



**LifeLine<sup>®</sup> Oil-Free Scroll Medical Air  
Single Point Connection (SPC) Base Mount  
Duplex System (10 Hp / 7.5 KW) with Basic Controls**

**SPECIFICATION**

**Single Point Connection (SPC) System Design**

The LifeLine<sup>®</sup> Oil-Less Scroll Medical air package is fully compliant with NFPA 99 and features a common base with single point connections for electrical, intake air, discharge air, and condensate drains. Designed and manufactured with ISO 13485 processes, each system is completely tested before shipment and includes:

- Two compressor towers, each with two oil-free scroll compressors and one motor
- Duplex desiccant drying system with purge control
- Integral pre-wired control panel
- Corrosion resistant vertical air receiver

**Compressor Module**

The compressors are continuous duty rated scroll type, single stage and air-cooled. The compressors have one fixed and one orbiting scroll sealed with PTFE tip seals.

- Field replaceable tip seals
- Dust and contamination protection from two part face seal
- Orbiting bearing and pin crank bearings are grease filled
- Heat dissipation maximized by an integral cooling fan
- V-belt driven compressor protected by totally enclosed beltguard
- Fully adjustable motor mounting base to achieve belt tensioning

**Compressor Motor**

The motor is NEMA rated, open dripproof and operates at 2930 RPM with 1.15 service factor suitable for 380V electrical service.

**Compressor Assembly**

The piped intake manifold includes one inline air filter and isolation valve per compressor and a high inlet vacuum switch to protect the compressors. The compressor discharge assembly includes:

- Integral air-cooled aftercooler with a maximum approach temperature of 15° F (9° C) above ambient and integrated drain trap with automatic solenoid drain valve
- Discharge lines include heat-shielded flex connector, safety relief valve, isolation valve and check valve
- Integral valve per compressor provides load-less starting and rapid air evacuation at shutdown

**Air Receiver**

Corrosion resistant vertical air receiver rated for minimum 150 PSIG design pressure.

The air receiver assembly includes:

- Zero loss electronic drain valve, liquid level gauge glass, safety relief valve, and manual drain valve
- Piped 3-valve bypass assembly with flange-fitted valves
- Pressure gauge

**Isolation System**

Four-point heavy duty isolation system for a minimum 95% isolation efficiency fully isolates the compressor / motor tower from the system.

**Dryer/Filter/Regulator System**

Each desiccant dryer is sized for peak calculated demand and produces a 10° F (-12° C) pressure dew point. Each dryer operates from a demand based purge saving control system featuring repressurization cycles. The dryer assembly includes the following mounted and piped:

