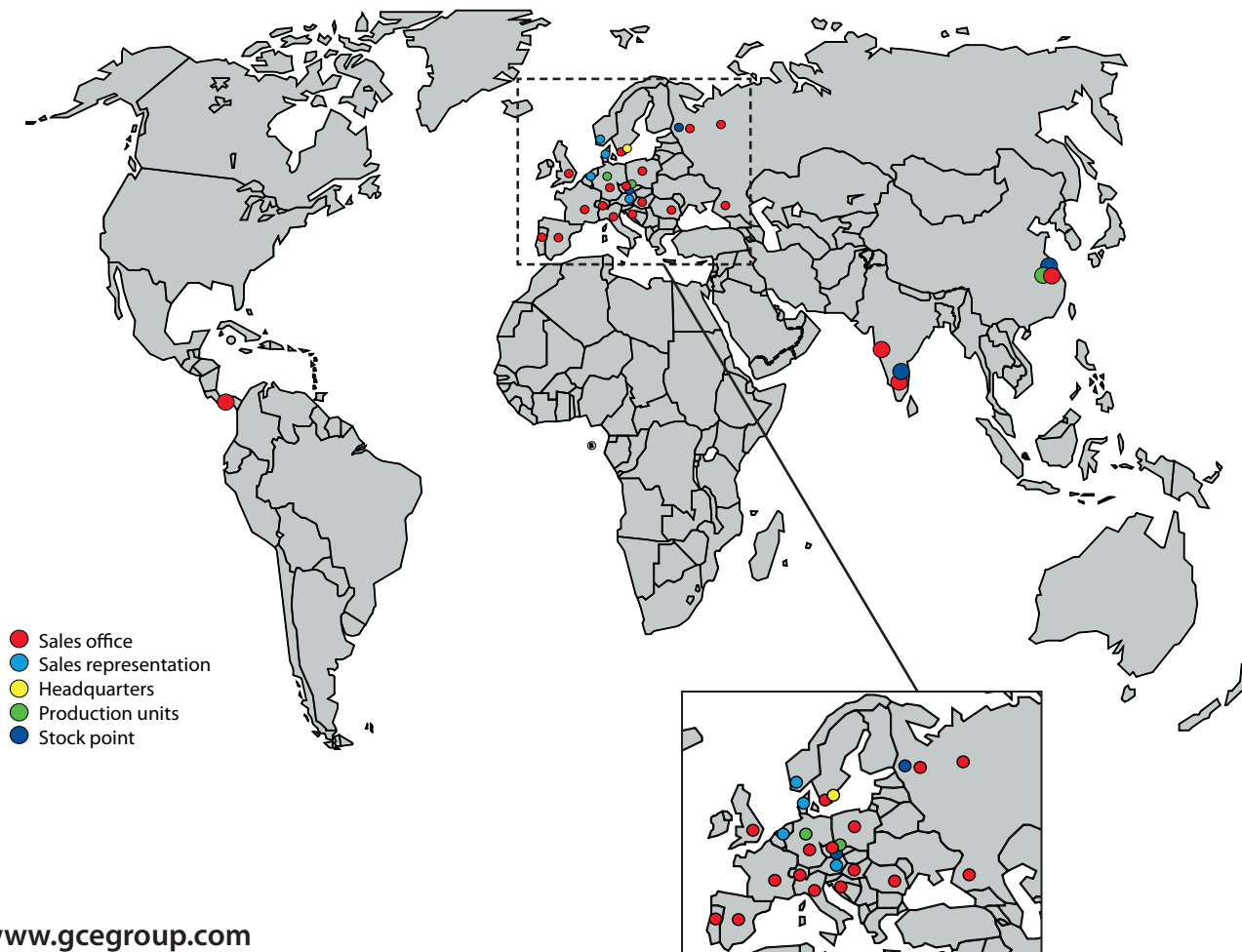




CENTRAL GAS SUPPLY

HIGH PRESSURE MANIFOLDS AND OUTLET POINTS FOR INDUSTRIAL GASES

GCE WORLDWIDE



www.gcegroup.com

THE GCE BUSINESS

GCE has almost 100 years of experience in the manufacture and supply of high pressure gas equipment. During this time the GCE product range has increased dramatically. Today's product portfolio fits a large variety of applications, from simple pressure regulators and blowpipes for cutting and welding to highly sophisticated gas supply systems for the medical, electronic and analytical industries.

GCE GROUP INCLUDES FOUR BUSINESS AREAS:

- Cutting & Welding
- Process Application
- Medical
- High Purity

ORIGINS

The origins of GCE (Gas Control Equipment) go back to the start of the 20th century when Gas Welding was first invented. The GCE group was formed as an independent company in 1987 through the merging of two of the worlds leading gas and welding companies into one independent unit. GCE has grown rapidly since its establishment and is leading the restructuring of the European gas equipment industry through mergers and acquisitions.

Through its extensive Research and Development programs GCE has set standards that have become the benchmark for the whole industry.

GCE SERVICES

The main industrial customers for GCE are wholesalers and local distributors. However in some markets GCE distributes equipment with the full cooperation of the main gas supplier for that market. For these companies GCE provides both commercial and technical support. A significant part of the sales volume in this area also comes from key end user accounts such as shipyards, repair shops, OEM customers and welding machine manufacturers.

A COMPLETE RANGE FOR CUTTING & WELDING

GCE Group is one of the world's leading producers of industrial regulators for cutting and welding. The range covers a broad spectrum of products, for different applications, that have been designed according to the requirements of most European standards such as DIN, Afnor, BSI and Nordic.

The torch range includes products for heating, cutting, brazing and flame-cleaning applications designed in accordance with the preferences of individual markets and customers. Regulators, torches, nozzles and other products are also increasingly combined in sets and sold to users as a single package.

GCE Group is a pioneer in the field of safety equipment and currently produces a comprehensive range of flashback arrestors and hose check valves. A range of nozzles, including the longlife Coolex[®] nozzle, completes GCE's Cutting & Welding range.

GCE Group's ranges include various types of gas equipment enabling safe handling of gases in central gas supply systems and brewery equipment, to machine cutting products. We offer cylinder valves and combination valves, pressure control units, gas manifolds, outlet points, shut-off valves, alarm and safety units, high-pressure flexible hoses and accessories for different applications, gases, pressures and flow rates.

All products have to meet demanding requirements for rugged durability, leak-proof sealing and overall safety. Uniquely qualified in this area, GCE stands at the forefront of international development of these products.

GLOBAL LEADER IN OXY-FUEL TECHNOLOGY

With extensive experience in the development and production of machine cutting torches and cutting nozzles, GCE Group is a global leader in oxy-fuel cutting technology. The design of the products is based on GCE's extensive knowledge and expertise in the oxy-fuel area.

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CENTRAL GAS SUPPLY

Central gas supply systems (CGS) are generally based on high volume gas delivery, on-side gas stocking in special containers and gas distribution from these high capacity sources up to the final applications. Gas can be delivered from production plant either in liquefied form mainly using cryogenic systems or in gaseous high-compressed form using in most cases steel cylinders or bundles of cylinders. When CGS is installed on-side and used, gas goes from the source (stable or mobile cryogenic vessel with vaporizer, cylinders bundle, cylinder or special container) through high pressure manifold with pressure regulator where the inlet pressure from the bulk is reduced to the level acceptable for gas distribution system (GDS). GDS is usually made of mild steel, stainless steel or copper pipeworks transporting gas to the application. Pipeworks are at the end equipped by outlet points preparing particular gas parameters as e.g. pressure and flow-rate according to application request. When CGS is installed in industrial plant than usually working efficiency, economical balance and also safety level are growing in relation with increasing gas consumption.

CENTRAL GAS SUPPLY SYSTEM =

- reliable supply system
- continuous gas delivery - no gas flow interruptions
- more precise gas parameters adjustment
- higher safety level because of outdoor gas storage & outdoor high pressure installation
- more space at the working place
- usually lower gas costs due to high volume delivery

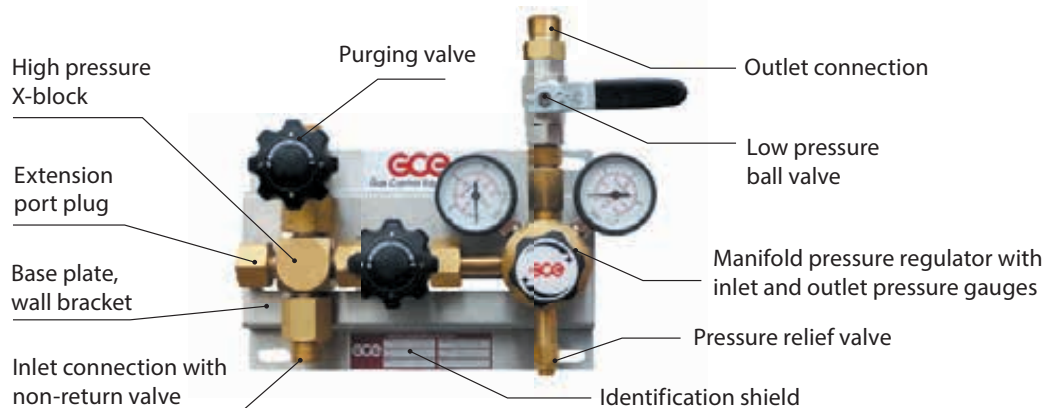
GCE INDUSTRIAL CGS-PRODUCTS ARE TO BE USED IN FOLLOWING FIELDS OF ACTIVITIES:

- Automotive and transportation
- Metal & glass & plastics & paper production and fabrication
- Chemical & petrochemical industry
- Metallurgy
- Oil & gas refinery
- Off-shore & shipyards
- Ecology & environment
- Food & beverages production and packaging (see also special GCE Beverage product range)
- Craftsmen & workshops
- On-site constructions

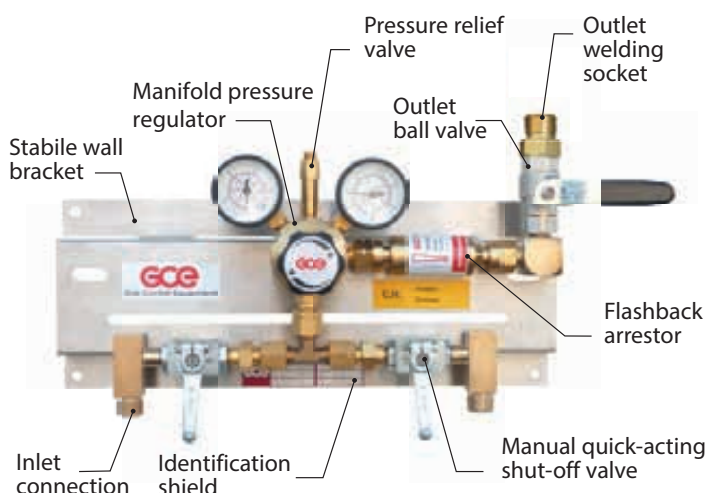
TYPICAL INDUSTRIAL APPLICATIONS:

- Flame, arc, plasma and laser welding
- Oxy-fuel, plasma and laser cutting
- Various heating processes
- Gas supply for metallurgical and chemical processes
- Glass melting and heating
- Glass & metals melting intensification
- Inertization & Neutralization
- Waste water treatment gas supply
- Food packaging

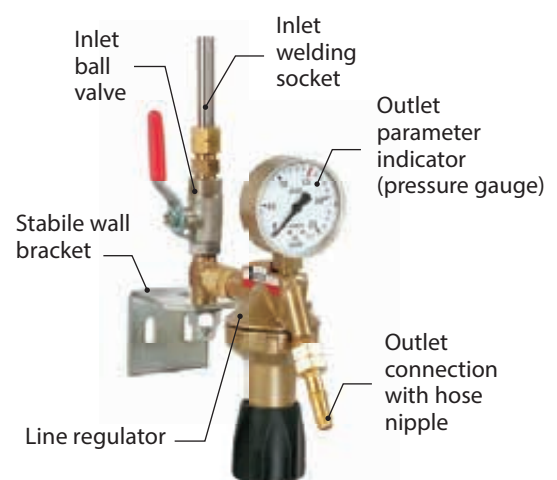
DESCRIPTION OF THE OXYGEN MANIFOLD



DESCRIPTION OF THE ACETYLENE MANIFOLD



OUTLET POINT DESCRIPTION



CENTRAL GAS SUPPLY SYSTEM SCHEME

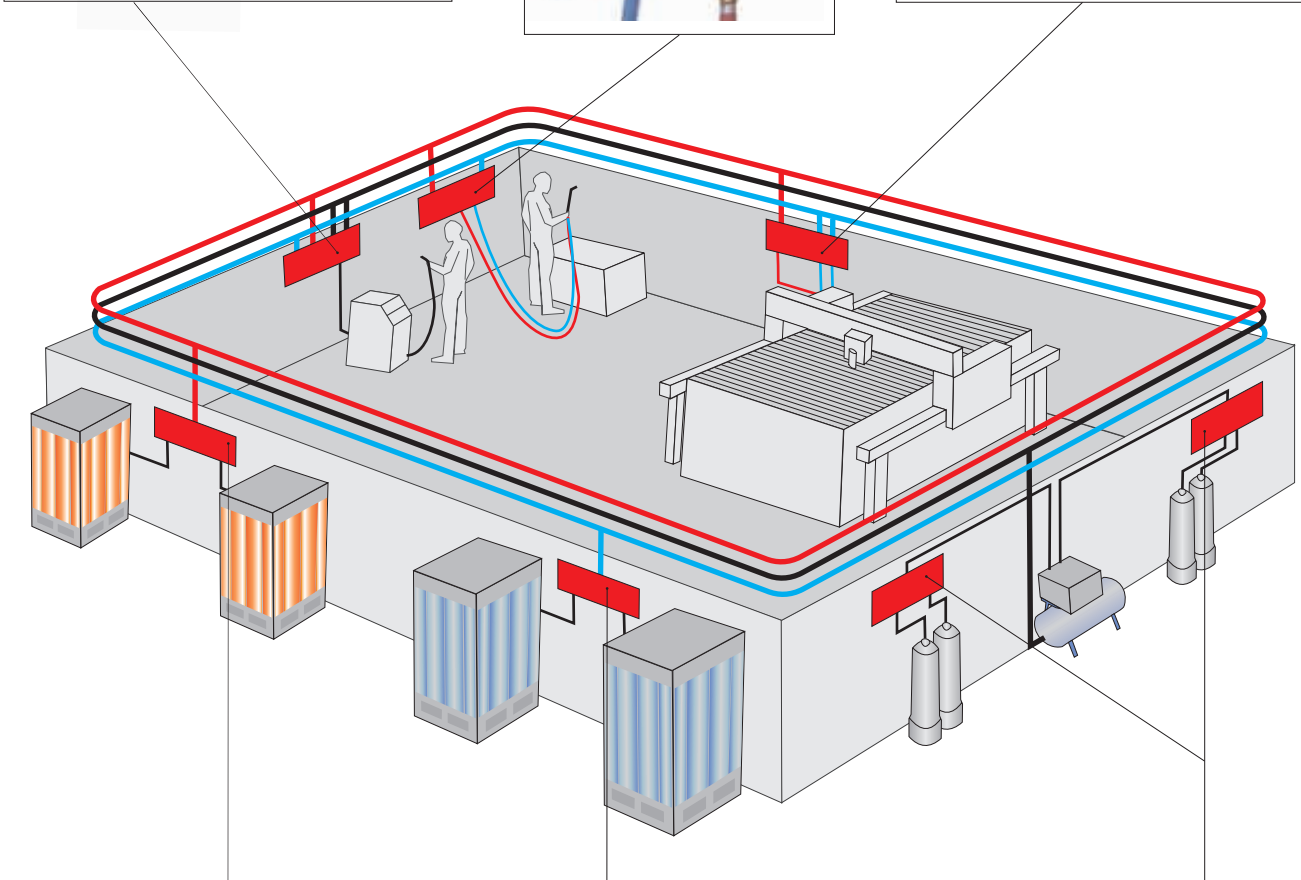
UNISET+



DINSET



HF-SET



MM400 - 2 ACE



MS400 OXY/INERT



MB400 OXY/INERT

HIGH PRESSURE MANIFOLDS OVERVIEW

MU LINE (SEE PAGES 7-9)

Simple units for cylinder supply and panels for mobile or on-site applications.

MU70
MU70-M



MU 400-M
MU400-M PROPANE



M70 LINE (SEE PAGES 10-12)

Gas manifolds for small- and middle-flow applications. Simple manifolds and manual changeover units, semiautomatic and automatic units.

MM70 -1



MM70-2



MA70



HIGH PRESSURE MANIFOLDS OVERVIEW

M400 LINE (SEE PAGES 13-15)

Gas manifolds for high-flow applications. Simple manifolds, manual changeover and semiautomatic units.

MM400 -1



MM400-2



MS400



MB LINE (SEE PAGE 16-18)

Gas manifolds range with compact inlet Manyflow valve block. Reliable solution for different gases and many applications

MB70



MB400



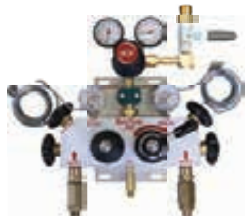
MF LINE (SEE PAGE 19-20)

Compact semiautomatic gas manifolds range with Maxiflow unit. For different gases and applications, one- or double-stage design.

MAXIFLOW 1/2



MAXIFLOW 2/2



OUTLET POINTS OVERVIEW

DINSET (SEE PAGES 26-28)

- Outlet points for different gases and applications
- Dincontrol regulator type
- Design with pressure gauges, flow gauges or flowmeters
- Available with different outlet pressure and flow rate ranges
- Single, double or triple units



UNISSET (SEE PAGES 29-30)

- Outlet points for applications and gases variants
- Unicontrol regulator type
- Available as single, double or twin units
- Design with pressure gauges, flow gauges or flowmeters with different outlet pressure and flow rate ranges



UNISSET+ (SEE PAGE 31)

- Outlet points with steel protection
- Unicontrol regulator type
- Design with pressure gauges, flow gauges or flowmeters
- For different outlet pressure and flow rate ranges



HF-SET (SEE PAGES 32-33)

- High flow outlet points for 100Nm³/h or 200Nm³/h
- S100 and S200 regulators
- For oxygen and fuel gases
- Different versions as single or triple units
- Designed especially for oxygen cutting machines and other high-flow applications



MU LINE

MU70

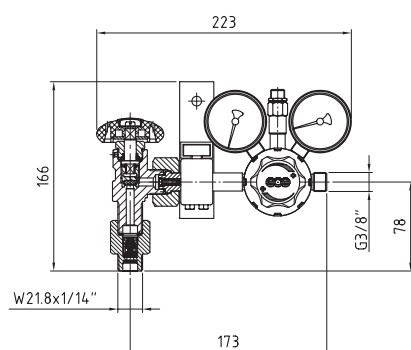


Basic unit with one inlet and one outlet, shut-off valve and pressure regulator, with inlet filter and non return valve. Designed for small or middle gas consumptions for one cylinder or cylinder bundle.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768091	MU70	O, D, N, CO ₂ , 300/20 bar	W21,8x1/14"	G3/8"
0768092	MU70	Hydrogen/methan, 300/20 bar	W21,8x1/14"LH	G3/8"LH

TECHNICAL DATA

Regulator type	UC500	Wall bracket	Painted steel
Body, bonnet material	Brass	Maximal inlet pressure	300 bar
Connectors & fittings material	Brass	Maximal flow rate	30 Nm ³ /h
Diaphragm material	EPDM, NBR	Temperature range	from -20 °C to 60 °C
Seat sealing material	PA		

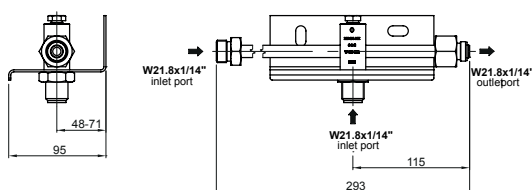


SE LINE



High pressure manifold extension unit. SE-Line manifolds contain collecting tubes in adjustable positions. The axial distance between tube and wall bracket is changeable. The tube as well as wall bracket are made of stainless steel. Connection blocks are made of brass. One block includes always port for pressure gauge or contact gauge optional mounting. SE Line can be used up to 300 bar. See also page 23.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
9625640	SE-1	O, D, N, CO ₂ ; 300 bar	W21,8x1/14"	W21,8x1/14"
9625690	SE-1	All fuel gases; 300 bar	W21,8x1/14"LH	W21,8x1/14"LH
9625650	SE-2	O, D, N, CO ₂ ; 300 bar	W21,8x1/14"	W21,8x1/14"
9625700	SE-2	All fuel gases; 300 bar	W21,8x1/14"LH	W21,8x1/14"LH
9625660	SE-4	O, D, N, CO ₂ ; 300 bar	W21,8x1/14"	W21,8x1/14"
9625710	SE-4	All fuel gases; 300 bar	W21,8x1/14"LH	W21,8x1/14"LH
215191005	Tube 90° SS	All fuel gases; 300 bar	W21,8x1/14"LH female	W21,8x1/14"LH male
215191010	Tube 90° SS	O, D, N, CO ₂ ; 300 bar	W21,8x1/14" female	W21,8x1/14" male
215191081	Plug with nut	All fuel gases; 300 bar	W21,8x1/14"LH	
215191080	Plug with nut	O, D, N, CO ₂ ; 300 bar	W21,8x1/14"	



MU70-M

New concept of acetylene manifold either for stable installation or for mobile usage with bundles or cylinders. Panel can be mounted directly at the wall with configuration as shown at the picture. When hanging kit in mounted on, panel can be hung directly at the bundle or cylinders pallet frame. This configuration fulfills requests of outdoor on-side applications. It is designed in accordance with ISO 14 114 with automatic quick - acting shut-off valve and regulator, both tested in accordance with ISO 15 615.

