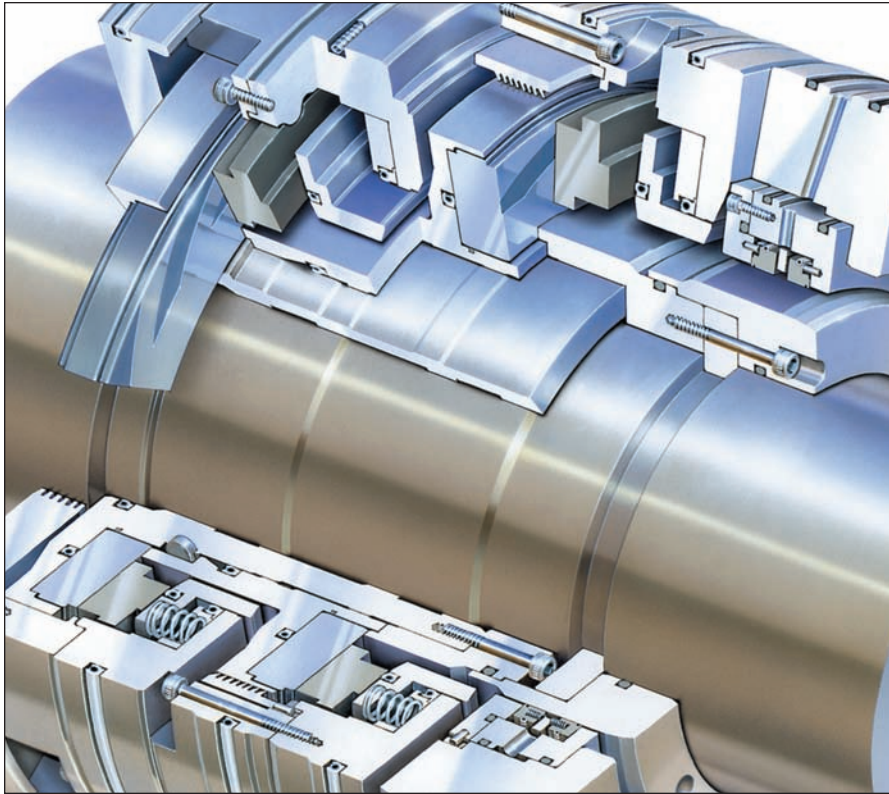




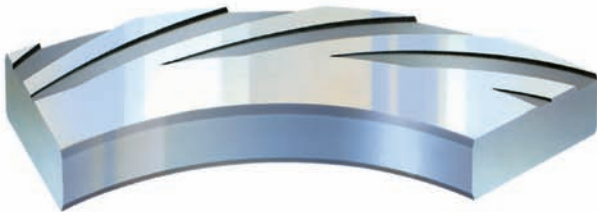
TYPE 28 Compressor Seals

Dry-Running, Non-Contacting Gas Seals

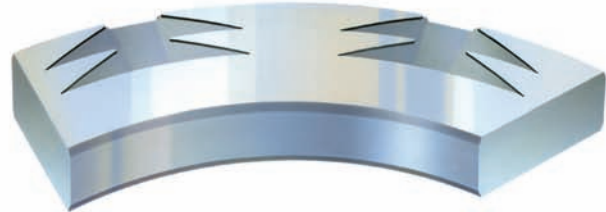
28AT/28XP/28EXP



Standard Unidirectional Groove Design



Optional Bidirectional Groove Design



Product Description

Type 28 compressor dry-running gas seals have been the industry standard since the 1970s for gas-handling turbomachinery. Utilizing John Crane's patented spiral groove pattern, these seals are non-contacting in operation.

