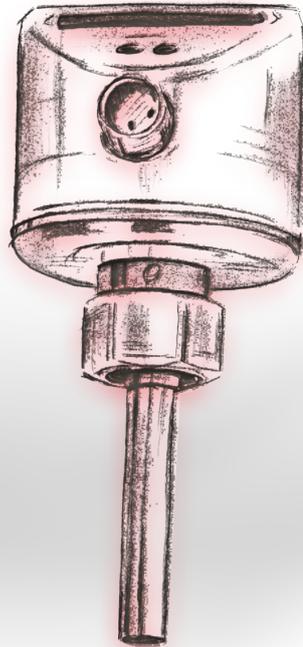
Safety valve SV-L2	3/4", VA, 10 bar	R002983
Safety valve SV-L2	3/4", VA, 20 bar	R002984
Safety valve SV-L2	3/4", VA, 40 bar	R002985
Safety valve SV-L2	3/4", VA, 100 bar	R002733
Safety valve SV-L3	1/2", VA, 240 bar	R002735



Flow sensor

SW-I

Monitoring of the flow condition
in pipelines



OPERATIONAL AREA

CO₂ / N₂ High-pressure inerting systems
CO₂ Low-pressure inerting systems



Flow sensor

SW-I

This sensor is used to monitor the flow condition of liquid and gaseous media in pipelines.

Flow sensor SW-I

- Can be used in harsh industrial environments
- Variable process connection via adapter
- Simple setting of switching points for fast commissioning
- LED bar graph for display of switching point and flow status

Material

Housing:
Stainless steel 1.4301, PC (Makrolon), PBT-GF20

Media

liquid | gaseous

Temperature range

-25°C up to +80°C

Weight

ca. 250 g

Operating voltage V

19...36 DC

Compressive strength

300 bar

Process connection

1/2"

Protection class

IP 67, III

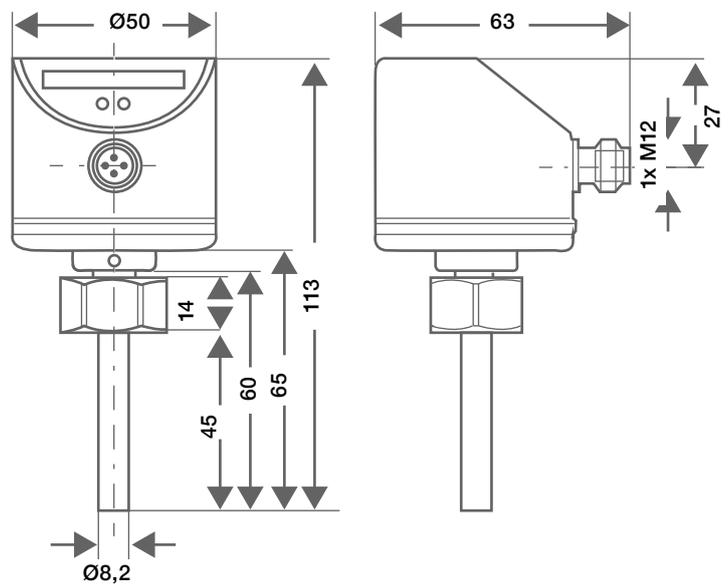
Electr. connection

Plug connection: 1 x M12

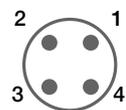
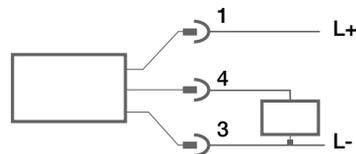
Standard

