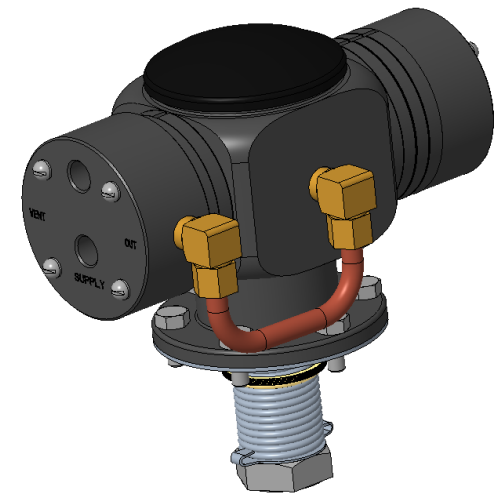


Conoflow's GC32 Commandaire Positioner

Jeff Gotthelf
Principal Engineer

May 3, 2022

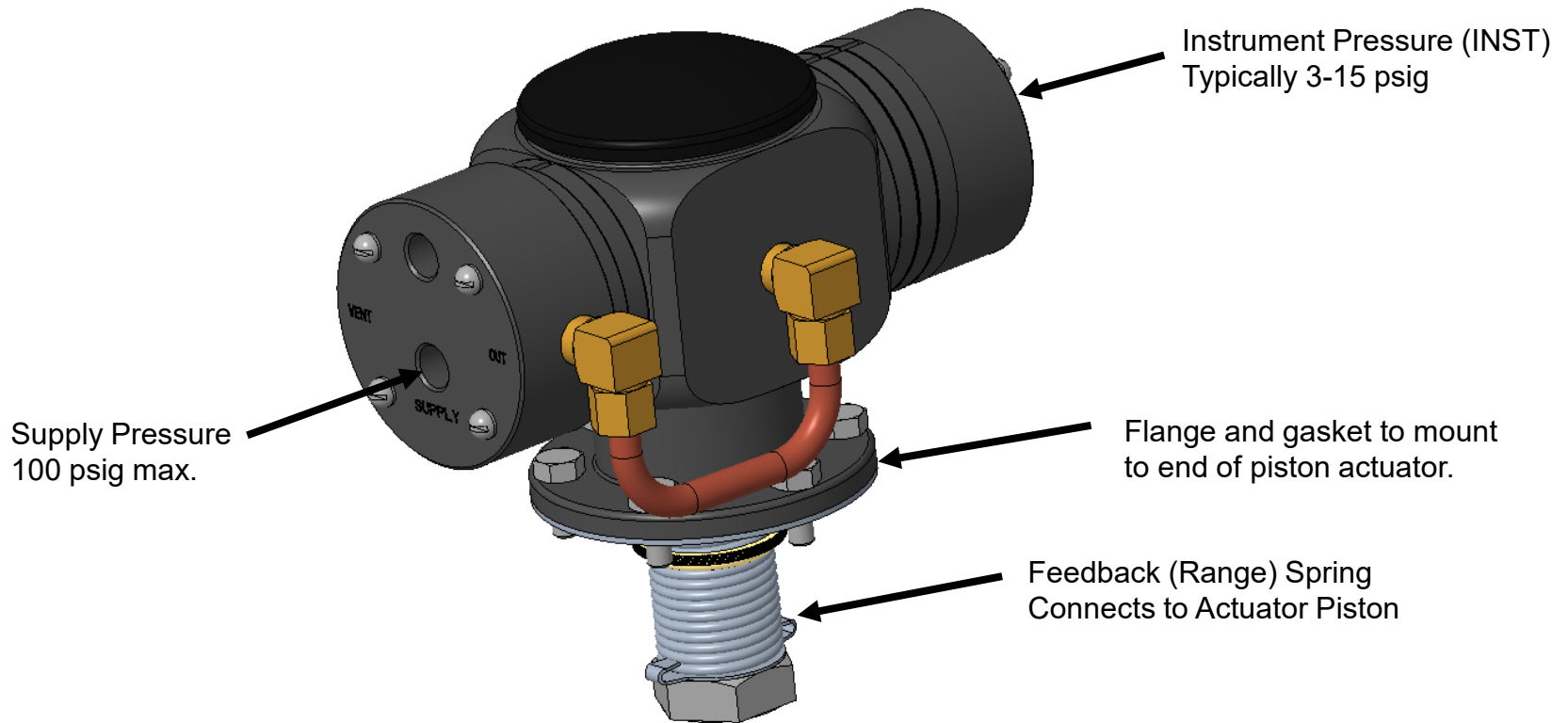


Conoflow®

GC32 Commandaire Positioner Description

- Like the GC31, the Conoflow GC32 Commandaire Positioner is a single acting air pressure and movement control for piston or diaphragm actuators.
- This positioner uses an air signal to proportionately move an actuator's piston or diaphragm position.
- This positioner mounts on the end of the actuator, and drives the piston or diaphragm downward and moves the actuator stem out with a decreasing control signal. The GC31 moves the actuator stem out with an increasing control signal.
 - A cushion load regulator or reversing relay is required to drive the piston or diaphragm back, towards the positioner if there is no actuator spring return.
 - This pressure retracts the actuator stem when the positioner no longer commands the piston to extend the stem.
- A range spring beneath the positioner, inside the actuator cylinder, connects to the actuator piston or diaphragm to provide the position feedback for the positioner's internal controls.
 - This range spring is required for the positioner to control actuator position.

