

# Atlas Copco

Medical Gas Equipment



*Sustainable Productivity*

**Atlas Copco**

# Global solutions for sustainable productivity

Atlas Copco is a world leader in solutions that generate sustainable productivity in your applications. Based on more than 130 years of experience and know-how, our products and services for the medical sector range from complete air plants, breathing and surgical air units and vacuum pumps to advanced control systems and terminal units.

What sets Atlas Copco apart as a company? Above all, it is our conviction that our own success is directly linked to the success of our customers. This is why we always go the extra mile to provide the best possible know-how and technology to help our customers grow and succeed.

There is a unique way of achieving this goal – we simply call it The Atlas Copco Way. It is based on our company values: constant innovation and interaction with our customers, plus a commitment to the highest standards in safety, quality and efficiency. These values are the foundation that helps us achieve sustainable productivity for our customers – and for the environment.

Benefits of working with Atlas Copco:

- World-leading player in air/gas compression and purification
- More than 130 years of experience
- Presence in more than 170 countries
- Extensive global service network with highly trained personnel
- No compromises on component quality
- Complete range of solutions and services
- One designer, one supplier for all products



# Absolute reliability, certified purity

Whether you work in a hospital, a dental practice, a veterinary lab or a clinical work environment, maximum reliability is your main priority. To successfully perform clinical work and make sure your equipment functions effectively, you rely on ultra-clean air. Set to meet your specific demands and suit a variety of applications, Atlas Copco offers a full range of state-of-the-art solutions to produce pure medical, breathing and surgical air as well as vacuum.



## ■ Pure, clean air

Compressed air: your practice depends on it to safeguard your patient's health and protect your valuable equipment. To provide an environment that is non-conducive to bacterial growth and contamination, you need absolutely pure and dry air. By opting for Atlas Copco's medical solutions, you obtain ultra-dry and clean air. The ideal tool to assure the long term operation of any surgical and laboratory equipment.

## ■ Solid reliability

To keep you up and running at all times, a dependable flow of pure air is crucial. Continuous market anticipation, years of experience and technological innovation have made Atlas Copco what it is today: a leading global manufacturer of compressor solutions. Our medical solutions once more give proof of that, providing clean and dry air, delivered in a quiet and compact package.

## ■ Complete compliance

Today's medical arena is more tightly regulated than ever. Atlas Copco's medical air systems are pre-certified to simplify your certification process on installation. They surpass the requirements of the most demanding standards and regulations such as:

- Medical Device Directive MDD 93/42/EEC
- European pharmacopoeia
- EN ISO 7396-1
- ISO 14971
- Health Technical Memorandums HTM 02-01 and HTM 2022

Furthermore, they are designed and manufactured according to ISO 9001, ISO 14001 and the ISO 13485:2003 quality management system. With dedicated medical production facilities in 3 locations (Belgium, United Kingdom & United States), Atlas Copco is ideally positioned to offer solutions in line with differentiating legislations.



# Air plants: Pure medical air

The critical field of patient care requires ultra clean, purified, medical air delivered to operating theatres and hospital beds with absolute reliability. The medical air supply in a hospital is a vital life support service, maintaining respiration of the critically ill during mechanical ventilation.

## Unsurpassed purity

Built to exacting standards, Atlas Copco's air plant systems are engineered to provide certified medical air, even in situations where the air intake may contain high concentrations of ambient pollution. The multi-stage filtration system ensures patient safety in 'worst case', but real life pollution scenarios. With the assurance of worldwide aftersales and service, our air plant systems offer the complete solution for all critical medical air applications.

## Unparalleled efficiency

An Atlas Copco air plant system is packed with features to lower your total cost of ownership (life cycle cost) and save energy. Microprocessor controlled off-load running of compressors reduces the number of starts that compressors must make, reducing wear, increasing reliability and lowering power consumption. The 'zero loss' EWD condensate drains fitted to all air receivers, coupled with an extremely low pressure drop across the purification packages, further enhance the efficiency of the overall system.