EN 61000-6-2

TECHNICAL DATA



Connection assignment



ORDER NUMBER

Flow sensor SW-I

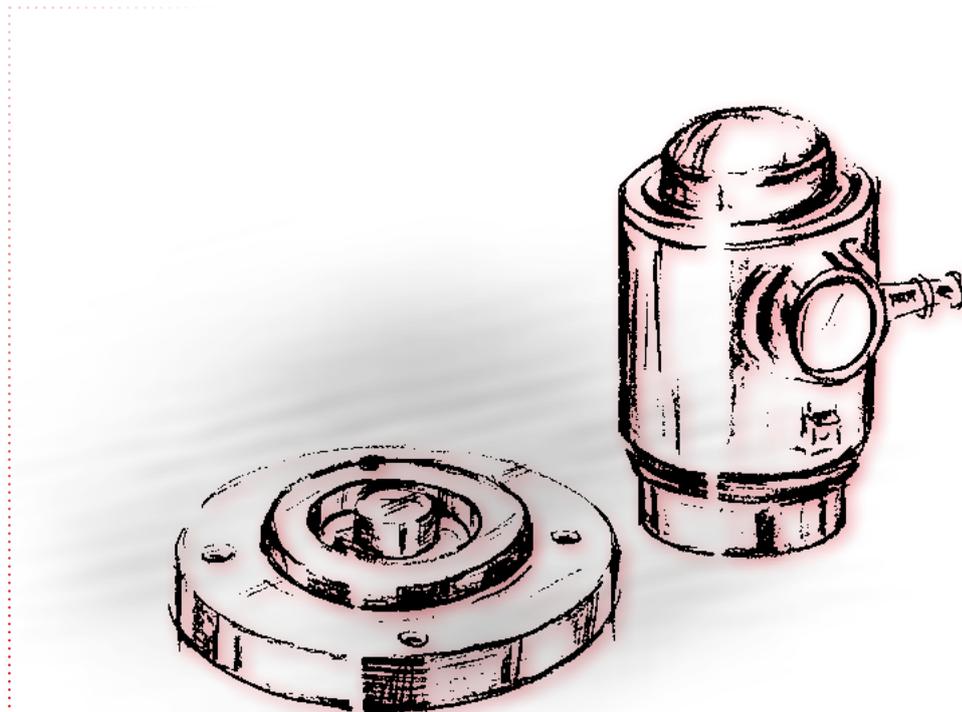
R002701



Load cells

WZ-S | WZ-SP

designed for weighing vessels



OPERATIONAL AREA

CO₂ High-pressure inerting systems

CO₂ Low-pressure inerting systems

PRODUCT INFORMATION



Load cells

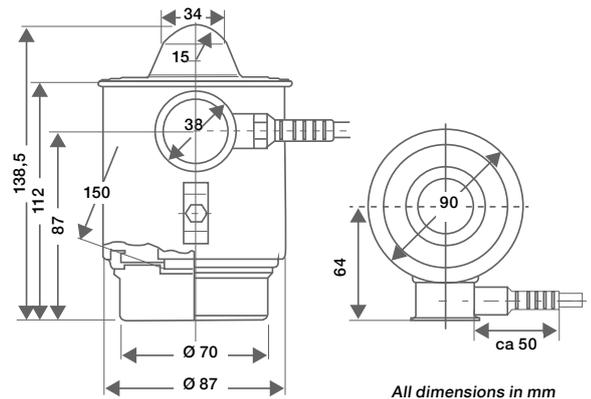
WZ-S

Load cells are designed for weighing vessels.

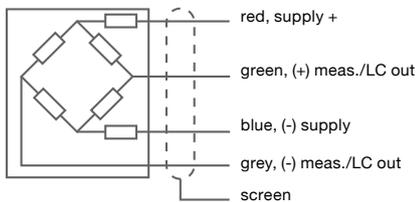
Load cell WZ-S

- ❑ Insert for high pressure vessel
- ❑ Easy installation
- ❑ Stainless steel
- ❑ Due to "matched output" technology, a damaged load cell can be exchanged without the need for re-calibration.

Material	Housing: Stainless steel
Temperature range	-10° C up to +55° C
Weight	ca. 2,00 –2,5 Kg
Protection class	IP 68
Output	1 od 2 mV/V
Pressure force	per Typ 5 t / 10 t
Nominal supply voltage	4... 24 VDC



