

# Manifold Control System



Medical Gas Manifold Control System



# Lifeline® MCS - The Manifold You Need

For a safe and reliable supply of medical gases the Lifeline® MCS manifold control system is the product you need, offering:

- Very high flow rate
- Two stage regulation system to maintain a smooth and constant delivery pressure
- Inherently corrosion resistant design, no sacrificial protection
- Colour graphical display with clear information and status notification
- Ease of access for maintenance

## Safety

Continuity of supply is of paramount importance for medical gases, which is why the Lifeline® manifold includes features such as:

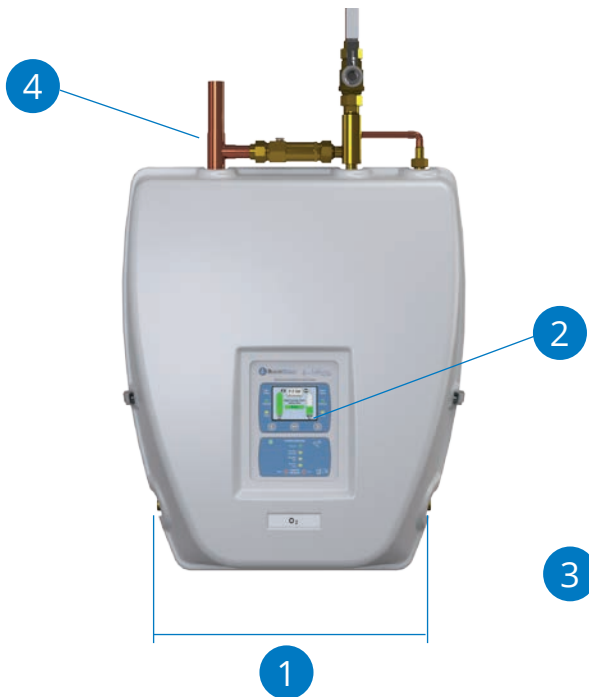
- Fail-safe solenoid valves in the event of power supply failure
- All major components are replaceable without interruption of supply
- Purposely designed halogen free medical first stage regulators
- High flow - medical gas supply in the most demanding circumstances
- Easy to read graphical display with additional analog back-up gauges in the event of power loss or failure
- Maintenance/ inspection indicator
- Electrical enclosure to reduce risk of electrical shock and reduce electromagnetic emission
- Compliance with EN 60601



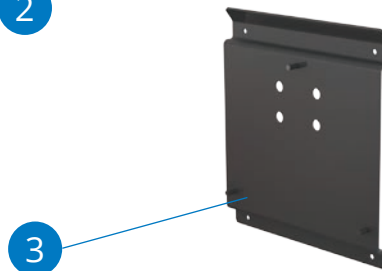
# High Reliability

The Lifeline® manifold incorporates first stage regulators specifically designed for the purpose of supplying medical gases, whereas many other manifolds utilise regulators primarily designed for use with gas torch welding or brazing sets.

Since the intermittent high flows apparent with medical gases can exert high strains on the internal components, the Lifeline® uses a regulator designed to cope with the rigorous demands of medical gas supply.

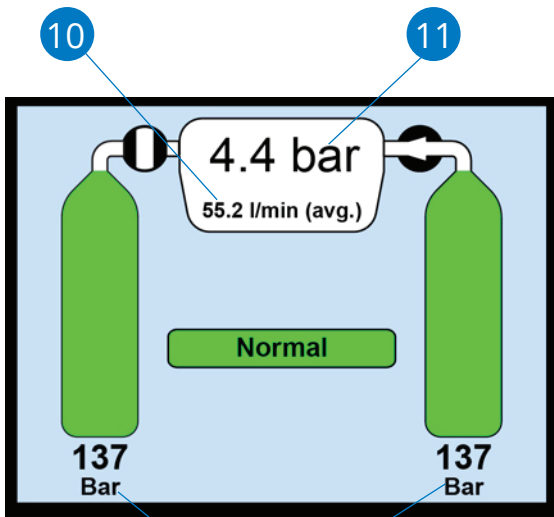


1. Compact design fits into any space
2. Colourful graphical display for easy reading
3. Wall bracket simplifies installation
4. Prepiped vent reduces installation time



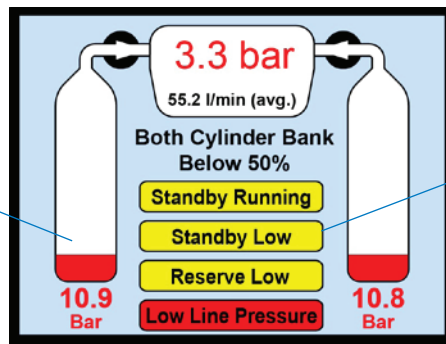
5. Graphical display with extended life time
6. LEDs indicating active bank and alarms (duplicate screen)
7. Power indicator
8. General service warning (every 40,000h/5 years) with in-time reminder that reduces risks