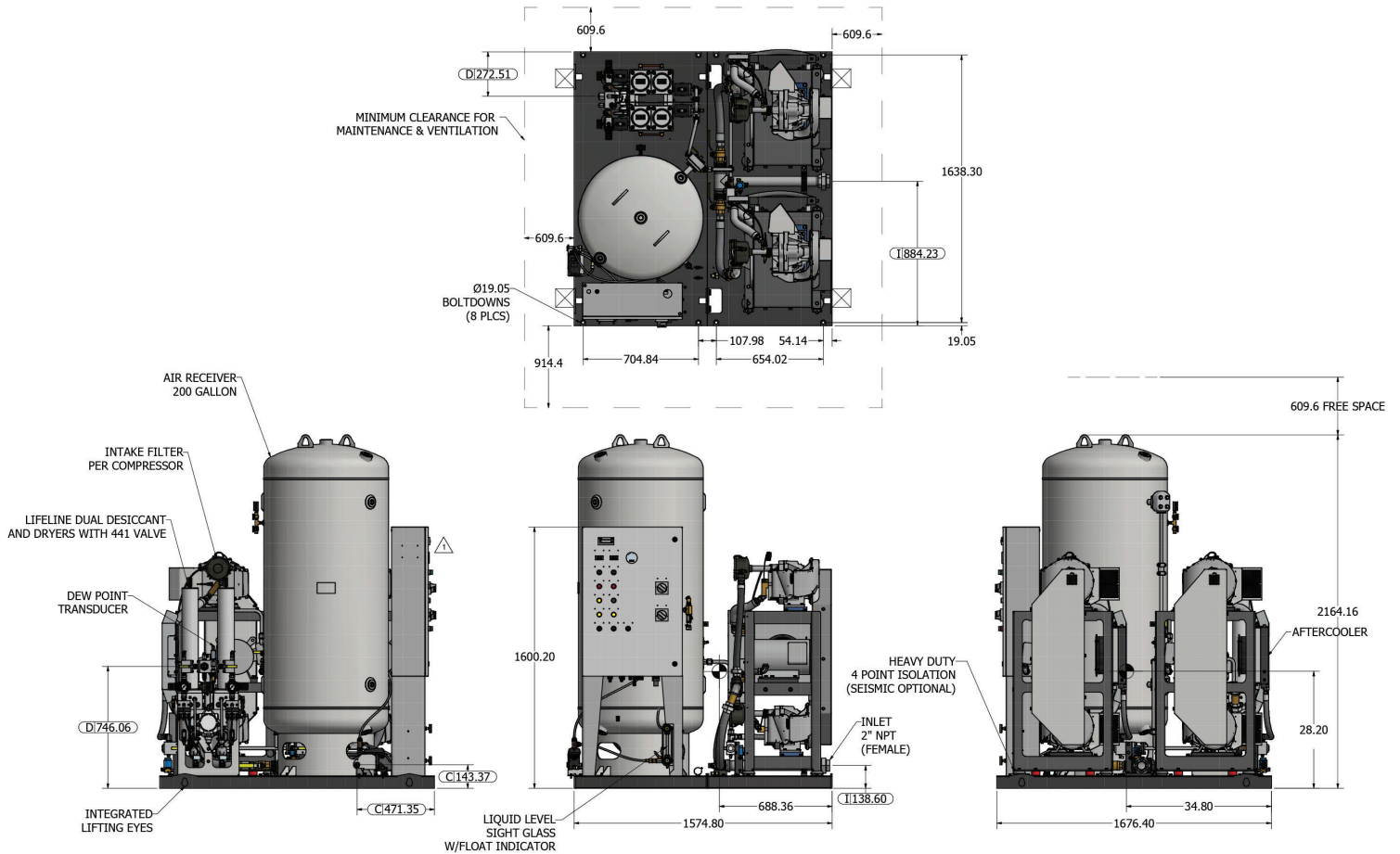
- 441™ transfer valve utilizing two sliding ceramic plates with a 5-year warranty
- High efficiency coalescing prefilter rated for 0.01 micron with automatic drain and element change indicator
- Fully duplexed final line particle filters rated for 1 micron with element change indicators
- Duplexed final line regulators and safety relief valves
- Ceramic type dew point sensor with ± 2°F system accuracy
- CO Sensor with ± 2 PPM (at 10 PPM) system accuracy

**Control System**

The duplex mounted and wired control system provides The duplex mounted and wired control system provides automatic lead/lag sequencing and automatic alternation of both compressors based on first-on/first-off principle with provision for simultaneous operation if required.

- Circuit breaker disconnects for each motor with external operators
- Full voltage motor starters with overload protection
- 24V control circuit transformers for each motor circuit
- Visual and audible reserve unit alarm with isolated contacts for remote alarm
- Hand-Off-Auto lighted selector switches
- Runtime hourmeters
- Pressure gauges
- Automatic activation of reserve unit if required
- Visual and audible alarm indication for high discharge air temperature shutdown with isolated contacts for remote alarm

Model Shown: 10 HP Duplex



**Notes:**

- Inlet & discharge flex connections are built into package.
- Allow 900mm in front of control panel for maintenance and ventilation, all other sides require 600mm of clearance.
- Additional drawings/diagrams available for download at [www.beaconmedaes.com](http://www.beaconmedaes.com).

Scroll Compressor Package Specifications <sup>1</sup>								
System Model No.	HP / KW	System Capacity <sup>2</sup>		System BTU/HR <sup>5</sup>	Receiver (gallons)	Noise Level <sup>6</sup>	System FLA (380/3/50)	Weight
		at 109 psig <sup>3</sup> l/m(cfm)	at 50 psig <sup>4</sup> l/m(cfm)					
WSAS10D-200V-BDED	(2) 10 / 7.5	793 (28.0)	985 (34.8)	23,014	200	77	29.4	1006 Kg

- Notes:**
1. Normal operating conditions at a maximum ambient of 40° C (105° F). Consult factory for higher ambient conditions.
  2. All capacities are shown as NFPA system capacities (reserve compressor on standby). System capacity does not account for losses due to dryer purge or other system losses.
  3. Unit performance measured according to ISO 1217, Ed. 3, Annex C-1996. Reference conditions: absolute inlet pressure 14.5 psig, intake air temperature 20° C (68° F). Performance measured in Standard Cubic Feet per Minute (SCFM).
  4. Capacities are calculated values and shown in Inlet Cubic Feet per Minute (ICFM).
  5. All system BTU/HR are shown with reserve compressor on standby.
  6. All noise levels are shown in dB(A) with reserve compressor on standby.