



by Gardner Denver

HG12 & HGF12 SERIES  
MODELS HG12000, HGF12000 NON-GEARED & HG12XXX GEARED

## Rotary Screw Gas Compressors

### Benefits

LeROI Rotary Screw Gas Compressors are very cost-effective for handling high volumes of gas in field gathering, vapor recovery, and other applications. The HG12 and HGF Series are suitable for applications to 125 BHP and 350 PSIG discharge pressure. Low maintenance and high reliability are inherent with rotary screws because they have few moving parts. There are no valves, rings or packing to wear out or cause loss of efficiency.

Smooth operation results from no unbalanced forces and no pressure pulsation. No foundation is required and there are no piping vibrations from pressure pulsation.

Natural gas engine or electric motor drives are equally acceptable with rotary screws. LeROI Rotary Screw Gas Compressors are available in various models covering a flow range of 20 to 15,000 MSCFD and horsepower from 10 to 900.

### Performance

Brake Horsepower	125 Max.
Flow Range (MSCFD)	1,400 Max.
Inlet Pressure	20" Hg Vac. Min.* 50 PSIG Max.
Discharge Pressure	20*-350 PSIG (MAWP)
Input Speed Range	
HG12 Non-Geared	2,250/Min. 6,000/Max. RPM
HGF12 Non-Geared	1,500/Min. 4,000/Max. RPM
HG12 Geared	750/Min. 3,600/Max. RPM

\* Consult Factory for use with lower vacuum inlet or discharge pressures.

### Features

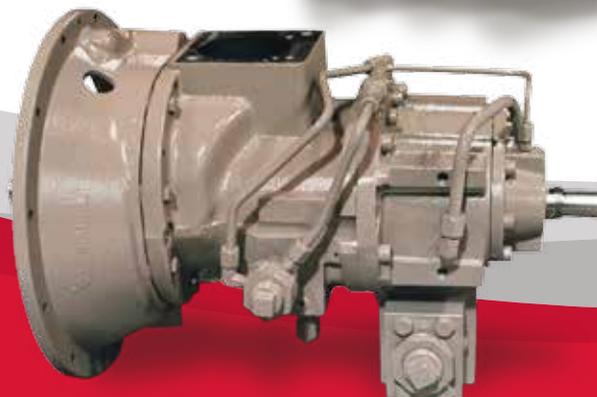
The HG12000 can be belt driven or directly coupled to electric motors for maximum flexibility at minimum cost. The compressor shaft bearings can absorb the belt side load without additional pillow block bearing supports up to 50 HP. Models HG12XXX and HGF12000 are suitable for direct coupling to engines and electric motors.

Single-Stage operation from 20 PSIG to 350 PSIG maximum is possible with the HG12 and HGF Series oil-flooded compressors. Compressor packages are therefore simple, reliable and inexpensive. The gas differential pressure provides oil circulation for proper lubrication at differential pressures over 70 PSI. Optional oil pumps are available for applications with less than 70 PSI differential pressure.

Discharge porting can be selected to match the internal compression to the application requirement for maximum compression efficiency. All iron or steel construction with no copper or copper alloys makes these compressors compatible with natural gas, sweet or sour.



HG12XXXHI



HGF12000HFS with Optional SAE #4  
Bell Housing and Fan Shaft Extension

# Options & Specifications

## Technical Specifications

- Model HG12000, HGF12000 Non-Geared & HG12XXX Geared
- Rotor Diameter 127.5 mm (5.02 inches)
- Rotor L/D 1.65
- Rotor Description
  - Twin Screw SRM Profile with Sealing Strips, 4 Lobe Male, 6 Lobe Female
- Shaft Seal(s) - Mechanical\*
- Drive System
  - HG12000 is suitable for direct coupling to electric motor or belt drive - oversized input shaft bearings for belt side load up to 50 HP. Rotation - Facing Shaft - CCW. Drive Shaft 1½" Dia. with ⅜" Square Key.
  - HGF12000 Female Rotor Drive, Non-Geared, Drive Shaft 1⅜" Dia. with ⅜" Square Key.
  - HG12XXX uses internal helical speed increasing gears (AGMA 11). Gear ratios of 1.2-3.1 are available. Drive Shaft 1½" Dia. with ⅜" Square Key. The HGF12000 Non-Geared and HG12XXX Geared are CW rotation suitable for direct coupling to engines or electric motors.
- Materials
  - Rotors - Ductile Iron 65-45-12
  - Castings - Cast Iron G3000
  - Bearings - Roller bearings on the inlet end and tapered roller bearings on the discharge end - alloy steel races, rolling elements and cages.
- Weight
  - HG12000 & HGF12000 Non-Geared - 330 lbs
  - HG12XXX Geared - 410 lbs

\* LeROI's mechanical seals prevent air from entering the gas stream when operated with any attainable vacuum inlet gas pressure.

## Options

- Internal Volume Ratio
  - Three volume ratios are available for matching compressor performance to pressure conditions.
  - High Ratio - 5.0 (Available)
  - High Ratio - 4.4 (Std.) Medium Ratio - 3.0
  - Low Ratio - 1.9
- Versatrol Internal Bypass Valves
  - Versatrol internal bypass valves are available for efficient capacity control from 100-70% of design flow. Control can be manual with two steps or stepless with a microprocessor. Control system is not included.
- Fan Shaft
  - A fan shaft is available for use with a direct mounted fan (side load is not acceptable and can not be used for belt drive).
- Oil Pump
  - Integral oil pump is available for low-pressure differential applications, with or without fan shaft extension.
- SAE # 4 Bell Housing on HGF12000; SAE # 3 Adapter Rings are available
- SAE # 3 Bell Housing on HG12XXX; SAE # 2 Adapter Ring is available
- Modules with oil cooler, aftercooler, gas/oil reservoir assembly, thermal valve, fan, oil filter assembly, minimum pressure valve and sight glass are all mounted on a steel subbase with connected components.
- Type 2 Mechanical with selectable seal faces based on application needs. Cartridge Type Seals and Gas Barrier Seals available, consult factory.

## Applications

- Gas Gathering
- Fuel Gas Boosting
- Inert Gas Boosting
- Biogas
- LNG Boil-Off Gas
- Well Head Gas Compression
- Vapor Recovery
- Landfill Gas
- Plunger Lift

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