

## Seal-Lok Introduction

The Seal-Lok fitting meets or exceeds the strict requirements of SAE J1453 and ISO 8434-3. It is an O-ring face seal type fitting that consists of a nut, a body, an O-ring and a sleeve. As shown in Fig. A2, the tube is flanged to 90° (or the tube may be brazed instead to a braze-type sleeve). When the fitting is assembled, it compresses an O-ring in the precision machined groove of the fitting body to form a leak tight seal.

Seal-Lok fittings are suitable for a wide range of tube wall thicknesses and are readily adaptable to inch or metric tubing and hose. (Please refer to Tables U3 and U4 located in the Appendix section for min./max. tube wall thickness for inch and metric tubing, respectively). Seal-Lok's leak-free design and rugged construction make it suitable for a wide range of applications where higher pressures, vibration and impulse are prevalent.

## How Seal-Lok Fittings Work

The Seal-Lok fitting body face contains a high durometer trap seal to maximize retention in a precision machined groove also known as a Captive O-Ring Groove (CORG) referenced in Fig. A1. As the nut is tightened onto the fitting body, the trap seal is compressed between the body and flat face of the tube flange or braze sleeve to form a tight, positive seal (see Fig. A2).

As the two faces come in contact, further tightening of the nut produces a sharp rise in assembly torque. A solid pull of the wrench at this point, to recommended assembly torque, completes the assembly. The sharp torque rise gives a "solid feel" at assembly, minimizing the possibility of over tightening.

Because the sealing surfaces are flat and perpendicular to the assembly pull, they remain virtually free of distortion during assembly, giving Seal-Lok fittings practically unlimited remakability. The O-ring should be inspected at each disassembly and replaced when necessary. **See the O-Rings and Seals section for information on replacement ORFS O-rings.**

Because the tubing is a sealing surface, it must be smooth, free of any nicks, scratches, spiral tool marks, splits or weld beads. Seamless tube is recommended for Seal-Lok fittings for ease in flanging and bending. Certain types of harder tubes that are not fully annealed may not be suitable for flanging due to the potential for immediate or long-term cracking of the tube flange. For specific tube type and wall thickness recommendations, please see Table U3 in the Appendix Section.

## Reference locations

**Dynamic Pressure Ratings:** Please refer to the last column of the part number tables located on the following pages of this section for the appropriate dynamic pressure ratings.

**Recommended Tube Wall Thickness:** Please refer to Table U3 located in the Appendix section.

**Assembly and Installation:** Please refer to Seal-Lok Assembly located within the Assembly/Installation section of this catalog.

**Standard material specifications:** Please refer to Table U1 located in the Appendix section.

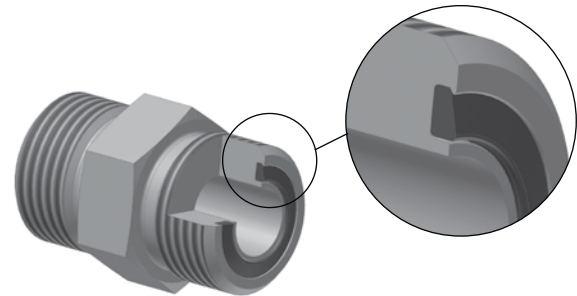


Fig. A1 — Captive O-ring Groove (CORG) Cutaway with Parker's trap seal

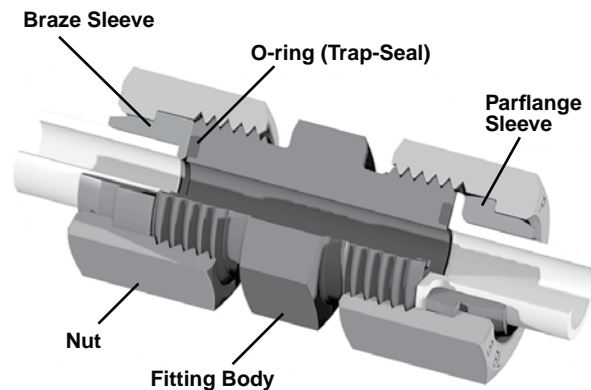


Fig. A2 — Seal-Lok Union cutaway with flanged and brazed assemblies

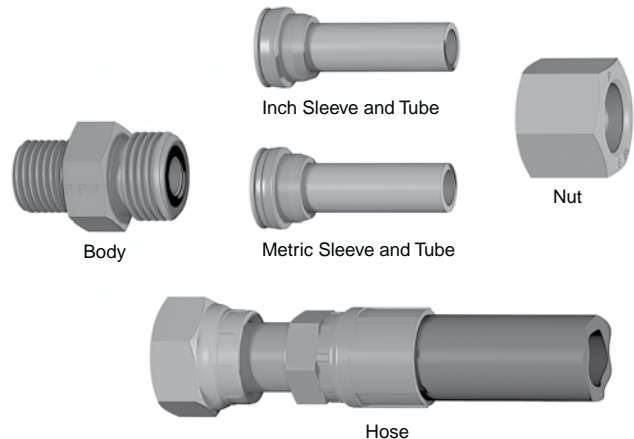


Fig. A3 — Seal-Lok Works with Inch or Metric Tube and Hose

Dimensions and pressures for reference only, subject to change.