

General mounting instructions for flat gaskets

Gasket:

1. **Checking the gasket.** It must be undamaged, clean and dry and its dimensions must match the dimensions of flanges. The shelf life of a gasket must correspond to the recommended period of storing. Type of a gasket must correspond to the operating parameters of the flange joint.

Flanges surfaces and connecting material:

2. **Checking sealing surfaces of flanges.** Sealing surfaces must be clean (free from any rests of old gasket), degreased, flat, parallel, rust-free and without any other damages. The recommended roughness of bearing surface depends on the type of the flat sealant. In case it shows any scratches, grooves and pressure marks, it is recommended to assess the flange surface professionally or to renovate it using special agents so that it is again fit for installation of a sealant and subsequent operation.
3. **Checking connecting material.** Tightening screws, nuts and pads must be clean, rust-free and undamaged and selected as suitable. They must be suitably lubricated in threads and on contact friction areas. It is recommended to use screws with the same quality. Do not use damaged screws and nuts.

Installation of sealant:

4. **Pay particular attention when applying a gasket.** The gasket must be put correctly on the more suitable sealing surface between flanges. It is suitable to use a chloride-free fixation adhesive for correct positioning and fixation of the sealant in case of more complicated application (vertical, places with complicated access etc.). The sealant must be protected against weather conditions during installation. For sealing of large dimensions it is recommended to carry it in its original package with the assistance of several trained technicians. It is necessary to pay particular attention when putting and installing the counterpart of the flange so that to prevent any damage to the gasket.

Tightening:

5. Tighten the screws manually by fingers first. Then, tighten them well cross-wise gradually in 3 steps to the values 30, 60 and 100 % of the recommended tightening stress at installation ("cross-wise" tightening has to be observed and applies for 4 or more screws). After it is 100% tightened and operational parameters are started, it is recommended to check these values after 24 hours and always tighten well the screws to 100% torque moment, if need be, after the operational values are abandoned, provided the situation allows it.
6. The maximum permitted compressional stress must not be exceeded when tightening - Q_{max} .
7. It is not recommended to loosen the screws and tighten them again. If tightness of the flange joint has not been achieved, it is possible to tighten the screws again, but always after the operational values are abandoned. Here it is necessary to observe repeatedly the correct assembly principles.
8. The best tools for tightening are torque wrench and pneumatic, hydraulic or mechanical tightening systems (with the obvious rule of relevant calibration). Tightening without checking the tightening torque is not recommended, because it does not guarantee observance of the tightening stress. Tightening without checking is possible only for undemanding operating conditions (i.e. low pressure, low operating temperature of media).
9. After a joint **is warmed up to the operating temperature, it is** recommended to carry out enhanced check of the flange joint during first 48 hours.



Temac, a.s.
Zvěříněk 289 13
Czech Republic

Phone: +420 325 550 181
Fax: +420 325 550 250
e-mail: tech.help@temac.cz
www.temac.cz