

Self Contained Electro-Hydraulic Power Packs For Valve Actuators



Superior Performance Throughout the Full Operational Range

- Continuous Power from 0.1W
- Lowest Cost Solution and Smallest Space Envelope
- Spring Return Holding Power from 0.5W
- High Operating Pressures up to 250 bar
- Configurable Output Functions
- Peak Motor Power from 40W



Energy Consumption



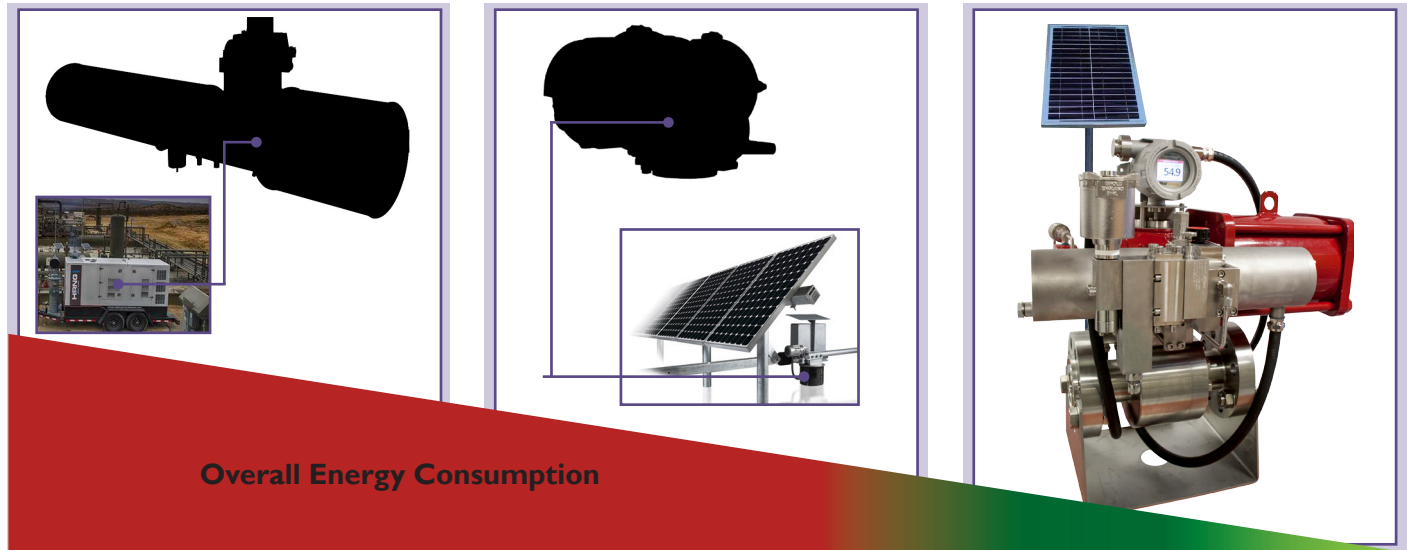
Why Choose Bifold Electro-Hydraulic Valve Actuation over Conventional Valve Actuation Systems

Customers can select from a comprehensive list of 24Vdc and single or three phase AC drive motor options. The valve assembly blocks are configurable to suit the customer's system operational requirements and control method. The power units can be supplied with an electronic controller for valve actuator positioning control and reductions in consumed electrical power, also realised from reducing the current to the control block solenoid valves once they have been energised to as little as 0.5W in some cases. These reduced power capabilities serve to minimise the size of solar panels where these are used in remote locations, further facilitating and reducing installation infrastructure and costs.

Features & Benefits

- Bifold achieve low power consumption by having a balanced high pressure hydraulic spring return solenoid valve which requires less than 0.5W holding power.
- Full functionality of the equivalent electric actuator (Partial Stroke Test (PST), Local / Remote Control, Comms Protocols, User Interface, Lockable).
- Failsafe.

Overall Energy Consumption Comparison



Overall Energy Consumption

Conventional Pneumatic Actuation

Conventional Electric Actuation

Bifold Electro-Hydraulic Actuation

Single Actuator

- Power Consumption **70W**
- Leak Rate **500 L/hr**
- CO₂/Year **200Kg**
- Solar Panel Size **10 to 20m²**
- Closing Time **1.5 secs**
- True Fail Safe **YES**
- Infrastructure Cost **HIGH**
 - Compressor
 - Power Generation
 - Field Tubing

Single Actuator

- Power Consumption **7W**
- Leak Rate **0**
- CO₂/Year **0**
- Solar Panel Size **1 to 2m²**
- Closing Time **15 secs**
- True Fail Safe **NO**
- Infrastructure Cost **MEDIUM**
 - Solar Panel Support Structure
 - Large Battery Enclosure

