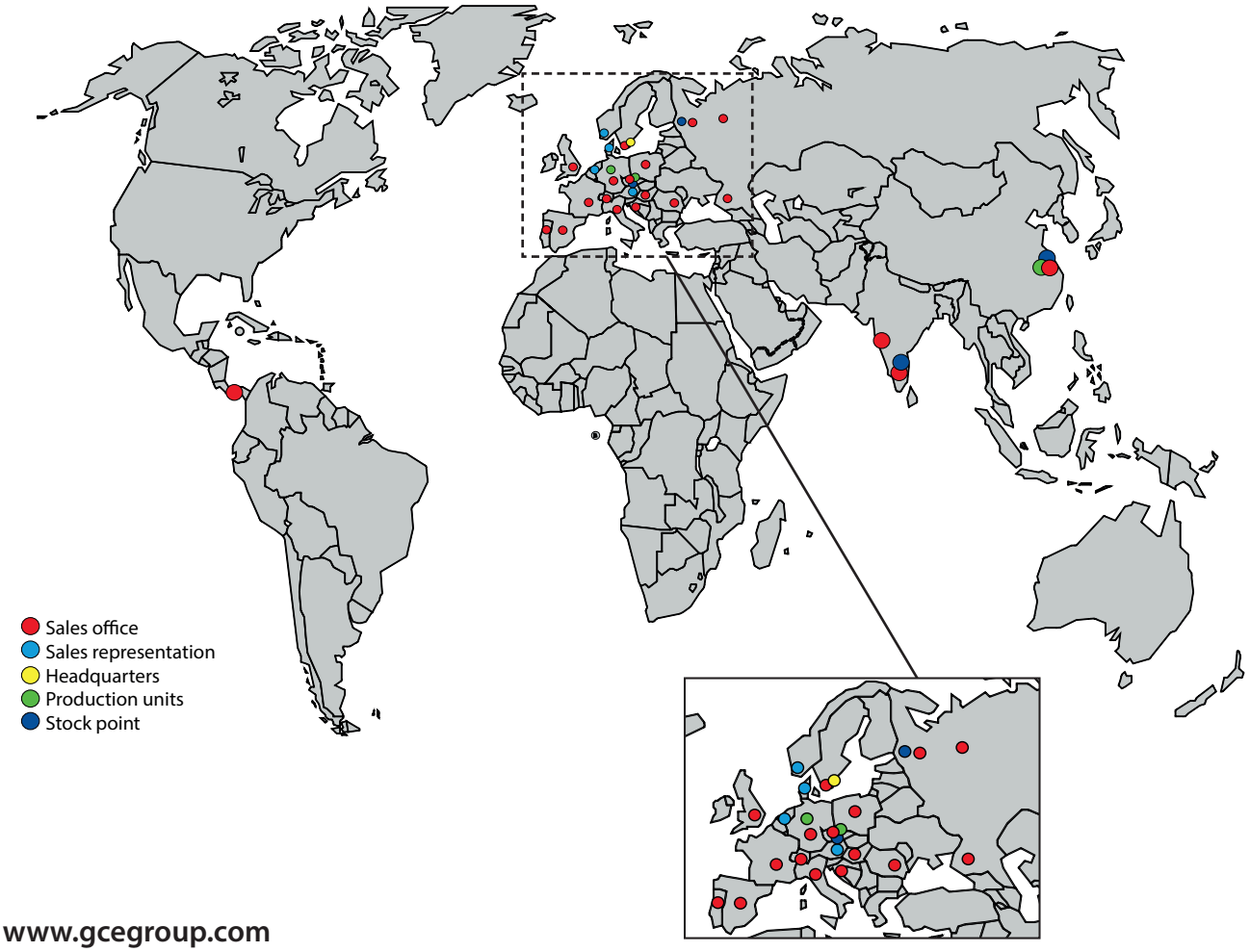
HEALTHCARE CATALOGUE

EDITION 1/2016

GCE
Gas Control Equipment

GCE WORLDWIDE



www.gcegroup.com

GCE OVERVIEW

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.

HISTORY

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.

A COMPLETE RANGE FOR HEALTHCARE

Medical gas equipment is at the heart of what we do at GCE Healthcare, we understand the need for high standard of safety, quality and reliability. We maintain a global quality management system and ensure that our products comply with applicable quality and regulatory standards, such as the Medical Device Directive 93/42/EEC, ISO 13845 and more.

GCE is proud of its team of experts, who are dedicated to providing leading solutions for our customers. We work with healthcare professionals and providers around the world, supporting them to meet the needs of their patients.

GCE Healthcare supplies oxygen therapy solutions to home oxygen providers who deliver healthcare services to patients at home. Many home oxygen providers count on our robust supply chain to deliver products to them when required.

Our warehouses in the United Kingdom, Germany, and Czech Republic hold stock of our different products ensuring that we are able to respond quickly to the requirements of our customers.

We are leaders in this very important field and offer a range of competitive and industry leading products that include;

- Portable Oxygen Concentrators
- Stationary Concentrators
- Medical Cylinder regulators
- Electronic and pneumatic gas conserving devices
- Suction pumps
- Associated accessories

CONTENTS

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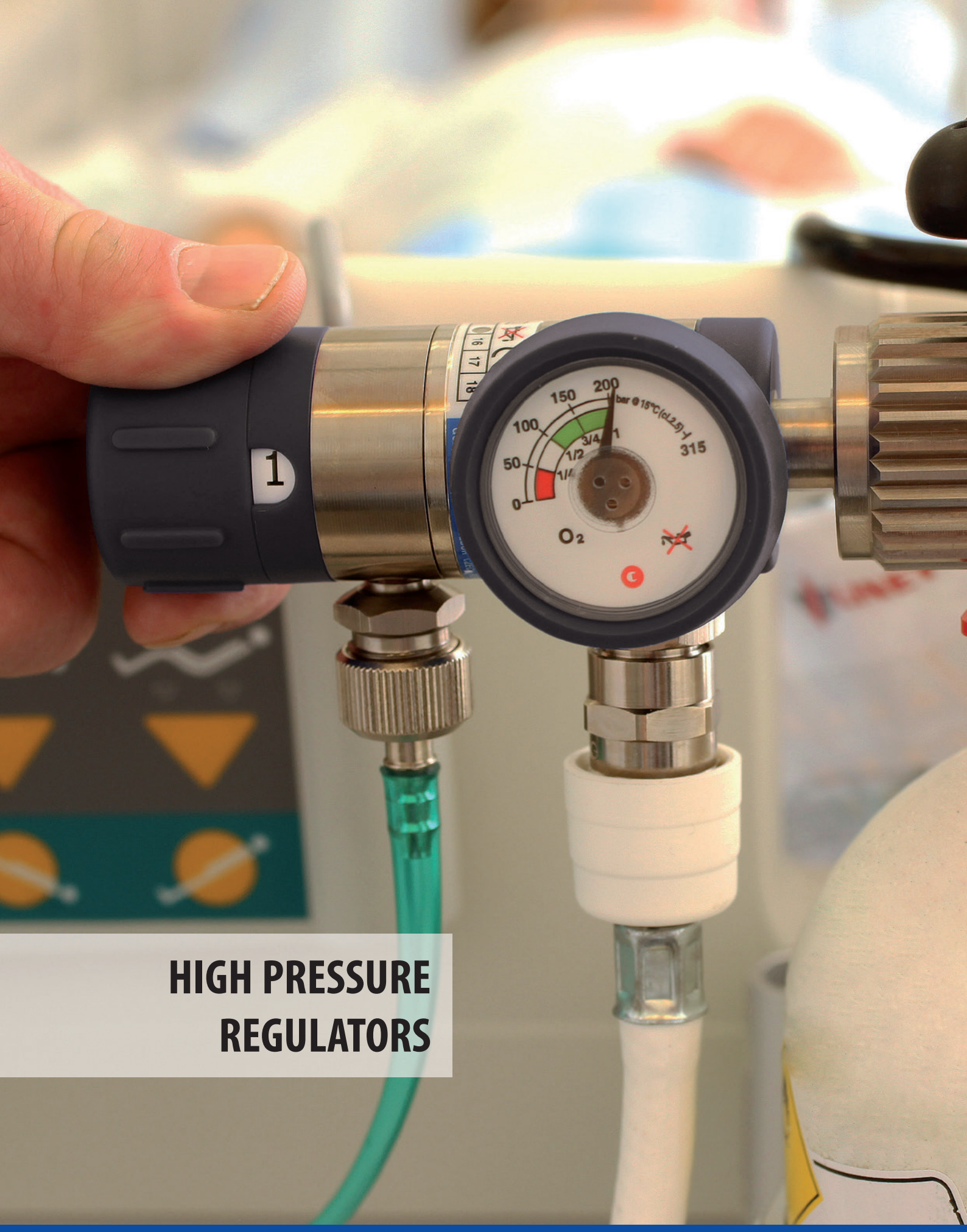


HIGH PRESSURE REGULATORS

GCE mediline®
Security in action

HIGH PRESSURE REGULATOR

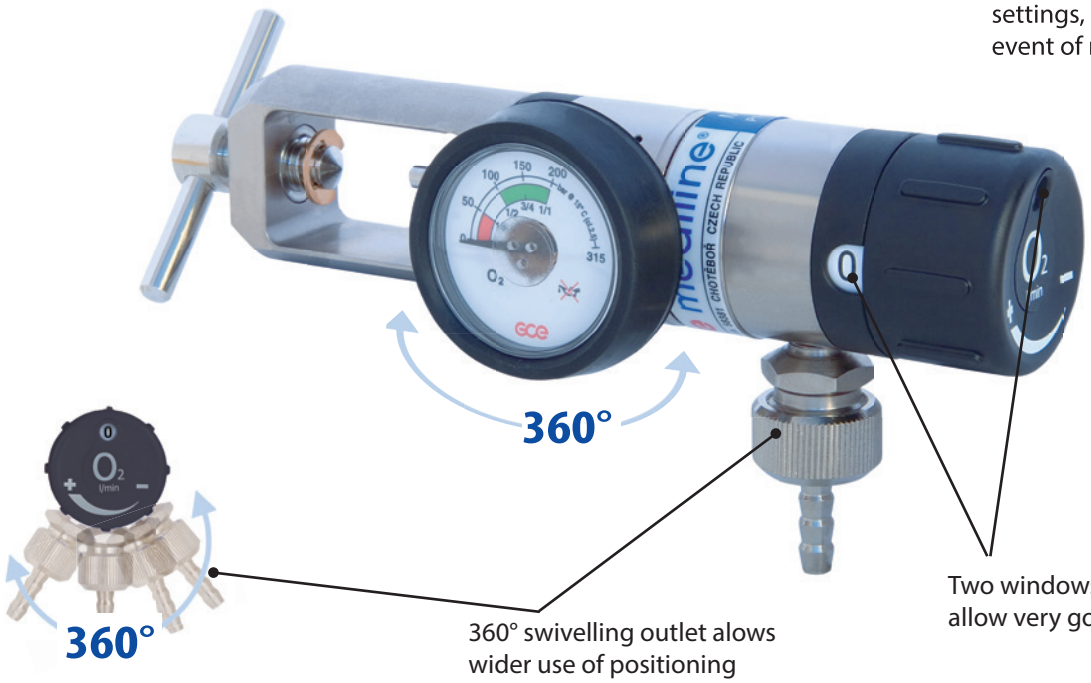
MEDISELECT® II

THE NEW GENERATION OF MEDICAL HIGH PRESSURE GAS REGULATORS

- Regulator with flow selector
- Rotating pressure gauge which allows convenient reading
- 360° swivelling outlet – it enables better orientation of the nasal cannula or oxygen mask towards the patient (preventing from twisting)
- Innovative self centering flow setting device with continuous flow between settings. In the unlikely event of indent mechanism failure, the patient will still be supplied with medical gas
- Lateral and frontal reading of flow settings
- Higher number of flow disc holes increases treatment options
  Extra flow setting of 25 lpm on the traditional 15 lpm variant, allows use in resuscitation
- The additional 7 lpm is intended for nebulization

Rotating pressure gauge which allows convenient reading

Continuous flow between settings, in the unlikely event of mechanism failure



360° swivelling outlet alows wider use of positioning

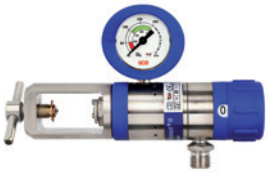
Two windows - frontal and lateral allow very good visibility of set values

HIGH PRESSURE REGULATORS

MEDISELECT® II

0720249

07720297



0720128

THERAPY FLOW REGULATOR RANGE

Art. Nr.	Description
0720252	Mediselect II (0,2,4 l/min)) O_2, Bullnose Inlet Connection, 137 bar
0720247	Mediselect II (0,1,2,3,4,5,6,7,9,12,15,25 l/min)) O_2, Bullnose Inlet Connection, 137 bar
0720296	Mediselect II (0,1,2,3,4,5,6,7,9,12,15,25 l/min)) O_2, Bullnose Inlet Connection, 200 bar
0720246	Mediselect II (0,1,2,3,4,5,6,7,9,12,15,25 l/min)) O_2, Pin Index Inlet Connection, 137 bar
0720297	Mediselect II (0,1,2,3,4,5,6,7,9,12,15,25 l/min)) O_2, Pin Index Inlet Connection, 200 bar
0720128	Mediselect II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) O_2, Pin Index Inlet Connection, 200 bar
0724221	Mediselect II (0,1,2,3,4,5,6,7,9,12,15 l/min) O_2, Pin Index Inlet Connection , 200 bar
0720265	Mediselect II (0,1,2,3,4,5,6,7,9,12,15 l/min) Air, Pin Index Inlet Connection, 200 bar
0720133	Mediselect II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) CO_2, Pin Index Inlet Connection, 60 bar

THERAPY FLOW & QUICK RELEASE CONNECTOR REGULATOR RANGE

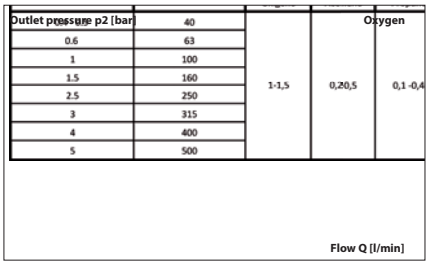
Art. Nr.	Description
0720249	Medi-select II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) Bullnose Inlet Connection
	Fitted with Single BS5682 Quick Release Connector, 137 bar
0720310	Medi-select II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) Bullnose Inlet Connection
	Fitted with Single BS5682 Quick Release Connector, 200 bar
0720248	Medi-select II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) Pin Index Inlet Connection
	Fitted with Single BS5682 Quick Release Connector, 137 bar
0720309	Medi-select II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) Pin Index Inlet Connection
	Fitted with Single BS5682 Quick Release Connector, 200 bar
0720302	Mediselect II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) O_2 , Pin Index Inlet Connection, 2xDISS, 200 bar

