

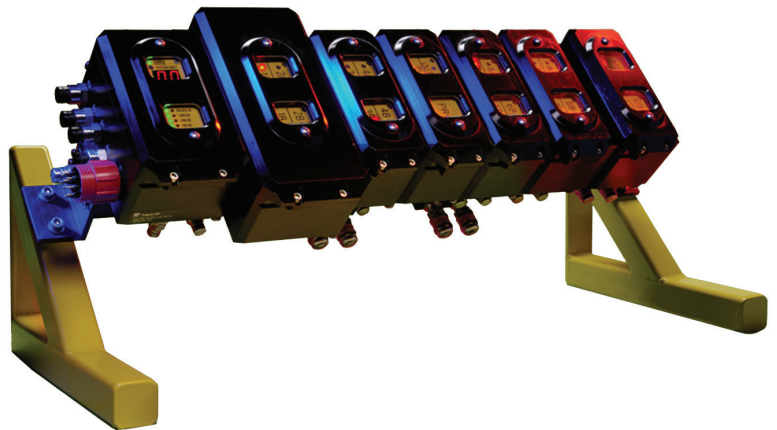
iVP – intelligent Valve Pack (General Function)



ROV CONTROL SYSTEM PRODUCTS

Key Features:

- Modular intelligent valve pack (iVP)
- Proportional control throughout
- Cost effective field proven technology
- Up to 12 functions – flow & pressure
- Standard & bespoke software screens
- External sensor capability
- Fully self-contained system



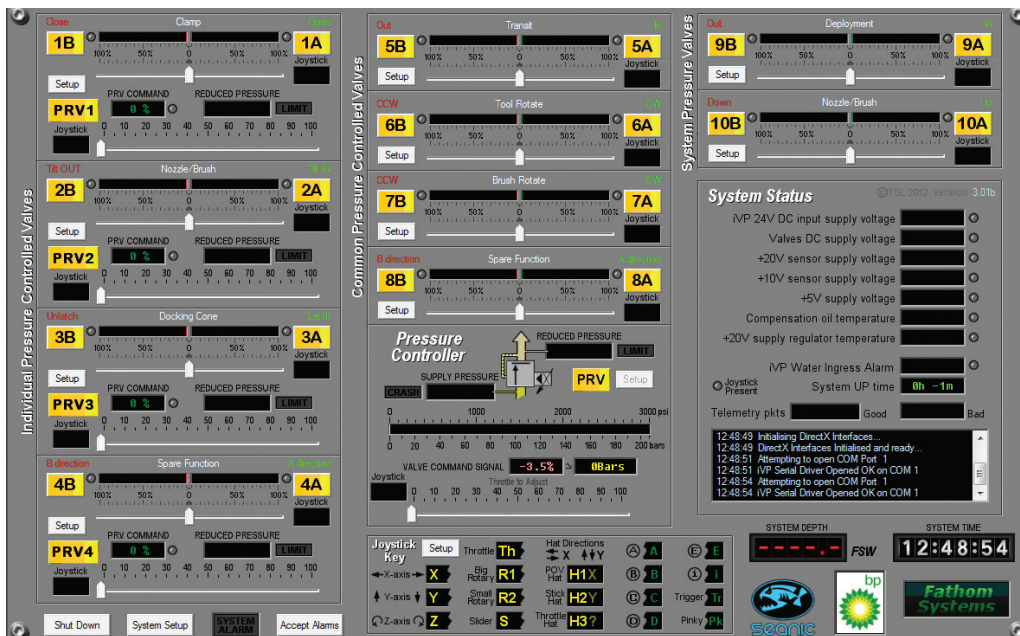
Product Overview:

The iVP is a field proven fully proportional intelligent valve pack based on industry standard valves. It provides hydraulic control requirements for extensive and complex subsea systems including tooling skids, tracked vehicles, tether management systems and tool deployment units.

The fully integrated subsea unit is supplied with a dedicated PC operating Fathom Systems Windows® based control software. The easy to use Graphical User Interface (GUI) guarantees that critical operations can be performed to the highest and safest levels.

The modular design allows for endless configurations with up to 12 bi-directional functions & pressure control. A typical configuration may consist of a number of two station directional modules to provide flow and pressure control. The proportional valves provide accurate and smooth control of the hydraulic functions without the need for external fixed flow throttles.

Please visit our website for sample configurations.



System Set-Up Options

- Electronics Module (Burton or SubConn interface)
- Wandfluh NG3 Valve type WDPF-A03
- Wandfluh NG6 Valve type WDPF-A06
- Wandfluh Pressure Control Valve type MVPS-A03
- Hydraforce Pressure Control Valve type TS-1036
- Wandfluh PO Check Valve types BDERV3 & ADERV6
- SUN Hydraulics High Flow Pressure Relief Valves
- Upstream, Downstream & Depth Pressure TXD's
- Single Input & Return to Tank
- Twin Inputs & Twin Return to Tank (dual fluid)
- Triple Input & Twin Return to Tank (single or dual fluid)

Sensors Set-Up Options

- Depth TXD: 300 Bar 0-5V
- System & regulated pressure TXD: 600 Bar 0-10V
- Service Line pressure measurement: 600 Bar 0-10V
- Turns Count: 24 bit, Single Pulse or Quadrature
- Strain Gauge Input: Constant current source to 4 wire strain gauge TXD. Set-up for 350 or 700 ohm bridges for 10V excitation
- Camera hosting capability

Software Features

- Graphical Representations, Password Protection, Automatic Calibration, Alarm Control, Diagnostics Valve and Electronics Operation, Video Overlay, Data Logging Tool Nudge, Tool Direction Control, Emergency Stop, System Presets, Water Ingress Alarms

Mechanical

- Depth Rating: 3000msw
- P, T, NG6 Valve, Fill & Drain: 3/8" BSPP
- NG3 Valve: 1/4" BSPP
- Material: 6082T6 Al Hard Anodised to BS5599, Dyed Black & Dichromate Sealed to 50 Microns
- Weight in Air: Specification Dependant
- Weight in Water: Specification Dependant

Electrical

- Power: 24V DC ($\pm 10\%$) smoothed & regulated
- Data: RS232/RS422 (for use with ROV MUX)
- Host Interface: SubConn BH10MSS (spec 44 wire) or Burton 5507-1508
- Sensor Interface: SubConn MCBH6FSS x 2, MCBH8FSS x 2 (Spec 44 wire)

Electronics Set-Up Options

- Processor, Valve Power Driver, Low Voltage & Diagnostics, Two Channel Fast Counter, Torque Transducer & Torque Tool Interface Electronics
- 12 & 16 bit analogue and 8 x digital inputs for instrumentation.
- Local LED status of telemetry, power supplies, water ingress and alarms visible through viewport