

## HEALTHCARE PRODUCT RANGE





# GCE GROUP OVERVIEW

The GCE Group has an extensive product range to service customers within Industrial, Medical, High Purity and Speciality gas applications. The GCE Group has an extensive product range to service its Industrial, Medical, High Purity customers.

The GCE Group can offer local sales and supply companies in the following locations: Austria, Benelux, Czech Republic, France, Germany, Hungary, Italy, Poland, Portugal, Romania, Spain, Sweden, Switzerland, United, China and Russia. In addition GCE has recently opened new sales offices in India, Middle East (Dubai), Panama and Mexico and has its main production facilities based in the Czech Republic and China. GCE has one central distribution centre based in Kladno, just north of Prague.

## MARKET LEADERS

The GCE Group is today Europe's leading company in the field of gas control and is involved in the development and manufacturing of all types of equipment for pressure and flow control of high pressure gases. GCE's main business originally concentrated in the oxy-acetylene cutting and welding market. However, with almost 100 years of experience in the handling of high pressure gases, the product range has now grown to include high purity and medical gas equipment.



## GCE CORPORATE RESPONSIBILITY

Today's product portfolio fits a large variety of applications, from simple pressure regulators and blowpipes for welding and cutting to sophisticated gas supply systems for medical and electronics industry applications.

## 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



# GCE LOCAL OFFICE

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Here in the UK GCE has its own sales office, workshop and warehouse based at Haydock, St Helens. Our sales team have acquired many years of experience in all aspects of Gas Control Equipment and are on hand to offer help and advice. Within our workshop we offer servicing on a range of GCE Medical Equipment including oxygen concentrators together with repairs and user advice.

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## GCE SALES OFFICE & WAREHOUSE

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## HIGH PRESSURE REGULATORS





# HIGH PRESSURE REGULATOR

## MEDISELECT® II

The new generation of medical high pressure gas regulators.

### FEATURES / ADVANTAGES / BENEFITS

- 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





# HIGH PRESSURE REGULATORS

## MEDISELECT® II

Mediselect II is a high pressure medical gas regulator with a quick connector and flow selector. Mediselect II is designed with a continuous flow mechanism between flow settings, which allows patients to receive gas therapy in the unlikely event of device failure.



0720297



0720249

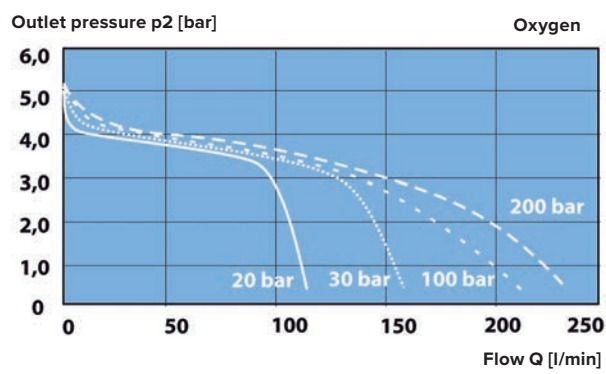
Art. Nr.	Description
<b>0720252</b>	MediSelect® II (0,2,4 l/min) ) O <sub>2</sub> , Bullnose Inlet Connection, 137 bar
<b>0720247</b>	MediSelect® II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) ) O <sub>2</sub> , Bullnose Inlet Connection, 137 bar
<b>0720296</b>	MediSelect® II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) ) O <sub>2</sub> , Bullnose Inlet Connection, 200 bar
<b>0720246</b>	MediSelect® II (0,1,2,3,4,5,6,7,9,12,15,25 l/min)) O <sub>2</sub> , Pin Index Inlet Connection, 137 bar
<b>0720297</b>	MediSelect® II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) ) O <sub>2</sub> , Pin Index Inlet Connection, 200 bar
<b>0720128</b>	MediSelect® II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) O <sub>2</sub> , Pin Index Inlet Connection, 200 bar
<b>0724221</b>	MediSelect® II (0,1,2,3,4,5,6,7,9,12,15 l/min) O <sub>2</sub> , Pin Index Inlet Connection , 200 bar
<b>0720265</b>	MediSelect® II (0,1,2,3,4,5,6,7,9,12,15 l/min) Air, Pin Index Inlet Connection, 137 bar
<b>0720133</b>	MediSelect® II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) CO <sub>2</sub> , Pin Index Inlet Connection, 60 bar

Art. Nr.	Description
<b>0720249</b>	Mediselect 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
<b>0720310</b>	Mediselect 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
<b>0720248</b>	Mediselect 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
<b>0720309</b>	Mediselect 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
<b>0720302</b>	Mediselect II (0,1,2,3,4,5,6,7,9,12,15,25 l/min) Pin Index inlet connection fitted with 2x DISS Quick Release Connector, 200bar

TECHNICAL DATA		
<b>Gas</b>	O <sub>2</sub> , Air, N <sub>2</sub> O, CO <sub>2</sub> , N <sub>2</sub> O/O <sub>2</sub> , Xe	
<b>Inlet pressure range</b>	up to 300 bar	
<b>Nominal outlet pressure</b>	4 bar	
<b>Flow ranges*</b>	0 to 2 lpm	0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 1, 1.5, 2
	0 to 3 lpm	0, 1/64, 1/32, 1/16, 1/8, 1/4, 1/2, 3/4, 1, 1.5, 2, 3
	0 to 6 lpm	0, 0.25, 0.5, 0.75, 1, 1.5, 2, 2.5, 3, 4, 5, 6
	0 to 25 lpm	0, 1, 2, 3, 4, 5, 6, 7, 9, 12, 15, 25
<b>Body material</b>	nickel-plated brass	
<b>Control knob</b>	polyamide	
<b>O-rings</b>	EPDM	
<b>Filter</b>	sintered bronze	
<b>Gauge cover</b>	TPE (thermoplastic elastomer)	
<b>Regulatory status</b>	Complies with Medical Devices Directive 93/42/EEC.	
	Complies with EN 10524-1 (Pressure regulators for use with medical gases)	
	Complies with EN 1789 (Medical vehicles and their equipment - Road ambulances)	

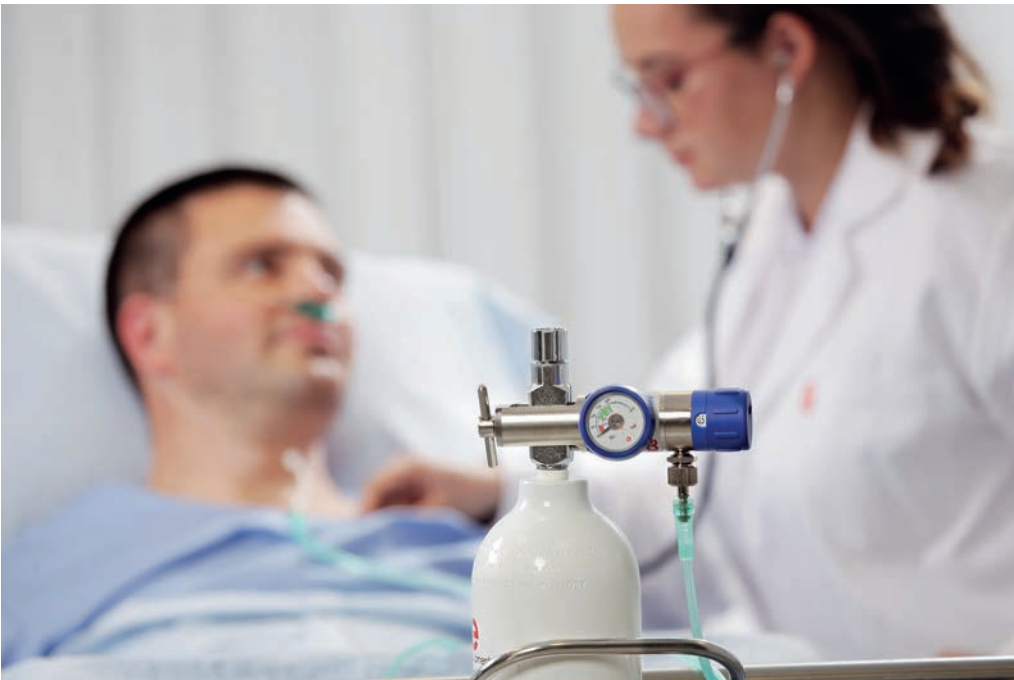
\* Flowrates expressed at 23°C and 101,3 kPa

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

**FEATURES / ADVANTAGES / BENEFITS**

- 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





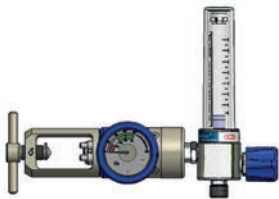
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0724244



0724243



0724221

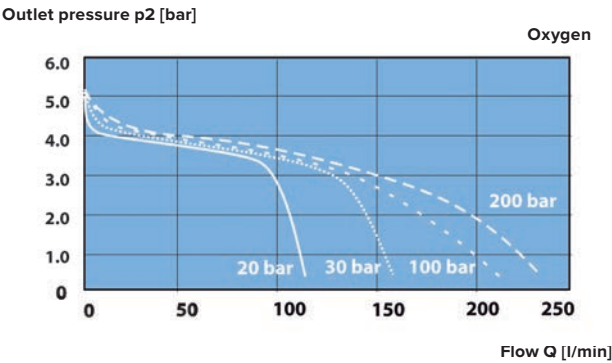
MEDIREG® II

Art. Nr.	Description
0724151	O <sub>2</sub> /N <sub>2</sub> O Regulator, Pin Index, Single BS 5682 Quick Connection Outlet
0724244	MediReg® II O <sub>2</sub> , G5/8 Bullnose Inlet Connection, 200 bar, BS5682 Quick Release Connector
0724243	MediReg® II O <sub>2</sub> , Pin Index Inlet Connection, 200 bar, BS5682 Quick Release Connector
0724221	MediReg® II O <sub>2</sub> , Pin Index Inlet Connection, 0 to 15 l/m flowmeter, 9/16, 200 bar

TECHNICAL DATA	
Gas	O <sub>2</sub> , Air, N <sub>2</sub> O, CO <sub>2</sub> , N <sub>2</sub> O/O <sub>2</sub> , Xe, Ar
Inlet pressure range	up to 300 bar
Nominal outlet pressure	4 bar
Body material	nickel-plated brass
Control knob	polyamide
O-rings	EPDM
Filter	sintered bronze
Gauge cover	TPE (thermoplastic elastomer)
Regulatory status	Complies with Medical Devices Directive 93/42/EEC.
	Complies with EN 10524-1 (Pressure regulators for use with medical gases)
	Complies with EN 1789 (Medical vehicles and their equipment - Road ambulances)
Classification	Class IIb

\* 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 GCE 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 ISO EN 10524-1.