There is also flashback arrestor GVA 90 downstream regulator. GVA 90 (EN 730-1, ISO 5175) contains filter, flame arrestor, thermal arrestor and non-return valve.

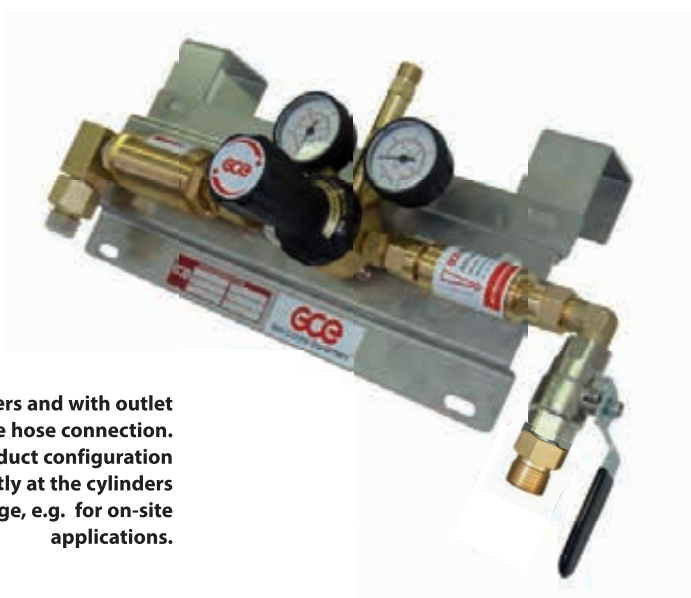
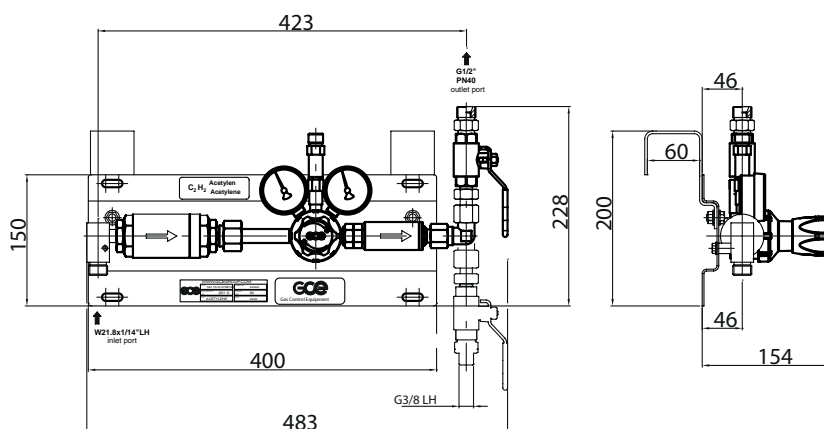


Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768120	MU70-M	Acetylene, 25/1,5 bar	W21,8x1/14"LH	DN15
9443320	Hanging kit for MU70-M and MU400-M			

Hanging kit contains two stainless steel hangers, screws with nuts and washers and also two outlet adaptors with threads G1/4" and G3/8" for direct hose installation. This kit can be used in combination with MU70-M or MU400-M manifolds.

TECHNICAL DATA

Regulator type	UC500	Wall bracket	Stainless steel
Body, bonnet material	Brass (Cu < 65%)	Maximal inlet pressure	25 bar
Connectors & fittings material	Brass (Cu < 65%)	Maximal flow rate	14 Nm ³ /h
Diaphragm material	EPDM	Temperature range	from -20 °C to 60 °C
Seat sealing material	Chloroprene		



MU70-M with mounted hangers and with outlet adapted for direct low-pressure hose connection. This picture shows optimal product configuration how to place MU70-M directly at the cylinders bundle or cylinders pallet cage, e.g. for on-site applications.

MU400-M

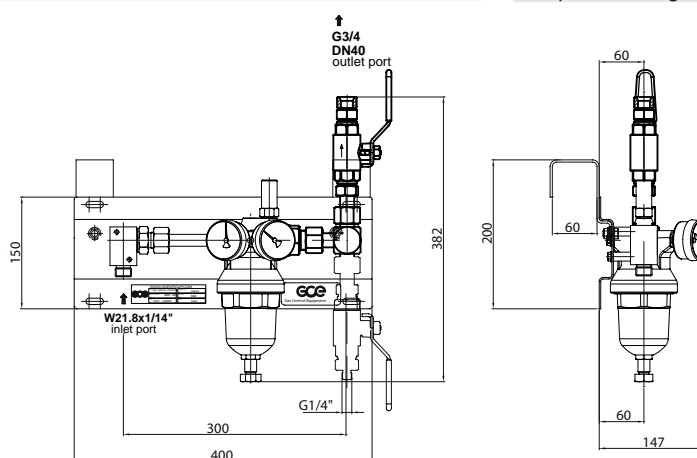


New concept of gas manifold with similar features as MU70-M. O, D, N, CO₂ variant is equipped by high-flow regulator MR400. Manifold unit with mounted hanging kit is shown at the picture. Hanging kit contains two stainless steel hangers, screws with nuts and washers and also two outlet adaptors with threads G1/4" and G3/8" for direct hose installation. This kit can be used in combination with MU70-M or MU400-M manifolds.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768121	MU400-M	O, D, N, CO ₂ , 300/20 bar	W21,8x1/14"	DN15
9443320	Hanging kit for MU70-M and MU400-M			

TECHNICAL DATA

Regulator type	MR400	Wall bracket	Stainless steel
Body, bonnet material	Brass	Maximal inlet pressure	300 bar
Connectors & fittings material	Brass, stainless steel	Maximal flow rate	400 Nm ³ /h
Diaphragm material	EPDM	Nominal flow rate	250 Nm ³ /h
Seat sealing material	PA	Temperature range	from -20 °C to 60 °C



MU400-M PROPANE

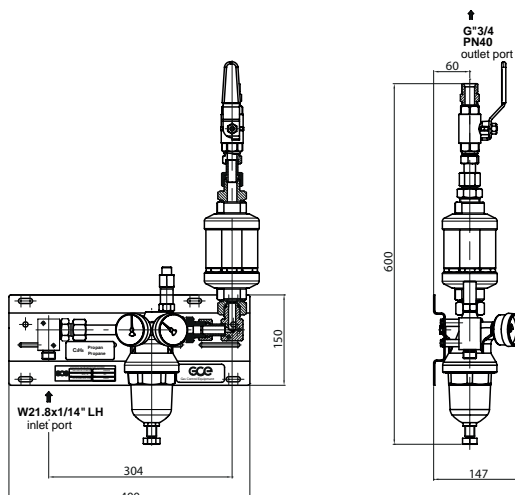


Propane variant is with high-flow regulator and contains also high-flow flashback arrestor Simax 3 at the outlet. Simax 3 is high flow flashback arrestor in accordance with EN 730-1 and ISO 5175 with filter, flame arrestor, thermal arrestor and non-return valve. There is also possibility to use hanging kit for mobile on-site installation.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768138	MU400-M	Propane, 25/4 bar	W21,8x1/14" LH	DN20
9443320	Hanging kit for MU70-M and MU400-M			

TECHNICAL DATA

Regulator type	MR60	Wall bracket	Stainless steel
Body, bonnet material	Brass	Maximal inlet pressure	100 bar
Connectors & fittings material	Brass, stainless steel	Maximal flow rate	100 Nm ³ /h
Diaphragm material	NBR	Nominal flow rate	50 Nm ³ /h
Seat sealing material	PTFE	Temperature range	from -20 °C to 60 °C



MM70 LINE

MM70-1

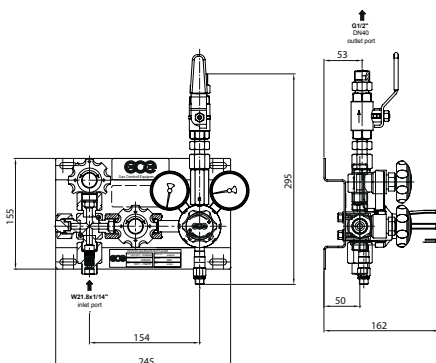
Gas manifold panel for different gases with inlet pressure up to 300bar. Manifold contains inlet x-block with non return valve and filter, purge valve and second inlet from site to install potentially extension unit. Purge valve can be used for pressure release when cylinder/bundle hose is dismantled. There is also high pressure shut-off valve, regulator with pressure relieve valve and outlet ball valve mounted at the stainless steel panel.



Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768093	MM70-1	O, D, N, CO ₂ , 300/20 bar	W21,8x1/14"	DN15, G1/2"
0768142	MM70-1	O, D, N, CO ₂ , 300/40 bar	W21,8x1/14"	DN15, G1/2"
0768168	MM70-1	O, D, N, CO ₂ , 300/100 bar, JC600	W21,8x1/14"	DN4, W21,8x1/14"
0768094	MM70-1	Hydrogen/methan, 300/20 bar	W21,8x1/14"LH	DN15, G1/2"
0768096	MM70-1	Propane, 25/4 bar	W21,8x1/14"LH	DN15, G1/2"

TECHNICAL DATA

Regulator type	UC 500	Wall bracket	Stainless steel
Body, bonnet material	Brass	Maximal inlet pressure	300 bar
Connectors & fittings material	Brass, stainless steel	Maximal flow rate	50 Nm ³ /h
Diaphragm material	EPDM, NBR	Temperature range	from -20 °C to 60 °C
Seat sealing material	PA		



MM70-1 ACETYLENE

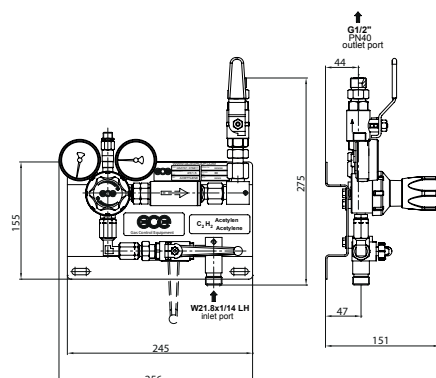
Acetylene variant of MM70-1 manifold for cylinder service. It is designed and produced in accordance with ISO 14 114. There is used manual quick acting shut-off valve upstream regulator. There is flashback arrestor GVA 90 (EN 730-1, ISO 5175) mounted downstream regulator and also outlet ball valve.



Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768111	MM70-1	Acetylene, 25/1,5 bar	W21,8x1/14"LH	DN15, G1/2"

TECHNICAL DATA

Regulator type	UC 500	Wall bracket	Stainless steel
Body, bonnet material	Brass (Cu < 65%)	Maximal inlet pressure	25 bar
Connectors & fittings material	Brass (Cu < 65%)	Maximal flow rate	14 Nm ³ /h
Diaphragm material	EPDM	Temperature range	from -20°C to 60°C
Seat sealing material	Chloroprene		



MM70-2

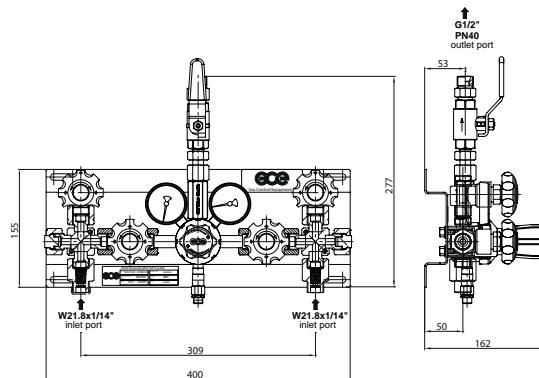


Manual changeover manifold for different gases with inlet pressure up to 300bar. At both inlet sides is placed x-block with non return valves and filters, purge valves and second inlets from sites for extension units. Shut-off valves, regulator with pressure relieve valve and outlet ball valve as well as other components are mounted at the stainless steel panel.

TECHNICAL DATA

Regulator type	UC500
Body, bonnet material	Brass
Connectors & fittings material	Brass
Diaphragm material	EPDM, NBR
Seat sealing material	PA
Wall bracket	Stainless steel
Maximal inlet pressure	300 bar
Maximal flow rate	50 Nm ³ /h
Temperature range	from -20 °C to 60 °C

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768122	MM70-2	O, D, N, CO ₂ , 300/20 bar	W21,8x1/14"	DN15, G1/2"
0768143	MM70-2	O, D, N, CO ₂ , 300/40 bar	W21,8x1/14"	DN15, G1/2"
0768124	MM70-2	Hydrogen/methan, 300/20 bar	W21,8x1/14"LH	DN15, G1/2"
0768125	MM70-2	Propane, 25/4 bar	W21,8x1/14"LH	DN15, G1/2"



MM70-2 ACETYLENE

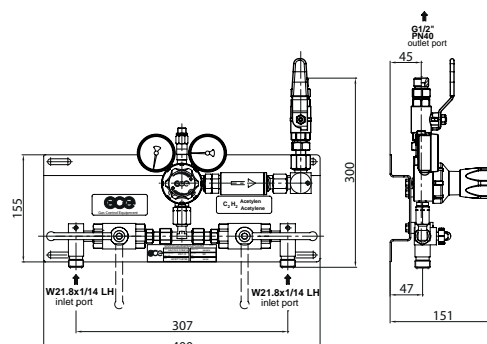


Acetylene variant of MM70-2 manual changeover manifold for cylinder service. It is designed and produced in accordance with ISO 14 114. There are used manual quick acting shut-off valves at each inlet side upstream regulator. These devices are tested according to ISO 15 615. There is flashback arrestor GVA 90 (EN 730-1, ISO 5175) mounted downstream regulator and also outlet ball valve.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768140	MM70-2	Acetylene, 25/1,5 bar	W21,8x1/14"LH	DN15, G1/2"

TECHNICAL DATA

Regulator type	UC500	Wall bracket	Stainless steel
Body, bonnet material	Brass (Cu < 65%)	Maximal inlet pressure	25 bar
Connectors & fittings material	Brass (Cu < 65%)	Maximal flow rate	14 Nm ³ /h
Diaphragm material	EPDM	Temperature range	from -20 °C to 60 °C
Seat sealing material	Chloroprene		





Automatic change over manifold mounted onto a stainless steel panel and consists of two pressure regulators with inlet and outlet pressure gauge, a switch unit with two magnetic valves including control unit and signal monitoring. Automatic change over for uninterrupted gas flow. Solenoid valves guarantee a maximum of exhaustion of the gas sources (cylinders or bundles). Acoustic and optical gas leakage monitoring via contact pressure gauges and signal device. In each case, after falling below boundary values (at the pressure gauges preset delay period) gas supply will be changed over to the full cylinder. Check valves on both sides prevent the reflux of gas back into the empty side. The user will be protected against operating errors by clear display and operator control functions. Control unit is the part of standard delivery package.



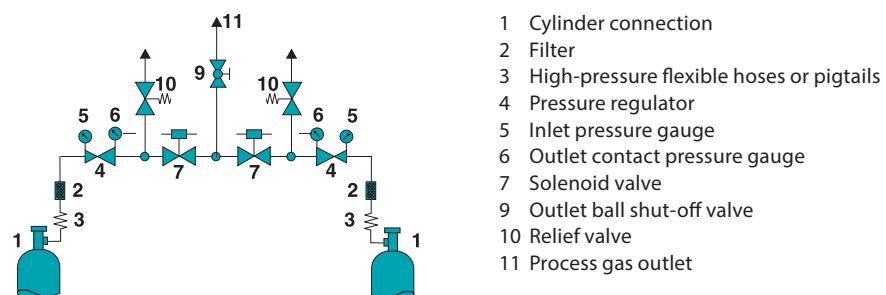
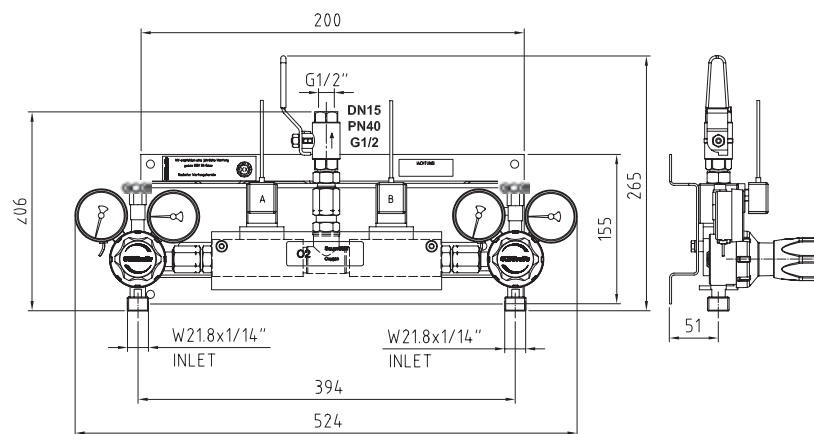
Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
EXM0025	BMD100-39	O, D, N, CO ₂ , 300/16 bar	W21,8x1/14"	DN15
EXM0028	BMD100-39	Nitrogen, 300/40 bar	W21,8x1/14"	DN15

TECHNICAL DATA

Regulator type	UC 500	Diaphragm	EPDM
Regulator body	Brass	Ball valve sealing	PTFE
Regulator bonnet	Zinc alloy	Maximal inlet pressure	300 bar
Seat sealing	PA	Temperature range	From - 20 °C to 60 °C
Piston sealing (for N ₂)	Silicon	Wall bracket	Stainless steel

TECHNICAL DATA - CONTROL UNIT

Power supply	220 V, 50 Hz
Working temperature	From 0 °C to 55 °C



- 1 Cylinder connection
- 2 Filter
- 3 High-pressure flexible hoses or pigtails
- 4 Pressure regulator
- 5 Inlet pressure gauge
- 6 Outlet contact pressure gauge
- 7 Solenoid valve
- 9 Outlet ball shut-off valve
- 10 Relief valve
- 11 Process gas outlet