- During dynamic operation, the mating ring/seat and primary ring/face maintain a sealing gap of approximately 0.0002 in./5 microns, thereby eliminating wear
- These seals eliminate seal oil contamination and reduce maintenance costs and downtime
- Single, double opposed, and tandem cartridge seals are capable of handling a wide variety of gas sealing applications in the gas collection/transmission, refining, chemical and petrochemical processing industries

Design Features

- Shrouded mating ring prevents secondary damage in the event of a mating ring fracture
- Low-level leakage can be vented to a safe area, used as fuel to drive equipment, or returned to process via a low-pressure ejector

Performance Capabilities

- Temperature: -220°F to 600°F/-140°C to 315°C
- Pressure: Up to 6,500 psig/450 bar g across single stage
- Speed: Up to 660 fps/200 m/s
- Shaft: Up to 13.75"/350mm

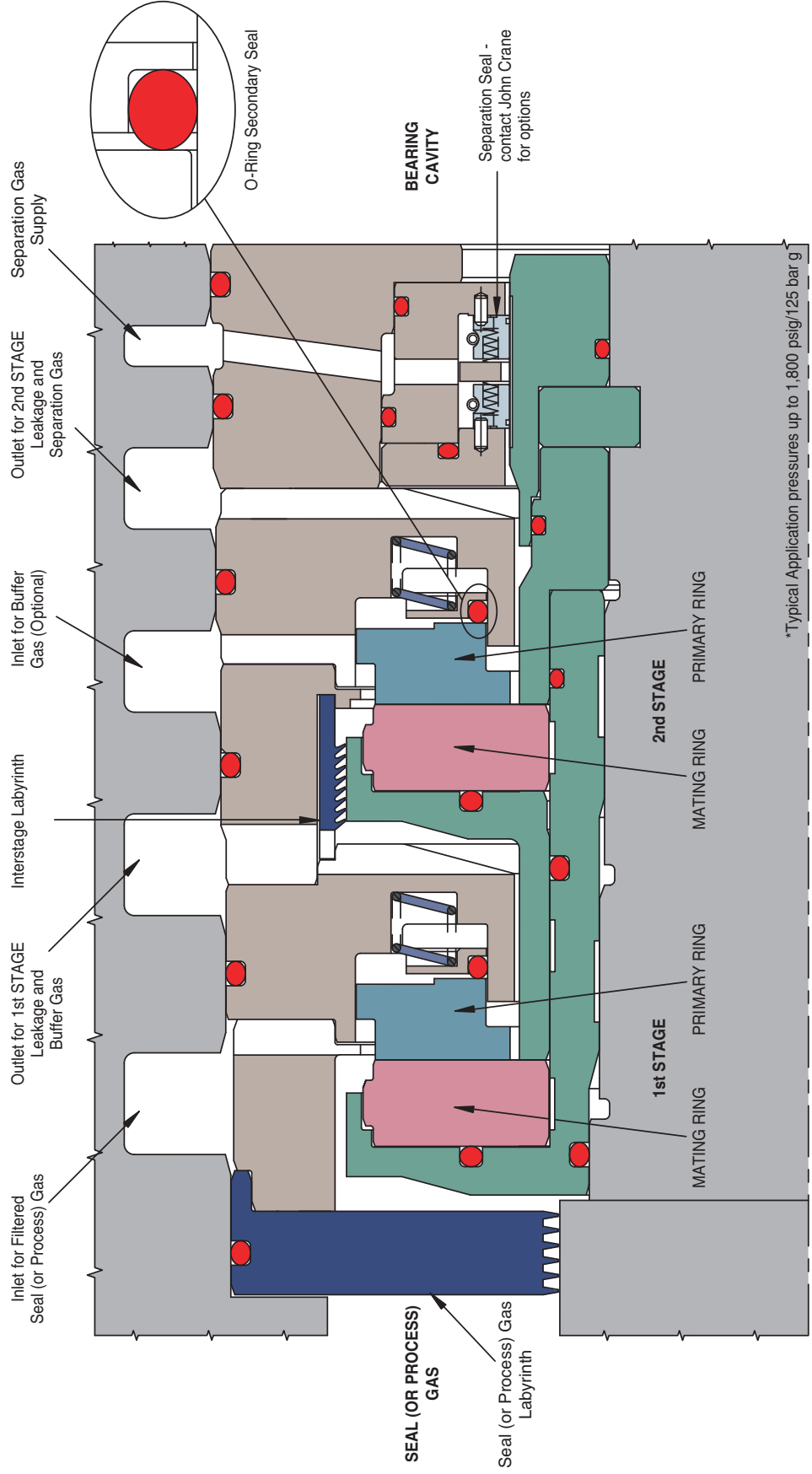
*Contact DryGasSeals@johncrane.com for more information about exact application requirements.



