

M99 Screw Compressor

Technical Specifications

COMPRESSOR

Gardner Denver / Tamrotor Enduro 25 Rotary Screw Compressor, with Adaptable Compressor Speed, designed to produce more gas flow per bhp.

ENGINE

Cummins G8.3, 6 cylinder natural gas engine. Net compression horsepower at site: 90 bhp @ 1800 rpm.

FUEL GAS SCRUBBER

4" dia x 30"h - Provides clean, dry gas for engine consumption. In-line design enables liquids to automatically drain to discharge line.

GAS AFTER COOLER / OIL COOLER

Oil cooler / gas after-cooler, cools discharge gas to within 15°C of ambient temperature.

SUCTION SCRUBBER WITH BLOW CASE

16" dia x 65" h vertical separator. Designed with automatic drain tank / blow case feature to collect and automatically unload inlet liquids into discharge line.

DISCHARGE OIL/GAS SEPARATOR

20" dia x 60"h with coalescing element.

WALK-IN BUILDING WITH SOUND ATTENUATED WALLS

9' x 15' walk-in style building with thermal acoustic insulation and perforated aluminium wall liner. Designed to provide superior sound attenuation.

CONTROL PANEL

Murphy Panel, Class I, Div II, w/ extensive monitoring & shutdowns to ensure safe and reliable operation.

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Flow Rates

Inlet Pressure	Discharge Pressure					High Pressure Unit	
	100 PSIG	125 PSIG	150 PSIG	200 PSIG	250 PSIG	300 PSIG	350 PSIG
0 PSIG	14.4 e³m³/d	13.5 e³m³/d	12.0 e³m³/d	9.7 e³m³/d			
5 PSIG	18.1 e³m³/d	17.0 e³m³/d	15.6 e³m³/d	13.1 e³m³/d	11.1 e³m³/d		
10 PSIG	22.1 e³m³/d	19.0 e³m³/d	18.1 e³m³/d	15.6 e³m³/d	13.7 e³m³/d	9.1 e³m³/d	7.9 e³m³/d
20 PSIG	27.5 e³m³/d	25.0 e³m³/d	22.5 e³m³/d	19.3 e³m³/d	17.0 e³m³/d	12.5 e³m³/d	10.1 e³m³/d
30 PSIG	34.3 e³m³/d	32.7 e³m³/d	28.2 e³m³/d	23.1 e³m³/d	19.4 e³m³/d	14.2 e³m³/d	13.7 e³m³/d
40 PSIG		38.5 e³m³/d	34.3 e³m³/d	26.1 e³m³/d	22.7 e³m³/d	17.8 e³m³/d	14.8 e³m³/d
50 PSIG		41.9 e³m³/d	40.6 e³m³/d	31.2 e³m³/d	25.7 e³m³/d	19.4 e³m³/d	18.0 e³m³/d
60 PSIG						21.7 e³m³/d	20.1 e³m³/d
70 PSIG						26.1 e³m³/d	21.9 e³m³/d
80 PSIG						28.3 e³m³/d	24.8 e³m³/d
90 PSIG						31.2 e³m³/d	27.7 e³m³/d


EUB - Emissions Data

ENGINE DATA

Engine Make & Model	Cummins G8.3
Engine Speed	1800 rpm
Engine HP @ 2500 Ft Altitude	93 bhp
NO _x Emissions	19.1 grams/hp-hr = 1776 grams/hr @ full load
CO ₂ Emissions	459 grams/hp-hr = 42,687 grams/hr @ full load
Fuel Gas Consumption	19 mscf/day

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EUB - Noise Data

Standard Package			
SILENCER DATA		SILENCER DATA	
Make & Model	Excel Model EXHD-3.5	Make & Model	Noise Solutions Zeron Model 1000
Grade	Hospital	Grade	Super Hospital Plus
dBa Attenuation	38-42 dBa	dBa Attenuation	35-55 dBa
SOUND DATA		SOUND DATA	
Distance From Unit	dBa	Distance From Unit	dBa
50m	62	50m	51
100m	56	100m	45
200m	48	200m	37
300m	43	300m	32
400m	38	400m	28
500m	34	500m	25
600m	31	600m	21
800m	27	800m	19
1000m	23	1000m	13

Note: These are predicted sound pressure levels based on open field test. Actual sound pressure level may vary depending on site and installation conditions.

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Installation Requirements

The following information is to provide assistance for the customer in preparing for and ensuring optimal operation of the gas compressor package.

INLET CONNECTION	3" 150# flange
OUTLET CONNECTION	2" NPT
WELLHEAD CONNECTION	Either hard pipe or flexible hose may be used.



SKID / BUILDING SIZE	Standard Building 9'w x 18'l x 10'h
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SKID / BUILDING SIZE	Building with SoundRanger 9'w x 23'l x 10'h
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SHIPPING WEIGHT	15,000 lbs
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LIFTING

The compressor package must be lifted and placed using a proper lifting device, consisting of a four-point lift (from each corner of the package). The package must remain level during lifting and placement. The unit cannot be skidded and dropped.

ENGINE STARTER

A pneumatic engine starter is provided with the gas compressor package. It requires approximately 60 psig of gas pressure to adequately start the engine.

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MOUNTING SURFACE

The customer is responsible to provide a suitable installation area. The compressor should be mounted on a flat and level bed of packed gravel. The use of planking alone is not recommended. This may cause unlevel settling of the package, unnecessary vibration, and increased sound pressure levels distributed through the skid base.

The gravel pad should extend to sufficient length to support any sound hoods that extend beyond the building walls.



GROUNDING

The compressor package must be grounded. The unit is supplied with a cable lug on skid edge to which the customer is responsible to attach a grounding device. It is recommended that an 8' rod be wired to the grounding lug and inserted into the earth, within 6 feet of the compressor building.

SOUND ATTENUATION

To reduce sound pressure levels cover the exposed surface of the skid base completely with gravel. The compressor package is built with both the cooler and muffler discharge on one side of the package, with the inlet and outlet connections on the other side. Ensure that the package is positioned so that the cooler and muffler discharge (which are the major sources of noise) are directed away from local residence as much as possible.

It is the responsibility of the customer to ensure that the compressor installation meets EUB and regulatory requirements.

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