

YOUR AUTHORIZED PACKAGER

COBEY®

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DRESSER-RAND



C-VIP

compressors

Every component of the VIP frame is designed to provide built-in reliability and simplicity.



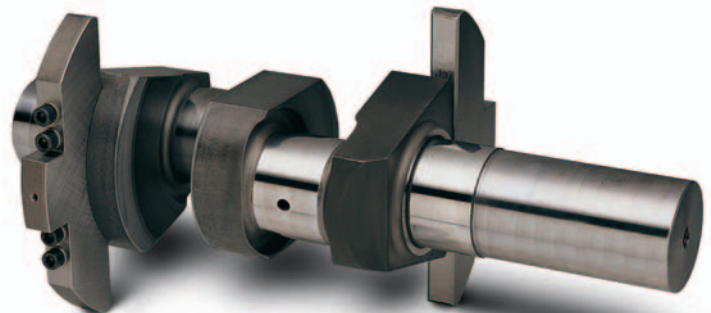
Dresser-Rand's VIP cylinder incorporates advanced technology that is matched by our proven frame. The 4C-VIP has a 4" (101.6 mm) stroke and is rated up to 2880 hp (2148 kW) at a maximum 1800 rpm. The 5C-VIP has a 5" (127 mm) stroke and is rated up to 2400 hp (1790 kW) at 1500 rpm. The 6C-VIP has a 6" (152.4 mm) stroke and is rated up to 1920 hp (1432 kW) at 1200 rpm.

Every component of the frame is designed to provide built-in reliability and simplicity. This rugged frame has proven itself in years of tough gas field service. It is available in two or four throws and is an ideal match for the VIP cylinder. Here's why.

Rugged frame casting has integral crosshead guides to ensure permanent alignment. Oil scraper and packing rings can be easily inspected and serviced through side openings in the crosshead guide housing.

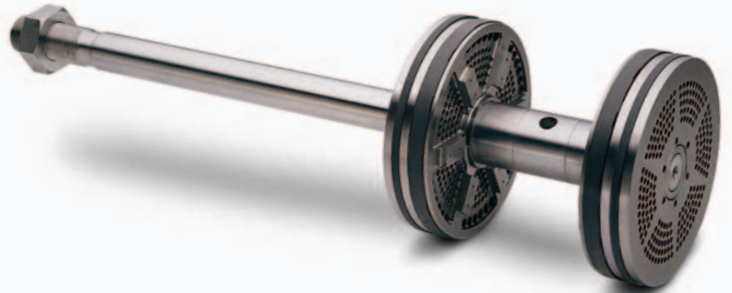
Dresser-Rand's exclusive PF valves with Hi-Temp™ plates are used to improve flow and efficiency, and to provide longer operating life.

The VIP compressor design eliminates the conventional piston, replacing it with a combination piston-valve that significantly reduces reciprocating weights. This allows higher rotative speeds at shorter strokes without inertia loading. The result is a highly efficient, smooth running compressor.

