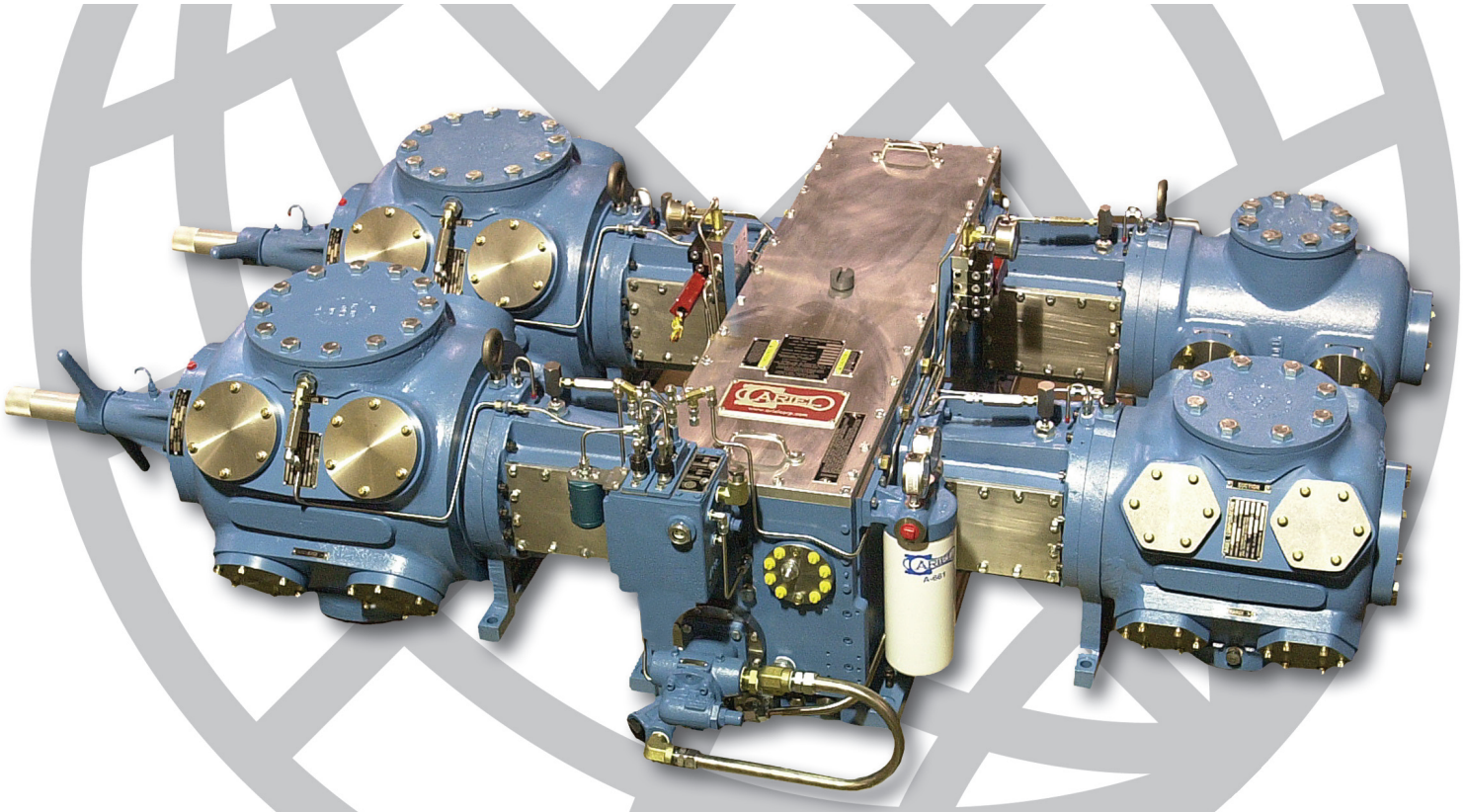


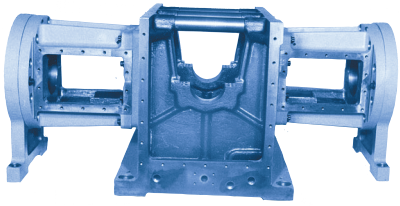
ARIEL JG and JGA COMPRESSORS

Frame	JG/2	JG/4	JGA/2	JGA/4	JGA/6
Number of throws	2	4	2	4	6
Rated Power, BHP	252	504	280	560	840
Rated Power, kW	188	376	209	418	626
Stroke, inches	3.5	3.5	3	3	3
Stroke, mm	89	89	76	76	76
RPM, maximum	1500	1500	1800	1800	1800
Piston speed, FPM	875	875	900	900	900
Piston speed, m/s	4.45	4.45	4.57	4.57	4.57
Total Rod Load, lbs	18000	18000	20000	20000	20000
Total Rod Load, N	80068	80068	88964	88964	88964
Tension, lbs	9000	9000	10000	10000	10000
Tension, N	40034	40034	44482	44482	44482
Compression, lbs	10000	10000	11000	11000	11000
Compression, N	44482	44482	48930	48930	48930
Average Weight with cylinders, lbs	2200	4700	2200	4700	7400
Average Weight with cylinders, kg	1000	2130	1000	2130	3355
Maximum Length, inches	33	58	33	58	86
Maximum Length, mm	838	1473	838	1473	2184
Nominal Width, inches	83	83	83	83	83
Nominal Width, mm	2032	2032	2032	2032	2032
Crankshaft ℄ (from bottom), inches	10.25	10.25	10.25	10.25	10.25
Crankshaft ℄ (from bottom), mm	260	260	260	260	260

FEATURES

The JG is the original Ariel separable, reciprocating gas compressor, which revolutionized the compression industry. As with all successive Ariel compressors, the design is driver-rated, based on the currently available engines developed by leading engine manufacturers. The JGA is a shorter-stroke, higher speed version of the JG.

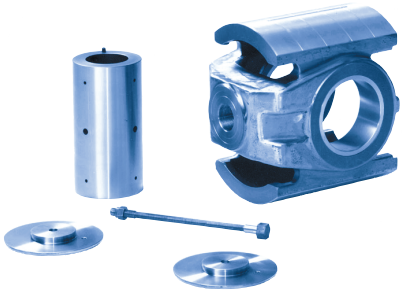
- **Serviceability** - Entire unit is designed for ease of repair. All components are readily accessible.
- **Standardization** - Many components are interchangeable throughout the various lines.
- **Full Pressure Lubrication** - A frame-driven lube oil pump provides pressurized, cooled oil through a full flow oil filter to all moving parts in the frame. A divider block distribution system supplies metered oil to cylinder bores and rod packing. Stainless steel tubing is used throughout the cylinder lubrication system.
