



Medical Central gas system & equipments

EDITION 1/2009

GCE Group - the European market leader in gas control equipment
GCE world-wide: <http://www.gcegroup.com>



GCE is an experienced developer and producer of gas control equipment since the beginning of the 20th Century. GCE is one of the world's leading manufacturers in this field and now employs over 1200 people around the world.

The company has grown through a combination of a dedicated workforce and an in depth knowledge of pressure and flow control related to gas welding and cutting technology, medical systems, process applications and high purity requirements.

GCE aim is to support its customers in their demands for safe and reliable products manufactured in accordance with the latest governing standards.



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Hospital Central Gas supply system

Simplex MMR Gas Manifold



The "Simplex MMR" gas manifold is suitable for such health care where the capacity requirement is limited, such as laboratories and small health care clinics. This gas manifold consists of only one group of cylinders. The regulator is mounted in the collection unit. Each inlet connection has a filter, a non-return valve and a shut-off valve. This arrangement makes it possible to use one cylinder at a time.

In order to obtain a stable outlet pressure this gas manifold is equipped with a preset two-stage regulator. On the high pressure side of the regulator there is a contact gauge the signal of which can be carried further to an alarm unit.

Simplex MMR is delivered mounted and test-pressurized.

Specification

A gas cylinder manifold Simplex MMR exclusive of gas cylinders includes:

- Gas cylinder manifold Simplex MMR.
- Collecting pipe Manyflow block for three hoses.
- Gas evacuation kits for collecting pipe.

For a complete Simplex MMR add:

- Non-return valves.
- High pressure hoses with safety wire.
- Cylinder retaining brackets.
- Gas name signs.

Art. Nr.	Description	Gas
325397702	Simplex MMR	Medical breathing oxygen, Air, Nitrogen, Argon
325397703	Simplex MMR	Nitrous oxide, Medical carbon dioxide

Technical data

Capacity at working pressure 5 bar:

Medical oxygen	30 m ³ /h
Medical nitrous oxide	27 m ³ /h
Medical breathing air	30 m ³ /h
Max. inlet pressure	220 bar
Max. outlet pressure	8 bar

MM90 Automatic Gas Manifold



The MM90 automatic medical manifold is intended for use in hospital pipeline system as medical gas source. Together with MM90, there shall always be used an alarm providing all alarms according to standard (like gas alarm C44). As 2nd stage is recommended to use a line pressure regulator.

The manifolds covered by this description are designed to allow equal numbers of cylinders to be manifold together to give an operating bank and a reserve bank. The manifold will deliver gas from the operating bank to the manifold pressure regulator until the cylinders are exhausted. At that point the supply will switch to the reserve bank and the exhausted bank can be reple-nished. The object is to give uninterrupted gas supply.

Gas Alarm C44 is Standard Accessory. The gas alarm C44 gives visual and audible indication. It surveilles and sounds the alarm when the following happens:

1. Too high or too low outlet pressure,
 2. Leakage on the non-operating gas cylinder bank,
 3. When change of operating side has ben effected.
- The gas alarm C44 is able to communicate wtih other equipment through relays. The alarm has a battery back-up for 30 minutes of operation.

Specification

An MM90 includes (except for gas cylinders or packs) the following components:

- MM90 AUTO Manifold
- Gas alarm C44

For a complete MM90 AUTO manifold add:

- Collecting pipes, high pressure valves, and non-return valves (high pressure components).
- High pressure hoses with safety wire.- Cylinder retaining brackets.

Art. Nr.	Description	
0727301	MM90 AUTO Manifold	O ₂
0727302	MM90 AUTO Manifold	Air
0727303	MM90 AUTO Manifold	N ₂ O

Technical data

Capacity at 900 kPa (9 bar) outlet pressure	
Oxygen, air	90 m ³ /h
Nitrous oxide, CO ₂	50 m ³ /h
Max. inlet pressure (settled)	20 000 kPa (200 bar)
Max outlet pressure	1200 kPa (12 bar)

Ward equipments

Low Pressure Hoses For Medical Gases



Technical Data

Gas pressure	O ₂ , air, N ₂ O, vacuum
Material	Polyvinyl chlorid, containing plasticizer, with brilliant polish, latex free, antistatic
Inner diameter	0 6,7 × 12,7 mm
Wall	3 mm
Hardness (Shore A)	87 ± 5
Density	1,25 ± 0,02 g/cm ³
Tensile strength	10 MPa ³
Fracture strain	200 %
Weight	110 g (1 m hose without connectors)
Working pressure	max. 14 bar / 20°C
Rupture pressure	56 bar / 20 °C bzw 40 bar / 40 °C
Max. working pressure range	3,0 to 14 bar
	0,1 to 1,0 bar absolute pressure for vaccum hose
Max. pressure drop	< 500 mbar with 3,2 bar and 200 lpm
Max. stretching force	600 N
	300 N for vaccum
Storage temperature	- 40 °C to + 75°C
Operation temperature	- 20 °C to + 60 °C
Humidity	5% to 95% RH
Ambient pressure	570 to 1200 hPa
Max. life time	10 years from production date



Nordic Standard



French Standard



DISS probe



German Standard 120°

Medievac+ Vacuum Regulator



Medievac+ is a new, 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 compactness of the device offers:

- fast connection to the vacuum source
- quick and convenient mounting of accessories
- good accessibility of other devices connected to close located terminal units.

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.

Three 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.

Medievac+ can easily be connected to the central gas vacuum supply system, either directly on the terminal unit or on a rail system.

Medievac+ compliance is based on EN ISO 10079-3 standard.

Art. Nr.	Description
0735106	Medievac+ 1000 with standard probe Accessories
0735105	Medievac+ 600 with standard probe 548900291595 safety jar 100 ml
0735104	Medievac+ 250 with standard probe

Technical data

ON-OFF function	ON : green button visible
	To switch ON: push on the OFF button (red)
Max. inlet pressure	- 950 mbar (inlet pressure at 1013 bar -15°C)
Max. suction flow	Medievac+ 1000 70 l/min ±5 l/min at - 950 mbar
	Medievac+ 600 70 l/min ±5 l/min at - 600 mbar
	Medievac+ 250 70 l/min ±5 l/min at - 250 mbar
Accuracy of gauge	±2,5 % of full scale
Safety valve	Medievac+ 250 only
	max. - 290 mbar opening
Inlet connection	According to the respective national standard
Outlet connection	ISO G1/2" male
Height (with jar)	265 mm
Width	55 mm
Depth	115 mm
Body material	ABS

Accessories for Medievac+ Vacuum Regulator



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, should the collecting 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. 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.