- 9. Digital pressure indication in both headers and line – full control
- 10. Pressure available bar or psi - no need for unit measure conversion
- 11. Average gas consumption (as a standard feature) – costs under control<sup>1</sup>
- 12. Set of alarms according to standards
- 13. Visualization of remaining gas volume in cylinders<sup>2</sup>

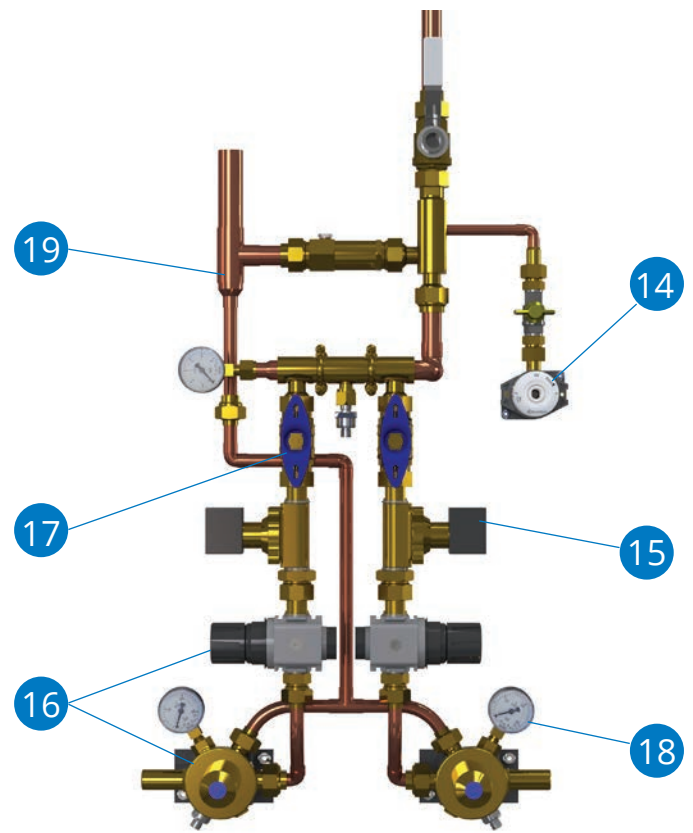
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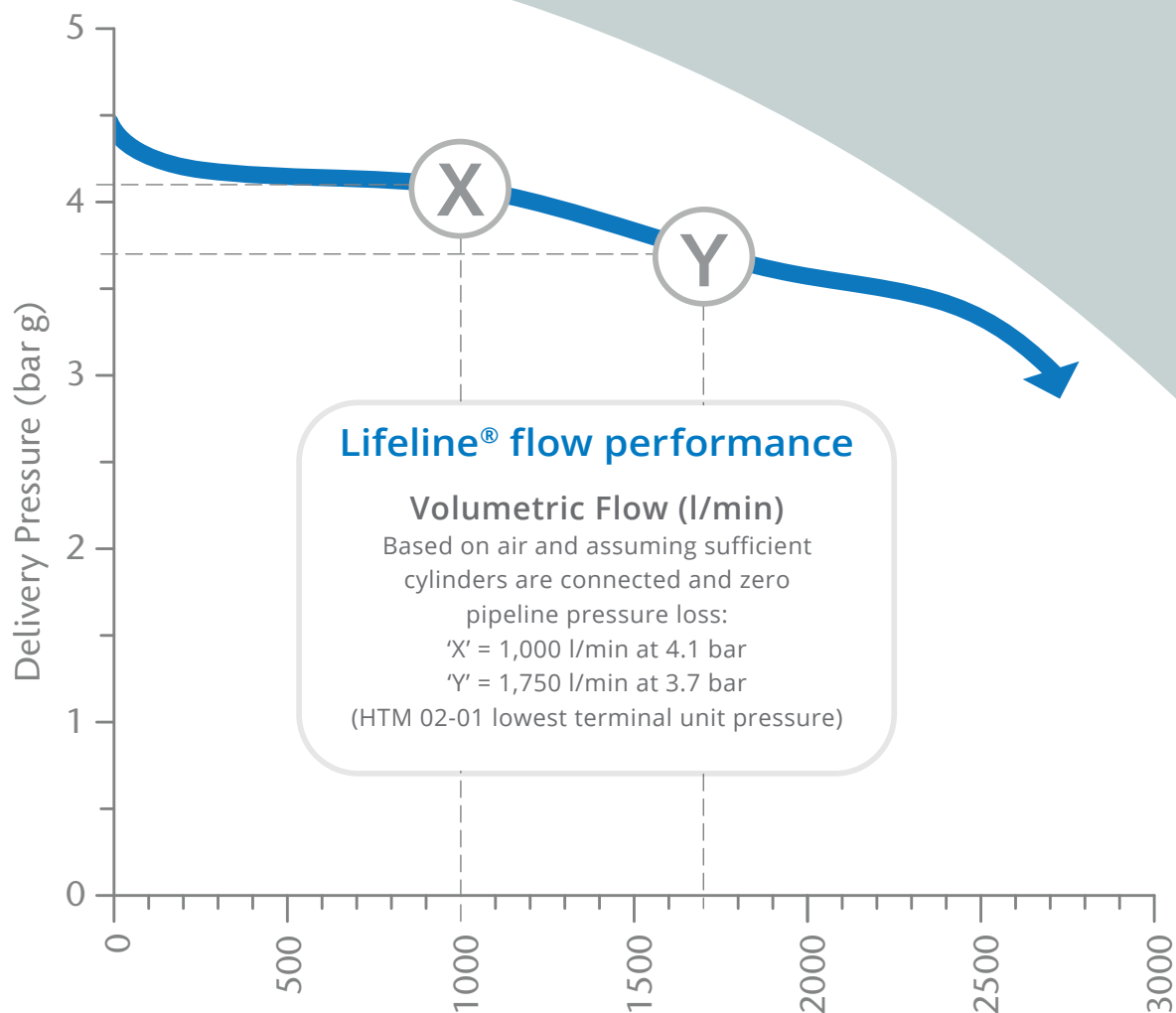
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- 14. Integrated test point reduces installation time
- 15. New robust solenoid valve
- 16. Two stage regulators allow pressure drop lower than 10% on a flow up to 1,750 l/min at 4 bar
- 17. Isolation valves to simplify maintenance
- 18. Backup cylinder and delivery pressure indicators
- 19. First and second stage prepiped PSV discharge



