

Extensions

HPI E

High purity extensions

FEATURES:

- Max. inlet pressure 300 bar
- Pipe material stainless steel 316L (1.4404)
- Modular design
- Diaphragm inlet shut off valve option
- Easy to install
- Made of 316L stainless steel for corrosive gases
- Made of chrome plated brass for non-corrosive gases and mixture up to 6.0



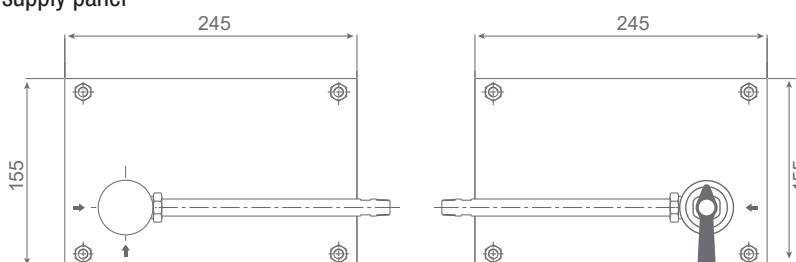
Model shown with additional accessories to be ordered separately

APPLICATIONS:

- To increase the number of connected cylinders to supply panel

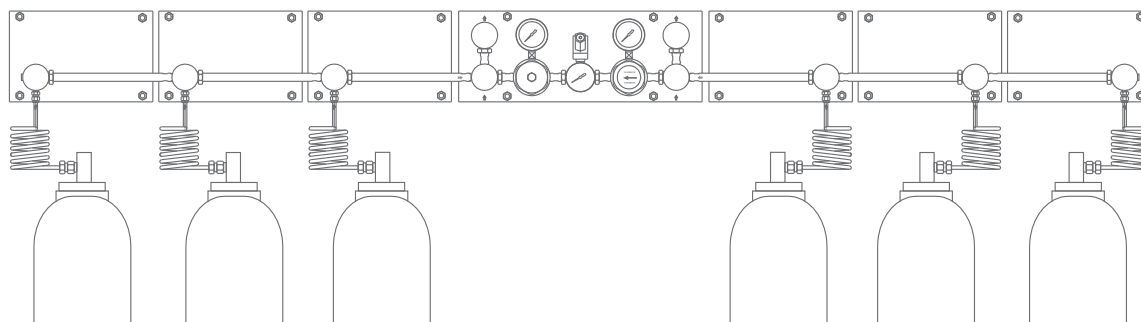
TECHNICAL DATA:

Purity	Up to 6.0
Inlet pressure	Max. 300 bar (4350 psig)
O-ring	Viton®* (FKM)
Oxygen use	Suitable



MATERIAL SPECIFICATIONS:

Shut-off valve seat	PCTFE
Diaphragm (valve)	Elgiloy®**
Inlet ports	1/4" NPT(F)
Temperature range	-30°C to +74°C
Weight	1,2 kg



ORDERING INFORMATION:

MODEL	MATERIAL	EXTENSION SIDE	SHUT OFF VALVE VERSION
9013287	Chrome plated brass	Right	No
9013288	Chrome plated brass	Left	No
9013289	Stainless steel	Right	No
9013290	Stainless steel	Left	No
9013291	Chrome plated brass	Right	Yes
9013292	Chrome plated brass	Left	Yes
9013293	Stainless steel	Right	Yes
9013294	Stainless steel	Left	Yes

For example: 9013287

* Viton® is a registered trademark of The Chemours Company
 ** Elgiloy® a registered trademark of Elgiloy Specialty Metals

Purge assemblies

HPI PA

High purity purge assemblies

FEATURES:

- Max. inlet pressure 300 bar
- Diaphragm shut off valve
- Made of 316L stainless steel

APPLICATIONS:

- Purge assemblies

TECHNICAL DATA:

Purity	Up to 6.0
Inlet pressure	Max. 300 bar (4350 psig)
Oxygen use	Suitable

MATERIAL SPECIFICATIONS:

Diaphragm (valve)	Hastelloy®* C276
Ports	1/4" NPT(F)
Temperature range	-30°C to +74°C
Leak rate	1x10 ⁻⁸ mbar l/s He
Orifice	Ø 3,2 mm