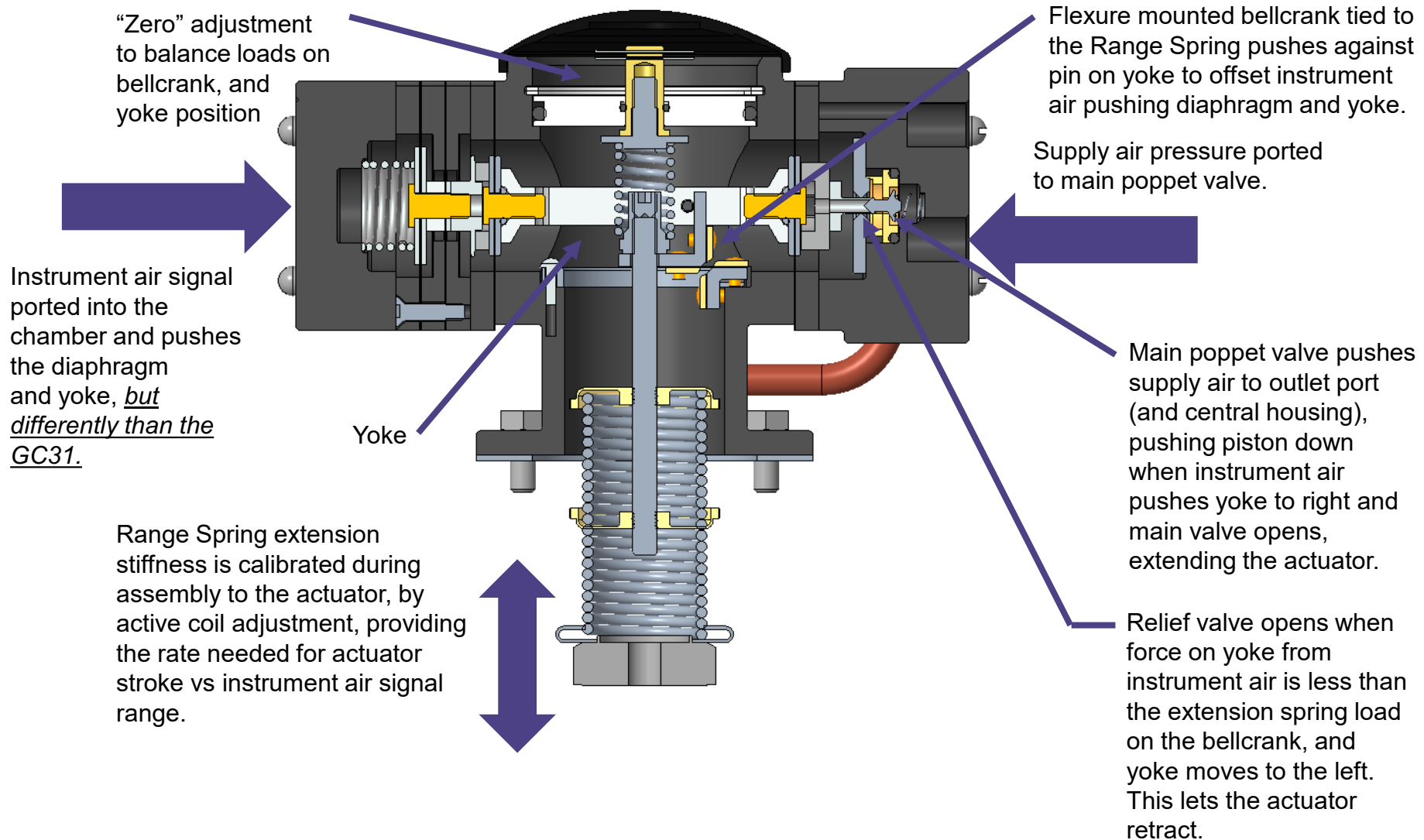
GC32 Commandaire Positioner Description



