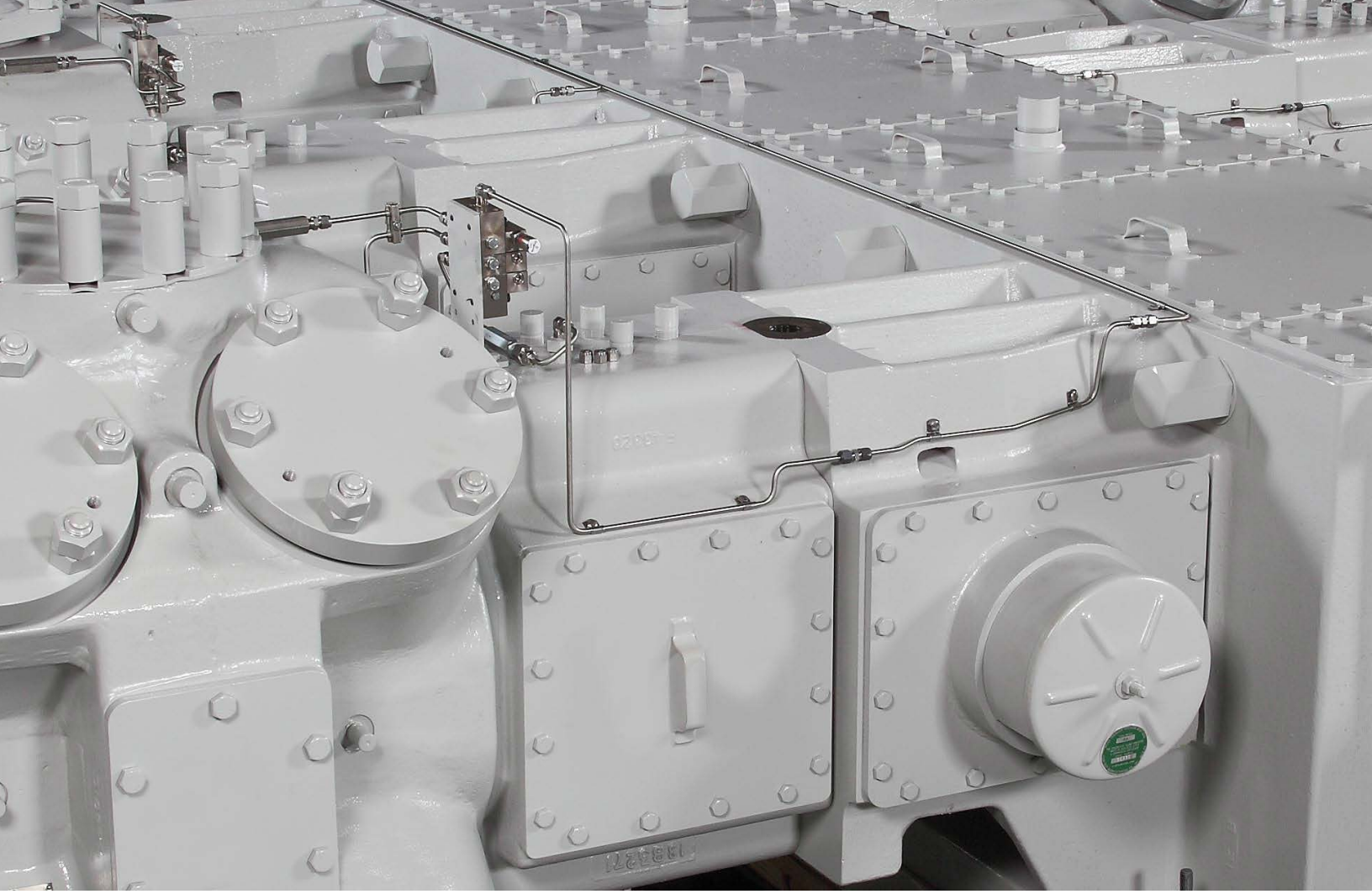


Dresser-Rand BDC-18H3

Reciprocating Process Compressor

The BDC reciprocating process compressor has earned a reputation for long-lasting performance. During the past 70 years, advancements in design and material technologies have allowed continuous improvement to the BDC's design and manufacture. With more than 1,200 units shipped worldwide, the BDC process compressor is an excellent choice for a variety of process gas applications.

Rugged Performer

The BDC frame is engineered to the highest standards. The fine-grain, cast iron frame provides maximum stability through the use of heavily ribbed walls and bearing saddles. The frame's rigid design is further enhanced with precision spacer blocks and dual tie rods above each bearing saddle and each pair of crank throws to reduce distortion caused by gas and inertia forces. To ensure precise bearing alignment, the bearing saddles are bored in a single set-up.

