



# VRC-2 GAS COMPRESSOR



**ARROW  
ENGINE COMPANY**



a TRIMAS company

AGCspec

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# VRC-2 COMPRESSOR FRAME SPECIFICATIONS

## Specifications

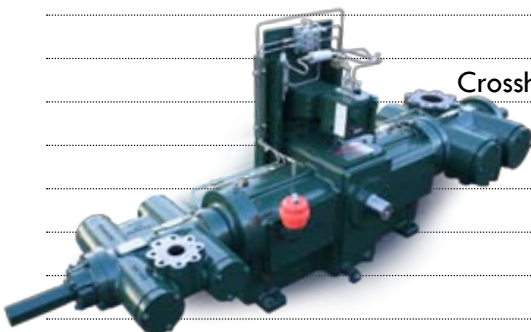
Rated Horsepower Hp (Kw)	125 (93)
Maximum Speed RPM	1800
Number Of Throws	2
Rod Load - Tension Lb (Kg)	7000 (3175)
Rod Load - Compression Lb (Kg)	7000 (3175)
Rod Load - Combined Lb (Kg)	14,000 (6350)
Stroke In (mm)	3 (76.2)
Piston Speed Ft/min (M/s)	900 (4.57)
Crankshaft Diameter In (mm)	2.50 (63.50)
Crankshaft Height To Cl In (mm)	12.75 (323.85)
Overall Length W/cyls. In (M)	22.5 (.57)
Overall Width W/cyls. In (M)	95 (2.41)
Unit Weight W/cyls. Lb (Kg)	1700 (771)
Oil Pump Capacity (Gpm) (Lpm)	4 (15)
Oil Heat Rejection Btu/hr (Kcal/hr)	3750 (945)
Oil Sump Capacity Gal. (Liter)	4 (15)

## Components

Crankshaft Main Bearing Diameter In (mm)	3.346 (84.988)
Crankpin Diameter In (mm)	2.447 (62.154)
Main Bearing Type	Spherical Roller
Connecting Rod Length Cl-Cl In (mm)	7.375 (187.325)
Connecting Rod Bearing Width (Single) In (mm)	1.604 (40.742)
Connecting Rod Bushing Width (Single) In (mm)	1.750 (44.45)
Connecting Rod Bolts (Single)	(Four) 1/2"
Connecting Rod Bearing Width (Double) In (mm)	0.802 (20.371)
Connecting Rod Bushing Width (Double) In (mm)	0.875 (22.225)
Connecting Rod Bolts (Double)	(Two) 1/2"
Croshead Surface In (mm)	5.25 X 3.5 (133.35 X 88.90)
Floating Croshead Pin Diam. In (mm)	2.235 (56.769)
Piston Rod Diameter In (mm)	1.125 (28.575)

## Materials

Frame	Class 40 Gray Iron
Crankshaft	Forging With Induction Hardened Journals
Connecting Rods	Forging
Connecting Rod Bearings	Tri-metal
Crosheads	65-45-12 Ductile Iron
Croshead Pins	SAE 8620 Carburized
Croshead Pin Bushings	SAE 660 Bronze
Piston Rods	SAE 4140 - Induction Hardened
Packing Rings	Carbon Filled Teflon w/ Cast Iron Backup Rings
Pistons	Cast Iron Or Aluminum
Piston Rings	Carbon Filled Teflon
Cylinders	80-55-06 Ductile Iron



# VRC-2 DOUBLE ACTING CYLINDER DATA

Bore In	Flange Size In/Rating	CE CLR. %	HE CLR. %	Valve Type (Hoerbiger)	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	26	42 CRO	0.76/0.65	.055/.047	44 W/HD SPACERS	1500	1350
3.0	1.5"/900#	28	20	42 CRO	0.76/0.65	.055/.047	40 W/HD SPACERS	1500	1350
3.5	2"/600#	34	28	60 CRO	1.84/1.23	.071/.047	56 W/VVCP	1000	900
4.0	2"/600#	26	22	60 CRO	1.84/1.23	.071/.047	42 W/VVCP	1000	900
4.5	2.5"/600#	26	23	70 CRO	2.39/1.60	.071/.047	52 W/VVCP	750	675
5.0	2.5"/600#	22	19	70 CRO	2.39/1.60	.071/.047	42 W/VVCP	750	675
5.5	3"/300#	26	24	88 CRO	3.41/2.64	.071/.055	52 W/VVCP	500	450
6.0	3"/300#	22	21	88 CRO	3.41/2.64	.071/.055	44 W/VVCP	500	450
6.5	4"/300#	26	25	105 CRO	3.98/3.98	.055/.055	59 W/VVCP	400	360
7.0	4"/300#	23	22	105 CRO	3.98/3.98	.055/.055	52 W/VVCP	400	360
7.5	4"/300#	21	20	105 CRO	5.10/3.98	.071/.055	59 W/VVCP	200	180
8.0	4"/300#	19	18	105 CRO	5.10/3.98	.071/.055	52 W/VVCP	200	180

The Arrow VRC-2 is a two-throw separable reciprocating gas compressor. The horizontally opposed cylinders are accurately balanced for smooth running and long lasting durability at 1800 RPM. Unlike many other reciprocating compressors, the VRC-2 has a unique three-throw crankshaft configuration that eliminates opposing cylinder off-set and the vibration associated with traditional designs.