M400 LINE

MM400-1

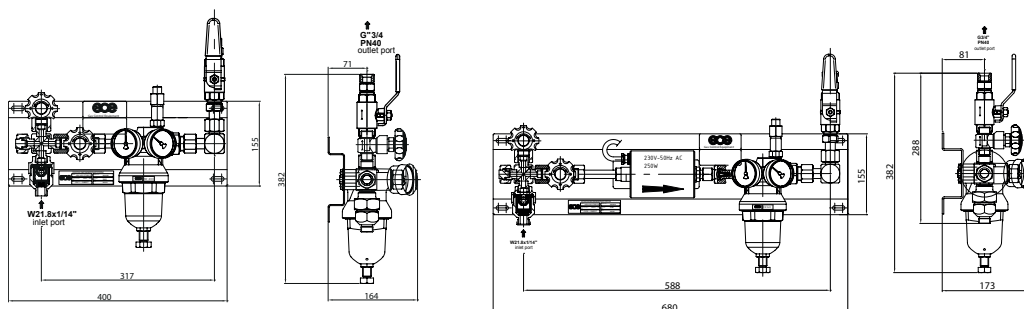


Gas manifold panel with regulators MR60 or MR400 for high-flow applications for different gases with inlet pressure up to 300bar. Manifold contains inlet x-block with non return valve and filter, purge valve and second inlet from site to install potentially extension unit. Purge valve can be used for pressure release when cylinder/bundle hose is dismantled. There is also high pressure shut-off valve, regulator with pressure relieve valve and outlet ball valve mounted at the stainless steel panel.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768127	MM400-1	O, D, N, CO ₂ , 300/20 bar	W21,8x1/14"	G3/4", DN20
0768144	MM400-1	O, D, N, CO ₂ , 300/40 bar	W21,8x1/14"	G3/4", DN20
0768194	MM400-1 PH	O, D, N, CO ₂ , 300/12 bar, with preheater	W21,8x1/14"	G3/4", DN20
0768189	MM400-1 PH	O, D, N, CO ₂ , 300/20 bar, with preheater	W21,8x1/14"	G3/4", DN20
0768128	MM400-1	Hydrogen/methan, 300/20 bar	W21,8x1/14"LH	G3/4", DN20
0768130	MM400-1	Propane, 25/4 bar	W21,8x1/14"LH	G3/4", DN20
0768165	MM 400-1 CG	O, D, N, CO ₂ , 300/20 bar, with contact gauge	W21,8x1/14"	G3/4", DN20

TECHNICAL DATA

Regulator type	MR400/MR60	Wall bracket	Stainless steel
Body, bonnet material	Brass	Maximal inlet pressure	300 bar
Connectors & fittings material	Brass, stainless steel	Maximal flow rate	400 Nm ³ /h
Diaphragm material	Butyl, NBR	Nominal flow rate	250 Nm ³ /h
Seat sealing material	PA, PTFE	Temperature range	from -20 °C to 60 °C



MM400-1 ACETYLENE

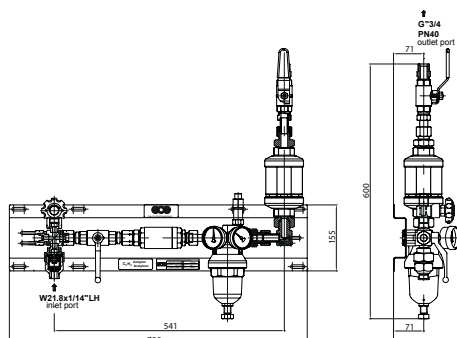


Gas manifold panel with regulator MR60 for high-flow acetylene applications. Acetylene variant of MM400-1 is designed and produced in accordance with ISO 14 114. Inlet x-block with mounted purge valve, non-return valve and filter enable safety operation with high pressure acetylene. There are used manual and also automatic quick acting shut-off valves upstream regulator. These devices are tested according to ISO 15 615. There is flashback arrestor Simax 3 (EN 730-1, ISO 5175) mounted downstream regulator and also outlet ball valve.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768131	MM400-1	Acetylene, 25/1,5 bar	W21,8x1/14"LH	G3/4", DN20

TECHNICAL DATA

Regulator type	MR60	Seat sealing material	PTFE
Body, bonnet material	Brass (Cu < 65%)	Wall bracket	Stainless steel
Connectors & fittings material	Brass (Cu < 65%), stainless steel	Maximal inlet pressure	25 bar
Diaphragm material	Chloroprene	Maximal flow rate	25 Nm ³ /h
		Temperature range	from -20 °C to 60 °C



MM400-2

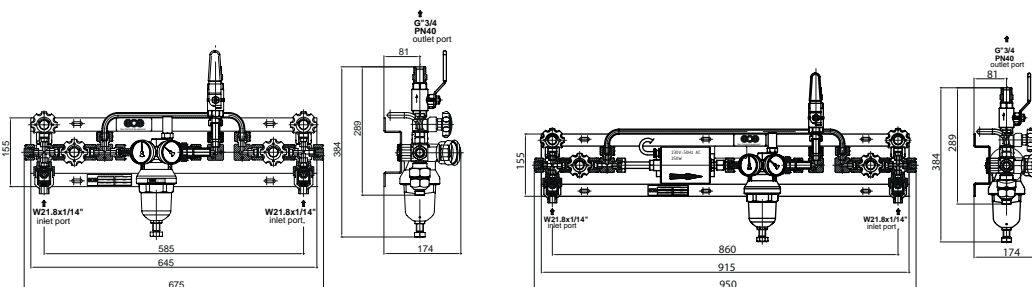
Manual changeover manifold with regulators MR60 or MR400 for high-flow applications for different gases with inlet pressure up to 300 bar. At both inlet sides is placed x-block with non return valves and filters, purge valves and second inlets from sites for extension units. Shut-off valves, regulator with pressure relieve valve and outlet ball valve as well as other components are mounted at the stainless steel panel.



Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768132	MM400-2	O, D, N, CO ₂ , 300/20 bar	W21,8x1/14"	G3/4", DN20
0768146	MM400-2	O, D, N, CO ₂ , 300/40 bar	W21,8x1/14"	G3/4", DN20
0768145	MM400-2 PH	O, D, N, CO ₂ , 300/20 bar, with preheater	W21,8x1/14"	G3/4", DN20
0768133	MM400-2	Hydrogen/methan, 300/20 bar	W21,8x1/14"LH	G3/4", DN20
0768135	MM400-2	Propane, 25/4 bar	W21,8x1/14"LH	G3/4", DN20

TECHNICAL DATA

Regulator type	MR400/MR60	Wall bracket	Stainless steel
Body, bonnet material	Brass	Maximal inlet pressure	300 bar
Connectors & fittings material	Brass, stainless steel	Maximal flow rate	400 Nm ³ /h
Diaphragm material	Butyl, NBR	Nominal flow rate	250 Nm ³ /h
Seat sealing material	PA, PTFE	Temperature range	from -20 °C to 60 °C



MM400-2 ACETYLENE

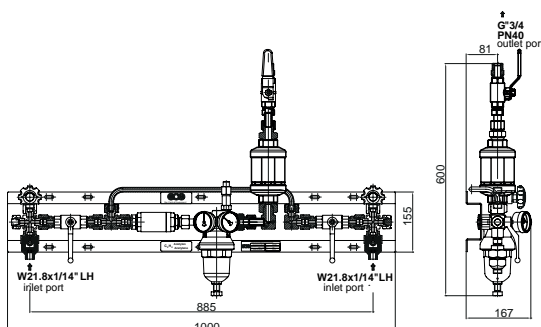
Manual changeover manifold with regulator MR60 for high-flow acetylene applications. Acetylene variant of MM400-2 is designed and produced in accordance with ISO 14 114. Inlet x-blocks with mounted purge valves, non-return valves and filters enable safety operation with high pressure acetylene. There are used manual and also automatic quick acting shut-off valves upstream regulator. These devices are tested according to ISO 15 615. There is flashback arrestor Simax 3 (EN 730-1, ISO 5175) mounted downstream regulator and also outlet ball valve.



Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768136	MM400-2	Acetylene, 25/1,5 bar	W21,8x1/14"LH	G3/4", DN20

TECHNICAL DATA

Regulator type	MR60	Seat sealing material	PTFE
Body, bonnet material	Brass (Cu < 65%)	Wall bracket	Stainless steel
Connectors & fittings material	Brass (Cu < 65%), stainless steel	Maximal inlet pressure	25 bar
Diaphragm material	Chloroprene	Maximal flow rate	25 Nm ³ /h
		Temperature range	from -20 °C to 60 °C



MS400



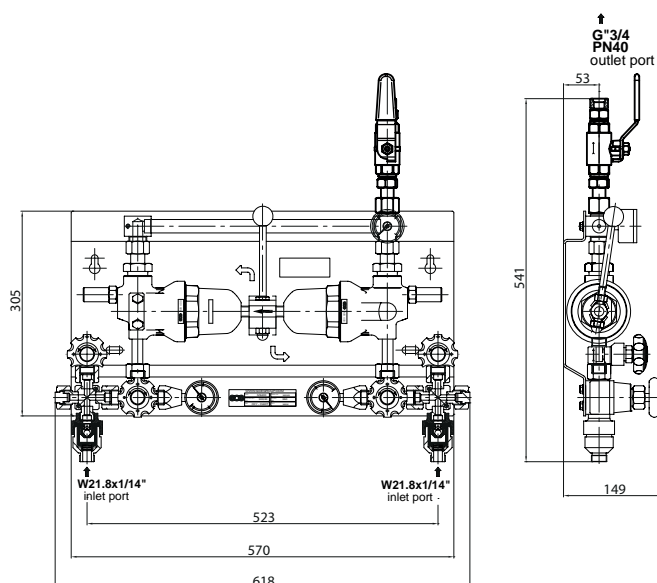
The MS400 Semiautomatic manifold reduces compressed gases of max. 300 bar to a continuous gas supply of 18-22 bar or 37-43 bar. It is designed for the use with 2 gas sources (cylinders or cylinder bundles). However, one side at a time is the operating one and the other is then the reserve side. The MS400 will ensure continuity of gas flow by automatically changing from a nearly empty side to a full (reserve) side. MS400 is a complete valve unit with high pressure filters, isolating valves, purge valves, regulators, autochange unit and low pressure pipe with line shut-off valve. Components are assembled and mounted at stabile stainless steel plate. Inlet x-block contain free port for extension to more gas sources.

MS400 can be used for oxygen and inert gases as nitrogen, argon, CO₂ and their mixtures. The variant for fuel gas can be used for hydrogen, methane nad their mixtures. It is optimal solution for continuous gas supply for industrial applications as e.g. welding & cutting, assist gas supply for laser cutting, different inertization and many other applications. There are also variants with contact gauges giving alarm information about switching over to reserve side.

Art. Nr.	Description	Gas, pressure	Inlet	Outlet
0768114	MS400	O, D, N, CO ₂ , 300 bar/20 bar	W21,8x1/14"	G3/4", DN20
0768164	MS400 CG	O, D, N, CO ₂ , 300 bar/20 bar, with contact gauge	W21,8x1/14"	G3/4", DN20
0768191	MS400 CG	O, D, N, CO ₂ , 300 bar/40 bar, with contact gauge	W21,8x1/14"	G3/4", DN20
0768192	MS400	O, D, N, CO ₂ , 300 bar/40 bar	W21,8x1/14"	G3/4", DN20
0768193	MS400	Hydrogen/methan; 300 bar/20 bar	W21,8x1/14" LH	G3/4", DN20
0768212	MS400 CG	Hydrogen/methan; 300 bar/20 bar,with contact gauge	W21,8x1/14" LH	G3/4", DN20

TECHNICAL DATA

Regulator type	MR400/MR60	Wall bracket	Stainless steel
Body, bonnet material	Brass	Maximal inlet pressure	300 bar
Connectors & fittings material	Brass, stainless steel	Maximal flow rate	400 Nm ³ /h
Diaphragm material	Butyl, NBR	Nominal flow rate	250 Nm ³ /h
Seat sealing material	PA, PTFE	Temperature range	from -20 °C to 60 °C



MS400, SPARE PARTS, REGULATORS

Art. Nr.	Description	Gas, pressure
0762913	MR60	O, D, N, CO ₂ , 300 bar/40 bar
0762910	MR400	O, D, N, CO ₂ , 300 bar/20 bar

MB LINE

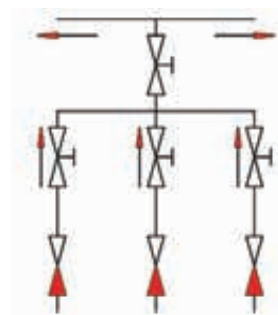
MANYFLOW



MANYFLOW block with its modular design establishes a complete range of gas control units either for cylinders or for bundle gas supply with Acetylene or high compressed gases up to 300 bar. Different gas flow level may be selected. This pressure device is used as a component in below mentioned high-pressure manifolds. It is also delivered as a basic unit without connection hoses.

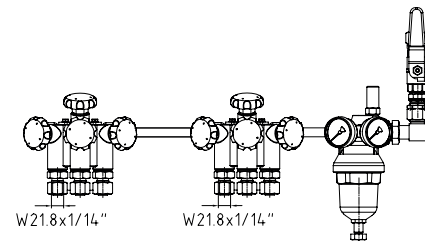
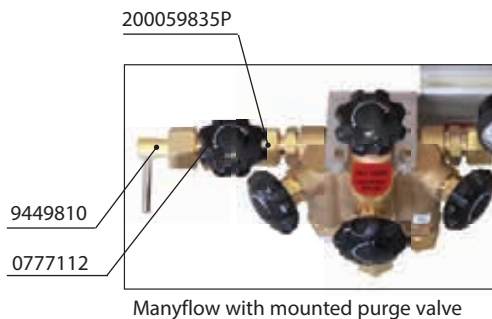
Hoses have to be ordered related to gas type and kind of supply (bundles or cylinders). Stainless steel tubes with different lengths are provided to prepare this modular concept for connection of more gas packages and therethrough to extend particular gas supply system for requested operating conditions.

Art. Nr.	Description	Gas	Inlet	Outlet
14037312	Manyflow block	Acetylene	W21,8x1/14"	W21,8x1/14"
0764954	Manyflow block	Acetylene	W21,8x1/14"LH	G3/4"
14037514	Manyflow block	O, D, N, CO ₂ , H up to 300 bar	W21,8x1/14"	W21,8x1/14"
0768221	Manyflow block	O, D, N, CO ₂ , H up to 300 bar	W21,8x1/14"LH	W21,8x1/14"LH
14037804	Connecting tube 450 mm	All gases	G3/4"	G3/4"
14037797	Connecting tube 750 mm	All gases	G3/4"	G3/4"
14037423	Connecting tube 1500 mm	All gases	G3/4"	G3/4"
SPP27990016	Manyflow outlet adaptor		G3/4" F	W21,8x1/14" M



- Compact block design for cylinder pressure up to 300 bar
- GCE high pressure shut-off valves
- Acetylene variant in accordance with ISO 15615
- Space saving installations
- In- and outlet connections W21,8x1/14" according to DIN 477 (other connection on request)
- Sinter metal filter and non return valve included.
- Continuous gas flow of all the cylinders is guaranteed.
- Very easy to extend. The modular design constitutes numerous variants.
- For bundle and cylinder gas supply.

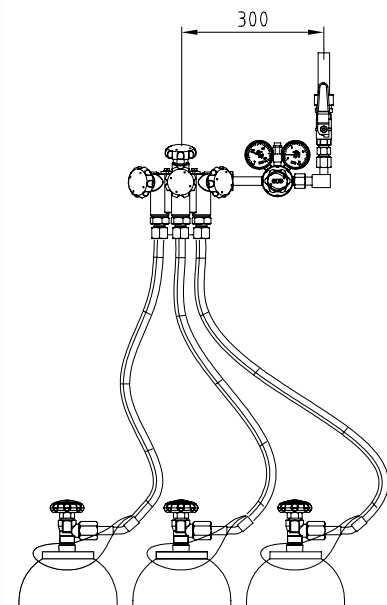
TYPICAL MANYFLOW APPLICATIONS:



High pressure manifold with Manyflow and extension unit for 6 cylinders or bundles



Cross section of the inlet with non-return valve and filter



High pressure manifold MB70 for 3 cylinders connected by high pressure flexible hoses

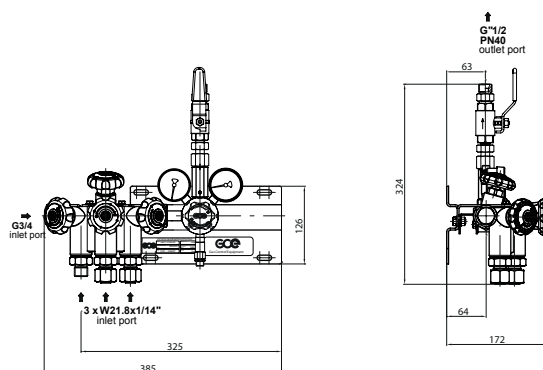
MB70

High pressure manifold based on Manyflow unit for middle and low flow rates. It can be used for oxygen and inert gases. It is designed for cylinder or cylinder bundles service. There are non-return valves at the Manyflow inlets, separated isolating valves and one central inlet shut-off valve. UC 500 regulator contains high pressure and low pressure gauges and pressure relief valve. There is outlet low pressure ball valve downstream regulator. Gas wetted components are made of brass. All components are fixed to the stabilizing stainless steel wall bracket.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768099	MB70	O, D, N, CO ₂ , 300/20 bar	W21,8x1/14"	G1/2", DN15
14037552	MB70 CG	O, D, N, CO ₂ , 300/20 bar, with contact gauge	W21,8x1/14"	G1/2", DN15
0768148	MB70	Hydrogen, 300/20 bar	W21,8x1/14"LH	G1/2", DN15
0768219	MB70	O, D, N, CO ₂ , 300/40 bar	W21,8x1/14"	G1/2", DN15
ARS0157	MB70 PH	O, D, N, CO ₂ , 300/20 bar, with preheater	W21,8x1/14"	G1/2", DN15

TECHNICAL DATA

Regulator type	UC500	Wall bracket	Stainless steel
Body, bonnet material	Brass	Maximal inlet pressure	300 bar
Connectors & fittings material	Brass	Maximal flow rate	50 Nm ³ /h
Diaphragm material	EPDM	Temperature range	from -20 °C to 60 °C
Seat sealing material	PA		



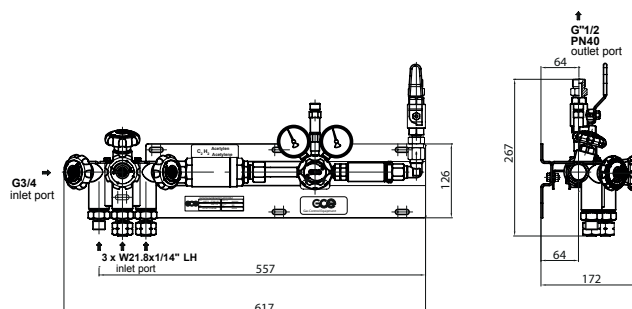
MB70 ACETYLENE

MB 70 for acetylene is design and produced in accordance with ISO 14 114. Manyflow is tested and approved in accordance with ISO 15 615 as well as high pressure automatic quick acting shut-off valve and pressure regulator UC 500. There are also pressure relief valve, high pressure and low pressure gauges. Low pressure flashback arrestor GVA 90 (EN 730-1, ISO 5175) consists of filter, flame arrestor, thermal arrestor and non-return valve. Outlet ball valve is mounted downstream FBA.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768100	MB70	Acetylene, 25/1,5 bar	W21,8x1/14"LH	G1/2", DN15
14037556	MB70 CG	Acetylene, 25/1,5 bar, with contact gauge	W21,8x1/14"LH	G1/2", DN15

TECHNICAL DATA

Regulator type	UC500	Wall bracket	Stainless steel
Body, bonnet material	Brass (Cu < 65%)	Maximal inlet pressure	25 bar
Connectors & fittings material	Brass (Cu < 65%)	Maximal flow rate	10 Nm ³ /h
Diaphragm material	EPDM	Temperature range	from -20 °C to 60 °C
Seat sealing material	Chloroprene		



MB400

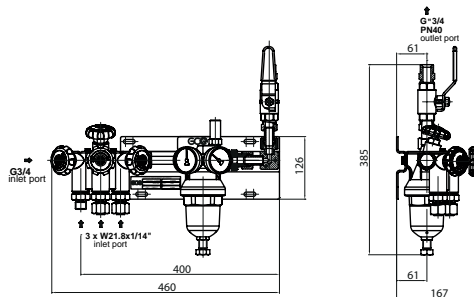


High pressure manifold based on Manyflow unit for high flow applications. It can be used for oxygen and inert gases. It is designed mainly for cylinder bundles service. There are non-return valves at the Manyflow inlets, separated isolating valves and one central inlet shut-off valve. MR400 regulator contains high pressure and low pressure gauges and pressure relief valve. There is outlet low pressure all valve downstream regulator. All components are fixed to the stabilizing stainless steel wall bracket.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768098	MB400	O, D, N, CO ₂ , 300/20 bar	W21,8x1/14"	G3/4", DN15

TECHNICAL DATA

Regulator type	MR400	Wall bracket	Stainless steel
Body, bonnet material	Brass	Maximal inlet pressure	300 bar
Connectors & fittings material	Brass, stainless steel	Maximal flow rate	400 Nm ³ /h
Diaphragm material	Butyl	Nominal flow rate	250 Nm ³ /h
Seat sealing material	PA	Temperature range	from -20 °C to 60 °C



MB400 ACETYLENE

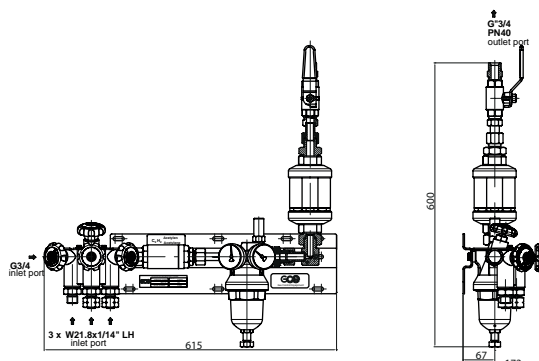


MB400 for acetylene is design and produced in accordance with ISO 14114. Manyflow is tested and approved in accordance with ISO 15615 as well as high pressure automatic quick acting shut-off valve and pressure regulator MR60. There are also pressure relief valve, high pressure and low pressure gauges. Low pressure flashback arrestor Simax 3 (EN 730-1, ISO 5175) consists of filter, flame arrestor, thermal arrestor and non-return valve. Outlet ball valve is mounted downstream FBA.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768097	MB400	Acetylene, 25/1,5 bar	W21,8x1/14"LH	G3/4", DN15

TECHNICAL DATA

Regulator type	MR60	Seat sealing material	PTFE
Body, bonnet material	Brass (Cu < 65%)	Wall bracket	Stainless steel
Connectors & fittings material	Brass (Cu < 65%), stainless steel	Maximal inlet pressure	25 bar
Diaphragm material	Chloroprene	Maximal flow rate	25 Nm ³ /h
		Temperature range	from -20 °C to 60 °C



MF LINE

An unique compact solution for high pressure gas supply. This manifold integrates many different high pressure components into the one massive brass block. Due to this specific design- aspect potential leakages are minimized. This ensures high- safety standard and eliminates not controlled gas consumption what creates additional profits for user.