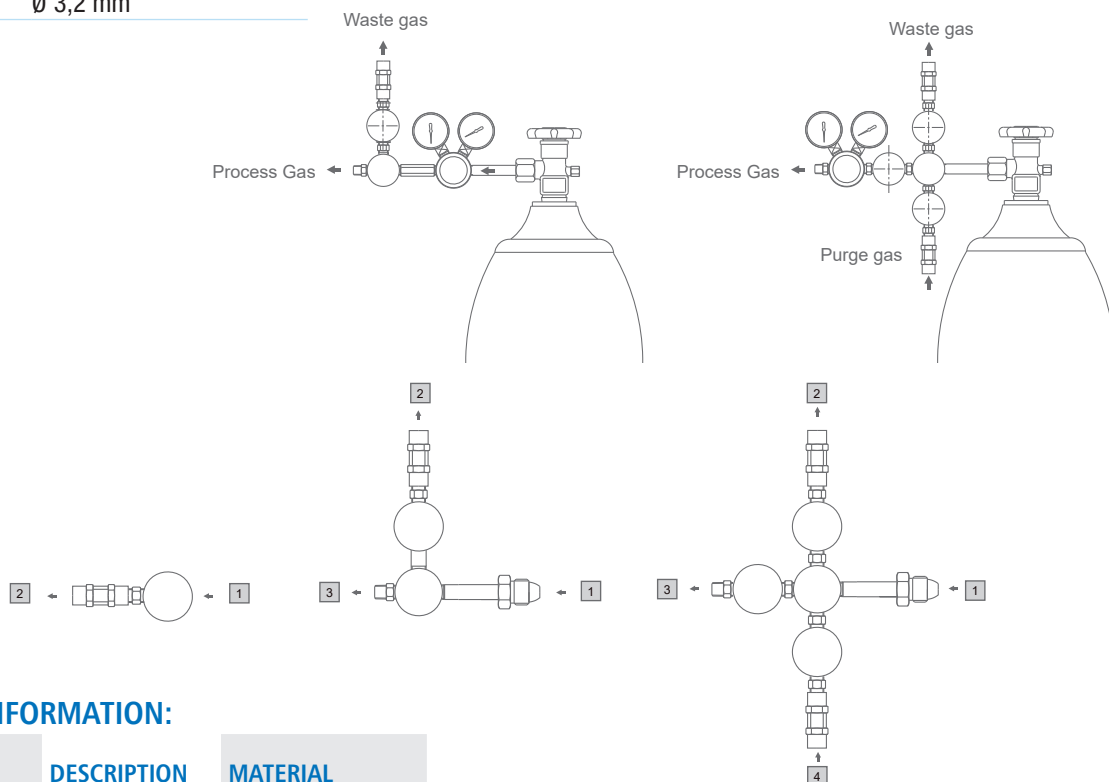
Straight purge assemblies

Tee purge assemblies



Cross purge assemblies

Models shown with additional accessories to be ordered separately



ORDERING INFORMATION:

PART NO.	DESCRIPTION	MATERIAL
9013277	Straight	Stainless steel
9013278	Tee	
9013279	Cross	

For example: 9013277

** Hastelloy® is a registered trademark name of Haynes International, Inc*

Valves

HPI DV300

High purity, high pressure diaphragm valve

FEATURES:

- Max. inlet pressure 300 bar (4350 psig)
- 1/2 turn
- Very high leak tightness
- Metal to metal sealing to atmosphere
- Made of 316L stainless steel for corrosive gases
- Made of chrome plated brass for non-corrosive gases and mixture up to 6.0

TECHNICAL DATA:

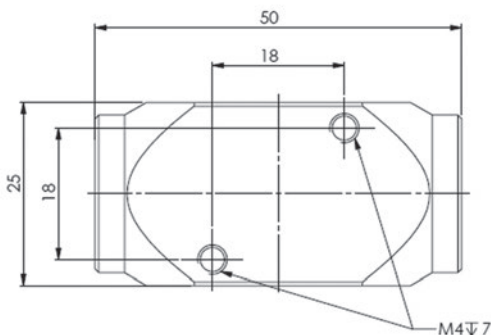
Purity	Up to 6.0
Inlet pressure	Max. 300 bar (4350 psig)
Inlet/outlet connection	1/4 FNPT
Oxygen use	Suitable



Model shown with additional accessories to be ordered separately

MATERIAL SPECIFICATIONS:

Seals	Metal to metal
Leak rate	$2,0 \times 10^{-8}$ mbar l/s He
Flow capacity	$C_v = 0,13$



RELATED OPTION:

Nipple connector 1/4" NPT

9574RM

1/4" NPT male

1/4" NPT male

Chrome plated brass

957X4R

1/4" NPT male

1/4" NPT male

Stainless steel 316L

ORDERING INFORMATION:

PART NO.

9105190

9105191

CONNECTION INLET

1/4" NPT female

1/4" NPT female

CONNECTION OUTLET

1/4" NPT female

1/4" NPT female

BODY MATERIAL

Chrome plated brass

Stainless steel 316L

* Elgiloy® a registered trademark of Elgiloy Specialty Metals

Valves

HPI DS300

High purity, high pressure diaphragm valve

FEATURES:

- Max. inlet pressure 300 bar
- Very high leak tightness
- Metal to metal sealing to atmosphere
- Made of 316L stainless steel for corrosive gases
- Made of chrome plated brass for non-corrosive gases and mixture up to 6.0

TECHNICAL DATA:

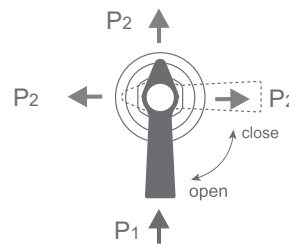
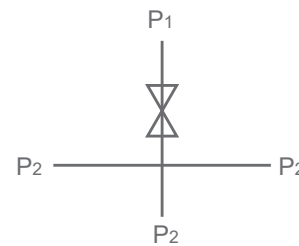
Purity	Up to 6.0
Inlet pressure	Max. 300 bar (4350 psig)
Oxygen use	Suitable

MATERIAL SPECIFICATIONS:

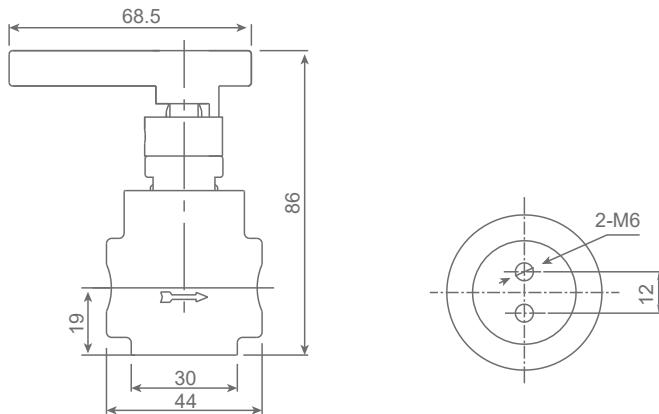
Seat	PCTFE
Diaphragm	Elgiloy®*
Filter	SS316
Temperature range	-30°C to +190°C
Leak rate	1x10 ⁻⁸ mbar l/s He
Orifice	Ø 2,7 mm



Model shown with additional accessories to be ordered separately



Left lever for shutoff



ORDERING INFORMATION:

PART NO.	DESCRIPTION	INLET CONFIGURATION	OUTLET CONFIGURATION	BODY MATERIAL	DIAPHRAGM MATERIAL	SEAT MATERIAL
9013265	1/4 turn instrument valve	1/4" NPT female	1/4" NPT female	Chrome plated brass	Elgiloy® (R)	PCTFE
9013266	1/4 turn instrument valve	1/4" NPT female	1/4" NPT female	Stainless steel	Elgiloy® (R)	PCTFE

* Elgiloy® a registered trademark of Elgiloy Specialty Metals

HPI NR300

High purity, high pressure needle valve

FEATURES:

- Max. inlet pressure 206 bar (2987 psig)
- Durable
- Flow regulating
- Metal to metal sealing to atmosphere
- Made of 316L stainless steel

TECHNICAL DATA:

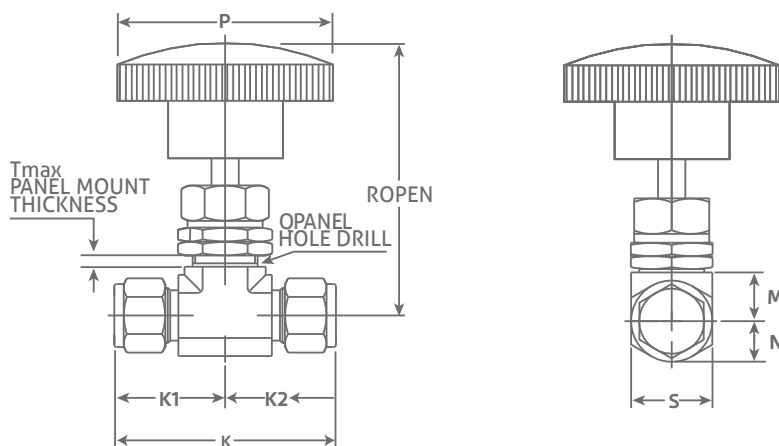
Purity	Up to 6.0
Inlet pressure	Max. 206 bar (2987 psig)
Oxygen use	Suitable

MATERIAL SPECIFICATIONS:

Seals	Metal to metal
Temperature range	-54°C to +232°C
Leak rate	1×10^{-8} mbar l/s He
Flow capacity	$C_v = 0,17$



Model shown with additional accessories to be ordered separately



ORDERING INFORMATION:

PART NO.

9103270
9103271
9103272
9103273
9103274
9103275
9103276

CONNECTION INLET

1/4" NPT male
1/4" NPT female
1/4" NPT male
1/4" NPT male
1/4" NPT male
6 mm tube fitting
1/4" tube fitting

CONNECTION OUTLET

1/4" NPT female
1/4" NPT female
1/8" tube fitting
6 mm tube fitting
1/4" tube fitting
6 mm tube fitting
1/4" tube fitting

BODY MATERIAL

Stainless steel 316L

Flexible hoses

HPI FH

Flexible hoses for connecting gas supply panels and gas cylinder

FEATURES:

- HPI FH S hose made of stainless steel 316L / 304
- HPI FH T hose made of PTFE + stainless steel 304
- Special requirements on request
- The hose is made of stainless steel 316L or PTFE inside, a stainless steel 304 double braid and end needed connections
- All hoses are equipped with stainless steel safety cable
- Inner diameter 6 mm
- Elbow connection on cylinder side



Model shown with additional accessories to be ordered separately

ORDERING INFORMATION:

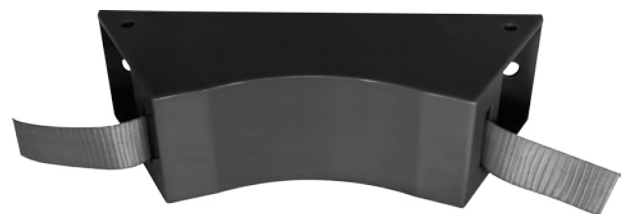
MODEL	LENGTH	INLET CONFIGURATION	CYLINDER CONNECTION	OPTION
HPI FH T PTFE/stainless steel 304	1000 mm 1000	1/4" NPT (Male) 001 Panel connection	Cylinder connection Please specify	Elbow connection on cylinder connection side 000
HPI FH S 316L/304 stainless steel	2000 mm 2000 3000 mm 3000	1/4" NPT (Female) 002		Elbow connection on both sides EE Straight cylinder connection SC

