

Scroll Medical Air Systems



BEACONMEDÆS®



Scroll Medical Air

The next generation

Built as the result of decades of experience in medical air design and manufacturing, BeaconMedaes offers the next generation Scroll Medical Air Package.

Design enhancements improve overall system efficiency and serviceability, coupled with the state of the art TotalAlert Embedded control system, this next generation Scroll medical air package is in a class of its own.

- *Designed to ISO 13485 standards and procedures*
- *Redesigned Lifeline dryer system for guaranteed dew point, minimal leak points, and improved serviceability*
- *New fittings and connectors to reduce potential leak points and conserve energy.*
- *Single point connections for intake, outflow, electrical and drainage.*
- *Touchscreen controls for system operation, alarms and warnings, service screens and event logs*
- *Embedded web server, remote monitoring and e-mail/pager alerts*
- *Ethernet connectivity for simple installation and TotalAlert networking*

Scroll Compressor

- *Minimal moving parts ensure a long operating life with minimum number of service interventions.*
- *With no need for oil lubrication in the compression chamber, you are guaranteed high-quality, oil-free air.*
- *The scroll elements are belt-driven, eliminating the need for a gearbox. Oil-free in every way.*

Suction opening

Suction chamber

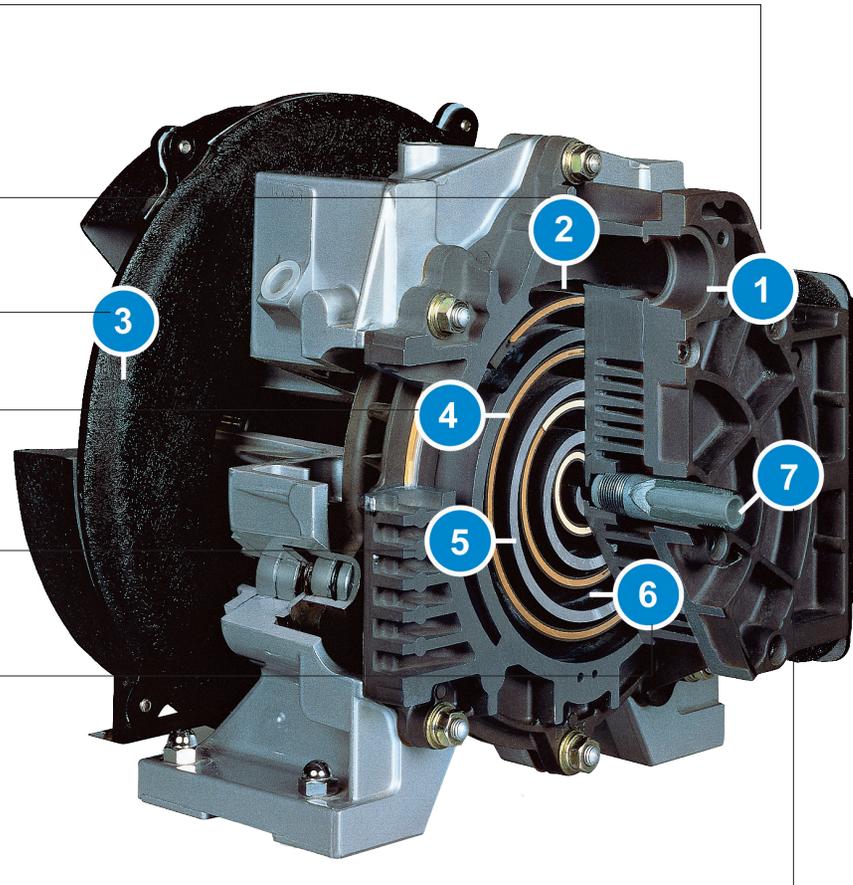
Cooling fan

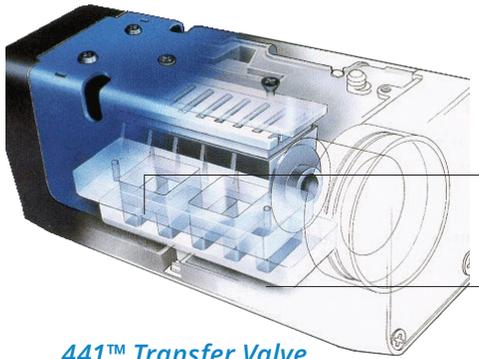
Fixed scroll

Orbiting scroll

Compression chamber

Delivery opening

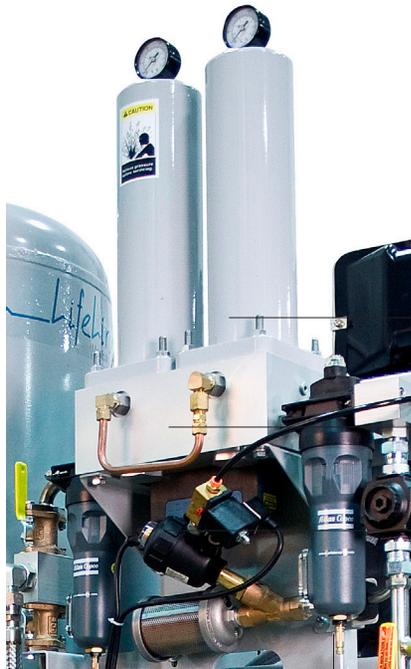




Dynamic
Ceramic
Plate

Static
Ceramic Plate

441™ Transfer Valve



Easy tower
disassembly
for
serviceability

Anodized
aluminum
base block

441 tower
transfer
valve

Inlet and
outlet
filtration

Clean, Dry Medical Air

The LifeLine medical air dryer delivers clean, dry medical air all the time. The unique aftercooler design ensures effective dryer operation even under heavy duty conditions, guaranteeing dew point performance.

High efficiency coalescing filters remove particles and liquids from the air stream to protect the dryers and to protect your medical air delivery. The repressurization cycle in the dryer add an additional safeguard against desiccant dusting and valve wear.

Dryer Efficiency – Dew Point Purge

