

August 16, 2017

TO: General Distribution

Re: Rubber (Elastomeric) Gaskets in Raised Face or 300# flanges

Please see various topics below.

### **Rubber in Raised face flanges:**

- **Rubber is not recommended in raised face flanges:** Rubber gaskets, including the STRESS SAVER gaskets (other than the 3504 STRESS SAVERS) are NOT recommended for metallic raised face flanges, as the available assembly stress far exceeds the crush resistances of rubber. If one or both of the flanges in the assembly is RAISED FACE, please contact Applications Engineering.
- **What about non-metallic flanges that have a small raised face?** There are some non-metallic flanges that are basically raised face (many having a rotating/floating backer flange). Many of these are acceptable with rubber gaskets because the compressive load is still pretty low, since the allowable torques are often very low.
- **The stresses might be a little higher than we normally recommend for rubber but they are still too low for most other gasket types.** Because other types of gaskets will not seal well at these low torques, rubber gaskets become the best option. Best gaskets for non-metallic raised face flanges: The Stress Saver XP and 3504 Stress Saver versions are best in these flanges, since these can handle the moderately higher stresses in these non-metallic RF designs.
- **Can we use rubber gaskets in raised face flanges if we limit the torque?** While it is possible to use lower bolt loads on rubber gaskets in raised face flanges, in many cases the max torque becomes unrealistically low. For example, with 1/2" metal raised face flanges and a rubber gasket, the max recommended torque is 2 ft-lbs. Such low bolt loads are almost certain to cause eventual leakage.

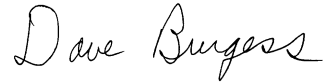
**Rubber gaskets in 300# flanges:** This can be a problem for a couple reasons:

- **The pressure rating of metal Class 300# flanges, at ambient temperature, is approx. 750 psig.** The recommended pressure limit for most of our rubber gaskets is 250 psig; as it is for the RUBBER versions of the Stress Saver family (370, 6800, and XP). Usually we are told that the customer insists that the actual pressure is under the 250 psig limit, but once the gasket is installed in a 300# system, we have to ask how the owners of the system will ensure that NO ONE will ever forget that there is a low pressure gasket in the system and decide to operate the pressure higher than 250 psig.
- **Crush Strength:** as stated above, the reduced area of 150# raised face flanges can generate stresses high enough to easily crush rubber gaskets. That problem is only compounded in higher pressure classes, such as 300# and up which have a higher available bolt load (to accommodate the higher pressure rating of the flange), making the crush strength even more of a potential problem.

**Typically there is no real reason to use a rubber in these flanges, as they can be reliably and safely sealed with compressed fiber sheet, GYLON®, GRAPHLOCK®, metallic gaskets, etc.**

We trust this information is helpful. Please feel free to contact Applications Engineering should you require anything further.

Sincerely,

A handwritten signature in cursive script that reads "Dave Burgess".

Dave Burgess

Sr Applications Engineer

Industrial Gasketing

cc: C Hicks M Tones

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