### OXYGEN

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



### ACCESSORIES

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

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

## MEDICAL MULTISTAGE REGULATOR (MMR)



MMR is a dual stage cylinder regulator that provides a stable outlet pressure. The regulator is designed with automatic compensation for the gradual fall of pressure occurring in a gas cylinder when the gas is used.

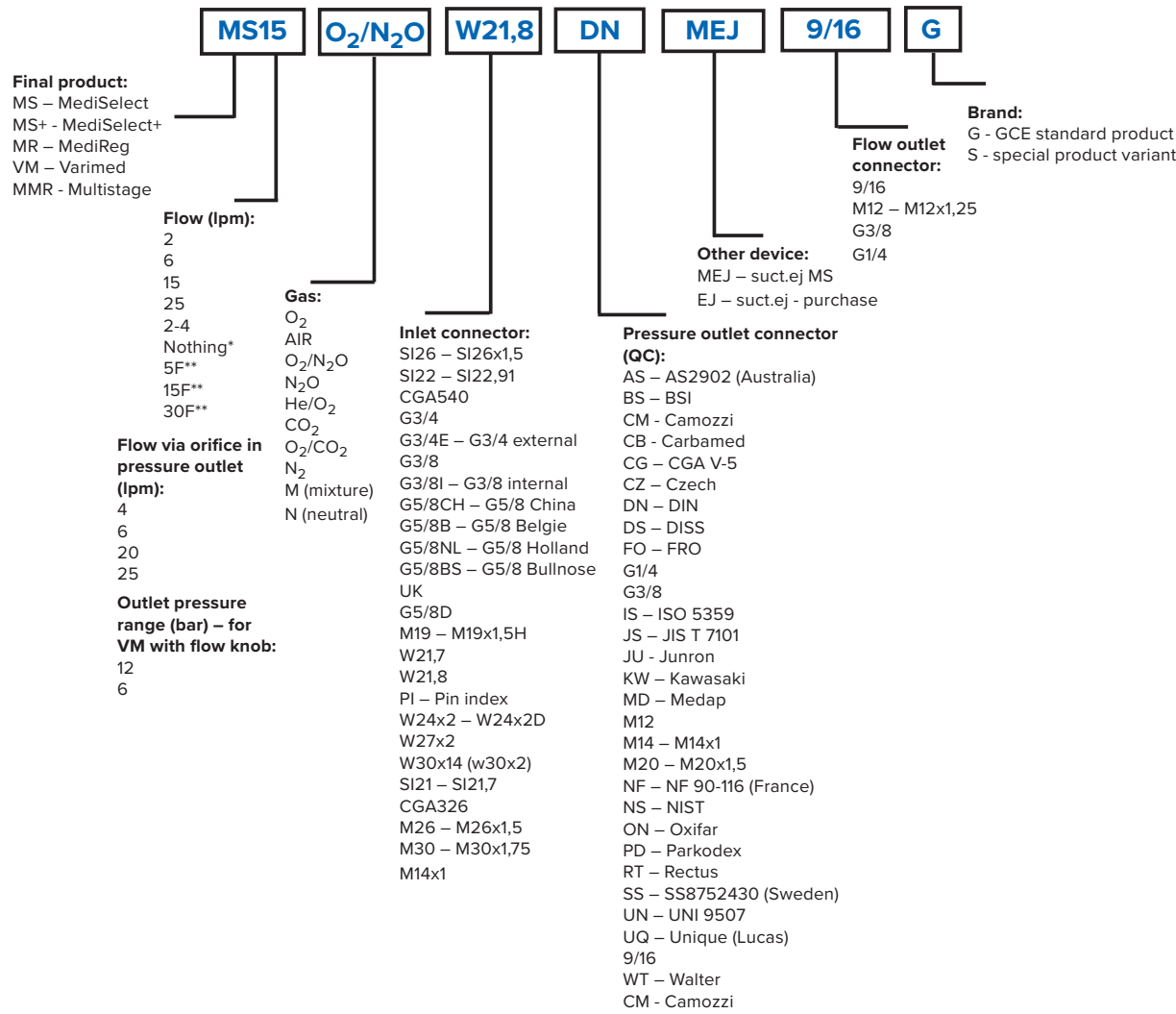
The regulator is suitable for high flow applications. An optimal field of application for the MMR is for the gas cylinder reserve that will be used, via the pressure monitor or pressure watch if an interruption in the gas supply occurs. MMR gives the stable and even pressure necessary for certain medical gas applications.

The regulator is available for medical air, medical oxygen and instrumental air and has a preset working pressure. A safety valve protects the equipment from overpressure. MMR is a product with high technical performance and reliability.

TECHNICAL DATA	
<b>Weight</b>	2400 g
<b>Capacity</b>	30 m <sup>3</sup> /h at P1 = 200 bar (20 000 kPa) and P2 = 5 bar (500 kPa)
<b>Outlet</b>	according to standard SS 8752430

Art. Nr.	Description	
<b>0729201</b>	MMR+ O <sub>2</sub> G5/8 G3/8 G	GCE, 300 bar, 4 bar, white, pressure adjusting knob
<b>0729202</b>	MMR+ O <sub>2</sub> G5/8 G3/8 G	GCE, 300 bar, 10 bar, white, pressure adjusting knob
<b>0729203</b>	MMR+ O <sub>2</sub> G5/8 G1/4 G	GCE, 300 bar, 10 bar, white
<b>0729204</b>	MMR+ O <sub>2</sub> /N <sub>2</sub> O G5/8 G1/4 G	GCE, 230 bar, 10 bar, white
<b>0729205</b>	MMR O <sub>2</sub> G5/8 G3/8 G	GCE, 300 bar, 4 bar, white
<b>0729206</b>	MMR+ O <sub>2</sub> G5/8 G3/8 G	GCE, 300 bar, 10 bar, white

DESCRIPTION CODING FOR REGULATORS



\* Version without flow head  
\*\* MR + flowmeter (Shall include also outlet connector type)



## HOSPITAL WARD EQUIPMENT





# QUALITY MIX AIR/O<sub>2</sub>

## BLENDER

The oxygen concentration can be set easily and accurately between a range of 21% and 100%. A Pressure Alarm sounds if there is any interruption or pressure drop in the gas supply system.

Easy to adjust, allows accurate blending with economical gas consumption and low noise level.

### FEATURES / ADVANTAGES / BENEFITS

- Quality Mix provides a continuous and precise mixture of medical Air and Oxygen for infants, children and adults.
- The exact O<sub>2</sub> concentration is easy to adjust and an optional bleed switch enables very low gas consumption, even with flow rates of less than 3 l/pm
- The delivered oxygen concentration can be displayed on the optional oxygen monitor.
- Alarm limits can be set to ensure the corresponding oxygen concentration.
- Beyond that you have the possibility to configure your device individually and according to your specific needs enabled through a sophisticated modular system which includes a regulator module, rail clamps, several flowmeters and silencers.

### COMPLETE INSTALLATION

Above all, the wide range of GCE products like regulators, combination valves and low pressure hoses is available to further simplify the installation.

### ROBUST HOUSING

A robust metal housing protects the device from damage especially under tough clinical conditions.

### OXYGEN MONITOR

The delivered oxygen concentration can be displayed on the optional oxygen monitor.

Main outlet with or without bleed valve

Auxiliary outlet with or without bleed valve

AIR inlet

O<sub>2</sub> inlet

### ALARM

Alarm limits can be set to ensure the corresponding oxygen concentration.



