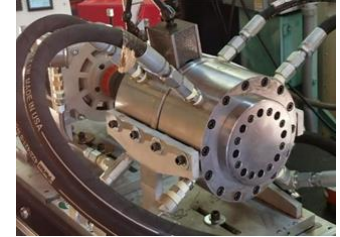


RadMax EX10 Expander-Generator Natural Gas Power Unit

The RadMax EX10 expander-generator is a positive displacement electricity producing power unit installed in parallel across an existing natural gas pressure reduction point to generate electricity from energy normally wasted by typical throttling type pressure control valves. Utilizing a small diverted gas flow from the pipeline, the RadMax EX10 expander is coupled with a 2, 5 or 10 kW electric generator depending upon the site's pressure letdown conditions and power requirements. The dependable and economic power generated can be used to drive converted pneumatic controllers eliminating methane emissions from these types of devices. The power can also be used to drive electronic equipment, lighting, communications or other site devices. The EX10 can produce electricity from the natural gas fuel flow to compressor station engines.



EX10 Power Unit 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 gas flow through the expander.
- 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.

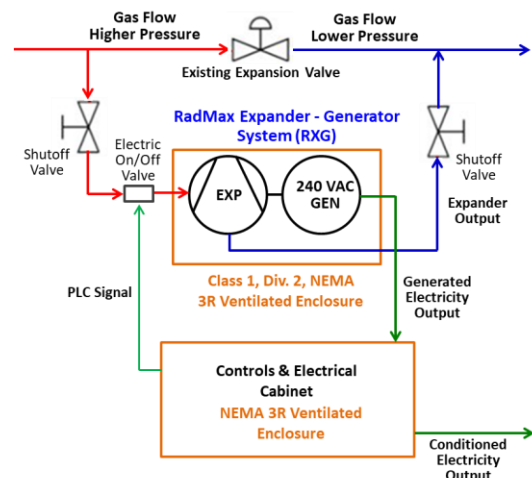


Installation Requirements

- 1" NPT (potentially larger) tap into compressor outlet line
- 1" (potentially larger) 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	Up to 15 kW (depends upon desired capacity and flow rate)
Inlet Pressure	Up to 2,500 psig (172.4 bar)
Outlet Pressure	Depends upon site requirements
Maximum Operating Pressure	3,000 psig (206.8 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 NPT (25.4 mm) or larger (depends upon flow rate)
Hazardous Location Classification	
Expander/Generator Cabinet	Class 1, Div. 2
Electrical Cabinet	Unclassified Area
Electric Power Options	
Option 1 (continuous power production)	120/240 VAC; load bank with 24-volt DC battery for PLC
Option 2 (motor starting)	2 hp, 3 phase 240 VAC; large capacity battery bank load buffer

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

Features:

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