The use of a pressurized lubrication system, highly efficient Hoerbiger valves, industry proven accessories, innovative engineering design, and close attention to quality make the Arrow VRC-2 gas compressor unequaled in the industry. Arrow Engine also sells standard skids and bottles, as well as ASME Code vessels. Call us for more information.



# ARROW VRC-2 STEEPLE CYLINDER DATA

Bore SACE x SAHE In	Flange Size In/Rating	CE CLR. %	HE CLR. %	Valve Type (Hoerbiger)	Lift Area Suct/Disch Sq/In	Valve Lift Suct/Disch In.	Added HE Clearance Max %	MAWP CE HE PSIG	RDP CE HE PSIG
3.5 X 2.25	2.0"/600# X 1.5"/1500#	34	42	60 CRO 42 CRO	1.84/1.23 0.76/0.65	.071/.047 .055/.047	26 W/HD SPACERS	1000 2250	900 2025
4.0 X 2.25	2.0"/600# X 1.5"/1500#	26	42	60 CRO 42 CRO	1.84/1.23 0.76/0.65	.071/.047 .055/.047	26 W/HD SPACERS	1000 2250	900 2025
4.5 X 2.50	2.5"/600# X 1.5"/1500#	26	34	70 CRO 42 CRO	2.39/1.60 0.76/0.65	.071/.047 .055/.047	26 W/HD SPACERS	750 2250	675 2025
4.5 X 3.0	2.5"/600# X 1.5"/900#	26	43	70 CRO 60 CRO	2.39/1.60 1.64/1.23	.071/.047 .063/.047	26 W/HD SPACERS	750 1500	675 1350
4.5 X 3.5	2.5"/600# X 1.5"/900#	26	31	70 CRO 60 CRO	2.39/1.60 1.64/1.23	.071/.047 .063/.047	26 W/HD SPACERS	750 1500	675 1350
5.0 X 2.50	2.5"/600# X 1.5"/1500#	22	34	70 CRO 42 CRO	2.39/1.60 0.76/0.65	.071/.047 .055/.047	26 W/HD SPACERS	750 2250	675 2025
5.0 X 3.0	2.5"/600# X 1.5"/900#	22	43	70 CRO 60 CRO	2.39/1.60 1.64/1.23	.071/.047 .063/.047	26 W/HD SPACERS	750 1500	675 1350
5.0 X 3.5	2.5"/600# X 1.5"/900#	22	31	70 CRO 60 CRO	2.39/1.60 1.64/1.23	.071/.047 .063/.047	26 W/HD SPACERS	750 1500	675 1350
5.5 X 3.0	3.0"/300# X 1.5"/900#	26	43	88 CRO 60 CRO	3.41/2.64 1.64/1.23	.071/.055 .063/.047	26 W/HD SPACERS	500 1500	450 1350
5.5 X 3.5	3.0"/300# X 1.5"/900#	26	31	88 CRO 60 CRO	3.41/2.64 1.64/1.23	.071/.055 .063/.047	26 W/HD SPACERS	500 1500	450 1350
6.0 X 3.0	3.0"/300# X 1.5"/900#	22	43	88 CRO 60 CRO	3.41/2.64 1.64/1.23	.071/.055 .063/.047	26 W/HD SPACERS	500 1500	450 1350
6.0 X 3.5	3.0"/300# X 1.5"/900#	22	31	88 CRO 60 CRO	3.41/2.64 1.64/1.23	.071/.055 .063/.047	26 W/HD SPACERS	500 1500	450 1350
6.5 X 4.0	4.0"/300# X 2.0"/600#	26	31	105 CRO 70 CRO	3.98/3.98 2.12/1.60	.055/.055 .063/.047	26 W/HD SPACERS	400 1000	360 900
6.5 X 4.5	4.0"/300# X 2.0"/600#	26	25	105 CRO 70 CRO	3.98/3.98 2.12/1.60	.055/.055 .063/.047	26 W/HD SPACERS	400 1000	360 900
7.0 X 4.0	4.0"/300# X 2.0"/600#	23	31	105 CRO 70 CRO	3.98/3.98 2.12/1.60	.055/.055 .063/.047	26 W/HD SPACERS	400 1000	360 900
7.0 X 4.5	4.0"/300# X 2.0"/600#	23	25	105 CRO 70 CRO	3.98/3.98 2.12/1.60	.055/.055 .063/.047	26 W/HD SPACERS	400 1000	360 900

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