文丘里装置

GCE的Mediline 文丘里装置有两款：为支架安装设计的金属面板式；或配BS标准接头，可直接安装在医疗减压器上。负压大小可以用内置的针阀进行调节，前方的压力表便于清晰观察负压的压力状态，装置上的开关按钮，轻松的一拉一按之间就能切断气流或将设置调回初始状态。装置在运行时非常安静，且一般情况下无需特别维护。

Flexiunit 1



Flexiunit轻便型面板，配有一个文丘里装置，功能强大，抽吸效果显著，负压在0到-80kPa间可任意调节；装置边上配有氧气流量调解阀，出口流量在0-25l/min之间。另外可选装一个快速释放接口，快速连接呼吸机或按需供气阀等。

软管可在四个位置接入：模块上下或任一侧，定位灵活。模块可以安装在GCE Medirail系列支架及轮椅或输液辅架上。

产品编号	产品描述
325197280	Flexiunit 1 0-15 l/min Mediflow 氧气出口

技术数据 (文丘里装置)

出口连接	宝塔头BS(5682); 3.5bar (50psi)快速接头 (可选)
最大进气压力	137 bar (1987 psi)
流量范围	0 – 25 升每分钟
工作温度	-20°C 到 + 60°C
标准气体	氧气
最大负压	- 80 kPa (- 0.8 bar)
流量负荷	> 25 l/min
最大气体消耗	38 l/min
氧气或空气驱动	

Flexiunit 2



Flexiunit 2由一个文丘里装置直接连接Mediline Mediselect 15系列减压器组成。氧气出口流量可在0-25l/min之间自由调节，有效负压在0到-80kPa之间。快速释放接口可作为附加配件，连接呼吸机或按需供气阀。

Flexiunit 2 进气接头有Pin和Bullnose等多种选择，可与所有标准钢瓶连接。

产品编号	产品描述
0720211	Flexiunit 2 0-25 l/min Pin Index 接头
0720212	Flexiunit 2 0-25 l/min Bullnose 接头

技术数据 (mediselect 减压器)

型号	单级减压器,符合EN738标准,第一部分
母体	铜镀镍
膜片	Viton
进气过滤网	烧结青铜 (60微米)
进气接头	Pin或bullnose
压力表	设定 1/4,1/2,3/4,full markings
出气接头	Fitree,或加配固定出气压力的快速接头 (BS5682)
最大进气压力	137 bar (1987 psi) –使用于英国市场
出口压力	3.5 bar (50psi)
流量	0 – 25 litres per minute
压力释放阀	设定在 7 bar (100 psi)
工作温度	-20°C 到 + 60°C
标准气体	氧气

Medicollect Collection Systems



The Medicollect range of collection jars are designed to collect organic fluids by aspiration and are manufactured for "high flow and high vacuum" application.

The jars are made of polycarbonate and the connectors are manufactured from chrome-plated brass. They can be autoclaved at a temperature of 121 degrees centigrade for 15 minutes.

The 300ml and 500ml jars are particularly suitable in hospitals for the collection of small volumes of liquids. They can also be used as safety containers to protect instruments/equipment upstream, if the overflow valve of the collection jar fails. For the collection of larger volumes, a 2000ml version is available.

Art. Nr.	Description
K291531	Medicollect 300ml, G1/2 inlet connection, 8.5mm hose outlet connection
K291657	Medicollect 500ml, G1/2 inlet connection, 8.5mm hose outlet connection (antibacterial filter)
K291530	Medicollect 2000ml, 9.5mm hose inlet & outlet connection

Technical data

Body	Polycarbonate jar with chrome-plated brass connections.
Autoclave	121°C for up to 15 minutes
Inlet connection	ISO G1/2 F or 9.5-11mm diameter tubing
Storage temperature	(-40°C +/-2°C) to (+60°C +/-5°C) and 40 -70% RH.
Operating temperature	(-18°C +/-2°C) to (+50°C +/-5°C)
Max. applicable vacuum value	-95 kPa/5 min (applicable to all jars)
Max. flow value	60 l/ min +/-10 l/ min to -95 kPa (applicable to all jars)

	Medicollect 300	Medicollect 500	Medicollect 2000
Height	180mm	215mm	305mm
Width	98mm	98mm	150mm
Depth	70mm	70mm	140mm
Total weight	0.20 Kg	0.24 Kg	0.62 Kg

Medimeter (An easy way to control gas flow)



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 chrome plated with a polycarbonate flow tube making it both tough and easy to clean. The Medimeter can be supplied as an assembly with or without gas specific probes. The probe is connected to the flowmeter on a 3/8" thread.

Oxygen

Art. Nr.	Description
MM3279	Medimeter 15 (0-15 l/min) with BS5682 Male Probe Quick Connector
MM3277	Medimeter 15 (0-15 l/min) with 3/8" Connector
MM3345	Medimeter 15 (0-15 l/min) Twin with BS5682 Male Probe Quick Conn.

Medical Air

Art. Nr.	Description
MM3278	Medimeter 15 (0-15 l/min) with 3/8" Connector

Technical data

Body	Chrome-plated brass with polycarbonate flow gauge.
Flow adjustment knob	Fully adjustable 0-15 LPM
Outlet connection	G 3/8" Male (with or without fir tree connection)
Height x Width x Depth with probe	74 mm x 48 mm x 130 mm
Storage temperature	(-40°C +/- 2°C) to (+60°C +/- 5°C) and 40 - 70% RH
Operating temperature	(+5°C +/- 2°C) to (+35°C +/- 5°C)
Max. supply pressure	500 kPa
Accuracy	To EN738-1



Mediflow



MediFlow® Ultra II is the new generation of medical flow selector device with built-in regulator.

It covers a comprehensive combination of inlet and outlet connections and offers various options for all medical applications, from neonatal care through to resuscitation.

Art. Nr.	Description
0728187	Mediflow® Ultra II with flow rates 0; 0,1; 0,2; 0,3; 0,4; 0,5; 0,6; 0,7; 0,8; 1; 1,5; 2
0728168	Mediflow® Ultra II with flowrates 0; 0,25; 0,5; 0,75; 1; 1,5; 2; 2,5; 3; 4; 5; 6
0728173	Mediflow® Ultra II with flowrates 0; 1;2; 3; 4; 5; 6; 7; 9; 12; 15; 25

Technical data

Inlet pressure range	2,8 – 8 bar	
Max.outlet pressurewith no flow	2,1 bar	
Flow ranges*	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 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
Inlet connection	according to national standards	
Outlet connection	9/16" UNF, M12x1,25, 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 (Pressure regulators for use with medical	

Mediwet Oxygen Humidifiers



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

The humidifiers are made of polycarbonate and the connectors are manufactured from chrome-plated brass.

They can be autoclaved at a temperature of 121 degrees centigrade for 15 minutes. They may also be used in conjunction with GCE Mediline flowmeters and regulators providing versatility and simplicity in use.

Available in 200ml, with G3/8" female connectors compatible with the Medimeter range.