All dimensions in mm

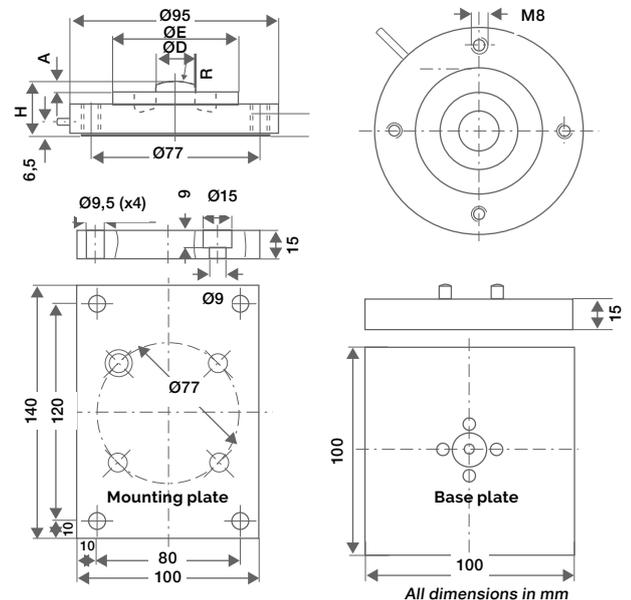


We reserve the right to amend specification

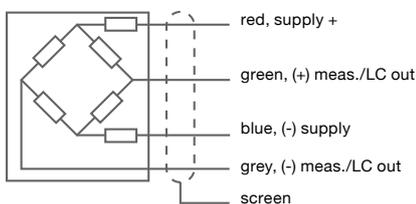
Load cell WZ-SP

- ❑ Insert for low pressure vessels and S-Batteries
- ❑ Very easy installation
- ❑ Stainless steel
- ❑ Compact installation height 25 /35 mm

Material	Housing: Stainless steel
Temperature range	-10°C up to +70°C
Weight	ca. 0,9 –1,2 Kg
Protection class	IP68
Output	1 od 2 mV/V
Pressure force	per Typ 2t / 5 t / 10 t
Nominal supply voltage	4... 24 V
Dimensions	Ø 95 mm x 25 / 35 mm H



All dimensions in mm



Load cells WZ-s | WZ-SP | robecco 05 /2021

ORDER NUMBERS

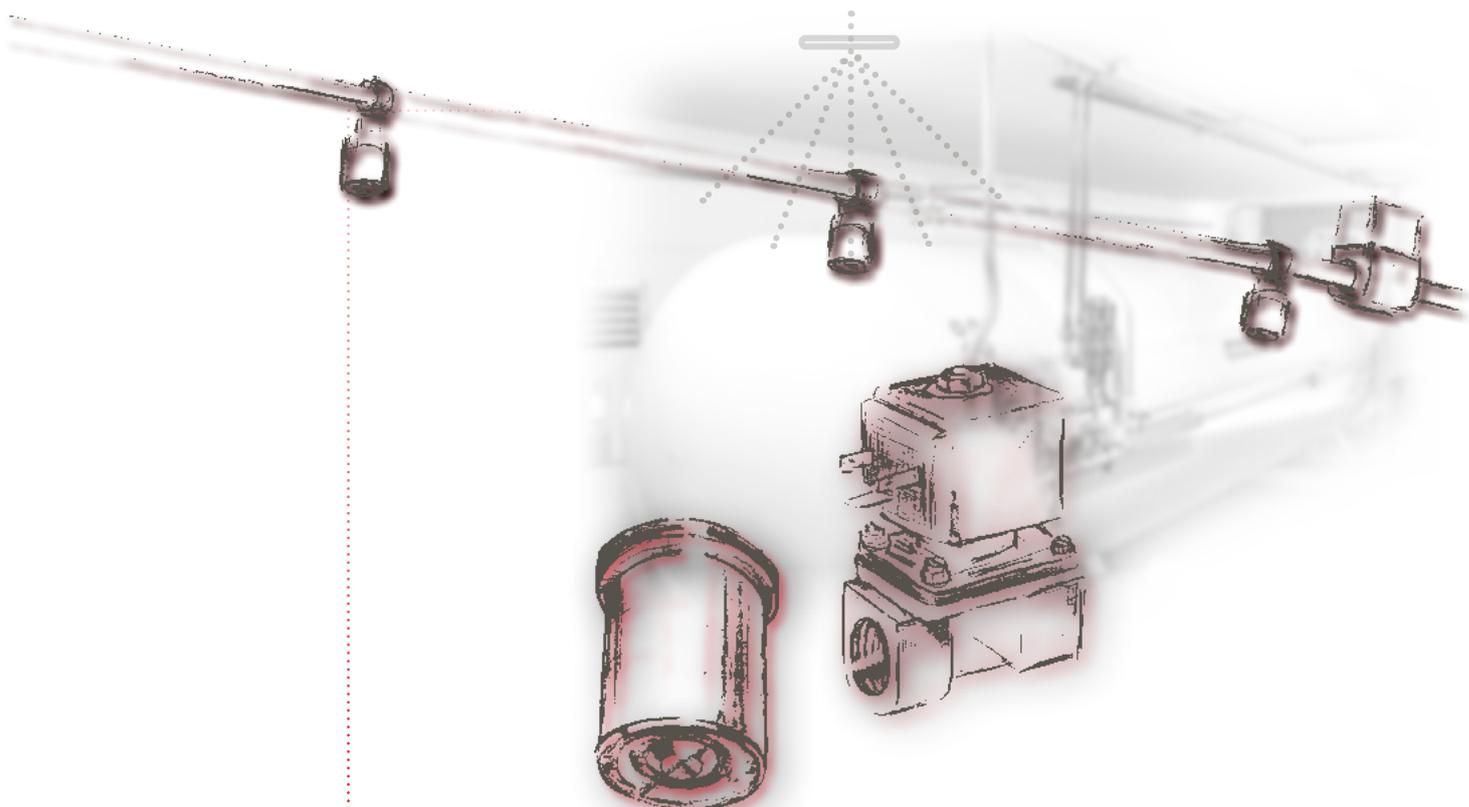
Load cell WZ-S1	Pressure force 10 t	R002812
Load cell WZ-S2	Pressure force 5 t	R002999
Load cell WZ-SP3	Pressure force 10 t	R003001
Load cell WZ-SP4	Pressure force 5 t	R003002
Load cell WZ-SP5	Pressure force 2 t	R003000
Load cell base plate for WZ-SP3, SP4, SP5		R003003
Load cell mounting plate for WZ-SP3, SP4, SP5		R003004