For example: HPI FXT-1000-001-DIN477 no6-000

Cylinder Wall Bracket

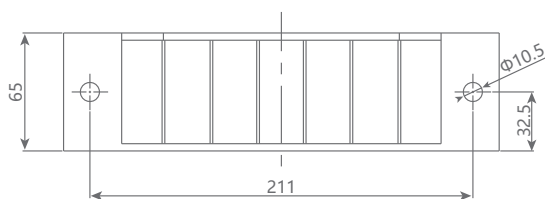
DESCRIPTION:

- Special design for one cilinder
- Easy installation to a wall or construction
- Delivered with safety belt
- ABS material

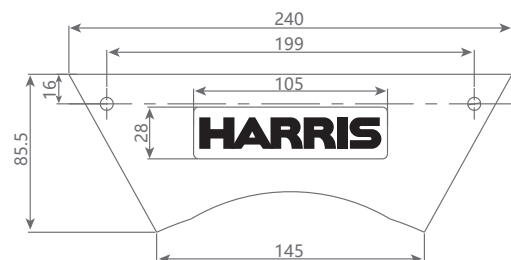


Other configuration on request

Model shown with additional accessories to be ordered separately



Part no.
9009506



Check valves

HPI CV L Check valve

FEATURES:

- The HPI CV L is a compact design for laboratory pipeline system
- Valve is closed
- When differential pressure between inlet and outlet is higher than the set pressure of the spring, the loaded poppet will move backwards and will enable a free passage of flow through the valve
- Inlet and outlet connection is 1/4" tube fitting

MATERIAL SPECIFICATIONS:

O-ring	Viton®* (FKM)
Materials body	SS 316L
Pressure rating	200 bar
Cracking pressure	0,02 bar



Models shown with additional accessories to be ordered separately

ORDERING INFORMATION:

PART NO.
9010209

DESCRIPTION
Line check valve

CONNECTION INLET
1/4" tube fitting

CONNECTION OUTLET
1/4" tube fitting

BODY MATERIAL
Stainless steel 316L

For example: HPI FXT-1000-001-DIN477 no6-000

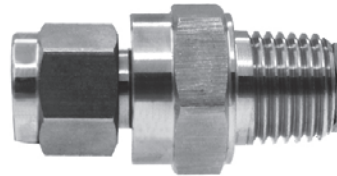
HPI CVP Check valve

FEATURES:

- The HPI CVP is a compact design for connecting gas supply panel and hose or pigtail
- Valve is normally closed
- When differential pressure between inlet and outlet is higher than the set pressure of the spring, the loaded poppet will move backwards and will enable a free passage of flow through the valve



9010210

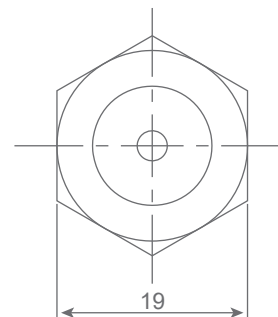
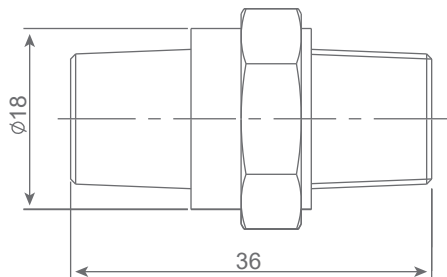


9010211

Models shown with additional accessories to be ordered separately

MATERIAL SPECIFICATIONS:

O-ring	Viton®* (FKM)
Materials body	SS 316L
Pressure rating	300 bar
Cracking pressure	0,02 bar



ORDERING INFORMATION:

PART NO.	DESCRIPTION	CONNECTION INLET	CONNECTION OUTLET	BODY MATERIAL
9010210	Panel check valve	1/4" NPT male	1/4" NPT male	Stainless steel 316L
9010211	Pigtail check valve	1/4" tube fitting	1/4" NPT male	Stainless steel 316L

* Viton® is a registered trademark of The Chemours Company

Relief valves

HPI RVP Adjustable relief valves

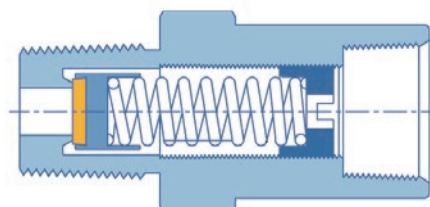
These relief valves may be used as an integral part of a pressure regulator or on equipment downstream of a regulator. The relief valves have a 1/4" MNPT inlet and outlet thread to vent gases either externally or remotely.

FEATURES:

- The HPI RVP is a relief valve for low pressure service
- The valve is normally closed. It will open when system pressure reaches the set level. It will re-close when the system pressure falls below the set level
- Upstream set pressure is the first indicator of flow process
- Every pressure relief after the first is repeatable within a deviation at room temperature
- Blocked upstream set pressure is the first indicator of a stopped flow process and is always lower than the set pressure
- Calculation of set pressure valve design demands back pressure consideration as the system back pressure increases the set pressure. The set pressure are multiplied by 1,3 times of the working pressure
- Every RVP Relief Valve is factory tested for proper set and resealing performance



Model shown with additional accessories to be ordered separately



MATERIAL SPECIFICATIONS:

O-ring	Viton®* (FKM)
Materials body	SS 316L or chrome plated brass
Inlet connection	1/4" NPT (M)
Outlet connection	1/4" NPT (F)
Open pressure	Up to 50 bar ¹

ORDERING INFORMATION:

PART NO.	SET PRESSURE RANGE	MATERIAL
9103281	0 - 6 bar	Chrome plated brass
9103282	0 - 6 bar	Stainless steel
9103283	6 - 16 bar	Chrome plated brass
9103284	6 - 16 bar	Stainless steel
9103285	16 - 26 bar	Chrome plated brass
9103286	16 - 26 bar	Stainless steel

¹ 26 – 50 bar on request

*Viton® is a registered trademark of The Chemours Company

Stainless Steel Tube Fitting

Male Connector

PART NO.

