



Innovate Service Perform

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Torq-Kit™

Increasing Flange Reliability

Torq-Kit™ pipe code assembly kits are designed to eliminate 95% of the human error in component selection & assembly.

Torq-Kit™ assembly sets ensure with your Pipe & Vessel Standards.

Assembly Instructions & Torque Sheets

Accurate Torque Specifications

Matched to Flange Metallurgy

Flange Type

Bolt Type

Process Temperature

Gasket Stress Requirements

Pipe Code Compliance

Nuts, Studs, Washers Meet Company Standards

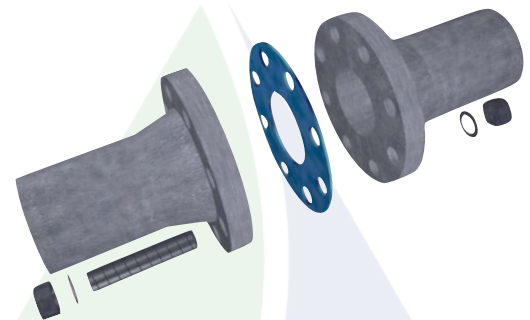
Ensure Design Standards to Actual Conditions

Sheet fabrication/design & supply flexibility

Installation Certification

Durable Weather Proof Tag

Critical Installation Information Sign Off



VSP Technologies deploys a team of Engineers and Fluid Sealing Specialists who provide engineered solutions for your unique sealing requirements.



Prince George, VA | Kingsport, TN | Houston, TX | Parkersburg, WV | Lake Charles, LA

Everyday Causes of Poor Reliability & Performance of Flange Connections

Wrong material

- *Process parameters can change over time, current pressure, temperature and service need to be verified during the gasket selection process*
- *Gasket selections and flange design need to be considered for proper hardware selection*

Wrong gasket size

- *Full face gaskets can require more compressive stress than is often available in the flange & fastener system*
- *VSP verifies current design drawings to sealing requirements and works with customers to verify components will meet requirements*

Yielded bolts

- *Lack of torque specifications and improper installation procedures often lead to bolt yield particularly in standard pipe flanges*
- *Prevents reusing yielded bolts in a gasket replacement*

Yielded case hardened washers

- *Yielded or cupped washers provide a narrower surface contact resulting in inaccurate torque application*

Over torque or under torque

- *Over torque can crush a gasket breaking its mechanical integrity*
- *Under torque, often as a result of rusted components exhibit higher torque before the required compressive stress is achieved*

Poor Installation procedures

- *Failure to use torque wrenches, follow torque star pattern sequences, or not using proper lubrication can all lead to improper gasket stress and sealing*

Bolts/studs are incorrect

Material
Length
Diameter
Grade

Torq-Kit™ Case Study

The Challenge

A large industrial site was planning a maintenance project to clean and repair a (> 96" ID) recovery column, with 24 flanged column sections. Each flange required two gaskets and (104) 1-1/8" studs, and a planning and execution challenge to ensure all components and parts were on the job site when required.

The Solution

VSP TORQ-KIT™ was specified to eliminate all sourcing, quality and logistical concerns. VSP TORQ-KIT™ kits have all necessary components in one container including proper assembly instructions specific to each connection. The lower total cost was really a secondary benefit. Supporting the maintenance planner, VSP took care of sourcing, sizing, fabricating and packaging all components in one box and delivering and staging the kits exactly where required.

The Result

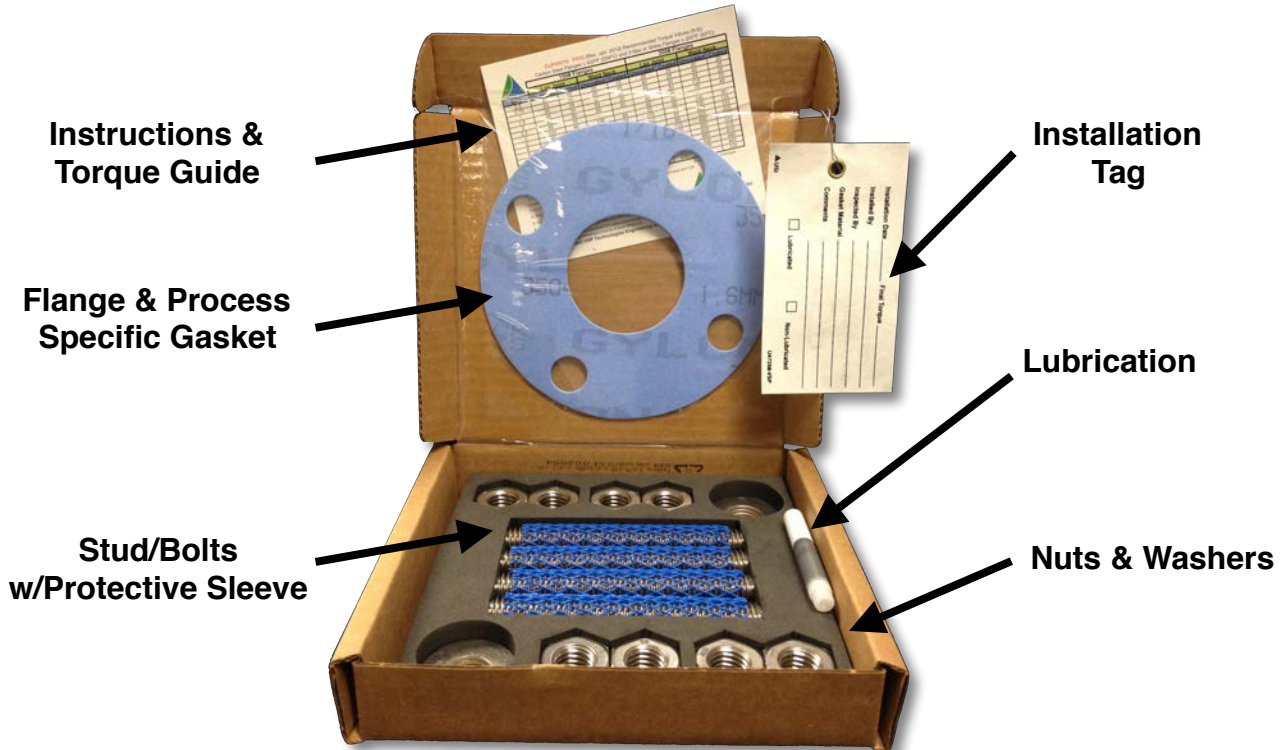
The column was repaired quickly and passed initial leak test with zero leaks at the flange connections.



Torq-Kit™ : Developed to Meet Industry Needs

- Assembly instructions provided with each kit – Ensures proper field assembly
- Nuts, studs, washers & gaskets
- All flange re-work components packaged in one box, no lost, missing or forgotten parts
- Weatherproof installation tag – Documents proper assembly, aids in final inspection
- Specialty packaging – all components arrive un-damaged and ready to use

Standard Torq-Kit™ Components



Stud/Bolt Grades Available

In Stock

A193-B8 Class 1
A193-B8 Class 2
A193-B7
A320-B8 Class 1
A320-B8 Class 2
Grade 5
Grade 8

By Request

A320-L7
A307-C
A193-B6
F593-C
F593-D
Monel
K-Monel

*Custom pipe code
& vessel kits available*



Installation Tag

Kit Label