



## Applications Manual Revisions List

### 30 January 2025

- Modified the Drivers topic to introduce the selection of drivers in relation to compressors.
- Replaced the Electric Motor Driver topic with the Driver Power Rating topic and modified language and examples for clarity.
- Updated the Driver Power Rating topic (previously Electric Motor Driver topic) to allow the 10% margin over the greatest compressor power demand to be applied to the motor rated horsepower or to the Service Factor.
- Removed discussion about generating a start-up torque curve from the Driver Power Rating topic (previously Electric Motor Driver topic). This information still remains under the Starting Torque topic.
- Updated the Process Motor Sizing topic to allow the 10% margin over the greatest compressor power demand to be applied to the motor rated horsepower or to the Service Factor.

### 06 January 2025

- Added Inadequate Surge Volume topic under Studies and Analyses.

### 14 December 2023

- Modified the Sour Gas topic to revise flushing lube recommendations.
- Modified the Electric Motor Drive topic to exclude the Service Factor from the 10% margin between rated driver power and maximum horsepower.

### 11 January 2022

- Added maximum allowable inertia limit for fan drive shafts
- Converted to Adobe Experience Manager

### 20 April 2021

- Re-applied the Distance Piece Arrangements topic
- Expanded the Minimum Allowable Pin Reversal to help identify configurations to review closer for acceptable reversal

### 17 June 2020

- Modified the discharge temperature topic to better define the Application Limit versus the Maximum Shutdown Limit.
- Added a topic on Oxygen.

### 29 May 2019

- Added information on VVCP stem seal vent, which cylinders have the two seal vent.
- Removed cylinder options / features table, referring to the Performance Software for the list of features and options.

### 20 February 2019

- Modified water cooled packing and non-lube topics to be more concise that packing cooling requires the water cooling system applied
- Added allowance for non-lubricated cylinder construction for Sour Level 1 service (Non-lube and Sour Gas topics)

### 19 November 2018

- Added references to EN 10204:2004 to Materials Certifications and Tests topic

### 8 October 2018

- Included the KBK:T frames.
- Added ability to purge wiper set with purged packing on long single compartment distance pieces for KBK:KBT and KBZ:KBU frames.

### 31 October 2016

- Added Valve Topic, to include low lift valve discussion.
- Modified Sour Gas topic due to the removal of the "H2S" designation from forged steel cylinders.
- Modified Piston Rod topic for the piston rod surface finish values.
- Modified Tools and Special Tools topics to remove specific components and refer to the Maintenance and Repair Manual.
- Modified Cooled Packing topic to better define when to provide a packing cooling system.

### 8 July 2016

- Added Auxiliary End Pump Removal topic.
- Added reference within Torsional Vibration Analysis to ER-83.
- Modified Ariel Special Flange topic to provide definition of the Taperlok flange ASME Div 1 design basis.

### 16 July 2015

- Modified Ariel Special Flange topic to include the alloy steel material designation for the higher pressure 2-5/8x10-FS-HE 10,000 psi cylinder.

### 9 March 2015

- Modified ISO-9001 topic to refer to the ISO statement on the website.
- Removed unit conversion calculation fields from the unit conversions due to instability with various browsers.

### 29 September 2014

- Included a low temperature cautionary note to the Suction Temperature and Ambient Temperature topics for o-ring sealing below -15 F.

### 17 April 2014

- Modified the Sour Gas topic to further stress the importance of safety, changing the recommendations for purged packing, two compartment distance pieces (short or long) and stainless steel piston rod material to required options.
- Modified the Carbon Dioxide Service topic to allow the use of 400 series stainless steel valve body material in CO2 service. 400 series stainless steel material is the supplied standard for the majority of the valves in Ariel cylinders. This allows for the use of standard valve material in CO2 service if the standard material is 400 series stainless steel.

### 26 July 2013

- Updated to re-organize table of contents and function on greater number of web platforms.
- Added gas properties for some of the more common gasses encountered in compression.
- Added an FPSO topic

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- Added a Carbon Monoxide topic
- Simplified the Calculation Method discussions
- Added Project Check List to the Torsional topic
- Added the JGF frame designation to the JGC:D:F frame class

### 14 September 2012

- Updated to provide changes in links to a fully revised Packager Standards.
- Removed references for Purge and Vent Systems in favor of the [Packager Standards Section 8 Packing and Distance Piece Vent Systems](#).

### 15 July 2012

- Added Air Service topic.
- Added selection recommendations to the Carbon Dioxide Service topic.
- Added Gas Properties topic.
- Added Crankcase Relief Door topic.
- Added Selection Recommendations to the Sour Gas topic.

### 11 November 2011

- Better defined those variables impacted by speed range on the Minimum Allowable Rotating Speed topic.
- Added the 19BL:VL:BM:VM cylinder to the Ariel Special Flange list for special peanut type flanges.
- Added a Project Engineering Checklist to the Electric Motor topic.

### 22 December 2010

- Removed frame lube oil viscosity and temperature information in favor of referencing the Packager's Standards, for a single location of information.

### 22 October 2009

- Added a watt density limit to the frame lube oil heater topic.

### 25 October 2008

- Added a Tools topic discussing the hydraulic torque tools and the SAE hand tools as a performance software option.
- Added the discussion of the SG tandem cylinder high clearance valve assemblies to the High Clearance Valve Assembly topic.

### 7 March 2007

- Modified Capacity and Load Control topic to include a load sequence hierarchy (including notes and links within the Torsional and Cylinder Single Acting topics to Capacity and Load Control topic).
- Removed Frame Thermal Growth topic. Please refer to the same topic presented in the Packager's Standards, Technical Manuals and Outline Drawings.
- Revised Low Suction Temperature Applications Topic to be Suction Temperature, discussing low suction temperature, high suction temperature and high mean cylinder gas temperature.
- Added Non-Intercooled Topic.
- Modified Ariel Calculation Method to remove critical temperature and pressure references.
- Removed the No Yellow Metals topic from the Sour Gas topic.

### 23 February 2007

- Corrected Frame Driven Lube Oil Pump discussion for the large frames that have external pressure relief valves downstream of the lube oil filter.

### 28 December 2006

- Modified Deactivated Stage topic, added clarification for the durations of blowthru and pulling suction valves.
- Added Special Tools topic for Hydraulic torque tools.
- Modified Helium Leak Test topic, added the mole weight and hydrogen content requiring He test.

### 6 December 2006

- Modified Assembly Inspections and Tests topic, added "prepared for shipment" in last bullet point.
- Modified Cylinder Hydro Test topic, changed ISO reference to match current ISO procedure numbers.
- Modified Helium Leak Test topic, changed ISO reference to match current ISO procedure numbers.
- Packager's Standards topic, added sub-section links.

### 6 November 2006

- Added Gas Method page defining the usage of VMG and Hall gas methods.
- Added the JGJ/4 fan shaft, a new addition to the line of fan shafts, suitable for 50 hp.

### 2 November 2006

- Various pages: Changed JGB:V frame references to KBB:V frames.
- Modified frame tilt data for the JGB:V and KBB:V frames.
- Sour Gas: Changed recommendations for S2C guides to allow for Long Single guides at lower levels of H2S when the S2C guide is not made available by Ariel (JGU:Z, KBB:V cylinders and some -VS cylinders).