TECHNICAL DATA

Gas	O_2, Air, N_2O/O_2, CO_2
Inlet pressure range	up to 200 bar (depending on gas type)
Nominal outlet pressure	4 bar
Flow ranges*	**0 to 25 lpm** 0-1-2-3-4-5-6-7-9-12-15-25
Body material	nickel-plated brass
Control knob	polyamide
O-rings	EPDM
Filter	sintered bronze
Gauge cover	TPE (thermoplastic elastomer)
Weight	app. 0,8 kg
Regulatory status	Complies with Medical Devices Directive 93/42/EEC.
	Complies with EN 10524-1 (Pressure regulators for use with medical gases)
	Complies with Standard EN 1789:2000
	(Medical vehicles and their equipment - Road ambulances)

* Flowrates expressed at 23°C and 101,3 kPa

FLOW CURVE FOR OXYGEN (P2 = 4 BAR)



SPARE PARTS

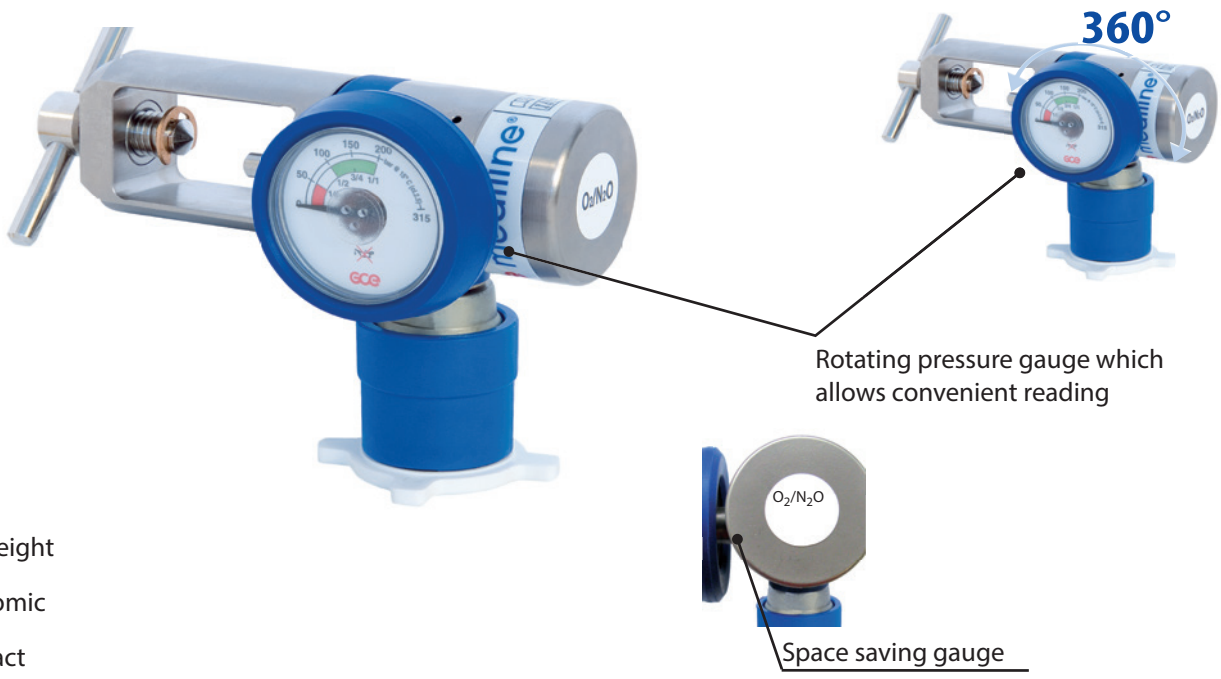
Art. Nr.	Type
9419640	O-ring for outlet hose nipple 9/16 UNF, 10 pcs
9438050	O-ring 9,19×2,62, 10 pcs
9421560	Gasket for pin index connection, 10 pcs

HIGH PRESSURE REGULATOR

MEDIREG® II

THE NEW GENERATION OF MEDICAL HIGH PRESSURE GAS REGULATORS

- Regulator with pressure outlet, constantly adjusted flow or with flowmeter
- Rotating pressure gauge which allows convenient reading
- Ergonomic and streamlined design
- Easy cleaning surface
- Compact and user friendly



Low weight

Ergonomic

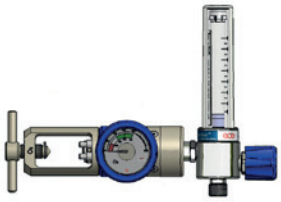
Compact

MEDIREG® II

0724151

0724244

0724243



0724221

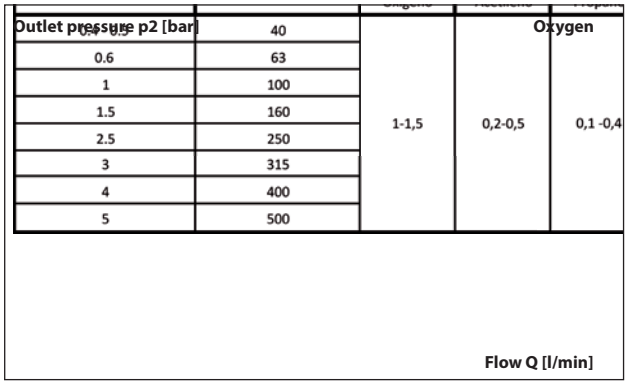
Art. Nr.	Description
0724151	O_2/N_2O Regulator, Pin Index, Single BS 5682 Quick Connection Outlet
0724244	Medireg II O_2 ,G5/8 Bullnose Inlet Connection, 200 bar, BS5682 Quick Release Connector
0724243	Medireg II O_2 ,Pin Index Inlet Connection, 200 bar, BS5682 Quick Release Connector
0724221	MediReg II O_2 ,Pin Index Inlet Connection, 0 to 15 l/m flowmeter, 9/16, 200 bar

TECHNICAL DATA

Gas	O_2, Air, N_2O, CO_2, N_2O/O_2
Inlet pressure range	up to 300 bar (depending of gas type)
Nominal outlet pressure	4 bar
Body material	nickel-plated brass
Control knob	polyamide
O-rings	EPDM
Filter	sintered bronze
Gauge cover	TPE (thermoplastic elastomer)
Weight	app. 0,65 kg
Regulatory status	Complies with Medical Devices Directive 93/42/EEC.
	Complies with EN 10524-1 (Pressure regulators for use with medical gases)
	Complies with Standard EN 1789:2000 (Medical vehicles and their
	equipment - Road ambulances)

* Flowrates expressed at 23°C and 101,3 kPa

FLOW CURVE FOR OXYGEN (P2 = 4 BAR)



SPARE PARTS

Art. Nr.	Type
9456140	O-ring for inlet connection, EPDM, After 2010-09-24, 10 pcs
9420350	O-ring for inlet connection, EPDM, Before 2010-09-24, 10 pcs
9421560	Gasket for pin index connection, 10 pcs
1023712	Pin index key

SINGLE STAGE THERAPY REGULATORS

The Mediline therapy regulator operates on the indirect single stage fixed pressure principle. This cylinder-mounted regulator for use with oxygen is factory pre-set and locked with a tamper proof seal.

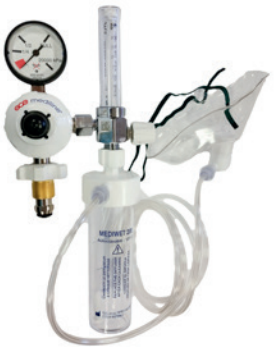
The regulator can be used for all hospital applications and emergency use requiring a constant 4 bar operating pressure.

The regulator is supplied with a 5/8" BSP RH (BS 341 inlet Bullnose connection No.3), standard outlet fitting 3/8" BSP and a pressure relief valve. A pressure gauge is incorporated to register the pressure of gas entering the regulator, giving an indication of the cylinder contents.

This regulator is CE marked and fully conform to the MHRA code of practice and the European specification EN 738-1.

OXYGEN

Art. Nr.	Description
0781660	Mediline S400 Regulator Bullnose Inlet, 3/8" Outlet



ACCESSORIES

Art. Nr.	Description
MM3277	Flowmeter 15 lpm G3/8" BSP
MK294416	Mediwet 121°C
1032907	Mask tube
4198650P	Chrome nut
4194120P	Chrome nipple

TECHNICAL DATA

Type	Single Stage regulator conforming to European specification EN 738-1
Body	Brass-Ports stamped with high-pressure indication
Diaphragm	Safety burst pressure 3,500kPa (35 - 55 bar)
Inlet filter	Sintered filter (25 microns)
Valve seat material	Zytel
Inlet connection	5/8" BSP RH (BS 341 connection No.3) for O_2
Outlet connection	3/8" BSP with 60°cone angle or quick release connection (BS 5682)
Pressure gauge	Solid bulkhead construction. Rear venting to EN 562. Dial 0-2000 kPa (1/4,1/2 and full markings)
Pressure/Flow ratings	
Inlet:	13700 kPa (137 bar)
Outlet:	400 kPa (4 bar)
Flow:	100 l/min
Pressure relief	Self re-seating type, leak tight at 600 kPa (6 bar) venting at 780 kPa (7,8 bar)
Operating temperature	[-20°C to 60 °C]use with medical gases)
Standard version available	Oxygen

HIGH PRESSURE REGULATOR

GCE SABRE MEDICAL REGULATORS

- The range covers the widest possible combination of inlet and outlet connections
- Includes products designed for oxygen therapy, for use with gas powered resuscitation and on demand equipment
- All offer unrivalled levels of accuracy and performance whilst maintaining Sabre's design brief of robust and simple to operate products leaving the carer to concentrate on their patient – not on remembering how to use the equipment
- They incorporate both sintered bronze filters and pressure relief valves, minimising the risk of contamination and providing increased carer and patient safety

SELECT FLOW

There is a comprehensive range of standard flow rate options on single, two and eleven flow Select Flow regulators.

PIN INDEX VERSIONS

Art. Nr.	Description
1068790	Select Flow with a firtree outlet, flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.
1068792	Select Flow with a firtree outlet, flow rates 0.1, 0.25, 0.5, 0.75, 1, 1.5, 2, 2.5, 3, 4, 5 l/min.
1068812	Select Flow with a firtree outlet, flow rates 8 & 15 l/min.

BULLNOSE (5/8")

Art. Nr.	Description
1068589	Select Flow with a firtree outlet, flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.
1068592	Select Flow with a firtree outlet, flow rates 0.1, 0.25, 0.5, 0.75, 1, 1.5, 2, 2.5, 3, 4, 5 l/min.

TECHNICAL DATA

Gas	O_2
Input pressure	200 bar
Therapy outlet	firtree
Therapy pressure	1.6 bar (23psi)
Weight (no outlets)	app. 0,51 kg

RESUSCITATION REGULATOR

Available with the full range of high pressure inlet connections.

Sabre Resuscitation Regulators are designed for use with gas powered resuscitation products. One or two regulated outlets can be fitted to each regulator in addition to a Select Flow therapy outlet providing both resuscitation and therapy from the one regulator.

PIN INDEX VERSIONS

Art. Nr.	Description
1065859	Resuscitation Regulator with a single BS 5682 quick connector outlet
	and firtree outlet with flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.

BULLNOSE (5/8")

Art. Nr.	Description
1065716	Resuscitation Regulator with a single BS 5682 quick connector outlet
	and firtree outlet with flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.

TECHNICAL DATA

Gas	O_2
Input pressure	200 bar
Therapy outlet	Firtree
Therapy pressure	1.6 and 4.2 bar (60psi)
Weight	app. 0,72 kg

THERAPY REGULATOR

This simple, high pressure regulator is suitable for inlet pressure of up to 200 bar and designed for use with traditional floating ball flow control devices. Available with the full range of high pressure inlet connections, Sabre Therapy Regulators combine all the benefits of simplicity, robustness and reliability common to the Sabre range.

BULLNOSE (5/8")

Art. Nr.	Description
1070989	Therapy Regulator, Bullnose with BS 5682 quick connection outlet

SPARE PARTS

Art. Nr.	Description
1028228P	O-ring (10pcs)
1023713	Valve key & cord for PI regulator (1pc)

HOSPITAL WARD EQUIPMENT

GCE mediline®
Security in action

SUCTION EQUIPMENT

MEDIEVAC+

- Compact and lightweight medical vacuum regulator system, which allows the user to efficiently and safely control suction therapy
- The suction level of the Medievac+ is regulated via an easy accessible, front mounted control knob
- A special feature of the Medievac+ on-off valve is easy resumption of the selected de-pressure value, when the treatment is interrupted
- The Medievac+ gauge can easily be rotated, allowing the vacuum pressure to be clearly viewed by the operator
- The gauge scale is colour coded in sections to display a clear indication of suction level
- Two versions of adjustable pressures are available to cover all therapy needs(-250 and –1000 mbar)
- The –250 mbar version has a safety valve, which will automatically shut off to guarantee maximum protection of the patient, in the unlikely event of de-pressure increase

THE COMPACTNESS OF THE DEVICE OFFERS:

- Fast connection to the vacuum source
- Quick and convenient mounting of accessories (for example safety jar)
- Good accessibility of other devices connected to close located terminal units

CONTROL KNOB

The 'most' technical control knob is designed with a mechanism which ensures it cannot be broken if it is overthightened.

ENCAPSULATED FILTER

Hygienic and easy to install, it protects the device against particles ascent 0.3 µm

ROTATING GAUGE

ADVANTAGE FOR NURSE:
Orientate the gauge in your direction in order to read the setting.

ADVANTAGE FOR TECHNICAL:
Absence of visible thread on foot allows a better resistance of the body in every replacement.

ON/OFF SWITCH

Allows maintaining the setting during use: the visible color shows the functionality status of the regulator: (green = working; red = stopped)

EFFICIENT!

Maximum flow of 70l/min clean lines for a more effective cleaning.