TECHNICAL DATA					
Blender Type		High Flow		Low Flow	
Main flow outlet		15-120		3-30	
Auxiliary flow outlet		2-100		0-30	
Max. combined flow (both outlets)		<120		<30	
Bleed flow at 3,4 bar		<13		<3	
Emergency flow (in the event that Air or O <sub>2</sub> supply failing)		<85		<15	
Pressure drop at inlet pressure from 3,1 to 5,2 bar with a flow rate of 30l/min at 60% FIO <sub>2</sub>		<0,21		<0,14	
Alarm sounds when supply pressure drops	Without regulator module	on 3,3	off 4,2	on 3,3	off 4,2
	With regulator module	on 2,3	off 3,2	on 2,3	off 3,2
Alarm volume		> 80dB at a distance of 30cm			
Setting range for oxygen concentration		21 - 100%			
Gas inlet pressure		4,5 ± 0,5 bar: air and O <sub>2</sub> differential should be with 0,7 bar			
Accuracy of mixed gas (FIO <sub>2</sub> )		± 3% oxygen			
Connection types		DISS inlets and outlets for O <sub>2</sub> and/or NIST inlets for air and O <sub>2</sub>			
Dimensions (LxWxH)		130 x 165 x 122 mm			
Weight		1600 g			
Operating temperature		+5°C to +40°C			
Storage temperature		+5°C to +40°C			
Humidity		Max.95 % non-condensing humidity			

## CONFIGURATIONS



# SUCTION EQUIPMENT

## MEDIEVAC+

### FEATURES / ADVANTAGES / BENEFITS

- 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, -600 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 overtightened.

#### ENCAPSULATED FILTER

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

#### ROTATING GAUGE

##### ADVANTAGE FOR NURSES:

Orientate the gauge in your direction in order to read the setting.

##### TECHNICAL ADVANTAGE:

Absence of visible thread on foot allows a better resistance of the body during every replacement.

#### ON/OFF SWITCH

Allows users to maintain the setting during use: the visible colour shows the functionality status of the regulator: (green = working; red = stopped)

#### EFFICIENT!

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



# HOSPITAL WARD EQUIPMENT

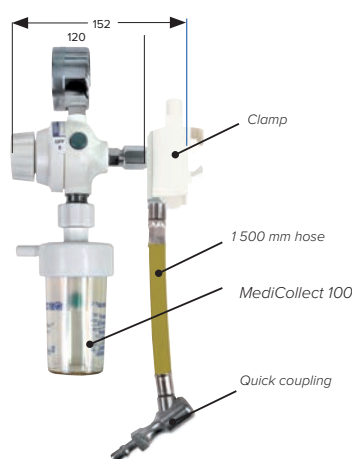
## VACUUM REGULATOR - MEDIEVAC+



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
0735163	Medievac+ 600 with DISS probe

TECHNICAL DATA	
ON-OFF function	ON : green button visible
	To switch ON: push on the red button
Inlet pressure	- 250 mbar (Measured from atmospheric pressure)
	- 600 mbar
Max. suction flow	- 950 mbar
	70 l/min $\pm$ 5 l/min
Accuracy of gauge	$\pm$ 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) EEC
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 Healthcare 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.

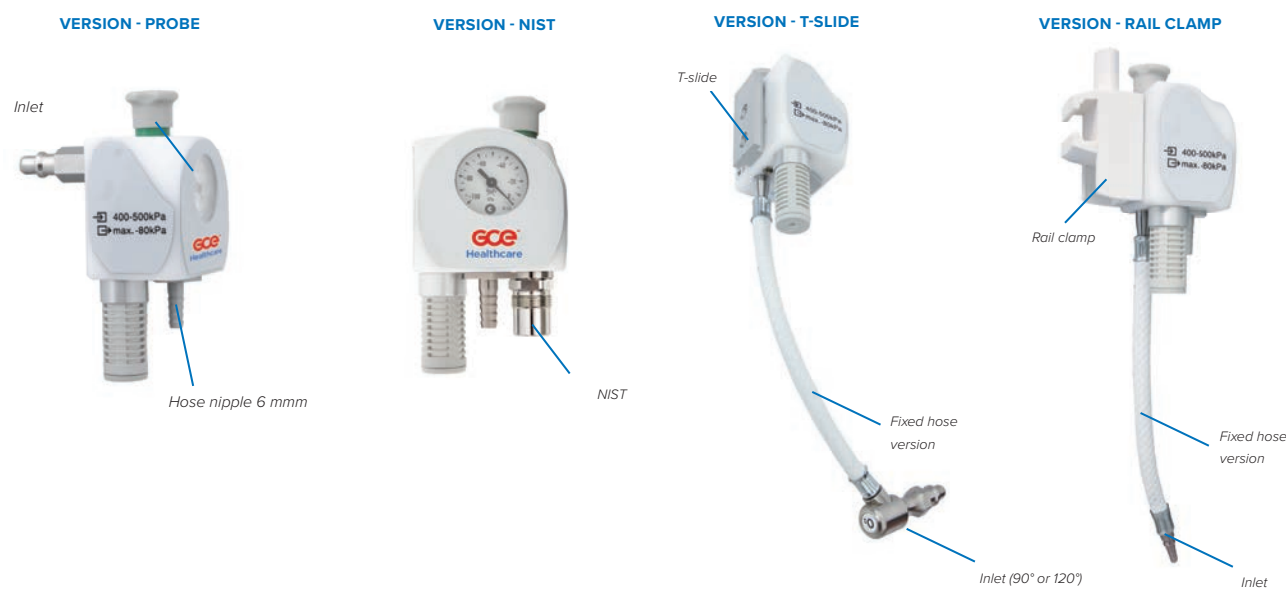
### FEATURES / ADVANTAGES / BENEFITS

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



### SUCTION EJECTOR - MEDIEJECT II

Art. Nr.	Description	Gas
0735431	MediEject II with BS Probe	Air
0735413	MediEject II with BS Probe	O <sub>2</sub>
TECHNICAL DATA		
Driving gas	O <sub>2</sub> , AIR	
Inlet	all regional standards in probe or hose version	
Inlet pressure	4-5 bar (400 - 500 kPa)	
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 (-80 kPa)	
Dimensions		
Total Width	70 mm	
Depth (only body, no 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	



## MEDICOLLECT



The GCE Healthcare Medicollect Suction System is designed for use with a vacuum source (vacuum regulator, vacuum injector, etc.) in a hospital environment when collecting bodily liquids and secretions from patients during a medical procedure.

GCE Medicollect range offers two main groups of collection jars. The primary line is a range of reusable jars that are air-tight, autoclavable and have an overflow valve.

The Medicollect range also includes different sizes of disposable suction jars and bags, which removes the need to autoclave and associated costs.

The bags are also available with Super Absorber which turns fluid into the gel which helps reduce the risk of contamination during handling and transportation.

### FEATURES AND BENEFITS

- > Easy to use and clean
- > Safe and fast in use
- > Overfill protection for bacteria filter
- > Waste classification can save money by using Super Absorbers
- > Super Absorber turns fluid into gel helping reduce contamination in handling and transport risks. Easy and safe way to take samples from the fluid

### 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)



REUSABLE SYSTEM

Art. Nr.	Description	Size (H×W×D)	Weight (g)	Autoclave	Durability
K291530	Jar 2000 + Lid	302×135×130	600	121°C / 20´	30 Autoclave cycles
K291540	Jar 1000 + Lid	236×115×110	340	121°C / 20´	30 Autoclave cycles
K291620	Jar 2000 + Lid	302×135×130	600	134°C / 18´	30 Autoclave cycles
K291619	Jar 1000 + Lid	236×115×110	340	134°C / 18´	30 Autoclave cycles

TECHNICAL DATA		Bag version	Reusable version
Material	Jar	Polycarbonate (121°C)	Polycarbonate (121°C), Polysulfone (134°C)
	Lid	Polycarbonate, Thermoplastic elastamer (TPE)	Polypropylene
	Hose nipple	Polyethylene	chrome plated brass
	Bag	230×180×80	-
Anti-overflow arrangement		Integrated	Ball valve
Connector on patient side		Hose adapter for internal 9	
Maximum applicable vacuum		-95 kPa (-950 mbar)	
Minimum applicable vacuum*		-20 kPa (-100 mbar)	
Maximum flow rate		100 l/min	
Storage conditions		-40 ± 2°C to +60 ±5°C and 10 to 100% RH	
Operating conditions		-18 ± 2°C to +40 ±5°C and 40 to 70% RH	
Dimensions of T-slide (rail clamp)		40 mm × 30 mm × 5 mm	

\* for the correct function of the overfilling protection device

ACCESSORIES

Art. Nr.	Description
373234593	Suction hose adapter 9 mm
373234931	T-connection for suction
302532P	Hose; 0.35 m; ø 6/12
325113237	Silicone hose; 25 m; 6×12
9435440	Silicone hose; 5 m; 6×12
9435450	Silicone hose; 1 m; 6×12
K291538	Catheter holder (without plate)
K291539	Catheter holder (with plate)
K006968	Manual vacuum stop device, non sterile for adults
0727435	Universal rail clamp 10 x 25 mm and 10 x 30 mm for T-slide application



## FLOW-METERING DEVICE

# MEDIFLOW® ULTRA II

MediFlow® Ultra is the new generation of medical gas 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.

### FEATURES / ADVANTAGES / BENEFITS

- 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.



