S2 Servo Pneumatic Proportional Control System

Simple by design, the S2 is an all-in-one pneumatic positioning system capable of tackling high speed and high force applications while linearly positioning a cylinder anywhere along its stroke.

**Features**
- Easy Tuning
- Simple Setup and Wiring
- Wide Range of Input Pressures
- Minimized Air Consumption
- All-in-One Package

**Applications**
- Line and Hopper Feed Rate
- Edge Guide Positioning
- Case Erect and Pack
- Pick and Place
- Lane Divide and Divert
- Gripper Position Control
- Quality Control Sorting
- Component Placing
- Actuate and Pilot Process Valves
- Material Processing
- Level and Elevator Control
- Sliice Gate Control
- Rotary Indexing and Positioning

**Compatibility**
Add position control to almost any application. Typical compatibility:
- Double Acting
- Non-Repairable Cylinders
- ISO & Tie Rod Cylinders
- Grippers & End Effectors
- Vane or Rack & Pinion
- Rotary Cylinders

**Mechanical Specifications**
- **Pressure:**
  0...10 bar (0...150 psig)
- **Ports:**
  ¼" NPTF
- **Connector:**
  5-pin M8 x 1 (male)
- **Mounting:**
  2 x M5 (10-32) Thru Holes
- **Temperature Range:**
  0º – 40ºC (32º– 104ºF)
- **Filtration:**
  5 μm Particulate
  0.3 μm Coalescing
- **Media:**
  Unlubricated, Dry, Neutral Gas
- **Height:**
  126 mm (5.00 in)
- **Width:**
  64 mm (2.50 in)
- **Length:**
  68 mm (2.75 in)
- **Weight:**
  0.91 kg (2.00 lbs)

**Material Specifications**
- **Body:**
  Aluminum 6061
- **Caps:**
  PA66 30% Glass Filled Nylon
- **Other:**
  Nitrile, 440C SS, Nickel Plated Steel

**Electrical Specifications**
- **Power Requirement:**
  12 ± 2 VDC
  24 ± 4 VDC @ 20W
- **Command Input Impedance:**
  0...10VDC: 100kΩ
  4...20mA: 210Ω
- **Feedback Input Impedance:**
  0...10VDC: 100kΩ
  4...20mA: 210Ω
- **Command Input:**
  Configurable 0...10 VDC; 4...20mA
- **Feedback Input:**
  Configurable 0...10 VDC; 4...20mA
- **Electronic Adjustments:**
  USB-Connectable User Interface
- **Status Indications:**
  2 Power and Status LEDs
- **Excitation:**
  ±10V (15mA max)

**Performance Specifications**
- **Positional Accuracy:**
  ± 0.1...1% of Full Scale (typical)
- **Flow:**
  1300 SLPM 5.5 → 0 bar
  (46 SCFM 80 → 0 psi)
- **Leak Rate:**
  5.7 SLPM 10 → 0 bar
  (12 SCFH 150 → 0 psi)
- **Order Code:**
  S2-025-U-04
The S2 Servo Pneumatic Proportional Control System is ideal for applications requiring high speed and high forces simultaneously. Speeds up to 2.0 m/sec are achievable while slowing the cylinder to a smooth controlled stop, preventing premature cylinder wear and damage. Handling 50+ kilogram masses, it is capable of 0.5 m/sec across a selection of cylinders. The ability to handle heavy loads while quickly and accurately following a changing input signal makes the S2 the ideal choice for machine designers.

**Maximum Cylinder Speed vs Moving Mass: Bore Size Comparison**

Note: Based on test results from typical setup: 250mm stroke guided horizontal cylinder with 5.5 bar inlet pressure. Changes in moving mass, cylinder orientation or other system parameters will impact maximum speed. Figures are to be used for general guidance only.