TYPE 28 Compressor Seals

Dry-Running, Non-Contacting Gas Seals

Type 28AT Tandem Arrangement



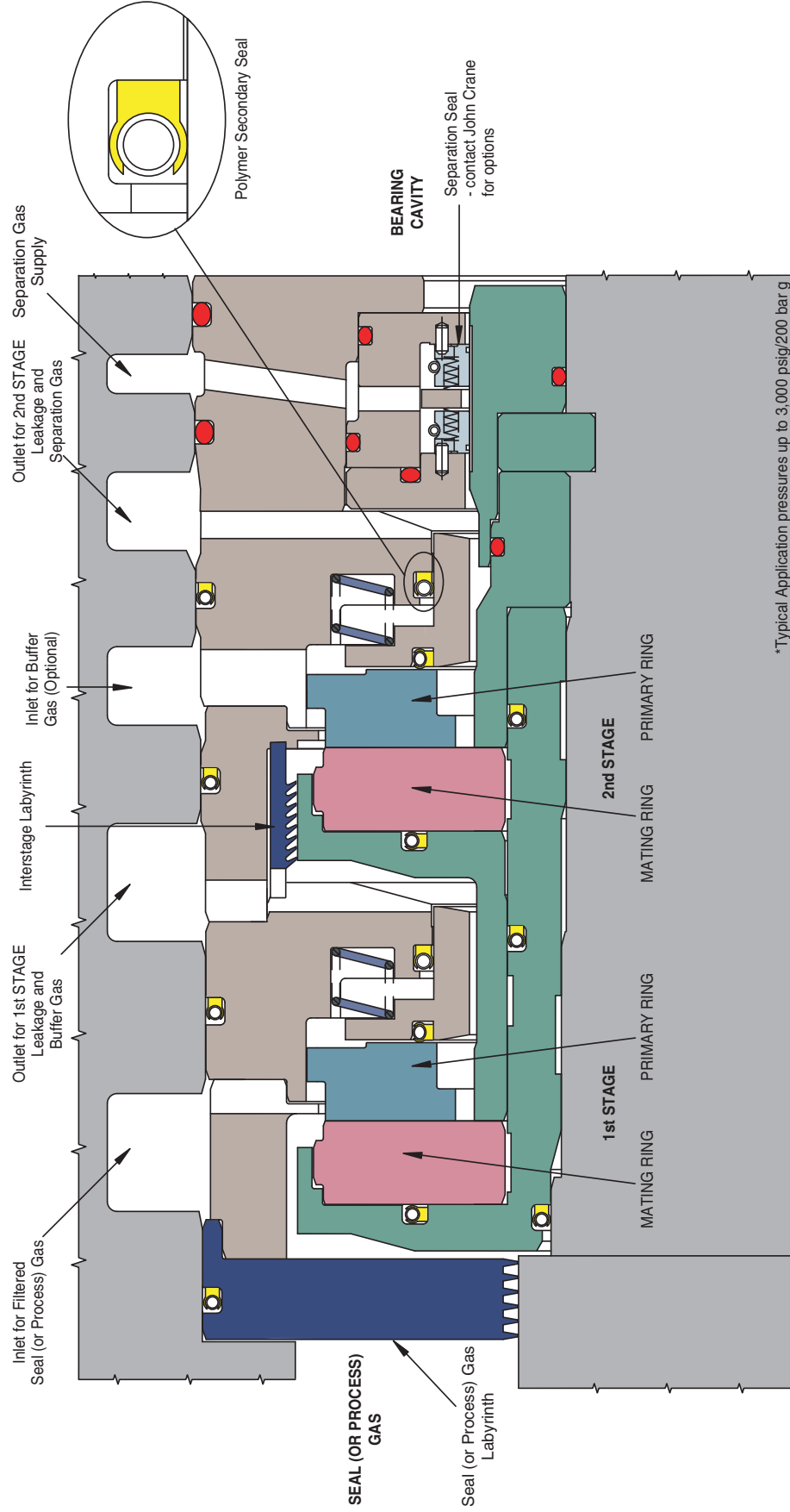
28AT / 28XP / 28EXP



TYPE 28 Compressor Seals

Dry-Running, Non-Contacting Gas Seals