MEDIFLOW® ULTRA II (LOW PRESSURE REGULATOR)

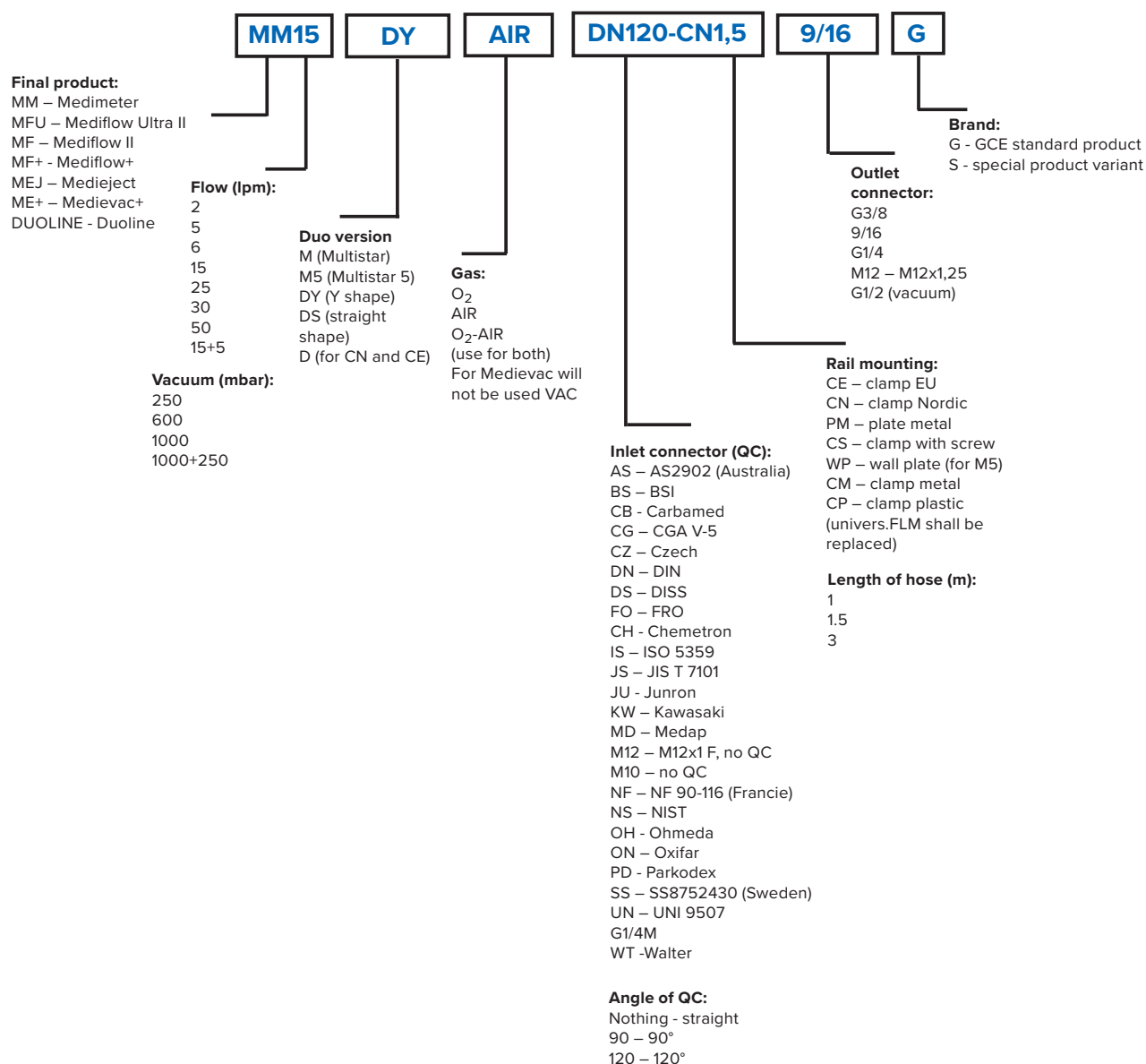
Art.Nr.	Type
0728187	Mediflow® Ultra II with flow rates 0-2 l/min
0728173	Mediflow® Ultra II with flowrates 0-25 l/min

TECHNICAL DATA	
Gas	O <sub>2</sub> , 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
Inlet connection	According to national standard
Outlet connection	9/16 UNF; M12×1.25; G3/8; G1/4 with hose nipple
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 (Low pressure regulators)
	Complies with Standard EN 1789 (Medical vehicles and their equipment)

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



## DESCRIPTION CODING FOR HOSPITAL WARD EQUIPMENT



## FLOW-METERING DEVICE

# MEDIMETER®

Medimeter is a gas flow device intended for control and measurement of air and oxygen administered to patients. Medimeter flow devices are available in different regional gas connections.

### FEATURES / ADVANTAGES / BENEFITS

- 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



Medimeter with  
30° scale



Medimeter with  
5° scale

## FLOWMETER - MEDIMETER®

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.



Standard version with probe



Duo version with probe



### 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 <sub>2</sub> , Air
Inlet pressure	4,5 bar
Flow ranges	0 - 5 lpm
	0 - 15 lpm
	0 - 30 lpm
Inlet connection	According to national standard
Outlet connection	9/16" UNF; M12×1.25; G3/8; G1/4 (with hose nipple)
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.

### 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 humidifier for oxygen therapy is a device that allows an increase in the relative humidity in the oxygen supplied to the patient; some patients during extended period of use may require some humidity to be introduced during oxygen therapy for added comfort.

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 or boiled cold water
Dimensions	Height 190 × Width 67 (incl hose nipple) × Ø 57 mm
Weight	Polysulphone version 115 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: Chromed brass
	Diffuser: Polyethylene
Outlet connection	Hose, flat gasket: Silicone
	O-ring: EPDM
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 5 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.

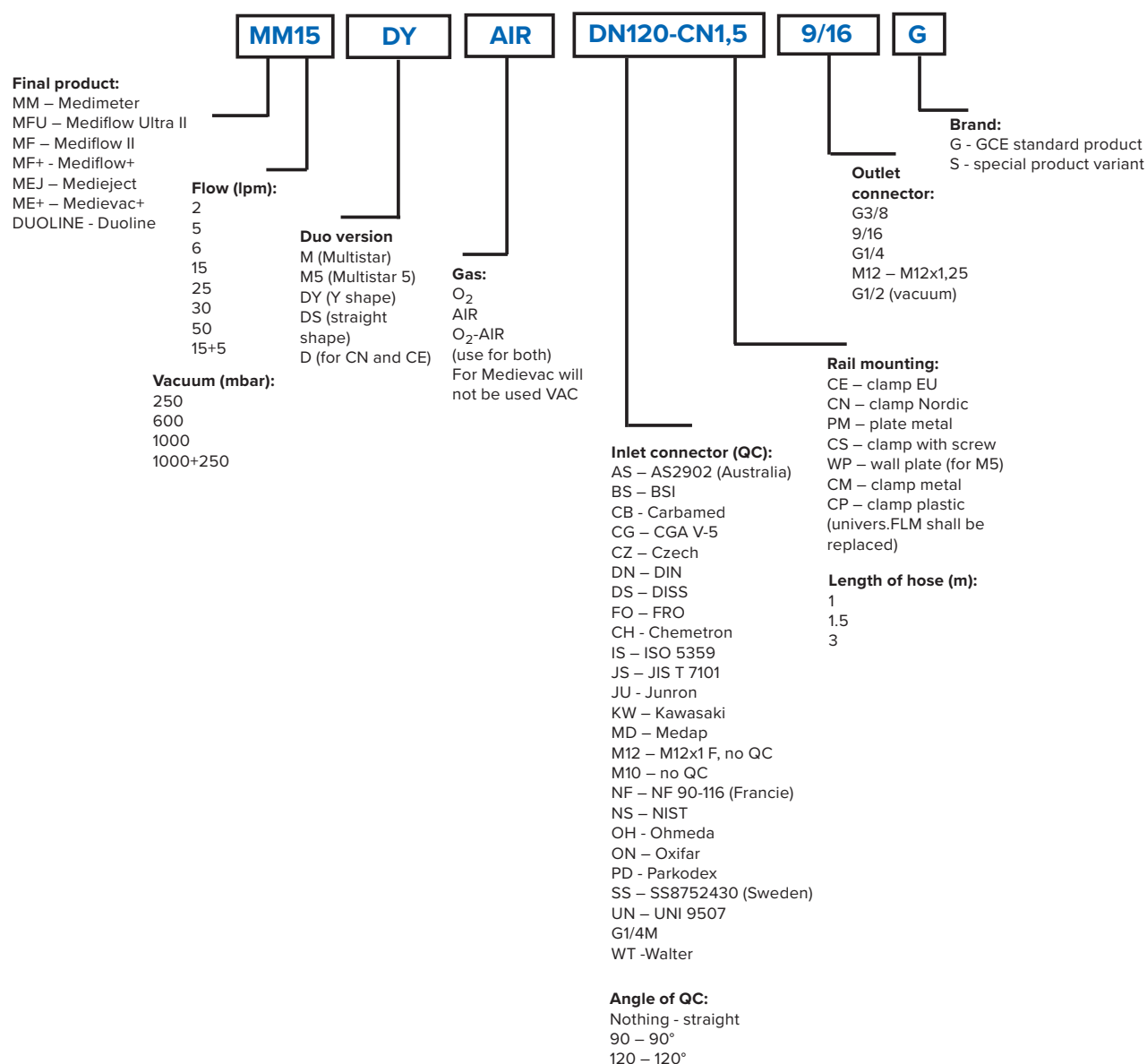
## SPARE PARTS

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)

