



J. LANFRANCO

LOCKNUTS FOR CRITICAL BOLTED JOINTS



Improving Valve Plate Installation and Reliability

ESL locknuts are the fastener of choice for compressor companies

CHALLENGE

Traditional Solutions Create New Problems

Reciprocating compressors are depended on to perform without fail in the oil and gas industry. But for many compressor manufacturers that fasten valve plates with traditional Drake-style locknuts, they are met with a problem. Although Drake nuts allow operators to achieve desired preload with precision and limit the potential for galling in stainless steel, there are multiple drawbacks:

- The two-piece assembly requires operators to be familiar with a specific installation procedure.
- Multiple tools are needed to ensure torque is applied correctly, which increases the potential for operator error.
- Limited availability, long lead times, and high prices.

ESL LOCKNUT CHARACTERISTICS

Prevailing torque

ASME B18.16.6

(IFI 100/107)

ISO 2320

Mechanical

SAE J995- Gr.5 & Gr.8

ASTM A563, A194

ASME B18.16.6

ISO 898-2, cl.8-10-12

A2070 / A4-80

304L / 316L

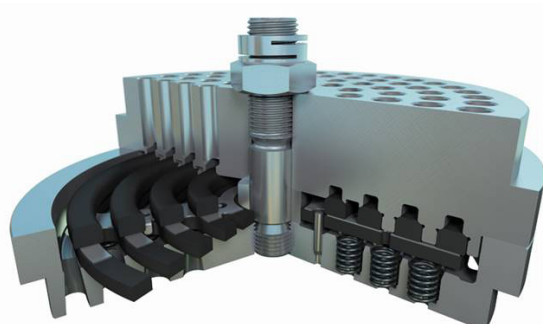
Features

Installs with standard tools

Suitable for hand tools

Locks in any position

Highly reusable



Sectional view of valve plate



WHY USE THE ESL?

Benefits of ESL Locknuts



ESL locknut

- 1 50% faster installations**
with its one-piece design. The locking nut does not require special training or multiple tools for installation.
- 2 Reliable and predictable locking performance**
with no galling in stainless steel joints and no damage to bolt threads.
- 3 Reduced inventory**
because the ESL's single piece replaces the two pieces previously stocked.
- 4 Operational simplicity**
since its one-piece design eliminates mix-ups when matching tops and bottoms.

SOLUTION

A Single Nut to Solve Multiple Problems

Following extensive testing and evaluation, a large compressor manufacturer approved the J.Lanfranco ESL locknut across the board for its valve plates. The superior performance of the ESL led to major improvements in several key areas:

- Provided a locking fastener with prevailing torque that functions independently of any preload.
- 100% perpendicularity when required.
- Consistent prevailing torque and guaranteed coefficient of friction enabled exact clamp force to be achieved with each installation.
- No galling and consistent friction coefficients for stainless steel. It uses a permanent, cost-effective anti-galling treatment that has been factory applied.

What are ESL locknuts?

With an all-metal design made of a single unique material, the J.Lanfranco ESL locknut requires no insert. It derives its prevailing torque from two radially de-pitched locking slots positioned parallel to the thread pitch in the turret portion of the nut.

The locking slots are opened by the bolt threads and apply precise and controlled locking torque directly on the thread flank. As a result, this non-galling fastener technology resists all forms of dynamic and cyclical vibration without damaging the bolt threads.

Consistent prevailing torque and guaranteed coefficient of friction.