VACUUM REGULATOR - MEDIEVAC+

Art. Nr.	Description
0735106	Medievac+ 250 with BS probe
0735105	Medievac+ 600 with BS probe without safety jar, hose nipple
0735104	Medievac+ 1000 with BS probe

TECHNICAL DATA

ON-OFF function	ON : green button visible
	To switch ON: push on the red button
Max. inlet pressure	- 950 mbar (Measured from atmospheric pressure)
Max. suction flow	70 l/min ±5 l/min
Accuracy of gauge	±2,5 % of full scale
Safety valve	Medievac+ 250 only
	max. - 290 mbar opening
Inlet connection	According to the respective national standard
Outlet connection	G1/2" male
Height	133 mm; 260 mm (with safety jar)
Width	63 mm
Depth	77 mm (without connector)
Body material	ABS
Regulatory status	Complies with Medical Devices Directive 93/42/EEC.
	Complies with EN ISO 10079-3 (Medical suction Equipment,
	Part 3: Suction equipment powered from a vacuum or pressure source)

ACCESSORIES FOR MEDIEVAC

The Medievac+ vacuum regulator system includes an optional accessory, the safety jar. It is an additional protection of the vacuum regulator and the hospital vacuum network, when the collection jars overflow. The filling capacity of 100 ml and the safety valve function, provide the user with extra time to stop the suction therapy.

The jar can be easily and safely disconnected from the vacuum regulator and autoclaved at 134 °C for 18 minutes, in line with hospital protocols. GCE Mediline also recommends the use of the front mounted filter that is connected on the safety jar for increased safety. The plastic shell of the filter is very convenient to mount; it enables hygienic handling as direct contact with the membrane is avoided. The use of this filter is also recommended by the standard (EN ISO 10079-3 part 6.5.2.1). Medievac+ compliance is based on EN ISO 10079-3 standard.

Art. Nr.	Description
548900291594	Safety jar 100 ml
548900291595	Safety jar 100 ml including filter
K291603	Filter (x10)
K293492	Hose nipple G1/2 + o-ring

SUCTION EQUIPMENT

MEDIEJECT II

- MediEject II is a next generation suction ejector from GCE Healthcare. The device uses the principle of the venturi system to create vacuum.
- The MediEject II has the best performance in depth of vacuum, gas consumption and the lowest noise level.
- MediEject II is available in all regional standards.

SUCTION EJECTOR - MEDIEJECT II

ADVANTAGES

- Easy to clean
- One knob control system
- Egonomic shape
- Deepest vacuum
- Lowest gas consumption
- Lowest noise level
- Maintenance free
- 10 years life time
- Available in hose and probe version

Art. Nr.
Upon request

TECHNICAL DATA

Driving gas	O_2, AIR
Inlet	all regional standards in probe or hose version
Inlet pressure	4-5 bar
Max gas consumption at inlet 4 bar)	25 lpm
Free flow suction at inlet pressure 4 bar	30 lpm
Noice level close/open suction	35/45 dB
Suction effect	-0.8 bar
Dimensions	
Total Width	70 mm
Depth (only body without plate/clamp/probe)	52 mm
Max Height	150 mm
Weight	0.350 kg
Regulations	MDD 93/42/EEC-MDD 2007/47/EC
	EN ISO 10079-3 – Suction equipment
	EN 1789 – Ambulance Standard
	MRI Compatible

FLEXIUNIT

FLEXIUNIT

The Flexiunit is the Mediline Mediselect 15 regulator, with the venturi suction ejector fitted directly to it. Allowing 0 to 15 l/min free flow oxygen and a powerful, effective, fully adjustable 0 to -80 kPa suction. A quick release outlet connector can be fitted as an optional extra, enabling a ventilator , demand valve etc to be powered from the unit. The Flexiunit can be fitted with both Pin Index and Bullnose inlet connections to suit all standard cylinders.

Art. Nr.	Description
0720250	Flexiunit Combined Suction/0-15 l/min Pin Index Connection
0720251	Flexiunit Combined Suction/0-15 l/min Bullnose Connection

TECHNICAL DATA

Maximal suction effect	-80 kPa (-0,8 bar)
Capacity	>25 l/min
Maximum consumption of gas	38 l/min
Dimensions (w×h×d)	105×115×102 mm (mounting in gas outlet version)

ACCESSORIES - SUCTION BOTTLES - WITH SINGLE USE BAGS

373234559

325113335

K291538

K291539

373234593

325111944

SUCTION BOTTLES - SINGLE USED BAGS

Art. Nr.	Description
373234559	Suction bag 2 l (20 pcs)
325113335	Suction bottle 1 l
	Add lid art. no. 325111944 to make complete

ACCESSORIES

Art. Nr.	Description
373234593	Connection for suction bag
325113237	Silicone hose; 25m; 6×12
9435440	Silicone hose; 5m; 6×12
9435450	Silicone hose; 1m; 6×12
325111944	Lid for suction bottle
K291538	Catheter holder (without plate)
K291539	Catheter holder (with plate)

ACCESSORIES - SUCTION JARS - MEDICOLLECT 2000

K291620

K291530

K006968

Medicollect 2000 is a range of reusable jars for collection of secretion. For protected and hygienic use of unbreakable material, guaranteed airtight, with an overflow valve and autoclavable material.

Art. Nr.	Description
K291530	Medicollect 2000 ml with lid (121°C)
K291620	Medicollect 2000 ml with lid (134°C)
K291540	Medicollect 1000 ml with lid (121°C)
K291619	Medicollect 1000 ml with lid (134°C)

CONSUMABLES

Art. Nr.	Description
K006968	Manual vacuum stop device, non sterile for adults

TECHNICAL DATA

Dimensions	Height 302 × ø135 × ø130 mm
Weight	0,6 Kg
Capacity	2 l
Pressure	Maximum applicable 950 mbar
	Minimum applicable 100 mbar
Maximum flow	100 l/min
Anti-overflow arrangement	Ball valve
Material	Jar: polysulphone (134°C), polycarbonate (121°C)
	Lid: polypropylene
	Hose nipples: chrome plated brass.
Connections	Hose nipples - ø 9 mm
Cleaning	Use a non abrasive cloth moistured with a neutral detergent immerged
	at 10% in hot water, < 60°C.
	Rince in pure water and dry well. Never use solvents.
	Autoclave at 121°C for 20 minutes for polycarbonyte and
	134°C for 18 minutes for polysulfone.
Maintenance	Check air tightness every six months or every five cleaning cycles.
	Check the overflow valve every six months or every ten cleaning cycles.
Durability	Maximum 30 autoclave cycles.

FLOW-METERING DEVICE

MEDIFLOW® ULTRA II

MEDIFLOW® ULTRA II IS THE NEW GENERATION OF MEDICAL FLOW SELECTOR DEVICE WITH BUILT-IN REGULATOR

- It covers a comprehensive combination of inlet and outlet connections and offers various options for all medical applications, from neonatal care through to resuscitation
- Built-in regulator provides a very stable and precise flow, independent of the pressure in the medical central gas system or cylinder
- Innovative self centering flow setting device with continuous flow between settings. In the unlikely event of indent mechanism failure, the patient will still be supplied by medicinal gas
- Lateral and frontal reading of flow settings
- 360° swivelling outlet – it enables better orientation of the nasal cannula or oxygen mask towards the patient (preventing from twisting)
- Higher number of flow disc holes increases treatment options. Extra flow setting of 25 lpm on the traditional 15 lpm variant, allows use in resuscitation. The additional 7 lpm is intended for nebulization
- Ergonomic and streamlined design

Independence of the pressure fluctuation
with inlet pressure range of 2,8 – 8 bar

Continuous flow between settings,
in the unlikely event of mechanism failure

Two windows - frontal and lateral allow very good visibility of set values

360° swivelling outlet alows
wider use of positioning

MEDIFLOW ULTRA II (LOW PRESSURE REGULATOR)

Art.Nr.	Type
0728187	Mediflow® Ultra II with flow rates 0-2 l/min
0728173	Mediflow® Ultra II with flowrates 0-25 l/min

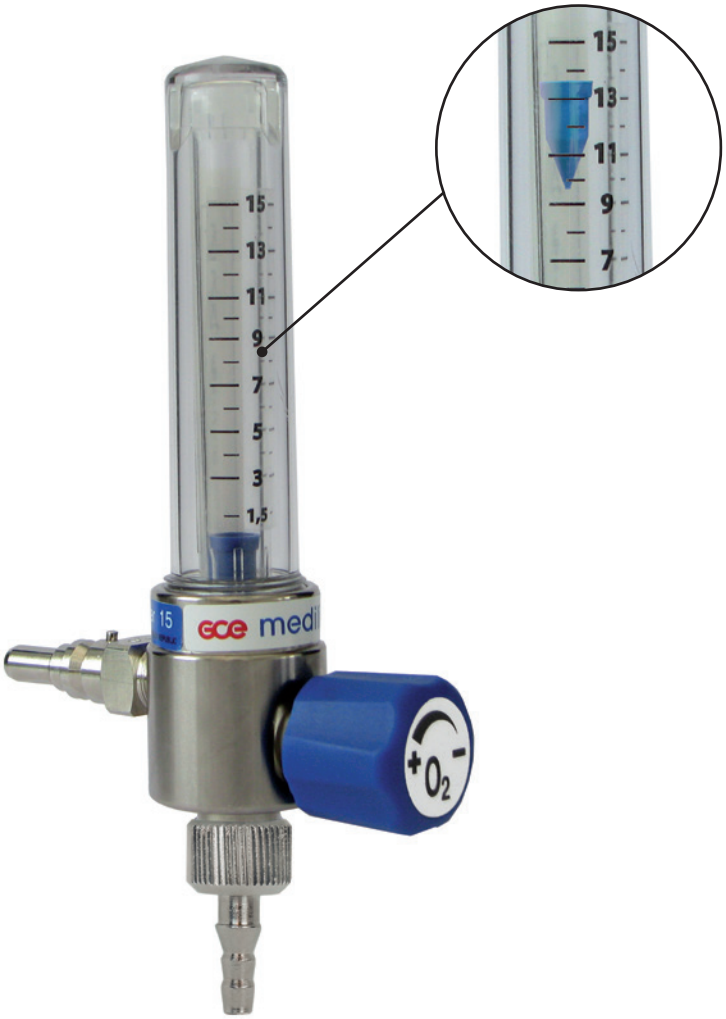
TECHNICAL DATA

Gas	O_2, Air	
Inlet pressure range	2,8 – 8 bar	
Max.outlet pressure with no flow	2,1 bar	
Flow ranges*	0 to 2 l/min	0-0,1-0,2-0,3-0,4-0,5-0,6-0, 7-0,8-1-1,5-2
	0 to 6 l/min	0-0,25-0,5-0,75-1-1,5-2-2,5-3-4-5-6
	0 to 25 l/min	0-1-2-3-4-5-6-7-9-12-15-25
Body material	nickel-plated brass	
Control knob	polyamide	
O-rings	EPDM	
Filter	sintered bronze and stainless steel	
Diameter	39 mm	
Length	77 mm	
Weight	350 g	
Regulatory status	Complies with Medical Devices Directive 93/42/EEC.	
	Complies with EN 10524-4	
	(Pressure regulators for use with medical gases-Low pressure regulators)	
	Complies with Standard EN 1789:2000	
	(Medical vehicles and their equipment-Road ambulances)	

FLOW-METERING DEVICE

MEDIMETER

- Medimeter is a flowmeter intended for control and measurement of flow of air or oxygen administered to patients
- Flat surface float allows easy and safe reading of flow values by the users
- Ergonomic design, easy for cleaning
- Available with probe connector, rail mounting with a hose and twin versions
- Soft closing mechanism
- Robust float, resistant against impact
- New scale - better reading of flow values



FLOWMETER - MEDIMETER

Standard version with probe

Duo version with probe

The Medimeter is a pressure compensating flow meter giving clear indication of flow rates which are controlled by a fully adjustable needle valve. The most common version used is the 0-15 l/min for both oxygen and air. The durable brass body is nickel plated with a polycarbonate flow tube making it both tough and easy to clean.

OXYGEN

Art. Nr.	Description
0730121	Medimeter 5 (0-5 l/min) with BS probe
0730122	Medimeter 15 (0-15 l/min) with BS probe
0730123	Medimeter 30 (0-30 l/min) with BS probe
0730124	Medimeter 15 (0-15 l/min) Twin with BS probe

MEDICAL AIR

Art. Nr.	Description
0730125	Medimeter 15 (0-15 l/min) with BS probe

TECHNICAL DATA

Gas	O_2, Air
Inlet pressure	4,5 bar
Flow ranges	0 - 5 lpm
	0 - 15 lpm
	0 - 30 lpm
Body material	Nickel-plated brass
O-rings	EPDM
Control knob	Polyamide
Body dimensions	Width 32 mm
	Height 160 mm
	Depth 60 mm
	Weight 280 g (without connector)
Temperature range	
Storage	- 30 °C to + 60 °C
Operation	- 20 °C to + 60 °C
Regulatory status	Complies with medical devices directive 93/42/EEC
	Complies with EN 15 002 (Flow - metering devices for connection to
	terminal units of medical gas pipeline systems)

ACCESSORIES

Art. Nr.	Description
K294402	MediWet 200 134°C G 9/16

SPARE PARTS

Art. Nr.	Denomination
9437250	External tube (10 pcs)
9454170	O-ring (20 pcs)
9423250	Hose nipple 9/16 UNF with o-ring (10 pcs)

ACCESSORIES - MEDIWET II HUMIDIFIER

The bubbling humidifier for oxygen therapy is used to increase the relative humidity in the oxygen supplied to the patient in the hospital or home.

The humidifiers jar are made of polycarbonate or polysulfone. The humidifiers lid are made of polypropylen. The connectors are from the brass thread and it is injected to the plastic hand nut.

They can be autoclaved at a temperature of 121 °C for 20 minutes (polacarbonate) or 134°C for 18 minutes (polysulfone). Polypropylen and the silicon hose withstands 134°C. They may also be used in conjunction with GCE Mediline flowmeters and regulators providing versatility and simplicity in use.

