SRJ BoltEx® – Bolt Exchange Clamp
FAQ

G1. What is BoltEx® and how is it used on operational assets?

BoltEx® is a simple solution that enables asset owners to change out bolts on flange connections whilst production continues with no loss of containment or risk to personnel. BoltEx® can also be used to reinforce degraded flanges until the next operational shutdown.

G2. What are the key components of BoltEx®?

BoltEx® is essentially four clamp halves that are positioned around and on either side of the flange connection and bolted together. BoltEx® works by relieving the load from the flange bolts which allows these to be safely removed and replaced. The clever part is the GPS (Gasket Protection System) which allows the load to be relieved from the flange bolts but prevents the gasket from being overloaded or crushed.

G3. Is BoltEx® one size fits all?

A single BoltEx® model will fit that specific flange size and rating only, e.g. a 2” #150 flange will require a 2” #150 BoltEx®. The same BoltEx® model will fit both RF and RTJ flange equivalents.

G4. What size of flange can BoltEx® be used on?

The BoltEx® model range spans across multiple flanges from ½” to 8”, and from 150# up to 2500# rating. The full BoltEx® range can be found here: BoltEx® Technical Datasheet

G5. Is BoltEx® suitable for non-standard flanges?

The standard range of BoltEx® is designed to fit standard ASME/ANSI B16.5 flanges with both RF and RTJ gaskets. Using our own in-house team, SRJ are also able to design a bespoke size BoltEx® upon request.

G6. What training/qualifications are required to install and use BoltEx®?

BoltEx® is designed to be used by pipe fitters and maintenance personnel that are trained and competent with the torquing and replacement of bolts. SRJ provides an installation manual, training pack and online assessment module to be undertaken by those holding a recognised hot bolting qualification. The online training takes around one hour to complete, and a certificate is provided to those that achieve the pass mark in the online assessment. SRJ recommends that personnel using BoltEx® have the recognised hot bolting qualification to a standard appropriate to their region e.g. EN, ASME, ECITB.

G7. What tools (and manual handling aids) are required to install a BoltEx® clamp?

BoltEx® can be installed with basic equipment that is readily available to all pipe fitters, namely: an adjustable spanner, a torque wrench and a socket set. Minor rigging maybe necessary for the larger models but all units incorporate lifting points for safe handling.

G8. How long does it take to install BoltEx® and perform bolt replacement?

BoltEx® can be assembled and installed very rapidly in around 10 minutes. The removal and replacement of flange bolts varies, dependent on the as found condition, but assuming reasonable condition and no need for a nut splitter to remove the existing bolts, the whole process can be completed in less than an hour.

G9. If the flange bolts cannot be removed, can BoltEx® be left in place?

BoltEx® has been designed to also be used as a flange reinforcement device and can be left in-situ for a defined period of time as determined by an operational risk assessment.

G10. Can BoltEx® be reused?

Yes, BoltEx® is designed to be reused multiple times, although the unit fasteners should be regarded as consumables and changed when there is any sign of bolt elongation.

G11. Can SRJ provide a full hot bolting service?

We work very closely with selected service partners globally to provide a full hot bolting service to asset operators when requested. We analyse flange anomaly data and can define work scopes and work packs as required to deliver a focused bolting anomaly program for your asset.

G12. Are there any advantages in conducting hot bolting prior to an asset shutdown?

At SRJ we see great benefits in carrying out hot bolting campaigns prior to shutdown, in order to assure that pressure boundaries are verified as well as clearing any backlog of flange bolting anomalies prior to commencing the shutdown. This approach also provides clear and timely advance notice of any potential flange related issues before the shutdown so that they can be worked around or dealt with directly as appropriate.

G13. What information does SRJ require to do a hot bolt scope assessment?

We can work with what ever information you have, as we recognise that not everyone has a fully populated flange register and/or anomaly register. We will work with your team to arrive at the most efficient solution given the available data to hand and we can help plug any data gaps along the way.

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