The LifeLine heatless desiccant dryers utilize dew point dependent purge control to guarantee the lowest possible energy losses for desiccant regeneration while delivering a totally stable and reliable dew point. Purge air is minimized with tower switching based on dew point readings, so when the medical air demand is low, so is your energy consumption.

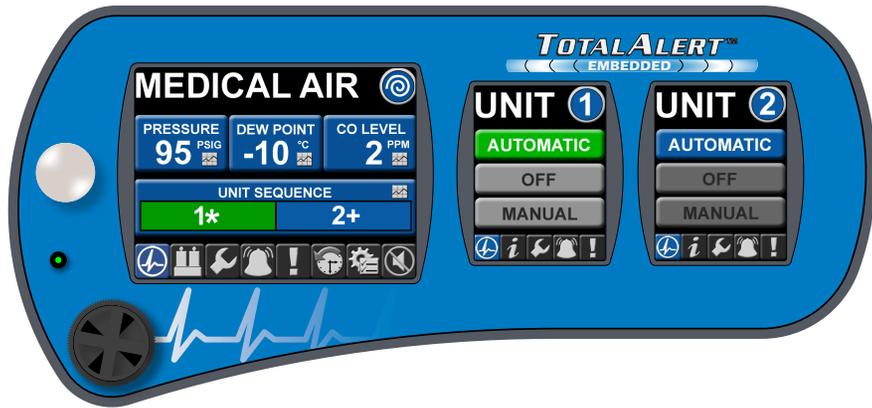
The drying towers are sized specifically for peak calculated demand in medical air applications and capable of producing a -10 pressure dew point. Unlike industrial dryers applied to medical air applications, the LifeLine dryers don't waste energy, footprint, or desiccant to achieve unnecessarily low dew points. With smaller towers, less purge air is required to regenerate the drying towers, saving you additional energy dollars.

Premium Components

The 441 transfer valve remains the heart of the LifeLine dryer. Inside the valve are two sliding ceramic plates that form a nearly perfect, almost indestructible seal. As these ceramic plates slide during each desiccant tower changeover, they wipe themselves clean of any particulates that typically destroy ordinary valve designs. The result is a maintenance free valve with extraordinary reliability. The tight seal eliminates costly loss of air that is common in other valve designs.

Simplicity

Designed for efficiency in the medical air system, the LifeLine medical air dryer's simple design begins with a machined, anodized aluminum base block, bringing leak-free and low pressure drop to the drying process, saving you on compressor power. Flanged fittings on the major connections ensure even fewer potential leak points, avoiding wasteful air losses.



Touchscreen Functionality

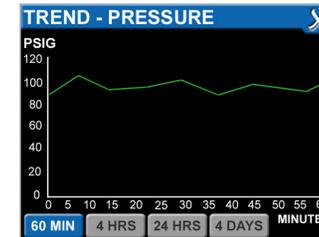
LifeLine Medical Air systems feature high-detail touchscreen controls. All systems incorporate a large “system” screen with additional “unit” screens for each pump/motor combination. Easy-to-read color graphics and icons make navigation a breeze and portray the system’s vital information.

- Motion sensor activates touchscreens, preserving the screen life
- Self-diagnostic alerts to inform you of potential system problems before becoming alarm/shutdown conditions

TotalAlert Embedded

The TotalAlert Embedded controls enable you to network your Scroll system with your TotalAlert alarm panels through your facility's Ethernet. By simply connecting the control panel to an Ethernet hub, you can monitor the system remotely from any computer on the facility's network. No additional wiring, no additional software - all inclusive out of the gate.

