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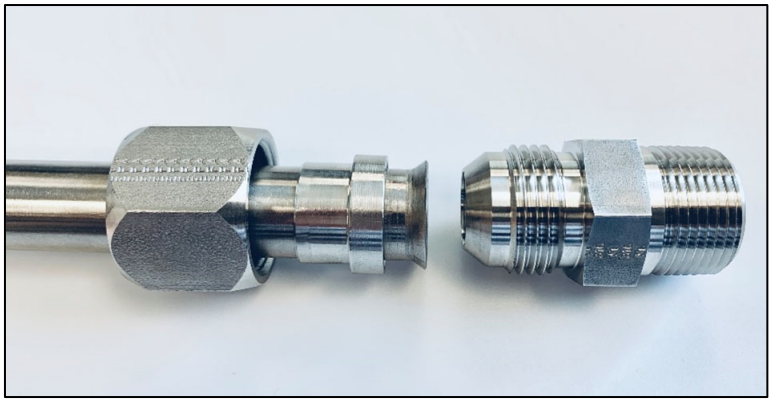
Flare Fittings – OmegaFlare

The OmegaFlare fitting is an SAE 37° flared tube fitting, commonly referred to the JIC Fitting. The manufacturing of the SAE J514 standard for tube fittings. Together these components work in conjunction with tubing to form a metal to metal seal when the nut pulls together flared tubing, with the sleeve and fitting body.



Typically, thin to medium wall tubing is used in flaring application. Wall for flared tubing typically ranges from .035” to .135” depending on tube OD. There are multiple ways to flare tube, there are a large variety of hand operated tools as well as hydraulically operated flaring equipment.

Tubing made from 304 or 316 stainless steel may be welded, seamless or DOM (Drawn over Mandrel) that is annealed. The nut and sleeve are placed over the tube, then the end of the tube is flared using the desired method of flaring. Once correctly flared, the tube, sleeve, nut and body are ready to work together. Due to the flaring process, there are maximum wall limits for use with flare fittings.

Sealing of the fitting and tube occurs once all the components are tightened together. The seal is formed between two smooth metal surfaces 100 micro, or better, and free of burrs, loose scale and slivers, as specified by SAE J514.

The flare fitting is commonly used world-wide because it is a simple construction. Flare fittings has a wide variety of applications and I ideal for high pressure hydraulic applications.

Flare fittings are ideal for hydraulic applications. Typically, pressures ranging from 2,500 to 10,000 PSI. Flare fittings are ideal for joining both hydraulic tube and hose systems. Additional applications include, Petro-chemical, fertilizers, water and other fluids.

The seal reliability is good, though this type of fitting is reliant on maintaining a clean sealing surface. Deviations in surface make this style of fitting susceptible to leaks.

The flare fitting is not recommended for application that require constant disassembly and reassembly because the sealing surface subject to change or damage during the process of loosening and retightening. Repeated re-sealing will wear the sealing surface making the seal less reliable.

This fitting is the same as the AN fitting, from specifications developed during WWII. Both AN standard and MIL-F-18866 have been superseded by SAE J514.
