The original SCHNORR® safety washer

Offer the following advantages:

① High resistance to vibration due to positive locking of the serrations.

② Concentrical force transmission and uniform axial load eliminate bending torques and deformation of the bolt stem.

③ The design of the serrations prevents friction and damage to components when tightening.

④ Extremely high safety against loss of pretension force and loosening.

⑤ Wide variety for materials and different finishes.

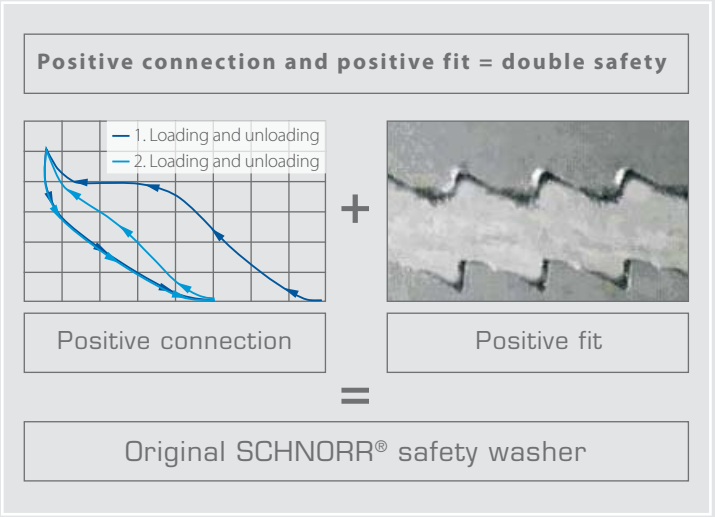
⑥ The closed ring form results in high degree of pretensioning, while avoiding burst-open effect.

⑦ Development and design of the washers take place on the basis of the screw geometrics, tightening torque as well as the constructive circumstances.

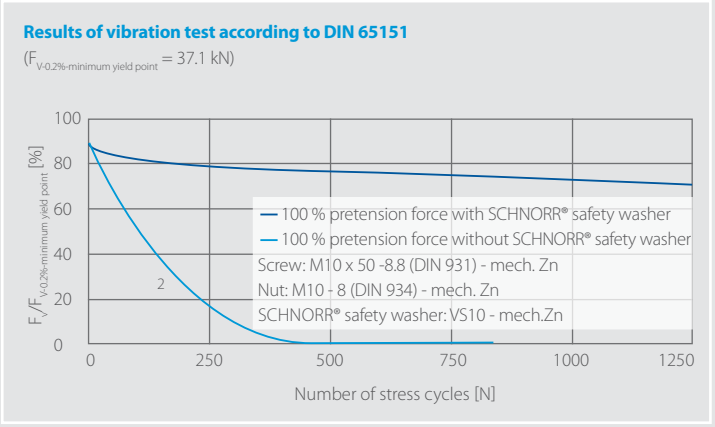
The original SCHNORR® safety washers are in the form of a disc spring but with a trapezoidal cross-section and serrations on both sides. The outer diameter is matched to the head diameter of the pan head and socket head cap screws.

SCHNORR® safety washers are available in two versions:
The standard safety washer type "S" is available for screws of sizes M1.6 to M36 and of the property classes up to 8.8.
For screws of property classes 8.8 and 10.9, higher pretension forces might be necessary. These are covered by our reinforced washers type "VS".

Due to the conical form, optimal traction is achieved at highest positive locking due to the helical gearing.



Vibration test according to DIN 65151



Extensive test series carried out at the "Staatliche Materialprüfungsanstalt" (public material research laboratory) in Darmstadt prove that the original SCHNORR® safety washer manufactured using the a patented manufacturing method brings about a clear improvement of the safety properties.

Conclusion

- Connections secured using a SCHNORR® safety washer maintains the pretension force also after 1,500 cycles.
- An unsecured screw connection has lost its pretension already after less than 500 cycles.