

8 Station Servo Valve Pack

This extremely compact servo valve pack weighs only 15 kg / 33 lb in sea water and provides precise control of propulsion thrusters on underwater vehicles.



- Extremely Compact and Lightweight
- Return Oil Temperature Sensor
- Adjustable Pressure Relief Valve
- Integral Cover Relief Valve
- Integral Soft Start Valve or Pump Remote
- Control Valve Options
- Water Ingress Sensors
- 77 LPM Flow @ 70 bar pressure drop
- Fully Captive Screw Assemblies

The pack incorporates eight 77 LPM (20 USGM) rated servo-valves that provide low pressure drop on most standard ROV applications. The use of this pack in conjunction with Sub-Atlantic's efficient thrusters and hydraulic power units will produce an unbeatable propulsion solution with regard to reliability, efficiency and cost. The valves can also be used to control any tool requiring a variable speed or reversible function.

Dimensions and Weights

Length	775 mm / 30.5"
Width	198 mm / 7.8"
Height	213 mm / 8.4"
Weight In Air	32 kg / 70.5 lb
Weight in Sea Water	15 kg / 33.0 lb

Pressure and Flow

- 280 Bar maximum input pressure
- 350 LPM maximum input flow rate.

Pressure Reducing Valve

- 1 off adjustable Pressure Relief Valve provides system protection by venting to the return gallery in the event of compensated pump control failure. Unless specified otherwise, the standard setting for the valve is 230 bar (based on 210 system pressure).

Soft Start or Pump Unloading Valve

- Option 1 - Soft start valve that opens the pressure and return galleries until the system pump is started at which point it automatically closes after a few seconds. This prevents the pump starting under load conditions that would result in excessive starting currents.
- Option 2 - Solenoid operated poppet valve used for loading/unloading pump via control system. This option

will require a 20 pin connector to accommodate the additional solenoid instead of the standard 12 pin.

Servo Control Valves

- 8 off 'STAR' lightweight servo valves rated 77 lpm full flow @ 70 bar pressure drop. In normal conditions, the valve should be operated with a maximum flow rate of approx. 40 lpm resulting in a pressure drop of only 19 bar.
- For analysis, the relationship of the flow Q in lpm versus pressure drop ΔP in bar, can be approximately modeled by the expression: $\Delta P = 0.0118 \times Q^2$
- As an option, Moog Ultra valves can be supplied instead of Star (each valve weighs 1.0 kg (2.2 lbs) more than Star).

Temperature Sensor

- A PT100 sensor is fitted in the return gallery.

Water Ingress Sensors

- 2 off probe type sensors located at each corner to accommodate all mounting orientations.

Control

- Control is externally via customers system. Direct and serial systems can be supplied to suit client requirements.

Electrical Connector

- The unit incorporates a Burton Type 5506-2412 12-pin bulkhead connector as standard. A mating connector plug will be required (not supplied). This can be supplied by Sub-Atlantic or through your local Burton distributor.

Cover Fixing

- Fully Captive Screw Assemblies for fast removal and preventing losses. Manifold incorporates rugged stainless steel threaded inserts for longevity.

Cover Oil Compensation

- When used underwater, the valve pack cover must be filled with oil provided from a suitable positive pressure compensator. Hydraulic oil can be used if new, clean & free from moisture.
- A compensator with a maximum sprung pressure of 1 bar (15 PSI) and a minimum capacity of 10% of the oil volume is recommended. Sub-Atlantic can supply a compact 860cc sprung compensator for this purpose in corrosion resistant plastic (70cc, 270cc, 380cc, 2700cc also available).



Port details

Supply	2 x 1-1/4" BSPP Female
Return	2 x 1-1/4" BSPP Female
Valve A & B Ports	16 x 3/4" BSPP Female
Additional Supply Ports	8 x 3/8" BSPP Female
Additional Return Ports	4 x 3/8" BSPP Female
Cover Fill & Compensation	1 x 1/8" BSPP Female
Cover Relief	1 x 1/8" BSPP Female
Cover Bleed & Drain	2 x 1/4" BSPP Female
Cover Bleed, Drain & Relief Adjust	1 x 3/4" BSPP Female
Optional Pump Control	1 x 1/8" BSPP Female

The specification details are illustrative for marketing purposes only. Actual equipment may be different as a result of product improvement or other reasons. Specific interface and performance information should be reconfirmed at time of order placement.



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