Dresser-Rand’s (D-R) heavy-duty BOs (Big Oilfield separable) compressor line takes advantage of our more than 75 years of gas transmission and refinery compressor experience to bring exceptional reliability, durability, and flexibility to higher-horsepower gas field applications. These rugged units excel at gas lifting, and gathering, gas transmission, underground gas storage, fuel gas boosting, landfill gas recovery, and many other applications. They are suited not only for sweet natural gas services, but can be built to handle sour natural gas, propane, carbon dioxide, air, nitrogen, and most other gases.

The BOs compressor design emerged from D-R’s more than 20 years of experience and expertise developing compressor frames and cylinders on our closed-loop test facility, using a variety of field gases. The result is a new level of reliability and performance. With BOs compressors on the job, you can look forward to reduced maintenance, and reduced energy consumption.

BOs compressors are also flexible to meet your gas compression application needs. With a selection of innovative systems for controlling cylinder capacity, they can operate at a wide variety of pressure, and flow conditions without sacrificing efficiency.

The BOs is rated up to 11,250 hp and 1000 rpm, with design pressures to 7500 psig using “billet steel” cylinders. BOs compressors are available in two-, four- or six-throw configurations, with a 7.25” (184 mm) or 8.5” (216 mm) stroke, and cylinder bore sizes ranging from 6” (152 mm) to 32” (813 mm) in diameter. The rigid, cast gray iron frame is heavily ribbed and reinforced for long life, and includes separate, bolt-on frame extensions with integrally cast distance pieces. Several types of compressor cylinders are available to match various gas transmission, gas storage, and gathering, and high-pressure applications.

CUSTOM ENGINEERED TO YOUR REQUIREMENTS

Our experienced engineers will draw on numerous configurations, and component options to develop a system that precisely matches your needs.

Rigid cast gray iron frame, heavily ribbed with bolt-on cast gray iron frame extensions with integral distance piece.

BOs gas-cooled compressor cylinders between 6” (152 mm), and 24” (610 mm) bore sizes, used in most gas field applications, feature a replaceable center bore section. All D-R cylinders incorporate the most advanced engineering design, and wear parts technology available today. BOs compressors are available with water-cooled cylinders that provide additional cooling in certain higher-temperature applications. This is accomplished with a water-cooled center section. BOs gas transmission cylinders feature large gas passages, and highly effective flow areas for optimum efficiency. They are available with a complete selection of cylinder capacity controls, all designed and built by D-R. All gas gathering and transmission cylinders are made of nodular iron. A full line of higher-pressure forged steel cylinders are also available.

BOs compressors are available with water-cooled cylinders that provide additional cooling in certain higher-temperature applications. This is accomplished with a water-cooled center section. BOs gas transmission cylinders feature large gas passages, and highly effective flow areas for optimum efficiency. They are available with a complete selection of cylinder capacity controls, all designed and built by D-R. All gas gathering and transmission cylinders are made of nodular iron. A full line of higher-pressure forged steel cylinders are also available.

BOs pistons can be either solid or hollow, aluminum or cast gray iron, depending on service conditions, balancing requirements and inertia forces. Integral steel pistons, and rods may be used for high-pressure applications.

ONE SOURCE FOR ALL YOUR COMPRESSION NEEDS

D-R and its distributors can provide single-source responsibility, including engineering, manufacturing, packaging, installation, parts, and service. We back the BOs line with a network of computerized parts warehouses and service centers located throughout the U.S. and Canada. Whether used in a standard or customized package, in rental service, or purchased outright, BOs compressors will deliver the flexibility, reliability, efficiency, and long life necessary to meet your operating needs.
The components of every BOS compressor are designed to enhance performance. The compressor frame and all cylinders are matched to provide years of reliable, efficient service. The open-top frame construction ensures rigidity while providing large access areas for maintenance and inspection.

A full-length frame extension piece with oversized access doors provides easy access to running gear components, allowing for easy inspection, adjustment, or removal. Cylinder performance is enhanced by using high-efficiency valves with high effective flow areas (EFA), and ample-size gas passages to minimize losses.

High-strength, nodular iron crossheads feature shim-adjustable aluminum shoes at top, and bottom. Surface-hardened crosshead pins are full floating for optimum reliability.
Forged steel connecting rods are rifle-drilled for pressure lubrication and feature high-strength bolts with rolled threads. Main bearings are aluminum with micro-babbitt overlay. Crankpin bearings are steel-backed aluminum tri-metal with a micro-babbitt overlay plate for embedability, and corrosion resistance. Connecting rod pin bushings are bronze with babbitt overlay.

Both valves use D-R’s exclusive “Hi-Temp” nonmetallic wear parts material.

Induction-hardened AISI 4140 steel piston rods feature rolled threads for optimum fatigue strength. Each piston rod is wet-magnetic-particle inspected. Every piston rod thread form is inspected using Johnson gauging.

The heavy-duty forged alloy steel crankshaft is balanced, and rifle-drilled for pressure lubrication. The crankshaft is counterweighted to reduce horizontal moments.
### Specifications and Dimensions

- **Frame**: One-Piece, High-Strength Cast Gray Iron
- **Crankshaft**: Solid Aluminum with Micro-Babbitt Overlay
- **Connecting Rods**: Alloy Steel, Rolled Threads
- **Crossheads**: Nodular Iron
- **Crosshead Pins**: Surface-Hardened Alloy Steel
- **Bearings—Main**: Solid Aluminum with Micro-Babbitt Overlay
- **Bearings—Crankpin**: Steel-Backed Aluminum with Micro-Babbitt Overlay
- **Bearing—Connecting Rod**: Bronze with Babbitt Overlay
- **Frame Extension/Distance Pc**: One-Piece, High-Strength Cast Gray Iron
- **Cylinders**: Nodular Iron, Cast Gray Iron and Steel
- ** Pistons**: Aluminum or Cast Gray Iron
- **Piston Rods**: Alloy Steel with Rolled Threads
- **Piston Rod Packing Rings**: Glass-Filled Teflon®
- **Oil Pump**: Positive Displacement Gear-Type
- **Oil Filter**: Full-Flow, 10 Micron
- **Oil Cooler**: Shell-and-Tube Type

### Cylinder Displacement

<table>
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<tr>
<th>Cylinder Size in.</th>
<th>MAWP psig (kg/cm²)</th>
<th>7.25°F Stroke Displacement (cu.in.)</th>
<th>Nominal Rated Power hp (kW)</th>
<th>Max. Allowable Operating Rod Load lbs. (kN)</th>
<th>Rated rpm</th>
<th>Approximate Gross Weight lbs. (kg)</th>
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**Notes:**
- Cylinder Displacement includes the displacement of the piston, connecting rod, and crosshead.
- MAWP: Maximum Allowable Working Pressure
- Pressure units are in psi (kPa), where 1 psi = 6.905 kPa.
- Nominal Rated Power is the power output at the rated speed.
- Max. Allowable Operating Rod Load is the maximum load the piston rod can withstand without failure.
- Rated rpm is the rated speed of the compressor.
- Approximate Gross Weight is the weight of the compressor, including all components.

*Includes compressor frame, running gear, and cylinders.

**Dimensions shown apply to 7.25" stroke. For 8.50" stroke, add 1.25" to "B", and "C" dimensions.
For more information on the BOS compressor, visit www.dresser-rand.com/gfc or contact us at:

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