

API 618 COMPRESSORS

Moderate Speed Process Compressors



WORLD STANDARD
COMPRESSORS



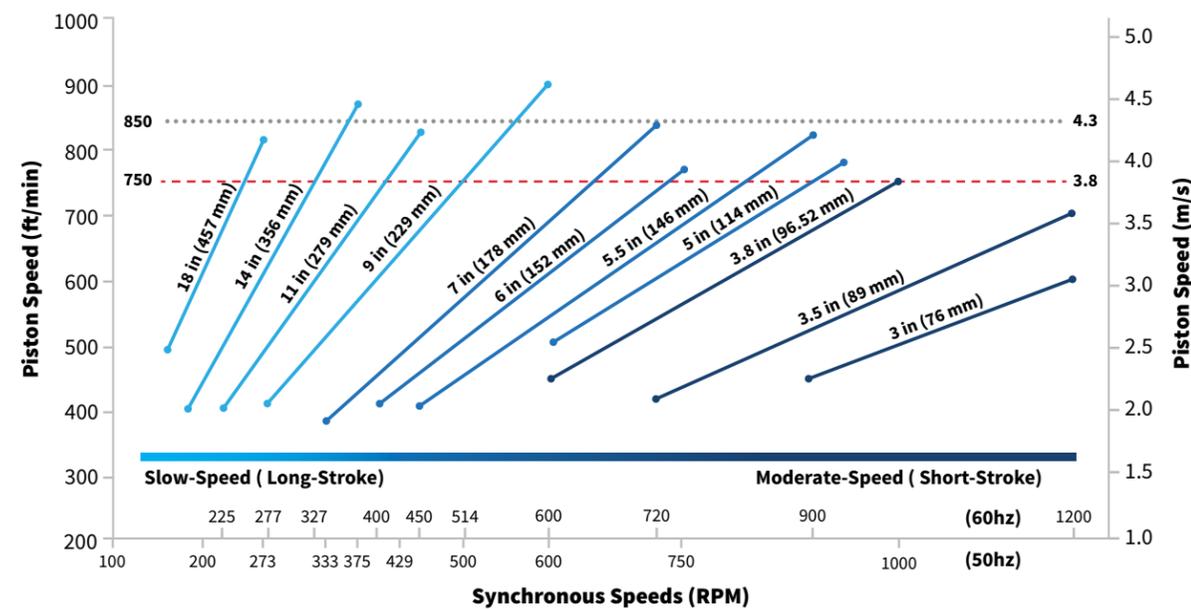
ARIEL API 618

Designed in accordance with API 618 for critical process applications, Ariel process reciprocating compressors are engineered for performance and reliability utilizing field proven, pre-designed components.

MODERATE-SPEED COMPRESSORS

Ariel's moderate-speed API 618 process compressors are utilized in a wide range of process applications around the globe, providing the safety and reliability demanded by today's refinery and petrochemical

industries. With 60,000+ reciprocating compressors ranging from 100 to 10,000 horsepower shipped since 1966, Ariel is the largest manufacturer of separable reciprocating gas compressors in the world.



Ariel's moderate-speed process compressors operate in comparable piston speed ranges to long-stroke,

slow-speed compressors. Ariel's extensive product line supports a wide range of process applications.





ARIEL RELIABILITY

ARIEL PROCESS CASE STUDY

Ariel reliability is proven in the field. A recent 24,000-hour overhaul on two units at a refinery in Louisiana showed no measurable wear to the crossheads, crosshead guides, cylinder bores, piston rods, piston trim, or packing trim. The end user made the decision to revise their inspection schedule to every 32,000 hours.

Ariel reliability = peace of mind.



Number of compressors
produced since 1966

60,000+

Countries where Ariel
compressors operate

100+

Availability of factory tech
service and parts personnel

24 hrs.

ARIEL DURABILITY

ARIEL PROCESS CASE STUDY

The end-user required a new hydrogen unit employing steam methane reforming technology. The facility supplies hydrogen and steam to a refinery for use in the production of fuels.

