



Oil-Free Scroll Air Compressor with Enclosure, Graphic Controller, Loose Desiccant Dryer and Receiver Tank (20-30 Hp)

SPECIFICATION

Enclosed Scroll Compressor

The oil-free scroll air compressor package is floor mounted and enclosed in a steel, sound-insulated canopy. The compressor is designed and supplied as a complete package with all necessary equipment, including but not limited to the following components:

- Inlet filter
- Three or four air compressor elements
- Three or four drive motors
- Aftercooler
- Starter and regulation system
- Control system

All components are mounted within a common six-sided low sound enclosure with solid base frame.

The enclosed scroll package provides air quality that qualifies to be in the category "Class 0" in terms of oil content as defined by standard ISO 8573-1:2001 Part 1.

Compressor Unit

Compressor Module: The compressor package is made up of three or four compressor modules, each consisting of a compressor element belt driven by an electric motor, and a radial fan mounted on the drive shaft of the compressor element. Each module is equipped with a temperature sensor to monitor the element housing temperature.

- LES20 - Four 5 Hp Scroll compressor modules
- LES22 - Three 7.5 Hp Scroll compressor modules
- LES30 - Four 7.5 Hp Scroll compressor modules

Compression Element: Each compressor element consists of a fixed scroll housing and an orbiting scroll rotor. The element and housing are pressure die cast aluminum. The crankshaft and pulley are cast iron. The element is V-belt driven using belts with ZPZ profile. Bolts for adjusting belt tension are easily accessible via removable panels.

Drive Motor: Each compressor module is belt driven by a totally enclosed and air cooled IP55 Class F motor, complying with IE3 Premium efficiency standards for optimum performance and reliability. The motor bearings are greased for life and do not require special attention.

Starter: Each compressor is factory equipped with a direct on line starter. The starter is mounted and wired within the UL listed compressor control cubicle.

Cooling System: Each compressor element is equipped with a radial fan mounted as part of the element to generate cooling air across the element. The compressor package is fitted with an aluminum block aftercooler for cooling of the compressed air. The cooling system includes a fan, driven by an electric motor, to generate cooling air for the aftercooler.

Regulation System: The compressor regulation system keeps the net pressure between programmable limits by automatically starting and stopping the compressor modules.

Compressor Control: The compressor package has a microprocessor controller with advanced graphics, capable of controlling and monitoring the modules. The unique Variable Air Delivery control system automatically starts and stops the compressor modules to exactly match the air demand. The controller distributes the running time evenly among the compressor modules by selecting the module with the lowest hours and starting that one first and stopping the unit with the most run hours first when applicable. The controller prevents simultaneous stopping and starting of the individual modules.

The microprocessor allows for programming of two pressure bands for loading and unloading. Time based start/stop and changeover for net pressure is programmable. The compressor is equipped with auxiliary contacts for external indication of run status, automatic or manual run control, general warning and general shutdown conditions.

The control system has the capability to control and monitor the following functions:

- Delivery air pressure
- Element outlet temperature
- Compressor status
- Motor overload status
- Delivery air temperature
- Running hours
- Regulator hours
- Ambient temperature

Compressor Protection: The microprocessor provides service requirement indication, warning and shutdown indication and alarms. Additional protective functions include emergency stop, element outlet temperature, drive overload, service warnings, and ambient temperature warning and shutdown.

Inlet Air Filter

A paper cartridge type filter is provided. The filter has a rated efficiency of SAE fine. The filter removes 98% of all dust particles greater than 1 micron, 99.5% of particles greater than 2 microns and 99.9% of particles greater than 3 microns in size. The inlet filter is factory installed.

Compressor Enclosure

The compressor module is enclosed in a steel, sound-insulated canopy with removable panels to provide access for maintenance. The sound insulating material is a flame retardant polyurethane.

Loose Desiccant Dryer Assembly

Loose dryer assembly consists of a twin tower, heatless regenerative desiccant dryer, and one prefilter.

- Dryer sized to match compressor capacity
- Capable of producing -40°C/-40°F pressure dew point
- Spring loaded, durable aluminum desiccant cartridges for easy service
- Optimized purge consumption with nozzle kit to adapt purge to inlet pressure
- Highly efficient UD+ two-in-one coalescing filter to remove solid particles, liquid water and oil aerosol.
- DDp+ outlet filter efficiently removes dust and particles from the compressed air
- Advanced controller with graphical, color display and integral demand-based purge saving functionality

Loose Accessory Kit

PDp+ Filter: High efficiency particle filter for dust protection, with total mass efficiency 0.01 µm 99.99%.

