

CPI Plug Style Unloader Actuator Upgrades Product Brief



The Challenge

When using old style unloader actuators customers commonly experience:

- Leakage of the process gas past the shaft and cover seals
- Reliability problems with finger style actuators where finger failures lead to damage to the valves
- Inability of hand operated unloaders to be used with automated control systems

The Solution

CPI plug unloader actuators with upgraded seals reduces emissions and when combined with a CPI valve upgrade increases overall reliability.

CPI custom designed plug unloaders can be retrofitted to existing cylinders and applications. The plug unloaders incorporate multiple design features to prevent gas emissions from entering the environment. These features include O-Ring style covers, O-ring jackbolts, polymer shaft seals, and vents to collect fugitive emissions.

Another advantage of CPI plug unloaders is that in certain applications one single plug unloader actuator per cylinder end can replace the multiple existing finger unloader actuators that are on every suction valve. The CPI plug unloader can be used for both valve port unloading with a CPI plug valve or for volume pocket unloading.

They provide an upgrade opportunity for both old style valves and unloaders or as part of normal reconditioning service.



A refinery customer experienced problems with gas leakage from their OEM old style diaphragm unloader actuators



CPI plug unloader actuators with upgraded seals which reduced their emissions and improved reliability

FEATURES

- Piston style air actuators
- Designed to meet API 618 standards
- Available in air-to-load and air-to-unload designs
- Both solid plug and balanced plug styles are available
- Special materials are available for corrosive applications

Most compressor cylinders are installed with valve unloaders that are used for start-up and capacity control.

These unloaders come in two main styles:

- Finger unloaders which hold open the suction valve plates or discs
- Plug style unloaders which open a large orifice in the center of a suction valve or port