Note:

- 1. Applicable only for non- liquefied gases.
- 2. Average flow indication and remained gas volume provided only for non liquefied gases.



## High Flow

The generously sized regulators provide higher flows than most other medical manifold control panels. Unlike most other manifolds available, there are two totally separate stages of pressure regulation, which provide the following benefits:

- Smoother flow characteristics are achieved by splitting the pressure regulation stages
- Downstream components are not subjected to shock loading

## Manifold Applications

- Primary supply of medical gases
- Back up supply for medical or surgical air systems

### Gases:

- Oxygen
- Nitrous Oxide
- O<sub>2</sub>/N<sub>2</sub>O 50/50
- Air 4 bar, 7 bar or 11 bar
- Carbon Dioxide
- Nitrogen 7 bar or 11 bar

### Flow Capacity:

- 1,750 lpm at 4 bar
- 2,000 lpm at 7 or 11 bar

### Standards:

HTM02-01, HTM2022, C11, ISO7396-1

# Simple To Maintain

The carefully designed layout of the Lifeline® control panel allows unrestricted access to all the major serviceable components, without the need to disassemble any other joints. Ball valves are provided to enable regulator replacement without interrupting the flow of gas from the manifold.

Each component utilises flat face 'O' ring sealed joints, making swap out of components fast. These features make the Lifeline® manifold the simplest manifold control panel to use and maintain. The control panel cover can be quickly removed, providing unhindered access to all internal parts.



## Key Benefits at a Glance

- Corrosion resistant case for prolonged life
- Two stage pressure regulation for smooth and constant delivery pressure
- Halogen free first stage regulator for ultimate safety
- Flat faced 'O' ring sealed joints makes swapping out components quick and easy
- Light, removable front cover assembly for easy access
- Easily adjustable second stage regulator for easy on-site set up
- Piped exhaust assembly for relief valves for added protection
- Compact design
- Maintenance indicators
- Digital display for high flow
- Quick and easy to install
- Adjustable units of measure bar/psi

## Standard Options

Heater Kit (N <sub>2</sub> O & O <sub>2</sub> /N <sub>2</sub> O 50-50)	Protection against freezing of header rack and first stage regulator
High pressure bank valve kit	Enables complete closure of the full cylinder bank
Tailpipes	Cupro nickle to prevent work hardening to BSP bull nose, Pin indexed, CGA and other norms
Spare cylinder racks	Powder coated steel rack with cylinder fixing chain
Modular manifold assemblies	Including powder coated steel fixing rack, header assembly with non-return valve connections and cylinder fixing chain

# Emergency Reserve Manifold

Due to its unique two stage regulation design, the Emergency Reserve Manifold (ERM) is capable of delivering the same high flow rates as the Lifeline® manifold control system.

