

# Inert Buffer Gas Control System



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*The inert buffer gas control system is available in standard designs, or Dresser-Rand can custom engineer a system to meet your specifications.*  
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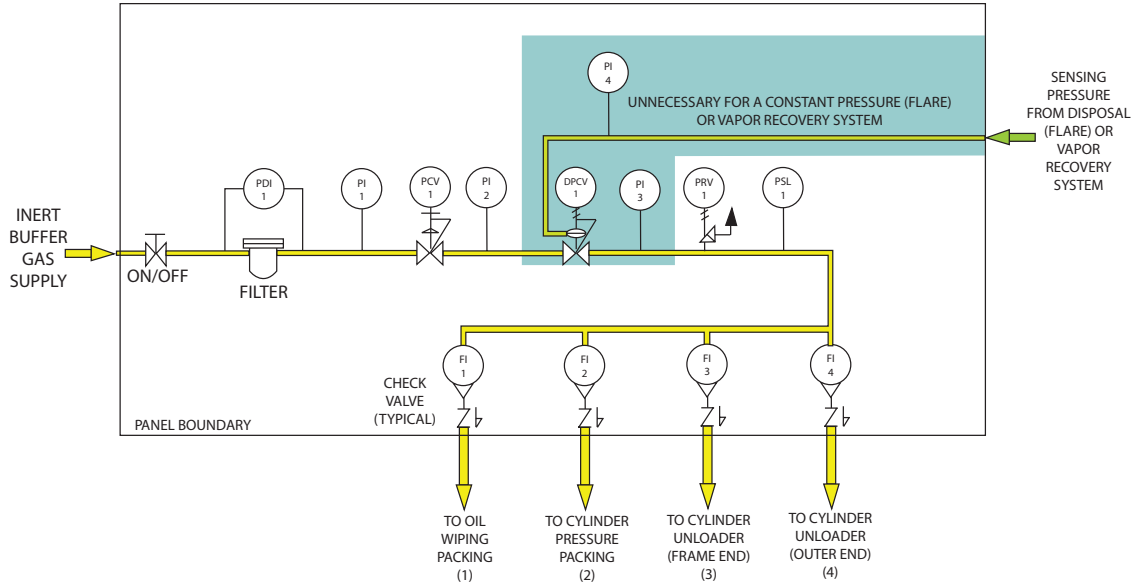
## Designed to Reduce Fugitive Emissions

Purging with inert buffer gas is an effective way to control and virtually eliminate fugitive gas emissions from reciprocating compressors. Dresser-Rand offers an inert buffer gas control system that will reliably distribute, control, and monitor buffer gas at all points on your reciprocating compressor. Instrumentation allows operators to simply and easily monitor buffer gas pressures as well as the condition of buffered and seal packings. Automated alarm and/or shutdown capability also is an option with this system.

Two types of pressure control are available – manual and automatic. Manual pressure control is used when venting to a constant pressure disposal (flare) or vapor recovery system. Automatic pressure control is used when it's necessary to maintain a buffer gas pressure 15 psig higher than a variable pressure disposal (flare) or vapor recovery system, as recommended by API 618.

Features	Benefits
Central distribution	Controls and monitors all reciprocating compressor buffer gas purge requirements from one location
Automatic pressure control	Maintains buffer gas purge pressure 15 psig above plant gas disposal (flare) or vapor recovery system pressure as recommended by API 618
Automated monitoring	Activates alarm and/or shutdown in the event of a buffer gas supply loss
Instrumentation	Enables simple and easy monitoring
Flow meters	Displays buffer gas flow rates to buffered packings and distance pieces (changes in flow rates indicate an increase in wear of the buffered and seal packings)
Compact design	Requires minimal space on compressor operating deck
Fully tested before delivery	Ensures Dresser-Rand quality and reliability

