Slimline Bonded Sealing Washers

For Electric Vehicle HVAC Hose Connections, EV Battery and Electronic Unit Cooling Systems

Rubber-to-metal bonded sealing washers combine the function of a rubber seal such as an O-ring with that of a metallic washer into one component. Their use aids in removing operational inefficiencies associated with component assembly and installation, and lessening warranty and rework costs associated with quality mistakes where visual inspection cannot assure the seal has been installed.

And when you add up all the advantages of using slimline composite sealing washers vs. using a molded elastomer shape — the benefits are substantial — and include:

★ **Eliminates machining costs.** Use of composite sealing technology producing the combination seal ring and the metallic washer eliminates the need for an additional seal groove and reduces costs associated with machining tight tolerance sealing grooves.

★ **Mistake-proof installation.** Damage to the seal due to incorrect installation or insufficient assembly forces is excluded due to the shape of the sealing ring and the defined torque levels of the screws.

★ **Lessen failures from quality inspection mistakes.** With composite bonded sealing washers, the metal part of the washer is visible, so it's easy to confirm that it's installed correctly. With just rubber seals, it might be hard to tell if they're in place correctly.

Typical applications for composite sealing washers include sealing of hose connections in automotive air conditioning systems or the cooling systems of battery and electronic units in future mobility applications.

Specialized materials available. For these uses, we offer special material design solutions that meet the fluid compatibility and corrosion requirements of R134a and R1234YF systems with PAG or POE oils. In addition, we offer special material solutions with good resistance against explosive decompression for cooling systems using CO2.

8 Product Advantages

- **Easy assembly**
- **Force-locked connection**
- **No re-torque required**
- **Lessens quality mistakes because it's easy to visually confirm seal is correctly installed**
- **Saves costs by eliminating necessity of machining o-ring grooves**
- **Composite rubber-to-metal bonded design ensures ideal compression of elastomer, preventing seal failure due to over-tightening**
- **5X SAE J2727 emissions credit vs. multiple O-rings**
- **Customizable to accommodate special designs and materials for CO_2 applications and high corrosion resistant requirements**