## Tailor-made

Atlas Copco's air plant systems are composed of modular blocks (compressor, dryer and receiver), enabling you to select up to 8 compressors and match the volumetric medical air flow with the purification package of your choice.

## A wealth of technologies available

In addition, Atlas Copco offers a wide range of different technologies including oil-free systems to choose from and precisely meet your requirements:

### LFx MED (piston technology)

Fundamental to the design of the LFx MED range are their high-quality standard components: essential for superb performance and efficient, trouble-free operation. Supplied as quality air point-of-use packages, the LFx MED is set to power up your practice!



### GA MED (screw technology)

Atlas Copco's GA screw compressor range has led the market for over 20 years. With an endless process of continuous improvement, the oil-injected GA MED compressor brings you proven reliability and Atlas Copco's latest high efficiency compression element.



### SF MED (scroll technology)

Generating guaranteed 100% oil-free, ultra-dry air, Atlas Copco's SF range protects valuable surgical and laboratory equipment from premature failure due to the effects of moist air and the build-up of oil residue.



### Z MED (tooth technology)



Certified ISO 8573-1 CLASS 0 by the renowned TÜV institute, Atlas Copco's ZR/ZT compressors incorporate a range of advanced technologies to provide you with top-quality, 100% oil-free air. The unique rotary tooth element increases efficiency thanks to two-stage compression.



# MED & dMED:

## Precision in critical environments

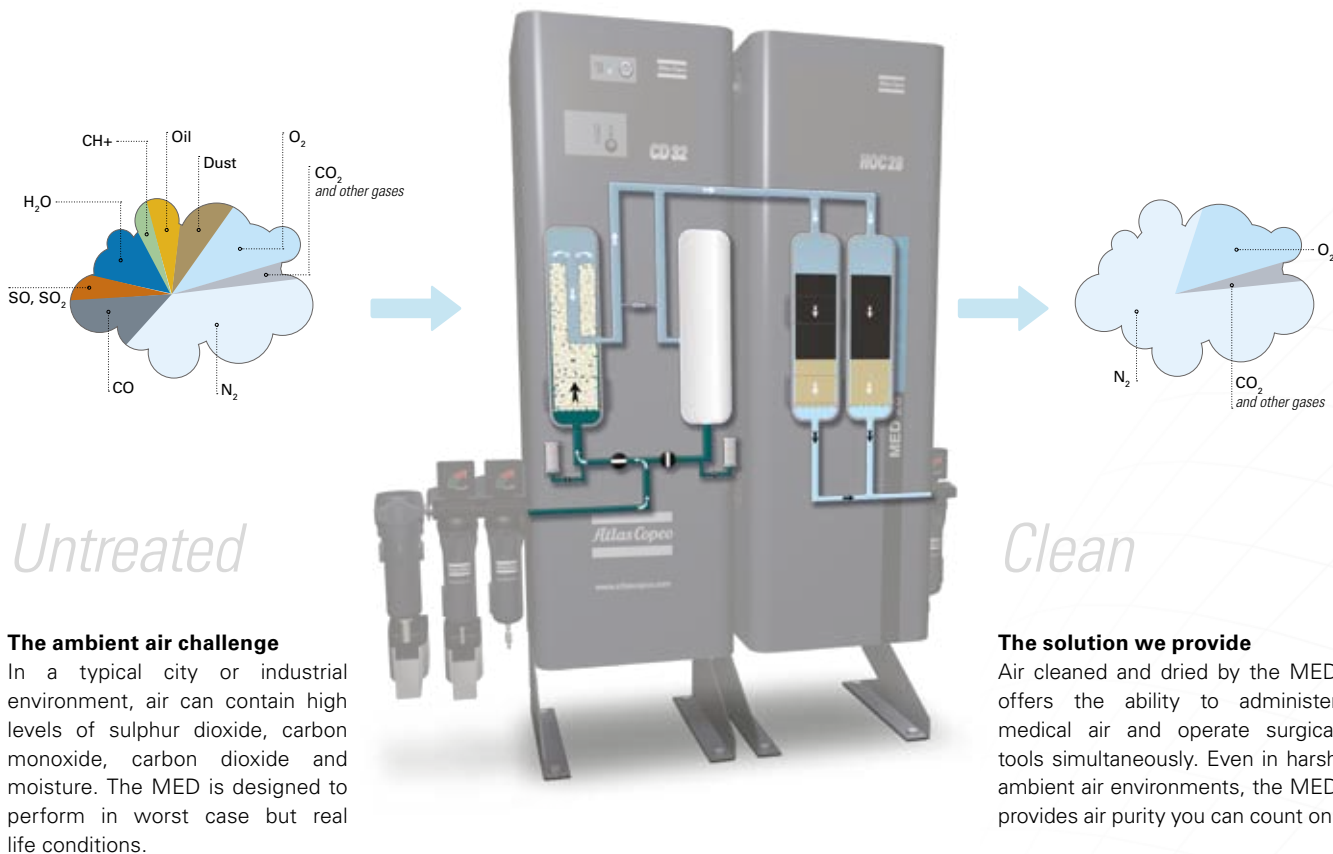
Built to exacting standards, the MED series is engineered to provide certified medical air even in areas with high ambient pollution. The MED ensures high air quality in 'worst case' but real life pollution scenarios. With the assurance of worldwide after-sales service from Atlas Copco, the MED series offers the complete solution for critical air environments.