Art. Nr.	Description
14090520	Mediwet 200ml, G3/8 F inlet connection
Other versions available on request	

Technical data	
Type	Bubble humidifier for oxygen therapy
Body	Polycarbonate jar with chrome-plated brass connections
Autoclave	121°C for up to 15 minutes
Inlet connection	G3/8 Female (Other standard connections available)
Outlet connection	Oxygen supply hose (recommended) dia. 6mm, length 2 metres
Storage temperature	(-40°C +/- 2°C) to (+60°C +/- 5°C) and 40 - 60% RH
Operating temperature	(-18°C +/- 2°C) to (50°C +/- 5°C)
Max. applicable pressure	500 kPa
Max. applicable flow	20 l/min

	Mediwet 200	Mediwet 500
Height	192 mm	210 mm
Width	83 mm	89 mm
Depth	60 mm	70 mm
Total weight	185 grams	190 grams

Humidifiers



The humidifier for oxygen therapy is a device allowing an increase in the relative humidity in the oxygen supplied to the patient; this gas for medical use normally lacks a sufficient humidity grade to be physiologically tolerated. It is made of polycarbonate and with chrome-plated brass nipples, and the oxygen therapy humidifier, is auto-clavable at 121° C (15 min).

Art. Nr.	Description
K294432	Humidifier 200 ml, 9/16 inlet connection
K294416	Humidifier 200 ml, G3/8 inlet connection
Other versions available on request	

Technical data	
Inner volume	200 ml
Height	200 mm
Width	74 mm
Depth	55 mm
Weight	0,135 Kg
Inlet connections	G 3/8
Outlet connections	Ø 6 – 9

Regulators

MediSelect® II and MediReg® II High Pressure Regulator



MediSelect® II

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 by medicinal 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.



MediReg® II

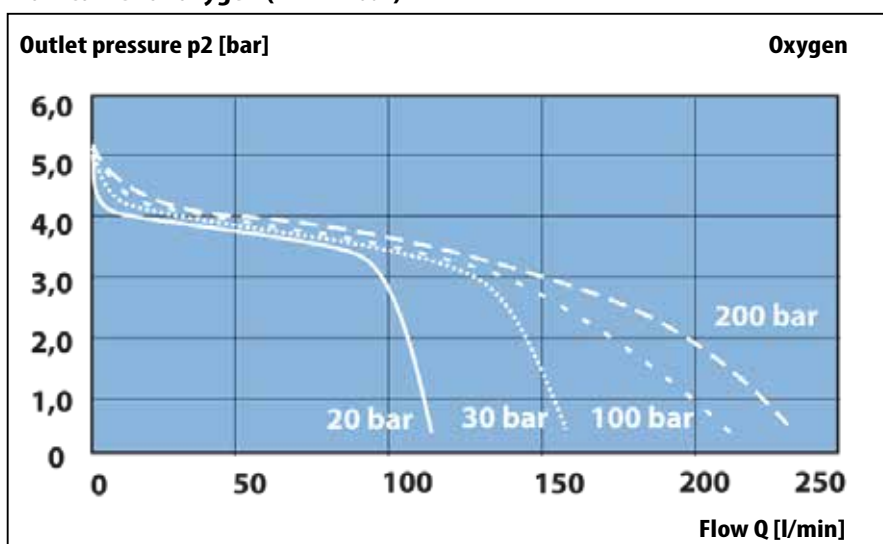
Regulator with pressure outlet, constantly adjusted flow or with flowmeter.
 Rotating pressure gauge which allows convenient reading.
 Ergonomic and streamlined design.
 Easy cleaning surface.
 Compact and user friendly.

Technical data

Gas	O ₂ , Air, N ₂ O, CO ₂ , N ₂ O/O ₂	
Inlet pressure range	up to 300 bar	
Nominal outlet pressure	4 bar	
Flow ranges*	0 to 2 lpm	0;0,1;0,2;0,3;0,4;0,5;0,6;0,7;0,8;1,1;1,5;2
	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
Inlet connection	according to national standards	
Outlet connection	9/16" UNF, M12x1,25, G3/8, G1/4 with hose nipple	
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 ASTM Standard G175-3 (Standard test method for evaluating the Ignition sensitivity)	
	Complies with Standard EN 1789:2000 (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)



The advantages of MediSelect® II

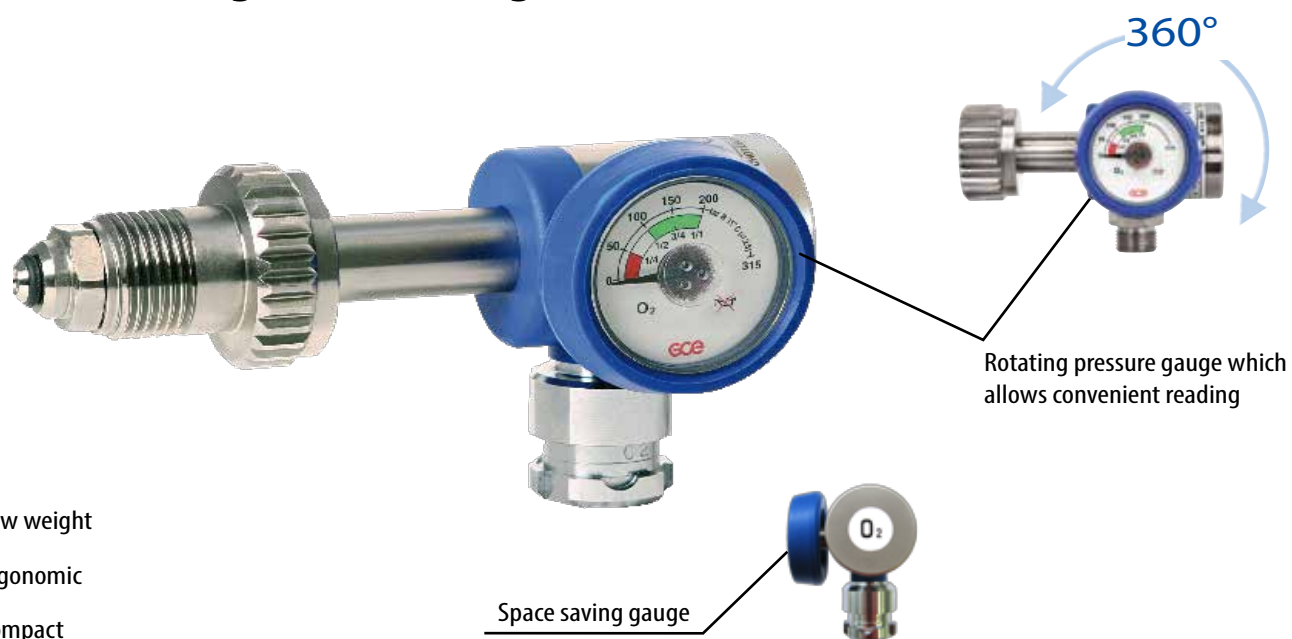
Rotating pressure gauge which allows convenient reading

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



The advantages of MediReg® II

Low weight
Ergonomic
Compact



Mediflow Ultra Low Pressure Regulator



MediFlow® Ultra is the new generation of medical flow selector device with built-in regulator. It covers a comprehensive combination of inlet and outlet connections and offers various options for all medical applications, from neonatal care through to resuscitation.