- **Unloading Devices** - Manual head-end variable volume clearance pockets, pneumatic fixed volume clearance pockets and pneumatic suction valve unloaders are available on a limited optional basis.
- **Heavy Duty Crankshaft** - Forged steel precision machined with integral counterweights.
- **Rugged Crankcase** - Heavily ribbed (with spacer bars for stiffening), high-strength cast iron base with removable, lightweight aluminum top cover and removable end covers for ease of access.
- **Precision Bearing Shells** - Precision-machined, tri-metal main and connecting rod bearings.
- **Rugged Crossheads and Guides** - Cast iron crosshead guides, external ribbing and removable side covers. One piece, long life crossheads with direct full pressure lubrication at top and bottom for minimum wear. Hardened and ground steel crosshead pins.
- **Rigid Connecting Rods** - Forged steel four bolt, heavy duty "H" section.
- **Quiet Auxiliary Drive** - Fully enclosed and continuously lubricated chain drive adjusted by positive positioning eccentric vernier.
- **Oil and Dust Seal** - Foolproof, non-contacting crankshaft oil seal plus reliable non-wearing dust seal.
- **Proven Cylinder Design** - Non-cooled compressor cylinders with ample nozzles and large gas passages. Cylinder bodies are ion-nitride hardened and drilled for indicator ports.
- **High Strength Bolting** - Grade 8 bolts or B-7 studs on all pressurized components. All bolting designed for accessibility.
- **Efficient Valving** - Ariel uses plate-type valves designed for modern speeds utilizing non-metallic sealing elements as standard. Selected to adhere to established, low valve velocity standards.
- **Durable Pistons** - Wear-resistant ductile or gray iron with wear bands.
- **Stout Piston Rods** - Short, stiff, precision-ground alloy steel piston rods with locking crosshead nut. Rolled threads are 1/4" under rod diameter for easy installation through packing.



