Subsea Valve Range

World leading supplier of directional control valves and modular valve assemblies for subsea applications
INTRODUCTION

Experience gained since 1987, successfully designing and manufacturing valves for operation directly immersed in sea water, has been applied to develop Bifold Fluidpower’s extensive range of technically superior sub-sea valves. Designed to operate reliably on fluids with contamination levels greater than NAS1638 Class 12, these true failsafe valves bring you the options for reducing sub-sea control module size, weight and costs, and put world beating performance at your command.

Below are typical specification requirements for sub-sea valves and comparable Bifold Fluidpower valve performance:

Subsea valve specification

- 1million cycles
- Control fluid compatibility:-
  - New generation water glycols, oil (non-charmable);
  - up to 20% sea water contamination
- Immersable in di-electric fluids with up to 20% sea water contamination
- Fluid cleanliness NAS 1638 Class 6 - NAS 1638 Class 10
- 3000m water depth
- up to 760 bar max wp.
- -10°C to +50°C
- Leakage <0.02 to 1 cc/min
- 18 to 28 VDC, 12 Watt

Bifold Fluidpower performance

- 1million cycles
- Seawater as operating medium
- Direct sea water immersion
- up to NAS 1638 Class 12
- 3000m water depth
- up to 1035 bar max wp.
- -40°C to +121°C
- Leakage 0 to 0.2 cc/min
- 18 to 28 VDC, 15 Watt

Qualification Tests

Bifold Fluidpower valves are subjected to extensive qualification test programmes and these include the following:

- 3 axis vibration test
- 3 axis, bi-directional shock test
- Thermal cycling from -18°C to +50°C; 0°C to +121°C
- Function tests monitoring internal leakage:
  - Response time at low and high ambient temperature & pressure
  - Operating voltage range
  - Pilot operating pressures (open/closed) at 1 atmosphere and 3000 metre water depth simulation

SHUTTLE VALVES

Ball seated and Slide - up to 1035 bar

PILOT OPERATED VALVES

Ball seated and Slide - up to 1035 bar

High pressure shuttle valve, subbase mounting

2/2, 3/2 normally open, spring return, high pressure, pilot operated directional control valve for 121°C ambient. Body ported. 690 bar max. differential working pressure

2/2, 3/2 normally closed or normally open, spring return, high pressure, pilot operated directional control valve for 121°C ambient. Extreme tolerance to poor fluid cleanliness. 1035 bar max differential working pressure. Up to 414 bar max ambient pressure. Subbase mounting. Dual pilot operator options (override and inhibit)
PILOT OPERATED VALVES (Shear plane sealing) - up to 690 bar

2/2, 3/2, 4/2

Single high pressure pilot 2/2, 3/2, (normally open or normally closed) 4/2, spring return. \( Cv = 0.24 \).

Single high pressure pilot. Adjustable pilot pressure. \( Cv = 0.24 \).

Bi-stable, high pressure pilot \( Cv = 0.24 \).

SOLENOID VALVES - up to 690 bar

Dual or single coils; direct acting and 2-stage configurations

3/2, normally closed or normally open, spring return, ball seated directional control valve. \( Cv = 0.01 \)

2/2 & 3/2, (normally open or normally closed) and 4/2 spring return, pilot stage solenoid valve operated shear plane sealing type directional control valve. \( Cv = 0.24 \).

3/2, bi-stable, fail close on loss of pressure pilot stage solenoid valve operated shear plane sealing type directional control valve. \( Cv = 0.24 \).

Solenoid Connector Options

Connectors can be fitted to customer specification.

Flying leads

Diamould & Hydrobond. 4 pin, 2 pin & individual push on connectors

Kemlon & DG O'Brien. Individual screw on connectors, internally grounded

Bennex. To suit oil filled cables
SPECIAL VALVE PRODUCTS
Direct seawater immersed modular valve assemblies for drill pipe riser and subsea pipeline valves.

Series configured bi-stable pilot operated 3/2 valve, pilot operated 3/2 spring return valve and solenoid operated 3/2 spring return valve

Dual, 3/2, spring return, 2-stage solenoid valves. Integral return line ingress filter protection.

CONTROL POD PRODUCTS:-
- SCM 8 function flange and 12 function cube manifolds
- SCM pressue supply manifold with filter, pressure transmitter and shuttle valve

Examples of Installation:-
Pilot operated slide valves and direct acting solenoid valves  
Bi-stable, 2-stage solenoid valves  
8 function flange manifold

Quality Assurance
All Bifold Fluidpower products are manufactured to a most stringent QA programme. Every care is taken at all stages of manufacture to ensure that every product will give optimum performance and reliability. We are recognised to EN ISO 9001:2000. Functional test certificate, letter of conformity and copies of original mill certificates, providing total traceability are available on request, to BS EN 10204 3.1.B where available. The manufacturer reserves the right to make changes to the specifications and design etc., without prior notice.

Accuracy of Information
We take care to ensure that product information in this catalogue is reasonably accurate and up-to-date. However, our products and services are continually updated so to ensure accurate and up-to-date information please refer to the issue list on the web site or contact a member of our sales team.