

PowerChokes®

Pressure Relief Valve (PRV) MAX

PowerChokes new and improved patented mud pump / Managed Pressure Drilling (MPD) Pressure Relief Valve MAX operates with a significantly faster response time compared to competitive models and is unparalleled in accuracy, repeatability and reliability.

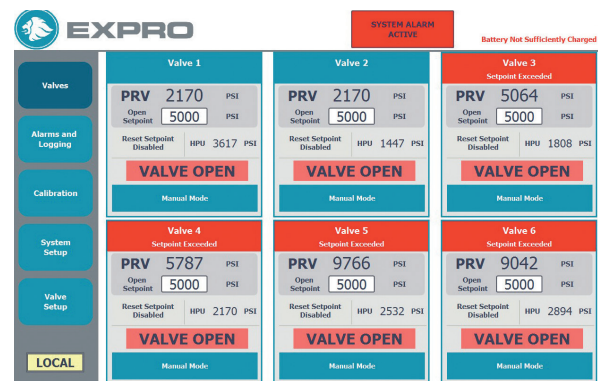
The PRV is used to control pressure within a given system to prevent pressure build-up and potential damage to equipment. The system has an optional reset in which the valve will close without any user intervention. This increases safety, reduces Non-Productive Time (NPT) but also importantly protects against under pressure, which is critical to operations which are connected to live wells.

Applications

- PRVs are used in a wide range of specifications where pressure levels are critical for smooth operations
- Managed Pressure Drilling
- Underbalanced Drilling
- Frac/flowback application
- Drilling (mudpump and surface equipment)
- Buffer manifolds
- Coiled tubing drilling
- Riser protection

Features and benefits

- Can be re-set after each trip with no maintenance or rebuilding
- May be manually or automatically re-set after each trip
- Opens in less than 375 msec upon pressure reaching the setpoint allowing lower pressure to be trapped
- Extends the life of your equipment
- Maintains pressure in a system in order to avoid underpressure
- Provides redundancy data logging and enhanced safety features
- Uses field-proven PowerChokes® technology and software for positioning accuracy, stability and repeatability
- PRV Failure Modes configurable with proprietary Expro software
- Position feedback Sensor PRV status
- 3rd Party Data Communication
- Panel mount hydraulic & rig air pressure gauges on the HPU enclosure
- Panel mount color coded filter differential pressure gauge
- Accessibility of Pump
- Reduce downtime for maintenance (like replace pumps, filters etc.)
- Easy of oil fill in to the reservoir
- Improvement in Manual override accessibility
- Pump not requiring much maintenance
- Lifting eye brackets for ease of safe field installation



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Touch screen Human Machine Interface (HMI) mounting anywhere on the rig for complete control.

The Programmable Logic Controller (PLC) with 12" touch screen Human Machine Interface (HMI) can control up to 6 PRVs separately. The interface provides much needed redundancy, each Pressure Relief Valve (PRV) has open/close events, valve pressures and sequence during valve pop off.

Additional audio/visual alarms capability signal the operator of abnormal conditions and events. Expro offers an optional battery backup so the system is never down and optional dual setpoints. One open setpoint to prevent overpressure and one re-set setpoint to prevent low pressures. Additional dynamic setpoints are also available which update on operational requirement, and optional remote communication for both control and monitoring of valves.

The Pressure Relief Valve (PRV) is system configurable which allows for multiple valves with multiple failure mechanisms from one system. It has a fail open, fail close and fail in position.



Technical specifications

Conforms to:	API 6A, PSL3, PR1, PX	Utility requirements	Control panel power requirements: 120,230 VAC, 1-Phase, 50Hz/60hz, 10A HPU: Rig air 110 psi
	API, 5000, 10,000, and 15,000 psi pressure ratings		
	ABS and DNV type approved		
	Pressure Equipment Directive (PED) CE mark	Additional information	Visual and digital position indicator
	Pressure-assisted sealing in closed position		High CV value to allow large flow rates to be accommodated
	Control panel ATEX certified - suitable for Zone 2, CE mark		Drop tight seal
	Hydraulic Power Unit (HPU) and PRV valve ATEX certified suitable for Zone 1, CE mark		Piston actuated
Material information	H2S services - NACE MR0175		1 5/8", 2" and 3" trim
	Application Programme Interface (API) material class EE-NL or better		Dual pump options available
	Valve body of forged construction, Application Programme Interface (API) 75k material, impact tested		Hard and dynamic setpoints available
	Metal to metal sealing (no elastomers in gate and seat seal), provide extended service life between maintenance periods		In-house software allows modifications
	316SS enclosure, IP 65 ingress protection		Additional certification available on request

Note: Other sizes, configurations and pressure ratings are available to meet most applications, for more information contact your local Expro representative or email expro.powerchokes@exprogroup.com