



**Quality Products
Engineered to Last**

VRS-2

GAS COMPRESSOR SPECIFICATIONS



ARROW™

ENGINE COMPANY

**A Tradition of Excellence
Since 1955**

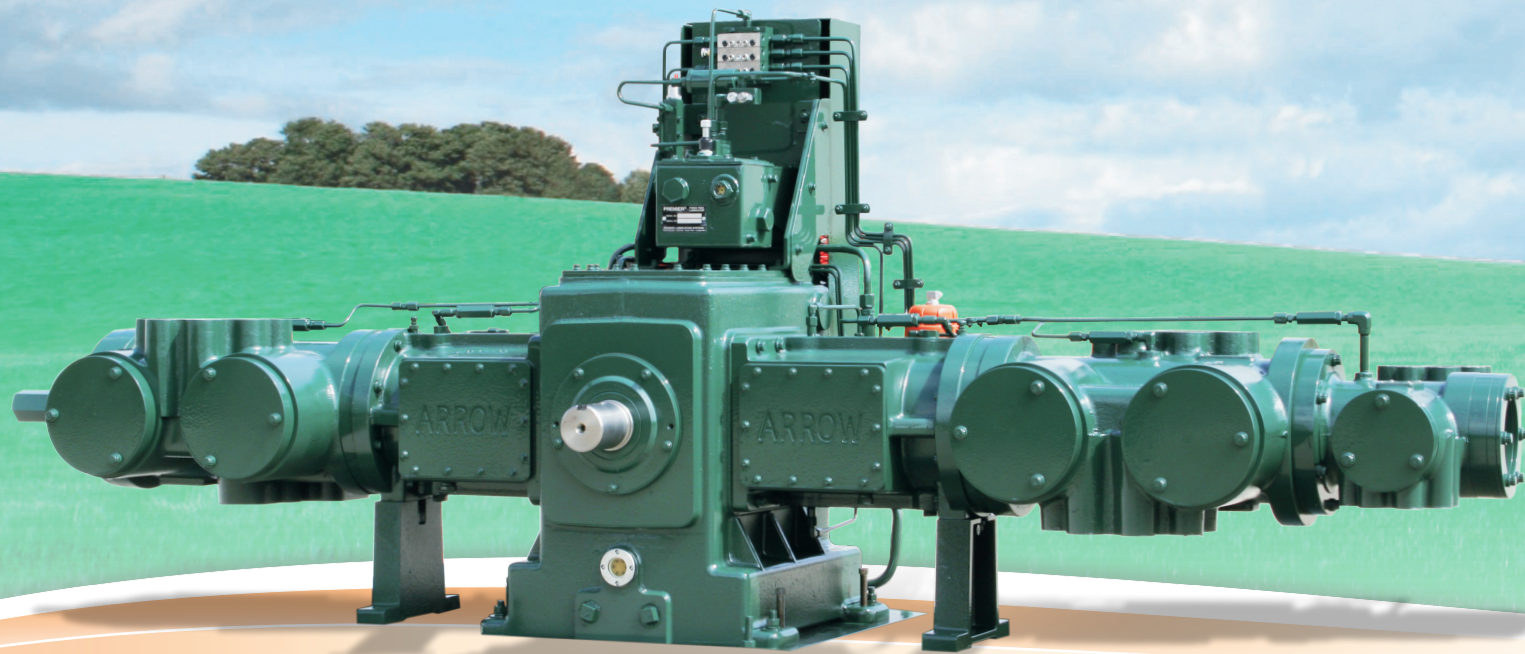
VRS-2 GAS COMPRESSOR

Double-Acting Cylinder Data

Bore In	Flange Size In/Rating	Valve Type	Lift Area Suct/Disch Sq/In	Valve Lift Suct/Disch In.	Added HE Clearance Max %	MAWP PSIG	RDP PSIG
2.5	1.5"/900#	42 CRE	0.82/0.59	.055/.039	44 w/HD SPACERS	2250	2025
2.5 HP	1.5"/1500#	42 CRE	0.59/0.47	.039/.031	44 w/HD SPACERS	2750	2475
3.0	1.5"/900#	42 CRE	0.82/0.59	.055/.039	40 w/HD SPACERS	2250	2025
3.0 HP	1.5"/1500#	42 CRE	0.59/0.47	.039/0.31	40 w/HD SPACERS	2750	2475
3.5	2"/600#	60 CRE	1.90/1.43	.063/.047	56 w/VVCP	1270	1150
4	2"/600#	60 CRE	1.90/1.43	.063/.047	42 w/VVCP	1270	1150
4.5	2.5"/600#	70 CRE	2.25/1.69	.063/.047	52 w/VVCP	1100	990
5	2.5"/600#	70 CRE	2.25/1.69	.063/.047	42 w/VVCP	1100	990
5.5	3"/300#	88 CRE	3.88/3.09	.079/.063	52 w/VVCP	635	575
6	3"/300#	88 CRE	3.88/3.09	.079/.063	44 w/VVCP	635	575
6.5	4"/300#	98 CRE	4.31/3.44	.079/.063	59 w/VVCP	500	450
7	4"/300#	98 CRE	4.31/3.44	.079/.063	52 w/VVCP	500	450
7.5	4"/300#	105 CRE	5.83/4.67	.079/.063	59 w/VVCP	350	315
8	4"/300#	105 CRE	5.83/4.67	.079/.063	52 w/VVCP	350	315
9.5	6"/150#	98 CRE (2/corner)	4.31/3.44	.079/.063	100 w/VVCP	250	225
10	6"/150#	98 CRE (2/corner)	4.31/3.44	.079/.063	96 w/VVCP	250	225

Steeple Cylinder Data

Bore In	Flange Size In/Rating	Valve Type (Hoerbiger)	Lift Area Suct/Disch Sq/In	Valve Lift Suct/Disch In.	Added Clearance / Max %	MAWP PSI	RDP PSI
3.5/ 2.25	2.0"/600# X 1.5"/1500#	60 CRE 42 CRO	1.90/1.43 0.76/0.65	.063/.047 .055/.047	26 W/HD SPACERS	1270/2550	1150/2025
4.0/2.25	2.0"/600# X 1.5"/1500#	60 CRE 42 CRO	1.90/1.43 0.76/0.65	.063/.047 .055/.047	26 W/HD SPACERS	1270/2550	1150/2025