9007848	6 mm OD x 1/4 in. Male NPT
9007849	8 mm OD x 1/4 in. Male NPT
9007850	10 mm OD x 1/4 in. Male NPT
9007857	1/8 in. Tube OD x 1/4 in. Male NPT
9007858	1/4 in. Tube OD x 1/4 in. Male NPT
9007861	1/2 in. Tube OD x 1/4 in. Male NPT

BODY MATERIAL

316 Stainless Steel
316 Stainless Steel
316 Stainless Steel
316 Stainless Steel
316 Stainless Steel
316 Stainless Steel



Union

PART NO.

9007897	6 mm Tube OD
9007898	8 mm Tube OD
9007900	1/4 in. Tube OD

BODY MATERIAL

316 Stainless Steel
316 Stainless Steel
316 Stainless Steel



Union Elbow

PART NO.

9007908	6 mm Tube OD
9007909	8 mm Tube OD
9007911	1/4 in. Tube OD

BODY MATERIAL

316 Stainless Steel
316 Stainless Steel
316 Stainless Steel



Union Tee

PART NO.

9007913	6 mm Tube OD
9007914	8 mm Tube OD
9007915	1/4 in. Tube OD

BODY MATERIAL

316 Stainless Steel
316 Stainless Steel
316 Stainless Steel



Plug

PART NO.

9007935	6 mm Tube OD
9007936	8 mm Tube OD
9007950	1/4 in. Tube OD

BODY MATERIAL

316 Stainless Steel
316 Stainless Steel
316 Stainless Steel



Models shown with additional accessories to be ordered separately

Pressure Gauges

PG

DESCRIPTION:

- Pressure gauges are designed for general and laboratory applications involving the measurement of compressed gases compatible with the materials of construction.
- Gauges are used to monitor pressure of regulators, points of use, supply boards.
- Radial (6 o'clock) mount PG R
- Centre back mount PG B

MATERIAL SPECIFICATIONS:

Type	Bourdon tube pressure gauge
Diameter	49 mm
Pressure	Many pressure ranges available From 2 bar up to 400 bar
Mounting connections	Radial mount Centre back mount
Connection	1/4" NPT male
Corpus material	Chrome plated brass or stainless steel
Accuracy	Class 2,5

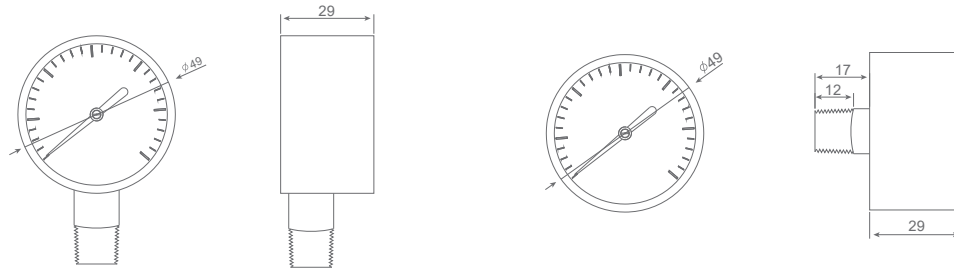


PG R



PG B

Models shown with additional accessories to be ordered separately



ORDERING INFORMATION:

PART NUMBER	DESCRIPTION	SCALE (bar)	SCALE (psi)	MATERIAL	CONNECTION	INDUCTIVE	TYPE OF GAS
9007664	PG RC-2,5B	0-2,5 bar	0-35 psig	BC	Radial	No	
9007665	PG RC-6B	0-6 bar	0-86 psig	BC	Radial	No	
9007666	PG RC-10B	0-10 bar	0-145 psig	BC	Radial	No	
9007667	PG RC-16B	0-16 bar	0-230 psig	BC	Radial	No	
9007668	PG RC-25B	0-25 bar	0-350 psig	BC	Radial	No	
9007669	PG RC-60B	0-60 bar	0-860 psig	BC	Radial	No	
9007676	PG RC-250B	0-250 bar	0-3500 psig	BC	Radial	No	
9007677	PG RC-400B	0-400 bar	0-5800 psig	BC	Radial	No	
9007678	PG BC-6B	0-6 bar	0-86 psig	BC	Back	No	
9007679	PG BC-16B	0-16 bar	0-230 psig	BC	Back	No	
9007680	PG BC-25B	0-25 bar	0-350 psig	BC	Back	No	
9007681	PG BC-60B	0-60 bar	0-860 psig	BC	Back	No	
9007682	PG RS-2,5B	0-2,5 bar	0-35 psig	SS	Radial	No	
9007683	PG RS-6B	0-6 bar	0-86 psig	SS	Radial	No	
9007684	PG RS-10B	0-10bar	0-145psig	SS	Radial	No	
9007685	PG RS-16B	0-16 bar	0-230 psig	SS	Radial	No	
9007686	PG RS-25B	0-25 bar	0-350 psig	SS	Radial	No	
9007687	PG RS-60B	0-60 bar	0-860 psig	SS	Radial	No	
9007688	PG RS-250B	0-250 bar	0-3500 psig	SS	Radial	No	
9007689	PG RS-400B	0-400 bar	0-5800 psig	SS	Radial	No	
9007690	PG BS-6B	0-6 bar	0-86 psig	SS	Back	No	
9007691	PG BS-16B	0-16 bar	0-230 psig	SS	Back	No	
9007692	PG BS-25B	0-25 bar	0-350 psig	SS	Back	No	
9007693	PG BS-60B	0-60 bar	0-860 psig	SS	Back	No	

Inductive contact version on request.