For this application, the customer selected four Ariel JGT/2 100% capacity non-lubricated, short-stroke, moderate-speed compressors driven by electric motors for the natural gas feed and hydrogen product services. The decision to purchase Ariel compressors was based on delivery, compact packaging, and reduced total installed cost. Spare parts availability and references for similar applications also contributed to the decision to purchase Ariel moderate-speed reciprocating process compressors.

Ariel reliability makes your investment pay off in the long run. Initial inspections were performed on two of the compressors



Feed-Gas Unit #1 after 12,086 operational hours

Hydrogen Unit #2 after 9,334 operational hours

Inspections of the running gear, cylinder bores, pistons, and rods revealed that all clearances were within specified tolerances. Even consumables such as piston rings, wearbands, and packing rings had not expended their specified service life. With Ariel quality, reliability, wide range of API 618 frame and cylinder options, and global support network, Ariel has the correct compressor for your next project.

Ariel Compressors are used in a number of critical services including:

- Hydrogen Makeup and Recycle
- Feed Gas
- Hydrogen Production
- SynGas
- Hydrotreating
- Hydrocracking
- Chemical processing
- Isomerization
- Offgas
- Hydrogen Storage
- Fuel Gas
- RFG



31

Number of Ariel models suited for Process service

1,200

Cylinders offered for Process service

15+

Years producing durable Process compressors

API 618 COMPRESSOR SPECIFICATIONS

Rated bhp

5,200

Stroke

5.75 in.

Max RPM

750

Tension Rod Load

75,000 lbs.

Gas Compression Rod Load

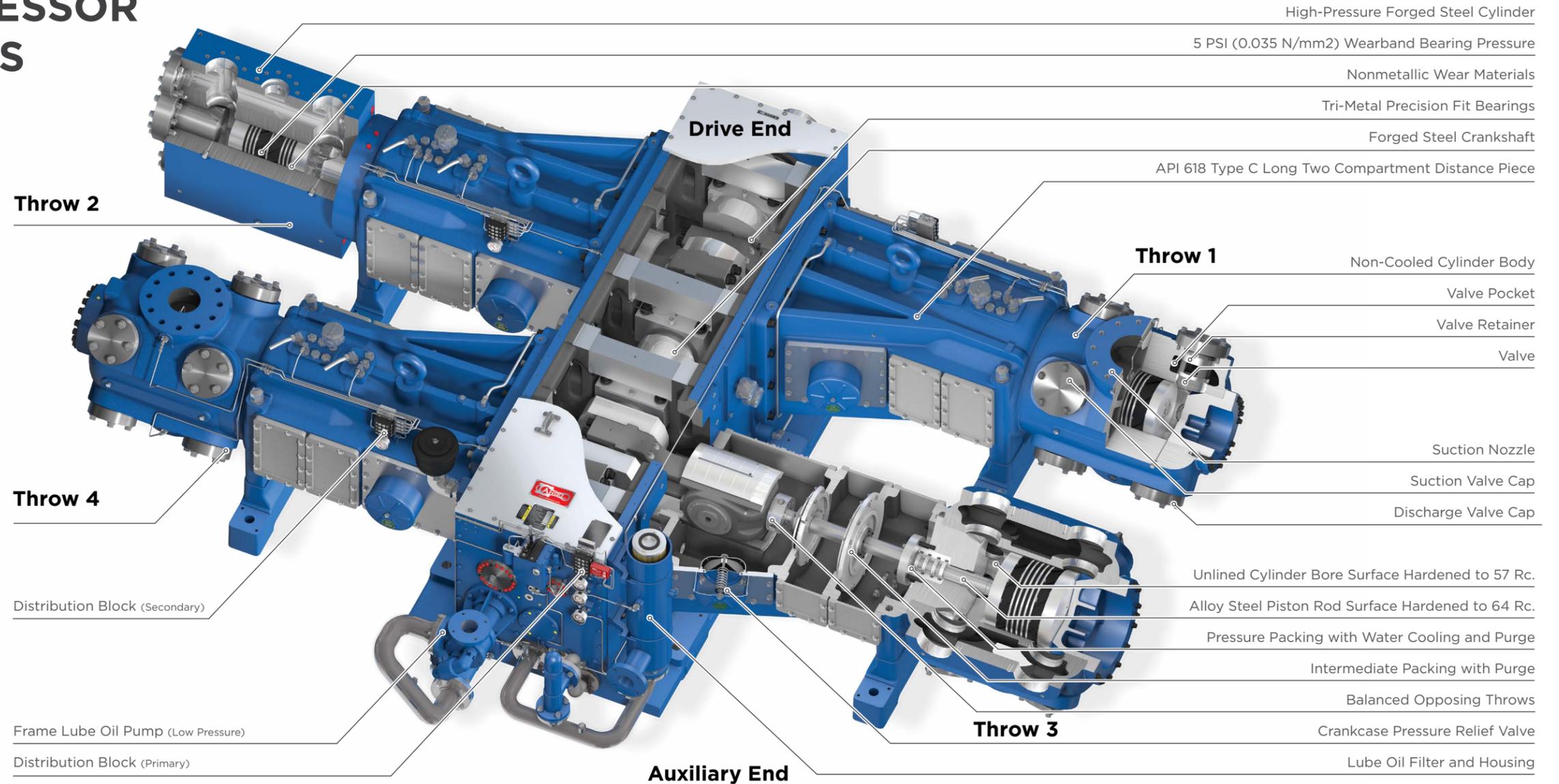
80,000 lbs.