Art. Nr.	Description
K294401	Mediwet II 121 °C inlet connection 9/16 UNF F
K294416	Mediwet II 121 °C inlet connection G 3/8 F
K294402	Mediwet II 134 °C inlet connection 9/16 UNF F
K294432	Mediwet II 134 °C inlet connection G 3/8 F

TECHNICAL DATA

Contents	Only sterile water
Dimensions	Height 190 × Width 85 (incl hose nipple) × Ø 60 mm
Weight	150 g
Capacity	200 ml of water
Consumption	6 ml of water per hour at a gas flow of 10 l/min at 20 °C
Material	Jar polycarbonate (autoclavable at 121 °C)
	Jar polysulphone (autoclavable at 134 °C)
	Lid and outlet hose nipple: polypropylene
	Inlet nut: the brass thread and it is injected to the plastic hand nut
	Diffuser: Polyethylene
	Hose: Silicone
	Gasket: O-ring NBR
Outlet connection	Tapered hose nipple for hose 6 × 9 mm (recommended length 2 m)
Cleaning	Water, non abrasive detergent. Never use solvents.
Disinfection	An alcoholic solution, or other solution compatible with the material
	according to the disinfectant manufacturer.
Autoclave	Polycarbonate version 121 °C for 20 minutes
	Polysulphone version 134 °C for 18 minutes
Special case	Diffuser: exchange at every cleaning - do not sterilise!
Maintenance	Check that the humidifier is whole and air tight before use. Monthly
	exchange of gaskets is recommended. Exchange the diffuser when its
	microperforations no longer exist.
Durability	Minimum 20 autoclave cycles under the condition that all instructions
	accompanying the product are adhered.

SPARE PARTS

Art. Nr.	Description
K301059	Jar 121 °C
K301062	Jar 134 °C
K301078	Lid connection G3/8
K301064	Lid connection 9/16
K294433	Inlet connection gasket G3/8 (10 pcs)
K294407	Inlet connection gasket 9/16 UNF (10 pcs)
K294408	Bottle gasket 121 °C (10 pcs)
K294409	Bottle gasket 134 °C (10 pcs)

CONSUMABLES

Art. Nr.	Description
K294434	Complete diffuser (tube 13 cm and diffuser, 10 pcs)

HOSE

LOW PRESSURE HOSE FOR MEDICAL GASES

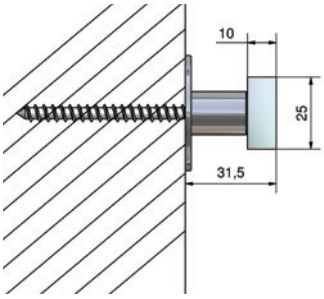
- The dimensions and colours of our polyvinyl chloride manufactured, textile-reinforced hoses are in accordance with the current hospital standard.
- Maximum working pressure 14 bar.
- The hoses for medical breathing oxygen and nitrous oxide are marked with the chemical denomination of the gas.
- The medical breathing air hose is marked "Air".
- Static
- Phthalates free
- Life time 5 years

Art. Nr.	Denomination	Colour	Max pressure	Dimension (inner/outer)	Roll
14119015	Medical breathing air	black/white	14 bar	8/14	30 m
14119016	Medical breathing air	black/white	14 bar	6.7/12.7	30 m
14119017	O_2 /N_2O	blue/white	14 bar	6.7/12.7	30 m
14119020	Nitrous oxide	blue	14 bar	6/11	30 m
14119021	Carbon dioxide	grey	14 bar	6/11	30 m
14119022	Mixed gas	red	14 bar	6/11	30 m
14119023	Vacuum/UTS	yellow	14 bar	10/16	30 m
14119024	Gas outlet	blue/brown	14 bar	12/17.4	30 m
14119013	Medical breathing oxygen	white	14 bar	6/11	30 m
325113237	Suction hose	transparent	-	6/12	25 m

RAILS

EU RAIL COMPLETE (25×10 EU), WITHOUT SCREWS

Art. Nr.	Denomination (meter)	Material
325197656	1,0	Stainless Steel
325197657	1,5	Stainless Steel
325197658	2,0	Stainless Steel
325197659	3,0	Stainless Steel



ACCESSORIES

Art. Nr.	Description	Material
325112959	Distance 20 mm	Stainless Steel (pack of 5)
325112960	Washer D 40 mm	Stainless Steel (pack of 5)
325112961	End protection	Plastic

TERMINAL UNITS

Recessed version

Exposed version

Installation plug

Medical terminal units provide quick and easy connection of hospital ward gas equipment to the hospital gas source. The type of medical gasoutlets are decided by national standards in each country and sometimes from local requests in each hospital. GCE complies with ISO 7396 and national installation standards with secure products where every product is fully tested in production. Our Medical gas outlets are in accordance with

ISO EN 9170-1, ISO EN 9170-2 international standards.

- Wall housing is compatible with all GCE MediUnit standards like DIN, BSI, SS, CZ
- All functional components are from brass
- Simple installation
- Fast connection and disconnection
- Designed for medical environment, Small size and Easy to clean
- Complies with colour coding and description by standard
- After 10 years it is possible to upgrade the units with a special upgrade pack
- Recessed, Exposed and Bed head installation versions

Art. Nr.	Description	Gas	Inlet
0732046	TU BSI - recessed	O_2	pipe Ø10
0732047	TU BSI - recessed	Air	pipe Ø10
0732048	TU BSI - recessed	VAC	pipe Ø10
0732049	TU BSI - recessed	N_2O	pipe Ø10
0732050	TU BSI - recessed	O_2/N_2O	pipe Ø10
0732051	TU BSI - recessed	Air-800	pipe Ø10
0732052	TU BSI - exposed	O_2	pipe Ø10
0732053	TU BSI - exposed	Air	pipe Ø10
0732054	TU BSI - exposed	VAC	pipe Ø10
0732055	TU BSI - exposed	N_2O	pipe Ø10
0732056	TU BSI - exposed	O_2/ N_2O	pipe Ø10
0732057	TU BSI - exposed	Air-800	pipe Ø10

INSTALLATION TOOLS

MP_00345	QC installation key
MP_00324	Button remover
0732040	Installation plug (10 pcs)

TECHNICAL DATA

Gases	O_2; O_2/N_2O; N_2O ; Air; Air-800; VAC
Dimensions	
Height	73 mm
Width	73 mm
Depth	63 mm
Weight	0.36 kg
Working pressure	4 - 5 bar
Regulatory status	Complies with Medical directive 93/42/EEC
	Complies with EN ISO 7396-1 (Central Gas Supply System)
	Complies with EN ISO 9170-1 (Terminal units)
	Complies with BS 5682 (BSI gas specific connections)

HOMECARE

ece mediline®
Security in action

ZEN-O™ - PORTABLE OXYGEN CONCENTRATOR

Zen-O is a lightweight portable oxygen concentrator that delivers up to 2 litres of oxygen in either pulse or continuous mode. Zen-O is manufactured to meet the exacting standards of the European Medical Device directive.

ADVANTAGES

Dual Mode

Zen-O™ offers patients the best of both worlds. Patients can alternate between continuous flow and pulse mode oxygen therapy.

Simple and easy to use

Zen-O™ is designed with patients in mind, it is simple to use with intuitive button operation and LCD panel.

Responsive to patient needs

Using advanced patented technology, Zen-O™ can deliver up to 2 litres per minute of oxygen in response to the patient's need. Unlike other devices that deliver a fixed amount of oxygen, Zen-O™ automatically increases the amount of oxygen delivered if a patient's breathe rate rises.

Durable and reliable

Zen-O™ is rugged and is supplied with a 3 year warranty or 15,000 hours of total use, giving you the assurance of quality and reliability.

Easily replaceable sieve bed

Zen-O™ has been designed with sieve beds that can be replaced easily by most homecare providers without the need to return the device to a distributor.

Visual and audible alarms

The device is designed with various audible and visual alarm prompts such as low battery, no breath detected, service required and low oxygen purity.

Art. Nr.	Description
RS-00502-G-S	Zen-O™ concentrator 12 cell
RS-00502-G-D	Zen-O™ concentrator 2 battery package

Zen-O™ with bag and pull cart

ACCESSORIES

Art. Nr.	Description
RS-00501	Zen-O™ battery 12 cell
RS-00509	Zen-O™ carry bag
RS-00507	Zen-O™ cart
RS-00508	Zen-O™ DC adapter
RS-00511	POC filter wrench
RS-00512	POC cannula filter pk of 10
RS-00520	Zen-O™ AC power supply w/EU cord
RS-00521	Zen-O™ AC power supply w/UK cord
RS-00522	Zen-O™ AC power supply w/US cord

Zen-O can hold up to two 12 cell batteries

EU cords, AC and DC power supply

TECHNICAL DATA

Size (W×D×H)	212 mm × 168 mm × 313 mm
	(8.3" × 6.6" ×12.3")
Weight	4.66 kg with one 12 cell battery
Power requirements	AC adaptor: 100-240V AC(+/- 10%) 50-60 Hz in, 24V DC, 6.25A out
	DC adaptor: 11.5 - 16V DC in, 19V, 7.9A out
Purity	87% - 96% at all settings
Maximum oxygen discharge pressure	20.5 psi
Inspiratory trigger sensitivity	-0.12cm/H_20
Humidity range	5% to 93% ± 2% non-condensing
Temperature	
Operation	5°C (41°F) and 40°C (104°F)
Storage	-20°C (-4°F) and 60°C (140°F)
Setting	Adjustable in 0.5 increments from 1.0 to 6.0 in pulse mode and
	from 0.5 to 2.0 in continuous mode
Noise level	38 dB(A) tested to Prüfmethode 14-1 03/2007 MDS-Hi*
	42 dB(A) tested to ISO 3744*
Alarm types	Low oxygen purity
	No breath detected
	Low battery
	Service required
Battery duration	Approx. 4 hours with a single battery or
	8 hours with 2 batteries at 18 BPM

STATIONARY OXYGEN CONCENTRATOR

NUVO LITE MARK 5

The Nuvo lite provides oxygen to patients that require Long Term Oxygen Therapy (LTOT) in the comfort of their home.

Nuvo lite is a compact and light stationary oxygen concentrator, that uses standard PSA technology to provide oxygen flow of up to 5 litres per minute. The Nuvo lite oxygen concentrator separates the oxygen from other gases in the air and delivers the oxygen at high concentration to the patient.

The Nuvo lite has an integrated oxygen sensing device for monitoring oxygen levels, and a 'No-Flow' alarm to alert the patient if there is no supply of oxygen.

FEATURES

- Lightweight - a mere 14.5 kg
- Sleek compact cabinet design with handle
- Lockable flow control valve
- Adjustable flow rate up to 5 litres per minute
- Quiet operation

Art. Nr.	Description
14111211	Concentrator Nuvo Lite Mark 5

ACCESSORIES

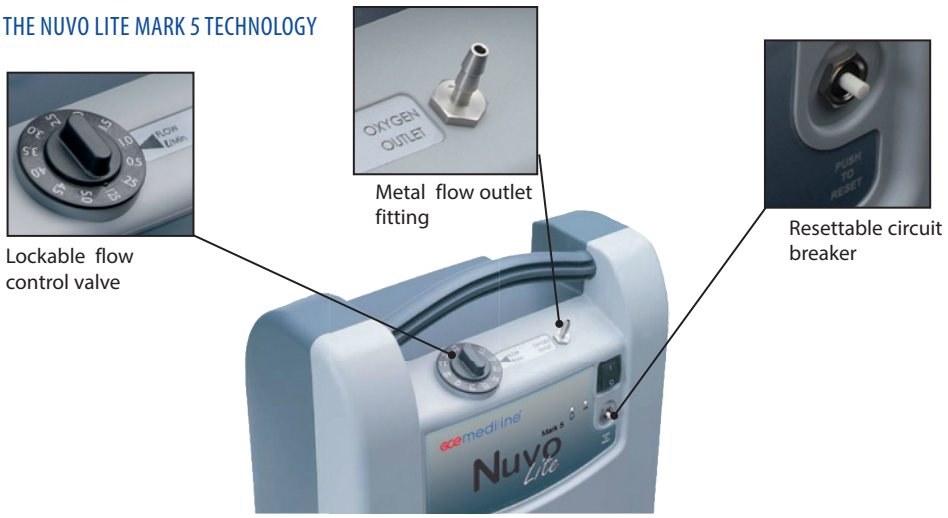
Art. Nr.	Description
14111220	Compressor intake filter
14111222	Prefiltering fleece
14090329	Bacteria filter
14090417	Single use bottle
14090510	Cannula with 2.1 m tube (50 p)

TECHNICAL DATA

Power supply	230 V, 50 Hz
Av. poser consumption	300 W
Fuse	5 A
O2	at 2 l/min: >90 %
	at 5 l/min: 90 % (+6,5% - 3%)
Sound level	40 dBA
Storage temperature	-20 to +60 °C
Ambient temperature limit	+5 to +40 °C
Weight	14.5kg
Dimensions (B×H×T): 36 × 23 × 58.5 (cm)	36 × 23 × 58.5 (cm)
Technology	PSA (pressure swing absorbation)
Standard	ISO 8359, EN 60601-1
Medical class	IIb
The Nuvo lite meets the requirements of eh Medical Device Directive 93/42/EEC	

This product require a plug adapter for use in the UK, part number 2001507.

THE NUVO LITE MARK 5 TECHNOLOGY



NUVO 8

The Nuvo 8 oxygen concentrator provides oxygen of up to 8 litres per minute to patients that require Long Term Oxygen Therapy (LTOT). The device is manufactured to provide a combination of enhanced features, reliability of technology and ease of use.

FEATURES

- Quick operation with less than 48 dba
- Sleek design for easy handling
- Simple and easy to use
- Quick snap rear panel allows easy access to filter, gauge and battery
- Patented RPSA technology

Art. Nr.	Description
14111811	Nuvo 8 concentrator

ACCESSORIES

Art. Nr.	Description
14111266	Dust filter
14111275	Filter air

TECHNICAL DATA

Electrical requirement	230 V, 60 Hz
Flow delivery rate	2 to 8 litres per minute
Oxygen concentration	0.5 to 7 liters per minute – 93% (+6.5% / -3%)
Oxygen monitoring system	Only available on model 985
	Pressure
	Low Oxygen Concentration Pressure
	Current overload or line surge shutdown
	Thermal Switch
	40 psi Pressure relief Valve
	Low battery Test
Filters	Cabinet, Compressor Intake & Bacteria
Weight	< 23 kg
Dimensions (L×W×H)	39.4 cm × 39.6 cm × 70.6 cmA
Operating Environment	
Ambient Temperature	50°F to 100°F (10°C to 40°C)
Humidity	15% to 95%, non-condensing
Storage Range	
Temperature	0°F to 140°F (-0°C to 50°C)
Humidity	15% to 95%, non-condensing

This product require a plug adapter for use in the UK, part number 2001507.

OXYGEN CONSERVING DEVICE

ECOlite® 4000

ECOlite® 4000 IS AN ELECTRONIC OXYGEN GAS CONSERVING DEVICE, WHICH ENABLES PATIENT FRIENDLY AND EFFICIENT LONG TERM OXYGEN THERAPY TREATMENT (LTOT).