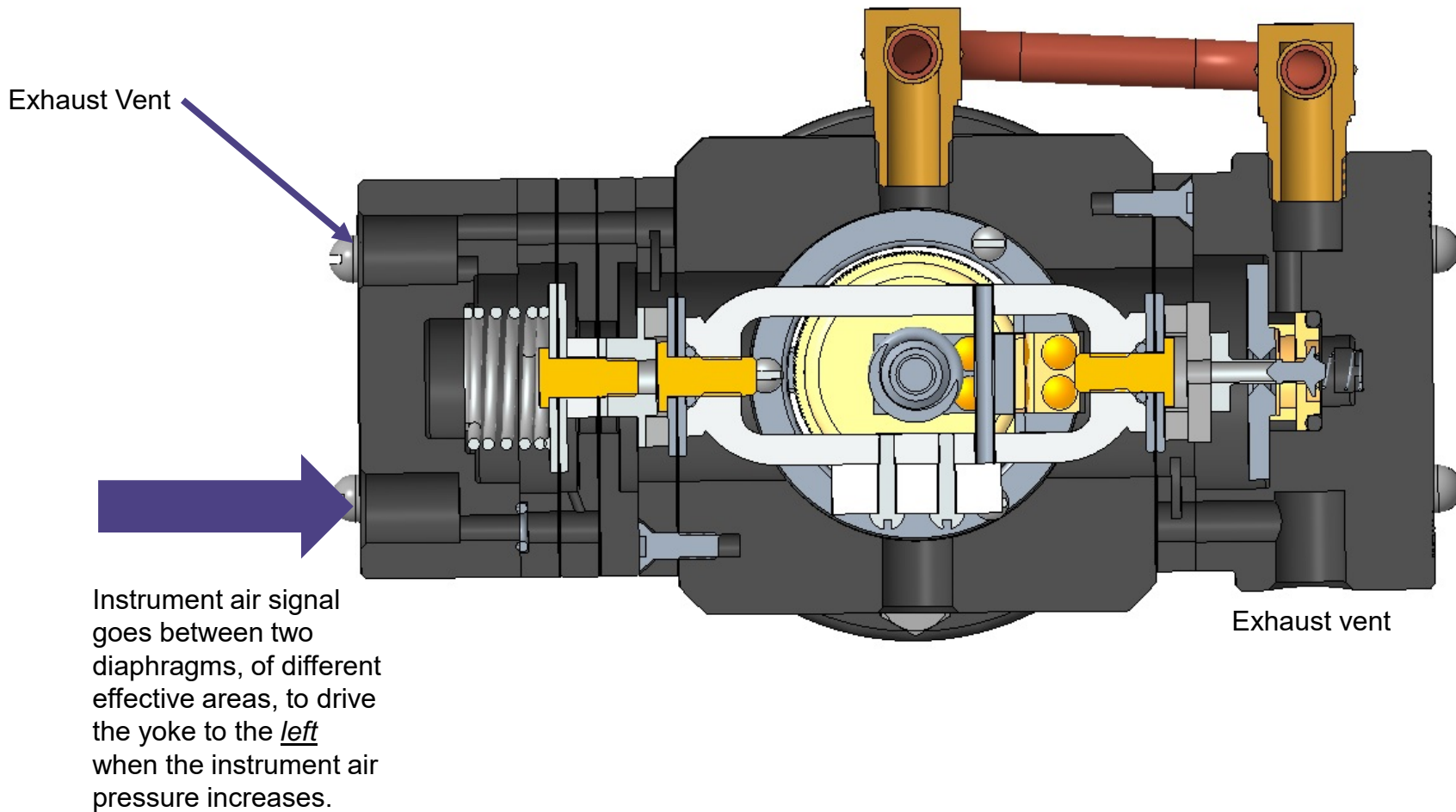
The Supply (Supply) and Instrument (INST) pressure port are on opposite ends.