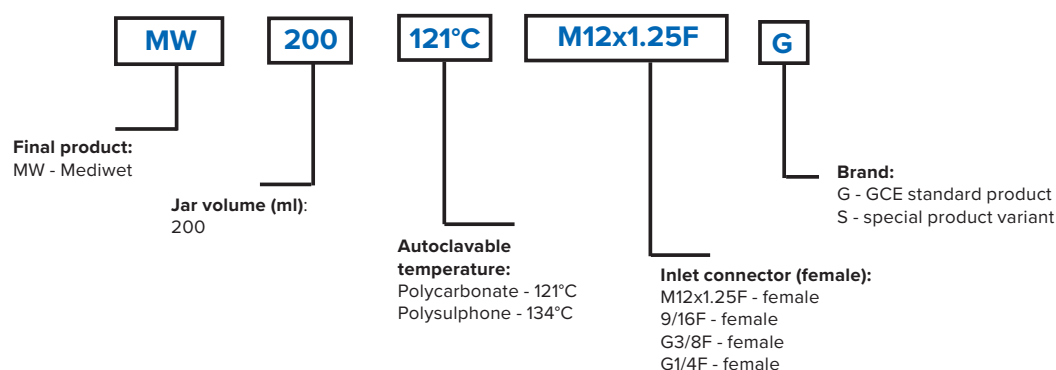
## CONSUMABLES

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

## DESCRIPTION CODING FOR HOSPITAL WARD EQUIPMENT



## DESCRIPTION CODING FOR MEDIWET





# TROLLEYS



325396136



325396137



14090630



325397691

Art. Nr.	Description
14090630	Trolley for 10 l cylinder, 5-wheels, static
325396136	Trolley for 10 or 20 l cylinder, without belt
	Dimensions H×W×D (mm): 935×426×352
325396137	Trolley for 10 and 20 l cylinders, 3×10 l or 2×20 l without belt
	Dimensions H×W×D (mm): 935×426×352
500009601P	Trolley for 2.5 or 5 l cylinder
325397691	Trolley for gas cylinder, D ≈116 mm

## ACCESSORIES

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

# 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".
- > Warranty time 2 years

Art. Nr.	Denomination	Color	Environment	Dimension (inner/outer)	Roll (m)
14119000	O <sub>2</sub>	white	Antistatic	6,7/12,7	30
14119001	O <sub>2</sub>	black	Antistatic	6,7/12,7	30
14119002	Medical breathing air/ O <sub>2</sub>	black	Antistatic	6,7/12,7	30
14119003	O <sub>2</sub>	green	Antistatic	6,7/12,7	30
14119004	Medical breathing air	black	Antistatic	6,7/12,7	30
14119006	LOT	black	Antistatic	6,7/12,7	30
14119008	Medical breathing air	black/white	Antistatic	6,7/12,7	30
14119010	VAC	yellow	Antistatic	10/16	30
14119009	N <sub>2</sub> O	blue	Antistatic	6,7/12,7	30
14119011	O <sub>2</sub> /N <sub>2</sub> O	blue/white	Antistatic	6,7/12,7	30
14119038	CO <sub>2</sub>	white	Antistatic	6,7/12,7	30
14119040	Medical breathing air	black/white	Antistatic	8/14	30
14119041	CO <sub>2</sub>	grey	Antistatic	6/11	30

## MEDICONNECT - LOW PRESSURE HOSES



Mediconnect is a new generation of flexible hoses for gas supply, intended for use with respiratory, anaesthetic and emergency equipment.

- > Resistant to abrasion and change of colour
- > Latex and phthalate free
- > Containing antistatic inner layer
- > Colour coding of ISO 5359
- > Wide range of country specific connections
- > Lengths of hoses from 0.5 to 5 m; to be specified by customer, available on request

TECHNICAL DATA	
Gas pressure	O <sub>2</sub> , air, N <sub>2</sub> O, vacuum, CO <sub>2</sub> , N <sub>2</sub> O/O <sub>2</sub> and Air 800
Material	Polyvinyl chlorid, containing plasticizer, with brilliant polish, antistatic
Inner/outer diameter	6.7 × 12.7 mm (vacuum excluded - VAC 10x16 mm)
Wall	3 mm
Hardness (Shore A)	88 ± 5
Density	1.25 ± 0.02 g/cm <sup>3</sup>
Tensile strength	= 10 MPa
Fracture strain	= 200 %
Working pressure	max. 14 bar / 20°C
Rupture pressure	56 bar / 20 °C respectively 40 bar / 40 °C
Operation temperature	- 20 °C to + 60 °C
Classification	Class IIa
Regulatory status	Complies with Medical Devices Directive 93/42/EEC
	Complies with ISO 5359 (Low pressure hoses)

EXAMPLES OF PROBES

NORDIC STANDARD



FRENCH STANDARD



DISS STANDARD



CZECH STANDARD



BRITISH STANDARD



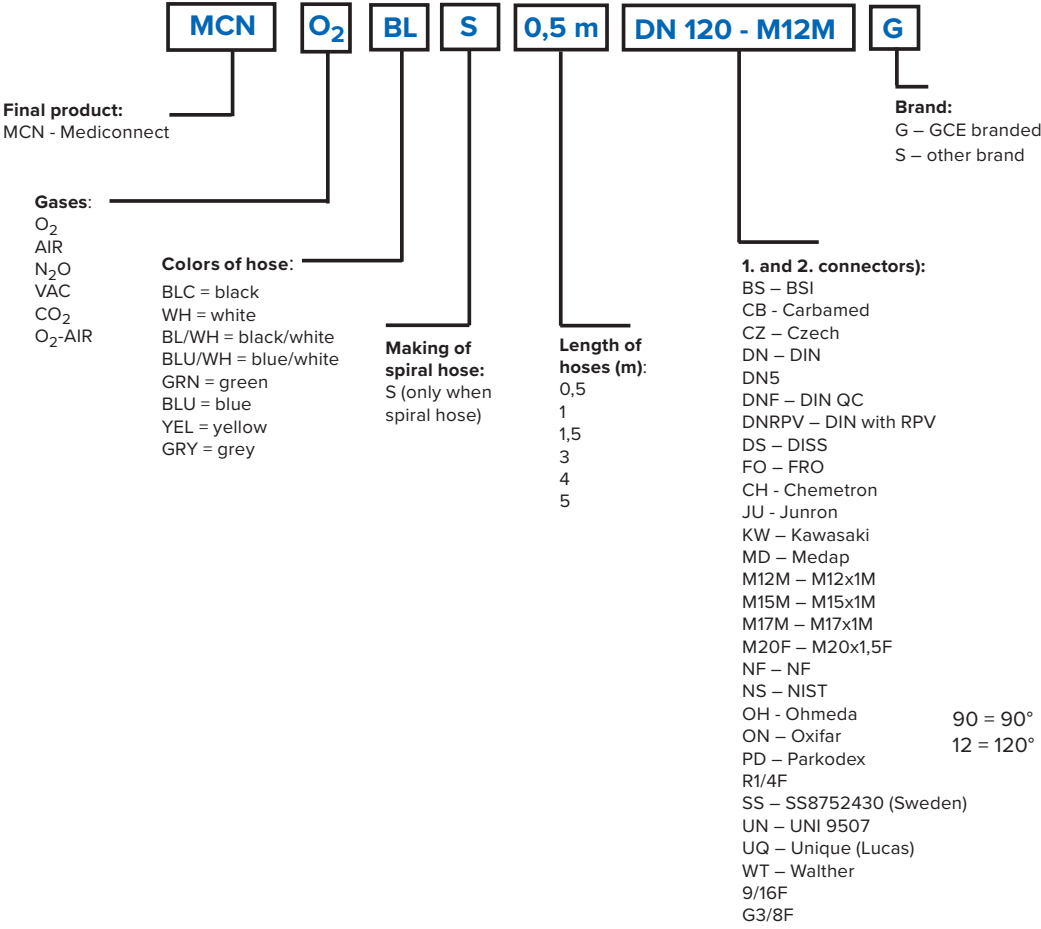
NIST STANDARD



GERMAN STANDARD



EXPLANATION OF THE ORDERING INFORMATION



# RAILS AND CLAMPS

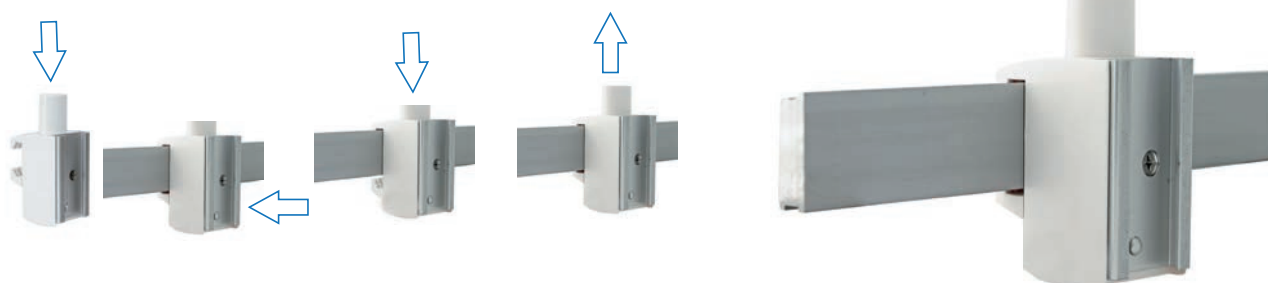
Rail clamps are parts of rail systems and are intended for fastening the medical devices (flowmeters, suction equipment, lighting, etc.) to the railing. Design of new GCE rail clamps provides a high level of modularity. Max. load at vertical axis - 50 kg.

## FEATURES / ADVANTAGES / BENEFITS

- The Mediclump is universal and can be applied to all applicable rail systems; 1: 10 x 25 mm, 2: 10 x 30 mm
- Easy to clean
- Light weight
- Spring activated
- Ergonomic shape
- MRI compatible
- Fulfills the Ambulance standards



## MOUNTING OF CLAMP



## VARIABLE INSERTS

### PERMANENT CONNECTIONS

Special aluminum plate for permanent connection with the products like MediEject, Duoline etc.

The plate can be simply adapted to customer needs by making additional holes.