Built-in regulator provides a very stable and precise flow, independent of the pressure in the medical central gas system or cylinder.

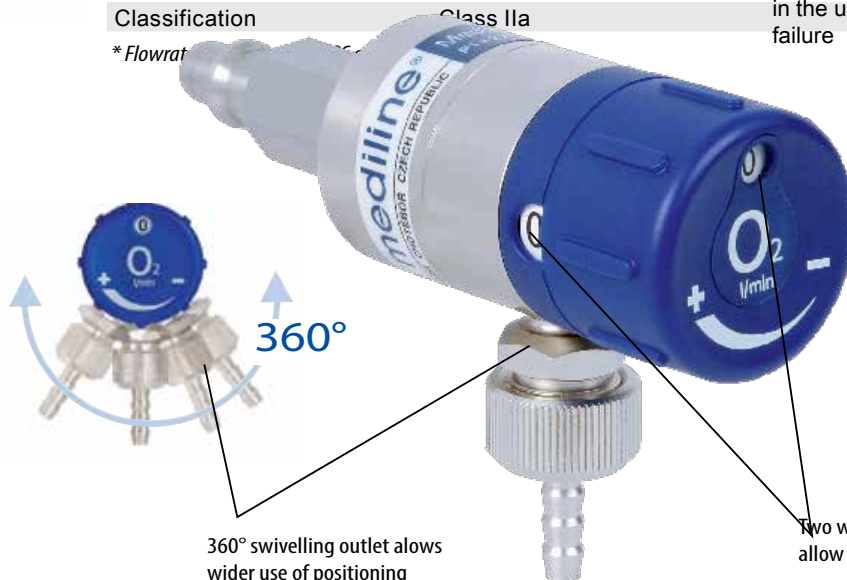


- Innovative self centering flow setting device with continuous flow between settings. In the unlikely event of indent mechanism failure, the patient will still be supplied by medicinal gas
- Lateral and frontal reading of flow settings.
- 360° swivelling outlet – it enables better orientation of the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

Technical data

Inlet pressure range	2,8 – 8 bar	
Max.outlet pressure with no flow	2,1 bar	
Flow ranges*	0 to 2 lpm	0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 1.5, 2
	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
Inlet connection	according to national standards	
Outlet connection	9/16" UNF, M12x1.25, 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	
Regulator status	Complies with Medical Devices Directive 93/42/EEC, EN 10524-4, EN 1789:2000	Complies with Medical Devices Directive 93/42/EEC, EN 10524-4, EN 1789:2000
Classification	Class IIa	Continuous flow between settings, in the unlikely event of mechanism failure

* Flowrate at 2 bar



360° swivelling outlet allows wider use of positioning

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

SABRE MEDICAL GAS REGULATORS

The range of medical gas regulators from Sabre conform to the requirement of EN 738.

The range covers the widest possible combination of inlet and outlet connections and includes products designed for oxygen therapy, for use with gas powered resuscitation and on demand equipment. All offer unrivalled levels of accuracy and performance whilst maintaining Sabre's design brief of robust and simple to operate products leaving the carer to concentrate on their patient – not on remembering how to use the equipment. Whether low or high pressure, all Sabre regulators operate identically, thereby decreasing training needs in multi-requirement establishments. They incorporate both sintered bronze filters and pressure relief valves, minimising the risks of contamination and providing increased carer and patient safety. Manufactured from precision machined and moulded components, Sabre regulators feature the minimum of moving parts thereby offering extended servicing intervals and low ownership costs. Each regulator is clearly marked with retest date. Developed from Sabre's many years experience in the manufacture of medical gas regulators, this new range provides levels of performance and life costs that exceed current levels of user expectations.

Selectflow Regulators



Available with a wide range of high pressure inlet connections and a universal fir tree low pressure outlet that is compatible with all oxygen therapy tube diameters, Sabre SelectFlow regulators offer unrivalled levels of accuracy and simplicity of operation. Models are manufactured with single, two or eleven flow settings with flow rates from 0.1 to 15 litres per minute (lpm) offering treatment options from neonatal care through to resuscitation. A higher purge flow rate (nominal flow of 25 lpm) is also available. All SelectFlow regulators feature a clear flow rate indicator window and click action selection. This decreases the risk of controlled or inaccurate administration and provides simple, clear flow selection. All models are designed for use with supply pressures up to 200 bar and feature an easy to read pressure gauge that can be aligned to any convenient reading position prior to pressurising. Available with the full range of high pressure inlet connections.

Pin Index Versions

Art. Nr.	Description
1068790	Select Flow with a fir tree outlet, flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.
1068791	Select Flow with a fir tree outlet, flow rates 0.25, 0.5, 0.75, 1, 2, 4, 6, 8, 12, 15 ~23 l/min.
1068792	Select Flow with a fir tree outlet, flow rates 0.1, 0.25, 0.5, 0.75, 1, 1.5, 2, 2.5, 3, 4, 5 l/min.
1068793	Select Flow with a fir tree outlet, flow rates 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1 l/min.
1068794	Select Flow with a fir tree outlet, flow rates 0.5, 0.8, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15 l/min.
1068795	Select Flow with special regulator flows. Customer may specify 11 flow rates from 0.1 to 15 l/min.
2007034	Select Flow with special regulator flow. Customer may specify one flow rate from 0.1 to 15 l/min.
1068811	Select Flow with a fir tree outlet, flow rates 5 & 15 l/min.
1068812	Select Flow with a fir tree outlet, flow rates 8 & 15 l/min.

Bullnose (5/8")

Art. Nr.	Description
1068589	Select Flow with a fir tree outlet, flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.
1068591	Select Flow with a fir tree outlet, flow rates 0.25, 0.5, 0.75, 1, 2, 4, 6, 8, 12, 15 ~23 l/min.
1068592	Select Flow with a fir tree outlet, flow rates 0.1, 0.25, 0.5, 0.75, 1, 1.5, 2, 2.5, 3, 4, 5 l/min.
1068593	Select Flow with a fir tree outlet, flow rates 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1 l/min.
1068594	Select Flow with a fir tree outlet, flow rates 0.5, 0.8, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15 l/min.
1068849	Select Flow, Brass with a fir tree outlet, flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.
1068850	Select Flow, Brass with a fir tree outlet, flow rates 0.25, 0.5, 0.75, 1, 2, 4, 6, 8, 12, 15 ~23 l/min.