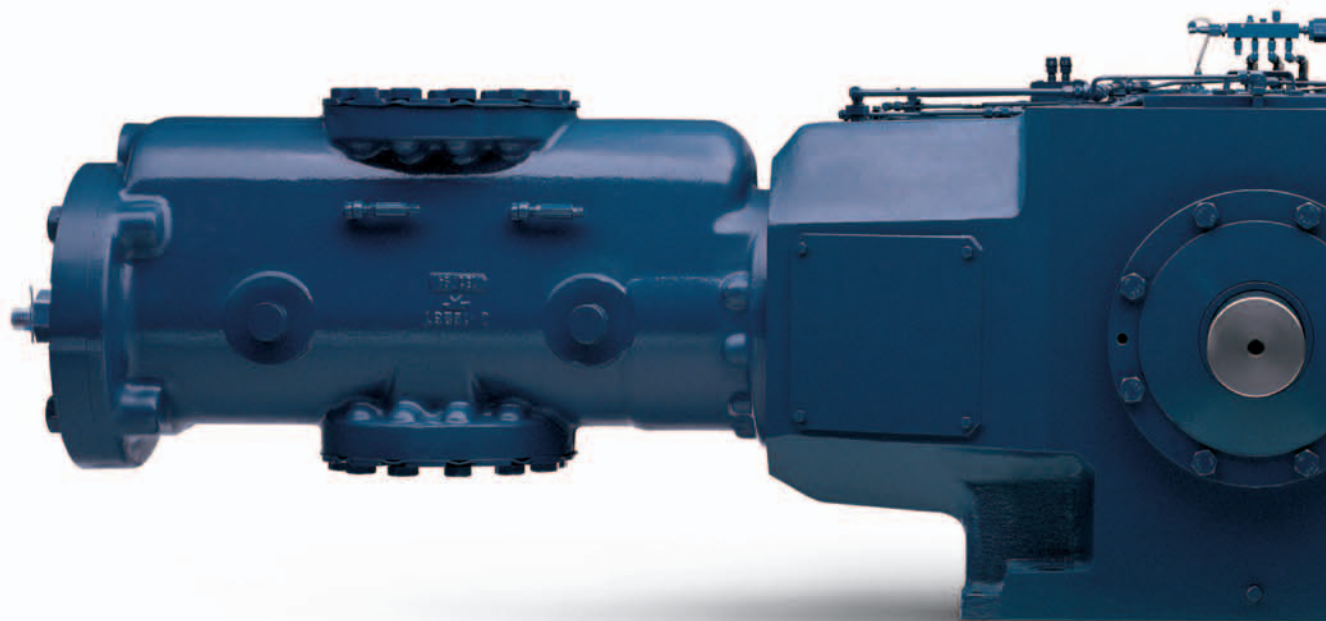


Heavy-duty, proven frame complem

The patented I-beam crossheads are lightweight, single-piece nodular iron with pressure lubrication to the wearing surfaces. A variety of crosshead balance weights is available to meet all balancing requirements. The rod loads are transmitted directly to forged steel connecting



rods through high-strength carbon steel connecting rod pins contained within aluminum alloy connecting rod bushings. Rod bearings are tri-metal precision-insert for durable, long-time operation.



ments VIP technology.

The heavy-duty forged steel crankshaft is statically balanced. Throws are set at 180 degrees (90 degrees with four throws) and the crankshaft is counter-weighted to reduce horizontal moments.

The frame for the C-VIP compressor has a positive displacement, gear-type oil pump driven directly from the crankshaft. It provides full-pressure lubrication to the running gear and crosshead.



RATINGS

Model	Stroke in. (mm)	Number of Cylinders	Nominal Rated Power hp (kW)	Max. Allowable Rod Load lbs. (kN)	Rated rpm
6C-VIP2	6 (152.4)	2	960 (716)	33000 (147)	1200
6C-VIP4	6 (152.4)	4	1920 (1432)	33000 (147)	1200
5C-VIP2	5 (127)	2	1200 (895)	33000 (147)	1500
5C-VIP4	5 (127)	4	2400 (1790)	33000 (147)	1500
4C-VIP4	4 (101.6)	2	1440 (1074)	33000 (147)	1800
4C-VIP4	4 (101.6)	4	2880 (2148)	33000 (147)	1800

Cylinder Size in. (mm)	MAWP psig (kg/cm2)	Piston Displacement			
		4" (101.6 mm) Stroke @ 1500 rpm -or- 5" (127 mm) Stroke @ 1200 rpm CFM (m ³ /hr.)	4" (101.6 mm) Stroke @ 1800 rpm -or- 6" (152.4 mm) Stroke @ 1200 rpm CFM (m ³ /hr.)	5" (127 mm) Stroke @ 1500 rpm CFM (m ³ /hr.)	4" (101.6 mm) Stroke @ 1200 rpm CFM (m ³ /hr.)
4.25 (108.0)	2250 (158.2)	88 (150)	105 (179)	110 (187)	70 (119)
5 (127.0)	2250 (158.2)	125 (213)	151 (257)	157 (267)	100 (170)
5.5 (139.7)	1925 (135.4)	154 (262)	185 (315)	193 (329)	123 (209)
6 (152.4)	1925 (135.4)	185 (315)	223 (380)	232 (395)	148 (252)
6.5 (165.1)	1375 (96.7)	220 (375)	263 (448)	274 (467)	176 (300)
7.125 (181.0)	1375 (96.7)	266 (453)	319 (543)	332 (565)	212 (361)
7.75 (196.9)	1150 (80.9)	317 (540)	380 (647)	396 (674)	253 (431)
8.5 (215.9)	1150 (80.9)	383 (652)	460 (783)	479 (816)	307 (523)
9.25 (235.0)	750 (52.7)	456 (777)	547 (932)	570 (971)	365 (622)
10 (254.0)	750 (52.7)	535 (911)	641 (1092)	668 (1138)	428 (729)
11.25 (285.8)	495 (34.8)	679 (1156)	815 (1388)	849 (1446)	544 (926)
12.5 (317.5)	495 (34.8)	841 (1432)	1010 (1720)	1052 (1792)	673 (1146)
13.75 (349.3)	275 (19.3)	1020 (1737)	1224 (2084)	1275 (2171)	816 (1390)
15 (381.0)	275 (19.3)	1216 (2071)	1460 (2486)	1520 (2589)	973 (1657)
16.25 (412.8)	215 (15.1)	1429 (2434)	1715 (2921)	1787 (3043)	1143 (1947)
17.5 (444.5)	215 (15.1)	1659 (2825)	1991 (3391)	2074 (3532)	1328 (2262)
19 (482.6)	215 (15.1)	1958 (3334)			1566 (2667)
20.5 (520.7)	215 (15.1)	2281 (3885)			1825 (3108)