Compressor Vibration Isolation Pads: Elasto-Rib Damper furnished with a load distributing steel plate permanently bonded to the Elasto-Rib pad.

Discharge Flex Hose: Flexible metal hose connector with male NPT thread. Corrugated tubing inner hose and heavy-woven braid outer sheath, made of non-corrosive stainless steel.

Regulator with Gauge: 1" NPT 0-160 psig regulator, balanced valve design, non-rising pressure adjusting dial, piston operated.

Loose Air Receiver Tank Assembly

Corrosion resistant, ASME Coded, National Board Certified vertical air receiver rated for minimum 200 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 with isolation valve

Scroll Compressor Package Specifications

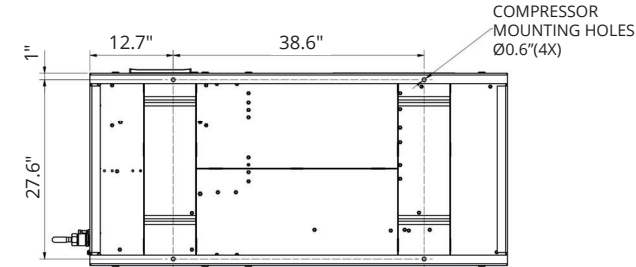
System Model No.	HP	Max. Working Pressure	Compressor Capacity FAD ¹	Compressor Noise Level ²	Compressor FLA		Air Quality ³	Regulated Delivery Pressure	System Capacity ⁴
					230V	460V			
LES20+145B-DD-200V-120	20	145	47.9	63	73.5		1-2-0	115 psi	41.7
LES20+145C-DD-200V-120	20	145	47.9	63		36.7	1-2-0	115 psi	41.7
LES22+145B-DD-200V-120	22	145	49.8	64	77.8		1-2-0	115 psi	43.3
LES22+145C-DD-200V-120	22	145	49.8	64		38.9	1-2-0	115 psi	43.3
LES30+145B-DD-240V-120	30	145	62.9	65	103.9		1-2-0	115 psi	54.7
LES30+145C-DD-240V-120	30	145	62.9	65		52.0	1-2-0	115 psi	54.7

- Notes:**
1. Unit performance measured according to ISO 1217, Annex C, latest edition. Reference conditions: Absolute inlet pressure 14.5 psig; Intake air temperature 68°F. Capacity FAD does not include purge losses, approximately 15%.
 2. Noise level measured at a distance of 1m according to Pneurop/Cagi PN8NTC2 test code.
 3. Air Quality measured according to ISO 8573-1. Air quality applicable only with all components assembled, see Scroll Compressor Package Part Numbers.
 4. System capacity is compressor capacity less 15% for dryer purge/losses.

