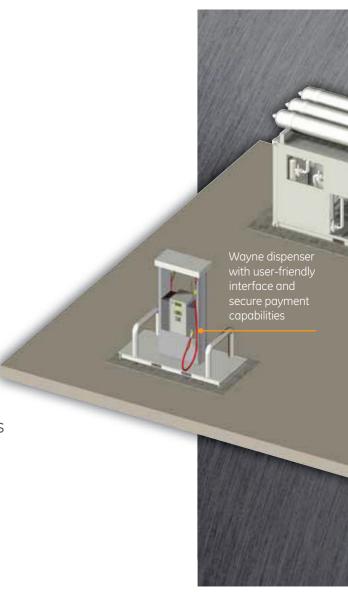
# Turnkey roadside Solution

The CNG In A Box system is an innovative solution that includes everything needed for final operation – preconfigured in a modified 8' x 20' ISO shipping container and ready for installation.

# Designed for safety & efficiency

GE's CNG In A Box system is built in accordance with NFPA 52, the National Fire Protection Association's Standard for Vehicular Gaseous Fuel Systems Code. ASME, ANSI, ISO, API and other standards are followed in the design process.



### What's inside

- GE compressor
- GE motor
- Inlet gas dryer
- Gas blow-down tank, gas-recovery system
- 3-bank buffer system
- Priority panel
- Process gas cooler
- Oil cooler and heate

- Locally mounted control panel (with PLC, HMI)
- Instrumentation for pressure, temperature
- Fire detector and gas leak detection
- Pressure relief valves
- Product filtration, piping, tubing, electrical wiring with rigid conduit

## Control system features

- Industrial-grade programmable logic controller (PLC) for all logic and control functions
- Controls interface with industrial-grade human machine interface (HMI)
- Start-up, shut-down and emergency stop sequencing
- Machine monitoring and protection on items such as:
  - Compressor temperature, pressure and vibration
  - Compressor lube oil pressure and temperature
  - Enclosure fire, gas leak detection and ventilation
  - Integrated inlet gas dew point monitoring
- Remote monitoring capabilit
- Maintenance trending
- Uninterruptible power supply (UPS) for unit control panel and dispenser during minor power outages and fluctuations
- Soft start for main electric motor ramp-up located in a remote power panel

### Remote power panel

- GE soft starter
- Main power disconnects
- Uninterruptable power supply

### **Options**

- Remote monitoring and diagnostics
- Dryer regeneration system
- Cold weather option
- Higher inlet pressure solutions

# World-class compression at the core

GE Oil & Gas designs and manufactures advanced compression technologies, with a global installed fleet of over 18,000 high-speed reciprocating compressors ranging from 60 to 7,200 hp. Our field-proven compressors deliver maximum flexibility and minimum maintenance cost in all types of gas compression applications.

The compressor is the largest and most complex element of the CNG In A Box system. It is designed for maximum availability and efficiency – ensuring continuous, reliable unmanned operation; long intervals between maintenance; and an easy, cost-effective maintenance regimen.



- Cylinder liners for quick reconfigurations
- Common XYZ flange

clearance pockets

- connections for reduced costs

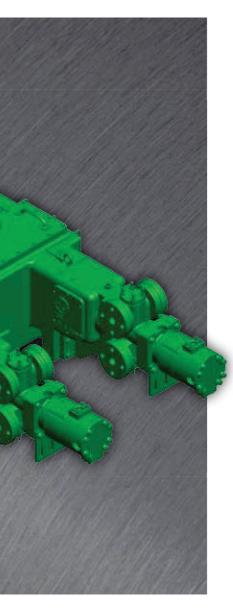
  Large variable-volume
- Upgraded VVCPs, pistons and connecting rods



- Advanced crankshaft quality inspection
- Single-piece crankshaft with integral counter weights
- Interior coating for hightemperature oil resistance



- Working pressure up to 6,500 psig
- Robust bushing desig
- Acid gas and sour gas
- 3X valve materials
- Application-specific valves for increased durability



### Key design features

- Proven field technology for high strength and longer life operating 24 hours a day, seven days a week
- Balanced opposed design minimizes vibration by equalizing the opposing reciprocating forces on the crankshaft
- Flexible cylinder configurations for field replicable cylinder solutions to maximize suction pressure inputs to system for increased efficiency
- Patented roller bearing technology to accommodate fluctuations in inlet gas pressures and temperatures.
   Most flexible solution to meet demands in the field

Estimated CNG In A Box™ system performance – 60hz models				
Model <sup>1</sup>	Min/Max Motor Power HP (kW)	Suction range psi (bar)	Flow range SCFM (m³/h)	GGE/ Min range
CNG-200	80 (60) - 200 (149)	8 (0.5) - 50 (3.4)	125 (213) - 400 (680)	1.0 - 3.2
CNG-400	190 (142) - <mark>400 (</mark> 298)	8 (0.5) - 43 (2.9)	313 (532) - 788 (1,340)	2.5 - 6.3

### Notes

- 1. Estimated flow/suction based on approximately 4,700 psi (324 bar) compressor discharge
- 2. Flow/power based on 1,780 rpm with SG of 0.65 and K-value of 1.24 (@ STP)
- 3. 1 SCFM = 1.7 m3/h, 1 psi = .068 bar, 1 HP = 0.746 kW
- 4. Suction pressures indicated are at compressor package inlet
- 5. GGE (gallon of gasoline equivalent) = SCF/125
- 6. 1,780 rpm = 60 Hz; 1,480 rpm = 50 Hz (flow and power decrease ~20% from 60hz model)
- 7. Notes and chart apply to corresponding graphs