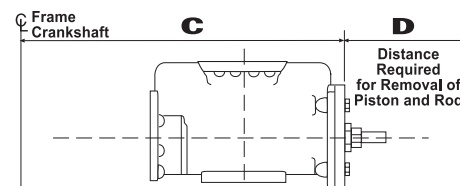
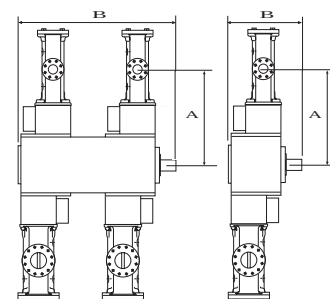
Model	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)
C-VIP236.94	45 (1143.0)	47.25 (1200.2)	72.25 (1835.2)	37 (939.8)
C-VIP436.94	45 (1143.0)	85.25 (2165.4)	72.25 (1835.2)	37 (939.8)

Specifications and Dimensions

Frame	Cast Gray Iron
Crankshaft	Forged Steel
Connecting Rods	Forged Steel
Connecting Rod Pins	Steel
Connecting Rod Bolts	Alloy Steel, Rolled Threads
Crossheads	Patented Nodular Iron I-beam Crossheads
Bearings - Main	Spherical Roller
Bearings - Crankpin	Tri-metal Bronze
Bushings - Connecting Rod	Aluminum Alloy
Cylinders	Gray and Nodular Iron
Piston Rods	AISI 4142 Carbon Steel
Piston Rod Packing Rings	Carbon-filled Teflon®
Oil Pump	Positive Displacement Gear-type
Oil Filter	Full-flow, 25 Micron
Oil Cooler	Shell-and-Tube

Compressor Cylinder

- Cast nodular iron cylinder barrel with integral crank end head for cylinder bores 4.25" (108.0 mm) through 5" (127.0 mm)
- Cast gray iron cylinder barrel with integral crank end head for cylinder bores 5.5" (139.7 mm) through 20.5" (520.7 mm)
- Manually operated variable volume clearance pocket
- AISI 4142 steel piston rods
- AISI 4142 steel suction and discharge valves (piston)
- PF-style plate valves complete with Hi-Temp, non-metallic PEEK plates and chrome silicon springs with Teflon® spring inserts
- Teflon® piston rings and riders for bore sizes 4.25" (108.0 mm) to 10" (254.0 mm)
- Carbon glass carbon filled Teflon® rings, for bore sizes above 10" (254.0 mm) combination ring type
- Carbon filled Teflon® piston rod packing rings
- .75 NPT plugged connections for indicator ports on outer end and frame end of all cylinders
- .75 NPT plugged connections for temperature thermowell on outer end and frame end inlet passage
- Inlet and discharge connections on all cylinders are standard ANSI F.F. flanges
- Six sets of parts lists and operating manuals
- One reproducible print of certified outline drawings (or furnished in electronic format)



Optional Features

- Carpenter Custom 450® piston rods with D-R TC3 coating
- Annealed 4142 piston rods with D-R TC3 coating
- Crankcase and lubricator oil heaters
- Crankcase explosion relief devices
- Dynamic valve analysis
- API 618 Type A, B, C, and D distance piece
- Purged packing case
- Pump-to-point cylinder lubrication
- Main bearing RTDs
- Torsional studies
- Flywheel (if required)
- Dual oil filter
- Liquid level controller
- Balance cylinders
- Purged wiper case

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