Technical data

Gas Types	O ₂
Inlet connectors	Full range HP
Input pressure	200 – 13 bar
Pressure gauge	0 – 200 bar low profile*
Therapy flows	All flow ranges
Flows above 1 L/m	±10%

Therapy Regulators



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

Pin Index Versions

Art. Nr.	Description
1071001	Therapy Regulator, Pin Index with BS 5682 quick connection outlet.
1070998	Therapy Regulator, Air, Pin Index with 3/8" outlet.
2004007	Therapy Regulator, Air, Pin Index with BS 5682 quick connection outlet.
1071027	Therapy Regulator, Brass, Pin Index with 3/8" outlet.

Bullnose (5/8")

Art. Nr.	Description
1070989	Therapy Regulator, Bullnose with BS 5682 quick connection outlet.
2008449	Therapy Regulator, Brass, Bullnose with 3/8" outlet and flowmeter with 0 - 15 l/min scale.

Technical data

Gas Types	O ₂ /Air
Inlet connectors	Full range HP
Input pressure	200 – 10 bar
Pressure gauge	0 – 200 bar low profile*
Therapy flows	N/A
Flows above 1 L/m	N/A
Flows below 1 L/m	N/A
Therapy outlet	N/A
Therapy pressure	N/A
Selector knob torque	0.3Nm
Pressure output	4.2 bar ±20%
Max. no. pressure outputs	1 (G1/8)
Pressure relief valve setting	8.4 bar (120psi)
Size L x W x D (mm)	97 x 44 x 56
Weight (no outlets)	330g
PI Yoke	Available
Environmental Limits	Operating and storage: -20°C to +60°C. Humidity up to 95% RH non condensing

* Pressure gauge marked full, 3/4, 1/2, 1/4, 0 and in bar

Flow Probe



Designed for use with low pressure regulated gas supplies, the Sabre Flow Probe offer the same easy to select features and flow rate option as the Selectflow range. When used in conjunction with trolley mounted regulators or piped supplies, their robust design, simplicity of operation and accuracy provide significant benefits over traditional glass or plastic flow control devices.

The Flow Probe includes the additional feature of a low pressure regulator to compensate for any variations in low pressure gas supply.

Art. Nr.	Description
11047819	Flow Probe with BS 5682 quick connection probe and flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.

Resuscitation Regulator



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

Pin Index Versions

Art. Nr.	Description
1065859	Resuscitation Regulator with a single BS 5682 quick connector outlet and firtree outlet with flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.
2003074	Resuscitation Regulator with a single BS 5682 quick connector outlet and firtree outlet with flow rates 0.25, 0.5, 0.75, 1, 2, 4, 6, 8, 12, 15, ~23 l/min.
1065959	Resuscitation Regulator, Brass with a single BS 5682 quick connector outlet and firtree outlet with flow rates 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, ~23 l/min.

Bullnose (5/8")

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

Technical data

Gas Types	O ₂ /Air
Inlet connectors	Full range HP
Input pressure	200 – 10 bar
Pressure gauge	0 – 200 bar low profile*
Therapy flows	11F
Flows above 1 L/m	±10%
Flows below 1 L/m	±20%
Therapy outlet	Firtree
Therapy pressure	4.2 bar (60psi)
Selector knob torque	0.3 Nm
Pressure output	4.2 bar ±20%
Max. no. pressure outputs	2 (staple)
Pressure relief valve setting	8.4 bar (120psi)
Size L x W x D (mm)	116 x 44 x 63
Weight (no outlets)	350g
PI Yoke	Available
Environmental Limits	Operating and storage: -20°C to +60°C. Humidity up to 95% RH

Demand Regulator



Designed to provide the higher flow rates that 'on demand' medical gas products require.

* Pressure gauge marked full, 3/4, 1/2, 1/4, 0 and in bar

Art. Nr.	Description
1046542	Demand Regulator with Bullnose inlet (5/8") and BS 5682 quick connection outlet.
1046574	Demand Regulator with Pin Index inlet and BS 5682 quick connection outlet.
2003307	Demand Regulator, Brass with Bullnose inlet (5/8") and BS 5682 quick connection outlet.
1046588	Demand Regulator, Brass with Pin Index inlet and BS 5682 quick connection outlet.

Technical data

Gas Types	O ₂ /N ₂ O:O ₂
Inlet connectors	Full range HP
Input pressure	200 – 9 bar
Pressure gauge	0 – 200 bar low profile*
Therapy flows	N/A
Flows above 1 L/m	N/A
Flows below 1 L/m	N/A
Therapy outlet	N/A
Therapy pressure	N/A
Selector knob torque	N/A
Pressure output	4.8 bar ±20%
Max. no. pressure outputs	2 (staple)
Pressure relief valve setting	9.6 bar (140psi)
Size L x W x D (mm)	97 x 44 x 56
Weight (no outlets)	330g
PI Yoke	Available
Environmental Limits	Operating and storage: -20°C to +60°C. Humidity up to 95% RH non condensing

Oxygen conservers

ECOLite 4000 Oxygen Conserver



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

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

ECOLite 4000 is an electronic oxygen gas conserving device, which enables patient friendly and efficient long term oxygen therapy treatment (LTOT).

With the ECOLite 4000, the oxygen is delivered only during the inspiration phase, permitting savings of up to 10 times compared to continuous flow oxygen therapy. The volume of oxygen needed for one breath is delivered during the first third of the inspiratory cycle, which guarantees both efficient and optimal treatment and a short exposure of the nasal mucosa to medical oxygen. A special feature of the ECOLite 4000 is the small, internal regulator, that allows the user to select a supply inlet pressure of between 1,6 to 5 bar. The working pressure of the device is regulated to 1,6 bar which enables a both clinically and physiologically patient friendly oxygen administration.

The device has two operating modes, Automatic and Manual. In the Automatic mode the amount of oxygen delivered increases in relation to the set flow rate at breath rates of 15 to 30 breaths per minute, to a maximum of 8 lpm. In the Manual mode the flows rate from 0,5 to 8 lpm with increments of 0,5 lpm.

If a specific flow rate is prescribed by the physician to be administered, the flow settings can be locked at any rate by the health care personnel in charge of setting the flows on initial setup.

The device has several built in alarm functions for safe use. The alarms are shown on the display and are also audible. The

ECOLite 4000 has alarms for:

- Low battery
- No Oxygen
- No Breathing

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

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

Accessories

Art. Nr.	Description
MM3735	Firlic* Snap On/Off Connector (to suit BAREMA standard firetree outlet)
2008973	1 litre Rucksack Bag
1024401	1.7 litre Rucksack Bag

* The Firlic provides a secure, leak free connection to the firetree outlet. This prevents the hose from detaching from the gas supply when used at higher pressures (i.e. 4 bar).