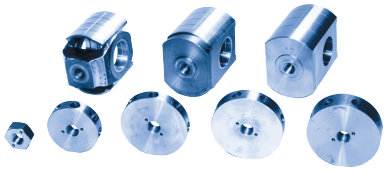
JG/2 & JGA/2 frame



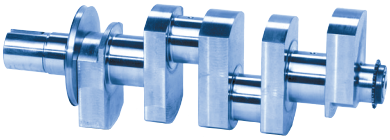
Forged steel connecting rod



Ductile iron crossheads, babbitted shoe surface, full-floating crosshead pin with "through-bolt" and end caps



Full array of crossheads and nuts for precise balancing of opposing pistons



JG/2 crankshaft

CYLINDERS

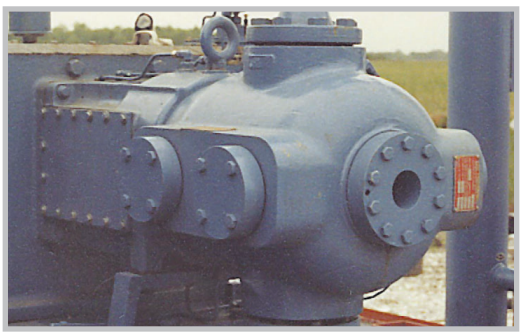
A COMPLETE LIST OF CYLINDERS IS AVAILABLE IN THE **ARIEL COMPRESSOR PERFORMANCE PROGRAM**

	Class*	BORE inches	BORE mm	MAWP psi	MAWP bar	Material
Double-Acting	1-3/4M-FS	1.625, 1.750	41, 44	3500	241	Forged Steel
	2-3/4M	2.500, 2.750	64, 70	1880	130	Ductile Iron
	3M	3.000	76	1190	82	Ductile Iron
	3-1/2M	3.250, 3.500	83, 89	1050	72	Ductile Iron
	4-1/8M	3.875, 4.125	98, 105	750	52	Ductile Iron
	5-1/8M	4.750, 5.125	121, 130	500	34	Ductile Iron
	5-3/4M	5.500, 5.750	140, 146	480	33	Ductile Iron
	6-1/2M	6.125, 6.500	156, 165	275	19	Ductile Iron
	8M	7.500, 8.000	191, 203	175	12	Ductile Iron
	3JG	2.750, 3.000	70, 76	2550	176	Ductile Iron
	3-5/8JG	3.375, 3.625	86, 92	1270	88	Ductile Iron
	3-5/8JG	3.375, 3.625	86, 92	1640	113	Ductile Iron
	4-1/8JG	3.875, 4.125	98, 105	1270	88	Gray Iron
	5-1/8JG	4.750, 5.125	121, 130	865	60	Gray Iron
	6-1/2JG	6.125, 6.500	156, 165	635	44	Ductile Iron
	7-1/2JG	7.125, 7.500	181, 191	600	41	Ductile Iron
	8-7/8JG	8.500, 8.875	216, 225	375	26	Gray Iron
	11JG	10.500, 11.000	267, 279	150	10	Gray Iron
	13-1/2JG	13.000, 13.500	330, 343	115	8	Gray Iron
Tandem*	4-3/8P-HE	4.125, 4.375	105, 111	1270	88	Ductile Iron
	5-1/8P-HE	4.750, 5.125	121, 130	635	44	Ductile Iron
	5-3/4P-HE	5.500, 5.750	140, 146	575	40	Ductile Iron
	2-1/4P-CE	2.063, 2.250	52, 57	1500	103	Ductile Iron
	2-3/4P-CE	2.500, 2.750	64, 70	1270	88	Ductile Iron
	3-1/4P-CE	3.000, 3.250	76, 83	1125	78	Ductile Iron
	6-1/2SP-HE	6.125, 6.500	156, 165	600	41	Ductile Iron
	8SP-HE	7.500, 8.000	191, 203	440	30	Ductile Iron
	3-3/4SP-CE	3.500, 3.750	89, 95	1265	87	Ductile Iron
	4-3/8SP-CE	4.125, 4.375	105, 111	935	64	Ductile Iron
	1-3/4SG-FS-HE	1.250, 1.500, 1.625, 1.750	32, 38, 41, 44	6100	421	Forged Steel
	2-1/2SG-FS-HE	2.000, 2.250, 2.500	51, 57, 64	5000	345	Forged Steel
	3SG-CE	2.750, 3.000	70, 76	3000	207	Ductile Iron
	3-5/8SG-CE	3.375, 3.625	86, 92	3000	207	Ductile Iron
	3JG-HE	2.750, 3.000	70, 76	2200	152	Ductile Iron
	5-1/8JG-CE	4.750, 5.125	121, 130	865	60	Gray Iron
	3-5/8JG-HE	3.375, 3.625	86, 92	1270	88	Ductile Iron
	6-1/2JG-CE	6.125, 6.500	156, 165	635	44	Ductile Iron
	4-1/8JG-HE	3.875, 4.125	98, 105	1125	78	Ductile Iron
	8-7/8JG-CE	8.500, 8.875	216, 225	375	26	Gray Iron