Water sprinkling unit

Solenoid valve WMV-S | Hose line WSL
Full cone nozzle WVKD-L

Installation for cooling high-pressure vessels



OPERATIONAL AREA

CO₂ High-pressure inerting systems



Water sprinkling unit

Solenoid valve WMV-S | Hose line WSL | Full cone nozzle WVKD-L

Unit for cooling CO₂ high-pressure vessels.

The unit consists of solenoid valve, hose line, stainless steel pipe and nozzles. robecco will assemble the complete unit for you individually.

The individual components are available as spare parts.

Solenoid valve WMV-S

- Pre-actuated 2/2-way solenoid valve
- Minimum operating pressure 0.1 bar



Connection

G 3/4"

Max. permissible pressure

16 bar

Electrical connection

24 V DC / 230 V AC

Ambient temperature

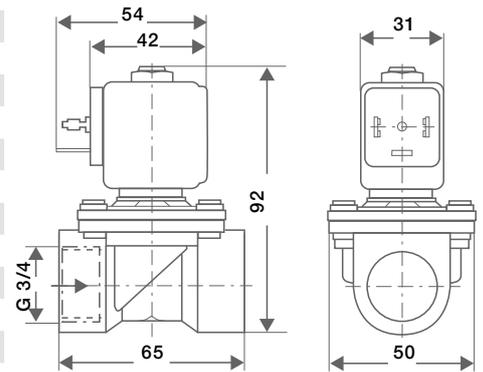
- 10°C + 60°

Material

Body: Brass

Protection class

IP 65 EN



all Dimensions in mm

We reserve the right to amend specification

Hose line WSL

- Sheathing stainless steel braiding NEOFLEX

Length

1.000 mm

Permissible pressure

max. 10 bar

Connection

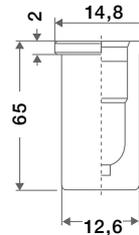
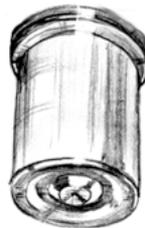
DN 16 | 3/4" Überwurfmutter

