

## 14. HOW TO SELECT AN INDUSTRIAL GASKET?

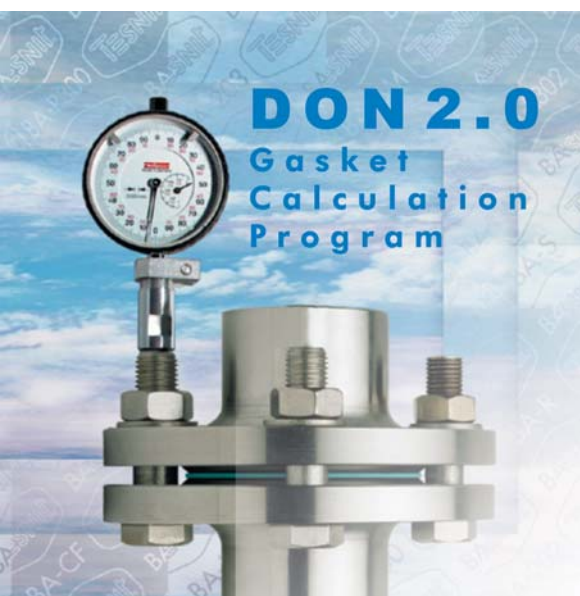
For any gasket application the choice of gasket material will depend on the operating conditions, mechanical features of the flanged assembly, the gasket characteristics and dimensions. In general, operating conditions determine the choice of jointing material, whereas the dimensional and mechanical features of the flange define the gasket type. The performance of any jointing material is influenced by the temperature, internal pressure, fluid, bolts (compressive stress), flange (type of flange, flange surface finish ...), cost-effectiveness and other special considerations. By using special software like the Gasket Calculation software DON, we combined all gasket selection factors thus offering our customers an easy and safe gasket selection.

### DON 3.0

Designers and installers of flange joints need a universal and specific tool to meet the requirements of EN 1591 standard. Numerous characteristics of the flange design are taken into account and consequently a large number of mathematical operations are required for such calculation.

DON 3.0 software was developed especially to save time needed for flange joint calculation according to the EN 1591-1 standard. The calculations consider all mechanical and thermal effects on the flange joint, as well as flange rotation and external loads. Additionally all corrigenda of the standard are already included in this software. The DON 3.0 database provides different parameters of sealing materials and gaskets defined by EN 13555 standard. The database also includes different standard flanges, bolts and gaskets parameters (dimensions and materials). It is also possible for the user to define and calculate any other user-defined flange joint.

By using the software it is possible to verify if the bolts, flanges and sealing material in the analysed joint will be able to withstand the operating conditions. The final result of the calculation is the required minimum bolting-up torque needed to achieve the criteria for the selected tightness class. The results are presented numerically and graphically. Because of extremely short calculation time it is very easy to simulate the impact of modifying various parameters the joint is exposed to.



### DON 2.0

The DON 2.0 software represents a successful tool for proper choice of gasket materials and gaskets connected with major sealing problems of the static sealing area. The software includes a large number of flange and bolts dimensions according to different standards. The influence of internal pressure and temperature of the media on the gasket and bolts are checked as well as the chemical resistance of the gasket material against the media. Other possibility offered by the software is the optimization of the joint regarding the type of the selected sealing material or the gasket thickness.