

Tech Note 2: Oils, Fuels & Viscous Liquid with Press-Fit

TN.02

Related Documents:

- Tech Note TN.07 Underground, Concrete & Press-Fit
- Tech Note TN.19 Hazardous Liquids & Gasses with Press-Fit
- Tech Note TN.25 Flange Pressure-Temperature Ratings

AusPress stainless and copper press-fit is generally suitable for conveying oil, fuels and other viscous liquids under pressure. As part of the process to confirm suitability, assess the compatibility between the fluid and the system material (ie grade 316 stainless) and the elastomer (ie ring seal material) in each instance.

For confirmation and specific advice, please contact us with the fluid specifications and/or SDS (MSDS) to technical@auspress.com.au

Oil & Grease Types:

Most types require a FKM ring seal to be fitted to each fitting.

Fuel Types:

Bio-fuels, refined fuels such as ROZ 95 & 98 and other petroleum based products require a FKM ring seal to be fitted to each fitting.

Diesel and ethanol containing fluids (including as E-85 and E-10 fuels) are recommended to be used with stainless press-fit with FKM seals fitted (copper can affect the diesel and is not recommended).

Design Considerations:

Although each installation should be designed for purpose, it is considered standard practice that oil lines (and other viscous lines like grease) that expand under thermal change are designed with the following to prevent over-pressurisation of the system:

- A thermal expansion safety valve (this is regardless if using press-fit, welded or threaded fittings).
- Pump should be isolated during non-operational periods.
- The system be de-pressurised during non-operational periods.

Ambient & seasonal temperatures should be considered when designing the system. For example, as a guide oil expansion volume changes $\approx 0.75\%$ / 10°C change.

We recommend hydraulic consultant involvement for project specific design allowances.

Installing:

The process to install AusPress press-fit follows the standard recommended installation procedures as per our installation & commissioning recommendations.