With patient first in mind, no halogenated polymers are used in the high pressure gas stream.

Not only is the ERM an ultra reliable product, it is also quick and easy to install by integrating the primary 2 x 1 manifold header.

We understand that space limitations are common in many manifold rooms, so we have managed to reduce the width of our 2 x 1 panel by 24%.

## Manifold Applications

- Back up supply for primary manifold control systems
- Back up supply for medical air plant systems (HTM2022)

### Gases:

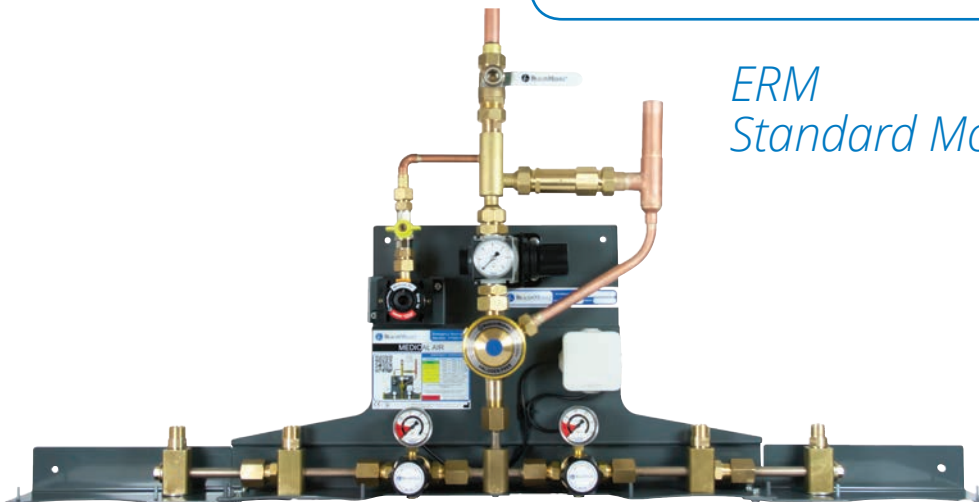
- Oxygen
- Nitrous Oxide
- O<sub>2</sub>/N<sub>2</sub>O 50/50
- Air 4 bar, 7 bar or 11 bar
- Carbon Dioxide
- Nitrogen 7 bar or 11 bar

### Flow Capacity:

- 1,700 lpm at 4 bar
- 2,000 lpm at 7 or 11 bar

### Standards:

HTM02-01, ISO7396-1



*ERM  
Standard Model*

## Standard Options

### Key Benefits at a Glance

- Same key components as Lifeline® MCS manifold for reduced number of on-site spare parts
- High and smooth flows due to two separate stages of pressure regulation
- Custom designed medical grade first stage regulator with no halogenated polymers
- Integrated 2 x 1 manifold header for reduced space, quick and easy installation
- Integrated Gem Shield test point

#### Cylinder extension kit



#### To increase cylinder capacity from 2 x 1 to 2 x 2\*



*image shows ERM including extension kit*

# Emergency Reserve Manifold ECO

BeaconMedaes offers you a simplified version of Emergence Reserve Manifold - ERM ECO - to serve small installations and clinics. To follow market requirements even better we have developed the ERM ECO with a dual stage regulator. The manifold also contains less serviceable components, without decreasing level of safety and functionality.

# Manifold Applications

- Back up supply for primary manifold in small hospitals / clinics

## Gases:

- Oxygen
- Nitrous Oxide
- O<sub>2</sub>/N<sub>2</sub>O 50/50
- Air 4 bar, 7 bar or 11 bar
- Carbon Dioxide
- Nitrogen 7 bar or 11 bar

## Flow Capacity:

- 200 lpm at 4 bar

## Standards:

HTM02-01, ISO7396-1

*ERM  
ECO Model*



# Product Features

Integrated test point  
GEM Shield  
terminal unit



Pressure gauge  
and alarm switch  
for each bank



# Key Benefits at a Glance

- Custom designed medical grade regulator with no halogenated polymers
- Integrated 2 x 1 manifold header for reduced space, quick and easy installation
- Integrated Gem Shield test point
- Pressure gauges to track pressure in each bank individually
- Standard pressure switch included to connect to alarm system (automatic manifold)



# Medical Semi-Automatic Manifold

The semi-automatic manifold is designed for use in medical or laboratory gas applications. Contact gauges connected to each cylinder bank regulator will provide alarm notification when the duty bank is empty. By engaging the simple change over system, the standby bank of cylinders can be brought on line for continuity of gas supply.