- With the ECOlite® 4000, oxygen is delivered only during the inspiration phase, permitting savings of up to 10 times compared to continuous flow oxygen therapy
- The volume of oxygen needed for one breath is delivered during the first third of the inspiratory cycle, which guarantees both efficient and optimal treatment and a short exposure of the nasal mucosa to medical oxygen.

PATENTED

CE 0434

- A special feature of the ECOlite® 4000 is the small, internal regulator, that allows the user to select a supply inlet pressure of between 1,6 to 5 bar. The working pressure of the device is regulated to 1,6 bar which enables a both clinically and physiologically patient friendly oxygen administration. The device has two operating modes, Automatic and Manual
- In the Automatic mode the amount of oxygen delivered increases in relation to the set flow rate at breath rates of 15 to 30 breaths per minute, to a maximum of 8 lpm. In the Manual mode the flow rates are from 0,5 to 8 lpm with 0,5 lpm steps
- The flow settings can be locked at any rate by the health care personnel in charge of setting the flows on initial setup
- The device has several built in alarm functions for safe use. The alarms are shown on the display and are also audible

THE ECOLITE® 4000 HAS ALARMS FOR:

- Low battery
- No oxygen
- No breathing

The battery life time of the device is prolonged to last for 200 hours. Standard AA 1,5 volt batteries are in use.

ECOlite® 4000 OXYGEN CONSERVER

The ECOlite 4000 is an electronic gas-conserving device with built in alarm functions. It operates with a gas cylinder set at an outlet pressure of 1.6 - 5 bar. An optional 1.6 bar outlet pressure version is available for use with a liquid oxygen container.

The oxygen flows through a pressure-reducing valve before entering the ECOlite 4000 and then onto the patient via a nasal canula. The incorporated microprocessor in the ECOlite 4000 controls and manages the oxygen flow to the patient in all conditions. The sensitive valve delivers oxygen at exactly the right dosage as soon as the patient inhales, then stops. This ensures oxygen will penetrate the alveoli and be assimilated into the blood.

REGULATORY STATUS

European Economic Area (EEA): This mark on the product indicates compliance with Directive 93/42/EEC relating to medical devices, Class IIa.

Art. Nr.	Description
325197479	ECOlite® 4000 Conserver with spiral hose, batteries and nasal cannula

ACCESSORIES

Art. Nr.	Description
14111220	Standard Nasal cannula
14090535	ECOlite® 4000 Carry Bag
14090631	ECOlite® 4000 Carry Bag Trolley
9462520	Firclic Snap On/Off Connector (to suit BAREMA standard firtree outlet)
325112782	Spiral supply hose for ECOlite
325112719	Belt bag

325112719

14090535

14090631

SPARE PARTS

Art. Nr.	Description
325112670	Battery cover

TECHNICAL DATA

FUNCTIONAL PERFORMANCE

Settings	Manual/Automatic
Triggering	At each breath
Sensitivity	0,13 cm H_2O
Regulating pressure	1,6 Bar
Accuracy	0,5-1,5 l/min +/- 30%
	2-8 l/min +/- 15%
Cycle output	0.5 to 8 l/min coresponding to 5-80 ml per bolus
Alarms	Battery monitoring
	Missing Oxygen supply
	No inhalation

POWER SUPPLY

Battery	RO6, AA, Alkaline 1,5 V
Oxygen supply Pressure	Between 1,6 and 5 Bar
Flow	Minimum 4 litres per minute

DIMENSIONS AND WEIGHT

Dimensions	Height: 101 mm
	Width: 85 mm
	Depth: 32 mm
Weight	184 g without battery

ENVIRONMENTAL CONDITION

Ambient temperature	
Operational	-10°C to +40°C
Storage	-40°C to +70°C
Relative humidity	25% to 95%

ELITE - PNEUMATIC GAS CONSERVER

The SABRE ELITE gas conserving device enables oxygen patients to use their cylinders for longer. The ELITE delivers oxygen when a patient inhales during a breathing cycle, thereby saving gas and enabling the oxygen cylinder to last up to 3 times longer when compared to constant flow oxygen therapy.

FEATURES AND BENEFITS

Easy to use

The ELITE is simple to use and connects easily to the schrader outlet on a cylinder or regulator. The ergonomic design allows carers and oxygen patients to easily select the preferred flowrate.

Low cost of ownership

The ELITE is fully pneumatic and has very low ongoing costs. Device maintenance is only required after 5 years from date of manufacture.

Various cylinder connections

The ELITE can be supplied with different cylinder connections defined by regional or local standards.

Operational savings for homecare providers

with the ELITE enabling gas cylinders to last longer and saving oxygen, home oxygen providers can save money on reduced number of trips to exchange cylinders for patients.

Warranty

The ELITE conserving device is supplied with a 2 year manufacturer warranty.

ELITE attached
to an integral valve cylinder

GCE SABRE ELITE

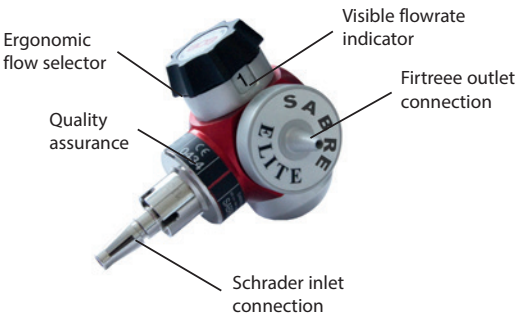
Art. Nr.	Description
2010294	GCE Sabre Elite with Probe

ELITE WITH HIGH PRESSURE CYLINDER CONNECTOR

Art. Nr.	Description
2001635	Elite valve and regulator with UK Bullnose standard connection
2001637	Elite valve and regulator with Pin Index connection

TECHNICAL DATA

Inlet pressure	up to 200 bar
Flow settings	1.0/1.2/1.5/2.0/2.5/3.0/3.5/ 4.0/4.5/5.0/ 5.5/6.0 l/min
	Version with up to 8 litres per minute is available



CYLINDER DURATION CHART ELITE VS. CONSTANT FLOW (HRS.MIN)

Cylinder size (litres)	Cylinder pressure (bar)	Flowrate (l/min) with ELITE					Flowrate (l/min) - constant flow				
		1	2	3	4	6	1	2	3	4	6
0.5	137	3.25	1.42	1.08	0.51	0.34	1.08	0.34	0.23	0.17	0.11
1	137	6.51	3.25	2.17	1.42	1.08	2.17	1.08	0.46	0.34	0.23
1.7	137	11.38	5.49	3.52	2.54	1.56	3.53	1.56	1.18	0.58	0.39
2	137	13.42	6.51	4.34	3.25	2.17	4.34	2.17	1.31	1.09	0.46
2.7	137	18.29	9.14	6.09	4.37	3.04	6.10	3.05	2.03	1.32	1.02
9.4	137	64.23	32.11	21.27	16.05	10.43	21.28	10.44	7.09	5.22	3.35
0.5	200	5.00	2.30	1.40	1.15	0.50	1.40	0.50	0.33	0.25	0.17
1	200	10.00	5.00	3.20	2.30	1.40	3.20	1.40	1.07	0.50	0.33
1.7	200	17.00	8.30	5.40	4.15	2.50	5.40	2.50	1.53	1.25	0.57
2	200	20.00	10.00	6.40	5.00	3.20	6.40	3.20	2.13	1.40	1.07
2.7	200	27.00	13.30	9.00	6.45	4.30	9.00	4.30	3.00	2.15	1.30
9.4	200	94.00	47.00	31.20	23.30	15.40	31.20	15.40	10.27	7.50	5.13

EMERGENCY EQUIPMENT

sabre™ medical
Security in action

MARS II - MANUAL AND AUTOMATIC RESUSCITATION SYSTEM

MARS II is a leading resuscitator developed for healthcare professionals and first responders. MARS II is specifically designed to help emergency personnel, respond to patients that require resuscitation. The device can be used in confined spaces, low oxygen/toxic environments.

FEATURES

- Simple to use
- Robust design to withstand harsh environments
- Can be enabled for automatic or manual (CPR) resuscitation

MARS II meets the requirments of ISO 10651-5:2006 and European Resuscitation Council Guidelines for Resuscitation 2010 for ventilatory resuscitators. The MARS II is available in all regional gas-standards. MARS II can be used for children (20 kg), small adults and adults.

MARS II is available in 2 different versions:
1: Standard version (all settings)
2: Industrial or Mining version (adult setting)

NOTE: Cylinder is not included, see page 45.

Art. Nr.	Description
0715212	MARS Standard kit with demand valve and trigger (100 l/min flow), control module (3 settings - Adult/Medium/Child). Pin index regulator with 11 setting constant flow (1 - 23 l/min). 'Square' carry bag, masks and head harness.
0715216	MARS Industrial kit with demand valve and trigger (100 l/min flow), control module with adult only setting. Pin index regulator with 11 setting constant flow (1 - 23 l/min). 'Square' carry bag, mask and head harness.
0715226	MARS Standard kit with demand valve and trigger (100 l/min flow), control module (3 settings - Adult/Medium/Child). With hose and BS probe. 'Square' carry bag, masks and head harness.
0715221	MARS Bag kit with demand valve and trigger (100 l/min flow), control module with adult setting only with hose and BS probe. Pin index regulator with 11 setting constant flow (1 - 23 l/min). Red 'square bag', masks and head harness.

1033026

ACCESSORIES

Art. Nr.	Description
1033026	Net Head Harness

TECHNICAL DATA

MARS II CONTROL MODULE

Gas	O_2
Material	Brass, aluminium main inside parts, abs cover
Dimensions	165 × 110 × 63 mm
Weight	1300 g
Regulator Inlet connections	Full range high pressure, swiveling to the module
Input pressure (with reg.)	200 - 20 bar
Inlet pressure (without reg.)	3.6 - 6 bar @ 100lpm
Working pressure	3 bar
Inlet connection (module)	G1/4
Regulator performance	min 100 lpm and min 3 bar
Inlet filter	30µm
Time to revert to automatic resuscitation	5 - 7 seconds
Gas consumption	0.15 lpm

MARS II DEMAND VALVE

Material	Polycarbonate, silicone, rubber, stainless steel
Dimensiones	120 × 50 × 70 mm
Weight	175 g
Inspiratory resistance	
Cracking pressure @ 5 lpm	-0.23 kPa
Triggering pressure @ 60 lpm	-0.44 kPa
Expiratory resistance @ 60 lpm	+0.48 kPa
Demand valve flow	
Spontaneous breathing	0 -100 lpm
Relief valve triggering pressure	55 cm H_2O
Alarm valve triggering pressure	46 cm H_2O

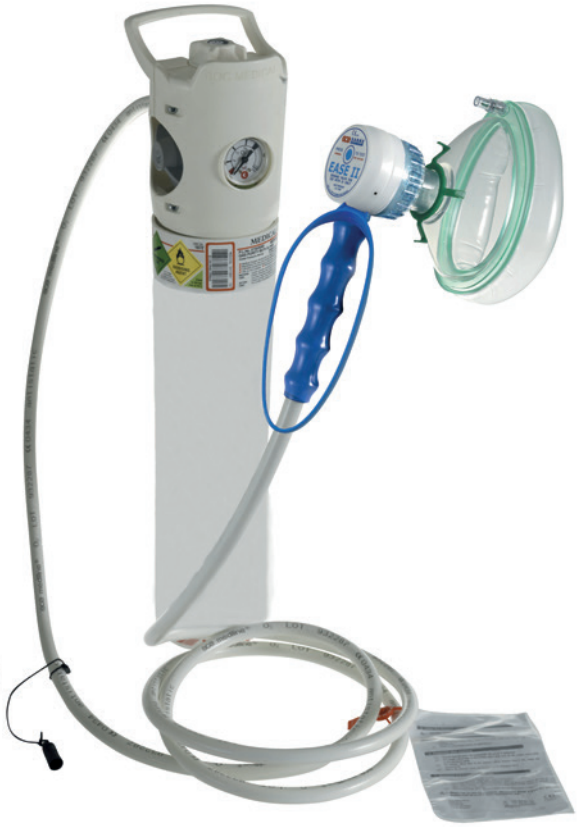
DEMAND VALVE

EASE II

The New Sabre EASE II portable systems provide a compact low resistance method of self-administering O_2 or O_2/N_20. The EASE demand valve is constructed in a way that creates minimal breathing resistance to the patient and can deliver high flows when required.

For greater user comfort the EASE II is both smaller and lighter than the original Sabre EASE. The new 'Easy Grip' handle is another user friendly addition.

- On demand Oxygen or Nitrous Oxide/ Oxygen system for delivering up to 300 litres/ min
- Portable first stage regulator and cylinder version for immediate care and pre-hospital applications.
- Low pressure pipeline version for obstetrics and general nursing applications.
- Conforms to BS 4272: Part 2: 1996
- Low inspiratory effort demand valve
- Test/ Purge facility on the demand valve, easy to clean and reassemble for cross infection protocol
- Hose fitted with probes by the national standards for connection into cylinder system or wall outlet
- Autoclavable, removable handle



The EASE II system is available to deliver Nitrous Oxide/ Oxygen upon demand. It is available for use as a portable system with first stage regulator, or as a low pressure pipeline version. The EASE is designed to administer effective pain relief within a wide range of medical situations including immediate care, general practice and general nursing obstetrics.

Conforming to BS 4272: Part 2:1996, the demand valve is designed to deliver up to 300 litres per minute of gas with minimal inspiratory effort by the patient. This valve also contains a removable patient valve that houses the exhalation flap and anti contamination valve. This can be removed and cleaned before replacement and re-use.

OPTIONS

The Sabre EASE range of products is structured in a way to allow the user to define their personal requirements of system, cylinder and carry options.

EASE II - DEMAND VALVE

EASE II demand valve is a robust and compact device used by patients to self administer medical gas therapy. EASE II can be used to administer nitrous oxide and oxygen mixture (commonly known as ENTONOX, LIVOPAN, OXYNOX, MEOPA, KALINOX) for pain relief or medical oxygen therapy. The EASE II demand valve is designed in a way that creates minimal breathing resistance to the patient and can deliver high flows when required.

- Delivery up to 300 litres per minute of gas
- Portable first stage regulator and cylinder version for immediate care and pre-hospital applications
- Conforms to global standards

EASE II O2 is recommended during diving accidents and cluster headaches therapy
EASE II N2O/O2 is recommended during pain releave therapy.