MAXIFLOW BRASS BLOCK CONTAINS FOLLOWING COMPONENTS:

- 2 inlet connections with sintered filters
- two regulators for semiautomatic operation
- inlet shut-off valves at both sides
- purge valves for high pressure part purging and for pressure release
- two HP gauges (contact gauges optionally)
- pressure relieve valve
- outlet connection with ball valve

MAXIFLOW DESIGN VARIANTS:

- basic unit Maxiflow 1/2 with two inlets as a one stage semiautomatic change over manifold for two cylinders or bundles
- Maxiflow 2/2 with second regulation step for precise outlet pressure adjustment
- Maxiflow 2/2 for acetylene with safety components in accordance with ISO 14114 and ISO 15615

MAXIFLOW 1/2



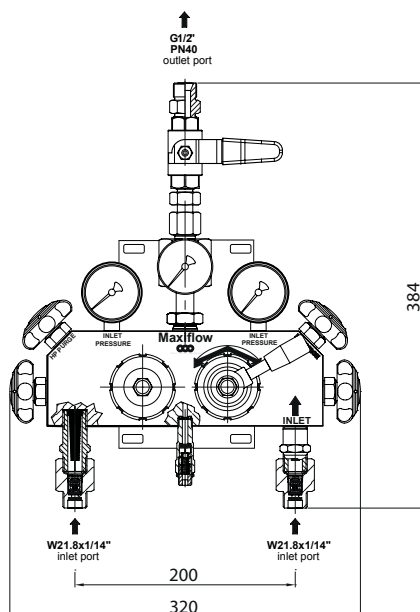
Single-stage semiautomatic autochange gas manifold for compressed gases with inlet pressure up to 300 bar. This product can ensure continuous gas supply without any application process interruption. Manifold can be equipped as an option by contact gauges to give information about gas source emptying. Product consists of massive brass block which is the stable base for other components installation.

There are components integrated into one body: two inlets, high-pressure shut-off valves, purge valves, two regulators, pressure relief valves, high-pressure gauges and outlet connection. This product minimises risk of leakages due to elimination of internal connections.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768185	Maxiflow 1/2	O, D, N, CO ₂ 300/14 bar	W21,8x1/14"	G1/2", DN15
0768186	Maxiflow 1/2	Hydrogen/methan, 300/14 bar	W21,8x1/14"LH	G1/2", DN15

TECHNICAL DATA

Panel and regulator body	Brass
Regulator bonnet	Zn-Al alloy
Regulator type ODNCO ₂ HM	Piston
Regulating valve sealing	Encapsulated, PA, ODNCO ₂ HM
Connectors & fittings	Brass
Wall bracket	Stainless steel
Maximal inlet pressure	300 bar
Nominal flow rate	30 Nm ³ /h (at 14 bar)
Temperature range	from -20 °C to 60 °C



MAXIFLOW 2/2

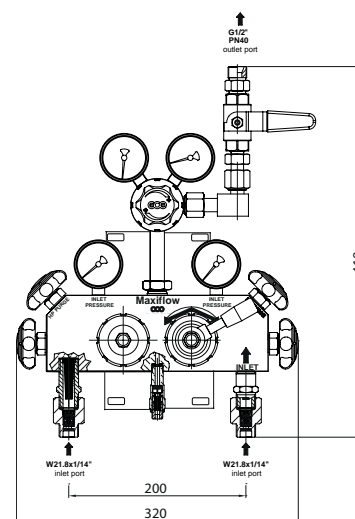


Semiautomatic autochange gas manifold for compressed gases with inlet pressure up to 300 bar. This product can ensure continuous gas supply without any application process interruption. Manifold can be equipped as an option by contact gauges to give information about gas source emptying. It is double-stage regulation unit giving stable value of outlet pressure parameter. Product consists of massive brass block which is the stable base for other components installation. There are almost eliminated internal connections what means minimal risk of leakages.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768183	Maxiflow 2/2	O, D, N, CO ₂ , 300/10 bar	W21,8x1/14"	G1/2", DN15
0768222	Maxiflow 2/2 CG	O, D, N, CO ₂ , 300/10 bar, contact gauges	W21,8x1/14"	G1/2", DN15
0768184	Maxiflow 2/2	Hydrogen/methan, 300/10 bar	W21,8x1/14"LH	G1/2", DN15
0768223	Maxiflow 2/2 CG	Hydrogen, methan, 300/10 bar, contact gauges	W21,8x1/14"LH	G1/2", DN15
0768119	Maxiflow 2/2	Propane, 12/2,5 bar	W21,8x1/14"LH	G1/2", DN15
0768196	Maxiflow 2/2 CG	Propane, 12/2,5 bar, contact gauges	W21,8x1/14"LH	G1/2", DN15

TECHNICAL DATA

Panel and regulator body	Brass
Regulator bonnet	Zn-Al alloy
Regulator type ODNCO ₂ HM	Piston
Regulator type P	Diaphragm NBR
Regulator type HM	Diaphragm NBR (2nd stage)
Regulating valve sealing	Encapsulated, PA, ODNCO ₂
Regulating valve sealing P	Encapsulated, Chloroprene
Regulating valve sealing HM	Encapsulated, PA
Connectors & fittings	Brass
Wall bracket	Stainless steel
Maximal inlet pressure	300 bar
Nominal flow rate	20 Nm ³ /h (at 10 bar)
Temperature range	from -20 °C to 60 °C



MAXIFLOW 2/2 ACETYLENE

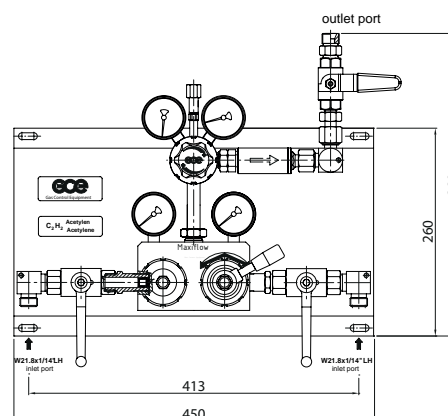


Semiautomatic autochange gas manifold for acetylene. This product can ensure continuous gas supply without any application process interruption. There is variant equipped by contact gauges to give information about gas source emptying. It is double-stage regulation unit giving stable value of outlet pressure parameter. Product is designed and produced in accordance with ISO 14114. There are used inlet manual quick acting shut-off valves, regulators tested according to requirements of ISO 15615. There is also mounted outlet flashback arrester GVA90 (EN 730-1, ISO 5175) and isolating ball valve.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0768166	Maxiflow 2/2	Acetylene, 25/1,5 bar	W21,8x1/14"LH	G1/2", DN15
0768167	Maxiflow 2/2CG	Acetylene, 25/1,5 bar, contact gauges	W21,8x1/14"LH	G1/2", DN15

TECHNICAL DATA

Panel and regulator body	Brass
Regulator bonnet	Zn/Al alloy
Regulator type	Diaphragm EPDM
Regulating valve sealing	Encapsulated, Chloroprene
Connectors & fittings	Brass
Wall bracket	Stainless steel
Flashback arrester	Brass
Manual quick acting valve	Steel
Maximal inlet pressure	30 bar
Nominal flow rate	5 Nm ³ /h (at 1,2 bar)
Temperature range	from -20 °C to 60 °C



SHUT-OFF VALVES DN4 AND DN8 FOR EXTENSION UNITS



SOV DN4 should be used for extension modules of M70 Line manifolds. BV 300 DN8 are designed for M400 Line manifolds.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0777111	SOV DN4	O, D, N, CO ₂ , 300 bar	W21,8×1/14"	W21,8×1/14"LH
0777112	SOV DN4	Fuel gas, 300 bar	W21,8×1/14"LH	W21,8×1/14"
0777208	SOV DN4	Acetylene, 25 bar	W21,8×1/14"LH	W21,8×1/14"
BV777105	BV 300 DN8	O, D, N, CO ₂ , 300 bar	W21,8×1/14"	W21,8×1/14"LH
BV777106	BV 300 DN8	Inert, 300 bar	W21,8×1/14"	W21,8×1/14"LH
BV777107	BV 300 DN8	Fuel gas, 300 bar	W21,8×1/14"LH	W21,8×1/14"
BV777209	BV 300 DN8	Acetylene, 25 bar	W21,8×1/14"LH	W21,8×1/14"

HIGH PRESSURE ACETYLENE BALL VALVE



High pressure acetylene isolating valve and manual quick acting shut-off valve according to ISO 14114 and ISO 15615.

Art. Nr.	Connection
SPP27990018	3/8"
SPP27990019	1/2"

NON RETURN VALVES



Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0764935	Non return valve	O, D, N, CO ₂ , 300 bar	W21,8×1/14"	W21,8×1/14"
0764936	Non return valve	Fuel gas, 300 bar	W21,8×1/14"LH	W21,8×1/14"LH
0764937	Non return valve	Acetylene, 25 bar	W21,8×1/14"LH	W21,8×1/14"LH
0764976	Non return valve	Propane, 20 bar	W21,8×1/14"LH	W21,8×1/14"LH



CYLINDER WALL BRACKET



Art. Nr.	Description
14037116	for 1 cylinder
14037117	for 2 cylinders
14037118	for 3 cylinders

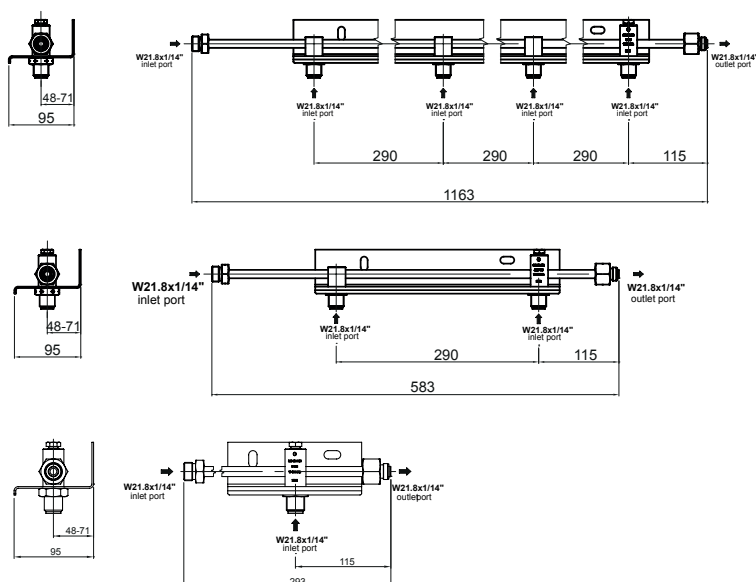
HIGH-PRESSURE MANIFOLD EXTENSION UNITS

SE LINE



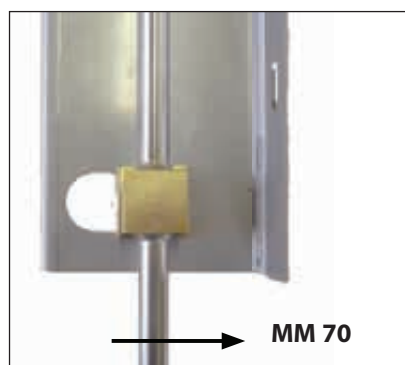
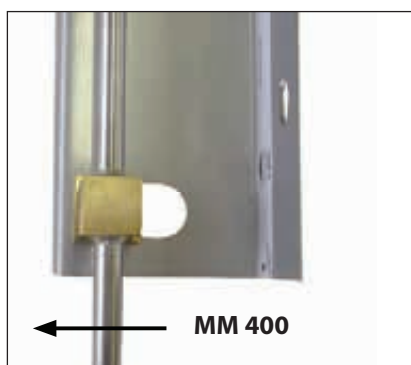
High pressure manifold extension unit. SE-Line manifolds contain collecting tubes in adjustable positions. The axial distance between tube and wall bracket is changeable. This enables SE Line application for both, M70 Line and M400 Line manifolds. The tube as well as wall bracket are made of stainless steel. Connection blocks are made of brass. One block includes always outlet for pressure gauge or contact gauge optional mounting. SE Line can be used up to 300 bar.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
9625640	SE-1	O, D, N, CO ₂ , 300 bar	W21,8x1/14"	W21,8x1/14"
9625690	SE-1	All fuel gases, 300 bar	W21,8x1/14"LH	W21,8x1/14"LH
9625650	SE-2	O, D, N, CO ₂ , 300 bar	W21,8x1/14"	W21,8x1/14"
9625700	SE-2	All fuel gases, 300 bar	W21,8x1/14"LH	W21,8x1/14"LH
9625660	SE-4	O, D, N, CO ₂ , 300 bar	W21,8x1/14"	W21,8x1/14"
9625710	SE-4	All fuel gases, 300 bar	W21,8x1/14"LH	W21,8x1/14"LH



SE Line set-up

Two axial positions of collecting tube in the bracket. See SE Line prepared for extension of M70 Line in the right picture and position prepared for M400 Line is in the left picture.

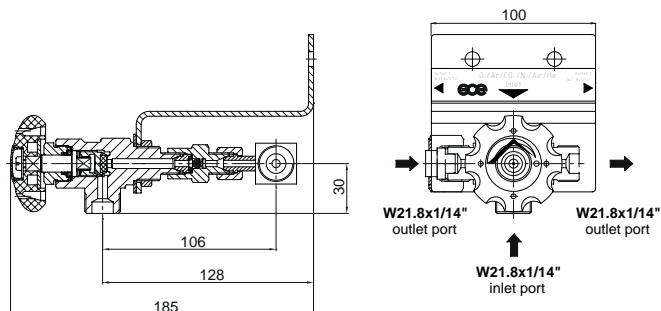


ME-1



ME-1 contains inlet connection with shut-off valve, non return valve, collecting pipe and two outlets. Bodies of components are made of brass. Stabile wall bracket made of 3 mm stainless steel is used as a base for components mounting. ME-1 is prepared for 300 bar service.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet	Standard
0768169	ME-1	O, D, N, CO ₂ , 300 bar	W21,8x1/14"	W21,8x1/14"	DIN 477-1/6
0768179	ME-1	Fuel gas, 300 bar	W21,8x1/14"LH	W21,8x1/14"LH	DIN 477-1/1
CE10001M	ME-1	O, D, N, CO ₂ , 300 bar	W21,7x1/14"	W21,7x1/14"	UNI4406
CE10006M	ME-1	Acetylene, 25 bar	G5/8" LH	G5/8" LH	UNI4411/2
CE10008M	ME-1	Fuel gas, 300 bar	W20x1/14" LH	W20x1/14" LH	UNI4405

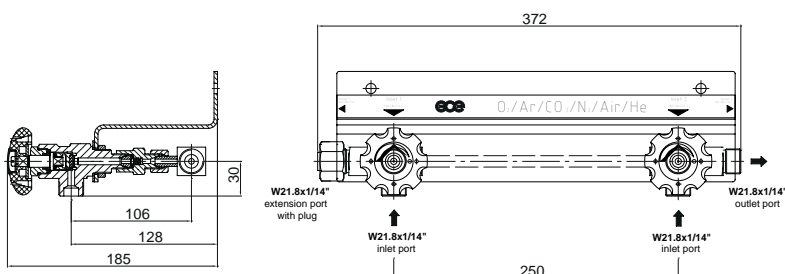


ME-2



ME-2 contains inlet connections with shut-off valves, non return valves, collecting pipe and two outlets. Bodies of components are made of brass. Stabile wall bracket made of 3 mm stainless steel is used as a base for components mounting. ME-2 can be used up to 300 bar.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet	Standard
0768177	ME-2	O, D, N, CO ₂ , 300 bar	W21,8x1/14"	W21,8x1/14"	DIN 477-1/6
0768181	ME-2	Fuel gas, 300 bar	W21,8x1/14"LH	W21,8x1/14"LH	DIN 477-1/1
CE10026M	ME-2	O, D, N, CO ₂ , 300 bar	W21,7x1/14"	W21,7x1/14"	UNI4406
CE10031M	ME-2	Acetylene, 25 bar	G5/8" LH	G5/8" LH	UNI4411/2
CE10034M	ME-2	Fuel gas, 300 bar	W20x1/14" LH	W20x1/14" LH	UNI4405

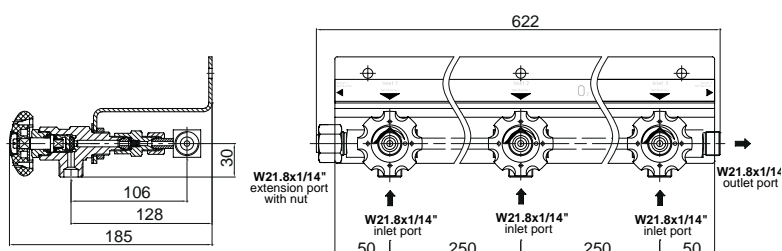


ME-3



ME-3 contains inlet connections with shut-off valves, non return valves, collecting pipe and two outlets. Bodies of components are made of brass. Stabile wall bracket made of 3 mm stainless steel is used as a base for components mounting. ME-3 can be used up to 300 bar.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet	Standard
0768178	ME-3	O, D, N, CO ₂ , 300 bar	W21,8x1/14"	W21,8x1/14"	DIN 477-1/6
0768182	ME-3	Fuel gas, 300 bar	W21,8x1/14"LH	W21,8x1/14"LH	DIN 477-1/1
CE10051M	ME-3	O, D, N, CO ₂ , 300 bar	W21,7x1/14"	W21,7x1/14"	UNI4406
CE10056M	ME-3	Acetylene, 25 bar	G5/8" LH	G5/8" LH	UNI4411/2
CE10074M	ME-3	Fuel gas, 300 bar	W20x1/14" LH	W20x1/14" LH	UNI4405



LINE FILTER



Nominal flow rate: 800 Nm³/h at 40 bar, pressure drop: max 15 bar.

