



## SWAGELOK TUBE FITTING ADVANTAGE

Swagelok is your best option for repeatable, leak-tight connections

Swagelok developed the original two-ferrule tube fitting in 1947, and with 200 active patents worldwide, we continue to improve our proprietary design for use in thousands of diverse applications.

## HOW WE OUTPERFORM

Swagelok tube fittings have a grip-type design that uses a unique “hinging and colletting” action to achieve optimal performance in three key areas:

### 01 TUBE GRIP

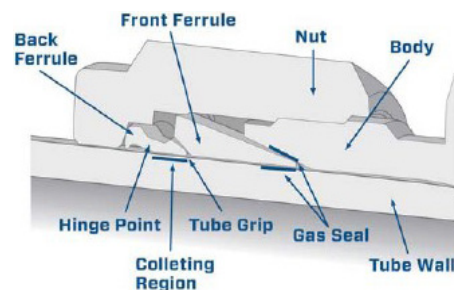
Hinging and colletting action provides more direct tube contact gripping support.

### 02 GAS SEAL

Burnishing/polishing action of the front ferrule creates concentrated zones of contact on the tube and on the body bevel for a stronger seal.

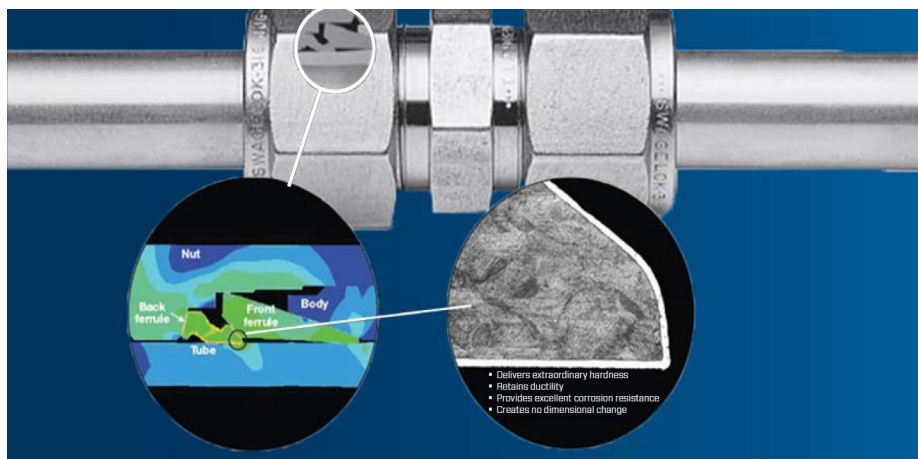
### 03 VIBRATION RESISTANCE

The colletting region better isolates stress risers at the tube grip to resist bending, deflection, and vibration.



## ABOUT THE SAT12 PROCESS

SAT12 is Swagelok’s unique low-temperature carburization process. It achieves a phenomenal tool steel-like hardness and strength in the ferrule without sacrificing corrosion resistance or material ductility (is non-brittle). In use for nearly two decades, it enriches the surface of stainless and other metal alloys by diffusing carbon atoms between metal atoms without forming carbides.



## DID YOU KNOW?

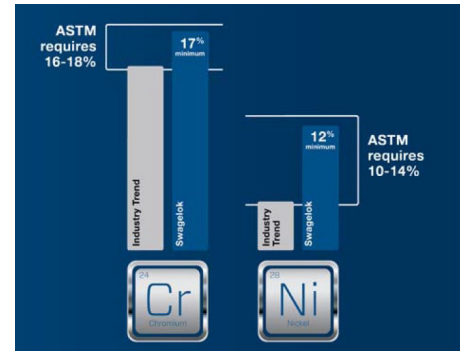
Swagelok has received numerous patents, prestigious awards, and global recognition for the SAT12 process since 1999, including the 2006 ASM Engineered Materials Achievement Award.

## MATERIAL AND MANUFACTURING

WHAT IS IN YOUR STAINLESS STEEL?

### YOU CAN BE CONFIDENT WE KNOW WHAT'S IN OURS.

Chromium and nickel are critical for corrosion resistance and ductility in stainless steel. Swagelok has maintained chromium content in its fittings at a minimum of 17% and nickel at a minimum of 12% for many years.



### UNCOMMON EXPERTISE

Others can try to copy our methods, but can't replicate our skilled operators, strict process control, and complete traceability Swagelok owns the manufacturing process from start to finish:

- 01** We forge, machine, electropolish, weld, assemble, and test - all in our own facilities.
- 02** We use optimized top-of-line tools and machining methods across 20 production facilities.
- 03** Our robust Reliability Excellence program keeps equipment running at optimal efficiency.
- 04** **Traceability at all phases** is an integral part of our overall quality system.
- 05** Our **Limited Lifetime Warranty** is a promise as strong as our products.



## TESTED TO EXTREMES

Swagelok performs continuous, rigorous testing on thousands of samples of production tube fittings to ensure only highly reliable components.

### OUR PASSION FOR PERFECTION

- We publish the most comprehensive book of tube fitting Product Test Reports (PTRs) in the industry.
- **Ongoing validation tests** ensure fittings consistently meet our most stringent standards.
- We conduct customized testing, **Customer Test Reports (CTRs)** for customers in our state-of-the-art labs, replicating specific conditions for any situation.



Constantly Evaluating  
The Performance Of  
Our Products Means  
Customers Never Need to  
Re-Evaluate Their Choices.

Get in touch with us!

Swagelok Singapore  
+65 63670688  
[inquire@swagelok.com.sg](mailto:inquire@swagelok.com.sg)  
[singapore.swagelok.com](http://singapore.swagelok.com)

Swagelok Philippines  
+632 88029308  
[inquireph@swagelok.com.ph](mailto:inquireph@swagelok.com.ph)  
[philippines.swagelok.com](http://philippines.swagelok.com)

Swagelok Brufluid  
+637 3336204  
[inquire@swagelok.com.bn](mailto:inquire@swagelok.com.bn)  
[brufluid.swagelok.com](http://brufluid.swagelok.com)

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