

Unloaders

For reciprocating compressors

We offer compressor unloaders that set the standards for reliability, fugitive emission reduction, corrosion resistance, and reduced maintenance and inventory costs.



Unloaders For Any Application

Dresser-Rand unloaders are used during compressor start-up and for capacity control during compressor operation. Specific applications for unloaders are determined by clients' requirements and compressor design.

The standard operator design for Dresser-Rand plug, port and clearance pocket unloaders is air-to-load. Air-to-unload designs for these unloaders are also available. Other designs, including finger unloaders, are available to meet your compressor cylinder unloading needs.

Performance You Can Rely On

OEM-designed and made of corrosion resistant materials, Our unloaders meet the toughest performance requirements. The unloaders feature standardized components—indicators, piston rods, springs, O-Rings, non-metallic seal rings—for low inventory costs. Plus, fugitive emissions are virtually eliminated with spring-energized TFE gland design with vent and purge capability. A standard indicator confirms whether the unloader is open or closed.

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Features	Benefits
Guides for unloader valve alignment	Ensure proper alignment for positive seating and minimal leakage
Standardized components	Reduce parts inventory and cost; improve availability
Aluminum piston and stainless steel housing	Resist corrosion; extend life
Spring located out of gas stream	Eliminates wear from dirt, corrosion and debris; extends life
Sleeve-type unloader valve	Minimizes area exposed to differential pressure; results in improved sealing with typical operator air pressure
Shoulder bolt	Provides consistent, direct seating
Stepped rod design	Ensures safe, dependable operation
Bellows rod seal (optional)	Eliminates fugitive emissions through the unloader rod

Port Unloader

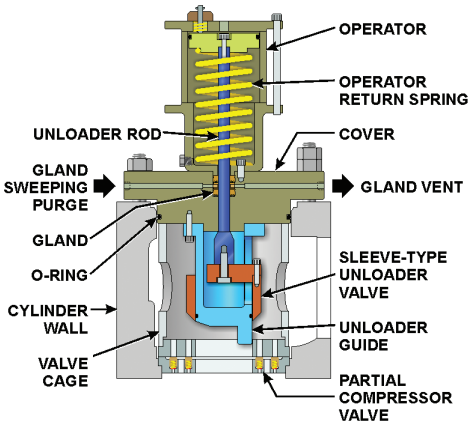
The port unloader is installed in a cylinder valve hole, with the unloader valve seated against a replaceable donut. This closes the inlet passage, effectively loading that end of the compressor cylinder. When the valve is unseated, that end of the compressor cylinder is unloaded.

Plug Unloader

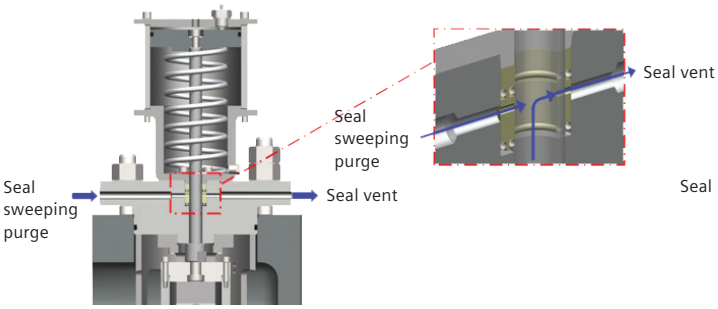
The plug unloader is used in conjunction with a partial inlet valve. When the unloader valve is seated, the inlet valve functions normally. When the unloader valve is unseated, process gas in the cylinder bypasses the valve through the center opening, unloading that end of the compressor cylinder.

Clearance Pocket Unloader

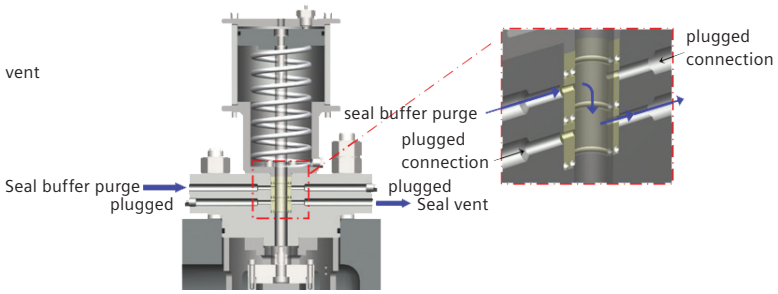
The clearance pocket unloader is used to open or close a clearance pocket. When the unloader valve is seated, the clearance pocket is closed. When the unloader valve is unseated, the additional clearance volume of the pocket is opened to the compressor cylinder, reducing the cylinder capacity.



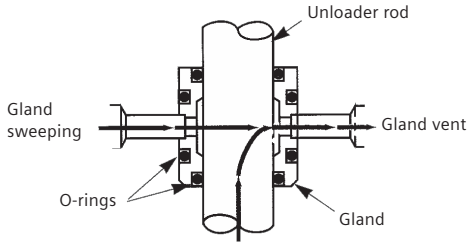
A plug unloader



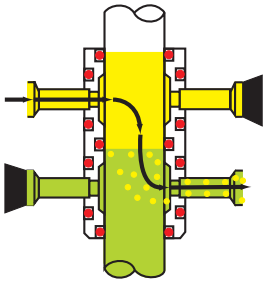
Standard sweeping purge unloader seal



Standard buffer purge unloader seal



Optional sweeping purge O-ring gland



Optional buffer purge O-ring gland

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