Nebar - Frequently Asked Questions

What information do you need to give a Nebar recommendation?

As much as possible of the following :

- the application (transformer, generator, gearbox, storage tank, pipe flange, etc).
- the fluid being sealed (as specific as possible).
- the normal continuous operating temperature, the highest intermittent temperature reached and the lowest temperature seen when not in operation.
- internal system pressure.
- type and condition of flanges :
  - material (steel, aluminium, ceramic etc).
  - bare metal, unglazed porcelain or painted on the sealing faces? If painted, with what type of paint?
  - approximate thickness of each flange.
  - how much the gap between the flanges varies without the gasket installed eg 0, 0.1, 0.5, 1, 2mm.
- size of the gasket - overall length x width and the flange width, or the outside and inside diameters.
- the bolting arrangement - bolt size, bolt spacing (c-c) and the number of bolts.

What maintenance does a Nebar gasket require?

- Nebar gaskets do not need any routine maintenance. Provided they have been correctly installed in a suitable application they should give long service without any problems.
- If slight seepage of fluid does occur after some time in service, the bolts can be carefully retightened by a small amount - just enough to stop the leakage. Care must be taken if the installation is warm, as the gasket will be softer and more easily over-compressed.

Can a Nebar gasket be re-used after plant maintenance?

- No, a gasket should never be re-used. If the flange assembly is being separated from the gasket for inspection or maintenance purposes, a new gasket should always be fitted.

How long will a Nebar gasket last before it needs replacing?

- If the gasket was installed correctly on good flanges, and operating conditions have remained perfect throughout it's life, the Nebar gasket may never need replacing. In ideal conditions the gasket can be expected to give many years service.

What thickness of Nebar gasket will I need?

- It depends on the stiffness of the flanges and how flat and parallel they remain after tightening. In general it is best to use the thinnest gasket possible as this gives the most robust joint, and the sealed fluids and internal pressures have the least influence on the gasket. As a rough guide the gasket will need to be approximately twelve times as thick as the error in flange parallelity. A gasket that is too thin or too stiff for the flanges is liable to leak.

Should I use a sealing compound on the gasket during installation to help prevent leaks?

- No! Nebar gaskets should always be installed on clean, dry flanges. A good seal relies on plenty of friction between the gasket and flange. Any liquid, paste or gel sealing compound will reduce the friction dramatically and is likely to cause leakage and even mechanical failure of the gasket.

Does it matter how much I tighten the gasket between the flanges?

- Yes! This is one of the most important aspects of installing a gasket.
  For Nebar the best way is to measure the original thickness of the gasket and then to slowly and evenly bolt the gasket down until the compressed thickness is 68% of the original thickness. So a gasket with a thickness of 5.0mm would be bolted down until it was 3.4mm thick. In most cases the gap between the flanges can be measured with feeler gauges. While 68% is the ideal figure, it is normally acceptable to compress the gasket to between 63 and 73% of its original thickness.
  If too little compression is applied the gasket is likely to leak in time. If far too much compression is applied the gasket could break down or the flanges might bend, causing leakage.

Sometimes it is not easy to measure the gasket thickness during compression and customers ask whether it is possible to tighten down using bolting torque as the control.
Yes it is possible, although it's not our preferred method and generally it's a less reliable method than tightening by thickness control.
To be able to use bolting torque the user will need to contact our Technical Services department with the following information :

- Nebar grade and thickness.
- Overall dimensions (length x width) and flange width, or outside and inside diameters.
- Number of bolts.
- Size of bolts (eg. M16)

Why do you not recommend tightening gaskets using bolting torque as the control?

- All installations are different. A bolting torque specified for one installation will not be correct for another. Every different gasket size, different number or size of bolts and different grade of Nebar would require a separate calculation to be able to give the theoretically correct bolting torque.
- All rubber/cork gaskets have compression characteristics that can vary within fixed tolerances. A bolting torque can only be calculated assuming a typical compression characteristic, and therefore it is not possible to guarantee that a calculated torque value will give the optimum degree of compression on any particular installation. Tightening by thickness control does not have this disadvantage.

What if none of the Nebar grades are suitable for my application?

- Tiflex is part of the James Walker Group of companies, who manufacture a wide range of sealing products. If our Technical Services team feel that a Nebar product is not suitable for a particular application, they may be able to suggest an alternative solution from the James Walker range.

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