Regulators can be included. Scavenging adapter is mandatory in combination with an active exhaust system.

Art. Nr.	Description
0715300	EASE II Demand value with 3 metres of hose & BS5682 probe.
	Supplied with mask, mouthpieces and manual.
0715309	EASE II kit with demand valve, 3 metres of hose and BS5682 probe, Pin Index regulator with BS5682
	socket. Supplied with mask, mouthpieces and manual
0715321	EASE II kit with demand valve, 3 metres of hose and BS5682 probe,
	For use with OXYGEN. Supplied with mask, mouthpieces and manual

ACCESSORY TO EASE II

Art. Nr.	Description
1032937	Disposable mouthpiece (Pack of 5 pcs)
1035575P	Breathing filter (Pack of 100 pcs)
1032994P	Disposable facemask - medium (Pack of 5 pcs)
1032620P	Adult size reusable mask
1024417	Blue barrel carry bag
1032622P	Adult/Child size mask, multiple use for Ease II
850500P	Expiration diverter single use for Ease II (Pack of 1 pce)

TECHNICAL DATA

DEMAND VALVE

Gas	O_2 /N_2O
Material	Polycarbonate, silicone rubber, stainless steel
Dimensions	50 × 50 × 63 mm
Gas supply	Requirement 2,8 to 7,0 bar at >200 l/min
Inspiratory resistance (At 2,8 bar supply press.)	Cracking pressure 0.15-0.2 kPahigh pressure,
	-0.2 kPa at 10 l/min
	-0.7 kPa at 200 l/min
Expiratory resistance	Cracking pressure at zero flow +0,35 kPa at 120 l/min
Operating temperature	-20°C tp +60°C used Oxygen
	+5°C to +40°C used 50/50 O_2/N_2O
Storage temperature	-30°C to +60°C

HOSE ASSEMBLY

Connection	Available in different regional standards
Working pressure	7 bar
Burst pressure	44 bar
Material	PVC, anti-static in accordance with ISO 5359
Weight	0.5 kg (3 m length)

EASE II KIT WITH REGULATOR AND BS PROBE

- 5 x Bacterial Filters
- 5 x Mouthpieces
- Adult Mask
- Child Mask
- Carry Bag

Art. Nr.	Description
MM6008	EASE II Kit with Regulator and BS Probe

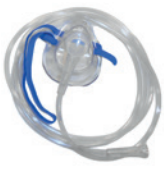
EASE II KIT WITH BS PROBE

- 5 x Bacterial Filters
- 5 x Mouthpieces
- Adult Mask
- Child Mask
- Carry Bag

Art. Nr.	Description
MM6009	EASE II Kit with BS Probe

ACCESSORIES

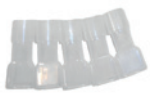
Art. Nr.	Description
MM6010	Empty O_2/N_2O Cylinder supplied with Pin Index Valve, 2 litre



Child Mask

Adult Mask

Mouthpieces



Bacterial Filters

MediVital®

COMBI VALVES
VALVES INTEGRATED WITH PRESSURE REGULATOR

- Available in different variants, they are designed to fulfil the requirements for all types of medical gases in different application areas and cylinder pressures up to 300 bar
- Gas from the cylinder is first controlled by the shut-off valve and then passes through the pressure regulator and delivered to the patient through the flow outlet or the pressure outlet
- They are always provided with an external pressure relief valve to protect the user outlets from over pressure
- Available with a protective guard and bed hanger for easier and safer handling by the healthcare personnel and patients.

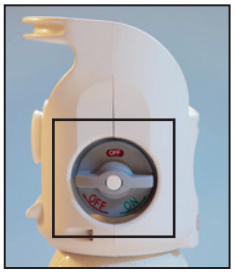
15 YEARS LIFE TIME

- 15 year life time ensured by extended endurance and cycle testing for future market requirements
- Slow opening shut off valve with new Patented design
- Latest technology highest shock resistant gauge
- Flow selector designed for optimal gas flow and patient safety
- Guard design provides maximum protection for the valve

BENEFITS FOR END USERS

PRESSURE INDICATOR

- Good visibility of values/status
- Wide dial angle improving readability
- 40 mm diameter
- Fluorescent scale face

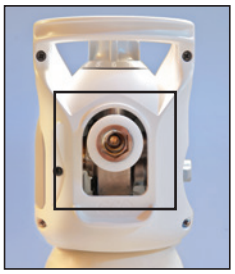


SHUT OFF VALVE

- Clear visibility of open/close status – colour indication
- Good visibility of open/close direction
- Space for RF chip inside the hand wheel

EASY USE FLOW SELECTOR

- Excellent view of all selected flows
- Large clear 4,5 mm digits
- Optimized ergonomics of hand wheel
- Increased flow in between settings (min 50% of lower value)
- Fixed arrow for flow indication on the front of the valve
- Increased clearance around hose nipple, enables easy connnection/ disconnection of cannula/mask
- Facility for RF chip inside the flow control knob

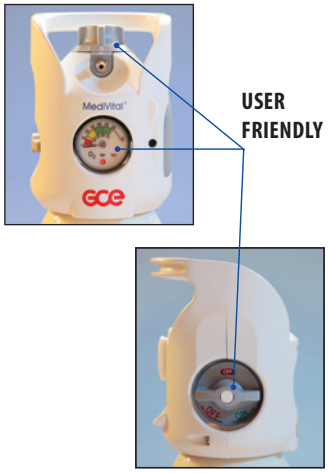


PRESSURE OUTLET

- Completely enclosed & protected by the guard
- Open/close push system with wide plastic grips for easy operation, for all main types
- Improved design for primary types

COMBI VALVES - VALVES INTEGRATED WITH PRESSURE REGULATOR

MediVital®



USER FRIENDLY

- Suitable for use in Homecare, Emergency and Hospital applications
- Easy read flow selector and gauge
- Shut off valve with clear open/closed status & colour coded marking
- Ergonomic guard design allows for easy handling of the cylinder package
- Compact and lightweight design less than 1150 grams
- Easy clean guard material

HIGHEST SAFETY

- Testing in accordance with the following standards; ISO 10534-3 ASTM G175 Pill test
- ISO 10297
- CE Marked CE 0434 in accordance with the medical directive 93/42/EC and TPED 2010/35 EU
- Phthalate and Halogenated polymer free components
- MRI compatible up to Tesla 3
- For use with oxygen, nitrous oxide and other medical mixed gases up to 300bar working pressure

Art. Nr.	Description
0718017	MediVital Valve & Guard Oxygen 17E W24x2 0-25 lpm (min 50pcs)
1019801	MediVital Combivalve 200bar with filled 2l Cylinder including bag, mask & tubing (1pc)
1019802	MediVital Combivalve 200bar with filled 2l cylinder (no bag, mask or tubing) (1pc)
1019803	MediVital Combivalve 200bar with empty 2l Cylinder including bag, mask & tubing (1pc)

Bed Hanger

ACCESSORIES

Art. Nr.	Description
9626070	G3/8" Filling Adaptor (1pc)
SPK31810032	Filling Pins Spares (5pcs)
9453230	Spares Pack Filling Adaptor O-rings (50pcs)
0727418	Humidifier Holder (10pcs)
0727421	Bed Hanger (10pcs)
K294401	Reusable Humidifier 121°C 9/16 (1pc)
14090417	Single Use Humidifier 9/16 (1pc)
9442820	Humidifier Connection Hose 40cm (10pcs)

Humidifier Holder

TECHNICAL DATA

Gas:	O_2, Air, N_2O/O_2 and other medical mixed gases
Inlet pressure:	Up to 300 bar (4500 psi)
Outlet pressure:	3,6 to 5,5 bar - acc. to EN ISO 10524-3 (or per customer specification)
RPV closing:	>3 bar
PRV opening and re-closing:	>5.5 bar
Flow ranges:	0-2, 0-6, 0-15 and 0-25 lpm
Materials:	Metallic parts (gas wetted): brass
	Elastomers: EPDM, silicon, PUR
	Plastics: PA66, PEEK, PI
	Springs (gas wetted): CuBe2, CuSn6
Dimensions:	Height: 153 mm; Width: 112 mm; Depth: 118 mm
Weight:*	1150 g
Inlet stem:	Tapered or parallel threads (17E, 25E, M18, per customer specification)
Filling port:	ISO 5145, NEVOC or per customer specification
Regulatory status:	Complies with MDD 93/42/EEC
	Complies with TPED 99/36/EEC
	Complies with EN ISO 10524-3
	Complies with ISO 10297
	Complies with EN 1789
	Complies with ASTM G175
	Production in accordance with EN ISO 9001 and EN ISO 13485
Classification:	IIb
Manufacturer:	GCE s.r.o, Žižkova 381, 583 81 Chotěboř

* Standard Combivalve (flow control unit 0 - 15 l/min, flow outlet, DIN quick coupling pressure outlet) with guard. All technical data are given for information only and are subject to modifications by the manufacturer.

AMBULANCE PANEL II

The APS II is a bespoken system containing an ambulance panel, hoses and regulators ready to be mounted in an ambulance. The system is CE marked and complies with EN 1789.

FLEXIBILITY

The APS II has three main components: regulators, hose assemblies and panels. The modular design of the individual components means that they are infinitely variable. The individual components can then be combined in many different configurations giving the end user total flexibility.

Medireg

AMBULANCE REGULATORS

The APS II can be delivered with two types of ambulance regulators, Medireg and Varimed. The APS II can also be used with combivalves*. Generally Medireg is for lower capacity and Varimed for higher capacity and this capacity is determined by the equipment that is used in the ambulance. The ambulance regulators are designed to withstand the conditions in the road ambulance and are manufactured according to EN 1789. The ambulance regulators are delivered with either standard 3/8" connections or quick connectors. The Varimed and Medireg can be delivered with electronic signal gauge to be connected to the ambulance monitoring or gas monitoring systems.

*Some restrictions regarding pressure monitoring when APS II includes electronic monitoring system.

Art. Nr.	Description
0724194	Medireg O_2 bullnose G1/4
0724200	Medireg bullnose, G1/4 contact gauge

AMBULANCE HOSE

The hoses connect to the regulators and the panels. The hoses are made up to individual specifications and are clamped and tested ready to install in the ambulance, or "SMART Fit". The special concept "SMART Fit" allows the ambulance builder to cut and adjust the hoses to fit in the ambulance. The hoses can be delivered static or antistatic. The standard connection is 3/8". The low pressure hoses can also be delivered stainless steel reinforced.

Standard Ambulance Hose

Steel reinforced

AMBULANCE PANEL

The new ambulance panel range from GCE Sabre Medical offers unrivalled flexibility in its installation and design. The modular concept uses common components leading to shorter lead times for manufacture and installation. Modules are infinitely variable and can incorporate gauges, switchovers, outlets or integral flow selectors and suction. Low profile back plates ensure close fitting to the ambulance wall whilst rounded edges avoid patients being exposed to sharp corners. The clear and simple gauge and switchover system allows easy surveillance and visibility by ambulance staff.

Art. Nr.	Description
0715410	AP II O_2 R S
0715431	AP II O_2 2xBS R
0715439	AP II O_2 FLS E

0715439

0715410

0715431

TECHNICAL DATA APS II

Gas	O_2, Air, N_2O/ O_2
Cylinder pressure	20-200 bar
Working pressure/flow	see separate information about regulators
Capacity Medireg	Recommended max 2 QC outlets
Capacity Varimed	Recommended max 5 QC outlets
QC outlet variants	SS, DIN, NF, BS, UNI, CZ
Capacity QC	60 l/min*
Capacity FLS	0-15, 0-25 l/min
Capacity suction	25 l/min
Connection	G3/8" (female)
Connection hoses	G3/8", G1/4", SS, DIN, NF, BS, UNI, CZ
Hoses	statis, antistatic, stainless steel reinforced
Working Temperature	-20C - +60C
Standards	EN1789:2008

AMBULANCE REGULATORS

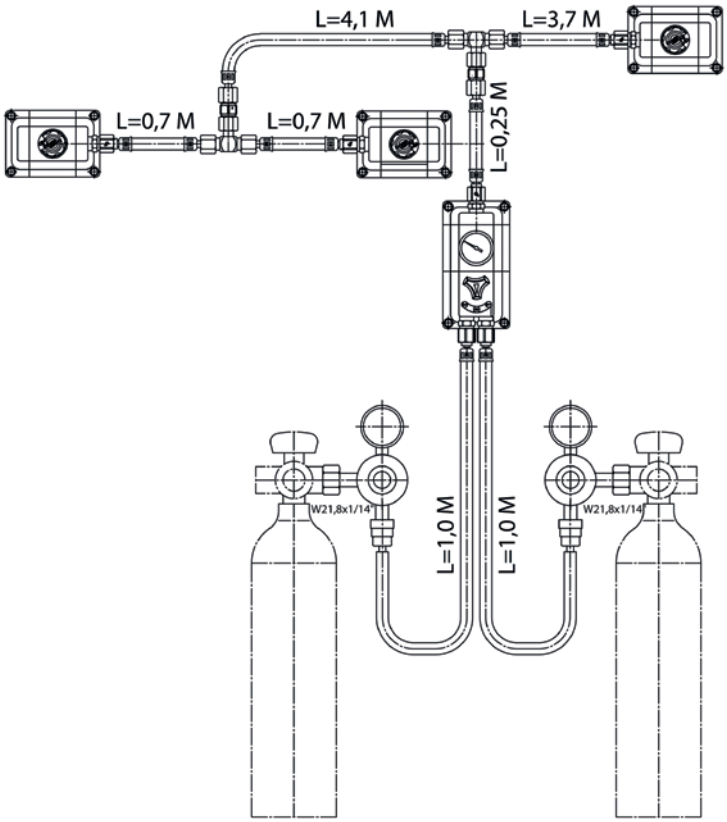
DEFINITION AMBULANCE REGULATORS

Type	Varimed, Medireg
Gas	O_2
Inlet	acc. to national stds
Outlet	G1/4", QC acc. national stds
Gauge	Standard, Electronic

HOSE-ASSEMBLIES

DEFINITION AMBULANCE HOSE

Type	Ambulance Hose, Steelreinforced, SMART Fit
Gas	O_2
Inlet	G3/8", G1/4", QC nat. stds.
Outlet	G3/8", G1/4", QC nat. stds.

