

RadMax EX10 Expander-Generator for Natural Gas Compression Stations Electricity Generation from Natural Gas Fuel Flow to Compressor Engines Specifications Sheet

The RadMax RXG EX10 positive displacement Micro Auxiliary Power Unit generates electricity from the pressure drop in providing natural gas fuel to compressor station engines. The expander-based unit is installed in parallel with the existing natural gas line from the compressor output feeding fuel to the compressor engine. The EX10 is able to use the energy normally wasted by typical throttling type pressure control valves used to drop the fuel line pressure to that required by the engines fuel system. Depending upon the site's pressure letdown conditions and power requirements, the EX10 expander coupled with a 2, 5, or 10 kW electric generator provides dependable and economic power that can be used to drive converted pneumatic controllers eliminating methane emissions from these types of devices, or power electronic equipment, lighting, communications or other site devices.



RXG EX10 Benefits

- Generated power is essentially “free and green” as the cost and economic penalty of producing the power has already been paid in the compression of the natural gas.
- A low cost, constant and dependable source of electricity for locations where electricity is not available or is expensive.
- Methane emissions are reduced or eliminated when the generated electricity is used to replace existing natural gas pneumatic controllers.
- Power is produced as long as there is sufficient fuel flow to the compressor engine.
- Does not have the availability and maintenance issues associated with other types of alternative energy sources like solar and wind. Does not create additional GHG during its operation like combustion powered generator units.
- Motor starting capability.
- System is self-starting and regulating, and requires no external power source.
- Separate expander-generator and electrical cabinets rated for Class 1, Div. 2 rated and Unclassified hazard areas.
- Easy installation with gas upstream and downstream connections.

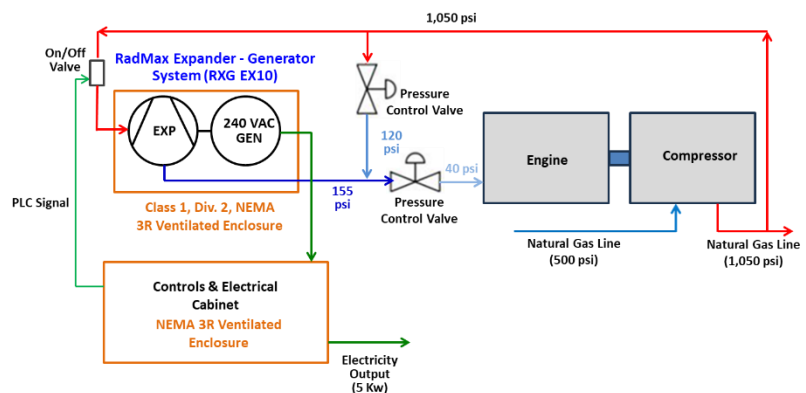


Installation Requirements

- 1" NPT tap into compressor outlet line
- 1" Electric ON/OFF Valve

Components

- Sealed RadMax Expander
- AC Generator
- PLC Control System
- Load Bank/Controller/Battery
- NEMA 3R Ventilated Enclosures



Specifications

Maximum Output Electrical Power	2 – 10 kW (depends upon available fuel flow rate)
Design Inlet Pressure	1,050 psig (72.4 bar)
Outlet Pressure	155 psig (10.7.3 bar)
Maximum Operating Pressure	1,500 psig (103.4 bar)
Speed	1,800 RPM
Output Voltage	120/240 VAC single/three phase
Bearings	Sealed
Gas Temperature Range	-30°F to 250°F (-34°C to 121°C)
Inlet/Outlet Fitting Size	1 inch NPS (25.4 mm)
Hazardous Location Classification	
Expander/Generator Cabinet	Class 1, Div. 2
Electrical Cabinet	Unclassified Area
Electric Power Options	
Option 1 (continuous power production)	5 kW 120/240 VAC; Load Band with 24-volt DC battery for PLC
Option 2 (motor starting)	2 hp, 3 phase 240 VAC; Large battery bank as load buffer

PLC controlled ON/OFF valve required to bypass unit for maintenance or intermittent operation

Designed for CAT 3516 or larger engine

Features:

- Two cabinet package; Expander/Generator, Class 1, Div. 2, Electrical, Unclassified Area
- 1" NPT Expander/Generator cabinet inlet and outlet connections
- Integrated system electronic controls
- Integrated electricity output voltage conditioning
- Minimal display or LED lights for system status