Art. Nr.	Description	Gas, Pressure	Inlet / Outlet	Filter ability
0760582	FZ 11	O, D, N, CO ₂ , Max 200 bar	M42×1,5	50 µm
SPP27990007	Spare filter insert 5 µm			
SPP27990008	Spare filter insert 50 µm			
SPP27990031	Pressure gauge, 400/300 bar			
SPP27990032	Pressure gauge, 40/20 bar			

LOW PRESSURE ACETYLENE FILTER



This filter is used for filtering of mechanical particles included in acetylene from pipe works. It should be mounted at the outlet point upstream the isolating valve and regulator.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
0863529	F 120 A	Acetylene, Max 1,5 bar	G1/2"	G3/8" LH
SPP27990021	Spare filter insert			

HIGH PRESSURE ACCESSORIES

Art. Nr.	Description	Gas, Max. pressure	Inlet	Outlet	Pos.
215191005	Tube 90° SS	A, P, H, M; 300 bar	W21,8×1/14"LH female	W21,8×1/14"LH male	1
215191010	Tube 90° SS	O, D, N, CO ₂ ; 300 bar	W21,8×1/14" female	W21,8×1/14" male	1
0768159	Tube 90° Cu	O, D, N, CO ₂ ; 300 bar	W21,8×1/14" female	W21,8×1/14" female	1
0768160	Tube 90° SS	A, P, H, M; 300 bar	W21,8×1/14"LH female	W21,8×1/14"LH female	1
9451080P	Tube straight	O, D, N, CO ₂ ; 300 bar	W21,8×1/14"	W21,8×1/14"	7
9451090P	Tube straight	A, P, H, M; 300 bar	W21,8×1/14"LH	W21,8×1/14"LH	7
215191076	Plug	A, P, H, M; 300 bar	W21,8×1/14"LH		2
215191077	Plug	O, D, N, CO ₂ ; 300 bar	W21,8×1/14"		2
215191069	Nipple	A, P, H, M; 300 bar	W21,8×1/14"LH female	W21,8×1/14 male	3
215191068	Nipple	O, D, N, CO ₂ ; 300 bar	W21,8×1/14" female	W21,8×1/14"LH male	3
200059835P	Double nut	All gases; 300 bar	W21,8×1/14"	W21,8×1/14"LH	4
215191081	Plug with nut	A, P, H, M; 300 bar	W21,8×1/14"LH		5
215191080	Plug with nut	O, D, N, CO ₂ ; 300 bar	W21,8×1/14"		5
215191084	T-piece	A, P, H, M; 300 bar	W21,8×1/14"LH female		6
215191085	T-piece	O, D, N, CO ₂ ; 300 bar	W21,8×1/14" female		6
311837121815P	Alu sealing gasket (package of 5 pcs), 18×12,0×1,5				
311325111032P	Cu sealing gasket (package of 10 pcs), 18×12,7×1,5				



MANIFOLD LOW-PRESSURE OUTLETS

WELDING AND BRAZING SOCKETS G1/2"



Accessories for 70-line manifolds according to EN 560.

Art. Nr.	Material	Out diam.	In diam.
9459830	Stainless steel	14 mm	9,2 mm
9459840	Brass	15 mm	9,8 mm
4A38550P	Carbon steel	14 mm	9,5 mm

WELDING AND BRAZING SOCKETS G3/4"



Accessories for 400-line manifolds according to EN 560.

Art. Nr.	Material
0764986	Stainless steel
0764977	Brass
0764978	Carbon steel

SLEEVE NUTS



Accessories according to EN 560.

Art. Nr.	Material	Connection
9459850	Brass	G1/2"
14099732P	Brass	G3/4"

BALL VALVES WITH CONNECTIONS



Accessories according to EN 560.

Art. Nr.	Connection	Nominal pressure
9457980P	G1/2"	PN40
94597890P	G1/2"	PN64
9460140P	G3/4"	PN40
9460280P	G3/4"	PN64

ACCESSORIES



Art. Nr.	Description	Gas, Max. pressure	Inlet	Outlet	Pos.
SPP27990022	Elbow	All gases; 64 bar	G1/2"	G1/2"	1
SPP27990023	Elbow	All gases; 64 bar	G3/4"	G3/4"	1
SPP27990024	T-piece	All gases; 64 bar	G1/2"	G1/2"	2
SPP27990025	T-piece	All gases; 64 bar	G3/4"	G3/4"	2
SPP27990026	T-piece	All gases; 64 bar	G1"	G1"	2

SAFETY VALVE SETS



Art. Nr.	Description	Pressure	Connection
9457970P	T-piece	60 bar	2x G1/2" - 1/4NPT

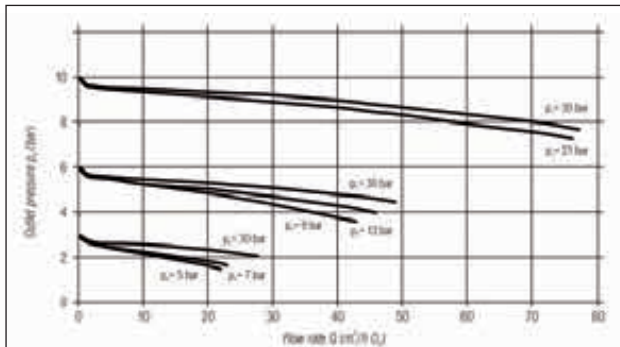


Art. Nr.	Gas	Opening pressure	Inlet connection	Outlet connection
9443240	Acetylene	1,55 bar	1/4NPT	G1/2"
9444210	Propane	6 bar	1/4NPT	G1/2"
9443250	O,D,N,CO ₂	18 bar	1/4NPT	G1/2"
9457180	O,D,N,CO ₂	28 bar	1/4NPT	G1/2"
9457190	O,D,N,CO ₂	45 bar	1/4NPT	G1/2"

DINSET

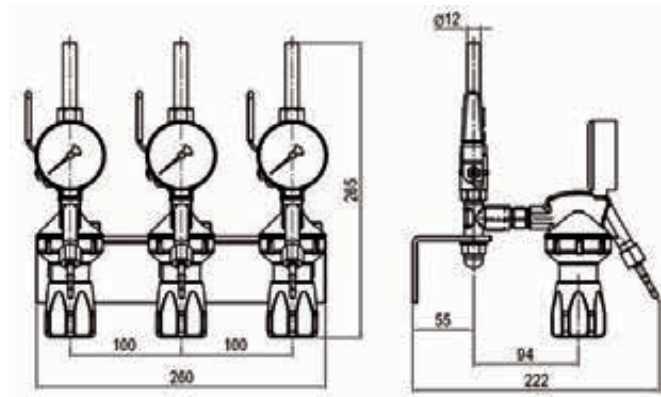
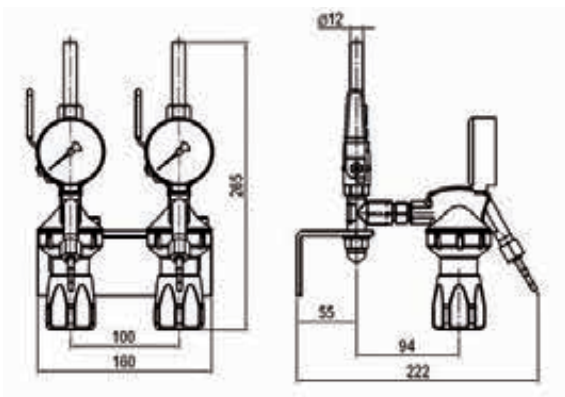
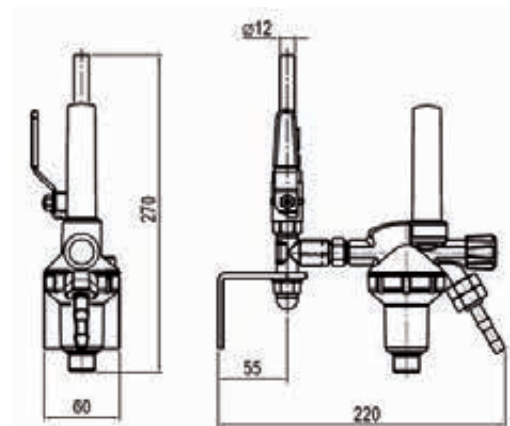
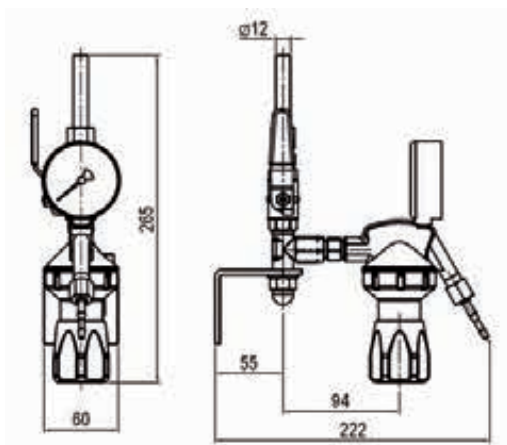
Dinset is classical GCE concept of products for industrial gases service based on premium Dincontrol regulator. They were created with using of huge professional experience in GCE group. They are continuously developed and optimized in accordance with current engineering knowledge. Dinset consists of inlet welding or brazing socket (acc. to gas type), inlet ball valve PN40, DIN-line regulator with pressure gauge, flow-gauge or flow-meter and hose nipple. Variants for shielding gases with flow-meter with dosing valve are supplying and indicating exact flow-rate. Components are mounted on V-profile steel wall bracket for safety installation. Functionality and quality of all components can be easily checked due to open design. Oxygen variant as well as acetylene and propane variants are prepared for optional installation of GCE flashback arrestors FR50 or SG5 due to identical outlet/inlet angle. But it can be used also other flashback arrestors from the market according to customer choice.

FLOW CAPACITY: OXYGEN



TECHNICAL DATA

Regulator body and bonnet	Brass
Diaphragm	EPDM, NBR
Seat sealing	PA, Chloroprene
Seat sealing	PA, Chloroprene
Connectors & fittings	Brass
Wall bracket	Steel Zn-coated
Maximal inlet pressure	30 bar Oxygen
Maximal inlet pressure	40 bar Other gases
Temperature range	from -20 °C to 60 °C



DINSET SINGLE UNITS



Single units are prepared for all technical gases and can be used for all industrial processes.

Art. Nr.	Type	Gas	Outlet range	Inlet	Outlet
14096150	Dinset Single	Acetylene	1,5 bar	G3/8"LH	G3/8"LH
14096151	Dinset Single	Oxygen	10 bar	G3/8"	G1/4"
14096152	Dinset Single	Ar/Mix	32 l/min Gauge	G3/8"	G1/4"
14096165	Dinset Single	Propane	2,5 bar	G3/8"LH	G3/8"LH
14096166	Dinset Single	Nitrogen	10 bar	G3/8"	G1/4"
14096167	Dinset Single	Compressed air	10 bar	G3/8"	G1/4"
14096168	Dinset Single	Ar/Mix	10 bar	G3/8"	G1/4"
14096169	Dinset Single	Hydrogen/methan	10 bar	G3/8"LH	G3/8"LH
14096172	Dinset Single	N ₂ /H ₂	10 bar	G3/8"LH	G3/8"LH
14096170	Dinset Single	Ar/H ₂	32 l/min Gauge	G3/8"	G3/8"LH
14096171	Dinset Single	N ₂ /H ₂	50 l/min Gauge	G3/8"LH	G3/8"LH
0785016	Dinset Single	O, D, N, CO ₂	10 bar	G3/8"	G3/8"

DINSET FLOW



Single units for shielding gases with flow-meter and dosing valve are giving and showing exact flow-rate.

Art. Nr.	Type	Gas	Outlet range	Inlet	Outlet
14096173	Dinset Flow	N ₂ /H ₂	50 l/min Flow	G3/8"LH	G3/8"LH
14096163	Dinset Flow	Ar/Mix	30 l/min Flow	G3/8"	G1/4"
14096164	Dinset Flow	Ar/Mix	15 l/min Flow	G3/8"	G1/4"
0785017	Dinset Flow	Ar/Mix	30 l/min Flow	G3/8"	G3/8"

DINSET DOUBLE UNITS



Double units are useful for oxy-fuel applications as well as for arc welding and plasma applications including root shielding. For other variants please ask your GCE partner.

Art. Nr.	Type	Gas	Outlet range	Inlet	Outlet
14096153	Dinset Double	Oxy-Ace	see single units	G3/8"	G1/4", G3/8"LH
14096154	Dinset Double	Oxy-Prop	see single units	G3/8"	G1/4", G3/8"LH
14096155	Dinset Double	Oxy-Ar	see single units	G3/8"	2x G1/4"
14096156	Dinset Double	Ar-Ar	see single units	G3/8"	2x G1/4"
0785015	Dinset Double	Oxy-Ace	see single units	G3/8"	G3/8", G3/8"LH

DINSET TRIPLE UNITS



Triple units designed mainly for oxygen cutting, flame applications and other welding and cutting technologies. But chosen combination of outlet points can be used for gas supply in all industrial processes. For other variants please ask your GCE partner

Art. Nr.	Type	Gas	Outlet range	Inlet	Outlet
14096157	Dinset Triple	Ar-Oxy-Ace	see single units	G3/8"	G1/4", G1/4", G3/8"LH
14096158	Dinset Triple	Oxy-Oxy-Ace	see single units	G3/8"	G1/4", G1/4", G3/8"LH
14096159	Dinset Triple	Oxy-Oxy-Prop	see single units	G3/8"	G1/4", G1/4", G3/8"LH
14096160	Dinset Triple	Oxy-Oxy-Ar	see single units	G3/8"	3x G1/4"
14096161	Dinset Triple	Oxy-Ar-Ar	see single units	G3/8"	3x G1/4"
14096162	Dinset Triple	Ar-Ar-Ar	see single units	G3/8"	3x G1/4"

SPARE PARTS FOR DINSET OUTLET POINTS

DINLINE AND DINFLOW REGULATORS



Art. Nr.	Description	Gas	Outlet range	Inlet	Outlet
0783071	Dinline	Ar, N ₂ , Compr. Air	10 bar	G3/8"	G1/4"
0783070	Dinline	Oxygen	10 bar	G3/8"	G1/4"
0783073	Dinline	Acetylene	1,5 bar	G3/8"LH	G3/8"LH
0783080	Dinline	Hydrogen/methan	10 bar	G3/8"LH	G3/8"LH
0783077	Dinline	Propane	2,5 bar	G3/8"LH	G3/8"LH
0783072	Dinline	Ar/Mix	32 l/min gauge	G3/8"	G1/4"
0783076	Dinline	N ₂ /H ₂	50 l/min gauge	G3/8"LH	G3/8"LH
0783081	Dinline	Ar/H ₂	32 l/min gauge	G3/8"LH	G3/8"LH
0783078	Dinflow	N ₂ /H ₂	50 l/min flow-meter	G3/8"LH	G3/8"LH
0783074	Dinflow	Ar/Mix	30 l/min flow-meter	G3/8"	G1/4"
0783075	Dinflow	Ar/Mix	15 l/min flow-meter	G3/8"	G1/4"

BALL VALVES



Carbon steel Zn-coated, V-profile, PN40, DN10

Art. Nr.	Description	Gas
14016153	with elbow	Oxygen
14016154	with elbow	All fuel gases
14016155	with elbow	Other gases

WALL BRACKETS



Art. Nr.	Description
14016145P	for single unit
14016146P	for double unit
14016147P	for triple unit

BRAZING AND WELDING NIPPLES, NUTS

Connecting nipples, outer diameter 12 mm.

Art. Nr.	Type	Material
14018004P	Welding nipple G3/8"	Carbon steel
4A19020P	Welding nipple G3/8"	Stainless steel
14018024P	Brazing nipple G3/8"	Brass
548200018932P	Swivel nut G3/8"LH	Brass
548200018934P	Swivel nut G3/8"	Brass

TYPICAL APPLICATION

Installation of Dinset with flashback arrestors FR50 for flame welding and cutting.

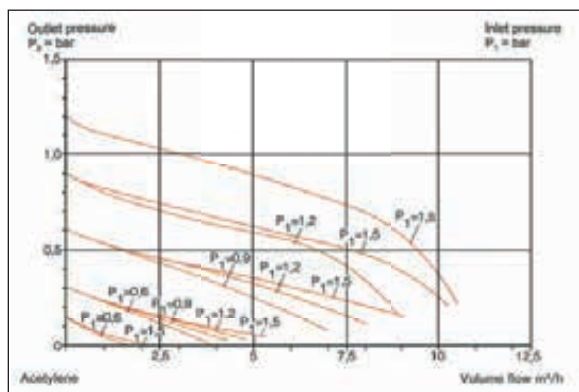


UNISET

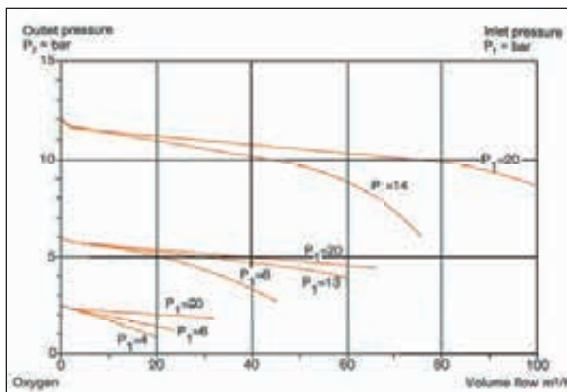
UNISET are new outlet points in GCE proposal for industrial gases service. They were created with using of long term experience with production of central gas supply systems. Variants for oxygen and fuel gases are equipped with three function flashback arrestors (FBA). There are two design types for shielding gases. First of them consists of flow-gauge showing flow-rate adjusted by pressure regulator. The second one is based on flow-meter with dosing valve supplying and indicating exact flow-rate. Components of entire range are mounted on stabile steel wall bracket ensuring fast and safety installation. Gas supply can be easy connected to application with outlet hose nipples.

Oxy/Inert variant is ready for oxygen service and can be used also for argon, nitrogen, helium carbon dioxide, compressed air and their mixtures. Special oxygen variant as well as acetylene and propane variants contain FBA. Fuel gas variant is designed for hydrogen, methane and natural gas. Unisets for shielding gases (Ar and Ar-mixtures) show adjusted flow-rate using either pressure gauge with flow-scale or flow-meter. Special twin-variant enable connection of two welding generators at one outlet pipe. This can be used also for combination of welding and root shielding with identical gas. Flow variant for N_2/H_2 and Ar/H_2 with outlet capacity of 50 l/min is optimal for root shielding application.

FLOW CAPACITY: ACETYLENE

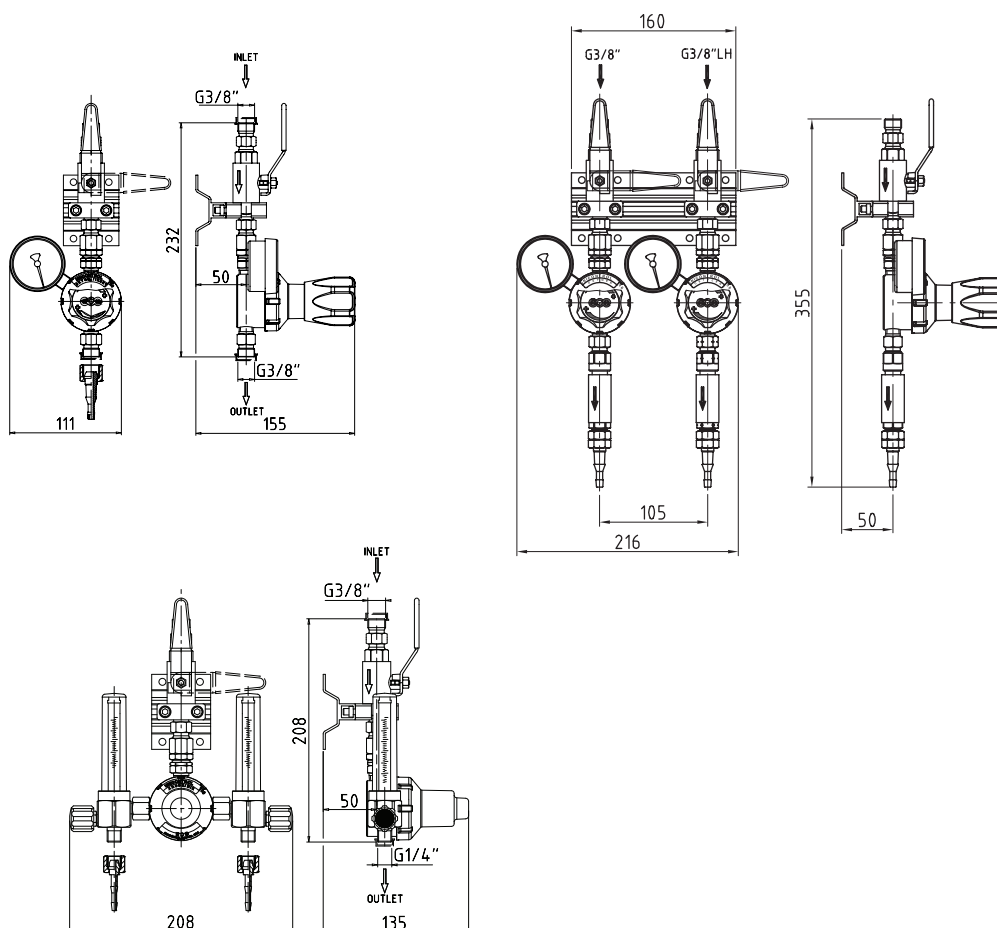


FLOW CAPACITY: OXYGEN



TECHNICAL DATA

Regulator body and bonnet	Brass	Wall bracket	Steel Zn-coated
Diaphragm	EPDM, NBR	Maximal inlet pressure	30 bar Oxygen
Seat sealing	PA, Chloroprene	Maximal inlet pressure	40 bar Other gases
Connectors & fittings	Brass	Temperature range	from -20 °C to 60 °C



UNISSET SINGLE UNITS

Single units are prepared for all technical gases and can be used for all industrial processes.