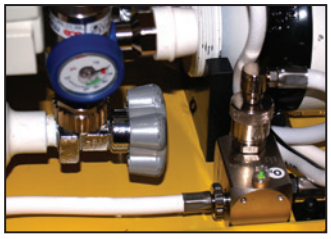


GAS SOURCE SELECTOR - GSS

The Gas Source Selector has been developed for devices such as transport incubators, respirators and anaesthesia devices, which can be supplied with gas from a cylinder during transport or connected to a central gas system.

- Economic gas supply from gas socket
- Less frequent replacement of gas cylinders
- Compact dimensions
- Simple connection to devices
- A green pressure indicator indicating gas supply via gas socket

Art. Nr.	Type	
0727205	GSS O_2	NIST
0727206	GSS Air	NIST
0727207	GSS O_2	AFNOR
0727209	GSS Air	AFNOR
0727210	GSS O_2	DIN INLET
0727211	GSS Air	DIN INLET



GSS on transport incubator

GSS on transport respirator

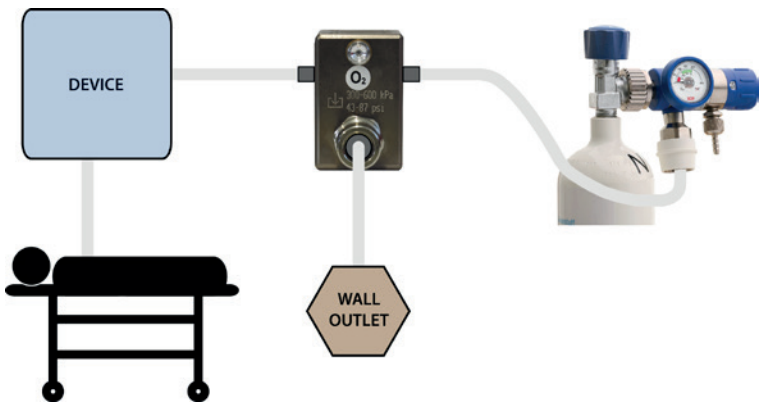
TECHNICAL DATA

Gases:	O_2, air, N_20 on request
Input pressure at gas outlet	3-6 bar
Input pressure of pressure reducer	3.6 – 5.5 bar
Output pressure	input pressure
Output flow (no internal reduction)	input flow
Housing material	Aluminium alloy, nickel plated
Dimensions	42×65×74 mm
Weight	approx. 400 g
Maintenance	maintenance free
Suitable for use	in emergency, in transport
GSS INLET-HOSE ATTACHMENT	
From gas outlet connection	NIST or Afnor
From pressure reducer	M12×1 (O_2)
	M20×1 (Air)
GSS-OUTLET HOSE ATTACHMENT	
To consumer	M15×1 (O_2)
	M17×1 (Air)

GSS automatic gas source switch switches automatically between the gas cylinder supply and wall outlet connection. Preference is always given to the more economic wall outlets.

As soon as the gas socket is connected, GSS changes over from the wall cylinder to the gas outlet. It does not change over to the gas cylinder unless the pressure at the wall outlet drops below a preset minimum pressure level.

FLOW SCHEME



BAGS AND ACCESSORIES

BAGS AND ACCESSORIES

Art. Nr.	Description
MM6005	Barrel bag, blue

1024419	Barrel bag, red
1024374A	Red square Mars bag

NEW PORTAFLOW RUCKSACK BAG

Art. Nr.	Description
1024401A	1.7 litre
1024402A	2.7 litre (also fits BOC CD cylinder)

MEDICAL CYLINDER VALVES

GCE offers wide range of cylinder valves for medical gases. They are produced, tested and packed in super clean conditions. Strict manufacturing rules and procedures applied for the manufacture of GCE medical cylinder valves, using top quality materials and tools to guarantee reliability and safety.

FEATURES

- Available in all of common inlet and outlet connection
- For all medical gases
- Handwheels in different colours and materials
- Handwheel caps with customer logo
- Variants with burst disc or dip tube

For valves with residual pressure valve GCE offers filling adaptors that guarantee compatibility with GCE RPV cassette design. Our valves are CE and π marked.

SMALL MEDICAL VALVES (SMV):

- Inlet pressure: up to 200 bar
- Inlet connection: 17E, M18x1.5
- Ergonomic hand wheel

OPTIONS:

- Residual pressure valve
- Burst disc
- Dip tube
- Hand wheel in different colours
- Customer logo on the hand wheel cap

PIN INDEX VALVES:

- Inlet pressure: up to 200 bar
- Inlet connection: 17E, 25E, M18x1.5, 0.750UNF

OPTIONS:

- Burst disc
- Dip tube
- Hand wheel or opening mechanism with the key

STANDARD CYLINDER VALVES (IN LINE):

- Inlet pressure: up to 200 bar
- Inlet connection: 17E, 25E, 3/4"NGT, 0.750UNF, 1.125UNF

OPTIONS:

- Residual pressure valve
- Burst disc
- Dip tube
- Hand wheel plastic or aluminium
- Hand wheel with space for RF chip
- Customer logo on the hand wheel cap

STANDARD CYLINDER VALVES (OFF LINE):

- Inlet pressure: up to 300 bar
- Inlet connection: 17E, 25E

Art. Nr.	Type	Gas	Service (bar)	Inlet	Outlet	Finish
0765389	Pin Index	Air	200	25E	Air pin	Chromed
0775535	Pin Index	Air	200	M 18	Air pin	Chromed
0765414	Pin Index	Entonox	200	18T (0.715)	Entonox pin	Chromed
0765340	Pin Index	Oxygen	200	17E	Oxy pin	Chromed
0765397	Pin Index	Oxygen	200	18T (0.715)	Oxy pin	Chromed
0765339	Pin Index	Oxygen	200	25E	Oxy pin	Chromed
0775467	Pin Index	Oxygen	200	M 18	Oxy pin	Chromed

TECHNICAL DATA

Gas:	O_2, Air, N_2, Ar, CO_2, N_2O and others
Input pressure	Up to 300 bar (4500 psi)
RPV closing	> 2 bar
Inlet connection	Tapered or parallel threads
	(17E, 25E, M18x1,5 or per customer specification)
Outlet connection	According to national standards
Materials	Chrome plated brass
Burst disc	190, 216, 250, 300 bar, for CO_2 and N_2O, other gases optional
Operating temperature	-20°C to + 65°C
Storage and transport temperature	-40°C to + 65°C
Regulatory status	Complies with MDD 93/42/EEC TPED 2010/35 EU
	ISO 10297 ISO 15996
	Production in accordance with EN ISO 9001 and EN ISO 13485
Classification	iIb

OXYGEN CYLINDERS

New white appearance cylinders compliant with UK MHRA approved changes.

Art. Nr.	Description
1019797	Oxygen Cylinder with Pin Index Valve, 2.7 Litre, 200 bar
1019798	Oxygen Cylinder with Pin Index Valve, 2.7 Litre, 200 bar, Empty
1019799	Oxygen Cylinder with Pin Index Valve, 2.0 Litre, 200 bar
1019800	Oxygen Cylinder with Pin Index Valve, 2.0 Litre, 200 bar, Empty
MM6010	Empty O_2/N_2O Cylinder supplied with Pin Index Valve, 2 litre

TROLLEYS

TROLLEYS

Art. Nr.	Description
14090630	Trolley for 10 l cylinder, 5-wheels, static
325396136P	Trolley for 10 or 20 l cylinder, without belt
	Dimensions H×W×D (mm): 935×426×352
325396137	Trolley for 10, 20 l cylinders, 3×10 l or 2×20 l without belt
	Dimensions H×W×D (mm): 935×710×352
325397691	Trolley for gas cylinder, D=116 mm

325396136P

325396137

14090630

325397691

ACCESSORIES

Art. Nr.	Description	Trolley
500009602	Belt for 2.5 l cylinder	500009601P
325396138	Belt for 5 or 10 l cylinder	500009601P, 325396136, 325396137
325396139	Belt for 20 l cylinder	325396136, 325396137

CYLINDER HOLDERS

CYLINDER HOLDERS

Art. Nr.	Description
14090635	Holder for 2 l cylinder (1 belt). D = 100 mm
14116016	Holder for 2 or 3 l cylinder (2 belts), D = 100 mm
500003472	Holder for 2 l cylinder (foot)
325197566P	Holder for gas cylinder, D = 116 mm
325197688P	Holder for gas cylinder, D = 100 mm
H03110301	Cylinder holder 1 cylinder
H03050220	Belt

14090635

325197566P

500003472

325197688

H03110301

ACCESSORIES

326000722

326001695

Art. Nr.	Description
326001695	Bed hanger bracket
326000722	T-Bracket

SERVICING OPTIONS

GCE SABRE MEDICAL EQUIPMENT SERVICING AND REPAIR

For User/Maintainer, or Service Agents, GCE offer a one day training course in-house at their works, or at GCE premises, in each of the following modules.

MEDICAL REGULATORS - 5 AND 3 YEAR SERVICE AND REPAIR

- Service schedules and instructions for the full range of GCE Sabre Medical Gas Regulators.
- Use of specified tooling and assembly equipment.
- Test, troubleshooting and labeling instructions.

EASE AND EASE II ENTONOX DEMAND VALVES - MONTHLY CHECKS AND ANNUAL SERVICE

- Service and maintenance instruction for the Regulator and Hose.
- Demand Valve service, testing and troubleshooting.
- A specific Demand Valve Test unit is required for this training.

MARS RESUSCITATOR - MONTHLY CHECKS AND ANNUAL SERVICE

- Service and maintenance instruction for the Regulator and Hose.
- Demand Valve service, testing and troubleshooting.
- Control Mocule service, testing and troubleshooting.
- A specific MARS Test unit is required for this training.

COURSE OBJECTIVES

- To train course attendee(s) in the service repair and testing of GCE Sabre, Medical Regulators, MARS and EASE using the Service Manuals written for these products (issued in CD format).
- Safety considerations of medical compressed gases and the general priciples of operation of these medical devices are covered in the course, with guidance on workplace cleanliness, tooling management and quality standards required for high pressure oxygen devices.
- The training is done in a practical forum, using the GCE Sabre Medical Service Manuals, test equipments, tooling and spares kits supplied/recommended by the manufacturer.

TRAINING OUTCOME/BENEFITS

- Attendees of the course will be certified to Service and Repair GCE Sabre Medical products for the range specified for two years and be competent undertake the servicing/repair activity.
- User/Maintainers establish autonomy over the service and maintenance of this equipment, offering service cost savings and significantly reduced down time of this essential medical equipment.

ALTERNATIVELY EQUIPMENT CAN BE RETURNED TO GCE FOR SERVICE AT THE ADDRESS BELOW:

Gas Control Equipment (UK) Limited
100 Empress Park
Penny Lane
Haydock
ST HELENS
WA11 9DB

Tel: +44(0) 1942 665202
Fax: +44(0) 1942 292977

USER INSTRUCTIONS

User instructions videos are available on the GCE website www.gcegroup.com.

CERTIFICATES

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

Källvattengatan, SE-200 21, Malmö, Sweden

With sites as per attachment

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 service of equipment to control flow and pressure as well as devices for usage of gases in gaseous and liquid form.

Initial Certification date: 28 February 1997

This Certificate is valid until: 28 February 2018

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

NORWEGIAN ACCREDITATION MSYS 002

Place and date: Høvik, 23 February 2015

for the Accredited Unit: DNV GL Business Assurance Norway AS.

Eugenie Winger Husebye
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
This Certificate has been digitally signed. See www.dnv.com/digitalsignatures for more info
HEAD OFFICE. Det Norske Veritas AS, Veritasveien 1, 1322 Høvik, Norway. Tel: +47 67 57 99 00 Fax: +47 67 57 99 11 - www.dnv.com

DNV BUSINESS ASSURANCE
MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 109399-2012-AQ-CZS-NA

This is to certify that the Management System of:

GCE Holding AB

Källvattengatan 9, SE-200 21, Malmö, Sweden

With sites as per attachment

has been found to conform to the standard:

NS-EN-ISO 13485:2012

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

Design, production, sales, distribution and service of medical devices to control flow and pressure as well as devices for usage of medical gases in health services in following product groups: Pressure regulators, Terminal units, Suction equipment, Hoses, Cylinder and combination valves, Flow meters, Central Gas Manifolds, Accessories.

Initial Certification date: 28 February 1997

This Certificate is valid until: 28 February 2018

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

NORWEGIAN ACCREDITATION MSYS 002

Place and date: Høvik, 23 February 2015

for the Accredited Unit: DNV GL Business Assurance Norway AS.

Eugenie Winger Husebye
Management Representative

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HEAD OFFICE. Det Norske Veritas AS, Veritasveien 1, 1322 Høvik, Norway. Tel: +47 67 57 99 00 Fax: +47 67 57 99 11 - www.dnv.com

DNV BUSINESS ASSURANCE
EC CERTIFICATE – FULL QUALITY ASSURANCE SYSTEM

Certificate No. 73547-2010-CE-CZS-NA 6.0

This Certificate consists of 3 pages

This is to certify that the Quality Management System of

GCE s.r.o.

Žižkova 381, 583 81 Chotěboř, Czech Republic

for design, production and final product inspection/testing of

Medical Devices for use with Medical Gases

has been assessed with respect to
the conformity assessment procedure described in Article 11.3.a and Annex II excluding section 4 (Module H) of Council Directive 93/42/EEC on Medical Devices, as amended, and found to comply

Further details are given overleaf

Place and date: Høvik, 26 March 2015

For DNV GL Business Assurance Norway AS

Aud Løken Eiklid
Certification Manager

NORWEGIAN ACCREDITATION

CE

Notified Body No.: 0434

This Certificate is valid until: **30 March 2020**

Sholeh Gheissar
Technical Reviewer

This Certificate has been digitally signed. See www.dnv.com/digitalsignatures for more info

Notice: The certificate is subject to terms and conditions overleaf. Any significant changes in design or construction may render this certificate invalid.

Det Norske Veritas Certification AS, Veritasveien 1, 1322 Høvik, Norway. Tel: +47 67 57 9900 Fax: +47 6757 9911 www.dnv.com
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Lloyd's Register LRQA

CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

Gas Control Equipment Ltd
Building 100, Penny Lane, Empress Park,
St Helens, Merseyside
United Kingdom

has been approved by Lloyd's Register Quality Assurance to the following Quality Management System Standards:

ISO 9001:2008
ISO 13485:2003

The Quality Management System is applicable to:

Design, production, sales and service of equipment to control flow and pressure as well as devices for usage of gases in gaseous and liquid form.