The semi-automatic manifold control system is simple to install, easy to use, utilises the same time served, and has the same medical grade components featured in the Lifeline® manifold and ERM manifold control products.

Users can select either the standard or full feature model. By choosing from a range of standard options, you can configure a panel in line with your own requirements.



*Full Feature Model*



*Standard Model*

## Manifold Applications:

- Primary manifold control system for private facilities, small clinics, etc., where local standards are applicable
- Back up supply for medical air plant systems (HTM2022)

### Gases:

- Oxygen
- Nitrous Oxide
- O<sub>2</sub>/N<sub>2</sub>O 50/50
- Air 4 bar, 7 bar or 11 bar
- Carbon Dioxide
- Nitrogen 7 bar or 11 bar

### Flow Capacity:

- 1,700 lpm at 4 bar
- 2,000 lpm at 7 or 11 bar

## Standard Options

Cover panel

Protection against freezing of header rack and first stage regulator

High pressure bank valve kit

Enables complete closure of the full cylinder bank

Pressure sensor

For high or low pressure alarm signal

Alarm termination box

For easy connection to medical gas alarm system

Exhaust assembly

To safely pipe away any relieved gases - recommended for indoor installation

# Medical Manual Manifold

The manual manifold is designed for use in medical or laboratory gas applications. Contact gauges connected to each cylinder bank regulator will provide alarm notification when the duty bank is empty. Changeover to the standby bank of cylinders is achieved by turning off the empty cylinders, and opening the standby cylinders for continuity of gas supply.

Alternatively a high pressure bank valve kit is available which enables the user to isolate one complete bank of cylinders from a single point.

As with the semi-automatic manifold control system it is simple to install, easy to use, utilises the same time served, and has the same medical grade components featured in the Lifeline® and ERM manifold control products.

*Standard Model*



*Full Feature Model*



## Key Benefits at a Glance

- Two stage pressure regulation for smooth and constant delivery pressure
- Halogen free first stage regulator for ultimate safety
- Flat faced 'O' ring sealed joints makes swapping out components quick and easy
- Easily adjustable second stage regulator for easy on site set up

# Pressure Reducing Sets

The BeaconMedæ's pressure reducing set is designed for use in medical applications, to reduce the output pressure of the surgical or combined air system to the required pipeline pressure.

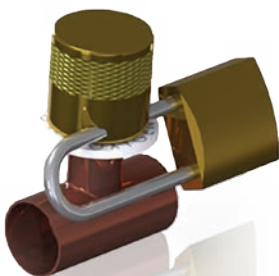
All components are fully duplexed allowing one side to be completely isolated for maintenance purposes, without interrupting the life supporting medical gas supply. The manifold control system is simple to install with four mounted holes situated in the powder coated steel back plate.

Models are available with different input and output pressures to suit the differing supply pressures required on-site.



- 11-7 bar inlet to 4 bar outlet
- 11 bar inlet to 8-7 bar outlet
- Flow rate from 1,200 - 5,000 lpm

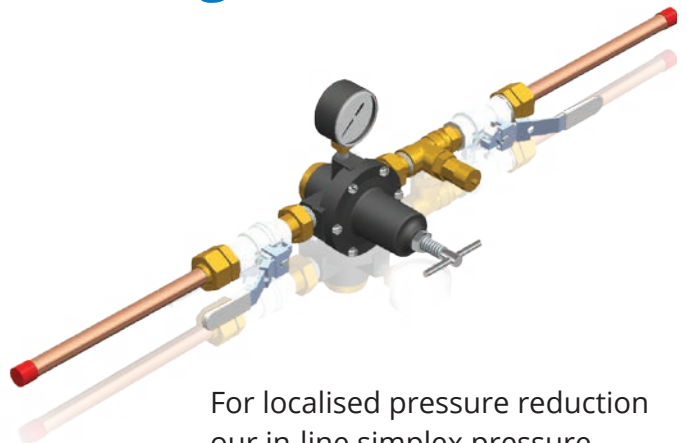
## Lockable Nist Tee Assemblies



HTM02-01 requires NIST connections to be included downstream of the duplex pressure reducing set to enable cylinders to be connected in the event of an emergency.

Our in-line, lockable NIST tee assemblies are available in all pipe sizes and can be positioned in the most convenient position on-site.

## In-line Simplex Pressure Reducing Unit



For localised pressure reduction our in-line simplex pressure reducing unit is available.



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*Life*  
is in the  
*details.®*