quickflange°



PUT THE PRESSURE ON

A Leading Provider of Specialist Piping Solutions

Specialising in piping- and pipeline repairs and rehabilitation, Norwegian-based Quickflange is one of the leading providers of high performance pipe connection systems to the oil and gas sector.

With operators looking to maximise production and flow assurance as well as protect the integrity of their piping infrastructures, Quickflange's safe, flexible and cost effective flange-to-pipe connections are addressing these industry challenges head-on.

Headquartered in Norway and with offices in the UK and the United Arab Emirates, our vision is simple – to be the globally preferred supplier of weldless, flange-to-pipe connection solutions. Our values that define our company and guide us in every decision we make are:

Quality, Health, Safety & the Environment (QHSE)

We have a relentless focus on QHSE in every solution we develop and every decision we make.

Unique technology

Our technologies, backed up by numerous patents, ensure that we are unique in the industry today.

Integrity

Integrity, professionalism and reliability is the key to everything we do.

Creative

Creativity and innovation are central to ensuring that the products of tomorrow are on the market today.

Kind to the environment

All our solutions are developed with environmental impact top of mind.





Technologies & Solutions

The Quickflange solution is a modified,

standard weld neck flange, with a patented internal groove pattern machined into it. It is machined in such a way that it can slide onto the pipe without the use of heat or other potential ignition sources with a hydraulic tool then used to activate the flange. The result is a mechanically robust flange-to-pipe connection within minutes.

No Hot Work and Increased Safety

As the flange is slid over the pipe end and activated with a cold-forging tool, no spark or heat is generated during the activation process. This complete dispensing of the gases, ignition sources, flames and hot work associated with traditional welding, ensures increased safety, flexibility and speed.

Simplicity and Speeds

The flange design is very simple with a pure metal-to-metal seal, and no moving parts, balls, springs, seals or gaskets. The whole connection process takes up to 15 minutes for the largest sizes (12") and far less for smaller sizes, irrespective of pipe wall thickness or material. The fact that the solution consists of a modified standard flange and is self-contained also means that it can be shipped and delivered within hours.

A Strong Mechanical Connection

The cold-forging tool forces the pipe wall into the grooves, simultaneously affecting the seal and grip on the pipe. The result is that the assembled joint is stronger than the flange itself and is energised by the natural relaxation "springback" of the deformed pipe material forced into the groove modification in the flanges. The two processes generate huge contact pressures, forming a seal and structural grip on the pipe.

Reduced Costs

Reduced personnel requirements compared to traditional welding, ensures a cost effective pipe connection solution.

Flexibility

Installation can take place in contained areas with no impact on production and covers a wide variety of piping diameters. The simplicity of the system also requires little support equipment and the Quickflange solution is compatible with numerous materials, such as Carbon steels, Stainless steel F316, 6Mo and Monel, Duplex, Super Duplex and Copper Nickel (CuNi), as well as sizes from 1" up to 12".





Applications

To date, Quickflange has deployed its piping solutions as a quick and safe alternative to welding in the UK, Norway, Belgium, Denmark, the Netherlands, Brazil, the Middle East and Australia with over 2,500 applications worldwide.

Typical applications include:

- Replacement of sections of damaged/corroded piping
- Replacement of existing flanges
- Insertion of valves and tee's
- Re-routing and de-bottlenecking
- · Pipe work and new spool tie-in
- Fitting flanges in areas with restricted space
- The avoidance of welding in 'difficult-to-weld' materials, such as CuNi, Monel and Duplex.

Recent customer installations include:

- The replacement of 30 3" flanges at an onshore Steam Assisted Gravity Drainage (SAGD) plant, where the installation time for the new flanges, including the cutting of the old flange and the setup time in getting the equipment into the water separator vessel, was just 25 minutes.
- The installation of two Quickflange solutions on the Discharge Line of a Fire Water Jockey Pump at an offshore accommodation platform, the solution significantly reducing the normal work scope and time required for connecting flanges to utility piping.
- Applying the Quickflange solution on an offshore platform in response to corrosion issues on a flare header drain, the entire activation and testing taking place within one shift. With the location of the required repairs in an area of limited access where no hot work was allowed, the 12"
 Quickflange solution was applied to the pipe end with crevice corrosion protection and then tested with a flange weld tester.
- The installation of a solution to tackle an issue with a 10" upstream crude oil line. Quickflange was asked to deliver its pipe connection solution for the pipe and the platform is now operating at full production capacity again.
- Intervention work on a buried fire main at an onshore gas terminal. Once the pipe was cut, the Quickflange installation took just ten minutes with the end result being a safe and strong mechanical connection.
- The Quickflange solution was used to tie-in a new vessel installed as part of an ongoing improvement programme on an offshore platform.
- The Quickflange solution was used for the tie-in of a new open drain pipework to an existing pipe on an offshore field - an immediate solution to a platform infrastructure issue.





