



**Boost** your Medical  
Air Performance  
and Reliability

**TMA Medical Air Supply System**







## A trusted leader

BeaconMedaes is a leading specialist in the design, supply and installation of piped medical gas distribution systems. We proudly play a vital role in hospitals around the globe in sustaining patients when they are at their most vulnerable.

Because life is in the details.



## The BeaconMedaes promise:

- Industry expertise
- Commitment to innovation
- Product quality
- Flexibility and customization
- Design that puts patients and healthcare professionals first
- Service excellence
- Best-in-class solutions

## TMA: All-In-One Medical Air Supply System

When it comes to medical air, there is no room for error or compromise. The quality and performance of your medical air supply system is of crucial importance, as is correct installation. BeaconMedaes' TMA Medical Air Supply System comes fully assembled as a final medical product for proper and fast commissioning, as well as optimal performance. All components, including duplex compressors, dryers, controls and instrumentation are integrated in one canopy to give you a true all-in-one solution.



All-in-one, fully integrated solution



Small footprint



Fast Installation and commissioning



Assembled and tested at the factory; shipped as a finished plant

## Features

- Medical central control with touchscreen
- Remote monitoring
- Duplex oil-injected screw compressors
- Duplex desiccant dryers with -46°C dew point and purge saver mode
- Independent dryers and compressor controllers
- Aftercooler temperature sensors (HTM)
- All sensors and instrumentation inside the box
- Failed-To-Go-On-Load switch (HTM)
- Back-up switch for central controller redundancy
- HTM Medical features

## Applications

- Surgical air 7 bar or 10 bar (HTM)
- Medical air 4 bar (HTM)
- Combined medical and surgical Air 7- and 10-bar system with external 4-bar pressure reduction set
- Instrument air (NFPA)
- Non-medical air