Type 28XP Tandem Arrangement

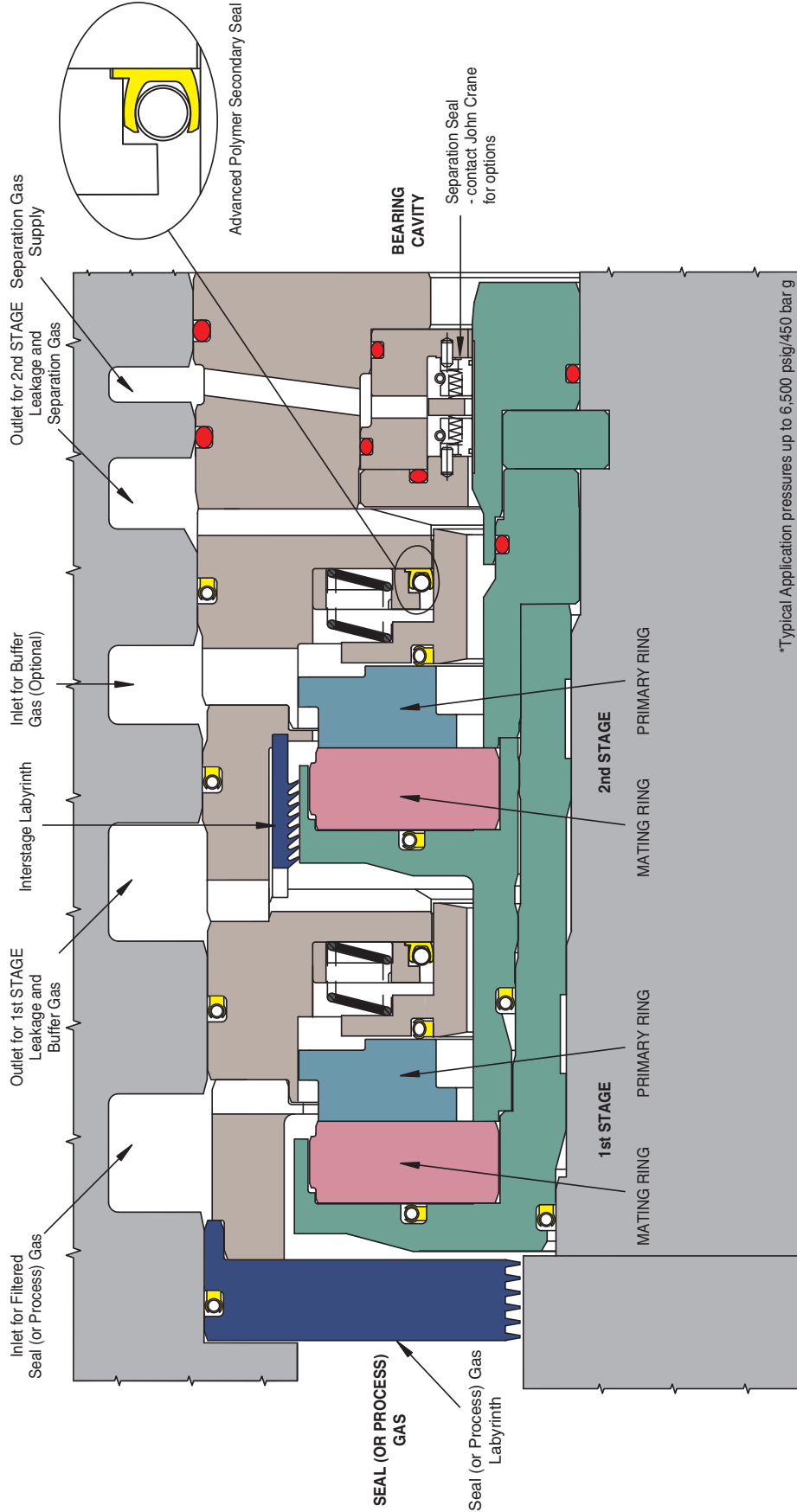




TYPE 28 Compressor Seals

Dry-Running, Non-Contacting Gas Seals

Type 28EXP Tandem Arrangement

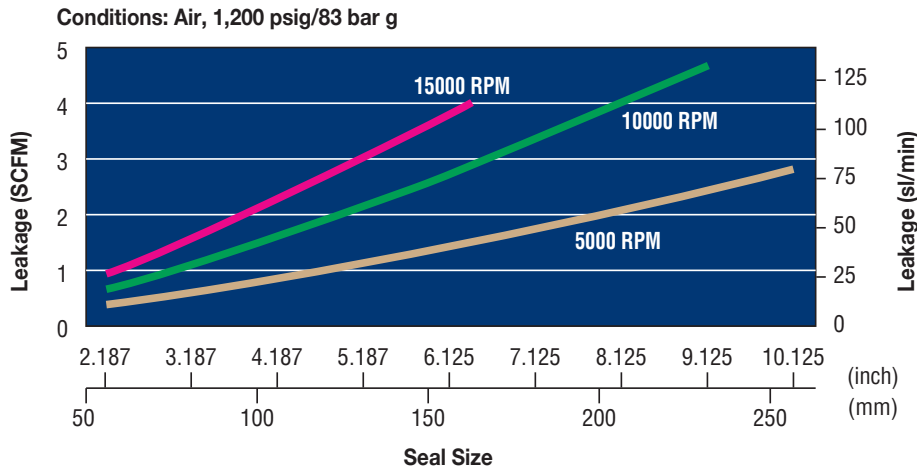




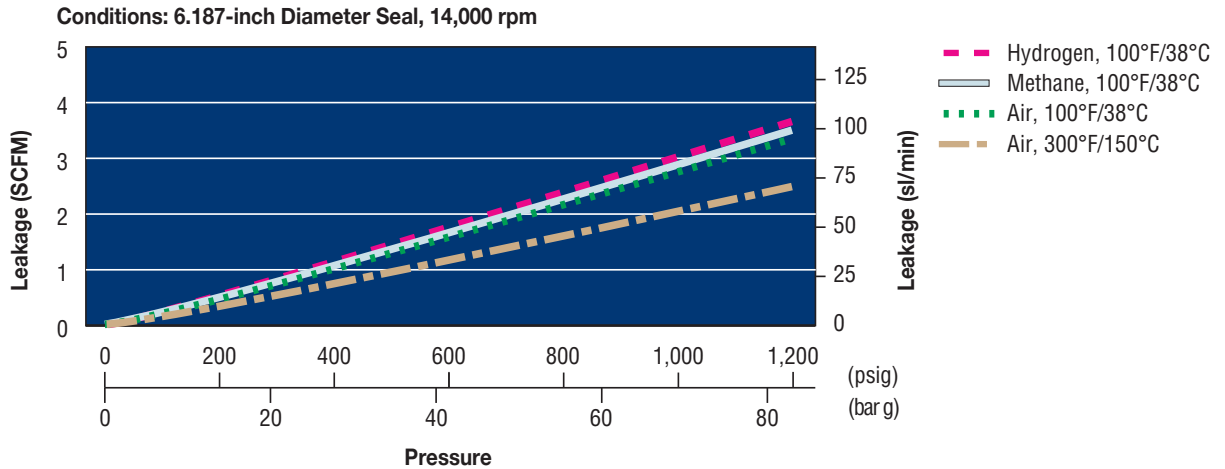