Technical data

Functional performance	
Settings:	Manual/ Automatic
Triggering:	At each breath
Sensitivity:	0,13 cm H2O
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
Power supply	Battery: R06, AA, Alkaline 1,5 V
Oxygen supply	
Pressure:	Between 1,6 and 5 Bar
Flow:	Minimum 4 litres per minute
Height x Width x Depth:	101 mm x 85 mm x 32 mm

Elite Oxygen Conservor



The Sabre Elite oxygen conserving device is an innovative way of delivering oxygen to the patient, whilst conserving the gas and extending the duration of the cylinder.

- Totally pneumatic, requires no external power source
- On demand oxygen is delivered to meet patient needs, depending on exercise / effort
- Matching the delivery performance of constant flow oxygen over a range of flow rates
- All brass high pressure components
- Easy to change between cylinders, medium pressure break ensures maximum user safety
- Easy to use, does not require complex set up, a simple, single connection of a cannula to the therapy outlet of the device is all that is required

Elite with Cylinder

Art. Nr.	Description
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2008544	Elite valve fitted to 1.0 litre Aluminium cylinder, 200 bar.
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Note: Cylinder variants supplied with carry bag, cannula and full to 200 bar. Fitted with a G1/4 fill port (adapters available).



Elite with Low Pressure Quick Connector

Art. Nr.	Description
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2010294	Elite head with BS 5682 probe quick connector.
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Elite with High Pressure Cylinder Connector

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

Art. Nr.	Description
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2001641	Elite valve and regulator with 17E cylinder connection.
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2001642	Elite valve and regulator with M18 cylinder connection.
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Note: Cylinder variants supplied with carry bag, cannula and full to 200 bar. Fitted with a G1/4 fill port (adapters available). More connections are available on your request.

Technical data

Input pressure	0-200 bar
Inlet Connector Type(s)	Full range high pressure
Pressure gauge	0-200 bar low profile
Therapy flow Equivalency (lpm)	1.0, 1.2, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0
Pressure Relief Valve Pressure	109 psi
Therapy outlet	Universal firtree
Service Intervals	Elite - 3 Years
Charging Adapter	(Bullnose) Part Number: 2003558
Nasal Canulae	Part Numbers 2008202 (pack of 100)

HOW TO SAVE OXYGEN?



During exhalation oxygen collects in a reservoir. At the start of the inhalation, the diaphragm detects the negative pressure in the nose. This opens a valve delivering the oxygen to the patient at the start of the breath.

The oxygen delivered correlates closely to the established method of constant flow across a range of breathing rates.

The Sabre Elite automatically adjusts oxygen delivery on a given setting to the patient's breathing rate.

For higher breathing rates there is less time for the oxygen to collect. The patient will therefore get smaller pulses,

but more of them. For lower breathing rates there is more time for the oxygen to collect. The patient will therefore

get larger pulses, but less of them.

A simple way of looking at oxygen savings by considering efficiency. The % efficiency is calculated by dividing the oxygen delivered to the lung by the total flow delivered. In constant flow delivery only a small proportion of oxygen gets into the lung where it can be absorbed. About 60% to 80% of the oxygen delivered is wasted.

Efficiencies are in the region of 20% to 40%. The reasons for this are:

(i) Constant flow does not stop during exhalation, so two thirds of the gas is wasted by flowing into the atmosphere.

(ii) Constant flow delivers throughout inhalation including the gas that goes into the dead-space. The Sabre Elite delivers

more efficiently. Efficiencies are in the region of 90% to 70%.

The pulse of oxygen is at the start of the breath where the gas is mixed with air that goes into the lung to be absorbed. During the later part of inhalation (where the oxygen would otherwise go into dead-space) and during exhalation the Sabre Elite saves the gas. The oxygen saving factor is primarily derived from efficiency, but other factors are relevant. The traditional constant flow settings



Cylinder capacity (litre)	Pressure (Bar)	Flow equivalency settings (L/min)				
		1	2	3	4	6
0.5	137	3:25	1:42	1:80	0:51	0:34
1.5	137	6:51	3:25	2:17	1:42	1:80
1.7	137	11:38	5:49	3:52	2:54	1:56
2.0	137	13:42	6:51	4:34	3:25	2:17
2.7	137	18:29	9:14	6:90	4:37	3:40
9.4	137	64:35	32:17	21:31	16:80	10:45
0.5	200	5:00	2:30	1:40	1:15	0:50
1.0	200	10:00	5:00	3:20	2:30	1:40
1.7	200	17:00	8:30	5:40	4:15	2:50
2.0	200	20:00	10:00	6:40	5:00	3:20
2.7	200	27:00	13:30	9:00	6:45	4:30
9.4	200	94:17	47:80	31:26	23:34	15:43

Emergency products

Gas Monitor and Control System



The MC112 is a complete control system for ambulances, which monitors the pressure in the cylinders. The system consists of: a control panel with alarm functions and a digital display, and 2 cylinder regulators with mounted pressure switches and cables between the pressure switches and the digital control panel.

Technical data

Current supply	0,1 A 11-15 V/DC
Weight x height x depth	127x125x22 mm
Regulator capacity at 4,5 bar	250 l/m
Max inlet pressure of regulators	220 bar
Fixed outlet pressure	4,5 bar (can be set to requirement)



Flowwme-



MediFlow®

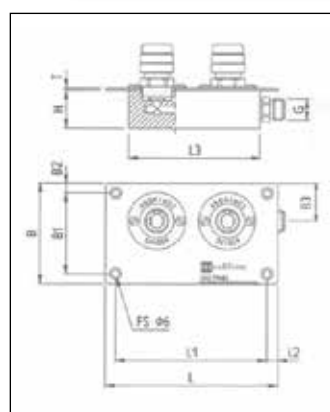


Medieject



Amf

The Medline ambulance gas panel is delivered with gas outlet for medical breathing oxygen, medical breathing air or Entonox. The panel is manufactured from eloxated aluminum profile and is equipped with self-closing gas outlet valves. The standard panel is equipped with 1, 2 or 4 gas outlets in each gas type. Hose nipple and hose nut are included.



- The gas panel is delivered with gas outlet for medical breathing oxygen and medical breathing air
- The panel is manufactured from eloxated aluminium profile and is equipped with self-closing gas outlet valves
- The standard panel is equipped with 1, 2, or 4 gas outlets in each gas type.
- Hose nipple and hose nut are included.

