



YOUR AUTHORIZED PACKAGER



DRESSER-RAND



# A-VIP compressors

The most advanced method of gas compression, simplified...



The VIP cylinder incorporates advanced technology that is matched by our proven frame. That's why Dresser-Rand chose to match the A-VIP cylinder with a highly reliable frame with years of proven gas field experience.

The 3.5A-VIP model frame has a 3.5" (88.9 mm) stroke and is available in two or four throws up to 1300 hp (969 kW) at a maximum 1800 rpm. The 4.5A-VIP model frame has a 4.5" (114.3 mm) stroke and is available in two or four throws up to 1080 hp (805 kW) at a maximum 1500 rpm. It is an ideal match for the VIP cylinder. Here's why.

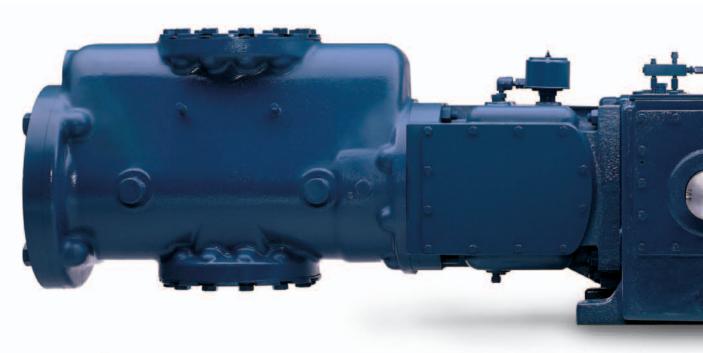
The VIP frame is one of the most rugged and dependable frames available. It is cast iron, enclosed, and oil- and dust-tight.

Exclusive Dresser-Rand PF valves with Hi-Temp™ plates are used to improve gas 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.



# **Proven Dresser-Rand frame is**





The forged steel crankshaft is proven for 1,800 rpm operation in tough gas field service. Throws are set at 180 degrees (90 degrees with four throws) and the crankshaft is counterweighted to reduce horizontal moments.

Aluminum, precision-insert main bearings are specifically designed to meet the demands of VIP operation.

The patented I-beam crossheads are made of lightweight materials (single-piece nodular iron or aluminum alloy 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 aluminum, precision inserted for durable, long-time operation.

# perfectly matched to VIP Cylinder.



The A-VIP compressor frame incorporates a gear-rotor oil pump directly driven from the crankshaft. This provides full pressure lubrication to the running gear and crosshead. The frame comes standard with an integral pressure regulator/relief valve.



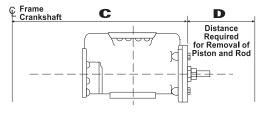


DRESSER-RAND

	RATINGS					
	Model	Stroke in. (mm)	Number of Cylinders	Nominal Rated Power hp (kW)	Max. Allowable Rod Load Ibs. (kN)	Rated rpm
Ì	4.5A-VIP2	4.5 (114.3)	2	540 (403)	15400 (68)	1500
Ī	4.5A-VIP4	4.5 (114.3)	4	1080 (805)	15400 (68)	1500
Ī	3.5A-VIP2	3.5 (88.9)	2	650 (485)	15400 (68)	1800
	3.5A-VIP4	3.5 (88.9)	4	1300 (969)	15400 (68)	1800

Cylinder Size in. (mm)	MAWP psig (kg/cm <sup>2</sup> )	3.5" (88.9 mm) Stroke @ 1500 rpm CFM (m <sup>3</sup> /hr.)	3.5" (88.9 mm) Stroke @ 1800 rpm CFM (m <sup>3</sup> /hr.)	4.5" (114.3 mm) Stroke @ 1200 rpm CFM (m <sup>3</sup> /hr.)	Piston Displacment 4.5" (114.3 mm) Stroke @ 1500 rpm CFM (m <sup>3</sup> /hr.)
()		or in (iii /iii.)	31 iii (iii /iii.)	3. m ( /)	St ( /)
4.25 (108.0)	1650 (116.0)	82 (140)	98 (167)	84 (143)	105 (179)
5 (127.0)	1375 (96.7)	115 (196)	138 (235)	118 (201)	148 (252)
5.5 (139.7)	1150 (80.9)	140 (238)	168 (286)	144 (245)	180 (307)
6 (152.4)	1150 (80.9)	167 (284)	201 (342)	172 (293)	215 (366)
6.5 (165.1)	825 (58.0)	197 (335)	237 (404)	203 (346)	253 (431)
7.125 (181.0)	825 (58.0)	237 (404)	285 (485)	245 (417)	306 (521)
7.75 (196.9)	605 (42.5)	282 (480)	339 (577)	290 (494)	363 (618)
8.5 (215.9)	605 (42.5)	340 (579)	408 (695)	350 (596)	438 (746)
9.25 (235.0)	585 (41.1)	404 (688)	485 (826)	415 (707)	519 (884)
10 (254.0)	585 (41.1)	473 (806)	567 (966)	486 (828)	608 (1035)
11.25 (285.8)	440 (30.9)	599 (1020)	719 (1224)	617 (1051)	771 (1313)
12.5 (317.5)	440 (30.9)	741 (1262)	889 (1514)	762 (1298)	953 (1623)
13.75 (349.3)	275 (19.3)	898 (1529)	1077 (1834)	923 (1572)	1154 (1965)
15 (381.0)	275 (19.3)	1069 (1821)	1283 (2185)	1100 (1873)	1375 (2342)