Innovative, Tested & Qualified

Partnering closely with two of the industry's

leading innovators, Det Norske Veritas (DNV) and Statoil and through our dedicated centre of excellence in Tvedestrand, Norway, Quickflange solutions are defined by the latest innovations and rigorous testing and qualification to give customers complete peace of mind.

An Evolving Solution

The Quickflange solution is constantly evolving with new combinations of pipe diameters, materials and pressure ratings – all tested according to criteria set by DNV. No solution comes to market without rigorous testing of pressure containment properties and minimal load resistance values.

Comparisons to Welded Weld-Neck Flanges

DNV testing has proven that the Quickflange is equivalent to welded weld-neck flanges in terms of pressure retention and load resistance. Resistance figures also meet the ASME 31.3 code for process piping as well as the maximum stress values allowed in pipe work with this standard.

A Proven Solution also with Thin-Wall Alloys

The Quickflange solution has been tested on larger diameter pipes and less familiar materials, such as high strength, thin-wall alloys with increased diameters.

Corrosion Protection

In order to prevent corrosion in the crevices between the pipe and the flange, these areas are effectively sealed off by applying an epoxy filler during the installation process. Testing has demonstrated that this is a suitable protection against crevice corrosion and the Quickflange solution is no more susceptible to corrosion than a weld-neck flange.

NO HOT WORK Safe & Easy

Quickflange Subsea

Having made such a major impact topside, Quickflange has taken its technology subsea, where the need for safe, cost effective, flexible and quick connection solutions is every bit as critical. The Quickflange solutions can be deployed subsea with minimal modification.

Simple, Quick and Robust Subsea Activation

For subsea, pipeline repair time is of the essence with significant costs relating to subsea operations, divers and support vessels. With its compact size at up to 60% shorter than other sleeve connectors Quickflange Subsea requires less pipe preparation especially coating removal. The simple activation process means divers can install a Quickflange quickly and efficiently. The joint can then be pre-tested and verified without the need to hydro test the pipeline through its external pressure test facility.

The construction of a Quickflange connector means there are no moving parts, grips or other components, ensuring that less can go wrong and thus ensuring maximum robustness.

A Flexible, Subsea Solution

The Quickflange activation system can be used on multiple pipe ranges and is fully retrievable and re-usable, thus offering a clear advantage to both repair and EPRS (Emergency Pipeline RepairSystems) contingency situations.

Installation and HSEQ

Installation and Pre-Planning

Each installation of the Quickflange solution is subject to detailed pre-planning, ensuring that the solution performs according to safety, health and environment requirements and the product's suitability prior to mobilisation. The dimensions of the Quickflange tools are verified by the client, securing the necessary space for appropriate rigging and lifting devices. The HSE Material Data Sheets are approved, and suitable cutting and testing equipment are made available prior to operation.

Certified Personnel

Installation is performed by certified personnel according to Quickflange's own certification procedures with personnel issued with a valid certificate after successful completion of the training course. Although Quickflange technicians are available, most clients have trained their own personnel for installation.

Health and Safety

Quickflange's central objective is to create a safe and fulfilling work environment with the prevention of all work related injuries and illnesses. Health and safety is promoted at all times.

The Environment

In order to preserve and protect the environment for future generations, Quickflange complies with all the relevant legislative requirements and regularly monitors its processes and solutions to pre-empt any negative environmental impact.

Quality Assurance

Quickflange is certified according to NS-EN ISO 9001:2008. All our solutions operate in accordance with this standard with quality assurance key to all products and future research and development. Process descriptions and procedures are regularly updated based on lessons learned and client specifications, with legal requirements and best practices always adhered to.



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