Alarm system

HAS

DESCRIPTION:

- Alarm box is used for monitoring low supply pressure gas source and inform user visually by LED light and acoustically by loud buzzer.
- Three version available 2, 6, 10 possible contact connection
- Readable LED light display
- 230V AC, 50 Hz; 110V AC, 60 Hz power supply (on request)



Model shown with additional accessories to be ordered separately

ORDERING INFORMATION:

4302085	ALARM, 1 connection
4302086	ALARM, 2 connections
4302087	ALARM, 4 connections
4302088	ALARM, 6 connections
4302089	ALARM, 10 connections

Cylinder cabinet

Gas cylinder safety cabinet

DESCRIPTION:

- Safety storage cabinet for the storage of flammable or toxic gas cylinders in working areas for 1 to 4 50 l cylinder according to EN-14470-2
- 90 minutes fire resistance

TECHNICAL DATA:

In accordance with EN 14470-2

Indoor storage	1 to 4 50 l cylinders
Outdoor store	2 to 5 50 l cylinders



- GS-test (EN 14470-1, EN 14727, document EK5/AK4 09-10, ProdSG);
- 50,000 wear-free opening and closing actions;
- Test basis: all cabinets of this model group correspond to the requirements of the Equipment and Product Safety Act (§7 pkt. 1) with respect to the guarantee of safety and health.

FUNCTION / CONSTRUCTION:

- No unauthorised use: doors lockable with profile cylinder (integration in an existing locking system possible)
- Easy alignment: adjusting aids to compensate for uneven floor
- Easy mounting of connecting pipes and gas fittings: large interior height (1890 mm), many lead-through possibilities on the top of the cabinet
- Ventilation: integrated air ducts ready for connection (DN75) to a technical exhaust, even ventilation inside the cabinet
- Tested and certified: according to the stricter GS principles



Indoor version



Outdoor version

Models shown with additional accessories to be ordered separately

ORDERING INFORMATION:

INSIDE MODEL	FLAMABLE AND TOXIC EXTERNAL DIMENSIONS W X D X H (mm)	INTERNAL DIMENSIONS W X D X H (mm)	WEIGHT	CYLINDER
G.90.205.140	1400 x 615 x 2050	1245 x 400 x 1858	690	4
G.90.205.090	900 x 615 x 2050	745 x 425 x 1858	490	3
G.90.205.060.2F	600 x 615 x 2050	477 x 424 x 1858	365	2
G.90.205.060	600 x 615 x 2050	445 x 425 x 1858	365	1
Outdoor				
GOD.215.135	1356 x 400 x 2149	1345 x 370 x 2070	138	5
GOD.215.100	1006 x 400 x 2149	995 x 370 x 2070	113	3
GOD.215.070	706 x 400 x 2149	695 x 370 x 2070	85	2

MATERIALS COMPATIBILITY

The compatibility data shown on the following pages has been compiled to assist in evaluating the appropriate materials to use in handling various gases. Prepared for use with the dry (anhydrous) gases at normal operating temperature of 70° (21° C), information may vary if different operating conditions exist.

DIRECTIONS:

Locate the gas you are using in the first column.

Compare the materials of construction for the equipment you intend to use with the materials of construction shown in the Compatibility Chart. Then use the Key to Materials Compatibility to determine the compatibility.

- Satisfactory for use with the intended gas
- U** Unsatisfactory for use with the intended gas
- I** Insufficient data available to determine compatibility with the intended gas
- R1** Satisfactory with brass having a low copper content
- R2** Satisfactory with acetylene, however, cylinder gas is dissolved in a solvent (generally acetone) which may be incompatible with these elastomers

- R3** Satisfactory with brass, except where acetylene or acetylides are present
- R4** Generally unsatisfactory, except where specific use conditions have proven acceptable
- R5** Satisfactory below 3000 PSIG (206.9 bar) where gas velocities do not exceed 30 ft./sec.
- R6** Compatibility depends on condition of use