in. (mm)	in. (mm)	in. (mm)	in. (mm
36.94 (938.3)	40.5 (1028.7)	59.25 (1505.0)	32.25 (819.2
36.94 (938.3)	77 (1955.8)	59.25 (1505.0)	32.25 (819.2)
10.44 (1027.2)	40.5 (1028.7)	63.56 (1614.4)	35.44 (900.2
10.44 (1027.2)	77 (1955.8)	63.56 (1614.4)	35.44 (900.2
	36.94 (938.3) 36.94 (938.3) 40.44 (1027.2)	36.94 (938.3) 40.5 (1028.7) 36.94 (938.3) 77 (1955.8) 40.44 (1027.2) 40.5 (1028.7)	36.94 (938.3) 40.5 (1028.7) 59.25 (1505.0) 36.94 (938.3) 77 (1955.8) 59.25 (1505.0) 40.44 (1027.2) 40.5 (1028.7) 63.56 (1614.4)

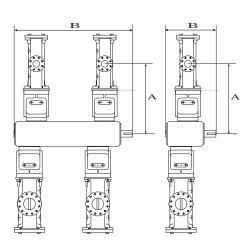


# **Compressor Frame**

- Rugged cast gray iron frame with bolt-on crosshead guides
- Frame inspection openings with steel covers
- Heavy duty balanced forged steel crankshaft
- Forged steel connecting rods
- Patented nodular iron or aluminum I-beam crossheads
- Horizontally split precision type aluminum alloy main bearings
- Horizontally split precision type aluminum crankpin bearings
- Aluminum alloy connecting rod bushings
- AISI 4142 steel connecting rod pin
- Crankcase filter-breather
- Metallic oil wiper rings
- Main lube oil pump directly driven from crankshaft complete with relief valve
- Single full-flow lube oil filter
- Shell-and-tube lube oil cooler
- All frame lube oil piping is stainless steel downstream of the filter
- · Bulls-eye oil level gauge
- Oil pressure gauge for frame lube oil
- Hand-operated frame mounted prelube pump
- Force-fed cylinder lubrication system
- Set of special tools consisting of crosshead nut wrench, piston rod entering sleeve, valve disassembly tool, hex tools and extension socket

# **Compressor Cylinder**

- Rugged cast gray iron frame with bolt-on crosshead guides
- Cast gray iron cylinder barrel with integral crank end head
- 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<sup>®</sup> spring inserts
- Carbon filled Teflon<sup>®</sup> piston rings and rider bands for bore sizes 3.5" (88.9 mm) to 10" (254.0 mm)
- Carbon-glass-carbon filled Teflon<sup>®</sup> combination rings for bore sizes more than 10" (254.0 mm)
- Carbon filled Teflon<sup>®</sup> 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 Materials For**

- Acid gas service
- Sour gas service

# DRESSER-RAND



ONE SHIP CANAL PARKWAY • BUFFALO, NY 14218 PH: +1.716.362.9550 • WWW.COBEY.COM

For more information on the A-VIP compressor, visit us on the Internet at www.dresser-rand.com/gfc or contact us at:

**Dresser-Rand Company Gas Field Compressors** 

1354 South Sheridan Road Tulsa, Oklahoma 74112-5416

USA

Phone: (918) 254-4099 Fax: (918) 252-9055

E-mail: GFC@dresser-rand.com

**Dresser-Rand Company Reciprocating Operations** 

100 Chemung Street Painted Post, NY 14870

Phone: (607) 937-2011 Fax: (607) 937-2905

For a complete list of D-R products and services, visit us on the Internet at www.dresser-rand.com or contact us at the following locations:

# **Company Headquarters**

Dresser-Rand Company 1200 West Sam Houston Pkwy. N. Houston, TX 77043

Tel: 713-467-2221 Fax: 713-935-3490

email: info@dresser-rand.com

# **Regional Headquarters**

### The Americas

**Dresser-Rand Company** 1200 West Sam Houston Pkwy. N. Houston, TX 77043

Tel: 713-467-2221 Fax: 713-935-3490

# **European Served Areas (ESA)**

(Europe, Eurasia, Middle East, Africa) Dresser-Rand S.A. 31 Boulevard Winston Churchill

Cedex 7013

Le Havre 76080 France Tel: 33-2-35-25-5225

Fax: 33-2-35-25-5366 / 5367

# Asia-Pacific

Dresser-Rand Asia Pacific Sdn Bhd Unit 8-1, 8th Floor Bangunan Malaysian Re 17 Lorong Dungun Damansara Heights 50490 Kuala Lumpur, Malaysia

Tel: 603-2093-6633 Fax: 603-2093-2622



©2004 Dresser-Rand Company. Printed in U.S.A. Form 85200

This document comprises a general overview of the products described herein. It is solely for informational purposes, does not represent a warranty of the information contained herein and is not to be construed as an offer to sell or a solicitation to buy. Contact Dresser-Rand Company for detailed design and engineering information suitable to your specific applications. Dresser-Rand Company reserves the right to modify its products and related product information at any time without prior notice.