### T-SLIDE

T-slide insert made from aluminum for T-plate application

### RAIL CLAMP HOSE KIT

The main body of the kit (gas flow passage) made from aluminum intended for connection of a flexible hose or NIST QC.



SPK33810004



0727435



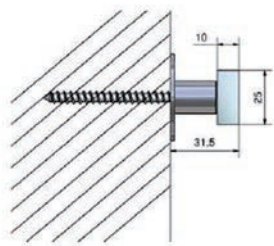
SPK33810006



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
325113122*	3,0	Stainless Steel

\* Only rail, without end protection washer and distance.



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



MediEject with fixed clamp

T-slide clamp with MediEject

## TERMINAL UNITS

Medical terminal units provide quick and easy connection of hospital ward gas equipment to the hospital gas source. The type of medical gas outlets 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 and exposed versions
- > Bed head installation versions (customized solution on request)



Recessed version



Exposed version



Installation plug

Art. Nr.	Description	Type	Marking
0732202001	O <sub>2</sub> – RECESSED	Pipe ø 10 mm	O <sub>2</sub>
0732202013	N <sub>2</sub> O – RECESSED	Pipe ø 10 mm	N <sub>2</sub> O
0732202014	O <sub>2</sub> /N <sub>2</sub> O – RECESSED	Pipe ø 10 mm	O <sub>2</sub> /N <sub>2</sub> O
0732202011	AIR – RECESSED	Pipe ø 10 mm	AIR
0732202015	AIR-800 – RECESSED	Pipe ø 10 mm	AIR-800
0732202012	VAC – RECESSED	Pipe ø 10 mm	VAC
0732202016	O <sub>2</sub> – EXPOSED	Pipe ø 10 mm	O <sub>2</sub>
0732202019	N <sub>2</sub> O – EXPOSED	Pipe ø 10 mm	N <sub>2</sub> O
0732202020	O <sub>2</sub> /N <sub>2</sub> O – EXPOSED	Pipe ø 10 mm	O <sub>2</sub> /N <sub>2</sub> O
0732202017	AIR – EXPOSED	Pipe ø 10 mm	AIR
0732202021	AIR-800 – EXPOSED	Pipe ø 10 mm	AIR-800
0732202018	VAC – EXPOSED	Pipe ø 10 mm	VAC

## INSTALLATION TOOLS

Art. Nr.	Description
MP_00345	QC installation key
MP_00324	Button remover
MP_01157ST	Pendants/bedhead unit – installation tool
0732040	Installation plug (10 pcs)

TECHNICAL DATA	
Gases	O <sub>2</sub> ; O <sub>2</sub> /N <sub>2</sub> O; N <sub>2</sub> O; Air; Air-800; VAC
Dimensions	
Height	73 mm
Width	73 mm
Depth	63 mm
Working pressure	4–5 bar (breathing gases) 7–10 bar (instrumental gases) (-0,4)–(-0,9) bar (vacuum)
Maximum pressure	20 bar
Regulatory status	Complies with Medical Devices Directive 93/42/EEC Complies with EN ISO 7396-1 (Central Gas Supply Systems) Complies with EN ISO 9170-1 (Terminal units) Complies with EN ISO 9170-2 (Terminal units for AGSS) Complies with BS 5682 (BSI gas specific connections) present HTM 02-01





## HEMOCARE



# LIGHTWEIGHT PORTABLE OXYGEN CONCENTRATORS

## ZEN-O™ and ZEN-O lite™

### ZEN-O lite™

Zen-O lite™ is a lightweight portable oxygen concentrator from GCE Healthcare that delivers up to 1050ml of oxygen to patients that require long term oxygen therapy. Zen-O lite™ is simple to use and is suitable for everyday use. Zen-O lite™ is manufactured to the exacting standards of the European Medical Device Directive and the United States Food and Drug Administration.

### FEATURES / ADVANTAGES / BENEFITS

- **REPLACEABLE SIEVE MODULES**

Zen-O lite™ is designed with easily replaceable sieve modules. The sieve modules can be swapped in under 5 minutes by either the user or home oxygen provider.

- **BREATH DETECTION INDICATOR**

A system indicator flashes each time a breath is detected during use, giving users the assurance that oxygen is being delivered.

- **ALARM**

Zen-O lite™ is designed with various audible and visual alarms, to prompt the user of a required action.

- **SUITABLE FOR AIR TRAVEL**

Zen-O lite™ is suitable for air travel and has met all relevant international safety standards including guidelines issued by the United States Federal Aviation Administration (FAA).

- **DURABLE**

Zen-O lite™ is built to last and is supplied with a 3 year warranty, the battery, sieve tubes and other accessories have a 1 year warranty.

- **ECO MODE**

The Eco Mode feature allows users to switch the operation of the device from delivery a fixed pulse of oxygen at each inhalation to a fixed volume of oxygen per minute, to allow for longer battery duration.

- **AUTO-MODE**

The Auto-mode feature activates after 60 seconds if no breath is detected, the device will automatically deliver pulses at a rate of 18 breaths per minute to the user. This feature allows users to continue receiving some oxygen if the cannula is dislodged.



ZEN-O *lite*™ - PORTABLE OXYGEN CONCENTRATOR

Art. Nr.	Description
RS-00608-G-S	Zen-O <i>lite</i> ™ portable concentrator with one 8 cell battery
RS-00608-G-D	Zen-O <i>lite</i> ™ portable concentrator with two 8 cell batteries
RS-00601	Zen-O <i>lite</i> ™ rechargeable battery
RS-00602	Zen-O <i>lite</i> ™ AC power supply w/EU cord
RS-00603	Zen-O <i>lite</i> ™ AC power supply w/UK cord
RS-00604	Zen-O <i>lite</i> ™ AC power supply w/US cord
RS-00605	Zen-O <i>lite</i> ™ DC power supply
RS-00606	Zen-O <i>lite</i> ™ carry bag
RS-00616	Replacement sieve modules
RS-00617	Zen-O <i>lite</i> ™ cannula wrench
RS-00619	Zen-O <i>lite</i> ™ rucksack
RS-00512	Zen-O <i>lite</i> ™ cannula filter pk of 10
RS-00515	Zen-O <i>lite</i> ™ external battery charger - US
RS-00516	Zen-O <i>lite</i> ™ external battery charger - EU
RS-00517	Zen-O <i>lite</i> ™ external battery charger - UK
RS-00523	Zen-O™ accessories bag
MM6012	Adult high low cannula 7ft. Pack of 25pcs*
MM6013	Adult high low cannula 25ft. Pack of 10pcs*

Each POC includes an oxygen concentrator with carry bag, battery, user manual, AC and DC power supply cords.

\* Suitable for Zen-OTM and Zen-O *lite*™ portable oxygen concentrators.

TECHNICAL DATA	
Size (W×D×H):	249 mm × 97 mm × 231 mm (9.8" × 3.8" × 9.25")
Weight:	2.5 kg (5.5 lbs) without carry bag
Power requirements:	AC adaptor: 100-240V AC(+/- 10%) 50-60 Hz in, 24V DC, 5.0A out DC adaptor: 11.5 - 16V DC in, 24V, 5.0A out
Purity:	87% - 96% at all settings
Maximum oxygen discharge pressure:	20.5 psi
Inspiratory trigger sensitivity:	-0.12 cm/H <sub>2</sub> O
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 5.0
Noise level:	37 dB(A)*
Operating altitude:	0' to 13000' (0m to 4,000) relative to sea level, 1060 down to 575 mbar
Battery duration:	Approx. 4 hours*

\* At setting 2



Battery



AC power supply



DC power supply

ZEN-O™ - PORTABLE OXYGEN CONCENTRATOR

Zen-O™ portable oxygen concentrator 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 and the United States Food and Drug Administration.

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 breath 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.

ECO MODE

The Eco Mode feature allows users to switch the operation of the device from delivery a fixed pulse of oxygen at each inhalation to a fixed volume of oxygen per minute, to allow for longer battery duration.

AUTO-MODE

The Auto-mode feature activates after 60 seconds if no breath is detected, the device will automatically deliver pulses at a rate of 18 breaths per minute to the user. This feature allows users to continue receiving some oxygen if the cannula is dislodged.

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

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™ with bag and pull cart



Zen-O can hold up to two 12 cell batteries



EU cords, AC and DC power supply



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

\* At setting 2



# 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	Cabinet filter
14090328	Product filter
14090417	Single use humidifierbottle
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
O <sub>2</sub>	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)
Technology	PSA (pressure swing absorbtion)
Standard	ISO 8359, EN 60601-1
Medical class	IIb
The Nuvo lite meets the requirements of the 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



Lockable flow control valve



Metal flow outlet fitting



Resettable circuit breaker



## 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.

The Nuvo 8 concentrator 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

- > 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	Cabinet filter
14111275	Compressor intake filter
14111280	Bacteria filter
14090417	Single use humidifier

TECHNICAL DATA	
Electrical requirement	230 V, 60 Hz
Flow delivery rate	0,5 to 8 litres per minute
Oxygen concentration	0.5 to 7 liters per minute – 93% (+6.5% / -3%)
	At 8 liters per minute – 90% (+6.5% / -3%)
Power consumption	400 watts
Operating pressure	1,2 bar
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	25,12 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.*



# ELECTRONIC OXYGEN GAS CONSERVING DEVICE

## ECOLITE® 4000

ECOLite® 4000 is an electronic oxygen gas conserving device that supports efficient long term oxygen therapy treatment (LTOT). With the ECOLite® 4000, oxygen is delivered only during the inhalation phase during a breathing cycle allowing savings of up to 10 times compared to continuous flow oxygen therapy.

