



by Gardner Denver

HG17, HGF17, HGS17, HGFS17 SERIES  
 MODELS HG17XXX, HGS17XXX GEARED. HG17000, HGF17000, HGFS17000 NON-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 HG17, HGF17, HGS17 and HGFS17 series are suitable for applications to 180 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 nor packing to wear out or cause loss of efficiency.

Smooth operation results from no unbalanced forces and no pressure pulsation. No foundation is required. 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	180 Max.
Flow Range (MSCFD)	2,500 Max.
Inlet Pressure	20" Hg Vac. Min.* 50 PSIG Max.
Discharge Pressure	
HG17XXX/HG17000/HGF17000	20*-350 PSIG (MAWP)
HGS17XXX/HGFS17000	20*-350 PSIG (MAWP)
Input Speed Range	
HG17XXX	540/Min. 4,000/Max. RPM
HGS17XXX	540/Min. 3,560/Max. RPM
HGF17000/HGFS17000	1,100/Min. 3,710/Max. RPM
HG17000	1,640/Min. 5,560/Max. RPM

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

## Features

The HG17, HGF17, HGS17 and HGFS17 Series can be direct coupled to engines and electric motors (HG17000 electric motor drive only) for maximum flexibility at minimum cost. The HGF17000 and HGFS17000 compressor shaft bearings can absorb V-belt side load without additional pillow block bearing supports.

Single-Stage operation from 20 PSIG to 350 PSIG maximum is possible with the HG17 series oil flooded compressors. Compressor packages are simple, reliable and cost-effective. Gas differential pressure provides oil circulation for proper lubrication at differential pressures over 60 PSI. Optional oil pumps are available for applications with less than 60 PSI differential pressure.

All 175 mm compressors are equipped with LeROI's adjustable Vi, allowing field adjustment of internal compression during operation. Also, fixed discharge porting can be ordered to match the internal compression needs of your application. All iron or steel construction with no copper or copper alloys makes these compressors compatible with natural gas, sweet or sour.



Variable Vi

MHG17XXXVFEPS Module Less Oil/Aftercooler with Optional SAE # 2 Bell Housing, Versatrol, and Oil Pump with Fan Shaft Extension

HG17XXXVFE  
 Compressor with Bell  
 Housing and Versatrol



# Options & Specifications

## Technical Specifications

- Model HG17XXX and HGS17XXX Geared and HG17000, HGF17000 and HGFS17000 Non-Geared
- Rotor Diameter 175 mm (6.89 inches)
- Rotor L/D
  - HGS17XXX and HGFS17000 - 1.2
  - HG17XXX, HG17000, HGF17000 - 1.65
- Rotor Description
  - Twin Screw SRM Profile with Sealing Strips, 4 Lobe Male, 6 Lobe Female
- Shaft Seal(s) - Mechanical\*
- Drive System
  - HG17XXX and HGS17XXX geared compressors are suitable for direct coupling to engines or electric motors and use internal helical speed increasing gears (AGMA 11). Gear ratios of 1.368 - 3.237 are available. Rotation - Facing Shaft - CW, Drive Shaft 2 1/8" Dia. with 1/2" Square Key
  - HGF17000 and HGFS17000 Non-Geared Compressors are suitable for direct connecting to engines or electric motors and belt drive - oversized input shaft bearings for belt side load up to 75 HP. Rotation - Facing Shaft - CW, Drive Shaft 1 7/8" Dia. with 1/2" Square Key
  - HG17000 Non-Geared compressor is suitable for electric motor or belt drives - oversized input shaft bearing for belt side load up to 75 HP. Rotation - Facing Shaft - CCW, Drive Shaft 1 7/8" Dia. with 1/2" Square Key
- Materials
  - Rotors - Ductile Iron 65-45-12
  - Castings - Cast Iron G3000
  - Bearings - Roller oller bearings on the inlet end and tapered roller bearings on the discharge end - alloy Steel Races, Rolling Elements and Cages
- Weight
  - HG17XXX - 1,250 lbs
  - HGS17XXX - 1,100 lbs
  - HG17000/HGF17000 - 950 lbs
  - HGFS17000 - 800 lbs

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

## Options

- Versatrol Internal Bypass Valves
  - Versatrol internal bypass valves are available for efficient capacity control from 100-50% of design flow. Control can be manual with four steps or stepless with a microprocessor. Control system is not included.
- Internal Volume Ratio
  - The 175 mm compressors have LeROI's externally adjustable Vi feature, allowing internal compression optimization while the compressor is operating.
  - Fixed volume ratios are also available to allow matching of the internal compression ratio to the actual conditions.
  - High Ratio - 4.0
  - Medium Ratio - 3.0
  - Low Ratio - 2.0
- Oil Pump
  - Integral oil pumps are available for low-pressure differential applications, with or without fan shaft extension.
- SAE # 2 Bell Housing
- SAE # 2 to # 1 Bell Housing Adapter
- 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.

## Applications

- Gas Gathering
- Fuel Gas Boosting
- Inert Gas Boosting
- Well Head Gas Compression
- Vapor Recovery
- Landfill Gas

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