### MED

#### Four steps to quality medical air

The MED's multi-stage filtration offers unparalleled air purity:

1. A WSD water separator and DD and PD coalescing filters remove free water and particles down to 0.01 micron and eliminate oil droplets down to 0.01 ppm.
2. A heatless desiccant dryer reduces moisture content to a pressure dew point of  $-40^{\circ}\text{C}/-40^{\circ}\text{F}$  – removing any risk of condensation, bacteria and mold growth.
3. A dual cleaning stage includes activated carbon to eliminate hydrocarbons (oil vapor, smells). A catalyst then converts CO into  $\text{CO}_2$ .
4. A particle PDp filter at the exit removes particles that may have been introduced in the desiccant stages down to 0.01 micron.



## ■ dMED

The dMED (dual MED) is a duplexed purification package for converting a compressed air source into breathing quality air. There are also simplex versions available for surgical air supply for driving pneumatically actuated tools in operating theatres. The dMED purification package is independently certified to provide medicinal air in compliance with the European Pharmacopoeia.

### Unsurpassed purity

The dMED has 7 stages of active purification:

1. Water separator - liquid water
2. Bulk aerosol filter - oil and water
3. Fine coalescing filter - oil and water
4. Desiccant dryer - water and CO<sub>2</sub>
5. Activated carbon - gaseous impurities
6. Catalyst - CO oxidation
7. Bacteria filter - bacteria/fine particles



# mVAC:

## A reliable source of medical vacuum

Atlas Copco's mVAC systems provide a highly reliable medical vacuum (suction) for a variety of applications, mainly in operating theaters and intensive care, emergency and respiratory units. mVAC systems consist of 2 to 6 air-cooled, oil-lubricated rotary vane type vacuum pumps and a central controller with an intelligent graphical user interface. The pumps can work independently to satisfy the required vacuum flow.

### Ultra-reliable

A reliable source of medical vacuum is critical to patient safety. The carbon composite material of Atlas Copco's mVAC pumps will not break down or wear out like laminated blades. And if the central controller should fail, every pump still has its own controller. Every mVAC system is subject to comprehensive Quality Assurance controls, is fully tested prior to dispatch and therefore ensures there will not be service interruptions even in extreme circumstances.

### Highly connectable

Up to six vacuum pumps can be connected in one mVAC system to ensure that even a large hospital always has a reliable vacuum to meet all its needs. Further, using AIRConnect™ Visualization you can connect to extensive monitoring and status information to get the most out of your mVAC system.

### Energy-efficient

At Atlas Copco we always strive to provide the most energy-efficient solutions. For the mVAC we have opted for a multi-pump arrangement to better match the flow demand. In this arrangement, the advanced Elektronikon® Graphic controller maximizes energy efficiency by controlling the individual vacuum pumps and regulating the overall vacuum. Even wear is ensured at all times.





