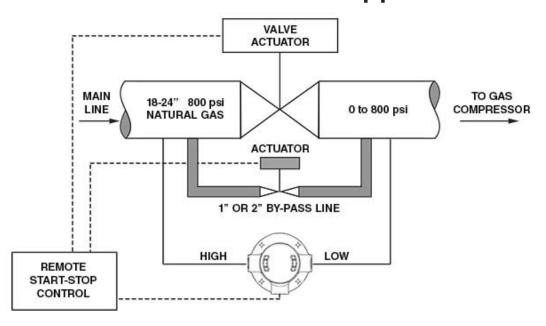


Application Note



Product **Application** Industry

Explosion Proof Opposed Piston Differential Pressure Switch Shock Prevention on Compressor Start-Up Oil & Gas

Challenge

Gas compressors are the heart of oil and gas pipelines; they are placed strategically to collect and pump the natural gas through a pipeline and to the end user. These compressors may be shut down during times of low demand or maintenance. The intake valve to a compressor is closed until the compressor is ready for startup, so the upstream natural gas pressure increases to much higher pressures than the downstream compressor. Opening the intake valve when there is still a large pressure differential will cause a "shock" to the compressor as high pressure natural gas flows into the compressor at high velocities. This shock could cause severe and expensive damages to the compressor.

Solution A 1" or 2" by-pass line is installed across the compressor intake valve, and an operator opens this line so that pressure is allowed to build up on the downstream side of the valve. An SOR Opposed Piston Differential Pressure Switch monitors the pressure differential across the valve. Once the pressure differential across the valve is within 50 psi the SOR Differential Pressure Switch will open the compressor to intake the natural gas at a safe flow rate. The SOR Opposed Piston Switch has high overrange and proof pressures that allow it to operate in applications that involve monitoring large pressure differentials, like this one.