Art. Nr.	Type	Gas	Outlet range	Inlet	Outlet
0768156	Uniset Single	Oxy/Inert	2,5 bar	G3/8"	G3/8" + hose nipple 6,3-8 mm
0768157	Uniset Single	Oxy/Inert	5 bar	G3/8"	G3/8" + hose nipple 6,3-8 mm
0768158	Uniset Single	Oxy/Inert	10 bar	G3/8"	G3/8" + hose nipple 6,3-8 mm
0768109	Uniset Single	Oxy/Inert	16 bar	G3/8"	G3/8" + hose nipple 6,3-8 mm
0768210	Uniset Single	Inert/Inert	40 bar	G1/2"	G3/8" + hose nipple 6,3-8 mm
0768108	Uniset Single	Oxygen	10 bar FBA	G3/8"	G3/8" + hose nipple 6,3-8 mm
0768106	Uniset Single	Acetylene	1,5 bar FBA	G3/8"LH	G3/8"LH + hose nipple 6,3-8 mm
0768107	Uniset Single	Propane	2,5 bar FBA	G3/8"LH	G3/8"LH + hose nipple 6,3-8 mm
0768190	Uniset Single	Hydrogen/methan	16 bar	G3/8"LH	G3/8"LH + hose nipple 6,3-8 mm
0768103	Uniset Single	Ar/Mix	30 l/min Gauge	G3/8"	G1/4" + hose nipple 4-6,3 mm

UNISSET FLOW

Single units for shielding gases with flow-meter and dosing valve are giving and showing exact flow-rate.



Art. Nr.	Type	Gas	Outlet range	Inlet	Outlet
0768104	Uniset Flow	Ar/Mix	15 l/min Flow	G3/8"	G1/4" + hose nipple 4-6,3 mm
0768155	Uniset Flow	Ar/Mix	30 l/min Flow	G3/8"	G1/4" + hose nipple 4-6,3 mm
0768260	Uniset Flow	N ₂ /H ₂ , Ar/H ₂	32 l/min Flow	G3/8"LH	G3/8"LH + hose nipple 6,3-8 mm
0768105	Uniset Twinflow	Ar/Mix-Ar/Mix	30 l/min Flow	G3/8"	2x G1/4" + 2x hose nipple 4-6,3 mm

UNISSET DOUBLE UNITS

Double units are useful for oxy-fuel applications as well as for arc welding and plasma applications including root shielding. Other gas combination are on request.



Art. Nr.	Type	Gas	Outlet range	Inlet, Outlet
0768250	Uniset Double	Oxy - Ace	10 bar - 1,5 bar FBA	see single units
0768240	Uniset Double	Oxy - Prop	10 bar - 2,5 bar FBA	see single units

UNISSET SPARE PARTS, FLOW-METERS

Flow-meters as a spare parts but can be used also for other applications.

Art. Nr.	Type	Gas	Outlet range	Inlet	Outlet
0768170	Flowmeter	Ar/Mix	30 l/min	G3/8"	hose nipple 6,3 mm
0768180	Flowmeter	Ar/Mix	15 l/min	G3/8"	hose nipple 6,3 mm

BRAZING AND WELDING NIPPLES, NUTS

Connecting nipples, outer diameter 12 mm.



Art. Nr.	Type	Material
14018004P	Welding nipple G3/8"	Carbon steel
4A19020P	Welding nipple G3/8"	Stainless steel
14018024P	Brazing nipple G3/8"	Brass
548200018932P	Swivel nut G3/8"LH	Brass
548200018934P	Swivel nut G3/8"	Brass

UNISET+

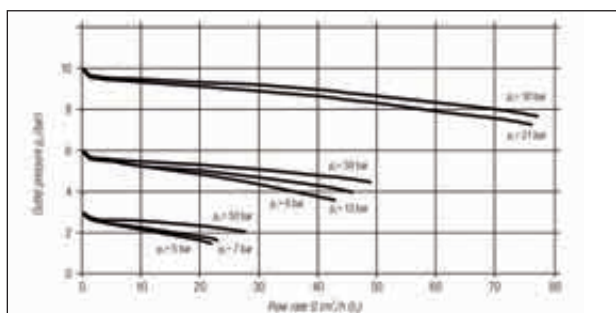
UNISET+ outlet points are an innovation in the field of central gas supply in deed. Excellent protection, given by the external steel cover, is combined with excellent look and easy assembly. Their high precision gives the possibility to use them with any industrial application.

UNISET+ outlet points are based on inlet ball valve and line pressure regulator. All variants include inlet brazing socket for 8 mm tube and outlet hose nipple. Oxygen, acetylene and fuel gas version contain also pressure gauge and outlet safety device MV93. MV93 is flashback arrestor protecting pipe works and gas source against flame coming from application in case of safety issue. There are two types for shielding gases (Ar, Ar/CO₂ and Ar/O₂ mixtures). First of them consists of flow-gauge showing flow-rate adjusted by pressure regulator. The second one is based on flow-meter with dosing valve giving and showing exact flow-rate.

UNISET+ outlet points are also called „Easy Work“ because of fast installation and easy handling. They can be mounted in less than 15 minutes, using appropriate tools.

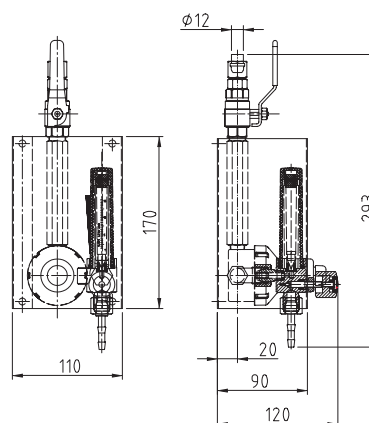
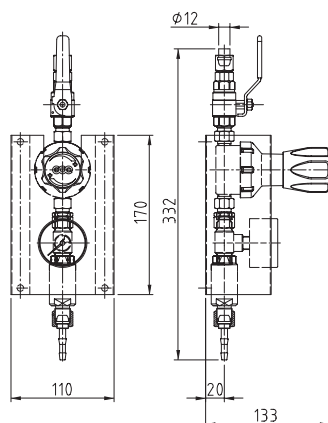
Maintenance operation thus makes very simply to be executed by just removing the metal cover, fully independent from the internal parts.

FLOW CAPACITY: OXYGEN



TECHNICAL DATA

Regulator body and bonnet	Brass, Zn alloy
Diaphragm	EPDM, NBR
Seat sealing	PA, Chloroprene
Connectors & fittings	Brass
Cover	Stainless steel
Flashback arrestor	Brass Ni-coated
Maximal inlet pressure	30 bar Oxygen
Maximal inlet pressure	40 bar Inert gases
Temperature range	from -20 °C to 60 °C



UNISET+



TYPICAL APPLICATION:

welding, cutting and allied processes

Art. Nr.	Gas	Outlet range	Inlet	Outlet
CE14000	Oxygen	0-10 bar	G3/8"	G3/8"
CE14100	Acetylene	0-1,5 bar	G3/8"	G3/8"LH
CE14105	Hydrogen/methan/LPG	0-4 bar	G3/8"	G3/8"LH
CE14200	Shielding gas	0-32 l/min Gauge	G3/8"	G3/8"
CE14250	Shielding gas	0-30 l/min Flow-meter	G3/8"	G3/8"
CE14300	Inert gases	0-10 bar	G3/8"	G3/8"

HF-SET

HF-set are outlet points for high flow applications. There are originally prepared for installation of oxygen cutting machines but because of their high flow capacity they can be used for all industrial processes. Outlet points are based on two regulators. S100 regulator is prepared for oxygen, acetylene and propane (this can be also used for natural gas). Maximal flow capacity of S100 regulator is 100 Nm³/h for oxygen and 20 Nm³/h for fuel gases. Optionally can be added flashback arrestor GVA 90 eventually GVO 90. S200 regulator is designed for oxygen and has maximal flow capacity 200 Nm³/h. Maximal inlet pressure of HF-set outlet points is 30 bar for Oxygen and 40 bar for other industrial gases.

HF S100/S200

Individual high-capacity outlet points for various industrial oxy-fuel applications. There are versions for oxygen with S100 or S200 regulators, version for acetylene and for propane, both with S100 (BG20) regulator. Products can be equipped with flashback arrestor (FBA) GVO90 or GVA90.

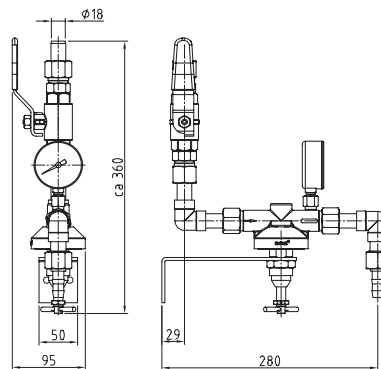
Art. Nr.	Description	Flow capacity	Outlet pressure	Inlet	Outlet
14016242	Oxygen S100	100 m ³ /h	10 bar	G3/4"	G3/4", ø12,5
0768195	Oxygen S100	100 m ³ /h	16 bar	G3/4"	G3/4", ø12,5
0768086	Oxygen S200	200 m ³ /h	15 bar	G3/4"	G3/4", ø12,5
0768087	Oxygen S100 + FBA	100 m ³ /h	10 bar	G3/4"	G1/2", ø11
14016243	Acetylene S100 (BG20)	20 m ³ /h	1,5 bar	G1/2"LH	G1/2" LH, ø11
14016244	Propane S100 (BG20)	20 m ³ /h	4 bar	G1/2"LH	G1/2" LH, ø11
0768088	Propane S100 (BG20) + FBA	20 m ³ /h	4 bar	G1/2"LH	G1/2" LH, ø11



Type S200



Type S100



HF TRIPLE S100



Three outlet points with S100 regulators mounted at the stable wall bracket. Outlets for heating oxygen as well as for fuel gas contain three function flashback arrestor GVO90 and GVA90.

Art. Nr.	Description
14016180	S 100 triple unit oxy/acetylene
14016181	S 100 triple unit oxy/propane

TECHNICAL DATA - MAX. FLOW CAPACITY

Cutting oxygen	100 m ³ /h
Heating oxygen	100 m ³ /h
Fuel gas	20 m ³ /h

HF TRIPLE S200



This triple outlet points are based on S200 regulator for cutting oxygen. Heating oxygen and fuel gas are supplied by S100 regulators, both with twin-connected three function flashback arrestor GVO90 and GVA90.

Art. Nr.	Description
14016182	S 200 triple unit oxy/acetylene
14016183	S 200 triple unit oxy/propane

TECHNICAL DATA - MAX. FLOW CAPACITY

Cutting oxygen	200 m ³ /h
Heating oxygen	100 m ³ /h
Fuel gas	20 m ³ /h

These Point-of-use systems are designed for high performing applications, i.e. machine cutting and automatized heating and similar applications, where standard point-of-use stations do not provide sufficient capacity and flow and where it is not necessary to regulate gas pressure at the outlet of the pipeworks.

HF BV, BALL VALVE UNIT



For compressed gases. Inlet: G 3/4" swivel nut with brazing nipple, diameter 19 mm. Outlet: G 3/4" swivel nut with hose nipples, 12,5 and 16 mm.

Art. Nr.	Type	Gas, pressure	Inlet	Outlet
14016175	DN20 Ball valve unit	Oxy/Inert, 40 bar	G3/4" + brazing nipple 19 mm	G3/4" + hose nipples 12,5 mm and 16 mm

HF BV WITH FBA, BALL VALVE UNIT WITH FLASHBACK ARRESTOR



Consists of high performance multi functional safety device GVO 90/GVA 90 and ball valve DN 20, without regulator.

Art. Nr.	Type	Gas, pressure	Inlet	Outlet
14016176	DN20 Ball valve unit with GVO90	Oxygen, 20 bar	G3/4" + brazing nipple 19 mm	G1/2" + hose nipple 11 mm
14016178	DN20 Ball valve unit with GVA90	All fuel gases, 5 bar, 1,5 bar	G1/2" + brazing nipple 19 mm	G1/2"LH + hose nipple 11 mm

HF TWIN



Consists of 2 high performance multi functional safety devices GVO 90/GVA 90 and ball valve DN 20, without regulator.

Art. Nr.	Type	Gas, pressure	Inlet	Outlet
14016177	DN20 Ball valve unit with twin GVO90	Oxygen, 20 bar	G3/4" + hose nipple 12,5 mm	G3/4" + hose nipple 16 mm
14016179	DN20 Ball valve unit with twin GVA90	All fuel gases, 5 bar, 1,5 bar	G3/4" + hose nipple 12,5 mm	G3/4"LH + hose nipple 16 mm
0764926	Twin GVO90 unit	Oxygen, 20 bar	G3/4" + hose nipple 12,5 mm	G3/4" + hose nipple 16 mm
0764927	Twin GVA90 unit	All fuel gases, 5 bar, 1,5 bar	G3/4"LH + hose nipple 12,5 mm	G3/4"LH + hose nipple 16 mm



ACCESSORIES

GGP 200 - GAS PREHEATER



19008004



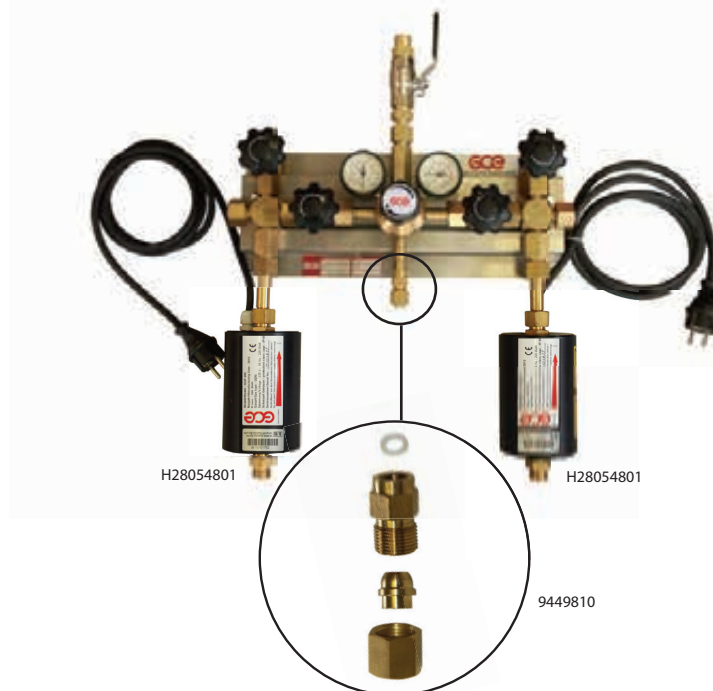
H28054801

Inlet pressure up to 300 bar, for inert gases. The expansion of high compressed gases i.e. CO₂ and argon CO₂ mixtures creates cold in regulators. This could require a gas preheater to prevent freezing of the pressure regulator and other components of gas manifold. Using of preheater is recommended for higher stability of gas flow in central gas supply systems. GGP 200 is reliable CE- marked product.

Art. Nr.	Description	Gas, Pressure	Inlet	Outlet
19008004	GGP 200	Oxygen / Inert, 300 bar	W21,8x1/14"F	W21,8x1/14"M
H28054801	GGP 200	Oxygen / Inert, 300 bar	W21,8x1/14"M	W21,8x1/14"F

TECHNICAL DATA

Power supply	230 V - 50 Hz	Safety switch	80°C, +/-5°C
Heating power	200 W	Outer diameter	90 mm
Connecting plug	IP 44 with 2 m cable	Lenght	aprox 150 mm
Protection class	IP 44	Weight	aprox 2,3 kg
Max. working temperature	40°C, +/-3°C		



H28054801

9449810

OUTLET CONNECTIONS



0764896

9449810

Purge valve blow-out tube for M70line and M400line manifolds. Inlet connection with sleeve nut, W21,8x1/14". UC500 Pressure relieve valve outlet should be mounted at MM70 Line manifolds to be connected with evacuating pipe.

Art. Nr.	Description
0764896	Purge valve outlet W21,8x1/14"
9449810	UC500 pressure relieve valve outlet



Purge valve with outlet connection mounted on X-block

FLASHBACK ARRESTORS FOR CYLINDER CONSUMPTION OR FROM OUTLET POINTS



Safety device (flashback arrester) for regulators.

Art. Nr.	Type	Gas	Inlet/Outlet	Max. pressure	Max. flow rate
14008400	GVO 10	Oxygen	G1/4"	15 bar	32,6 Nm ³ /h
14008401	GVO 10	Oxygen	G3/8"	15 bar	32,6 Nm ³ /h
14008402	GVA 10	All fuel gases	G3/8"LH	*	7,6 Nm ³ /h

Attention: Please obtain the regular inspection for safety devices. Note the national laws.

Flow rate values are valid for compressed air.

* Acetylene 1,5 bar, Hydrogen 4 bar, Methane, Propane, Ethylene 5 bar

HIGH PERFORMANCE MULTI FUNCTIONAL FLASHBACK ARRESTOR FOR MANIFOLD CONNECTION OR FOR HIGH FLOW OUTLET POINTS



Art. Nr.	Type	Gas	Inlet/Outlet	Max. pressure	Max. flow rate
14008440	GVO 90	Oxygen	G3/8"	15 bar	54,7 Nm ³ /h
14008131	GVO 90	Oxygen	G1/2"	15 bar	54,7 Nm ³ /h
14008121	GVA 90	All fuel gases	G3/8"LH	*	13,2 Nm ³ /h
14008130	GVA 90	All fuel gases	G1/2"LH	*	13,2 Nm ³ /h
0764975	GVA 90	All fuel gases	G1/2"	*	13,2 Nm ³ /h

Attention: Please obtain the regular inspection for safety devices. Note the national laws.

Flow rate values are valid for compressed air.

* Acetylene 1,5 bar, Hydrogen 4 bar, Methane, Propane, Ethylene 5 bar

DEMAX/SIMAX - 3 FUNCTION MANIFOLD FLASHBACK ARRESTORS



The manifold (line) flashback arrestors of the SIMAX and DEMAX family are products specially designed to provide maximal flow rate with minimal pressure drop necessary for central gas manifolds or cylinder bundle supply systems. Enormous flow capacity without any compromising of safety is achieved by the splitting of massive gas flow into several sections protected by individual flame arresting units. Sintered stainless steel filters in every unit provide flame arresting function, each of them is fitted by reliable non-return valves and integrated thermal (melting) fuses. Individual units are arranged into compact clusters fitted by connection flanges allowing easy integration in to manifold pipelines.

Many other higher capacity variants (SIMAX 5/8...) are available on request.

To reach optimal performance and before choosing and purchasing GCE recommend consulting our experts who can give advice on your individual application.

Complies with EN730, German BAM institute tested.

SIMAX / DEMAX offers following safety functions:

- FA Sintered flame arresting element
- NV Non return valve to prevent reverse flow of gases
- TV Thermal trip device, activated by heat to permanently cut off the gas supply.