4.5/2.50	2.5"/600# X 1.5"/1500#	70 CRE 42 CRO	2.25/1.69 0.76/0.65	.063/.047 .055/.047	26 W/HD SPACERS	1100/2250	990/2025
4.5/3.0	2.5"/600# X 1.5"/900#	70 CRE 60 CRO	2.25/1.69 1.64/1.23	.063/.047 .063/.047	26 W/HD SPACERS	1100/1500	990/1350
4.5/3.5	2.5"/600# X 1.5"/900#	70 CRE 60 CRO	2.25/1.69 1.64/1.23	.063/0.47 .063/.047	26 W/HD SPACERS	1100/1500	990/1350
5.0/2.50	2.5"/600# X 1.5"/1500#	70 CRE 42 CRO	2.25/1.69 0.76/0.65	.063/.047 .055/.047	26 W/HD SPACERS	1100/2250	990/2025
5.0/3.0	2.5"/600# X 1.5"/900#	70 CRE 60 CRO	2.25/1.69 1.64/1.23	.063/.047 .063/.047	26 W/HD SPACERS	1100/1500	990/1350
5.0/3.5	2.5"/600# X 1.5"/900#	70 CRE 60 CRO	2.25/1.69 1.64/1.23	.063/.047 .063/.047	26 W/HD SPACERS	1100/1500	990/1350
5.5/3.0	3.0"/300# X 1.5"/900#	88 CRE 60 CRO	3.88/3.09 1.64/1.23	.079/.063 .063/.047	26 W/HD SPACERS	635/1500	575/1350
5.5/3.5	3.0"/300# X 1.5"/900#	88 CRE 60 CRO	3.88/3.09 1.64/1.23	.079/.063 .063/.047	26 W/HD SPACERS	635/1500	575/1350
6.0/3.0	3.0"/300# X 1.5"/900#	88 CRE 60 CRO	3.88/3.09 1.64/1.23	.079/.063 .063/.047	26 W/HD SPACERS	635/1500	575/1350
6.0/3.5	3.0"/300# X 1.5"/900#	88 CRE 60 CRO	3.88/3.09 1.64/1.23	.079/.063 .063/.047	26 W/HD SPACERS	635/1500	575/1350
6.5/4.0	4.0"/300# X 2.0"/600#	98 CRE 70 CRO	4.31/3.44 2.12/1.60	.079/.063 .063/.047	26 W/HD SPACERS	500/1000	450/900
6.5/4.5	4.0"/300# X 2.0"/600#	98 CRE 70 CRO	4.31/3.44 2.12/1.60	.079/.063 .063/.047	26 W/HD SPACERS	500/1000	450/900
7.0/4.0	4.0"/300# X 2.0"/600#	98 CRE 70 CRO	4.31/3.44 2.12/1.60	.079/.063 .063/.047	26 W/HD SPACERS	500/1000	450/900
7.0/4.5	4.0"/300# X 2.0"/600#	98 CRE 70 CRO	4.31/3.44 2.12/1.60	.079/.063 .063/.047	26 W/HD SPACERS	500/1000	450/900