Total Rod Load

150,000 lbs.

Piston Rod Diameter

2.875 in.



ARIEL CORP.
www.arielcorp.com

KBU/4

WORLD STANDARD COMPRESSORS

Commonly Used Applications ▶ Hydrogen Production

Ariel's large medium-speed reciprocating separable compressors are capable of handling high rod loads of 150,000 lbs. The KBU and KBZ have proven to be the most cost effective method of compression for applications requiring large-horsepower drivers and high-compression capacity.



- NACE Compliant Construction Available
- Valve Type and Material Application Specific
- Low Unbalanced Forces and Couples
- Lubricated or Non-lubricated Configuration Available
- Ductile Iron and Forged Steel Cylinders

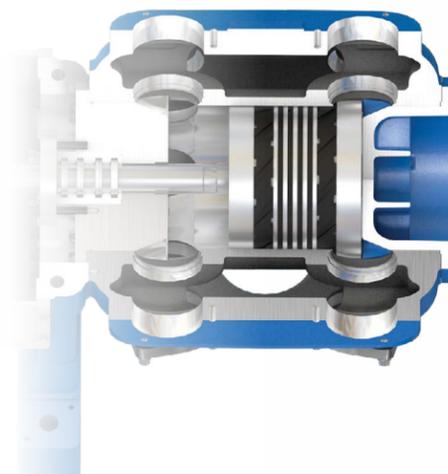
ARIEL PRODUCT LINE

Ariel's comprehensive line of moderate speed, reciprocating process compressors combine more than 50 years of research and development with the use of advanced design tools, field-proven installations and on-site experience. Ariel's wide range of process compressors are designed to achieve or exceed three years of uninterrupted service, while meeting the most demanding industry requirements.

Frame	Stroke	Typical Piston Speed (Ft/Min)	Typical Rotating Speed (RPM)
JGA	3	450	900
JGJ	3.5	525	900
JGF	5.0	660	720
JGD	5.5	660	720
KBT	5	600	720
KBK	6	720	720
KBU	5.75	690	720
KBB	7.25	725	600

CYLINDER DESIGN FEATURES

- Wearbands to meet 5 PSI bearing pressure for both lubricated and non-lubricated services
- Indicator connections
- Purged packing cases
- Water cooled packing cases
- Application specific valve design
- Application specific non-metallic wear materials
- Capacity and load control devices available
- Hardened 4100 series alloy steel piston rods
- 17-4 PH stainless steel and tungsten carbide coated piston rods available as options
- Cylinder bores hardened to greater than 50 Rockwell C



EXPERTISE, TEAMWORK, AND COMMITMENT TO THE CUSTOMER

The Ariel distribution business model is based on the seamless integration between Ariel and the packaging distributor. Only the most experienced and qualified companies can become Ariel Distributors. These companies don't just package Ariel compressors – they become part of Ariel and its global distribution network, designed to serve its worldwide customer base by providing regional access to engineering,

packaging facilities, technical services, and parts support. Ariel and its distributors work as a team throughout every project to ensure the successful operation of the installed equipment. We begin with project planning and participate throughout the design, fabrication, installation, start-up and commissioning of the compressor package. When you talk to an Ariel distributor, you are talking to Ariel.