Single Actuator

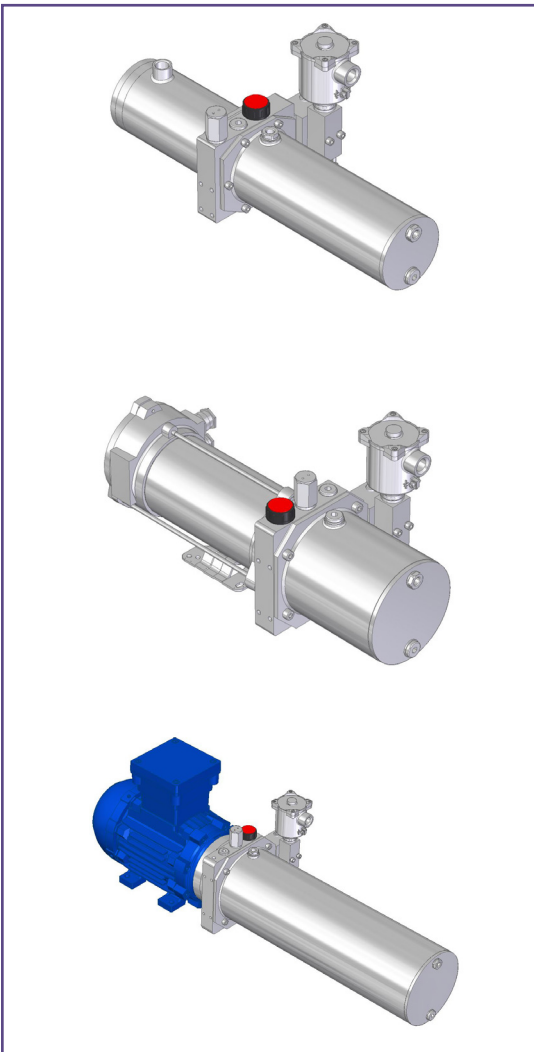
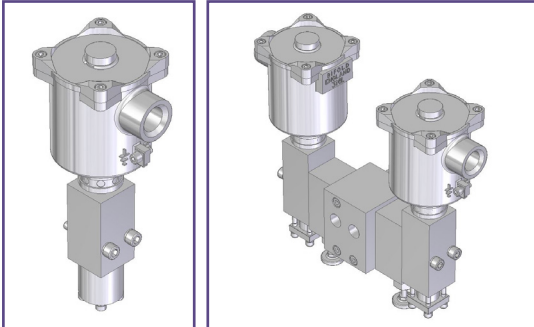
- Power Consumption **0.7W**
- Leak Rate **0**
- CO₂/Year **0**
- Solar Panel Size **0.1 to 0.2m²**
- Closing Time **1.5 secs**
- True Fail Safe **YES**
- Infrastructure Cost **NONE**

Features & Benefits

Worldwide Approvals



Solenoid Operator is Free to Rotate 360°



Standard Solenoid Operator Equipment Design & Build

- Solenoid Operator Worldwide Approvals
- Solenoid operator is free to rotate 360° allowing for an easy cable layout and ease of connection wiring. Solenoid operator internals rotate with the enclosure and prevent cables being pulled out of terminal block.
- Worldwide technical and field support.
- Standard solenoid valve can be mounted in any orientation to simplify installation due to all the components having enhanced rotational capabilities.

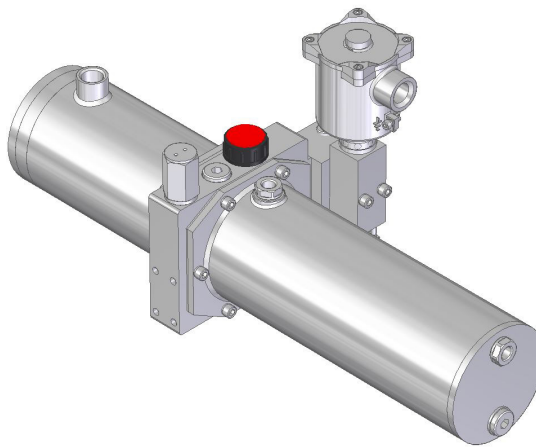
Electro-Hydraulic Power Pack

- Bifold has developed a compact Electro-Hydraulic Power Unit to control single or double acting actuators operating gate, ball or other types of process valve. In addition to the basic electric motor, hydraulic pump and fluid reservoir the units incorporate control blocks accommodating the associated control system directional, speed and pressure relief valves.
- Hydraulically actuated process valves present a fail-safe solution for safety critical process systems that electrically actuated valves either cannot do, or cannot do without significant size, weight and cost penalties.
- Bifold's fully self contained, compact units are a lowest cost solution for actuated process valves and associated installation costs are low. The very low power requirements permit these power packs to be used in remote locations in conjunction with small area, solar panels and rechargeable battery systems, with a consequential zero carbon footprint.
- The compact, modular design eliminates all control system tubing, apart from the interconnecting tube or flexible hose connecting the actuator to the power unit. The potential for fluid leakage from tube fitting connections is, therefore, virtually eliminated.