Art. Nr.	Gas	Description	Function	Max pressure	Connection thread	Weight
0764433	OXY	FBA DEMAX-5 Oxy G1/2" RH	NV, FA, TV	15 bar	G1/2"RH	1,45 kg
0764432	FUEL	FBA DEMAX-5 Fuel G1/2" LH	NV, FA, TV	5 bar	G1/2"LH	1,45 kg
0764435	OXY	FBA SIMAX-3 Oxy G1" RH	NV, FA, TV	15 bar	G1"RH	3,55 kg
0764434	FUEL	FBA SIMAX-3 Fuel G1" LH	NV, FA, TV	5 bar	G1"RH	3,55 kg

GCE SAFE-GUARD-5



The latest innovation from GCE the SAFE-GUARD-5 offers the maximum level of protection required by EN730-1 to prevent dangerous flashbacks from reaching the regulator and cylinder supply sources.

FUNCTIONS

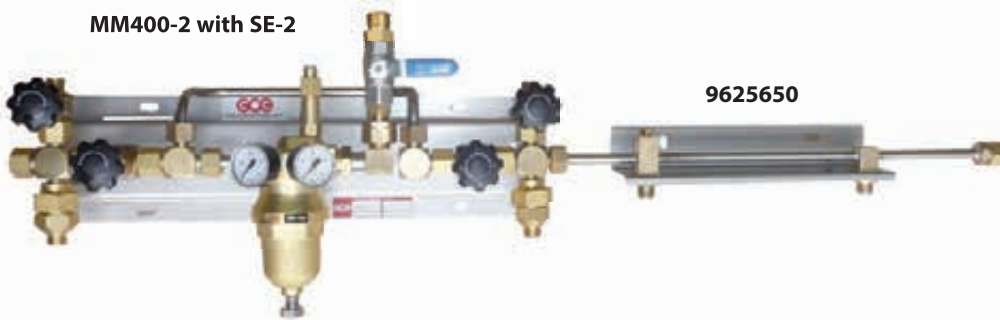
- Flame arresting element (FA)
- Non return valve (NV)
- Pressure sensitive cut off valve (PV)
- Temperature sensitive cut off valve (TV)
- Reset mechanism to clearly advise unit activation (RM)

Art. Nr.	Gas	Inlet connection	Max. pressure	Outlet connection
0764456	Fuel	G3/8" LH Female	A:1,5 bar; HPMYF:5 bar	G3/8" LH Male
0764457	Oxygen	G3/8" Female	10 bar	G3/8" Male
0764458	Oxygen	G1/4" Female	10 bar	G1/4" Male

APPLICATIONS AND VARIANTS

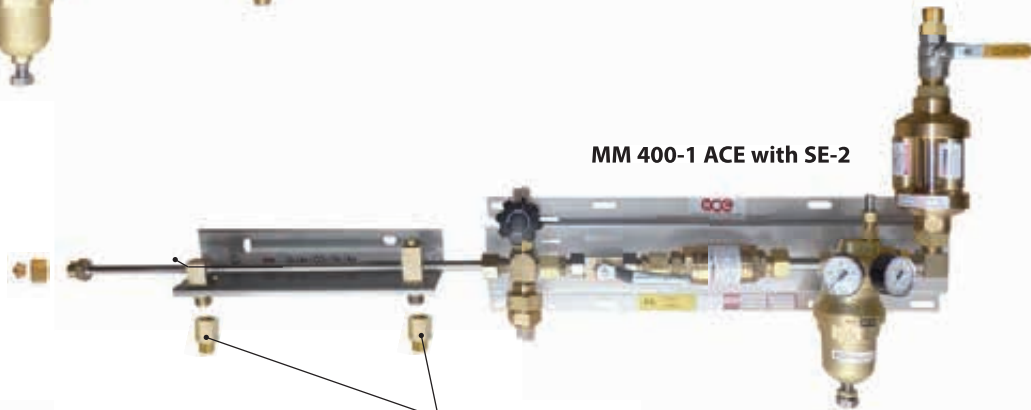
SE Line application examples

MM400-2 with SE-2



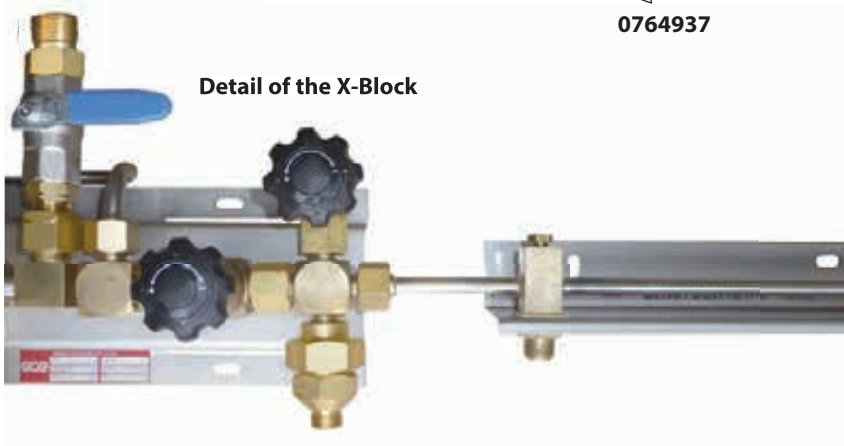
9625650

MM 400-1 ACE with SE-2



0764937

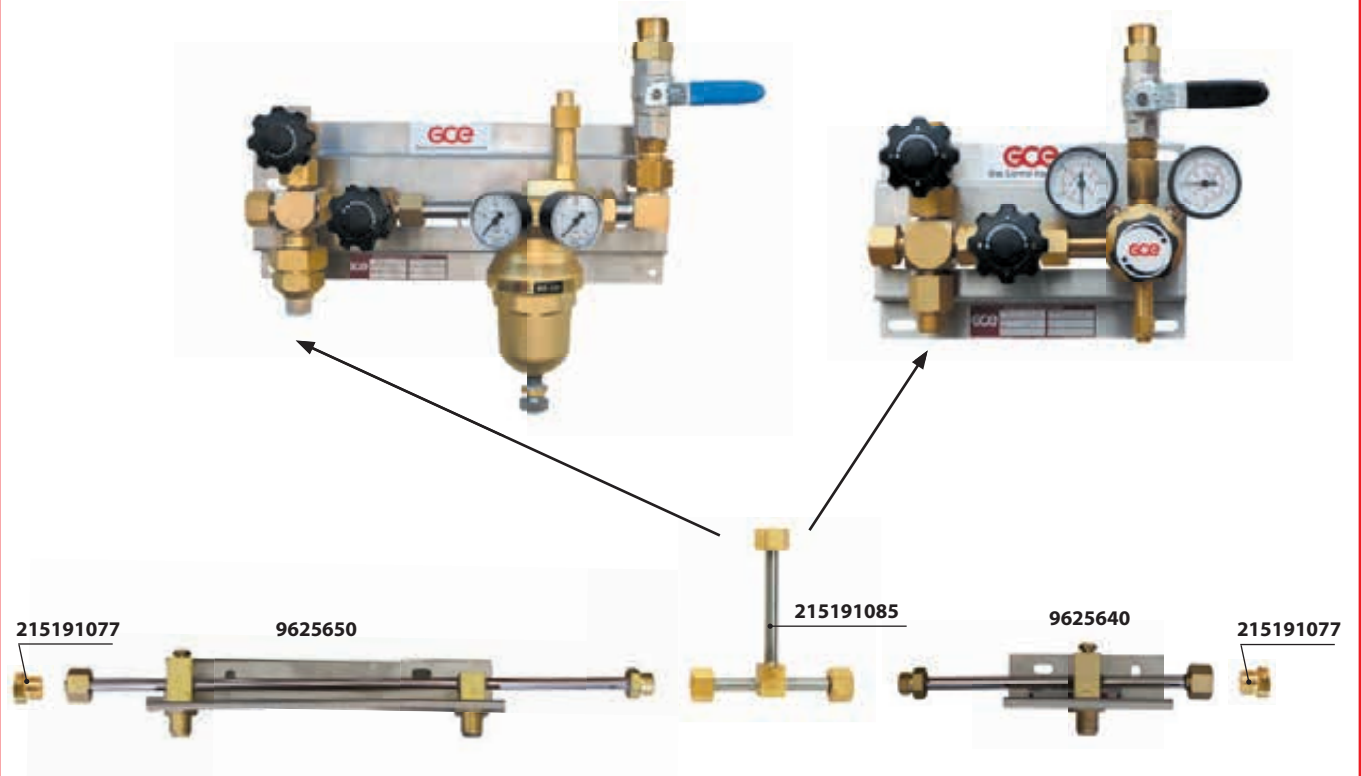
Detail of the X-Block



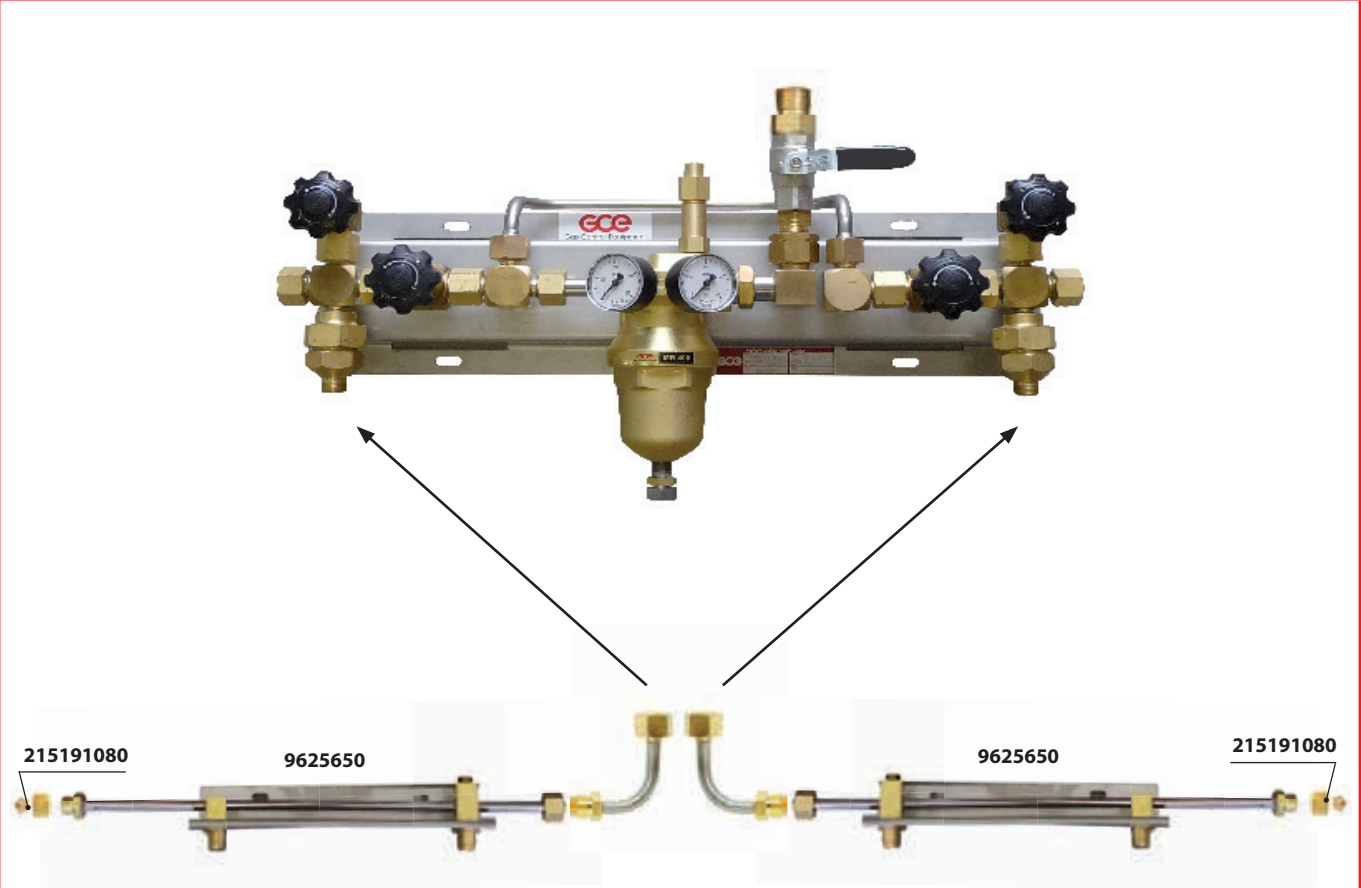
High pressure components of MM400 manifold



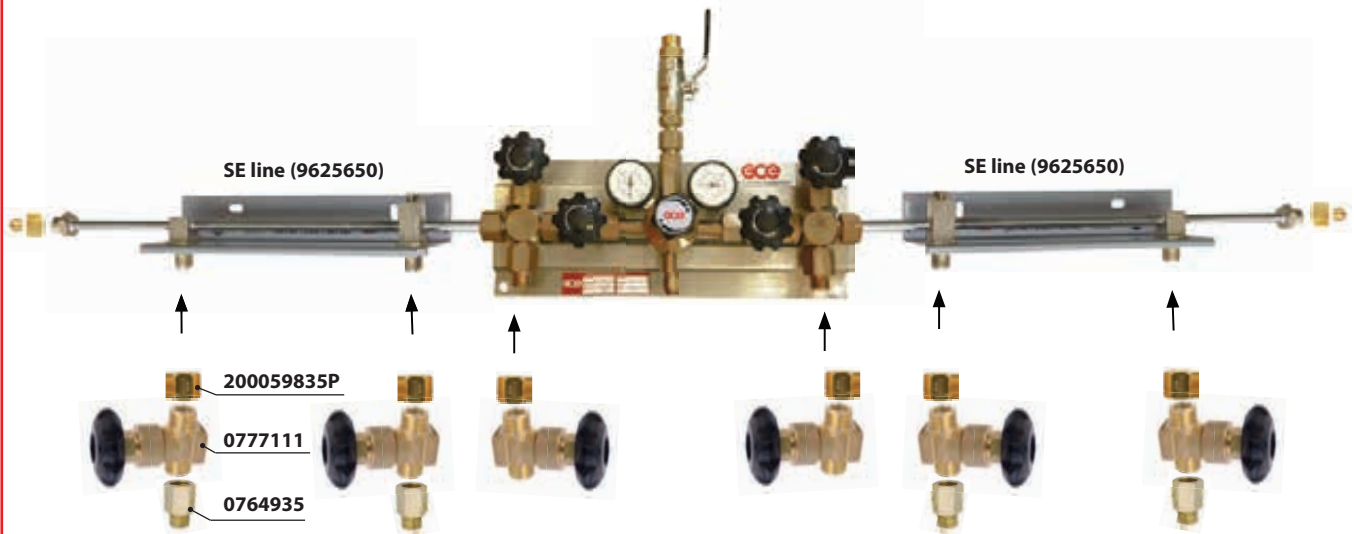
SE Line mounting examples with T-piece



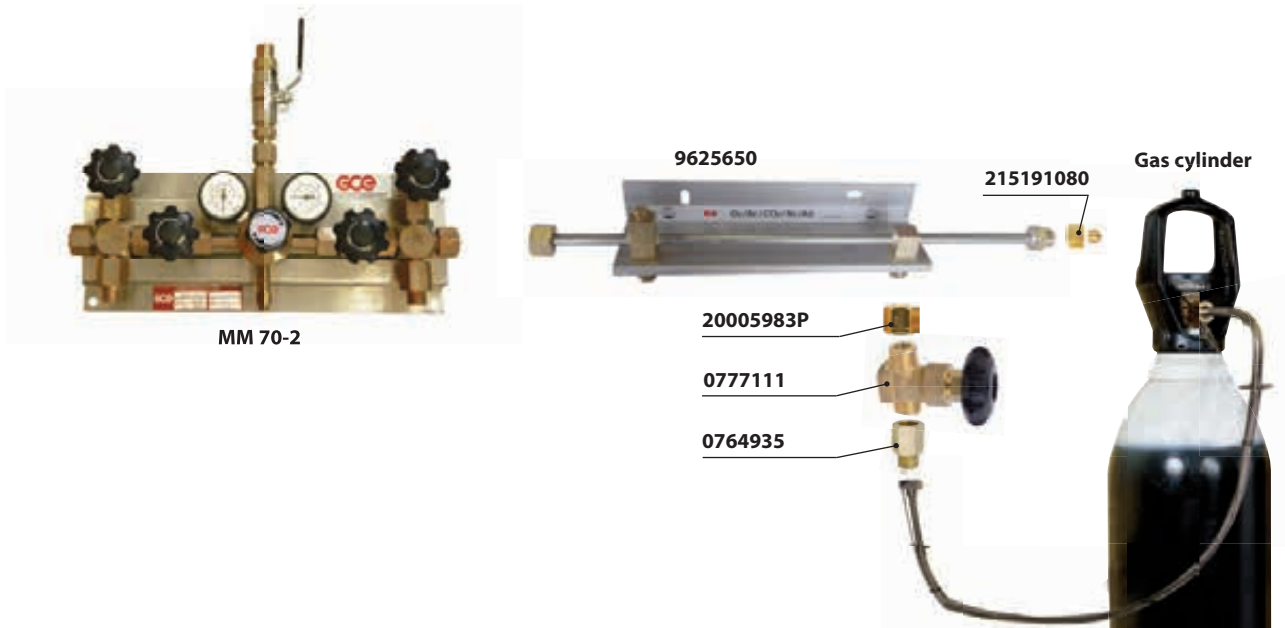
SE-Line mounting example with elbow



MM70-2 with SE-2



SE Line mounting

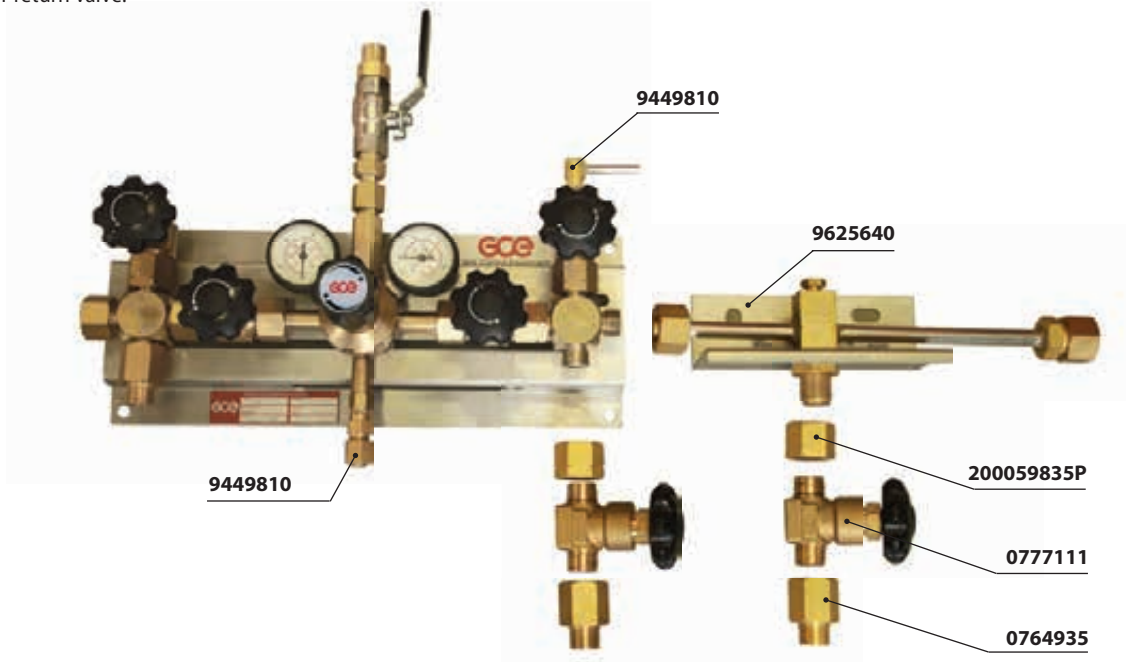


High pressure acetylene safety devices of MM400 manifold



MM70-2 Manifold application

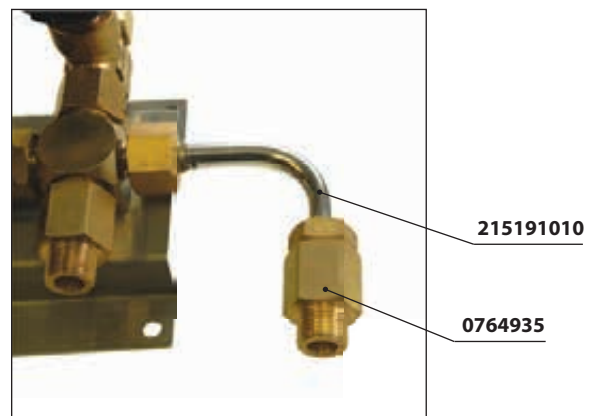
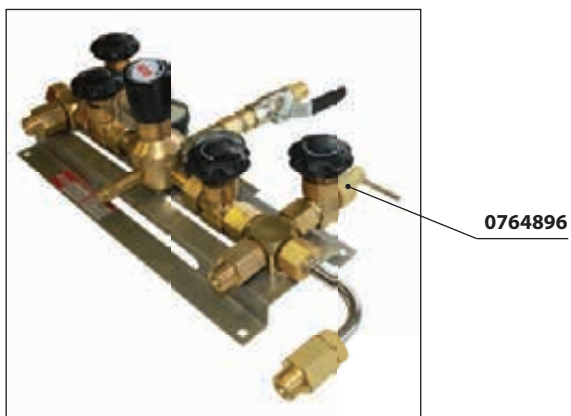
MM70-2 extended with pressure relief valve outlet, purge valve outlet. Right bank is extended for 2 cylinders with SE-1 and shut-off valve and non-return valve.