This certificate forms part of the approval identified by certificate number LRQ 4009367

Approval Certificate No: LRQ 4009367/A

Original Approval: 20 August 2015
Current Certificate: 20 August 2015
Certificate Expiry: 19 August 2018

Issued by: Lloyd's Register Quality Assurance Limited

UKAS MANAGEMENT SYSTEMS 001

1 Trinity Park, Bickenhill Lane, Birmingham, B37 7ES, United Kingdom

GENERAL BUSINESS TERMS AND CONDITIONS

PREAMBLE

1. These General Conditions shall apply when the parties agree in writing or otherwise thereto. Deviations from the Conditions shall not apply unless agreed in writing.
When used in these conditions the term "written" or "in writing" refers to a document signed by both parties or a letter, fax, electronic mail or other means agreed by the parties.

PRODUCT INFORMATION

2. Data in product information and price lists are binding only to the extent that they are expressly referred to in the contract.

TECHNICAL DOCUMENTS AND TECHNICAL INFORMATION

3. All drawings and other technical documents regarding the goods or their manufacture submitted by one party to the other, prior or subsequent to the formation of the contract, shall remain the property of the submitting party.
Drawings, technical documents or other technical information received by one party shall not, without the consent of the other party, be used for any other purpose than that for which they were submitted. They may not without the consent of the other party be copied, reproduced, transmitted or otherwise communicated to a third party.
4. The Seller shall, not later than by delivery of the goods, free of charge provide the Buyer with one copy, or the larger number of copies that may have been agreed, of drawings and other technical documents, which are sufficiently detailed to permit the Buyer to carry out installation, commissioning, operation and maintenance (including running repairs) of all parts of the goods.
The Seller shall not, however, be obliged to supply manufacturing drawings of the goods or spare parts.

DELIVERY TEST

5. Where a delivery test has been agreed, it shall, unless otherwise agreed, be carried out where the goods are manufactured.
If technical requirements for the test have not been agreed, the test shall be carried out in accordance with general practice in the industry concerned in the country where the goods are manufactured.
6. The Seller shall notify the Buyer in writing of the delivery test in sufficient time to permit the Buyer to be present at the test.
If the Buyer has received such notice, the test may be carried out even if the Buyer is not represented at the test. The Seller shall record the test. The test report shall be sent to the Buyer. The report shall, unless otherwise shown by the Buyer, be considered to correctly describe the execution of the test and its results.
7. If at the delivery test the goods are found not to be in accordance with the contract, the Seller shall as soon as possible ensure that the goods comply with the contract. If so required by the Buyer a new test shall thereafter be carried out. The Buyer may not, however, require a new test if the defect was insignificant.
8. If no other division of the costs has been agreed, the Seller shall bear all costs for delivery tests carried out where the goods are manufactured. The Buyer shall, however, at such delivery tests bear all costs for his representatives, including costs for travel and subsistence.

DELIVERY

9. Where a trade term has been agreed, it shall be interpreted in accordance with the INCOTERMS in force at the formation of the contract. If no trade term is specifically agreed, the delivery shall be Ex Works.

TIME FOR DELIVERY. DELAY

10. If, instead of a fixed date for delivery, the parties have agreed on a period of time within which delivery shall take place, such period shall start to run at the formation of the contract.
11. If the Seller finds that he will not be able to deliver the goods at the agreed time or if delay on his part seems likely, he shall without undue delay notify the Buyer thereof in writing, stating the reason for the delay and if possible the time when delivery can be expected. If the Seller fails to give such notice, he shall, regardless of the provisions of Clauses 13 and 14, reimburse the Buyer for any additional expenses, which the latter incurs and which he would have avoided, had he received notice in time.
12. If delay in delivery is caused by a circumstance which under Clause 36 constitutes ground for relief or by an act or omission on the part of the Buyer, including suspension by the Seller under Clause 18, the time for delivery shall be extended by a period, which is reasonable having regard to the circumstances in the case. The time for delivery shall be extended even if the reason for delay occurs after the originally agreed time for delivery.
13. If the Seller fails to deliver the goods on time, the Buyer is entitled to liquidated damages from the date on which delivery should have taken place.
The liquidated damages shall be payable at a rate of 0.5 per cent of the agreed price for each complete week of delay. If the delay concerns only a part of the goods, the liquidated damages shall be calculated on the part of the price which is properly attributable to the part of the goods which cannot be taken in use due to the delay.
The liquidated damages shall not exceed 7.5 per cent of that part of the price on which it is calculated.
The liquidated damages become due at the Buyer's written demand but not before all of the goods have been delivered or the contract is terminated under Clause 14.
The Buyer loses his right to liquidated damages if he has not lodged a written claim for such damages within six months after the time when delivery should have taken place.
14. If the Buyer is entitled to maximum liquidated damages under Clause 13, and the goods are still not delivered, the Buyer may in writing demand delivery within a final reasonable period which shall not be less than one week.
If the Seller fails to deliver within such final period and this is not due to any circumstance for which the Buyer is responsible, the Buyer may, by written notice to the Seller, terminate the contract in respect of that part of the goods which cannot be taken in use due to the delay.
In case of such termination the Buyer shall also be entitled to compensation for the loss he suffers because of the Seller's delay to the extent that the loss exceeds the maximum of liquidated damages which the Buyer may claim under Clause 13. This compensation shall not exceed 7.5 per cent of that part of the price which is properly attributable to the part of the goods in respect of which the contract is terminated.
The Buyer shall also have the right to terminate the contract by written notice to the Seller if it is clear that there will be a delay, which under Clause 13 would entitle the Buyer to maximum liquidated damages. In case of termination on this ground the Buyer shall be entitled to both maximum liquidated damages and compensation under the third paragraph of this Clause.
Except for liquidated damages under Clause 13 and termination of the contract with limited compensation under this Clause 14, all other claims in respect of the Seller's delay shall be excluded.
This limitation of the Seller's liability shall not apply, however, where the Seller has been guilty of gross negligence.
15. If the Buyer finds that he will be unable to accept delivery of the goods on the agreed date, or if delay on his part seems likely, he shall without undue delay notify the Seller thereof in writing stating the reason for the delay and, if possible, the time when he will be able to accept delivery.
If the Buyer fails to accept delivery on the agreed date, he shall nevertheless make any payment which is dependent on delivery as if the goods in question had been delivered. The Seller shall arrange storage of the goods at the Buyer's risk and expense. If the Buyer so requires, the Seller shall insure the goods at the Buyer's expense.
16. Unless the Buyer's failure to accept delivery as referred to in Clause 15 is due to any such circumstance as described in Clause 36, the Seller may by written notice require the Buyer to accept delivery within a reasonable period.
If, for any reason for which the Seller is not responsible, the Buyer fails to accept delivery within such period, the Seller may, by written notice to the Buyer, terminate the contract in respect of that part of the goods which is ready for delivery but has not been delivered due to the Buyer's default. The Seller shall then be entitled to compensation for the loss he has suffered by reason of the Buyer's default. The compensation shall not exceed that part of the price which is properly attributable to the part of the goods in respect of which the contract is terminated.

PAYMENT

17. Unless otherwise agreed, the agreed purchase price, together with value added tax, if any, shall be invoiced with one third at the formation of the contract, one third when the Seller gives written notice that the bulk of the goods are ready for delivery. Final payment shall be invoiced at delivery of the goods. The invoiced amount becomes due 30 days after the date of the invoice.
18. If the Buyer fails to pay, the Seller shall be entitled to interest from the due date at the rate of interest determined by the law on late payments in the Seller's country.
If the Buyer fails to pay by the due date, the Seller shall also, after having notified the Buyer in writing thereof, suspend performance of his contractual obligations until payment is made.
19. If the Buyer has failed to pay the amount due within three months after the due date, the Seller may terminate the contract by written notice to the Buyer and, in addition to interest on late payment, claim compensation for the loss he has suffered. The compensation shall not exceed the agreed purchase price.

RETENTION OF TITLE

20. The goods shall remain the property of the Seller until paid for in full, to the extent that such retention of title is valid.

LIABILITY FOR DEFECTS

21. The Seller shall, in accordance with the provisions of Clauses 23–33 below, remedy any defect in the goods resulting from faulty design, materials or workmanship.
The Seller is not liable for defects arising out of material provided by the Buyer or a design stipulated or specified by him.
22. The Seller's liability does not cover defects caused by circumstances, which arise after the risk has passed to the Buyer.
The liability does not, for example, cover defects due to conditions of operation deviating from those anticipated in the contract or to improper use of the goods. Nor does it cover defects due to faulty maintenance or incorrect installation from the Buyer's side, alterations undertaken without the Seller's written consent or faulty repairs by the Buyer. Finally the liability does not cover normal wear and tear or deterioration.
23. The Seller's liability is limited to defects which appear within a period of one year from the date of delivery of the goods. If the goods are used more intensely than agreed, this period shall be reduced proportionately.
24. For parts, which have been repaired or replaced under Clause 21, the Seller shall have the same liability for defects as for the original goods for a period of one year. For other parts of the goods the liability period referred to in Clause 23 shall be extended only by the period during which the goods could not be used due to a defect for which the Seller is liable.
25. The Buyer shall notify the Seller in writing of a defect without undue delay after the defect has appeared and in no case later than two weeks after the expiry of the liability period defined in Clause 23 as supplemented by Clause 24. The notice shall contain a description of how the defect manifests itself. If the Buyer fails to notify the Seller in writing within the above time limits, he loses his right to make any claim in respect of the defect. If there is reason to believe that the defect may cause damage, notice shall be given forthwith. If notice is not given forthwith, the Buyer loses the right to make any claim based on damage which occurs and which could have been avoided if such notice had been given.
26. After receipt of a written notice under Clause 25, the Seller shall remedy the defect without undue delay. Within this limit the time for remedial work shall be chosen in order not to interfere unnecessarily with the Buyer's activities. The Seller shall bear the costs as specified in Clauses 21–32.
Remedial work shall be carried out at the Buyer's premises unless the Seller finds it appropriate to have the defective part or the goods sent to him for repair or replacement at his own premises.
The Seller shall carry out dismantling and re-installation of the part if this requires special knowledge. If such special knowledge is not required, the Seller has fulfilled his obligations in respect of the defect when he delivers a duly repaired or replaced part to the Buyer.
27. If the Buyer gives such notice as referred to in Clause 25, and no defect is found for which the Seller is liable, the Seller shall be entitled to compensation for the work and costs which he has incurred as a result of the notice.
28. If remedy of the defect requires intervention in other equipment than the goods, the Buyer shall be responsible for any work or costs caused thereby.
29. All transports in connection with repair or replacement shall be at the Seller's risk and expense.
The Buyer shall follow the Seller's instructions regarding how the transport shall be carried out.
30. The Buyer shall bear the increase in costs for remedying a defect which the Seller incurs when the goods are located elsewhere than at the destination stated in the contract or – if no destination has been stated – the place of delivery.
31. Defective parts, which have been replaced under Clause 21, shall be placed at the Seller's disposal and shall become his property.
32. If the Seller fails to fulfil his obligations under Clause 26 within a reasonable time, the Buyer may by written notice require him to do so within a final time. If the Seller fails to fulfil his obligations within that time limit, the Buyer may at his option:
a) have the necessary remedial work carried out and/or have new parts manufactured at the Seller's risk and expense, provided that the Buyer proceeds in a reasonable manner, or
b) demand a reduction of the agreed purchase price not exceeding 15 per cent thereof.
If the defect is substantial, the Buyer may instead terminate the contract by written notice to the Seller. The Buyer shall also be entitled to such termination where the defect remains substantial after measures referred to in a). In case of termination, the Buyer shall be entitled to compensation for the loss he has suffered. The compensation shall not, however, exceed 15 per cent of the agreed purchase price.
33. Regardless of the provisions of Clauses 21–32, the Seller shall have no liability for defects in any part of the goods for more than two years from the start of the liability period referred to in Clause 23.
34. The Seller shall have no liability for defects save as stipulated in Clauses 21–33. This applies to any loss the defect may cause, such as loss of production, loss of profit and other consequential economic loss. This limitation of the Seller's liability shall not apply, however, if he has been guilty of gross negligence.

LIABILITY FOR DAMAGE TO PROPERTY CAUSED BY THE GOODS

35. The Buyer shall indemnify and hold the Seller harmless to the extent that the Seller incurs liability towards any third party in respect of loss or damage for which the Seller is not liable towards
the Buyer according to the second and third paragraphs of this Clause.
The Seller shall have no liability for damage caused by the goods:
a) to any (movable or immovable) property, or consequential loss due to such damage, occurring while the goods are in the Buyer's possession, or
b) to products manufactured by the Buyer or to products of which the Buyer's products form a part.
The above limitations of the Seller's liability shall not apply if he has been guilty of gross negligence.
If a third party lodges a claim for compensation against Seller or Buyer for loss or damage referred to in this Clause, the other party to the contract shall forthwith be notified thereof in writing.
The Seller and the Buyer shall be mutually obliged to let themselves be summoned to the court or arbitral tribunal which examines claims against either of them based on damage or loss alleged to have been caused by the goods. The liability as between the Seller and the Buyer shall, however, always be settled by arbitration in accordance with Clause 39.

GROUNDS FOR RELIEF (FORCE MAJEURE)

36. The following circumstances shall constitute grounds for relief if they impede the performance of the contract or makes performance unreasonably onerous: industrial disputes and any other circumstance beyond the control of the parties, such as fire, war, mobilization or military call up of a comparable scope, requisition, seizure, trade and currency restrictions, insurrection and civil commotion, shortage of transport, general shortage of materials, restrictions in the supply of power and defects or delays in deliveries by sub-contractors caused by any such circumstance as referred to in this Clause.
The above described circumstances shall constitute grounds for relief only if their effect on the performance of the contract could not be foreseen at the time of formation of the contract.
37. The party wishing to claim relief under Clause 36 shall without delay notify the other party in writing on the intervention and on the cessation of such circumstance.
If grounds for relief prevent the Buyer from fulfilling his obligations, he shall reimburse the expenses incurred by the seller in securing and protecting the goods.
38. Notwithstanding other provisions of these General Conditions, either party shall be entitled to terminate the contract by notice in writing to the other party, if performance of the contract is delayed more than six months by reason of any grounds for relief as described in Clause 36.

DISPUTES. APPLICABLE LAW

39. Disputes arising out of or in connection with the contract shall not be brought before the court, but shall be finally settled by arbitration in accordance with the law on arbitration applicable in the Seller's country.
40. All disputes arising out of the contract shall be judged according to the law of the Seller's country.

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 900 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.

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Gas Control Equipment

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