### FEATURES / ADVANTAGES / BENEFITS

- ADVANCED TECHNOLOGY**  
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.
- AUTOMATIC AND MANUAL FLOW RATES**  
The device offers automatic and manual operating modes. In the automatic mode the amount of oxygen delivered increases in relation to the set flow rates of 15 to 30 breaths per minute, to a maximum of 8 Litres Per Minute (LPM). In the manual mode the flow rates are from 0.5 to 8 LPM.
- FIXED FLOW RATE**  
The ECOLite 4000 allows home oxygen providers to select and lock a fixed flow rate prescribed by a clinician during the initial installation.
- VISUAL AND AUDIO ALARMS**  
The ECOLite 4000 alerts users and carers if there is no oxygen supply, no breathing is detected or battery power is low.
- DURABLE**  
The ECOLite 4000 has a robust design and is built to last up to 10 years. The device is supplied with a 2 year device warranty.



Art. Nr.	Description
325197479	ECOLite® 4000 Converter with spiral hose, batteries and nasal cannula

### ACCESSORIES

Art. Nr.	Description
14111220	Standard Nasal cannula
14090329	Spiral Hose UK
14090535	ECOLite® 4000 Carry Bag
14090631	ECOLite® 4000 Carry Bag Trolley
9462520	Firclik Snap On/Off Connector (to suit BAREMA standard firetree outlet)
325112782	Spiral supply hose for ECOLite
325112719	Belt bag

### SPARE PARTS

Art. Nr.	Description
325112670	Battery cover



#### TECHNICAL DATA - FUNCTIONAL PERFORMANCE

Settings	Manual/Automatic
Triggering	At each breath
Sensitivity	0,13 cm H <sub>2</sub> O
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 corresponding to 5-80 ml per bolus
Alarms	Battery monitoring Missing Oxygen supply No inhalation

#### TECHNICAL DATA - POWER SUPPLY

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

#### TECHNICAL DATA - DIMENSIONS AND WEIGHT

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

#### TECHNICAL DATA - ENVIRONMENTAL CONDITION

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

## REGULATORY STATUS

The device meets the requirements of the Medical Device Directive 93/42/EEC relating to medical devices, Class IIa.

ELITE - PNEUMATIC GAS CONSERVER

The SABRE ELITE oxygen 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.

GCE SABRE ELITE

Art. Nr.	Description
2010294	GCE Sabre Elite with Probe

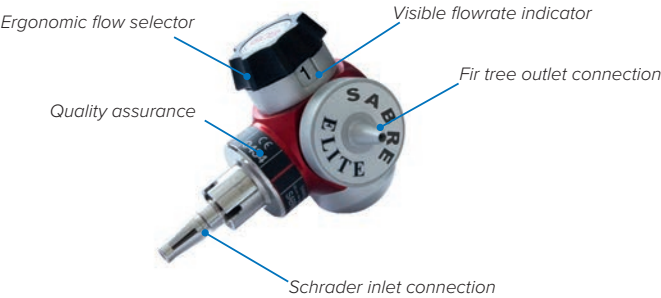
ELITE WITH HIGH PRESSURE CYLINDER CONNECTOR

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



ELITE attached  
to an integral valve cylinder



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





## 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 and 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 requirements 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)

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.

### ACCESSORIES

Art. Nr.	Description
1033026	Net Head Harness

TECHNICAL DATA - MARS II CONTROL MODULE	
Gas	O <sub>2</sub>
Material	Brass, aluminium main inside parts, abs cover
Dimensions	165 × 110 × 63 mm
Weight	1300 g
Regulator Inlet connections	According regional high pressure standards
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

TECHNICAL DATA - MARS II DEMAND VALVE	
Material	Polycarbonate, silicone, rubber, stainless steel
Dimensions	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 <sub>2</sub> O
Alarm valve triggering pressure	46 cm H <sub>2</sub> O



NOTE: Cylinder is not included, see page 45.



1033026

# EMERGENCY ANALGESIC SUPPLY SYSTEM

## EASE II

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  $O_2/N_2O$ ) 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  $O_2$  is recommended during diving accidents and cluster headaches therapy  
EASE II  $N_2O/O_2$  is recommended during pain relief therapy.

### FEATURES / ADVANTAGES / BENEFITS

- Low inspiratory effort demand valve
- Test/ Purge facility on the demand valve
- Easy grip handle and wrist strap
- Replaceable patient/bacterial filter
- 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 at 134 °C
- 5 year service interval

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



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.

EASE II - DEMAND VALVE

Art. Nr.	Description
0715300	EASE II Demand valve with 3 metres of hose & BS5682 probe. For use with O <sub>2</sub> /N <sub>2</sub> O mix. 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

EASE II ACCESSORIES

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)



Child Mask



Adult Mask



Mouthpieces



Bacterial Filters



TECHNICAL DATA - DEMAND VALVE

Gas	O <sub>2</sub> /N <sub>2</sub> O
Material	Polycarbonate, silicone rubber, stainless steel
Dimensions	50 × 50 × 63 mm
Gas supply	Requirement 2,8 to 7,0 bar at >200 l/min Cracking pressure 0.15-0.2 kPa
Inspiratory resistance (At 2,8 bar supply press.)	-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 <sub>2</sub> /N <sub>2</sub> O
Storage temperature	-30°C to +60°C

TECHNICAL DATA - 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



### EASE II KIT WITH PIN INDEX REGULATOR AND BS PROBE

- > EASE II
- > Pin Index Regulator + QC
- > 5 x Bacterial Filters
- > 5 x Mouthpieces
- > Adult Mask
- > Child Mask
- > Carry Bag

Art. Nr.	Description
<b>MM6008</b>	EASE II Kit with Regulator and BS Probe



### EASE II KIT WITH BS PROBE

- > EASE II
- > 5 x Bacterial Filters
- > 5 x Mouthpieces
- > Adult Mask
- > Child Mask
- > Carry Bag

Art. Nr.	Description
<b>MM6009</b>	EASE II Kit with BS Probe



## ACCESSORIES

Art. Nr.	Description
<b>MM6010</b>	Empty O <sub>2</sub> /N <sub>2</sub> O Cylinder supplied with Pin Index Valve, 2 litre

## MEDIVITAL



Art. Nr.	Description
<b>Upon request</b>	Empty O <sub>2</sub> /N <sub>2</sub> O Cylinder supplied with MediVital, 2 litre, and BS5682 Socket

MEDICAL COMBI VALVES

MEDIVITAL®

Medivital is a pressure regulator integrated with cylinder valve for fitting to gas cylinders used for medical gases.

FEATURES / ADVANTAGES / BENEFITS

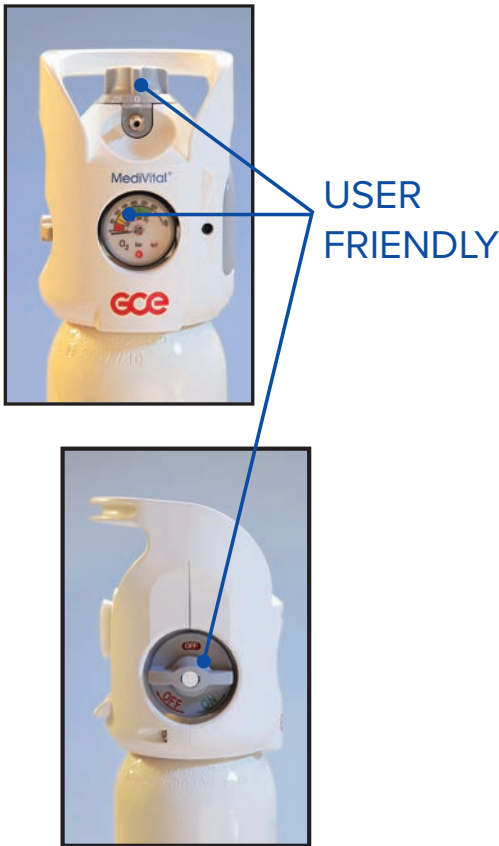
- 15 year life time ensured by extended endurance and cycle testing for future market requirements
- Slow opening shut off valve with new patented design
- Shock resistant gauge
- Flow selector designed for optimal gas flow and patient safety
- Guard design provides maximum protection for the valve

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 easy handling of the cylinder package by all users
- > Compact and lightweight design less than 1150 g
- > Easy clean guard material

HIGHEST SAFETY

- > Testing in accordance with the following standards, EN ISO 10524-3, ASTM G175 Pill test, EN ISO 10297
- > CE marked in accordance with the Medical directive 93/42/EEC and TPED 2010/35 EU
- > Phthalate and halogenated polymer free components
- > MRI compatible up to Tesla 3
- > For use with medical Oxygen, Air and O<sub>2</sub>/N<sub>2</sub>O mixed gases up to 300 bar working pressure



ACCESSORIES

Art. Nr.	Description
0727421	Bed hanger (10 pieces)
0727427	Bed hanger with black plastic sleeves (10 pieces)
0727418	Humidifier holder 9/16 (10 pieces)
9442820	Connecting hose for humidifier holder 40 cm (10 pieces)
0727422	Valving tool (1 piece)
on request	Filling adaptor
0727760	G3/8" Filling Adaptor (1 piece)
SPP31810159	Filling Pins Spares (5 pieces)
SPP31810094	Spares Pack Filling Adaptor O-rings (10 pieces)
K294401	Reusable Humidifier 121°C 9/16 (1 piece)
14090417	Single Use Humidifier 9/16 (1 piece)



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

TECHNICAL DATA	
Gas:	O <sub>2</sub> , Air, O <sub>2</sub> /N <sub>2</sub> O
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:	0-6, 0-15 and 0-25 lpm
Materials:	Metallic parts (gas wetted): brass
	Elastomers: EPDM, silicon, PUR
	Plastics: PA66, PEEK
	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 2010/35 EU
	Complies with EN ISO 10524-3
	Complies with EN 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 01 Chotěboř



Bed Hanger



Humidifier Holder

\* 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.