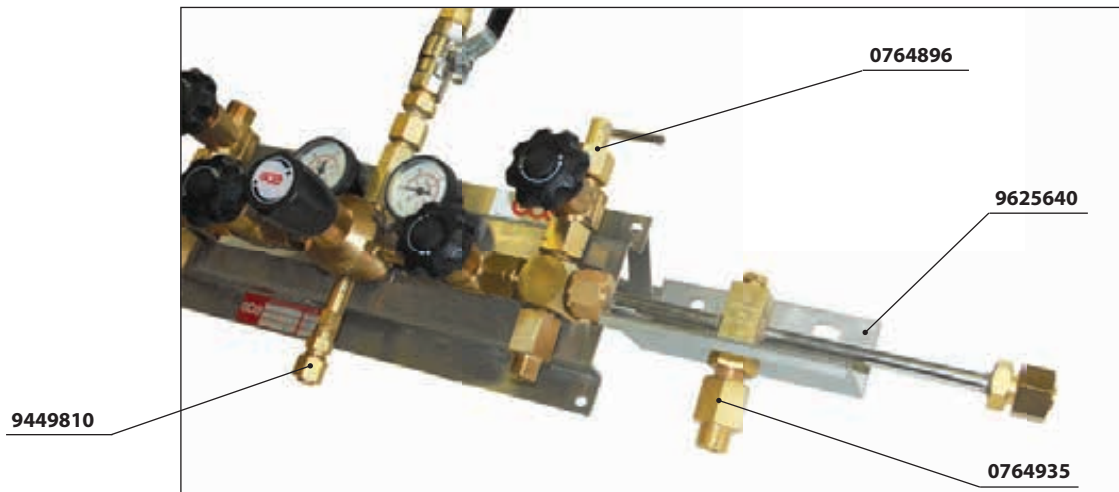
Relief valve outlet with brazing nipple



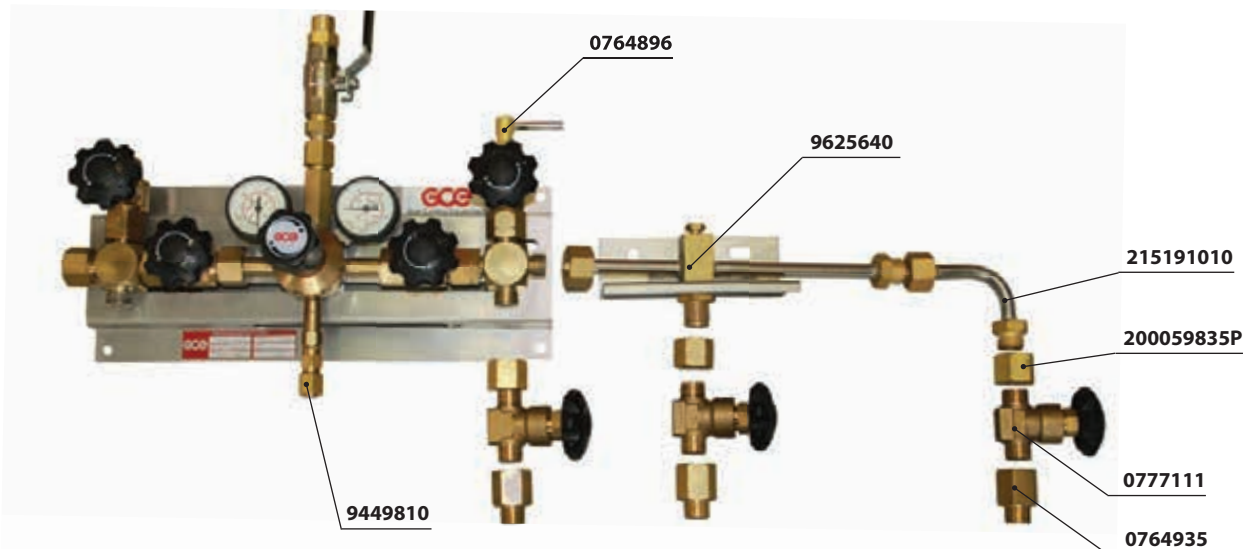
Simple extension for 2 cylinders with non-return valve



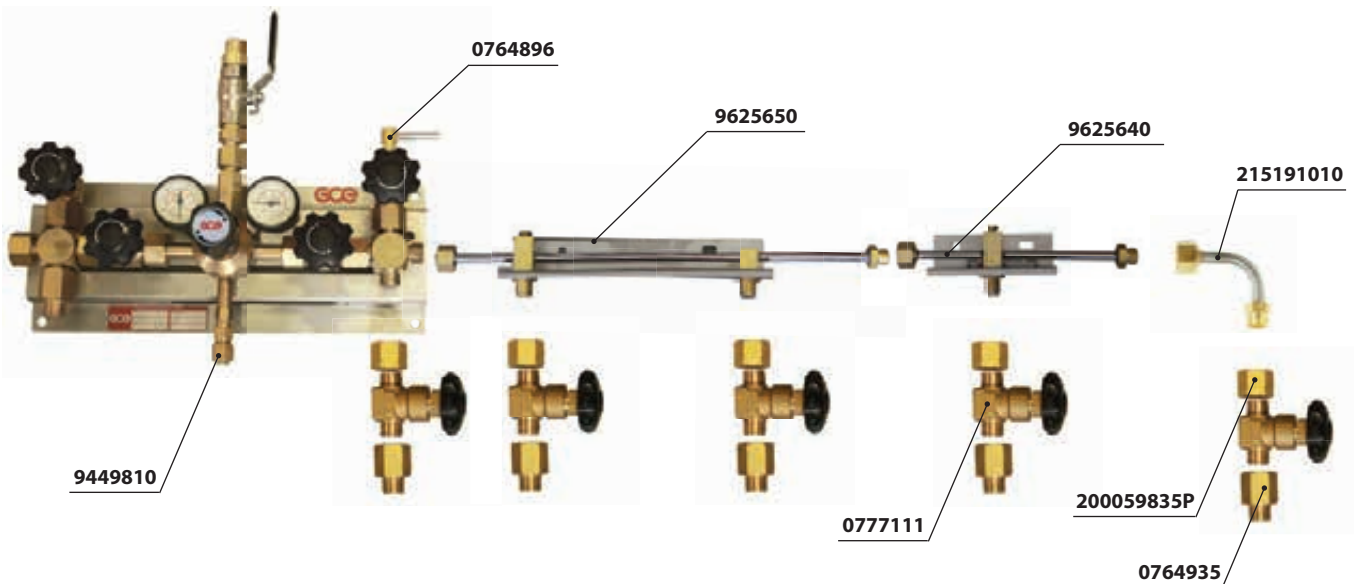
MM70-2 with right bank extended with SE-1 and non-return valve



MM70-2 with right bank extended for 3 cylinders with SE-1, shut-off valves and non-return valves



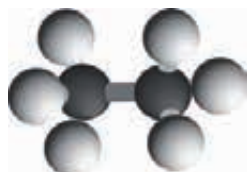
MM70-2 with right bank extended for 5 cylinders with SE-2, SE-1, shut-off valves and non-return valves



FUEL GASES



Methane (Natural Gas) - CH_4



Ethane - C_2H_6



Ethene (ethylene) - C_2H_4



Ethine (acetylene) - C_2H_2



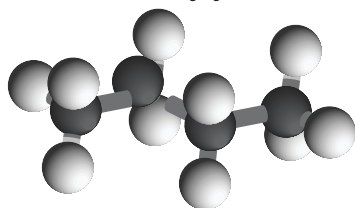
Propane - C_3H_8



Propene (propylene) - C_3H_6



Propyne (methylacetylene) - C_3H_4



n-Butane - C_4H_{10}

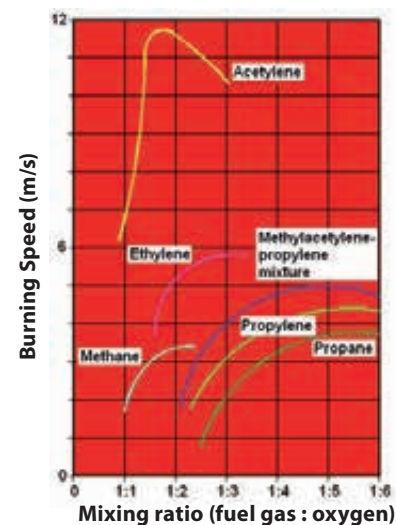
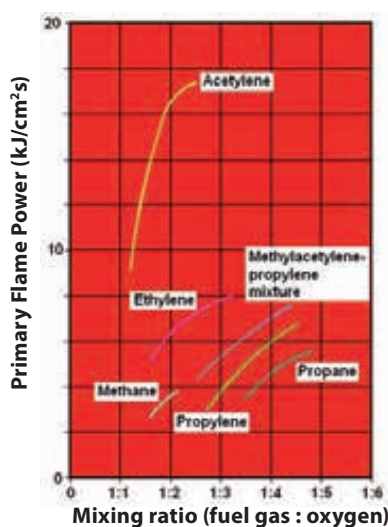
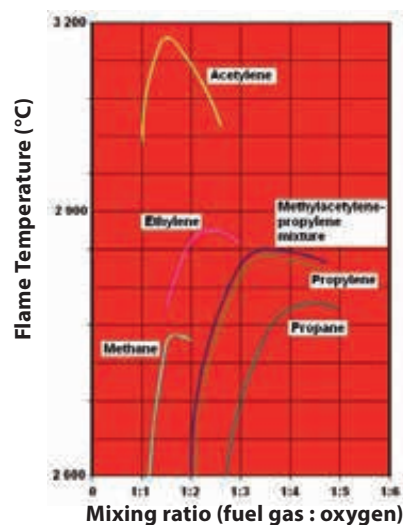


1-Butene - C_4H_8



Butadiene - C_4H_6

FUEL GASES PROPERTIES



FUEL GASES PROPERTIES

Fuel gas type			Heating power		Mixing ratio		Flame temperature (°C)		Density		Relative density to air 1 bar at 15°C
					V oxygen/ V fuel gas				1 bar, 15°C	liquid form	
			MJ/m ³	MJ/kg	N	M	N	M	kg/m ³	kg/l	
Hydrogen	H ₂	H	10,758	119,533	0,36	0,42	2 835	2 856	0,09	0,07	0,007
Methane	CH ₄	M	31,814	44,186	1,6	1,8	2 770	2 786	0,72	0,42	0,566
Acetylene	C ₂ H ₂	A	56,93	48,678	1,1	1,5	3 106	3 160	1,11	0,62	0,923
Ethylene	C ₂ H ₄	F	55,674	47,6	1,8	2,4	2 902	2 924	1,17	0,57	0,98
Propylene	C ₃ H ₆	Y	89,999	46,153	2,8	3,5	2 872	2 896	1,95	0,58	1,506
Propane	C ₃ H ₈	P	93,557	46,315	3,75	4,3	2 810	2 828	2,02	0,53	1,589

Glossary: V - volume, N - mixing ratio with neutral flame, M - mixing ratio with maximal flame temperature

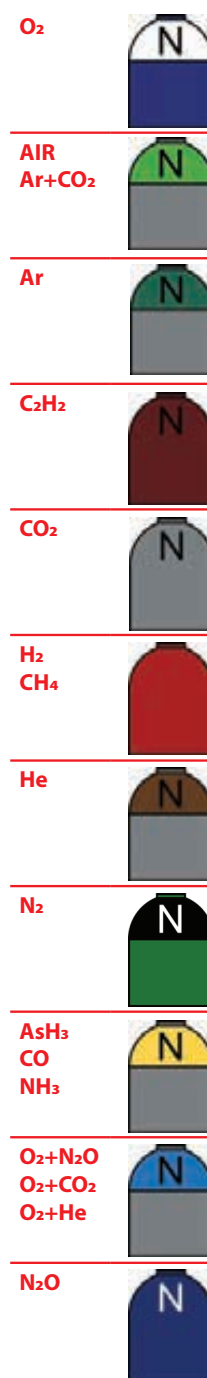
CYLINDER CONNECTION FOR WORKING PRESSURES UP TO 200 BAR

Gas/Country Standard	Sweden SS 2238	Czech Republic ČSN 078600	Germany DIN 477	France NF E 29-650	UK BS 341	Spain MIE-AP7	Italy UNI 11144
Oxygen	W21,8	W21,8	G3/4	SI22,91	G5/8	W22,91	W21,7
Acetylene	G3/4	Yoke	Yoke or M24x2LH	Yoke or W22,91LH	G5/8 LH	Yoke or W22,91LH	Yoke or G5/8LH
Argon	W24,32	W21,8	W21,8	SI21,7	G5/8	W21,7	W24,5
Nitrogen	W24,32	W24,32	W24,32	SI21,7	G5/8	W21,7	W21,7
Air	G5/8	G5/8	G5/8	SI30x1,75	G5/8	M30x1.75	W30
Hydrogen	W21,8LH	W21,8 LH	W21,8 LH	SI21,7LH	G5/8 LH	W21,7LH	W20 LH
Carbon dioxide	W21,8	G3/4	W21,8	SI21,7	W0,860	W21,7	W21,7

EXPLOSIBILITY

Fuel gas		Explosibility limit (%)		
			% of fuel gas in Oxygen	% of fuel gas in Air
Acetylene	C ₂ H ₂	High	93	80
		Low	2,5	2,5
Propane	C ₃ H ₈	High	45	9,5
		Low	2,2	2,2
Natural gas (Methan)	CH ₄	High	60	15
		Low	5	5
Hydrogen	H ₂	High	94	74,5
		Low	4	4

GAS CYLINDER IDENTIFICATION - COLOUR CODING ACCORDING TO EN 1089-3 FOR INDUSTRIAL GASES



MAXIMAL FLOW RATE OF ACETYLENE PER 40L OR 50L CYLINDER AT 15°C

Short-term consumption (max.10 min.)	max. 1 m ³ /hour	
For a 1 shift (approx. 8 hours)	max. 0,5 m ³ /hour	
Continuous consumption	max. 0,35 m ³ /hour	

CONVERSION OF PRESSURE UNITS

	bar	mbar	kPa	MPa	atm	psi
bar	1	1 × 10 ³	100	0,1	0,986	14,504
mbar	1 × 10 ⁻³	1	0,1	1 × 10 ⁻⁴	9,869 × 10 ⁻⁴	0,0145
kPa	1 × 10 ⁻²	10	1	1 × 10 ⁻³	9,869 × 10 ⁻³	0,145
MPa	10	1 × 10 ⁴	1 × 10 ³	1	9,869	145,038
atm	1,013	1013	1,013 × 10 ²	0,101	1	14,696
psi	0,0689	68,948	6,895	6,89 × 10 ⁻³	6,895 × 10 ⁻²	1

FLOW RATES CONVERSION COEFFICIENT

Test gas	Gas conversion coefficient (ISO 7291)								
	Air	Oxygen	Nitrogen	Argon	Hydrogen	Helium	Acetylene	LPG	CO ₂
Air	1	0,95	1,02	0,851	3,81	2,695	1,05	0,800	0,808
Nitrogen	0,983	0,93	1	0,837	3,75	2,65	1,03	0,784	0,792

Standard atmosphere at 23 °C and 1,013 bar (0,1013 MPa), ISO 554

NOTES

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NOTES

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DNV BUSINESS ASSURANCE MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 109396-2012-AQ-CZS-NA

This is to certify that the Management System of
GCE Holding AB

Källvattegatan, SE-200 21, Malmö, Sweden

has been found to conform to the standard:

ISO 9001:2008

This Certificate is valid for the following product or service ranges:

Design, production, sales and servicing of equipment for using of technical gases in industry. Pressure regulators, closing, combined and special valves, cutting, welding, heating and brazing torches, safety equipment, speciality torches, fittings, accessories for industrial purposes.

Initial Certification date:
28 February 1997

This Certificate is valid until:
28 February 2015

The audit has been performed under the supervision of
Evangelos Lavandzis
Lead Auditor



Place and date:
Hovik, 28 February 2012

for the Accredited Unit:
DET NORSKE VERITAS
CERTIFICATION AS, NORWAY

Bjorg Synnove Nesgard

Bjorg Synnove Nesgard
Management Representative



Certificate of conformity

We GCE, s.r.o., Žitkova 381, 58381 Chotěboř, Czech Republic confirm that our product range:

Central gas supply systems for industrial applications (CGS)

is developed and manufactured according to the valid and accepted international standards and in accordance with the sound technical engineering practice, especially with respect to following:

- The use of materials in the gas welded area which meets the gas type specific requirements
- Design and production procedures of the gas supply equipment meets the used pressure gas type specific requirements.
- Proper cleaning of all gas welded components for high pressure oxygen applications.
- Special cleaning procedures for high purity and ultrahigh purity gas application.
- All products go through a final functional and leak test.
- All products are packed according to the application to avoid inadmissible contamination.
- An applied quality assurance system according to ISO 9001:2008 is established.

We also confirm that product range:

Pressure regulators for CGS

is developed and manufactured according to ISO 728:2010. Gas welding equipment - Pressure regulators for manual systems used in welding, cutting and allied processes up to 300 bar.

We also confirm that product range:

Acetylene manifold systems

is developed and manufactured according to ISO 141: 4:1998. Gas welding equipment - Acetylene manifold systems for welding, cutting and allied processes - General requirements and according to ISO 15915:2013. Gas welding equipment - Acetylene manifold systems for welding, cutting and allied processes - Safety requirements in high-pressure devices.

The safety instructions of the product manual delivered with the goods have to be followed. This certificate confirms the conformity of a.m. European regulation.

Chotěboř, 17th June 2013

Jan Leszkow

Jan Leszkow
GCE
Quality department



Certificate of conformity Information about PED-directive (97/23/EC) related to GCE, s.r.o. products

We GCE, s.r.o., Žitkova 381, 58381 Chotěboř, Czech Republic, according to our risk analysis, confirm that our product range:

Central gas supply systems for industrial applications (CGS)

are produced according to the European Regulation below:

Regulation 97/23/EC of the European Parliament and the Council of 29th May 1997, Pressure Equipment Directive.

The safety instructions of the product manual delivered with the goods have to be followed. This certificate confirms the conformity of a.m. European regulation.

Chotěboř, 17th June 2013

Jan Leszkow

Jan Leszkow
GCE
Quality department



Certificate of conformity Information about ATEX-directive (94/9/EC) related to GCE, s.r.o. Central gas supply systems for industrial applications (CGS)

We GCE, s.r.o., Žitkova 381, 58381 Chotěboř, Czech Republic, according to our risk analysis, confirm that our product range:

Non electrical components for CGS

does not contain any own potential source of ignition and therefore are not subject to the European Regulation below:

Regulation 94/9/EC of the European Parliament and the Council of 23rd March 1994, Equipment intended for use in potentially explosive atmospheres (ATEX).

The safety instructions of the product manual delivered with the goods have to be followed.

Chotěboř, 17th June 2013

Jan Leszkow

Jan Leszkow
GCE
Quality department

GCE Group is one of the world's leading companies in the field of gas control equipment. The headquarters are in Malmö, Sweden, and the two major supply units are located in Europe and Asia. The company operates 15 subsidiaries around the world and employs more than 850 people. GCE Group includes four business areas –Cutting & Welding, Process Applications, Medical and High Purity. Today's product portfolio corresponds to a large variety of applications, from single pressure regulators and blowpipes for cutting and welding to sophisticated gas supply systems for medical and electronics industry applications.