TYPE 28 Compressor Seals

Dry-Running, Non-Contacting Gas Seals

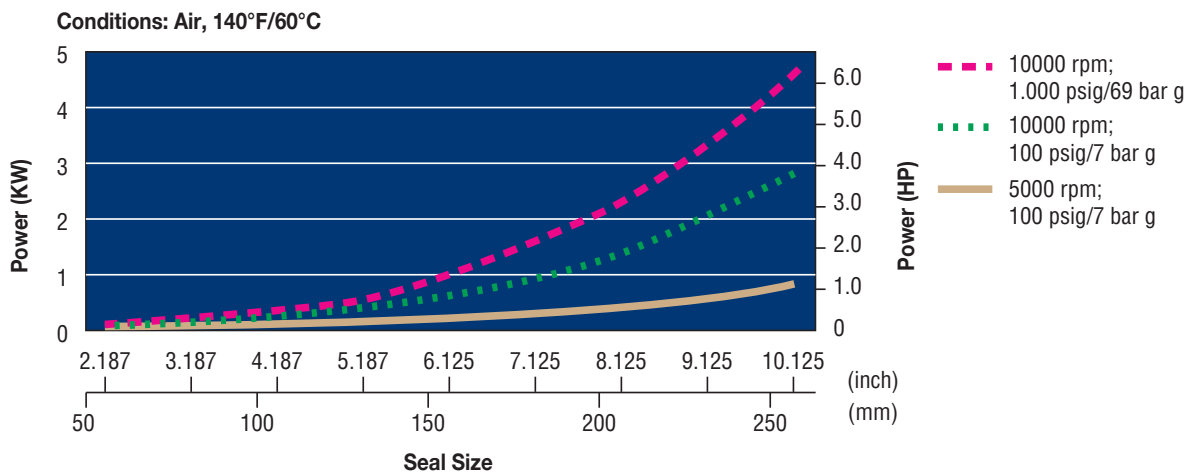
Size and Speed Effect on Leakage



Pressure, Temperature and Gas Effect on Leakage



Gas Seal Power Consumption



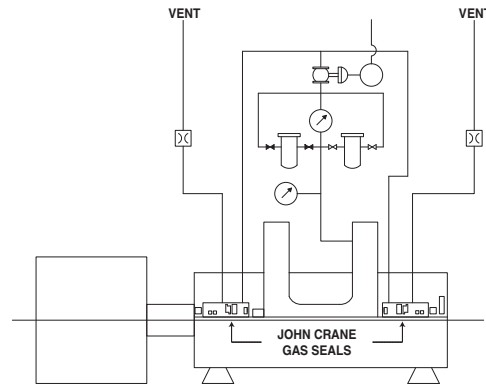
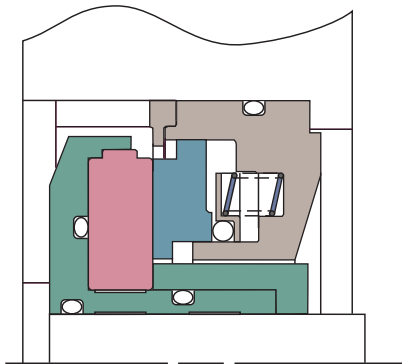
*This information should not be used for specification purposes. Contact DryGasSeals@johncrane.com for more information about exact application requirements.



