

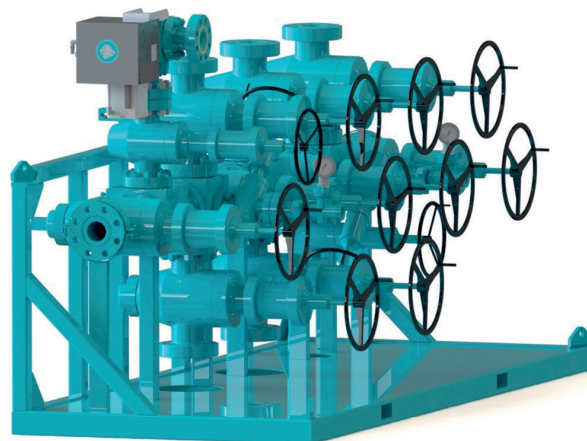
PowerChokes®

Diverter Manifold

Expro can custom-design diverter manifolds to allow a manageable, safe and efficient means to configure multiple operations from a single location.

Our diverter manifolds can be integrated with managed pressure drilling packages, configured to a wide range of individual client requirements. Diverting oil or gas without flow interruption, whilst accommodating up to 20 hydraulic valves, can also be achieved during complex operations or within challenging footprint constraints with Expro's solution-based approach.

Expro can also provide pressure relief valves and chokes, which can be integrated with our diverter manifold, providing additional control and safety.



Technical specifications

Application Programme Interface (API) pressure ratings (psi)	3,000 / 5,000 / 10,000 / 15,000
Manifold inlet/outlet sizing	2 ¹ / ₁₆ " - 7 ¹ / ₁₆ "
Application Programme Interface (API) temperature class	PX, -20° to 350°F (-29° to 177°C)
Application Programme Interface (API) material class	Up to EE-NL
Application Programme Interface (API) PR levels	1 - 2
Application Programme Interface (API) PS levels	1 - 3, 3G
H2S service	Yes
H2S service certifications	API 6A, Standard 53/NACE MR01-75 Additional certifications (ABS and DNV) available upon request
Inlays available	Inconel/SS, sealed areas, ring grooves or fully lined
Double block and bleed	For rerouting flow lines and servicing components
Skid grating	Options available
Visual/audible alarms	Options available

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

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Expro can customise full managed pressure drilling for your operations. There are many advantages of integrating the diverter manifold via our Human Machine Interface (HMI) panel and Hydraulic Power Unit (HPU), avoiding manually opening and closing valves. Automating the process is quicker as there is no down time, and it is safer as there is no confusion over opened/closed valves in error. Predefined valve positions can be programmed so that a touch of a button can safely and quickly change between different rig operations. There are various packages, which can include Human Machine Interface (HMI) and/or Hydraulic Power Unit (HPU).

Human Machine Interface (HMI) Features and Benefits

- Standard and customised to client request for other applications including:
 - Pressure Relief Valve (PRV) control systems, commonly used for mud pump protection
 - Managed Pressure Drilling (MPD) control systems
 - Well control system
 - Hydraulic valve manifold control systems
- Multiple Human Machine Interfaces (HMI) can be synchronized, with each HMI having multiple screens to display different components simultaneously – screens can be installed in any location to optimise rig floor space
- Joystick or switches for valve operation
- Realtime valve position and position control monitoring
- Remote speed adjusts for hydraulic control of valves
- Certifications provided per the following jurisdiction ATEX, IECEx, ABS, DNV, NEC, CEC, and additional certifications available upon request
- Communication to third party systems with user requested communication protocols (e.g. PROFIBUS etc)
- System built-in safety alarms, data logging and password protection available
- All alarms meet offshore safety standard DNV-OS-D202
- Hydraulic valve remote speed adjust control available
- Can control electrical on hydraulic gate valves, ball valves etc.

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Hydraulic Power Unit (HPU) Features and Benefits

- Flow rates and accumulators designed for application
- Suitable for Zone 1 locations (other options and certifications available on request)
- Remote panel or local panel operation of various hydraulic valves and chokes
- Valve actuation can be controlled manually by lever push buttons or by Human Machine Interface (HMI) screen
- Digital gauge, hydraulic gauge and Human Machine Interface (HMI) pressure display available
- Junction box, cabling, hydraulic connections and hoses selected for application
- Valve position feedback monitoring available via led display or HMI
- Manifold piping and instrumentation diagrams displayed on panel face or HMI panel with control and feedback available
- Valve speed adjust control available
- Human Machine Interface (HMI) Integration and Hydraulic Power Unit (HPU)
- Electric or air driven pumps

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