* HE=Head End, CE=Crank End

Ariel was the first to design and market a gas compressor cylinder without water cooling in the jacket. This proven design yields significant advantages over water-cooled cylinders:

- higher efficiency
- larger gas passages
- reduced pressure-drop losses
- lower maintenance (no scaling or corrosion)



JG Cylinder

THE ARIEL NETWORK

Ariel's success is based on strong relationships built on mutual respect and trust. Employees, vendors, distributors, and end users are all part of the Ariel Network.

Ariel Compressors are marketed and packaged through a long-established network of elite compression system engineering companies. Ariel's Authorized Distributors integrate the compressor with a structural skid, a prime mover, piping, pulsation control, cooling systems, process valving, and control systems.

- All Ariel distributors adhere to Ariel's strict packaging standards.
- Ariel's large network offers the most complete service and parts coverage available in the world.



Truck Mounted: High pressure injection units for Sichuan Petroleum, near Chengdu, P.R.C. (China) JGA/4's

CUSTOMER SERVICE

We are committed to supporting our compressors for life. If there is a problem with an Ariel compressor, we'll help you solve it — now.

- The Ariel Network is composed of more than 1000 Ariel-trained field servicemen and technicians, worldwide.
- Ariel's policy has always been to routinely ship standard parts within 24 hours of receiving an order.
- Ariel gas compressors are backed by more than 100 parts and service outlets close to every major natural gas field.
- Ariel's Service and Technical Schools are held frequently, free of charge, for engineers and field servicemen. These courses are taught by Ariel engineers and technicians directly involved in the subject material.
- The availability of Ariel manufactured parts at competitive prices will ensure your Ariel compressor's maximum reliability and productivity.
- Ariel's goal is to offer the best customer care and service. Our warranty and our treatment of warranty issues clearly show our commitment to this goal.

ARIEL CORPORATION
WORLD HEADQUARTERS
35 Blackjack Road
Mount Vernon, Ohio 43050 USA
Telephone: 740-397-0311
Fax: 740-397-3856

24-HOUR SUPPORT
North America: 888-397-7766
Worldwide: +1 740 397 3602

REGIONAL SALES and SUPPORT
Denver, Colorado, • Fort Worth, Texas
Houston, Texas • Sydney, Australia
Calgary, AB, Canada • The Netherlands
Moscow, Russia • Singapore
Bangkok, Thailand

www.arielcorp.com