

HG10 and HGF10 Series Models HG10000 and HGF10000 Non-Geared



HGF10000HF Compressor with Female Rotor Drive and SAE # 3 Flywheel Housing

#### PERFORMANCE

- Brake Horsepower 90 Max.
- Flow Range (MSCFD) 500 Max.
- Inlet Pressure

20" Hg Vac. Min.\* 50 PSIG Max. 20\*-350 PSIG (MAWP)

Discharge PressureInput Speed Range

HG10000

HGF10000

2,650 RPM Min.\* 5,400 RPM Max. 1,770 RPM Min.\* 3,600 RPM Max.

\* Consult factory for use with lower vacuum inlet pressures, lower discharge pressures and/or lower input speeds.



#### **BENEFITS**

Rotary Screw Compressors are very cost-effective for handling high volumes of gas in field gathering, vapor recovery, and other applications. The HG10 and HGF10 Series are suitable for applications to 90 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 12 models covering a flow range of 20 to 15,000 MSCFD and horsepower from 10 to 800.

# **FEATURES**

The HG10 can be belt driven or direct 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 30 HP. The HGF10000 is suitable for direct coupling to engines and electric motors.

Single-Stage operation from 20 PSIG inlet to 350 PSIG maximum is possible with the HG10 and HGF10 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 below 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.



HG10 and HGF10 Series Models HG10000 and HGF10000 Non-Geared

# **Options and Specifications**

# **TECHNICAL SPECIFICATIONS**

- Models HG10000 and HGF10000
- Rotor Dia. 108 mm (4.25 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:
  - HG10000 is suitable for direct coupling to electric motors or belt drive - oversized input shaft bearings for belt side load up to 30 HP. Rotation – Facing Shaft – CCW
- Drive Shaft 1.44" Dia. with 3/8" Square Key • HGF10000 is CW rotation suitable for direct
- coupling to engines or electric motors. Drive Shaft 1.44" with 3/8" Square Key
- 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: 250 Pounds
- 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 – 4.4
  - Medium Ratio 4.4
  - Low Ratio 1.9
- Fan Shaft:

A fan shaft is available for use with a direct mounted fan (side load is not acceptable so cannot be used for belt drive).

- Oil Pump Integral oil pump is available for low-pressure differential applications, with or without fan shaft.
- SAE # 3 Bell Housing (Bolt On)
- 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. Drive motor, belts, pulleys, guard and electric motor driven cooling fan are also available.

# APPLICATIONS

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

Visit www.leroigas.com for additional information.



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Brochure re-order ref: #RCTHG10 02/2010



HG12 and HGF Series Models HG12000 and HGF12000 Non-Geared and HG12XXX Geared



HGF12000HIE with Standard Shaft and Versatrol

#### PERFORMANCE

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

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



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

#### **BENEFITS**

Rotary Screw 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 12 models covering a flow range of 20 to 15,000 MSCFD and horsepower from 10 to 800.

#### **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.



HG12 Series Models HG12000 and HGF12000 Non-Geared and HG12XXX Geared

# **Options and Specifications**

# **TECHNICAL SPECIFICATIONS**

- Model HG12000 and HGF12000 Non-Geared and HG12XXX Geared
- Rotor Dia. 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 1-5/8" Dia. with 3/8" Square Key > HGF12000 Female Rotor Drive, Non-Geared, Drive Shaft 1-3/8" Dia. with 3/8" Square Key
  - > HG12XXX uses internal helical speed increasing gears (AGMA 11). Gear ratios of 1.2-3.1 are available. Drive Shaft 1-5/8" Dia. w/ 3/8" 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 Pounds HG12XXX Geared - 410 Pounds
- \* LeROI's mechanical seals prevent air from entering the gas stream when operated with any attainable vacuum inlet gas pressure.

Visit www.leroigas.com for additional information.

### **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 so 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.

# **APPLICATIONS**

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



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HG17, HGF17, HGS17 and HGFS17 Series Models HG17XXX and HGS17XXX Geared, HG17000, HGF17000, HGFS17000 Non-Geared



HG17XXXVFE Compressor with Bell Housing and Versatrol

#### PERFORMANCE

- Brake Horsepower
- Flow Range (MSCFD)
- Inlet Pressure
- Discharge Pressure HGS17XXX/HGFS17000
- Speed Range HG17XXX

HGS17XXX

2,500 max. 20" Hg Vac. Min.\* 50 PSIG Max.

180 Max.

HG17XXX/HG17000/HGF17000 20\*-350 PSIG (MAWP) 20\*-350 PSIG (MAWP)

540 RPM Min. 4,000 RPM Max. 540 RPM Min. 3,560 RPM Max 1.100 RPM Min. HGF17000/HGFS17000

HG17000

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

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



3.710 RPM Max.

1.640 RPM Min.

5.560 RPM Max.

#### BENEFITS

Rotary screw 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 12 models covering a flow range of 20 to 15,000 MSCFD and horsepower from 10 to 800.

#### **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 therefore simple, reliable and inexpensive.

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 175mm 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.





HG17, HGF17, HGS17 and HGFS17 Series Models HG17XXX and HGS17XXX Geared, HG17000, HGF17000, HGFS17000 Non-Geared

# **Options and Specifications**

# **TECHNICAL SPECIFICATIONS**

- Model HG17XXX and HGS17XXX Geared and HG17000. HGF17000 and HGFS17000 Non-Geared
- Rotor Dia. 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 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 Pounds HGS17XXX - 1.100 Pounds

- HG17000/HGF17000 950 Pounds HGFS17000 - 800 Pounds
- LeROI's mechanical seals prevent air from entering the gas stream when operated with any attainable vacuum inlet gas pressure.



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### **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**

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- Fuel Gas Boosting
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