Precision-Built, Balanced-Opposed Design

Each BDC is built with a fixed crank design that reduces couples. The crankshaft is forged from high-tensile strength alloy steel that is fully stress-relieved and heat-treated. All journals and crankpins are precision ground and polished to exact tolerances.

SIEMENS energy

siemens-energy.com/reciprocating-compressors

Rugged, precision-machined tri-metal main and crankpin bearings are generously sized for long-lasting service. Bearings are positioned on both sides of each pair of crankthrows. All bearings are forced-lubricated per API-618 specifications. Connecting rods are rifle-drilled for lubrication of the crosshead pin bushing.

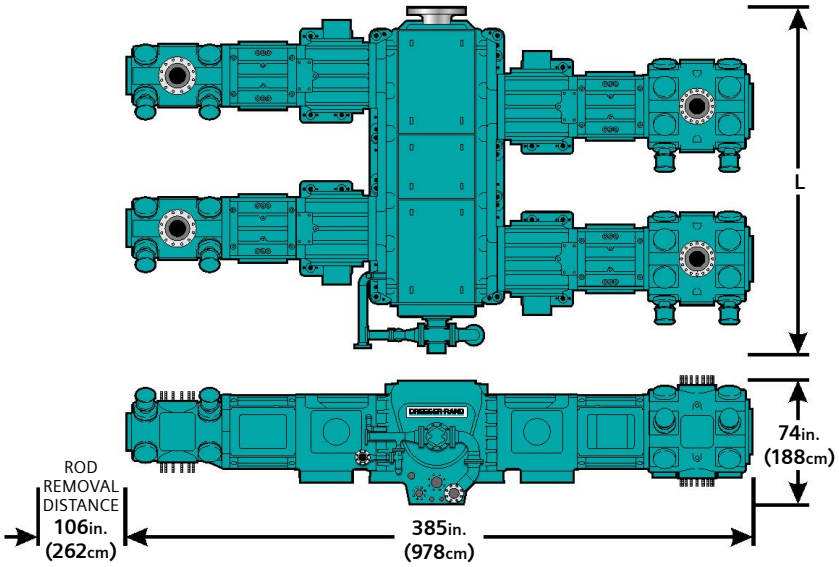
The flanged crosshead is designed for error-free assembly, ensuring maximum reliability through the accurate hydraulic pre-stressing of the critical piston-to-crosshead bolting. Hydraulic tensioning reduces labor and maintenance downtime, while increasing safety and reliability. The crosshead flange is firmly secured to the piston rod by a hydraulically tensioned nut and the flange is then attached to the crosshead using six hydraulically tensioned studs. The design employs an adjusting ring on the nose of the crosshead to facilitate adjustment of piston rod runout without having to re-shim the crosshead shoes.

A spacer provides simple, one-time adjustment of piston-to-cylinder end clearance. The hydraulics are located in the tensioning tool instead of the piston nut, where an O-ring failure may necessitate torching through the rod to disassemble the joint. An air-motor driven hydraulic pump, tensioning devices, and piston rod alignment tools are provided.

All frame and distance piece inspection and service openings are extra large to permit easy access. The frame-to-frame extension, frame extension-to-distance piece, and distance piece-to-cylinder bolting is external, making hydraulic tensioning easy and accurate.

Specifications

Maximum HP	45,000 (33,556 kW)
Standard strokes	12 to 16 inch (305 to 406 mm)
Number of throws	2, 4, 6, 8, or 10
Cylinder bore range	7 to 48.5 inch (178 to 1,232 mm) max bore



BDC-18H3 Typical Length (L) Dimension

Throws	2	4	6	8	10
Inches	119	192	267	341	417
Centimeters	302	488	679	869	1,059

Outstanding Cylinder Design and Selection

Each cylinder is capable of loading the frame's maximum allowable continuous rod load. All cylinder bolting, piston nut, and valve differential pressures meet this design criteria to permit future flexibility if process conditions change or the compressor is reapplied to another application. Cylinders are available for lubricated or non-lubricated service. Materials include nodular iron, cast steel, fabricated carbon or stainless steel, and forged steel.

Dimensions

Dimensions provided are typical, basis API Type B distance pieces. For Type C & D distance pieces add 34 inches (86 cm) to the width dimension and 17 inches (43 cm) to the rod removal distance.

Published by
Siemens Energy Global GmbH & Co. KG
Industrial Applications
Freyeslebenstraße 1
91058 Erlangen
Germany

Published by
Siemens Energy, Inc.
Industrial Applications
15375 Memorial Drive, Suite 700
Houston, TX 77079
USA
For more information, please contact
Phone: +1 832-679-8500
Article No. PGOG-B10028-00-7600