## ES-VAC central controller

Developed specifically for medical vacuum applications, the ES-VAC central controller is an intelligent microprocessor-based control system dedicated to controlling up to six vacuum pumps in an mVAC system. It is equipped with the 5.7-inch high-definition color display Elektronikon® Graphic+ module.



## Pump controller

Each individual pump is equipped with a standard Elektronikon® controller that is linked to the advanced ES-VAC central controller.



## Tank-mounted variant

Tank-mounted mVACs are complete stand-alone assemblies with all components and filters mounted on a single horizontal vacuum vessel. This configuration provides a compact, low-footprint unit specifically designed for ease of installation.

# A step ahead in monitoring & controls



Get the most out of your medical air system with our next-generation Elektronikon® control and monitoring system and AIRConnect™ Visualization and Notification package. Elektronikon® regulates system pressure to push energy efficiency to new levels. AIRConnect™ gives you immediate access to valuable information such as system status, alarms, trends and historical data. Controlling and monitoring your system has never been easier.



## Real-time monitoring on your desktop

Simple and easy to install, the AIRConnect™ monitoring device collects data from your medical air system. Through a website integrated within the Elektronikon® module, all data is visualized in real time, offering you immediate clarification. As these real-time visualization pages are accessed through the hospital's LAN, total data security is assured.



## Increased clarity

AIRConnect™ provides a host of functions to increase system transparency:

- Logging and trending for an accurate performance status of your system.
- Desktop event notification to avoid constant status checking.
- E-mail and SMS event notification for additional convenience.



# A wealth of other medical gas products

BeaconMedaes is part of the Atlas Copco Group and the world's leading supplier of medical gas equipment, like medical air plants, vacuum plants, Waste Anaesthetic Gas Disposal Systems, manifolds and pipeline components. BeaconMedaes' team of dedicated engineers has years of professional experience, designing the most advanced products in the market.

## AGS: Anaesthetic Gas Scavenging

The Anaesthetic Gas Scavenging system is an active system which removes anaesthetic gas mixtures from operating rooms and any other areas fitted with nitrous oxide terminal units.



## Manifolds

Continuity of supply is of paramount importance for medical gases. BeaconMedaes manifolds incorporate 1st stage regulators specifically designed to cope with the rigorous demands of medical gas supply.



## Medical gas outlets

Whether your medical gas outlets decision will be made to match existing or you are free to choose your outlets based on technology and up-to-date features, BeaconMedaes is your source for the highest quality product measured in durability, reliability, and cost-effectiveness available anywhere.



## Patient environment products

BeaconMedaes Bedhead Trunking provides an attractive and practical way to place required services close to the patient. According to the specific needs of your location, these units provide outlets and connections to e.g. medical gas and lighting.



## Monitoring equipment

BeaconMedaes offers you a variety of alarms to allow you to choose a system which best matches your requirements for technology, communication, size and features.





### **Driven by innovation**

With more than 135 years of innovation and experience, Atlas Copco will deliver the products and services to help maximize your company's efficiency and productivity. As an industry leader, we are dedicated to offering high air quality at the lowest possible cost of ownership. Through continuous innovation, we strive to safeguard your bottom line and bring you peace of mind.



### **Building on interaction**

As part of our long-term relationship with our customers, we have accumulated extensive knowledge of a wide diversity of processes, needs and objectives. This gives us the flexibility to adapt and efficiently produce customized compressed air solutions that meet and exceed your expectations.



### **A committed business partner**

Our commitment to you does not simply end when your Atlas Copco products have been delivered and installed. We have an extensive range of aftermarket services to offer you continued support, whenever you need it. With a presence in over 170 countries, we can deliver high-quality customer service anytime, anywhere. Our highly skilled technicians are available 24/7 to answer any queries you may have. And all of this is backed by an efficient logistics organization, ensuring fast delivery of genuine spare parts when you need them. With Atlas Copco you can rest assured that your superior productivity will always be our first concern!