The controlled outlet pressure is routed to the central housing, where it pressurizes the top of the piston through a flange and gasket connection on the end of the piston actuator.

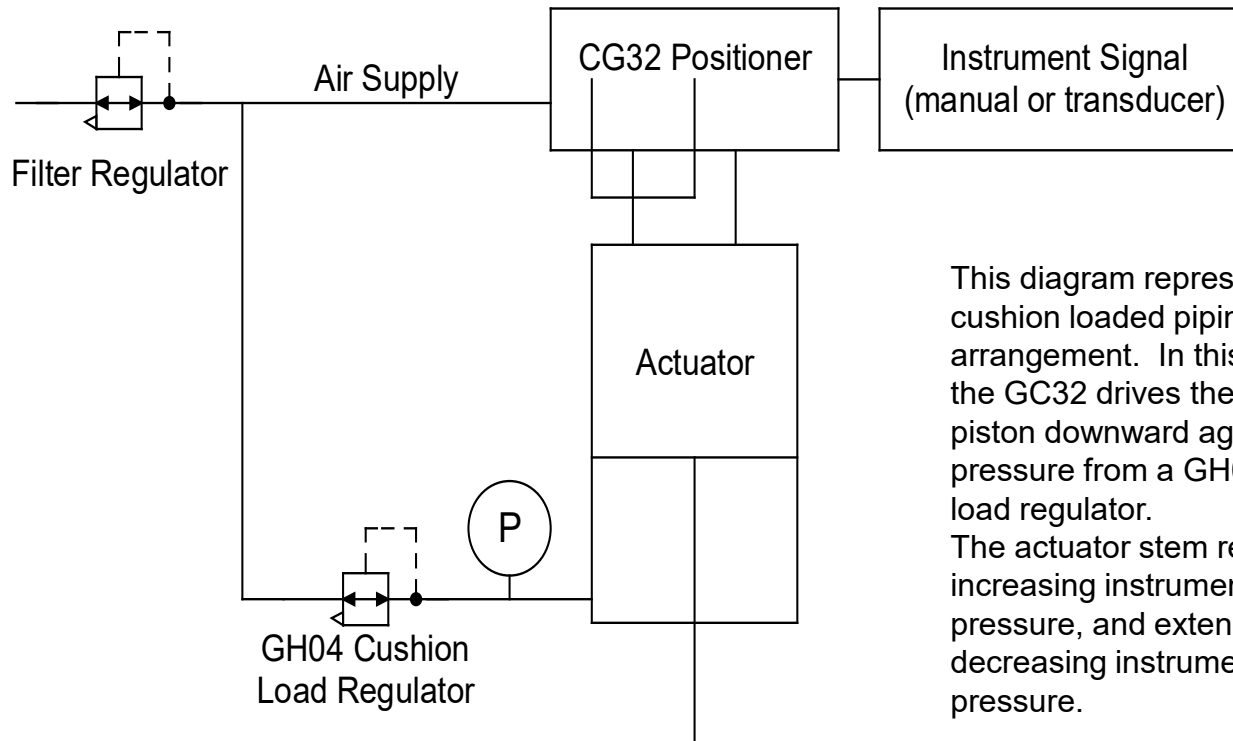
GC32 Commandaire Positioner – Internal Operation



