

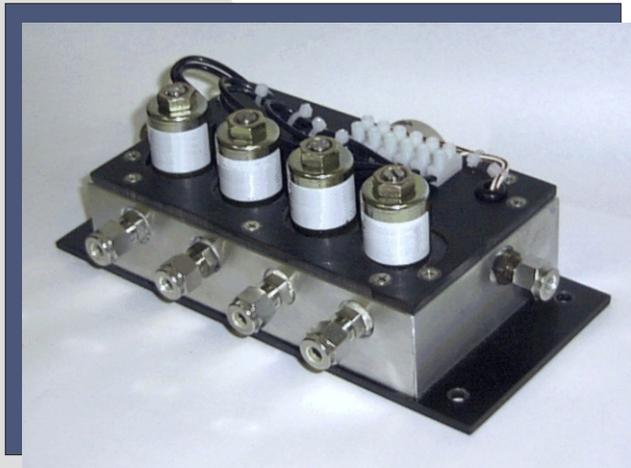


**ATMO/  
SEAL<sup>®</sup>, INC.**

**Emissions Sample Transport Systems**

## **Atmo-Seal Heated Valves and Manifolds**

Atmo-Seal Engineering, Inc.<sup>(tm)</sup> manufactures individual and manifolded Heated Valves for use in gas and diesel sampling; stack and process monitoring. The typical operating range is 450 F, but higher temperature ranges are available.



### **Heated Valve Array Features**

- Choice of AC 50-60 HZ or DC heater and valve operation in a wide range of voltages
- Choice of Thermocouple, RTD, Internal Thermostat or other sensors
- Choice of Ball Valve, Solenoid or Plug Valves with, AC/DC/Pneumatic actuators - or manual valves
- Valves feature inert, high-temp seals made from Teflon<sup>(tm)</sup>, Viton<sup>(tm)</sup> or Silicone or Graphite
- Super-tough metal outer shell with phenolic barriers for durability and operator safety.
- Easily interfaces with our controllers, or your I/O, PC or PLC

### **Sample Routing and more...**

Atmo-Seal multi-position valve arrays are the perfect device for sample routing. Our arrays are used for pre-catalyst and post catalyst comparisons, multi-point sample collection; automated leak checking; introducing calibration and purge gases; distribution of a single sample to multiple analyzers.

Using automatic valves also keep your technicians out of test cells - and harms way - during test cycles. They allow for gas routing in remote areas or tight situations.

With an Atmo-Seal valve array, you choose the number of positions; select between two-way and three-way valve configurations; decide between multiple inputs, multiple outputs or any combination. Our arrays are built to route your gases to your specifications.

We will also incorporate other features into your array such as filters, manual valves, LED valve-status indicators; thermocouple wells, or other components. With an Atmo-Seal Array, the possibilities are endless.

As always, maintenance is at the forefront of our heated valve designs. Valve components are easily accessed, cleaned or replaced and, if needed, even the VALVE BODY may be replaced on our units: an industry exclusive.

Of course, our of our Valve Arrays carry a full, 18 month limited warranty.

"Timely Quality" It's more than just a saying at Atmo-Seal, Inc., it's our success, and yours.

## Heated Valve Array Part Number Guide

Valve Type	Port Size*	Number of Ports Not including Common Port(s)	Configuration Code
<p>▲</p> <p><b>VAK</b> <b>VAP</b> <b>BAW</b> <b>BAU</b> <b>VAV</b></p>	<p>▲</p> <p><b>2 - 1/8"</b> <b>4 - 1/4"</b> <b>6 - 3/8"</b> <b>8 - 1/2"</b> <b>etc,</b> <b>6mm</b> <b>8mm</b> <b>10mm</b> <b>etc.</b></p>	<p>▲</p> <p><b>1 - One In One Out</b> <b>2 - Two Primary (non-common)</b> <b>3 - Three Primary (non-common)</b> <b>4 - Four Primary (non-common)</b> <b>etc.,</b></p> <p><small>* 1/32" to 2" or 1mm to 50mm, port sizes available with Compression/Swage, tube stub, NPT, ISO, BSP or other</small></p>	<p>▲</p> <p><b>See below</b></p>

**VAK** - ASE's exclusive Mini-Solenoid Valve. The choice valve for low volume sampling or applications where high back pressure exists. Our exclusive configuration will seal against back pressure at up to 70 PSI and over 300 PSI positive pressure - at temperatures up to 225 C.

**VAP** - The "Industry Standard" 70 Series Peter-Paul 2 way and 3 way solenoid valves. Configured for high-temp operation with either Viton, Silicone or Teflon seals standard. Operational gas temps to 225 C.

**BAW** - High temperature, direct acting electric ball valve or manual valve arrays with Teflon, Viton, PEEK or graphite seals (high temperature) seals. Ball valve arrays are self-wiping, seal in both directions, and are the ideal choice for high-speed and/or heavily particulate laden gas samples. Our electrically actuated ball valve arrays have extended, not conducting extensions to protect the electronic actuators from high sample temperatures. (Up to 575 C)

**PAV** - High temperature, direct acting electric plug valve or manual valve arrays with Teflon, Viton, PEEK or graphite seals (high temperature) seals. Plug valve arrays are a cost-effective alternative to ball valves and share many common characteristics, seals in both directions, good laminar flow, etc., Our actuated ball valve arrays can be rated to temps in excess of 225 C.

**BAU** - User specified, supplied or specialty application valves.

**VAV** - Proportioning, needle or adjustable flow valve arrays. These may be manual, automatic or controlled vial a PC/PLC with x-ducer or flow sensor feedback loops. Operational temps to 575 C.

**Configuration Code** - The configuration code at the end our part number(s) refer to your individual design criteria. Information covered in the Configuration Code may include Thermocouple or RTD type, operation voltage, port type, flow direction, etc. The Configuration Code also covers common options such as Over-Temperature Protection, R.F. Shielded Thermocouples, etc

**Example Part Number: VAP-4-6-A25:** **VAP** - PP SV, **4** - Port Size, **6** - Number of Input Ports, **A25** -Compression fitting ports, dual J & K Thermocouples, 200 C operation/exposure, 120 VAC heaters, 24 VDC valve actuation, 3 way valves with a common output. Of course, we will customize our products to your exact specifications.

### Common Options

**Dual Thermocouples:** Two J and Two K type thermocouples to allow the unit to be used with two temperature controller types.

**Over-Temperature Protection:** Built in thermal switch(es) which will open if the filter exceeds its maximum operational temperature. Switch(es) will close again once the filter has cooled down to a safe range.