- Text/e-mail alerts and alarms notify the right people immediately
- Ethernet communication compatible with TotalAlert alarm systems



Trend screens for historical analysis of problems or potential problems.

| SERVICE ITEM | DUE IN |
|------------------------|------------|
| CHECK BELT TENSION | 26 DAYS |
| 15 HP UNIT BASIC KIT | -5 DAYS |
| 15 HP UNIT EXT KIT | 933 DAYS |
| GREASE PUMP BEARINGS | 4225 HOURS |
| REPLACE PUMP TIP SEALS | 9225 HOURS |

Service screens with count-down timers and alerts for upcoming maintenance items.

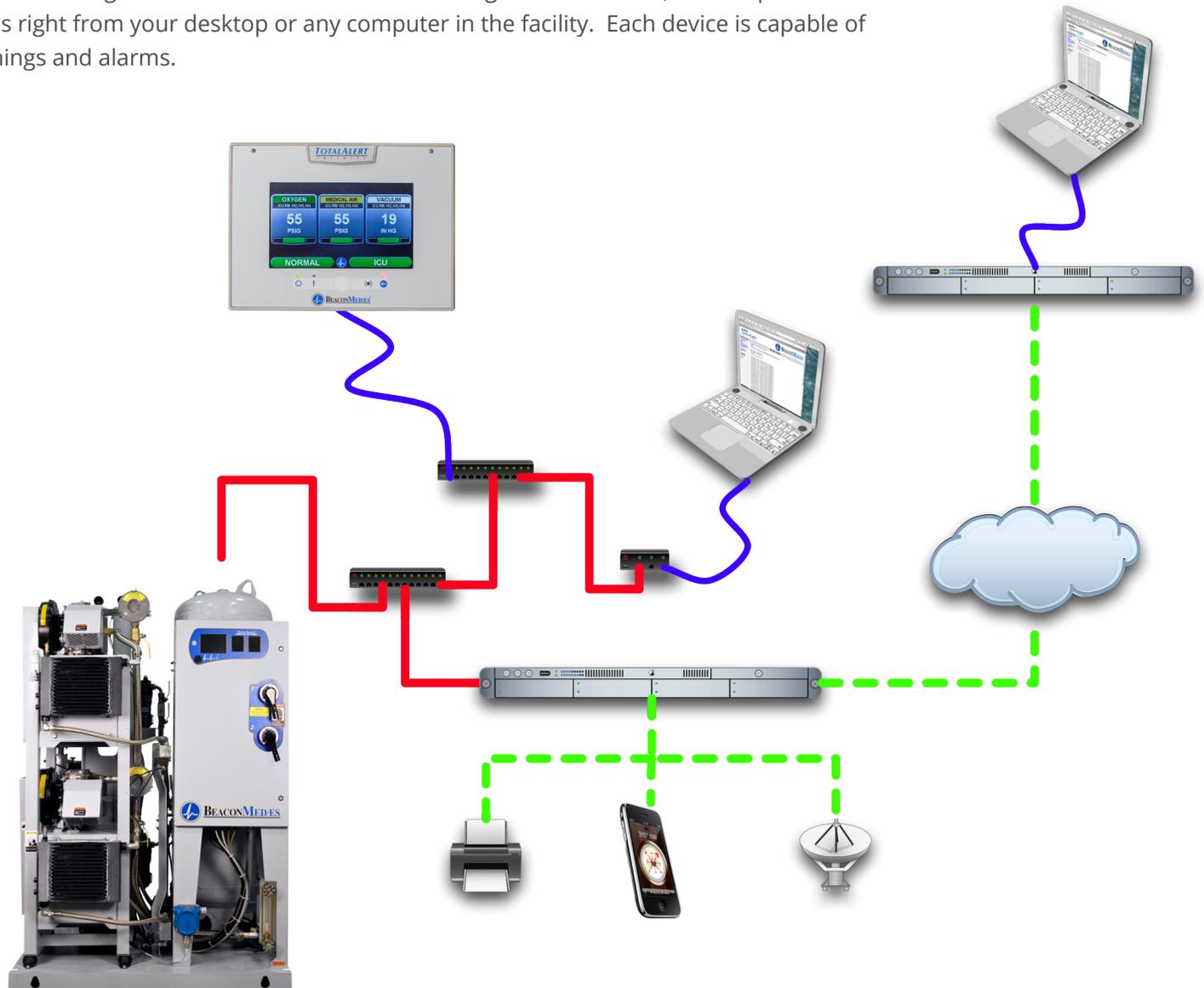
| DATE/TIME | EVENT |
|---------------------|---------------------------------------|
| 2009-08-26 04:40 PM | POWER RESET |
| 2009-08-22 11:03 AM | ALARM - UNIT 1 - RESET |
| 2009-08-22 10:59 AM | ALARM - UNIT 1 - HIGH AIR TEMPERATURE |
| 2009-08-16 02:24 PM | WARNING - SYSTEM - RESET |
| 2009-08-16 02:19 PM | WARNING - SYSTEM - HIGH DEW POINT |

Download event logs for alarm and service history.

