

SCHAAF GmbH & Co KG, Press text SMM 2012, TTG page 1

TTG – Tensioned Thread Geometry

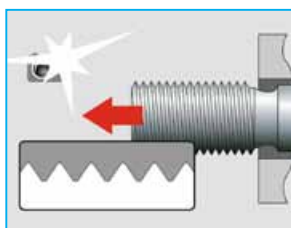
The patented procedure for targeted equal distribution of the axial bolt pretensioning force

The permanent ambition to meet customer requirements inspires Schaaf consistently to create product innovations and industry-sector-specific solutions. As a result, the traditional company developed the TTG – Tensioned Thread Geometry.

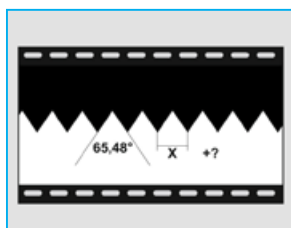
If a bolt is in a high pretensioned condition, bolt elongation and flange compression have occurred. Until now it has not been possible to ensure a 100% flank contact with equal distribution of force between the bolt thread and the nut. A distortion of the loaded thread results and it is not equivalent with the original geometry of the nut. Furthermore, the bolt is extremely loaded, which can result in the known breakages in the first thread turn. With TTG Schaaf has developed the procedure to copy the profile of the high pretensioned bolt connection in the nut area and transfers it to the nut. This means the nut is adjusted to the high pretensioned bolt. Thus stress concentrations are avoided and the nut lies exactly over the complete area, respectively, distributes the forces over the complete thread geometry.

This insignificant more expensive solution extends the longevity of the bolt, the safety of the connection and is a can be used for a long time. Since the outer geometry is not relevant and the TTG is independent of the nut material, the TTG can always be combined with bolt connections, e. g. the Schaaf products MSN, SSV or HM.

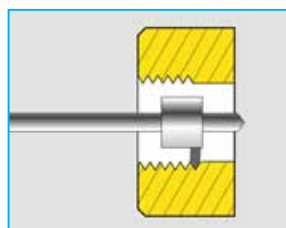
Captures



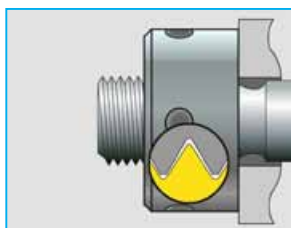
Take a picture of pretensioned bolt



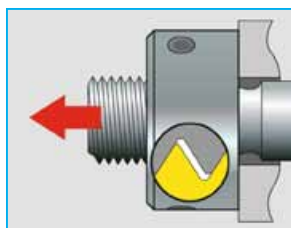
Determination of thread geometry



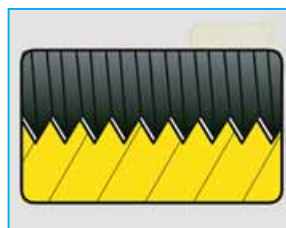
Manufacturing the nut after determination



Flank contact at untensioned bolt



100% flank contact with targeted equal force on the pretensioned bolt...



... over the complete area