Reliability for the Toughest Gas Applications

**Industries**
- Vapor recovery
- Oil and gas production
- Solid waste facilities
- Waste water treatment
- Chemical and petrochemical
- Coal bed methane
- Coproduction
- Refining
- Power plant utilities
- Industrial refrigeration
- Offshore drilling
- Synthetic fuels production

**Applications**
- Hydration vapors
- Natural gas fuel gas
- Coal bed methane
- Landfill gas
- Digester gas
- Acid gas
- Sour gas (up to 90% H2S)
- Refrigeration
- Condenser vacuum
- Wellhead pressure reduction
- Process vacuum
- Polymerizing gas

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Ro-Flo® Compressors: The Low-Cost, Low-Maintenance Answer to Tough Gas Applications

Ro-Flo® compressors are engineered and built to give you years of reliable, continuous service with no loss of volume or pressure. Because the only wearing parts are the bearings, blades and seals, maintenance costs are minimal. Routine maintenance can be done in the field. Blades, seals and gaskets can be inspected and replaced without removing the compressor from the system.

Ro-Flo® compressors have no reciprocating motion or pulsation. Foundation requirements are minimal. Routine maintenance is required, the simplicity of the Ro-Flo® design makes this process easy, on-site, without removing the compressor from the system.

Ro-Flo® Compressors Cut Your Operating Costs and Maintain Constant Efficiency

Ro-Flo® sliding-vane, positive displacement compressors feature a solid, complete rotor eccentrically mounted inside a water-jacketed cylinder. Gas is compressed by being trapped between rotor and stator. As the rotor spins, the space between the rotor and stator decreases, causing pressure and volume to increase. When the volume reaches the maximum value, the rotor blades disengage from the cylinder to allow gas pressure to force gas out of the system.

Ro-Flo® Compressors: The Low-Cost, Low-Maintenance Answer to Tough Gas Applications

Dependable and Cost-Effective Ro-Flo® Rotary Compressors Offer:

SMOOTH, CONTINUOUS FLOW: No reciprocating motion or pulsation. Foundation requirements are minimal.

EASE OF MAINTENANCE: Normal maintenance can be done in the field. Blades, seals and gaskets can be inspected and replaced without removing the compressor from the system.

MULTIPLE PRESSURES: Available in low- and high-pressure capacities.

RELAY PERFORMANCE: Pressures to 150 psig and flows to 2500 scfm (3600 MCFH) with a ±5% guarantee on performance.

CONSTANT EFFICIENCY: Centrifugal force keeps blades in contact with the cylinder as they wear, by centrifugal force, and move radially in and out of the rotor slots during each revolution. This results in a constant level of efficiency and pulsation free compression.

Quality High-Performance Seals

The Ro-Flo® custom-engineered shaft seals are designed to perform consistently under the dirtiest and most corrosive conditions. “Double bellows” zero-leakage shaft seals are crafted to perform consistently under the dirtiest and most corrosive conditions. “Double bellows” zero-leakage shaft seals are crafted to perform consistently under the dirtiest and most corrosive conditions.

Durable, Precision-Engineered Rotor Shaft

Our stainless ASTM 316L rotor shaft provides pseudo-zero wear, wear-free service. Rotor shafts are precision-borited and vibrated, ensuring smooth operation. Radial and axial shaft seals are balanced and finished and fully designed to ensure longer blade life.

Over-sized, Corrosion-Resistant Bearings

The rotor shaft bearings are supported by two identical roller bearing assemblies. These bearings allow the following special features: low wear, high load capacity, corrosion resistance, and low friction.

Installations

Compressing landfill gas at wastewater treatment plant

Number of units: 5
Volume per unit: 220 ACFM/374 m3/hr
Speed: 1,860 rpm
Inlet: 14.3 psia/1.0 bar a
Discharge: 55.0 psia/3.8 bar a
Driver: 60 hp/45 kW electric motors

Compressing landfill gas and feeding an array of 30kW microturbines

Model: H30U1CH
Volume per unit: 425 scfm
Inlet: 2.0 psig
Discharge: 80 psig
Driver: 150 hp motor with jackshaft/ft.