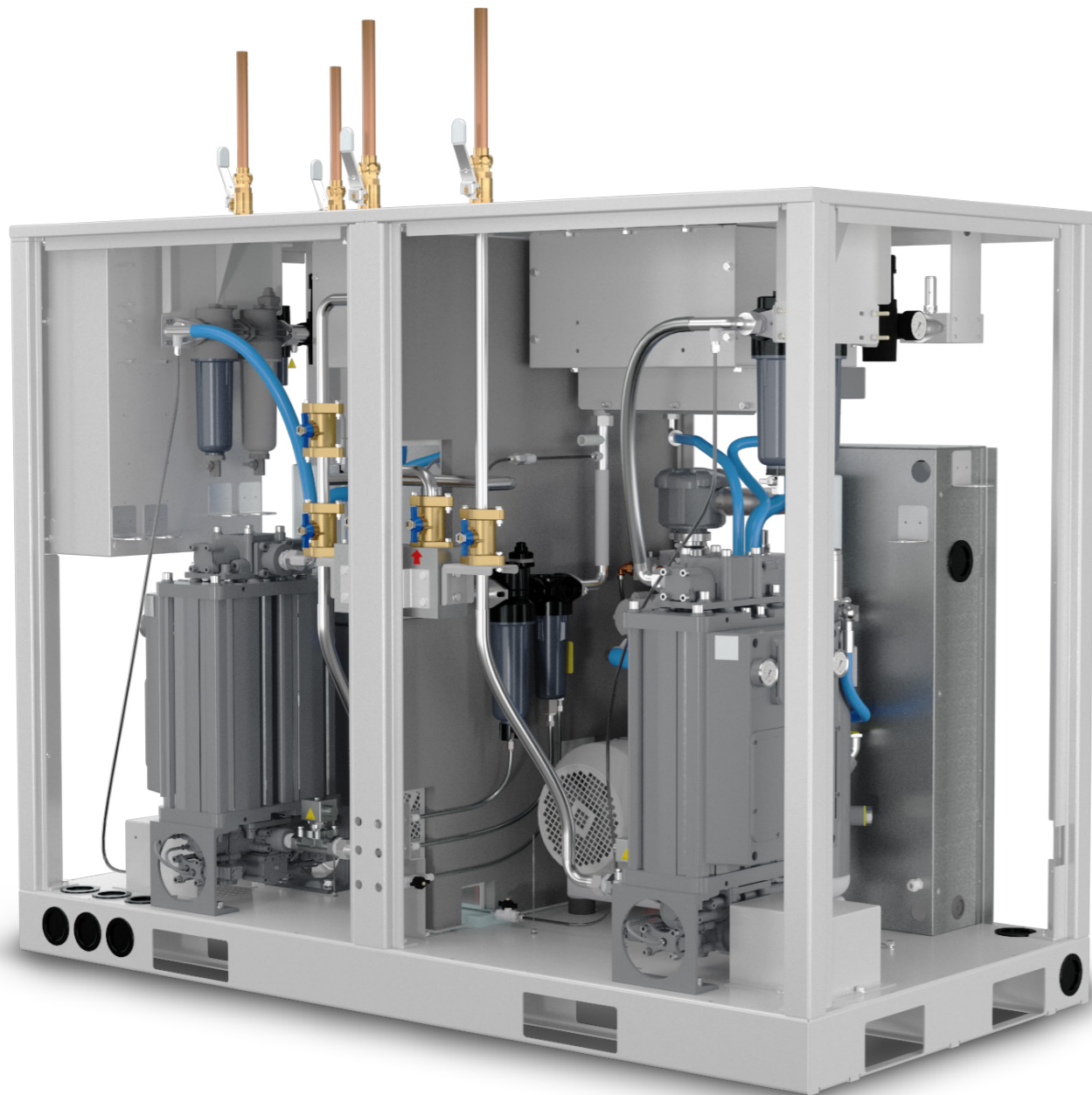
## Certifications and standards

- Complete unit is certified as an EU MDR Class IIa Medical Device
- HTM 02-01 Medical Gases Health Technical Memorandum
- ISO 7396-1:2016 Medical Gas Pipeline Systems
- Made at a facility certified to produce medical products according to ISO 13485
- NFPA99 (instrument air)
- European Pharmacopoeia. (Eu. Ph. 11th edition, 2023)
- EN 62304 software verification and validation
- EN 60601 electrical safety and electromagnetic compatibility



## Proven technology in one integrated package

BeaconMedaes' TMA Medical Air Supply System combines proven technology in a unique all-in-one package with a small footprint. Supplied as a complete medical device, the TMA ensures easy installation and factory-guaranteed performance.



### Safe, easy service

Compartments are isolated mechanically and electrically on each side to enable safe service interventions on one part while the other part keeps running.



### 100% redundancy

The TMA comes equipped with duplex compressors, dryers, coolers, controllers and other components to protect from single fault failure.



### Fully connected and factory-tested control system

The TMA control system is integrated, wired, connected and tested at the factory. This guarantees correct wiring and control set-up.



### Gas quality

To ensure gas quality, the TMA can be optionally equipped with CO and CO<sub>2</sub> or O<sub>2</sub> sensors.



### Low noise

The TMA's sound-attenuated enclosure protects critical internal components from dust and unauthorized intervention. It also reduces noise levels and allows efficient heat ducting.

## Surgical, instrument or non-medical air

The TMA comes as a duplex unit in one canopy. That means it can be used for surgical (HTM), instrument (NFPA), and non-medical air applications. Only the receiver must be piped on-site to complete the installation. A back-up manifold serves as a secondary supply source.



## Medical Air compliant with HTM02-01

HTM02-01 specifies that the continuity of a medical air supply should be provided by three sources: three compressors and one back-up manifold (with the provision of one compressor being unavailable during service interventions). In such configurations, the TMA medical air supply system will be complemented by an external GA VSD+ (variable speed drive) compressor. The GA VSD+ will then serve as the primary supply source. The TMA's two integrated compressors will be the secondary source and the back-up manifold will be the third. Using one external VSD compressor (as opposed to all three compressors being VSD) gives you maximum energy savings with a lower capital investment.