TYPE 28 Compressor Seals

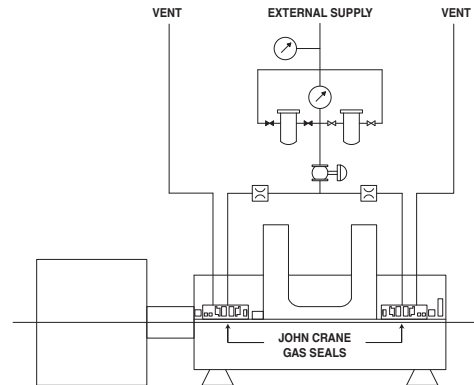
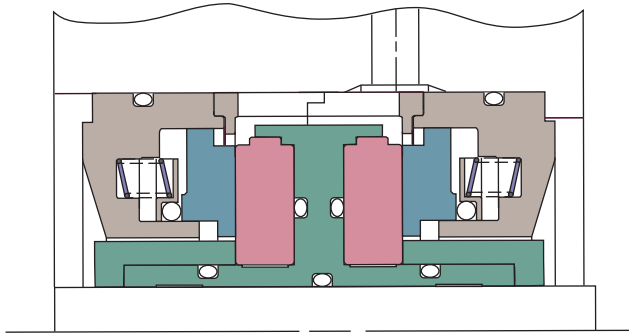
Dry-Running, Non-Contacting Gas Seals

Typical Single Seal Arrangement and Seal Support System



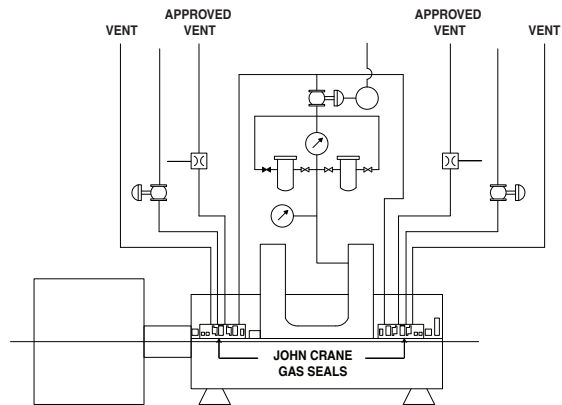
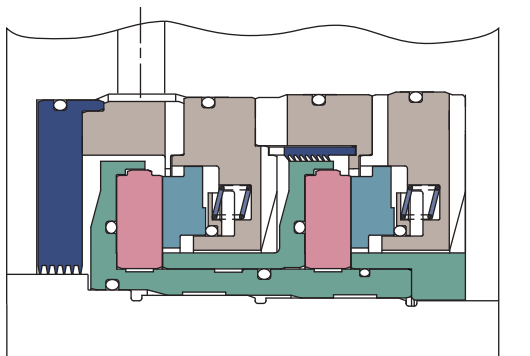
*Single Seal Arrangement for applications not requiring a safety back-up seal.

Typical Double Opposed Seal Arrangement and Seal Support System



*Double Seal Arrangement where hazardous gas is not permissible to leak into atmosphere.

Typical Tandem Seal Arrangement and Seal Support System



*Tandem Seal Arrangement for applications requiring a safety back-up seal.



For your nearest John Crane facility, please contact one of the locations below.

North America
Global Headquarters
Morton Grove, IL, USA
1-800-SEALING
Tel: 1-847-967-2400
Fax: 1-847-967-3915

Europe
Slough, UK
Tel: 44-1753-224000
Fax: 44-1753-224224

Latin America
São Paulo, Brazil
Tel: 55-11-3371-2500
Fax: 55-11-3371-2599

Middle East & Africa
Dubai, United Arab Emirates
Tel: 971-481-27800
Fax: 971-488-62830

Asia Pacific
Singapore
Tel: 65-6518-1800
Fax: 65-6518-1803

If the products featured will be used in a potentially dangerous and/or hazardous process, your John Crane representative should be consulted prior to their selection and use. In the interest of continuous development, John Crane Companies reserve the right to alter designs and specifications without prior notice. It is dangerous to smoke while handling products made from PTFE. Old and new PTFE products must not be incinerated. ISO 9001 and ISO 14001 Certified, details available on request.