Wet sour gas (11% H2S) boosting at refinery

Number of units: 2
Volume per unit: 812 ACFM/1,350 m3/hr
Inlet: 6.0 psig/0.4 bar a
Discharge: 80 psig/5.5 bar a
Driver: 325 hp/245 kW electric motors and variable speed drives
Ro-Flo® Compressors: The Low-Cost, Low-Maintenance Answer to Tough Gas Applications

Dependable and Cost-Effective Ro-Flo® Rotary Compressors Offer:

- SMOOTH, CONTINUOUS FLOW: No reciprocating motion or pulsation. Foundation requirements are minimal.
- EASE OF MAINTENANCE: Normal maintenance can be done in field. Blades, seals and gaskets can be inspected and replaced without removing compressor from the system.
- MULTIPLE PRESSURES: Available in low- and high-pressure configurations.
- RELIABLE PERFORMANCE: Pressures to 150 psig and flows to 2500 acfm (3600 Mscfd) with a ±5% guarantee on performance.
- CONSTANT EFFICIENCY: Durable, Precision-Engineered Rotor Shaft. Our standard ASTM 1144 rotor shafts feature an industry leading 25% higher load capacity than standard 300 series bearings. Our standard 316L stainless steel shafts offer the following benefits:
  - Balanced design and proper selection offer the highest load capacity of any shaft in the industry.
  - Extended life and longer operation.
- LARGEST DOWNSTAGE CAPABILITY: Rotor blades are hand finished and radially machined blade slots are hand finished to ensure uniform, reliable performance.

Quality High-Performance Seals

- Self-adjusting, radially sliding face contacts maintain constant pressure and clearance.
- Corned end of durable, laminated steel impregnated with phenolic resin, heat-laminated cloth impregnated with phenolic resin, heat-treatable to withstand wear at elevated temperatures.

Durable, Precision-Engineered Rotor Shaft

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  - Balanced design and proper selection offer the highest load capacity of any shaft in the industry.
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Over-sized, Corrosion-Resistant Bearings

- Oversized, corrosion-resistant bearings are used to provide years of continuous, reliable compressor service. Years of research and testing has resulted in a sliding bearing that stands up to the toughest operating conditions.

Durable Design Features Include:

- Self-adjusting, radially sliding face contacts maintain constant pressure and clearance.
- Corned end of durable, laminated steel impregnated with phenolic resin, heat-treatable to withstand wear at elevated temperatures.

Ro-Flo® Compressors Cut Your Operating Costs and Maintain Constant Efficiency

Ro-Flo® sliding-vane, positive displacement compressors feature a solid, single-piece rotor eccentrically mounted inside a water-jacketed cylinder. Gas is compressed by being trapped between rotor and the inner wall of the cylinder. Gas is transferred from the suction process to the discharge process. As the gas moves closer to the discharge port, the pressure is comparably increased until it is equal to the pressure in the discharge port area. There are no gaps in contact with the cylinder as they work by centrifugal force, and move radially in and out of the rotor slots during each revolution. This results in a constant level of efficiency and pulsation free compression.

Ro-Flo® Compressors:

- Low cost
- Reliable
- Constant efficiency
- Pulsation free
- Simple to install
- Simple to start
- Simple to use

Cut Your Operating Costs and Maintain Constant Efficiency

Ro-Flo® sliding-vane, positive displacement compressors feature a solid, single-piece rotor eccentrically mounted inside a water-jacketed cylinder. Gas is compressed by being trapped between rotor and the inner wall of the cylinder. Gas is transferred from the suction process to the discharge process. As the gas moves closer to the discharge port, the pressure is comparably increased until it is equal to the pressure in the discharge port area. There are no gaps in contact with the cylinder as they work by centrifugal force, and move radially in and out of the rotor slots during each revolution. This results in a constant level of efficiency and pulsation free compression.

Ro-Flo® Design Features Include:

- Self-adjusting, radially sliding face contacts maintain constant pressure and clearance.
- Corned end of durable, laminated steel impregnated with phenolic resin, heat-treatable to withstand wear at elevated temperatures.

Ro-Flo® Compressors: The Low-Cost, Low-Maintenance Answer to Tough Gas Applications

Dependable and Cost-Effective Ro-Flo® Rotary Compressors Offer:

- SMOOTH, CONTINUOUS FLOW: No reciprocating motion or pulsation. Foundation requirements are minimal.
- EASE OF MAINTENANCE: Normal maintenance can be done in field. Blades, seals and gaskets can be inspected and replaced without removing compressor from the system.
- MULTIPLE PRESSURES: Available in low- and high-pressure configurations.
- RELIABLE PERFORMANCE: Pressures to 150 psig and flows to 2500 acfm (3600 Mscfd) with a ±5% guarantee on performance.
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  - Balanced design and proper selection offer the highest load capacity of any shaft in the industry.
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Quality High-Performance Seals

- Self-adjusting, radially sliding face contacts maintain constant pressure and clearance.
- Corned end of durable, laminated steel impregnated with phenolic resin, heat-laminated cloth impregnated with phenolic resin, heat-treatable to withstand wear at elevated temperatures.