Material

AISI 304

Full cone nozzle WVKD-L

- Axial full cone nozzle
- Even liquid distribution
- Mounting with union nut



Strahlwinkel

90°

Reference pressure / flow rate

5 bar = 18 l/min

Connection thread

3/8" Union nut

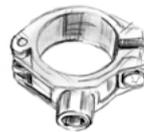
Material

Brass

Water sprinkler unit robecco 05 /2021

Equipment

- Mounting clamp



- Union nut



ORDER NUMBERS

Solenoid valve WMV-S1
Solenoid valve WMV-S2

24 V DC
230 V AC

R002851
R002852

Hose line WSL

R002968

Full cone nozzle WVKD-L

MS58

R002996

Equipment

Mounting clamp for full cone nozzle WVKD-L
Union nut for full cone nozzle WVKD-L

Polyamid
MS58

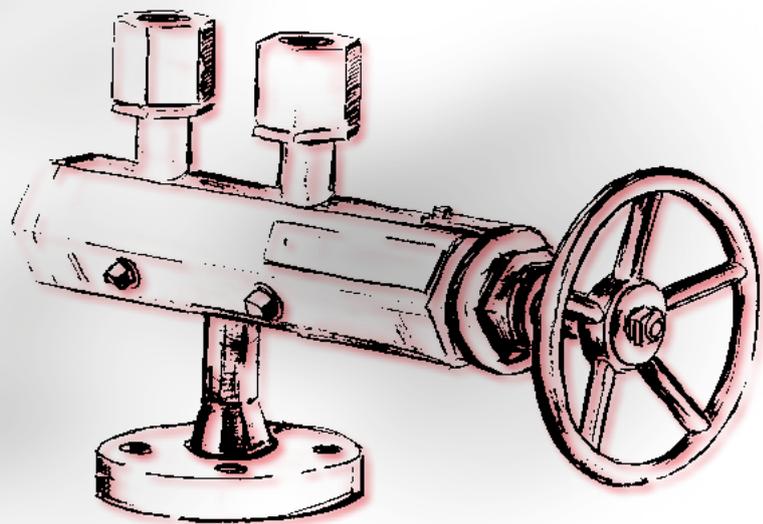
R002997
R002998



Change-over valve

WV-H

for the installation of two safety valves



OPERATIONAL AREA

CO₂ High-pressure inerting systems



Change-over valve

WV-H

for the installation of two safety valves. Cryogenic Changeover valves, stainless steel.
Approved for air gases, vapours and cryogenic liquefied gases.

Change-over valve WV-H

- Cryogenic Changeover Valves, stainless steel
- With two test connections
- Approved for air gases, vapours and cryogenic liquefied gases
- Manual operation by handwheel

Material

Housing: Stainless steel 1.4571

Sealing: PTFG

Hand wheel: Aluminium

Medium

air gases, vapours and cryogenic liquefied gases

Temperature range

-196°C – +185°C

Operation pressure

PN 160 bar

Flange diameter

Flange DN 2638, DN15

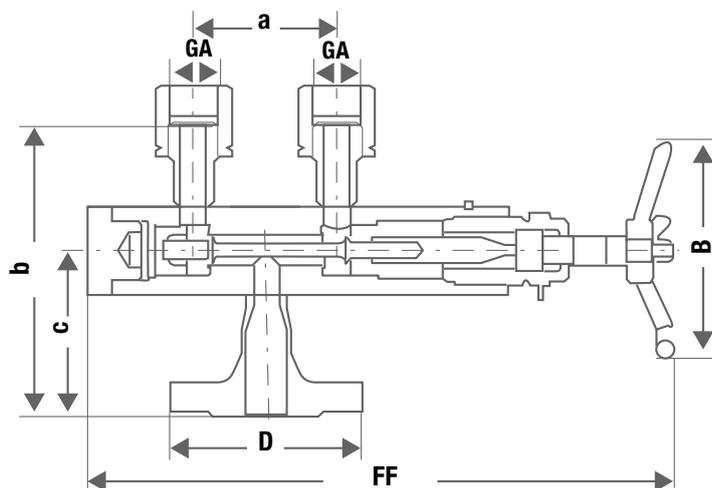
Outlet

Spannmuffe 3/4 "

Weight

ca. 5 kg

TECHNICAL DATA



DIMENSIONS in mm

Dimension data						
a	b	D	B	c	FF	GA
110	140	105	120	70	325	3/4"

ORDER NUMBER

Change-over valve WV-H

DN15, PN160 bar

R002793

**Further information
on request**