COMPATIBILITY GUIDE

COMMON NAME

CHEMICAL FORMULA

		MATERIALS OF CONSTRUCTION										
		METALS					PLASTICS			ELASTOMERS		
		Brass	Stainless Steel	Aluminum	Zinc	Copper	PCTFE	Teflon®	Viton®	Buna-N	Neoprene	Polyurethane
Acetylene	C ₂ H ₂	R1	•	I	U	U	•	•	R2	R2	R2	R2
Air	-	•	•	•	•	•	•	•	•	•	•	•
Allene	C ₃ H ₄	•	•	•	I	U	•	•	•	•	•	I
Ammonia	NH ₃	U	•	•	U	U	•	•	U	•	•	
Argon	Ar	•	•	•	•	•	•	•	•	•	•	•
Arsine	AsH ₃	•	•	R4	I	•	•	•	•	•	•	U
Boron Trichloride	BCl ₃	U	•	U	I	•	•	•	I	I	I	I
Boron Trifluoride	BF ₃	•	•	•	I	•	•	•	I	I	I	I
1,3-Butadiene	C ₄ H ₆	•	•	•	•	•	•	•	•	U	•	U
Butane	C ₄ H ₁₀	•	•	•	•	•	•	•	•	•	•	•
1-Butene	C ₄ H ₈	•	•	•	•	•	•	•	•	•	•	•
cis-2-Butene	C ₄ H ₈	•	•	•	•	•	•	•	•	•	•	•
trans-2-Butene	C ₄ H ₈	•	•	•	•	•	•	•	•	•	•	•
Carbon Dioxide	CO ₂	•	•	•	•	•	•	•	•	•	•	U
Carbon Monoxide	CO	•	•	•	•	•	•	•	I	•	•	•
Carbonyl Sulfide	COS	•	•	•	I	•	•	•	I	I	I	I
Chlorine	Cl ₂	U	•	U	U	U	•	•	•	U	U	U
Deuterium	D ₂	•	•	•	•	•	•	•	•	•	•	•
Diborane	B ₂ H ₆	•	•	U	I	•	•	•	I	I	I	I
Dichlorosilane	H ₂ SiCl ₂	I	•	I	I	I	•	•	I	I	I	I
Dimethyl Ether	C ₂ H ₆ O	•	•	•	•	•	•	•	•	•	•	I
Ethane	C ₂ H ₆	•	•	•	•	•	•	•	•	•	•	•
Ethyl Acetylene	C ₄ H ₆	I	•	•	I	U	•	•	•	I	•	I
Ethyl Chloride	C ₂ H ₅ Cl	•	•	U	I	•	•	•	•	•	•	U
Ethylene	C ₂ H ₄	•	•	•	•	•	•	•	•	•	•	I
Ethylene Oxide*	C ₂ H ₄ O	R3	•	R4	I	U	•	•	U	U	U	U
Ethylene Oxide/Carbon Dioxide Mixtures*		R3	•	I	I	U	•	•	U	U	U	U
Ethylene Oxide/Halocarbon Mixtures*		R3	•	I	I	U	•	•	U	U	U	U
Ethylene Oxide/HCFC-124		R3	•	I	I	U	•	•	U	U	U	U
Halocarbon 11	CCl ₃ F	•	•	R4	I	•	•	•	•	•	U	U
Halocarbon 12	CCl ₂ F ₂	•	•	R4	I	•	•	•	•	•	•	•
Halocarbon 13	CClF ₃	•	•	R4	I	•	•	•	•	•	•	•
Halocarbon 13B1	CBF ₃	•	•	R4	I	•	•	•	•	•	•	•
Halocarbon 14	CF ₄	•	•	R4	I	•	•	•	•	•	•	•

COMPATIBILITY GUIDE CONT.

COMMON NAME

CHEMICAL
FORMULA

		MATERIALS OF CONSTRUCTION										
		METALS					PLASTICS		ELASTOMERS			
		Brass	Stainless Steel	Aluminum	Zinc	Copper	PCTFE	Teflon®	Viton	Buna-N	Neoprene	Polyurethane
Halocarbon 21	CHCl ₂ F	•	•	R4	I	•	•	•	U	U	•	•
Halocarbon 22	CHClF ₂	•	•	R4	I	•	•	•	U	U	•	U
Halocarbon 23	CHF ₃	•	•	R4	I	•	•	•	I	I	I	•
Halocarbon 113	CCl ₂ FCClF ₂	•	•	R4	U	•	•	•	•	•	•	•
Halocarbon 114	C ₂ Cl ₂ F ₄	•	•	R4	I	•	•	•	•	•	•	•
Halocarbon 115	C ₂ ClF ₅	•	•	R4	I	•	•	•	•	•	•	•
Halocarbon 116	C ₂ F ₆	•	•	R4	I	•	•	•	I	I	I	•
Halocarbon 142B	C ₂ H ₃ ClF ₂	•	•	R4	I	•	•	•	U	•	•	•
Halocarbon 152A	C ₂ H ₄ F ₂	•	•	R4	I	•	•	•	U	•	•	•
Halocarbon C-318	C ₂ F ₈	•	•	R4	I	I	•	•	•	•	•	•
Halocarbon 502	CHClF ₂ /CClF ₂ -CF ₃	I	•	R4	I	I	•	•	•	•	•	•
Halocarbon 1132A	C ₂ H ₂ F ₂	•	•	R4	I	•	I	•	I	I	I	•
Helium	He	•	•	•	•	•	•	•	•	•	•	•
Hydrogen	H ₂	•	•	•	•	•	•	•	•	•	•	•
Hydrogen Chloride	HCl	U	•	U	U	U	•	•	•	U	U	U
Hydrogen Sulfide	H ₂ S	U	•	•	I	I	•	•	U	•	•	•
Isobutane	C ₄ H ₁₀	•	•	•	•	•	•	•	•	•	•	•
Isobutylene	C ₄ H ₈	•	•	•	I	•	•	•	•	•	•	I
Isopentane	C ₅ H ₁₂	•	•	•	•	•	•	•	•	•	•	•
Krypton	Kr	•	•	•	•	•	•	•	•	•	•	•
Methane	CH ₄	•	•	•	•	•	•	•	•	•	•	•
Methyl Chloride	CH ₃ Cl	•	•	U	U	•	•	•	•	U	U	U
Methyl Mercaptan	CH ₃ SH	•	•	U	I	U	•	•	I	I	•	I
Neon	Ne	•	•	•	•	•	•	•	•	•	•	•
Nitric Oxide	NO	U	•	•	I	•	•	•	I	I	•	I
Nitrogen	N ₂	•	•	•	•	•	•	•	•	•	•	•
Nitrogen Dioxide	NO ₂	I	•	•	I	I	•	•	U	U	U	U
Nitrous Oxide	N ₂ O	•	•	•	•	•	•	•	•	•	•	•
Oxygen	O ₂	•	R5	R4	•	•	•	•	R6	R6	R6	•
Perfluoropropane	C ₃ F ₈	•	•	•	I	•	•	•	I	•	•	I
Phosphine	PH ₃	I	•	•	I	I	•	•	I	I	I	I
Phosphorous Pentafluoride	PF ₅	I	•	I	I	I	•	•	I	I	I	I
Propane	C ₃ H ₈	•	•	•	•	•	•	•	•	•	•	•
Propylene	C ₃ H ₆	•	•	•	•	•	•	•	•	U	U	U
Propylene Oxide	C ₃ H ₆ O	I	•	I	I	I	•	•	U	U	U	U
Refrigerant Gases	See Halocarbons											
Silane	SiH ₄	•	•	•	I	•	•	•	•	•	•	•
Silicon Tetrachloride	SiCl ₄	I	•	U	I	I	•	•	I	I	I	I
Silicon Tetrafluoride	SiF ₄	•	•	•	I	•	•	•	•	•	•	•
Sulfur Dioxide	SO ₂	U	•	•	U	U	•	•	•	U	U	•
Sulfur Hexafluoride	SF ₆	•	•	•	I	•	•	•	•	•	•	•
Trichlorosilane	HSiCl ₃	I	•	U	I	I	•	•	I	I	I	I
Vinyl Methyl Ether	C ₃ H ₆ O	•	•	•	I	U	•	•	I	I	I	I
Xenon	Xe	•	•	•	•	•	•	•	•	•	•	•