## Options & dimensions

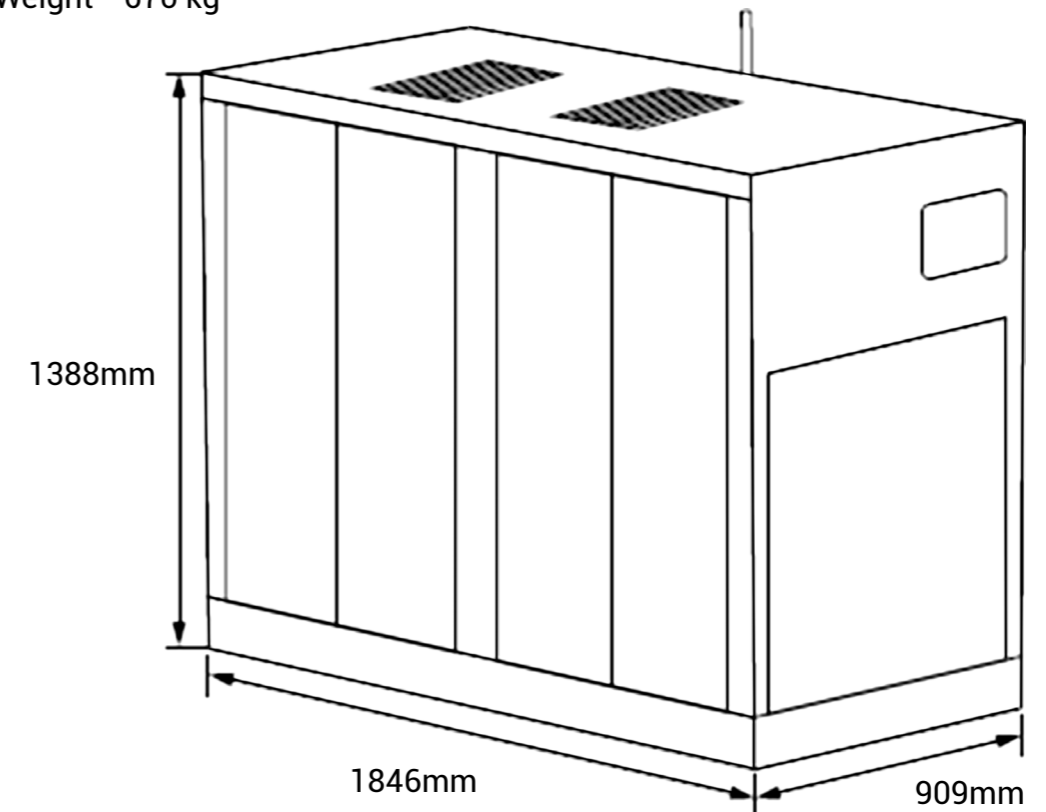


### Options

- Secondary 4 bar regulators for combined systems
- CO sensor: is used to alarm the facility, in case the level of CO exceed 5 ppm.

### Dimensions

Weight - 670 kg



# Specifications



## HTM02-01/ ISO7396-1 compliant Medical/Surgical Air systems with TMA7

Parameter	Combined Air		Surgical Air		Medical Air
Surgical to medical ratio	50% SA, 50% MA <sup>2</sup>	50% SA, 50% MA <sup>2</sup>	100% SA	100% SA	100% MA
Supply pressure (bar)	10	7	10	7	4
System Configuration	TMA7-13/10 2 x 500L vessels 2 x vessel kits <sup>1</sup> 1 x GA7VSD+	TMA7-10/7 2 x 1000L vessels 2 x vessel kits <sup>1</sup> 1 x GA7VSD+	TMA7-13/10 2 x 500L vessels 2 x vessel kits <sup>1</sup>	TMA7-10/7 2 x 1000L vessels 2 x vessel kits <sup>1</sup>	TMA7-10/4 2 x 1000L vessels 2 x vessel kits <sup>1</sup> 1 x GA7VSD+
System design flow for Surgical Air (l/min)	393	507	786	1014	-
System design flow for Medical Air (l/min)	393	507	-	-	1014
Total System flow (l/min)	786	1014	786	1014	1014

## HTM02-01/ ISO7396-1 compliant Medical/Surgical Air supply system with TMA11

Parameter	Combined Air		Surgical Air		Medical Air
Surgical to medical ratio	50% SA, 50% MA <sup>2</sup>	50% SA, 50% MA <sup>2</sup>	100% SA	100% SA	100% MA
Supply pressure (bar)	10	7	10	7	4
System Configuration	TMA11-13/10 2 x 1000L vessels 2 x vessel kits <sup>1</sup> 1 x GA11VSD+	TMA11-10/7 2 x 1000L vessels 2 x vessel kits <sup>1</sup> 1 x GA11VSD+	TMA11-13/10 2 x 1000L vessels 2 x vessel kits <sup>1</sup>	TMA11-10/7 2 x 1000L vessels 2 x vessel kits <sup>1</sup>	TMA11-10/4 2 x 1000L vessels 2 x vessel kits <sup>1</sup> 1 x GA11VSD+
System design flow for Surgical Air (l/min)	600	729	1200	1458	-
System design flow for Medical Air (l/min)	600	729	-	-	1458
Total System flow (l/min)	1200	1458	1200	1458	1458

<sup>1</sup> Accessory vessel kit for medical air receiver is completed with data plate, pressure safety valve, zero-loss electronic drain valve, pressure gauge (with isolation valve), copper inlet and outlet connection pipes (each with isolation valve).

<sup>2</sup> Split between surgical and medical air for a combined system is chosen as 50% to 50% for reference purposes. To calculate the design flow at different splits please refer to the calculation guide below and the HTM code.



Life is in the details.®