GC32 Commandaire Positioner – Internal Operation

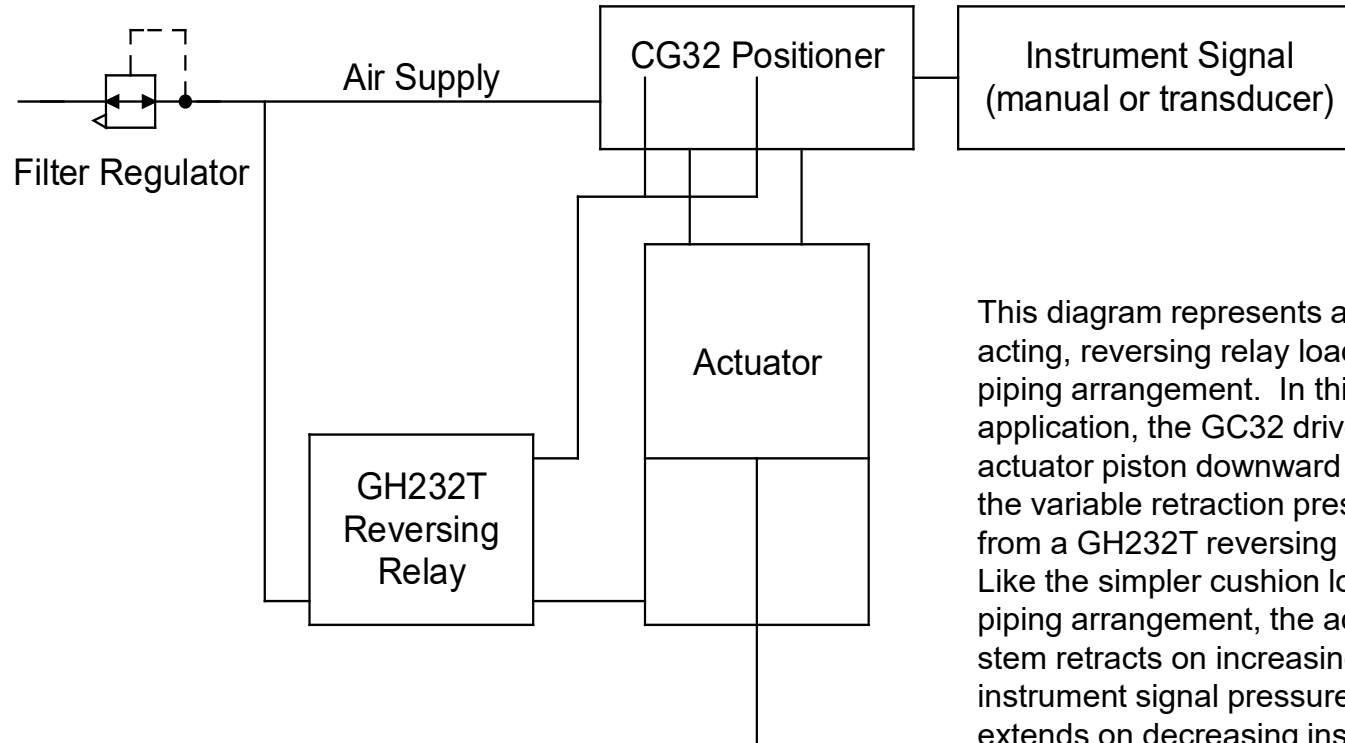


GC32 Commandaire Positioner – Piping / Hook Up



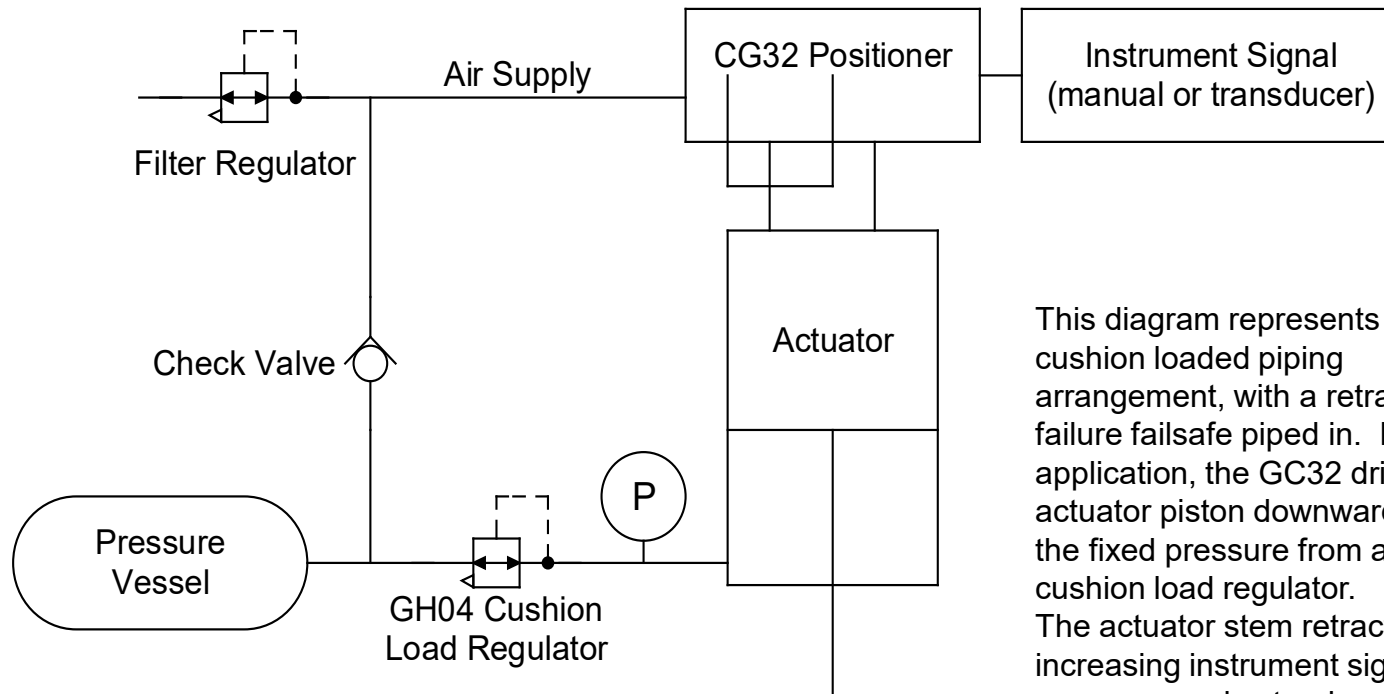
This diagram represents a simple, cushion loaded piping arrangement. In this application, the GC32 drives the actuator piston downward against the fixed pressure from a GH04 cushion load regulator. The actuator stem retracts on increasing instrument signal pressure, and extends on decreasing instrument signal pressure.

GC31 Commandaire Positioner – Piping / Hook Up



This diagram represents a double acting, reversing relay loaded piping arrangement. In this application, the GC32 drives the actuator piston downward against the variable retraction pressure from a GH232T reversing relay. Like the simpler cushion load piping arrangement, the actuator stem retracts on increasing instrument signal pressure, and extends on decreasing instrument signal pressure.

GC32 Commandaire Positioner – Piping / Hook Up



This diagram represents a simple, cushion loaded piping arrangement, with a retract on failure failsafe piped in. In this application, the GC32 drives the actuator piston downward against the fixed pressure from a GH04 cushion load regulator. The actuator stem retracts on increasing instrument signal pressure, and extends on decreasing instrument signal pressure. If air pressure is disrupted, the air in the pressure vessel will continue to supply the cushion load regulator to retract the stem.