

General assembly instruction for swg SPIRATEM

The gasket:

1. This type of semimetallic gaskets is solid and sturdy construction and position the gasket in the flange is predetermined and sealing element always rests with the surface area of the flange. Despite the fact that this type of gasket is less susceptible to assembly errors, it is recommended to follow these instructions.

Flange surfaces and connecting material:

2. **Check the sealing surfaces of flanges.** The sealing surfaces have to be clean (with the old gasket removed), degreased, flat, parallel, non-corroded and they must not show any other marks of damage. The recommended roughness of seating is from 3,2µm to 12,5µm. In case of scratches, scores or impressions it is recommended to professionally inspect the flange or to renew it by special preparations (mechanically) so that it can again be fit for gasket installation and follow-up.
3. **Check connecting material.** Fastening bolts, nuts and washers have to be clean, non-corroded and they must not be otherwise damaged. Their size has to be selected properly. They have to be greased by a suitable lubricant in threads and contact friction surfaces. We recommend using of screws of the same quality. Do not use damaged bolts and nuts.

Gasket installation:

4. **Pay attention to gasket installation.** Correctly apply the gasket on a more suitable sealing surface between the flanges. For correct insertion and fixation of the gasket under more difficult conditions (vertical installation, badly accessible spaces, split gaskets of bigger dimensions, etc.), it is suitable to use a chloride-free adhesive agent. Protect the gasket from climatic influences during installation. When handling gaskets of bigger dimensions, we recommend carrying it in the original packaging by more people previously instructed. Pay heightened attention to the introduction and installation of the flange counterpart to avoid gasket damage.

Tightening:

5. First tighten the bolts by fingers. Then tighten them crosswise gradually in three steps 30, 60 and 100 % of the recommended tightening torque for installation (tightening the bolts crosswise has to be observed and is generally valid when tightening 4 bolts or more). After tightening the bolts to 100 % of the tightening torque and introduction of operating values, it is recommended to check them after 24 hours and if required, the bolts should be tightened to 100 % of the tightening torque after reducing operating parameters to lower values, if possible.
6. During tightening, the maximum compression stress in the gasket must not be exceeded.
7. We do not recommend loosening the bolts and tightening them again. If the tightness of the flange joint is not fulfilled, the bolts can be retightened, but always after reducing operating parameters to lower values. In this case, the principles of correct installation have to be followed again or consult the flange joint with specialists.
8. The most suitable tightening systems are torque spanners, hydraulic, pneumatic or mechanical tightening systems (please follow the rule of valid calibration of the system used). Tightening of bolts without checking the fastening torque is not recommended, since the recommended tightening torques cannot be guaranteed. Tightening without tightening torque check is possible only for light-duty operating conditions. (i.e. low pressures, low operating temperatures of the used media, suitability of flange joint).
9. After „warming-up“ of the flange joint to the operating temperature, it is recommended to carry out more frequent checks during the first 48 hours.