Art. Nr.	Description
325197461	Medical Breathing Oxygen, 1 gas outlet
325197460	Medical Breathing Oxygen, 2 gas outlets
325197498	Medical Breathing Oxygen, 4 gas outlets
325197499	Medical Breathing Air, 1 gas outlet
325197500	Medical Breathing Air, 2 gas outlets
325197501	Medical Breathing Air, 4 gas outlets
325197502	Medimix/Entonox, 1 gas outlet

Measurements (mm)

Number of Gas Outlets	L	L1	L3
1	80	64	54
2	135	119	109
4	245	229	197

B	B1	B2	B3	L2	H	T	G
80	64	8	30	8	30	2	ISO-G3/8 (Medical breathing oxygen with socket)

Pre-Vent Ventilator



- 144 Variable Vt/BPM Settings; Allows Ventilation of Patients from 3kg to adult with great flexibility
- Demand valve function allows spontaneous breathing, pausing the automatic cycling
- Automatic cycling resumes if patient ceases spontaneous breathing after 4-6 seconds
- 60% and 100% Oxygen concentration modes available
- Low gas pressure alarm
- Single power source pneumatic alarms work from cylinder contents and will never be inactive when using the Pre-Vent – requires no batteries
- Large, high visibility airway pressure gauge
- Adjustable pressure relief from 20 to 60 cmH₂O expels vents gas to atmosphere, whilst maintaining automatic ventilation
- Manual override control allows immediate calibrated delivery of oxygen to volume/frequency settings
- Can be supplied MRI compatible

Art. Nr.	Description
2006277	Pre-Vent kit with pin index regulator with 11 setting constant flow (1 - 23 l/min), hose and BS 5682 probe, 'Square' carry bag, masks, disposable patient circuit and manual.

Trans- Vent Ventilator



- 144 Variable Vt/BPM Settings; Allows Ventilation of Patients from 3kg to adult with great flexibility
- Demand valve function allows spontaneous breathing, pausing the automatic cycling
- Automatic cycling resumes if patient ceases spontaneous breathing after 4-6 seconds
- 60% and 100% Oxygen concentration modes available
- Low gas pressure alarm
- Single power source pneumatic alarms work from cylinder contents and will never be inactive when using the Trans-Vent – requires no batteries
- Large, high visibility airway pressure gauge
- Adjustable pressure relief valve from 20 to 100 cmH₂O expels vents gas to atmosphere, whilst maintaining automatic ventilation
- Internal, adjustable CPAP/PEEP from 0-20 cmH₂O
- Manual override control allows immediate calibrated delivery of oxygen to volume/ frequency settings
- Can be supplied MRI compatible

Art. Nr.	Description
2006183	Trans-Vent kit with pin index regulator with 11 setting constant flow (1 - 23 l/min), hose and BS 5682 probe, 'Square' carry bag, masks, disposable patient circuit and manual.

Mars-Pro Ventilator



- Easy to use combined tidal Volume and Frequency control
- Manual override control allows immediate calibrated delivery of oxygen to volume/ frequency settings
- Demand valve function allows spontaneous breathing, pausing the automatic cycling
- Automatic cycling resumes if patient ceases spontaneous breathing after 10 seconds
- Pressure relief valve set at 45 cmH₂O expels vents gas to atmosphere, whilst maintaining automatic ventilation
- Low gas pressure alarm
- Single power source pneumatic alarms work from cylinder contents and will never be inactive when using the MARS-Pro requires no batteries
- Large, high visibility airway pressure gauge Vt/BPM Settings; Allows Ventilation of Patients from 3kg to adult with great flexibility

Demand valves

EASE II Demand Valve



The New Sabre EASE II portable & pipeline systems provide a compact, low resistance method of self-administering O₂ /N₂O. The EASE demand valve is constructed in a way that creates minimal breathing resistance to the patient and can deliver high flows when required. For greater user comfort the EASE II is both smaller and lighter than the original Sabre EASE. The new 'Easy Grip' handle is another user friendly addition.

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

Art. Nr.	Description
0715302	Ease II kit with demand valve, 3 metres of hose & pin index regulator. Supplied with mask, mouthpieces and manual.
0715300	EASE II Demand value with 3 metres of hose & BS5682 probe. Supplied with mask, mouthpieces and manual.
1029114	EASE II Demand valve with 3 metres of hose & BS5682 probe. Supplied with mask, mouthpieces and manual.



Accessories

Art. Nr.	Description
1024417	Blue barrel carry bag
1035575	Breathing filter, single use for use with EASE demand valve (push fit connection).
1032937	Mouthpiece, single use for EASE demand valve (Pack of 5)
1032620	Adult size mask, multiple use (Large) for EASE demand valve.
1032622	Adult/Child size mask, multiple use (Medium) for EASE demand valve.
1032624	Child size mask, multiple use (Small) for EASE demand valve.
1032994	Adult size mask, single use (Large) for EASE demand valve.

Other standard probes are available on your request.



COMBILITE SYSTEM

GCE Gas Control Equipment has been the pioneer in the field of integrated combination valves for medical applications. Already in the mid eighties GCE started with the development of the first integrated valves and regulator products. Today more than one million medical combivalves from GCE are worldwide in use in hospitals as well as in home & emergency care. Our combination valves are available in different variants and are designed to fulfil the requirements for all types of medical gases in different application areas and cylinder pressures up to 300 bar (4500 psi). The Combilite® System is the most successful combination valve manufactured by GCE, available with a protective guard and bed hanger for easier and safer handling by the healthcare personnel and patients. The Combilite protective guard fits all type of cylinders up to a max. package weight of 24 kg. The optional bed hanger facilitates the handling in hospitals, especially during patient transport. The Combilite® System combine the function of high-pressure cylinder valve and medical pressure regulator. Gas from the cylinder is first controlled by the shut-off valve and then passes through the pressure regulator and delivered to the patient through the flow outlet or the pressure outlet. They are always provided with a (external or internal) low-pressure relief valve to protect the user outlets from over pressure.

Pressure outlet or Quick Coupler (option)

The Combination valve may be fitted with a pressure outlet. The pressure outlet is the outlet direct from the low-pressure chamber and is fitted with a gas specific medical quick connector also called "quick coupler" (See appendix Nr2). The user can connect another piece of equipment to this outlet with a gas specific male probe. The quick connector self seals when the male probe is disconnected. This outlet is for supplying gas at a controlled pressure to power medical devices, e.g. medical ventilator.

Flow control head and Flow outlet (option)

GCE Medical Combination Valves can be delivered with a flow control head. This function is used to supply a gas flow (l/min) at atmospheric pressure directly to a patient through the flow outlet e.g. through a cannula or a facemask. The flow outlet user connection can be from a push on hose fitting (hose nipple) or a threaded (for humidifier for instance)

Residual Pressure Valve

GCE combination valve contains a residual pressure valve located in the regulator inlet passage. It is bypassed during filling. This function is to retain a minimum positive pressure in

Shut-Off valve

The combination valve is provided with a shut-off valve to isolate the gas from the cylinder from the other valve functions.

Filling port

A separate filling port is provided for filling the gas cylinder. It includes a non-return valve (NRV). The NRV prevents the filling port from being pressurised in normal use. The presence of the NRV means special filling

Pressure gauge

A cylinder contents pressure gauge is provided. This can be active or non-active. Versions fitted with active cylinder contents gauge enable to read the cylinder contents when

Inlet stem

The product is fitted to the gas cylinder by a threaded inlet stem. Stem can be taper thread or parallel thread and of different size depending upon



Excess flow device (option)

Excess flow safety valve can be provided and is located in the valve stem. This provides extra safety in the unlikely event of the valve stem breaking. It has no effect on performance during normal service.

