

Dresser-Rand HHE-VB

Reciprocating Process Compressor

Our first HHE-class compressor was installed more than 50 years ago. Continuous advancements in technology have allowed us to enhance the HHE's reputation as a highly reliable, heavy-duty process compressor. With more than 3,000 units serving in applications around the world, the HHE process compressor has proven to be an outstanding choice for a variety of applications.

Rugged Performer

The HHE-VB offers a sizable solution to a majority of process requirements. Designed to API-618 specifications, the HHE-VB is available in standard stroke sizes of 8.5, 10, 11, or 12 inches (216, 254, 279, or 305 mm) with up to six throws.

For long-lasting reliability, the HHE-VB frame is engineered to the highest standards. The fine-grain, cast iron frame provides maximum stability through the use of internally ribbed walls and integral cross-member bearing saddle supports located between each crankthrow. The frame's rigid design is further enhanced with precision spacer blocks and tie rods at each bearing point. This greatly reduces distortion caused by gas and inertia forces. To ensure precise bearing alignment, the bearing saddles are bored in a single set-up.

Optimized Design, Precision-Built

Every HHE-VB is built with optimized crank angles and a minimum number of crank throws, resulting in minimal unbalanced forces and moments on the foundation. Available with up to six throws, the HHE-VB frame is designed with intergral frame extension crosshead guides. The design flexibility does not limit the HHE-VB to an even number of crank throws. The result of this variable crank angle design is a compressor that requires minimum foundation size and expense, reduced drive-train torsional stresses, and reduced motor current pulsation and power costs. 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 exacting tolerances.

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Rugged, precision-machined, tri metal main and crankpin bearings are generously sized and micro-babbit coated for best run-in and long-lasting service. Bearings are provided on both sides of each crankthrow and doubled at the drive end. All bearings are forced-lubricated per API-618 specifications. Connecting rods are die-forged steel with rifle-drilled passages for positive lubrication of the crosshead pin and bearings.

The nodular iron crosshead is equipped with adjustable top and bottom aluminum shoes which are babbit coated to facilitate proper run-in. To reduce unbalanced primary forces, balance weights can be added. The crosshead utilizes a multi-bolt torque nut to properly tension the piston rod to the crosshead. This permits tightening without the need for large slug wrenches.

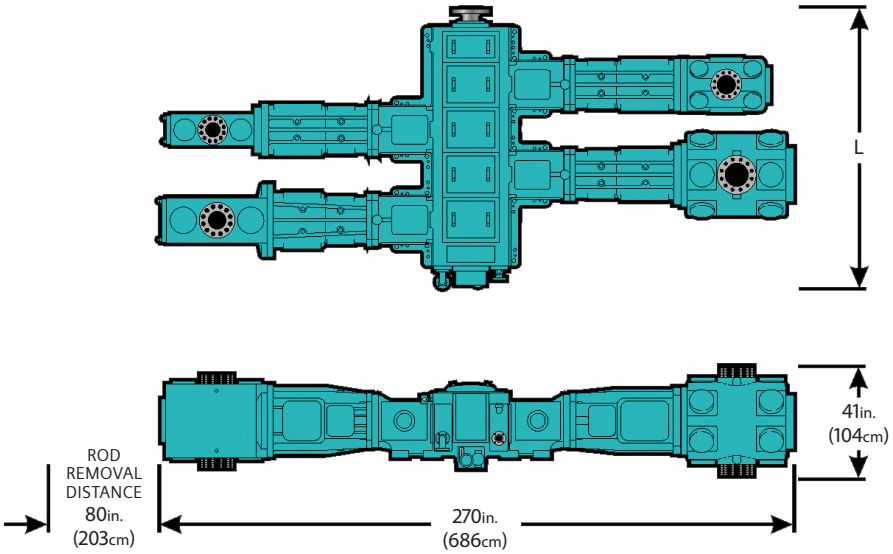
All frame and distance piece inspection and service openings are extra large to permit easy access. Bolting for frame-to-frame extension, frame extension-to-distance piece, and distance piece-to-cylinder is external, making tensioning easy and accurate.

Outstanding Cylinder Design and Selection

Each cylinder is designed with the capability of loading the frames maximum allowable continuous rod load. All cylinder bolting, piston nut, and valve differential pressures meet this design criteria. This will permit future flexibility if process conditions change or the compressor is reapplied for another application.

Specifications

Maximum HP	5,000 (3,729 kW)
Standard strokes	8.5 to 12 inch (216 to 305 mm)
Number of throws	Up to 6
Cylinder bore range	5 to 38.5 inch (127 to 978 mm) max bore



HHE-VB Typical Length (L) Dimension

Throws	1	2	3	4	5	6
Inches	63	84	105	125	146	166
Centimeters	161	213	266	318	370	423

With experience in virtually every type of service, our cylinders provide outstanding service and reliability. Our engineering expertise will ensure that each cylinder built for your application will provide maximum performance and reliability with minimum maintenance cost. Cylinder materials include nodular iron, cast steel, fabricated carbon or stainless steel, and forged steel. Most cylinders are available for either lubricated or non-lubricated service.

Dimensions

Dimensions provided are typical, and are basis API Type B distance pieces. For API Types C & D distance pieces, add 26.6 inches (68 cm) to the width dimension and 13.3 inches (34 cm) to the rod removal distance.

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Siemens Energy, Inc.
Industrial Applications
15375 Memorial Drive, Suite 700
Houston, TX 77079
USA

For more information, please contact
Phone: +1 832-679-8500

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