Durable, Precision-Engineered Rotor Shaft

- Durable, Precision-Engineered Rotor Shaft. Our standard ASTM 1144 rotor shafts feature an industry leading 25% higher load capacity than standard 300 series bearings. Our standard 316L stainless steel shafts offer the following benefits:
  - Balanced design and proper selection offer the highest load capacity of any shaft in the industry.
  - Extended life and longer operation.

Over-sized, Corrosion-Resistant Bearings

- Oversized, corrosion-resistant bearings are used to provide years of continuous, reliable compressor service. Years of research and testing has resulted in a sliding bearing that stands up to the toughest operating conditions.

Durable Design Features Include:

- Self-adjusting, radially sliding face contacts maintain constant pressure and clearance.
- Corned end of durable, laminated steel impregnated with phenolic resin, heat-treatable to withstand wear at elevated temperatures.
Ro-Flo® Compressors: The Low-Cost, Low-Maintenance Answer to Tough Gas Applications

- Designed to provide low-cost, low-maintenance advantages in dirty or corrosive gas applications, Ro-Flo® compressors can meet your specifications.
- Ro-Flo® compressors are engineered and built to give you years of reliable, continuous service with no loss of volume or pressure. Because the only wearing parts are the bearings, blades and seals, maintenance costs are minimal. When routine maintenance is required, the process is easy, on-site, without removing the compressor from the system.

Ro-Flo® Compressors Cut Your Operating Costs and Maintain Constant Efficiency

- Ro-Flo® sliding-vane, positive displacement compressors feature a solid, single rotor eccentrically mounted inside a water-jacketed cylinder. Gas is compressed by being trapped between slots during each revolution. This results in a constant level of efficiency and pulsation free compression.
- Blades, seals and gaskets can be inspected and tested at normal maintenance intervals. Maintenance can be done in the field. Special cage material for corrosion resistance.
- Double sealing: "Double bellows" zero-leakage shaft seals are available. Single face mechanical seals are fully field-rebuildable. "Double bellows" zero-leakage shaft seals are crafted to perform consistently under the dirtiest and most corrosive conditions. Double face mechanical seals are crafted to perform consistently under the dirtiest and most corrosive conditions.
- Rotor blade features: Self-adjusting, radially sliding rotor blades maintain constant pressure and flow rates. Centrifugal force keeps blades in contact with cylinder as they wear. Vanes are kept in contact with the cylinder as they wear by centrifugal force, and move radially in and out of the rotor slots during each revolution. This results in a constant level of efficiency and pulsation free compression.
- The only wearing parts are the bearings, blades and seals. Maintenance costs are minimal.
- Because the only wearing parts are the bearings, blades and seals, maintenance costs are minimal. When routine maintenance is required, the process is easy, on-site, without removing the compressor from the system.
- The key component in ensuring continuous, reliable compressor performance. Years of research and testing have resulted in a sliding-vane, positive displacement design that excels in the toughest applications. Blade shaft features: Rugged, long-life, oversize, corrosion-resistant bearings
- 400 Series bearings. We use 400 Series roller bearings for high temperature operation. Special cage material for corrosion resistance. We use 400 Series roller bearings with high temperature special cage material for corrosion resistance.
- Compressors can be operated at 45% of maximum speed to facilitate variable flow applications.

Ro-Flo® Design Features Include:

- Rugged, Long-Life Rotor Valves: Durable Ro-Flo® rotor blades are designed to maintain constant pressure and flow rates. Centrifugal force keeps blades in contact with cylinder as they wear. Vanes are kept in contact with the cylinder as they wear by centrifugal force, and move radially in and out of the rotor slots during each revolution. This results in a constant level of efficiency and pulsation free compression.
- Self-adjusting, radially sliding rotor blades maintain constant pressure and flow rates. Centrifugal force keeps blades in contact with cylinder as they wear. Vanes are kept in contact with the cylinder as they wear by centrifugal force, and move radially in and out of the rotor slots during each revolution. This results in a constant level of efficiency and pulsation free compression.
- Quality High-Performance Seals: Self-adjusting, radially sliding rotor blades are ordered to perform consistently under the dirtiest and most corrosive conditions. "Double bellows" zero-leakage shaft seals are available. Single face mechanical seals are fully field-rebuildable. Balanced design and longer life of seal face materials translate into heat build-up and wear resistance characteristics.
- Durable, Precision-Engineered Rotor Shaft: Our standard ASTM 1144 rotor shafts provide years of continuous, reliable compressor service. Years of research and testing have resulted in a sliding-vane, positive displacement design that excels in the toughest applications. Blade shaft features: Rugged, long-life, oversize, corrosion-resistant bearings
- 400 Series bearings. We use 400 Series roller bearings for high temperature operation. Special cage material for corrosion resistance. We use 400 Series roller bearings with high temperature special cage material for corrosion resistance.
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