

10 Reasons to Specify Valve Manifolds



Specifying the right valve manifold for an application can sometimes be a complex and difficult decision, especially with so many options out there and with many factors to consider. Here we examine 10 reasons why a valve manifold could be the right solution for your application.



1. Where space is at a premium

Not only are valve manifolds compact, but they help to consolidate and centralize pneumatic connections. Additionally, they offer a variety of valve functions (ex. 5/2, 5/3, 2x3/2) in a single body. This gives users the option to either control more valves within the same footprint or configure the same number of solenoids within a reduced space, bringing value to customers who are concerned with product footprint.



2. Ease of installation

Mounting a valve manifold is often an easily overlooked step in the configuration process. Valve manifolds can be mounted directly to a machine or onto DIN rail, many can be installed vertically or horizontally without restrictions for further flexibility.



3. Field maintenance and valve replacement is made easy

Plug-in sub-base manifold designs enable quick and easy valve replacement which can help minimize process downtime. Valve slices are removed by simply unscrewing two screws on each valve slice and new valves are then added using the same method. The silencers and push-in fittings used on the manifold can be easily replaced too. On the other hand, if your application requirements change or your specified valve manifold needs to be adapted, expansion kits may be offered which can be used to readily expand a valve manifold in the field.



4. Allows users to save energy and money

Why use the maximum pressure for your application if you don't need it? Valve manifolds that offer intermediate supply & exhaust modules can be combined on a single manifold allowing several pressure zones for pilot and exhaust (by using blanking plugs in between the zones). The generation of compressed air consumes energy and costs money. By separating the valves into zones and using just the required pressure for the zone, users can save both money and energy.



5. Where operating pressure is low

Valve manifolds can provide a low minimum operating pressure requirement of just 29psi, meaning less pressure is required for the valve slices to function. With externally piloted supply, valve manifolds can also work with -14.5psi (vacuum). Making them suitable for use in a wide range of applications including operators who run at lower pressures in their factory.



6. For improved productivity and high throughput

Valve manifolds provide high working frequency allowing them to be specified in applications requiring high switching frequency (e.g: packaging, textile etc.). As higher switching frequency allows for more valve cycles, this translates into improved productivity and greater throughput in a process.



7. For improved diagnostics

Newer valve manifolds now offer IO-Link connectivity in addition to other Industrial Ethernet communication protocols (EtherNet/IP, EtherCAT, PROFINET, etc). IO-Link provides insight and feedback from the valve manifold device allowing for condition monitoring and process diagnostics. Monitoring the number of valve cycles and if any valves short circuit or fail remotely allows users to minimize downtime due to faults.



8. Readily available kits of accessories, spare valves and replacements

Spare valves, blanking plates, sub-bases, wiring and cables are readily available for the valve manifolds. If the application or machine needs changing or adapting, extension kits are available allowing users to add more valves on to the manifold as well as swap control modules to adapt to a different communication protocol.



9. Easy to use design tools

Using simple and easy to use design tools like an online configurator can help create a custom valve manifold that can be configured quickly. Customize each valve slice, check price and availability and order directly from the configurator. Users can also download CAD configurations in native formats, obtain technical documentation containing details of the configuration or save the configuration and return to it later in just a few clicks.



10. Dedicated technical support

Having customer support teams with decades of experience working on industrial application solutions to support customers with their valve manifold specifications is important. If you're looking to use a valve manifold inside a control cabinet, working on an electro-pneumatic control system or simply need help choosing the right manifold for your application, there are technical and customer support teams on hand to help.

Want to find out more?

Click below to find out more about Norgren's complete lineup of valve manifolds including the new VR Series.

<https://www.norgren.com/us/en/list/valve-manifolds>