

Upstream Oil and Gas

Eliminate pneumatic valve emissions in your upstream oil and gas applications

Challenges

New environmental regulations

Governments and environment protection agencies are proposing new regulations aimed at reducing harmful pollution from new and existing oil and natural gas facilities. This often includes carbon emissions from pneumatic device venting.

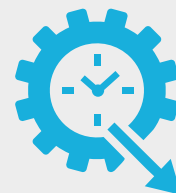
PNEUMATIC CONTROLLER VENTING ACCOUNTS FOR 30% OF METHANE EMISSIONS FROM OIL & GAS INDUSTRY



Gas blowby

Applications such as 2 or 3 phase separators require fast response time to provide precise level control, to prevent unplanned downtime. Most electric valves on the market today require significant time to actuate, thus increasing potential for gas blowby.

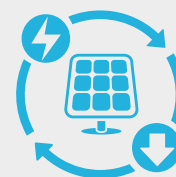
SLOW VALVE SYSTEM RESPONSE TIMES CAN RESULT IN UNPLANNED DOWNTIME



Power constraints

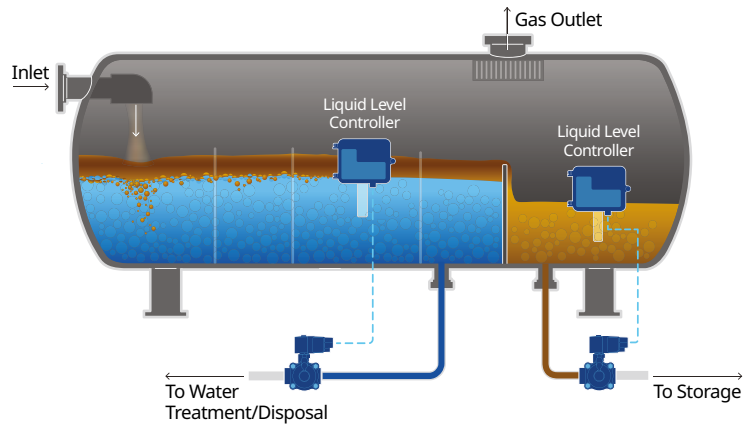
Upstream applications often operate in remote areas with limited power availability, making it more challenging to deploy electric valve actuation technologies. The use of solar energy drives the need to minimize power consumption.

USE OF SOLAR ENERGY AT REMOTE LOCATIONS LIMITS AVAILABLE ON-SITE POWER



OUR SOLUTION – Eliminate emissions using electric solenoid valve technology

Emerson provides a fully electric solution for process valves used in upstream applications, such as separators and storage. By providing an alternative to traditional pneumatic valves piloted by natural gas, this eliminates venting, enabling companies to reduce their carbon footprint, while aligning with corporate stewardship initiatives and/or environmental regulations.



Fully electric solution eliminates venting

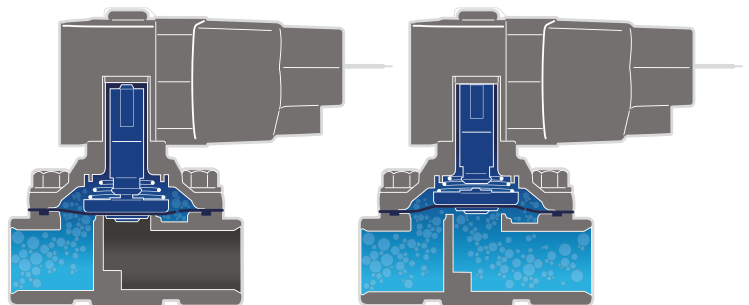
Emerson's trusted ASCO™ electric solenoid valve solution replaces traditional pneumatic valves that are piloted by well gas. Unlike pneumatic valves, the electric solution does not need to perform venting to actuate. Additionally, unlike traditional stem valves, there is no valve packing, thus eliminating leakage. All emission sources from traditional valves are eliminated.

Low power device suitable for remote applications

ASCO Series 210 electronically enhanced solenoid valve offers outstanding flow and pressure capability from a low power device, drawing less than 1.2 watts of power. This makes it ideally suited even for facilities that use solar energy to power equipment.

Quick actuation improves performance

Extremely responsive actuation of 50 – 75 msec compared to other actuation types such as ball or stem valves, that can take up to 8 seconds. This ensures precise control, helping to optimize process performance.



De-Energized
Normally Closed

Energized
Normally Closed

	ASCO Series 210 Solenoid Valve	Conventional Upstream Electric Motorized Valves
Leakage	None	Leakage through valve packing
Response time	Less than 0.1 sec	Up to 8 sec
Power consumption	< 1.2 W	Up to 96 W

ASCO Series 210 Electronically Enhanced Solenoid Valves



Rosemount™ Level Switch/Detector – Vibrating Fork



Fisher™ L2e Electric Level Controller



EMERSON™