TotalAlert Embedded Network

The TotalAlert Embedded network puts all of the information from your source equipment and alarms at your fingertips. Each unit comes fully equipped with an embedded web server - all you have to do is plug it into the facility's Ethernet and pull up the unique web address on any web browser on the network.

All devices communicate with each other through the Ethernet. Access the event logs of each device, see the pertinent information and statistics, view trends right from your desktop or any computer in the facility. Each device is capable of sending text/e-mail alerts for all warnings and alarms.



Reliability



Aftercooler Design

The Aftercoolers have separate cooling fans from those used for cooling the compressors. Individual fans ensure temperatures to the dryer of 15 degrees above ambient. Another insurance that the dryers will operate as designed, providing low dew point medical air.



Fittings and Connections

Anodized aluminum blocks and flanged fittings are utilized throughout the air stream design. Flanged and O-ring type connections make servicing the system a snap and prevent costly leaks in the air stream.



Zero Loss Electronic Drain

The Zero Loss Electronic drain valve ensures that your drains are fully cleared without wasting any of the air, adding to the overall cost-efficiency of the Scroll Medical Air System.

Maintenance Made Simple

Scroll Towers

While minimizing footprint, the tower design allows ease of access to all sides of the compressor, motor, belts, and aftercoolers. Belt adjustments are easy to make. Greasing bearings and tip seal changes are much more efficient and can be performed on site.



Dryer Towers

Desiccant towers are easy to reach and simple to remove for service. Inlet and outlet filter cartridges are easily reachable and removable without obstructions. Basic servicing does not require extra steps or items to remove.



TAE Control Panel

The TotalAlert Embedded (TAE) control panel features an intrinsically safe 24v within the panel. Service personnel are at less risk while performing maintenance tasks with the control panel. With the edition of TAE control boards, there's even less wiring in the control panel.



Ease of Installation



Electrical Connections

The control panel comes pre-drilled to make the electrical connections as safe and quick as possible. Connections for main power, alarm contacts, and Ethernet are easily accessible. No metal shavings from hole drilling to damage the system.



Disassembly of System

All Scroll systems are designed to fit through standard doorways. The larger Scroll systems can quickly be disassembled for transport. Reassembly requires few steps with mistake-free reconnections ensuring your system is wired exactly as it was intended.



Inlet/Outlet Connections

System connections are located in easy-to-pipe configurations. Inlet piping contains flex connectors as required by code, so no extra parts are required during installation. Connections are structurally supported so that potential weight damage to the piping is eliminated.

Space Saving Configurations

BeaconMedæ's offers the Scroll in a variety of formats designed for ease of installation, maintenance, and above all, to save space over most other compressor types and configurations.

System Start Up

For every Scroll installation, an authorized BeaconMedæ's service technician provides the system start-up. With critical functions relying on the medical air system, BeaconMedæ's ensures the system's proper installation and functioning during start up.

- *Proper system operation is assured*
- *Time and money savings if problems occur at start up*
- *Elimination of potential warranty issues in the future*

Preventive Maintenance

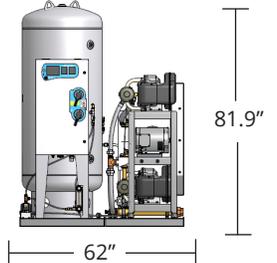
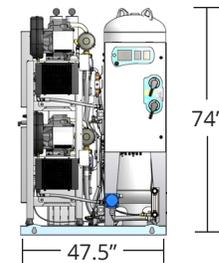
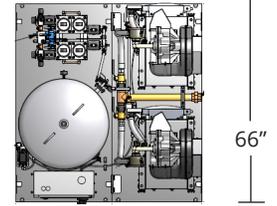
The efficient operation and service friendly design of the Scroll Medical Air Systems keep maintenance interventions to a minimum in both frequency and time. Effective service access combined with extended service intervals reduces maintenance downtime and compressor availability

- *Low level of consumable parts*
- *Direct access to all service points*
- *Service warning function available via the TotalAlert Embedded controller*
- *BeaconMedæ's Planned Maintenance Program available*



10 - 15 HP Duplex

2.0 - 7.5 HP Duplex



10 - 15 HP Triplex - Quad (Quad shown)