MOISTURE CONVERSION

Dew Point °C °F	Vapor Pressure (Water/Ice in Equilibrium) mm of Mercury	PPM on Volume Basis at 760 mm of Hg Pressure	Relative Humidity at 70 F%	PPM on Weight Basis in Air
-90 -130	0.00007	0.0921	0.00037	0.057
-88 -126	0.0001	0.132	0.00054	0.082
-86 -123	0.00014	0.184	0.00075	0.11
-84 -119	0.0002	0.263	0.00107	0.16
-82 -116	0.00029	0.382	0.00155	0.24
-80 -112	0.0004	0.562	0.00214	0.33
-78 -108	0.00056	0.737	0.003	0.46
-76 -105	0.00077	1.01	0.0041	0.63
-74 -101	0.00105	1.38	0.00559	0.86
-72 -98	0.00143	1.88	0.00762	1.17
-70 -94	0.00194	2.55	0.0104	1.58
-68 -90	0.00261	3.43	0.014	2.13
-66 -87	0.00349	4.59	0.0187	2.84
-64 -83	0.00464	6.11	0.0248	3.79
-62 -80	0.00614	8.08	0.0328	5.01
-60 -76	0.00808	10.6	0.043	6.59
-58 -72	0.0106	13.9	0.0565	8.63
-56 -69	0.0138	18.2	0.0735	11.3
-54 -65	0.0178	23.4	0.0948	14.5
-52 -62	0.023	30.3	0.123	18.8
-50 -58	0.0295	38.8	0.157	24.1
-48 -54	0.0378	49.7	0.202	30.9
-46 -51	0.0481	63.3	0.257	39.3
-44 -47	0.0609	80	0.325	49.7
-42 -44	0.0768	101	0.41	62.7
-40 -40	0.0966	127	0.516	78.9
-38 -36	0.1209	159	0.644	98.6
-36 -33	0.1507	198	0.804	122.9
-34 -29	0.1873	246	1	152
-32 -26	0.2318	305	1.24	189
-30 -22	0.2859	376	1.52	234
-28 -18	0.351	462	1.88	287
-26 -15	0.43	566	2.3	351
-24 -11	0.526	692	2.81	430
-22 -8	0.64	842	3.41	523
-20 -4	0.776	1020	4.13	633
-18 0	0.939	1240	5	770
-16 3	1.132	1490	6.03	925
-14 7	1.361	1790	7.25	1110
-12 10	1.632	2150	8.69	1335
-10 14	1.95	2570	10.4	1596
-8 18	2.326	3060	12.4	1900
-6 21	2.765	3640	14.7	2260
-4 25	3.28	4320	17.5	2680
-2 28	3.88	5100	20.7	3170
0 32	4.579	6020	24.4	3640
2 36	5.294	6970	28.2	4330
4 39	6.101	8030	32.5	4990
6 43	7.013	9230	37.4	5730
8 46	8.045	10590	42.9	6580
10 50	9.029	12120	49.1	7530
12 54	10.52	13840	56.1	8600
14 57	11.99	15780	63.9	9800
16 61	13.63	17930	72.6	11140
18 64	15.48	20370	82.5	12650
20 68	17.54	23080	93.5	14330