## 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 (SOV)

- > 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 connection/disconnection of cannula/mask
- > Facility for RF chip inside the flow control knob

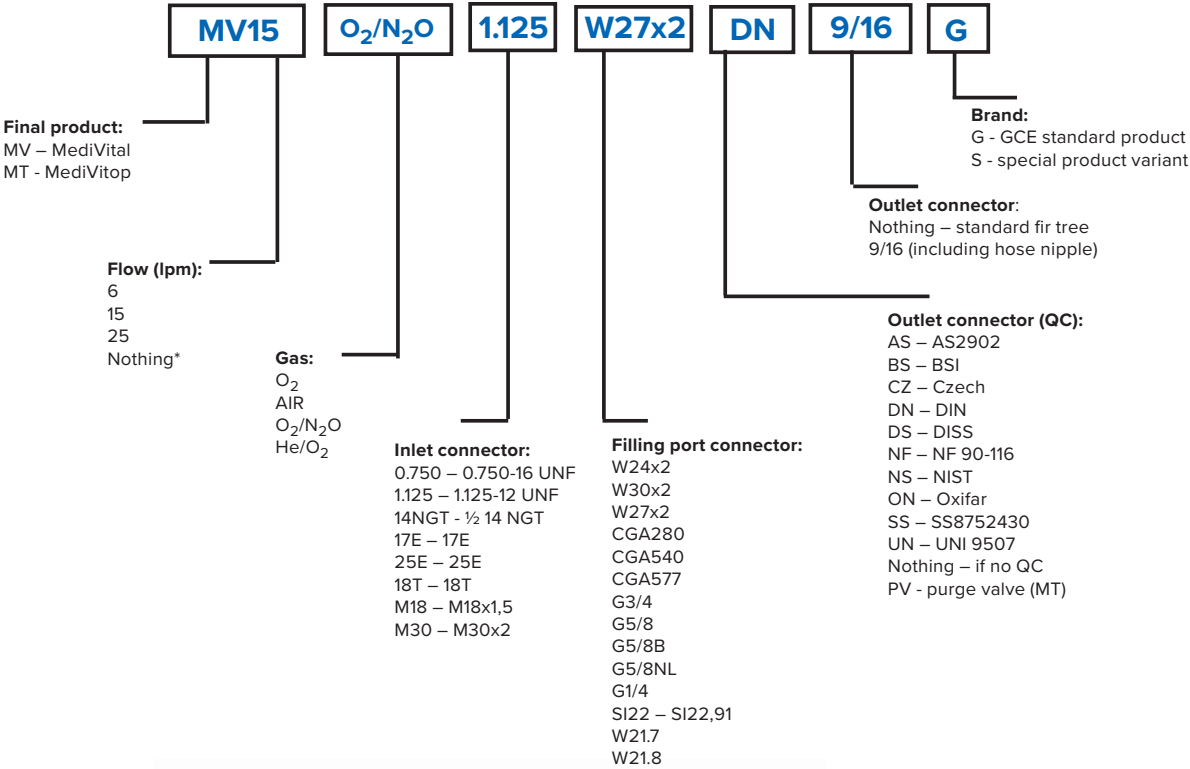


### PRESSURE OUTLET

- > 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



DESCRIPTION CODING FOR VALVES



# AMBULANCE PANEL SYSTEM - APS

The Ambulance Panel System is a bespoke system containing an ambulance panel, hoses and regulators ready to be mounted in an ambulance. Our GCE Ambulance Panel System is modular system of individual CE marked components and complies with EN 1789. The Ambulance Panel System 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.



0724151



Varimed



Standard Ambulance Hose



Steel reinforced

The Ambulance Panel System can be delivered with two types of ambulance regulators, Medireg and Varimed. The APS 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 ISO 10524-1. 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 Ambulance Panel System includes electronic monitoring system.*

## 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. The hoses can be delivered static or antistatic. The standard connection is 3/8". The low pressure hoses can also be delivered with stainless steel reinforcement.

## AMBULANCE PANEL

The new ambulance panel range from GCE 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 switch over system allows easy monitoring and visibility by ambulance staff.

TECHNICAL DATA - AMBULANCE PANEL SYSTEM	
Gas	O <sub>2</sub> , Air, N <sub>2</sub> O/ O <sub>2</sub>
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

TECHNICAL DATA - DEFINITION AMBULANCE REGULATORS	
Type	Varimed, MediReg®
Gas	O <sub>2</sub>
Inlet	acc. to national stds
Outlet	G1/4", QC acc. national stds
Gauge	Standard, Electronic

HOSE-ASSEMBLIES

TECHNICAL DATA - DEFINITION AMBULANCE HOSE	
Type	Ambulance Hose, Steelreinforced, SMART Fit
Gas	O <sub>2</sub>
Inlet	G3/8", G1/4", QC nat. stds.
Outlet	G3/8", G1/4", QC nat. stds.

Art. Nr.	Description
0724194	MediReg® O <sub>2</sub> bullnose G1/4
0724200	MediReg® bullnose, G1/4 contact gauge

Art. Nr.	Description
0715410	AP II O <sub>2</sub> R S
0715431	AP II O <sub>2</sub> 2xBS R
0715439	AP II O <sub>2</sub> FLS E



# BAGS AND ACCESSORIES



## BAGS AND ACCESSORIES

Art. Nr.	Description
MM6005	Barrel bag, blue



Art. Nr.	Description
1024419	Barrel bag, red
1024374A	Red square Mars bag



## MEDIVITAL CYLINDER BAG

Art. Nr.	Description
2000537	2 litre



# MEDICAL CYLINDER VALVES

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

## FEATURES / ADVANTAGES / BENEFITS

- Available in all of common inlet and outlet connection
- For all medical gases
- Handwheels in different colours and materials
- Handwheel caps with customer logo on request
- Optional RPV for most valves
- 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  $\pi$  marked.

TECHNICAL DATA		
Gas	O <sub>2</sub> , Air, N <sub>2</sub> , Ar, CO <sub>2</sub> , N <sub>2</sub> O, He and others	
Inlet 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 <sub>2</sub> and N <sub>2</sub> O, 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
	EN ISO 10297	EN ISO 15996
	Production in accordance with EN ISO 9001 and EN ISO 13485	
Classification	IIb	

## 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

- > Residual pressure valve
- > Burst disc
- > Dip tube



### 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	Inlet	Outlet	Finish
<b>0765389</b>	Pin Index	Air	200	25E	Air pin	Chromed
<b>0775535</b>	Pin Index	Air	200	M 18	Air pin	Chromed
<b>0765414</b>	Pin Index	Entonox	200	18T (0.715)	Entonox pin	Chromed
<b>0765340</b>	Pin Index	Oxygen	200	17E	Oxy pin	Chromed
<b>0765397</b>	Pin Index	Oxygen	200	18T (0.715)	Oxy pin	Chromed
<b>0765339</b>	Pin Index	Oxygen	200	25E	Oxy pin	Chromed
<b>0775467</b>	Pin Index	Oxygen	200	M 18	Oxy pin	Chromed



OXYGEN CYLINDERS - PIN INDEX

Art. Nr.	Description
1019797	Oxygen Cylinder with Pin Index Valve, 2.7 Litre, 137 bar
1019798	Oxygen Cylinder with Pin Index Valve, 2.7 Litre, 137 bar, Empty
1019799	Oxygen Cylinder with Pin Index Valve, 2.0 Litre, 137 bar
1019800	Oxygen Cylinder with Pin Index Valve, 2.0 Litre, 137 bar, Empty
MM6010	Empty O <sub>2</sub> /N <sub>2</sub> O Cylinder supplied with Pin Index Valve, 2 litre

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

ACCESSORIES

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



H03110301



14090635



325197566P



325197688



500003472



326001695



326000722

# SERVICING OPTIONS

## GCE MEDICAL EQUIPMENT SERVICING AND REPAIR

For Maintenance engineers 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 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 Module 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, 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 principles 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 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 Medical products for the range specified for two years and be competent to undertake the servicing and repair activity.
- > User/Maintenance teams establish autonomy over the service and maintenance of this equipment, offering service cost savings and significantly reduced down time of this essential medical equipment.

## USER INSTRUCTIONS

User instructions videos are available on the GCE website [www.gcegroup.com](http://www.gcegroup.com).

## 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

Please email in advance to agree your requirements to e-mail: [sales@gcegroup.com](mailto:sales@gcegroup.com).

# 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.

## GROUND S 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.



# REGIONAL OFFICES

## EUROPE

CZECH REPUBLIC  
FRANCE  
GERMANY  
HUNGARY  
ITALY  
POLAND  
PORTUGAL  
ROMANIA  
SPAIN  
SWEDEN  
UNITED KINGDOM & IRELAND

## AMERICA

LATIN AMERICA  
MEXICO  
USA

## ASIA

CHINA  
INDIA  
RUSSIA



visit: [www.gcegroup.com](http://www.gcegroup.com)



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