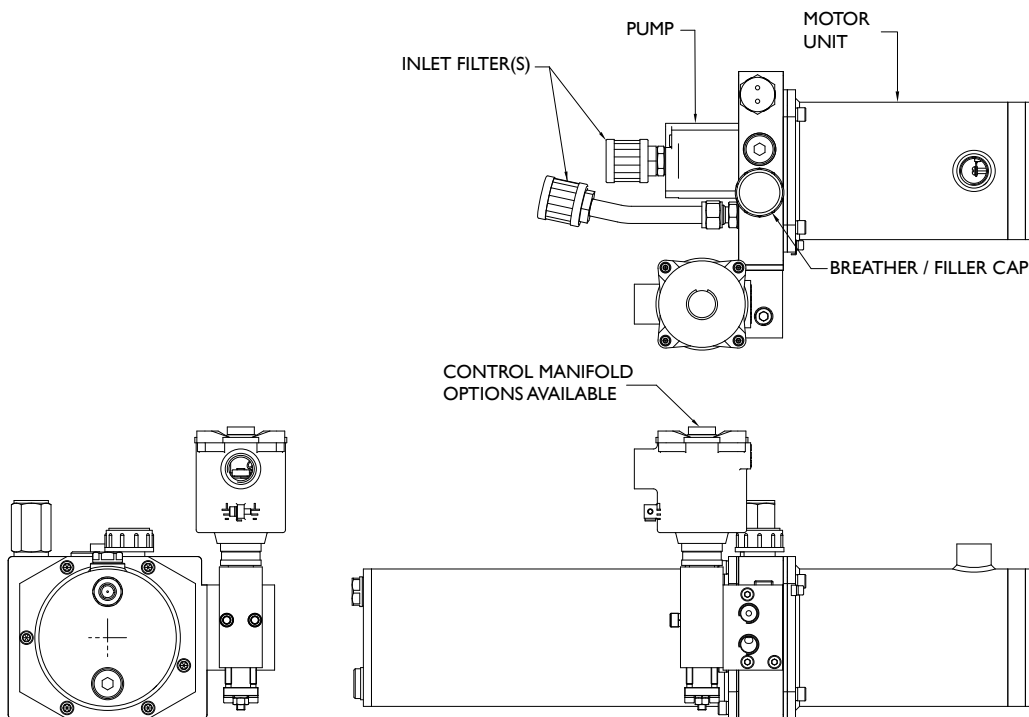
Example System

Features & Benefits

- Compact design.
- Ex d motor options.
- Low power consumption.
- Bifold controls manifold interface.
- Manual override cartridge hand pump available with the VA option.
- Up to and including 210 bar working pressure.
- Failsafe.



