

# **Medical Gas Terminal Units**



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### **FXCFPTIONAL RELIABILITY**

The BeaconMedæs Gem® Shield terminal unit's exceptional reliability is a testament to its unique pedigree. This is the seventh generation, in a hierarchy encompassing the most successful British Standard medical gas terminal units ever. Now including antimicrobial additive for added patient safety, in additon to access holes for quick and easy maintenance.

BeaconMedæs have supplied more than 1.5 million terminal units, with an installed base covering all the continents. This latest tried and tested design comes after 40 years of designing and manufacturing terminal units, and comes with with a three year warranty.

You obviously need a reliable medical gas terminal unit, but that alone is not enough. You need a smooth action with minimal effort required to connect and disconnect gas probes. You need a terminal unit that is designed to give the lowest possible pressure drop - no compromises.

### ATTENTION TO DETAIL

The smooth, quiet action of the BeaconMedæs Gem® terminal unit is a result of the detailed attention paid by its designers. The high precision gas indexing diameters coupled with accurately calculated geometry in the engage and release mechanism ensure a strong, positive and secure connection, every time - giving you the confidence you need when you need it most.

Our unique and innovative check valve seating design has proven to outlast and out perform other designs, enabling us to provide a 36 month warranty as standard. In order to ensure every terminal unit is leak free, 100% of the first fix assemblies are subjected to a stringent pressure differential leak test.

The unique flush gas identification ring eliminates the dust trap associated with other designs and includes ink pad printed identification, rather than a glued label which often fail and fall off over time.



### **ACCESSORIES**

Jig plates	For quick and uniform installation
Stainless steel fascia plates	For improved aesthetics
Probes	Stainless steel probes for connecting downstream equipment
SOT & Flowmeters	A full range of equipment and accessories for connection to patients
Fascia plates	For wall mounted installations - now with antimicrobial protection

### **APPLICATIONS:**

- Wall mounted (horizontal and vertical stub pipe)
- Bedhead mounted (curved stub pipe)
- Modular/wall (OEM bedhead) mounted (horizontal, vertical or rear entry stub pipe)
- Pendant (boom, rigid, retractable)

#### **Gases:**

• Medical Air 4 bar,

Oxygen

• Surgical Air 7 bar

Oxygen

- . Caulaan Diamida
- Nitrous Oxide
- Carbon Dioxide
- O2/N2O 50/50
- Nitrogen

# **GEM 10 KEY BENEFITS AT A G**LANCE

- High precision gas indexing diameters
- Unique pedigree time served components
- Engineered break point to prevent pipework from rupturing during bed jacking
- Easy to connect and disconnect gas probes
- Unique check valve design
- · Easy to clean flush outer ring with pad printed gas ID
- Exceptional pressure drop performance
- Pressure differential leak testing on 100% of 1st fix assemblies



# **GEM SHIELD** ADDITIONAL BENEFITS

- Antimicrobial additive included in all user accessible parts to reduce cross infection
- Safety taggant for added security
- Access holes for quick and easy installation and maintenance



Illustration demonstrating installation or maintenance of Gem Shield versus Gem 10 medical gas terminal unit

### UNRIVALLED PERFORMANCE

In recent years, pressure drop in surgical air systems has become a major concern, because pendant systems in operating theatres inherently require long flexible hose assemblies with small bore NIST connections.

BeaconMedæs uses unique check valve designs within the ceiling connection point and terminal unit.

Test	BS EN ISO 9170- 1:2008 Requirement	BeaconMedæs Gem 10° Performance	Benefit
10,000 operation cycles	Pass	Pass	High Reliability
Δp @ 40 l/min, 320 kPa	15 kPa maximum	0.6 kPa	Higher Flows
Δp @ 200 l/min, 320 kPa	70 kPa maximum	14 kPa	Higher Flows
Δp @ 350 l/min, 560 kPa	70 kPa maximum	30 kPa	Higher Flows
Δp @ 25 l/min, 40 kPa abs.	15 kPa maximum	1.1 kPa	Higher Flows
Axial force test	500N minimum	over 1000N	Higher Strength
Connection force	100 N maximum	67N (600kPa) 90N 1200kPa)	Easier Operation
Disconnection force	20-110N	42N (320kPa)	Easier

20-110N

39N (640kPa)

Operation

Disconnection force

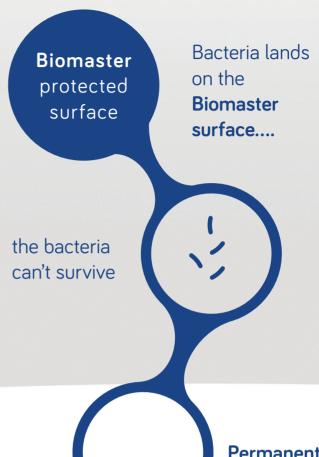
Gem® Terminal Unit Performance



### BIOMASTER ANTIMICROBIAL ADDITIVE

All user accessible parts incorporate an antimicrobial additive to minimise cross infection. Independent testing proves a reduction against E coli and MRSA bacteria. Since the additive is included in the mixture of the plastic, the inherent properties last the lifetime of the product.

Biomaster Antimicrobial additives use a Silver Ion based technology. This prevents the growth of harmful bacteria, lasts the life-time of the product and is safe and non toxic.



Biomaster binds to the cell wall disrupting growth



Permanent product protection



The Biomaster ions interfere with enzyme production stopping the cell producing energy

Biomaster interrupts the cell's DNA preventing replication



### **VERIMASTER SAFETY TAGGANT**

All user accessible parts incorporate a safety taggant which is mixed together with the antimicrobial additive during the masterbatch process. This enables a test device to be used to check we have truly added the mixture during manufacturing as part of our quality control procedure.

This also means we can demonstrate your product is truly protected. With the safety taggant check we can verify if it is a genuine BeaconMedæs product or not - for added security measures, and ultimate peace of mind.

#### **BeaconMedæs**

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