ARIEL OEM PARTS SUPPORT

Ariel Original Equipment Manufacturer Parts keep your Ariel compressor running like new. Ariel OEM Parts are the exact same high-precision, exceptional quality parts that go into Ariel's new units. Available through over 700 world-wide distributor locations, Ariel OEM Parts are offered at a fair price and supported by Ariel expertise. Whether you're looking for recommended spares for new units or planning scheduled maintenance of your current compressors, Ariel is available to assist you around the world. The Ariel commitment does not end there. Ariel "Unit Down!" Protocol ensures that your compressor will be back on-line as soon as possible.



If something happens to your Ariel compressor, whether a warranty issue or other event, Ariel and its distributors will work together to determine the best plan of action to get your unit back in operation.



Ariel and its distributors will find the part you need by searching inventories throughout our network. If necessary, Ariel will locate and allocate what you need from our manufacturing facility.



Ariel and our distributors will work to deliver you the parts and will assist, if needed, at the site to do whatever is necessary to get your compressor back on-line.

DISTRIBUTOR QUALITY & SUPPORT

Our mission is to provide you the right parts at the right time, no matter when your compressor was built or where it is in operation.

Ariel Corporation and Ariel distributors form the Ariel Global Distribution Network. This responsive network has nearly 700 locations in more than 100 countries around the world. Ariel Inside Account Representatives

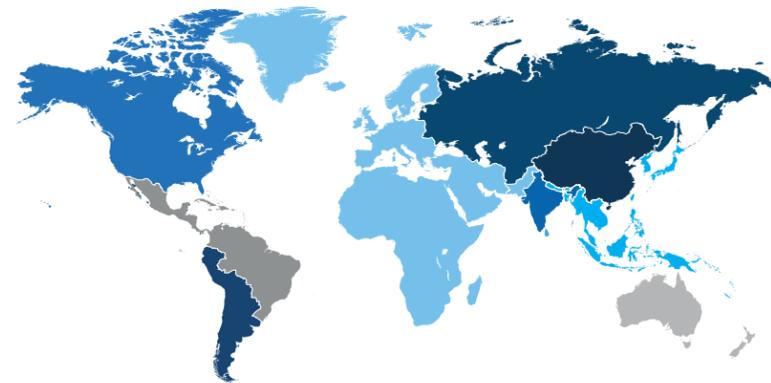
and Regional Parts Managers work directly with Ariel Distributor personnel to assess your needs and to provide access to the latest technology and innovations in the Ariel parts inventory.

Trusted Ariel distributor locations around the world

700+

Ariel compressors packaged for Process service

300+



ARIEL REGIONAL SALES AND SUPPORT LOCATIONS

- Mount Vernon, Ohio
- Houston, Texas
- Fort Worth, Texas
- Denver, Colorado
- Calgary, AB, Canada
- Moscow, Russia
- Beijing, China
- Sydney, Australia
- The Netherlands
- Singapore
- Bangkok, Thailand
- Mumbai, India
- Dubai, UAE
- Buenos Aires, Argentina





WORLD CLASS CUSTOMER SUPPORT

Since 1966, Ariel has shipped over 60,000 compressors, with the majority still operating today. Supporting this ever-growing fleet is a network of Ariel professionals who are available 24/7. Ariel's engineering and field service professionals are backed by a lean manufacturing group that produces parts of the highest quality for both new unit assembly and parts support.

COMPREHENSIVE WARRANTY

Subject to proper maintenance and normal use, Ariel's warranty covers every part for 12 months and the frame, guide and running gear castings for three years. Provided all replacement parts are Ariel OEM parts,

cylinder bodies, pistons and piston rods are covered for two years, while coverage for the frame, guide and running gear castings is extended to six years. Please see Ariel's Limited Warranty Summary for details.

COMPREHENSIVE PRODUCT TRAINING

Ariel offers training in a range of familiar and newly-created formats: classroom, in the field, online, and international. We welcome our industry partners to experience training at our new world-class training center in Mount Vernon, Ohio, at no cost.



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