## Control System—Typical for One Compressor Cylinder



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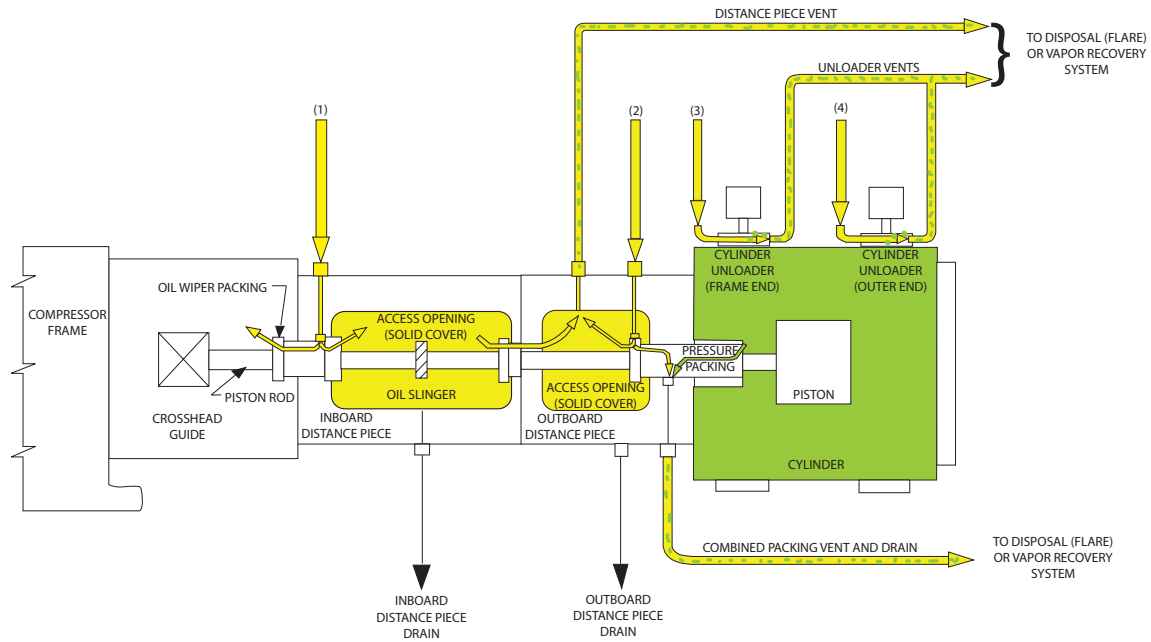
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## Typical Compressor Cylinder Inert Buffer Gas Arrangement



### Key

- DPCV-1** **Differential Pressure Control Valve** - Maintains buffer gas pressure at a minimum of 15 psig above a variable pressure disposal (flare) or vapor recovery system
- FI-1** **Flow Indicator** - Displays buffer gas flow rate to oil wiper packing
- FI-2** **Flow Indicator** - Displays buffer gas flow rate to pressure packing
- FI-3** **Flow Indicator** - Displays buffer gas flow rate to cylinder unloader (frame end)
- FI-4** **Flow Indicator** - Displays buffer gas flow rate to cylinder unloader (outer end)
- PCV-1** **Pressure Control Valve** - Reduces buffer gas supply pressure to the required system pressure
- PDI-1** **Pressure Differential Indicator** - Displays condition of buffer gas filter
- PI-1** **Pressure Gauge** - Displays buffer gas supply pressure into buffer gas control system
- PI-2** **Pressure Gauge** - Displays pressure control valve buffer gas outlet pressure
- PI-3** **Pressure Gauge** - Displays differential pressure control valve buffer gas outlet pressure
- PI-4** **Pressure Gauge** - Displays disposal (flare) or vapor recovery gas line pressure
- PRV-1** **Pressure Relief Valve** - Protects buffer control system components from over pressure
- PSL-1** **Low Pressure Switch** - Identifies loss of buffer gas pressure and generates alarm (or shutdown)

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