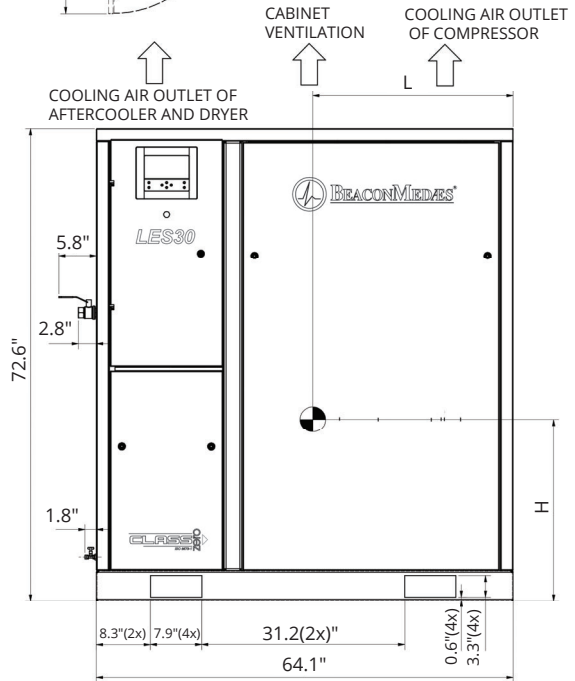
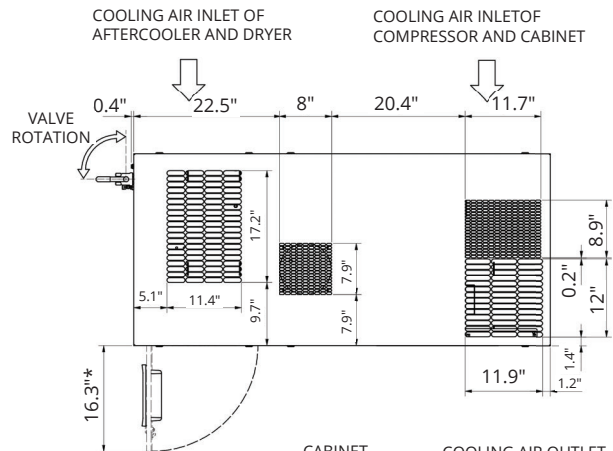
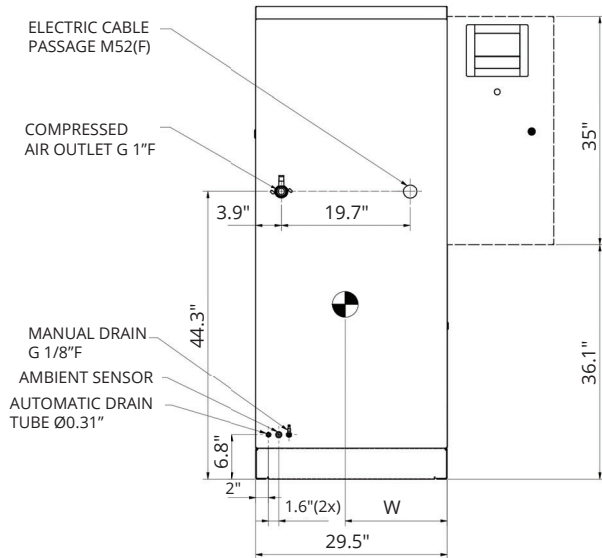
Scroll Compressor Package Part Numbers

System Model No.	Voltage	Compressor	Wet Receiver Tank	Dryer Assembly	Accessory Kit	Air Quality
LES20+145B-DD-200V-120	230/3/60	LES20+145B-ND 8153606747	200G	CD25HE+Mk5-ISO2	Filter/Flex Hose/ Vibration Pads/ Regulator	1-2-0
LES20+145C-DD-200V-120	460/3/60	LES20+145C-ND 8153606762	4107007952	8102333674 / 0000020106	2205609606	
LES22+145B-DD-200V-120	230/3/60	LES22+145B-ND 8153606788	200G	CD25HE+Mk5-ISO2	Filter/Flex Hose/ Vibration Pads/ Regulator	1-2-0
LES22+145C-DD-200V-120	460/3/60	LES22+145C-ND 8153606804	4107007952	8102333674 / 0000020106	2205609607	
LES30+145B-DD-240V-120	230/3/60	LES30+145B-ND 8153606820	240G	CD25HE+Mk5+ISO2	Filter/Flex Hose/ Vibration Pads/ Regulator	1-2-0
LES30+145C-DD-240V-120	460/3/60	LES30+145C-ND 8153606846	4107007954	8102333674 / 0000020106	2205609607	

Compressor Dimensions - LES20 / LES22 / LES30

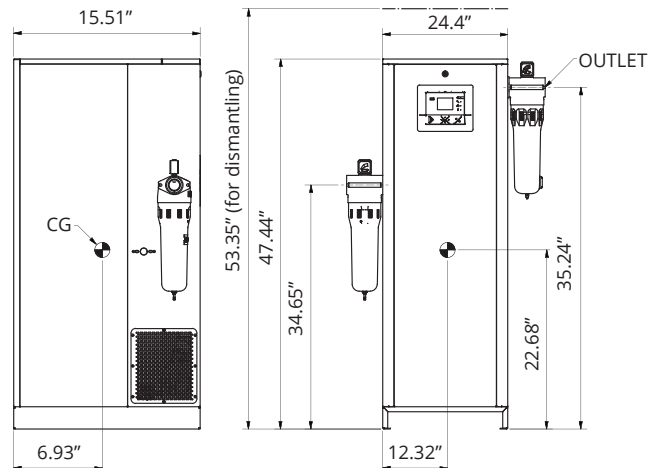
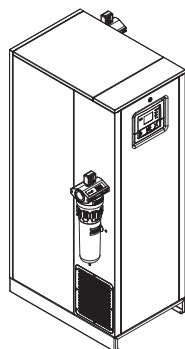


