**Fitting.Made.Easy. Technical Bulletin**
Flareless Fittings - OmegaBite

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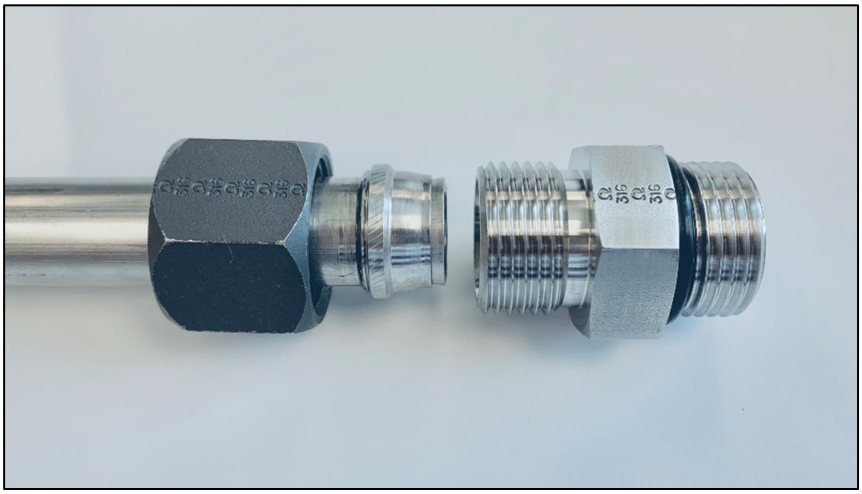
The OmegaBite fitting is an SAE flareless tube fitting. The manufacturing of the SAE J514 standard for tube fittings. Together these components work in conjunction with tubing to form a metal to metal seal when the nut draws together tubing, with the ferrule and fitting body. The tapered seat of the fitting body allows the tube to seat squarely against the fitting, forming the seal.



Typically, medium to heavy wall tubing is used in flareless application. Minimum wall for tubing used with flareless fittings ranged from .028” to .095”, depending on tube OD. Tubing made from 304 or 316 stainless steel may be welded, seamless or DOM (Drawn over Mandrel) that is annealed.

It is recommended that tubing be manufactured to the ASTM-A213 or A269 standards with a B90 Rockwell. As there is no flaring of the tube, there is no max wall limitation with flareless fittings.

A flareless fitting seals when the tube seats against the fitting body, inside the flareless thread end. During installation, the sleeve bites into the tube, without distortion of the tube.

When the nut is tightened against the ferrule the tube is seated into the fitting body and the meatal to metal seal is formed. Ferrule for flareless fittings are manufactured with 17-4 PH material to ensure their ability to perform the “bite” into the tube.

**Proper installation is very important** for this style of fitting. However, when properly installed, flareless fittings are very reliable. These fittings may be serviced repeatedly without the liability of damaging or wearing out the sealing surface.

Flareless fittings are less likely to develop leaks as it is not dependent on a clean burr and nick free surface as the flare fitting is.

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