

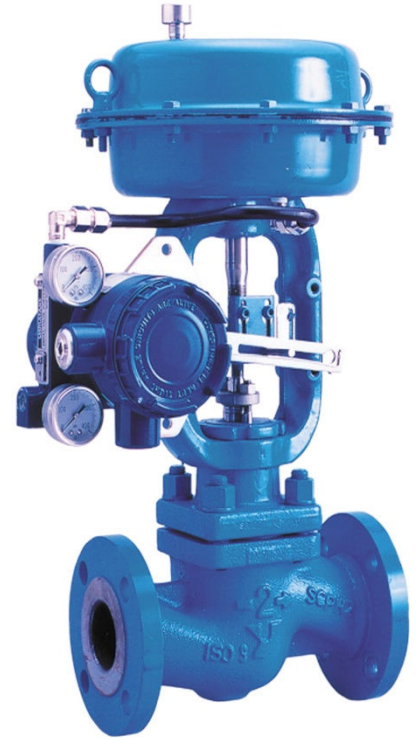


**Aspen Engineering Services, LLC**  
**Solutions for the Oil and Gas Industry**

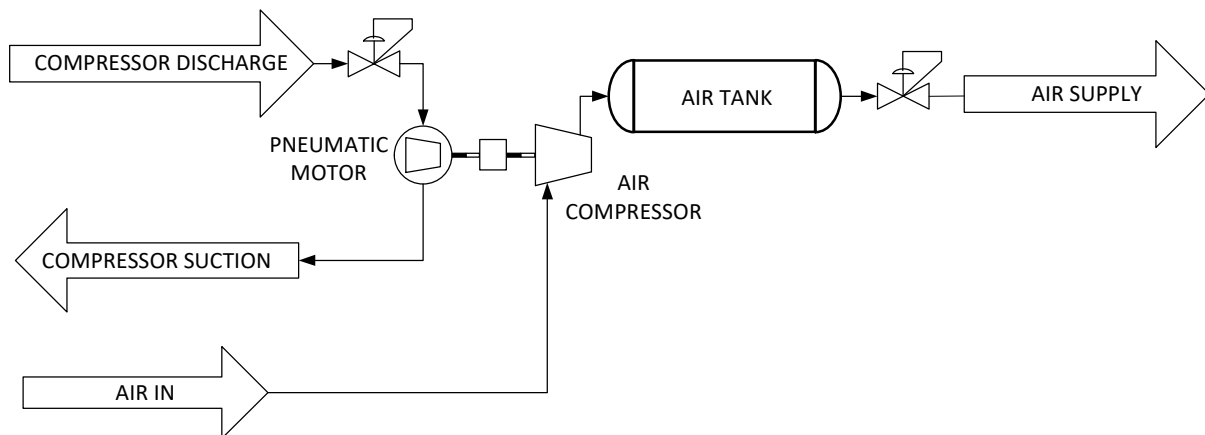
**REMOTE COMPRESSED AIR SYSTEM**

The Environmental Protection Agency's New Source Performance Standards (NSPS, 40 CFR Part 60 Subpart OOOO) requires that each pneumatic controller affected facility constructed, modified or reconstructed on or after October 15, 2013, at a location between the wellhead and a natural gas processing plant for the point of custody transfer to an oil pipeline, must have a bleed rate less than or equal to six standard cubic feet per hour.

To comply with this ruling, oil and gas producers must either convert their pneumatic control devices to zero bleed systems, or install an air compressor on site. Conversion to zero bleed actuators is an expensive and time-consuming process. Further, adding an air compressor generally requires a natural gas-fired engine to drive the compressor, since electricity is typically not available at remote sites. The engine consumes natural gas, emits carbon dioxide and, consequently, typically requires permitting.



The patent-pending Remote Compressed Air System (RCAS) produces instrument air, without electricity, for use in control valve actuators. Field supplied natural gas powers a pneumatic motor equipped with a shaft to drive an air compressor. The compressor pulls air from the atmosphere and provides the line pressure required to allow the pneumatic controller to function as designed. The gas discharged to the atmosphere when the pneumatic controller is actuated is ordinary atmospheric air. The natural gas that drives the pneumatic motor attached to the air compressor is routed back to the field collection system, and is not vented to the atmosphere.



RCAS is Patent Pending  
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