Compressor	Center of Gravity			Weight
	L	W	H	
LES20+145x-ND	32.7"	12.1"	27.9"	1279
LES22+145x-ND	33.1"	12.2"	25.9"	1264
LES30+145x-ND	31.9"	12"	30.7"	1514

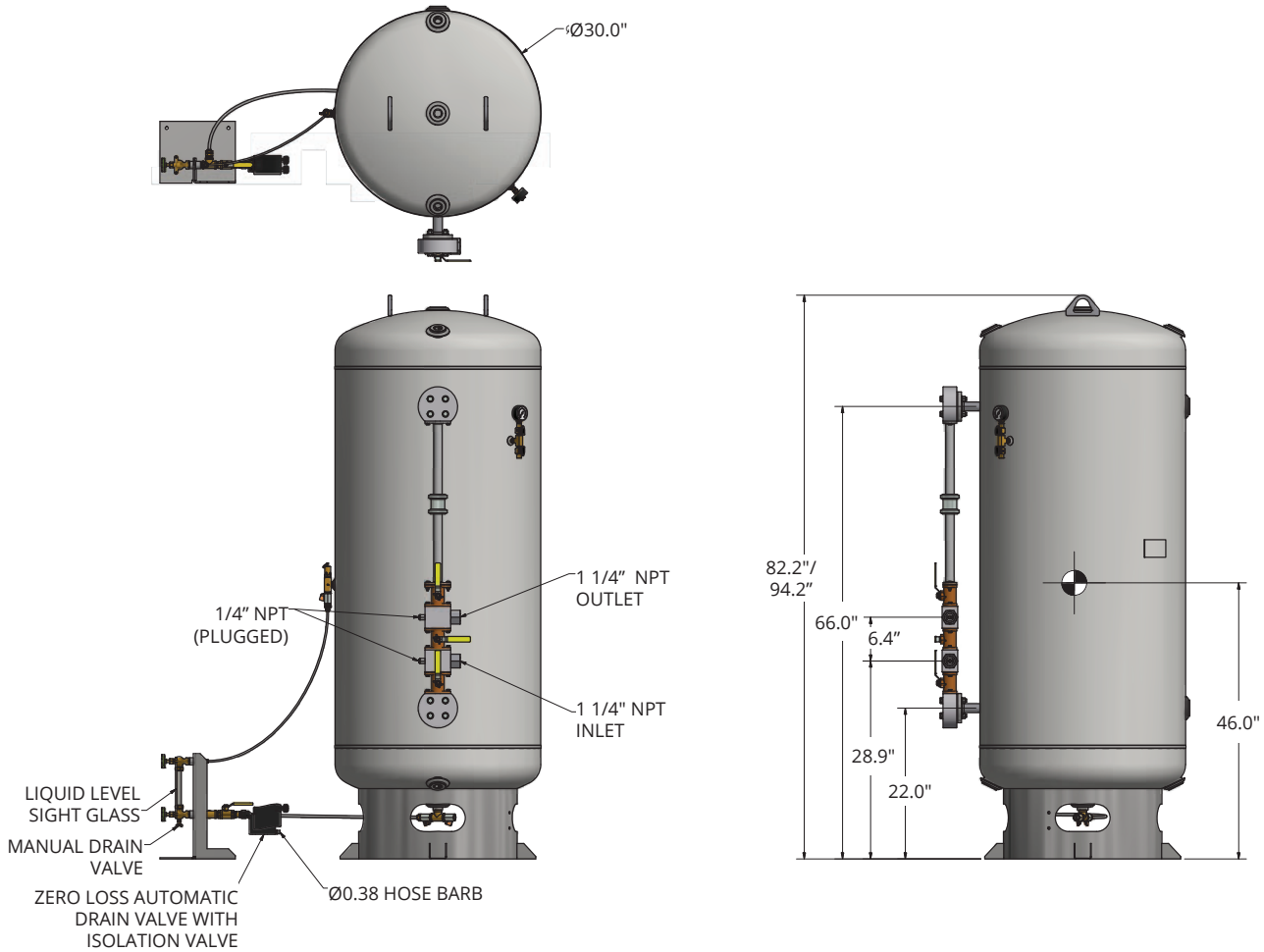


Dryer Dimensions - CD25HE+Mk5-ISO2

Dryer	Inlet	Outlet	Weight (lbs)
CD25HE+Mk5-ISO2	1/2"NPT	1/2"NPT	227



Receiver Dimensions - 200G / 240G



Receiver Tank	Weight
200G	530 LBS
240G	685 LBS

⊙ INDICATES CENTER OF GRAVITY