GA Drawing



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

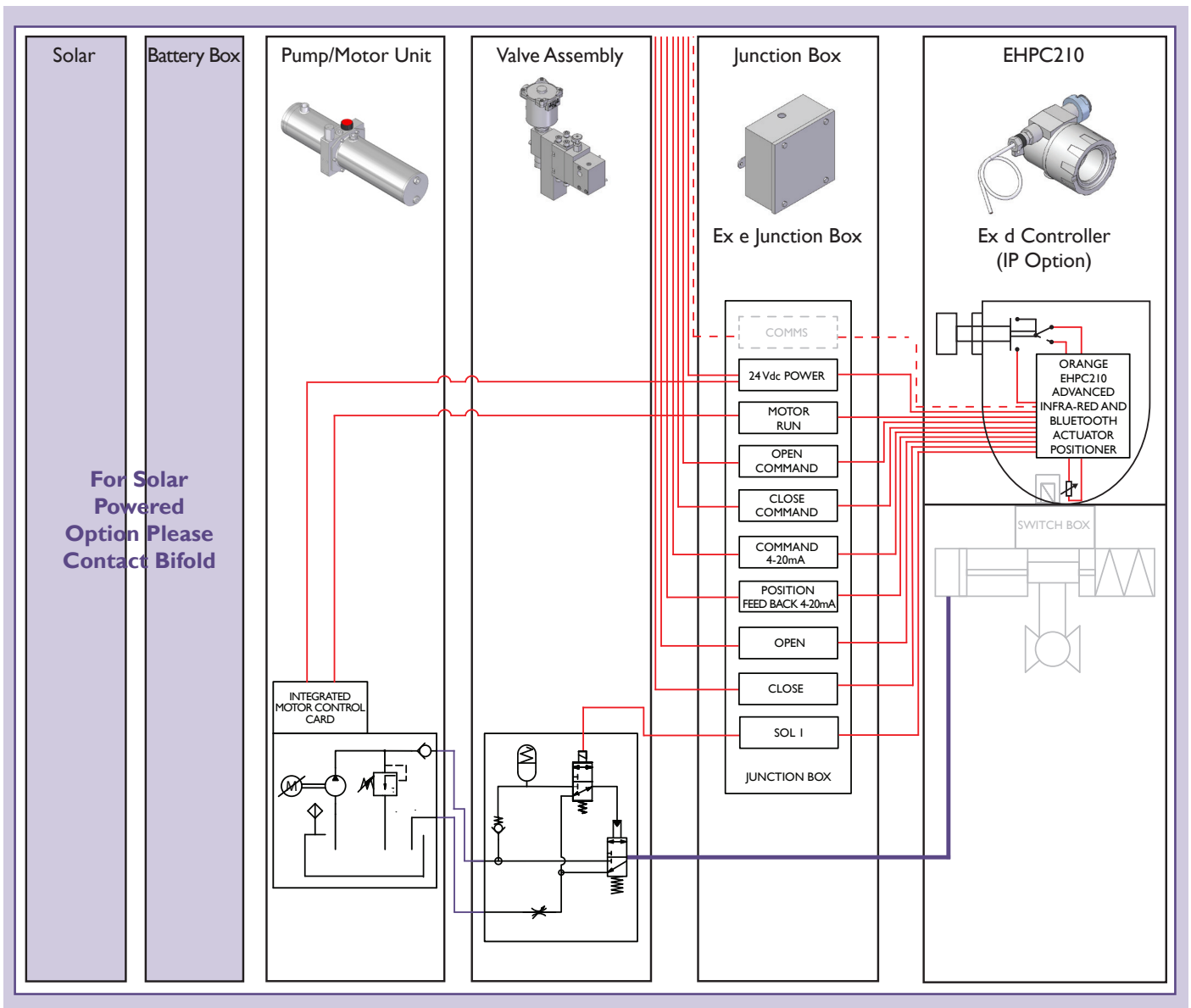
When selecting a product, the applicable operating system design must be considered to ensure safe use. The products function, material compatibility, adequate ratings, correct installation, operation and maintenance are the responsibilities of the system designer and user.

Quality Assurance
All Bifold products are manufactured to a most stringent QA programme to ensure that every product will give optimum performance and reliability. We are third party certified to BS EN ISO 9001:2008. 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 where available. We reserve the right to make changes to the specifications and design etc., without prior notice.

Example System



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For Solar Powered Option Please Contact Bifold

**Pneumatic and
Instrumentation Valves
Hydraulic Valves
Subsea Valves
Hydraulic Pumps,
Intensifiers and Valves
Actuator Electronic
Control and Positioning**



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Registered No. 1787729 in England.
Registered Office:
Broadgate, Oldham Broadway
Business Park, Chadderton,
Oldham, Greater Manchester, OL9 9XA.

Bifold Fluidpower Ltd
Bifold Group
Broadgate, Oldham Broadway
Business Park, Chadderton,
Greater Manchester, OL9 9XA. UK.
Tel: +44 (0) 161 345 4777
Fax: +44 (0) 161 345 4780
Email: marketing@bifold.co.uk
Web: bifold.co.uk

Bifold Orange
Unit 7, Cosford Business Park
Central Park, Lutterworth
Leicestershire
LE17 4QU, UK.
Tel: +44 (0) 161 345 4777
Fax: +44 (0) 161 345 4780
Email: marketing@bifold.co.uk
Web: bifold.co.uk

Marshalsea Hydraulics Limited
Marshalsea House, Venture Way
Priorswood Industrial Estate
Taunton, Somerset,
TA2 8DE, UK.
Tel: +44 (0) 1823 331081
Fax: +44 (0) 1823 323382
Email: info@marshalsea.co.uk
Web: bifold.co.uk

USA Office
Bifold Fluidpower Ltd
11490 Westheimer,
Suite 850,
Houston, TX, 77077.
Tel: +1 (713) 783 4253
Fax: +1 (713) 783 0067
Email: marketing@bifold.co.uk
Web: bifold.co.uk

Singapore Office
Bifold Fluidpower Ltd
511 Guillemard Road #02-03,
Grandlink Square,
Singapore 399849.
Mobile: +65 98245580
Email: marketing@bifold.co.uk
Web: bifold.co.uk

**Innovative and Reliable
Valve Solutions**



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