Note: Special high-pressure steeple cylinders are available for applications up to 6,000 PSID.



ARROW
COMPRESSION

Arrow Engine Company
2301 East Independence, Tulsa, Oklahoma 74110

www.ArrowEngine.com

toll free (800) 331-3662 local (918) 583-5711
toll free fax in US & Canada (800) 266-1481 • local fax (918) 699-2202

VRS-2 FEATURES

275 hp at 1800 rpm

3" Stroke

Combined rod-load capacity of 20,000 lbs

Separate distance pieces

Babbitted crossheads

Double-acting and steerable cylinders from 2.25" to 10" diameter

Variable volume clearance pockets

Pressurized cylinder lubrication

Hoerbigers latest valve design

Carbon filled Teflon® rings and packing

PACKAGE OPTIONS

Engine Drive or Electric Motor Drive

Low BTU Carburization

Standard or Critical Grade Silencers and Catalytic Converters

Class I, Div. 2, Group D Capable

Automatic Bypass System/Suction Makeup

Air/Gas Starter System

12V/24V Electrical System

Automatic Cooler Louvers

Suction & Discharge Companion Flanges

Trailer Mounting Available

Meter Systems/Tubes for Gas Flow/Fuel Measurement

Maintenance Spare Parts

VRS-2 SPECIFICATIONS

SPECIFICATIONS

Stroke	3 in. (76.2 mm)
Speed, Rpm (Maximum)	1,800 RPM
Piston Speed	900ft/min (4.57 m/s)
Number of Throws	2
Horsepower	275 hp (205 kw)
Piston Rod Diameter	1.125 in. (28.575 mm)
Crankshaft Diameter	2.75 in. (69.85 mm)
Height - Bottom To Crankshaft	13 in. (330.2 mm)
Maximum Width	100 in. (2.54 m)
Maximum Length	33 in. (0.838 m)
Approx. Weight With Cylinders	2500 lbs (1134 kg)
Rod Load - Tension	10,000 lbs (4536 kg)
Rod Load - Compression	10,000 lbs (4536 kg)
Rod Load - Combined	20,000 lbs (9072 kg)
Oil Pump Capacity	4 GPM (15 LPM)
Oil Heat Rejection	3750 BTU/hr. (945 Kal/HR)
Oil Sump Capacity	4 gal. (15 L)

COMPONENTS

Crankshaft Main Bearing Diameter	3.937 (100.0)
Crank Pin Diameter	3.125 (79.38)
Main Bearing Type	Spherical Roller
Connecting Rod Length CI-CI	8.375 (212.73)
Connecting Rod Bearing Width (Single)	1.745 (44.32)
Connecting Rod Bushing Width (Single)	2.125 (53.98)
Connecting Rod Bolts (Single)	(FOUR) 1/2"
Connecting Rod Bearing Width (Double)	1.370 (34.8)
Connecting Rod Bushing Width (Double)	1.125 (28.6)
Connecting Rod Bolts (Double)	(TWO) 1/2"
Crosshead Surface	5.50 X 4.5 (139.7 x 114.3)
Floating Crosshead Pin Diameter	2.499
Piston Rod Diameter	1.125 (28.575)

MATERIALS

Frame	Class 40 Gray Iron
Crankshaft	Forging With Induction Hardened Journals
Connecting Rods	Forging
Connecting Rod Bearings	Tri-metal
Crossheads	65-45-12
Crosshead Pins	Ductile Iron with Babbit SAE 8620 Carburized
Crosshead Pin Bushings	SAE 660 Bronze
Piston Rods	SAE 4140 Induction Hardened
Packing Rings	Carbon Filled Teflon with Cast Iron Backup Rings
Piston	Cast Iron or Anodized Aluminum
Piston Rings	Carbon Filled Teflon
Cylinders	80-55-06 Ductile Iron



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