

PORTING DESCRIPTIONS

SAE

General: The SAE port utilizes a threaded connector sealed with an elastomeric o-ring. The o-rings used are from the ARP-900 Series and may be specified in an available elastomeric material to match the characteristics of the media.

Advantages: Excellent seal for both liquids and gases that does not require any additional sealant which could contaminate a system. Very easy to make and break; very good reusability. Assembled dimensions are constant and predictable.

Limitations: Cost and pressure capability not as good as NPT.

NPT

General: The NPT port is the most common pressure connection in the U.S. It is a threaded connection sealed by the squeezing action of the tapered threads on a sealant such as Teflon[®] tape applied to one of the threads.

Advantages: Mating parts are readily available in the widest variety of materials and configurations. The port itself may be machined in any metal suitable for regulator bodies. No elastomer is required to effect the seal so the connection can be made entirely from Teflon[®] and the regulator body material. Port is easy to machine, thus is low in cost.

Limitations: The quality of seal formed is somewhat dependent on skill of operator in applying sealant and torque. The sealant can contaminate a system, especially if the joint is disconnected and then reconnected. The assembled dimension of the joint may vary because of the variability in machining and the variability of assembly torque.

MS33649

General: The MS33649 port superseded the AND10049 and AND10050. It utilizes a threaded connector sealed with an elastomeric o-ring. The o-rings used are from the ARP-900 Series and may be specified in any available elastomeric material to match the characteristics of the media. This port is not recommended for new use - use SAE instead. UPDATE: MS33649 has been superseded by the AS5202 specification.

Advantages: Excellent seal for both liquids and gases that does not require any additional sealant which could contaminate a system. Very easy to make and break; very good reusability. Assembled dimensions constant and predictable. Recommend "SAE" port.

Limitations: Cost and very difficult to find fittings.

OVER >

PORTING DESCRIPTIONS

AMINCO (High Pressure)

General: The Aminco port is half of the NBS High Pressure Coned connection designed for very high pressure service. Mating parts made by Aminco, Autoclave Engineers, and others will work with this port. The seal is formed by the coned end of the tubing being forced into a metal-to-metal seal with the regulator body.

Pressure Capability: Aminco ports connected to the correct mating fitting and tubing will work at pressure up to 60,000 psi as long as the port is machined in material at least as strong as 300 Series SST.

Advantages: The Aminco port is very reliable at extreme pressures. It provides ease of assembly and disassembly and sealing without the use of additional sealants which could contaminate a system.

Limitations: The flow area of the high pressure tubing used with Aminco ports is very small and the tubing is difficult to bend. The tubing must be specially machined to mate with the port.

AUTOCLAVE SLIM-LINE (Medium Pressure)

General: Autoclave Slim-Line ports are intended to mate with the proprietary Slim-Line fittings manufactured by Autoclave Engineers. This is a medium-high pressure fitting which seals in the same way as the Aminco fitting.

Pressure Capability: Slim-Line ports connected to the correct mating fitting and tubing will work at pressures up to 20,000 psi as long as the port is machined in material at least as strong as 300 Series SST.

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