Cylinder valves

Combilite System



Technical Specifications

- Available for Medical Oxygen, Medical Air, N2O/O2 and other medical mixed gases
- ON/OFF high pressure isolation valve
- Long-life rotating or non-rotating seat mechanism in the ON/OFF valve
- ZYTEL seat material
- Inlet pressure up to 300 bar (4500 psi)
- Outlet pressure from 3,6 to 5,5 bar according to EN ISO 10524 – 3 (or per customer specification)
- Flow capacity 60 l/min nominal (at full cylinder pressure)
- Wide range of flow control discs (0 - 1 l/min, 0 - 5 l/min, 0 - 15 l/min, 0 - 25 l/min etc.)
- Flow settings: 3/10/12 steps (including ZERO position) 40 mm safety gauge, 180° indication range
- Weight 950 gram*
- Height 123 mm (measured from the cylinder neck)
- Inlet Stem - tapered or parallel threads (E17, E25, M18, per customer specification)

* Standard Combivalve (flow control unit 0 - 15 l/min, flow outlet, AFNOR quick coupling pressure outlet) without guard.
More informations, please contact GCE local corporation.

All technical data are given for information only and are subject to modifications by the manufacturer.



Optional Features

- Excess flow valve (limits the flow in case of accident and valve shearing)
- Nickel plated flow control unit surface
- Non active gauge, fully protected
- Safety burst disc
- Wide range of quick couplers according to customer's national standard
- Teflon taped cylinder connection, "Low torque" valve actuator, easy opening characteristic
- Electronic memory chip for easy traceability and cylinder control

Standard Features

- Cylinder valve and pressure regulator in one
- Brass construction
- Flow control unit
- Nickel plated body surface
- Good grip, easy operated hand-wheel
- Flow outlet ports (firtree, 360 degree swivel function)
- Active cylinder pressure gauge with colored safety- and refill zones
- Filling port with non-return valve
- Integrated pressure relief valve
- Individual, traceable serial number stamped into body
- Particle tube filter in front of pressure regulator
- Residual pressure valve (keeps 3 - 5 bar residual pressure in cylinder)

Filling adapter & Safety Guard

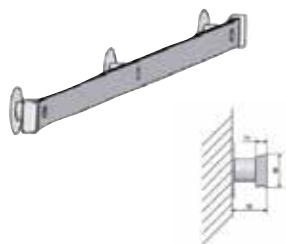
- White, or per customer specification
- Optional bed-hanger
- Optional moulded OEM label
- Drop tested according to EN ISO 11117
- 115 mm outside diameter
- Two-sided, non protruding handle
- Guard fits to the valve, not cylinder
- Designed for use on cylinders up to a max package weight of 24 kg

Maintenance and Repair

- GCE provides repair and 5 year service of the Combilite® System.

Accessories

UNI Rail Complete (30x10), Without Screws



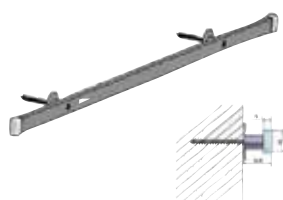
The Medirail is available in varying lengths and can be mounted using the appropriate brackets and screws which are included. Equipment can be fixed from the rail.

Art. Nr.	Description
325197665	1,0 meter
325197666	1,5 meter
325197667	2,0 meter
325197668	3,0 meter

Accessories

Art. Nr.	Description
180901001	End protection
182037404	Washer
329000223	Distance 20 mm

EU Rail Complete (25x10), With Screws

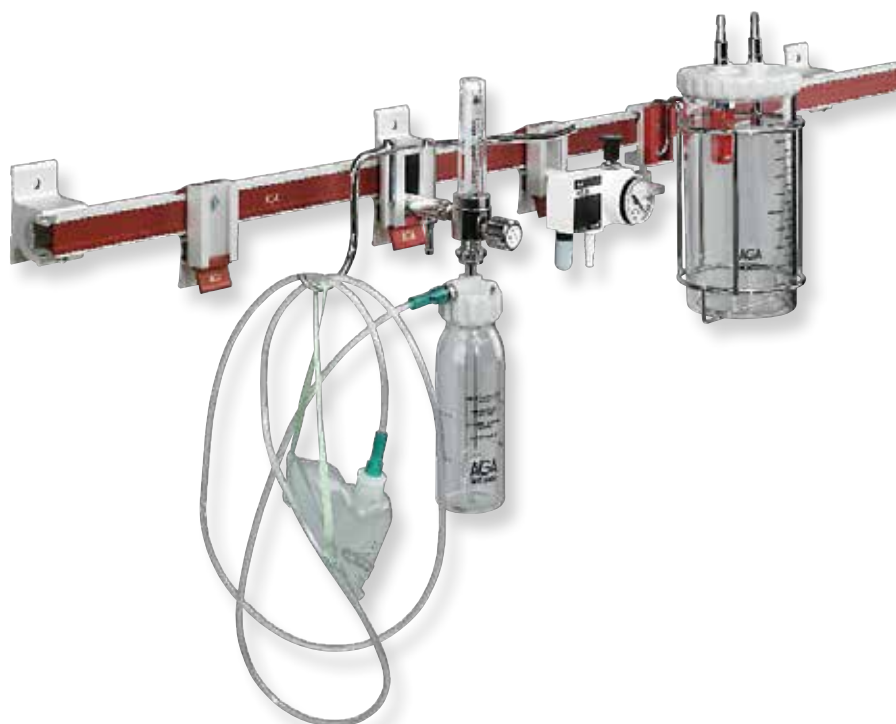


The Medirail is available in varying lengths and can be mounted using the appropriate brackets and screws which are included. Equipment can be fixed from the rail.

Art. Nr.	Description
325197656	1,0 meter
325197657	1,5 meter
325197658	2,0 meter
325197659	3,0 meter

Accessories

Art. Nr.	Description
325112959	Distance 20 mm
325112960	Washer D 40 mm
325112961	End protection



GCE More Products



R 12 IPPB Device
for respiration and aerosol therapy



Oxygen Concentrator

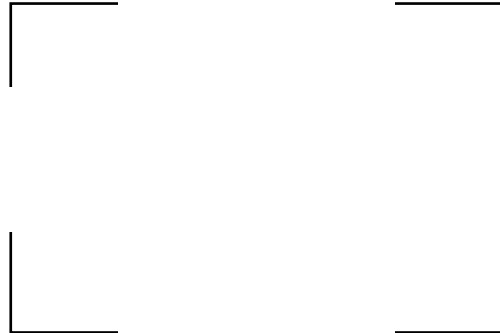


Ultrasonic Nebu-

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