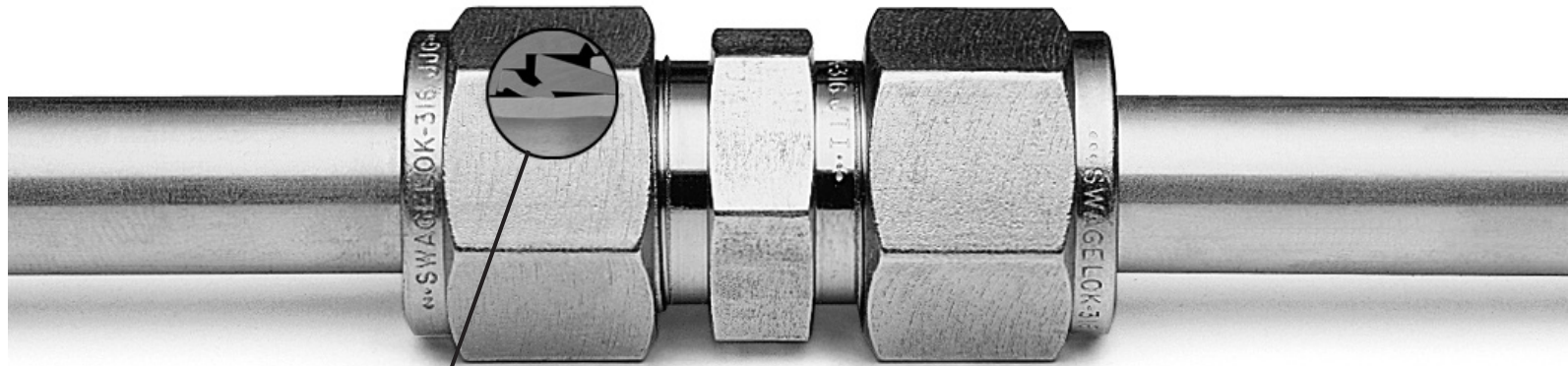
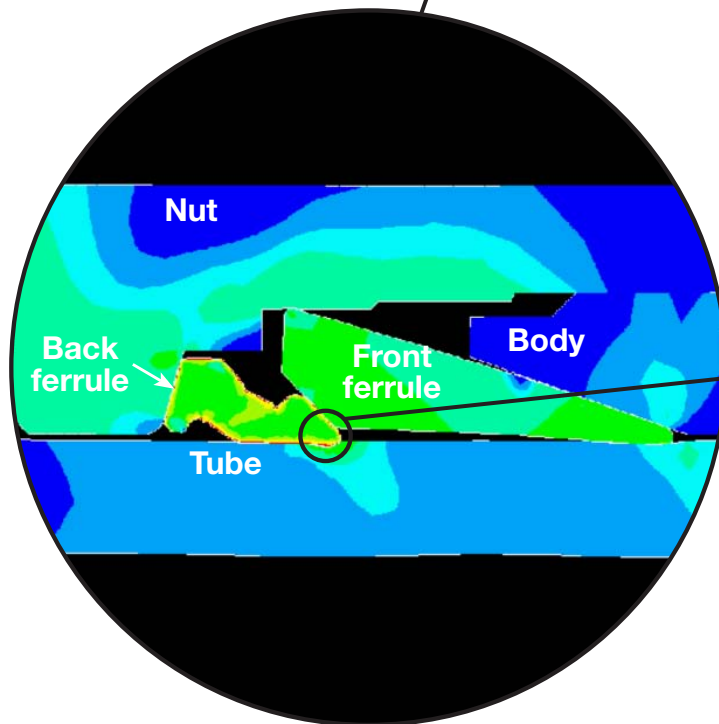


The Swagelok® Tube Fitting Advantage



SAT12SM Patented Surface Hardening Process



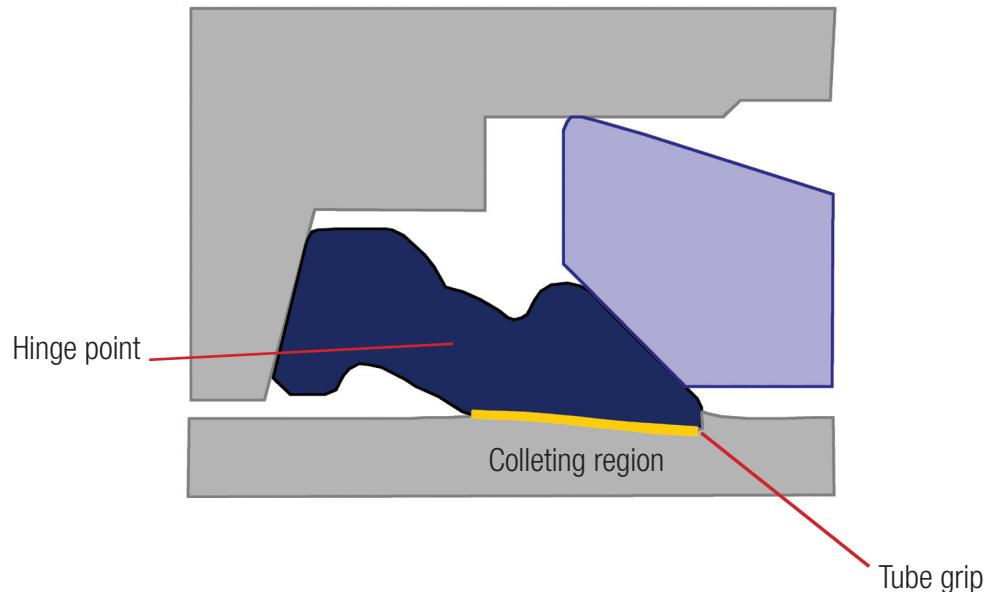
Finite Element Analysis



Swagelok Patented Back-Ferrule Geometry

Tube Grip

- The unique hinging-colleting action provides more direct tube contact and gripping support

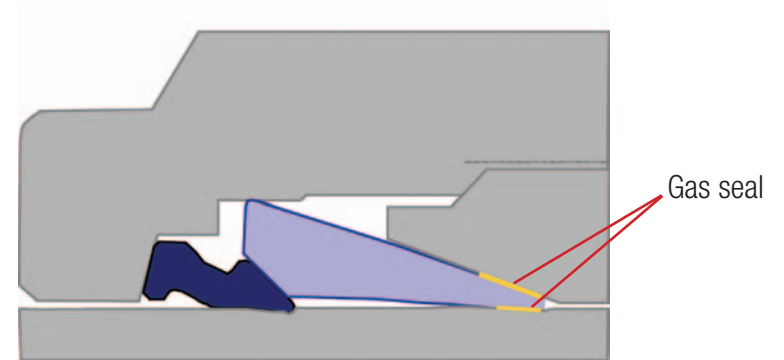


Vibration Resistance

- The colleting region more effectively isolates any stress riser at the tube grip from system vibration.

Gas Seal

- The burnishing/polishing action creates concentrated zones of contact for a gas-tight seal



The Swagelok tube fitting's extraordinary performance comes from a combination of design features.

- The Swagelok patented geometry of the back ferrule provides a hinging colleting action that enables the Swagelok tube fitting to perform extraordinarily well in three key factors.
 - Tube Grip
 - Gas Seal
 - Vibration Resistance
- The controlled phased sequential pull-up and contoured geometry, along with the SAT12 patented surface hardening process of the back-ferrule, enables the tube fitting components to work together in systematic harmony during assembly.