

## Refrex® Multi Tube Bellows





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INSULCON PROJECTS S.A. - Switzerland +41 (0) 91 911739-0 infoch@insulcon.com Since 1984 Insulcon started to develop high temperature flexible tube seals for ethylene crackers, reformers, crude heaters, etc. for several multi-nationals. Insulcon's **Refrex® multi tube bellows** are applied now for many years in naphtha- and ethylene cracking, reforming-, and platforming furnaces, visbreakers, crude heaters and all kind of process heaters.

**Refrex® multi tube bellows** are flexible seals around multiple pipe penetrations in the roof of a petrochemical furnace. They prevent cold air ingress due to under pressure and are to absorb both axial and lateral movements. Refrex® multi tube bellows can be applied up to 1370°C.

**Refrex® multi tube bellows** guarantee a durable application resulting in low maintenance costs and high energy savings. Complicated high temperature tube passings, through roofs or walls may be flexible sealed by our Refrex® mono or multi tube bellows. Based on our experience with high temperature woven fabrics, the Refrex® woven fabric types were selected as be the best materials for our multi tube bellows.

**Refrex®** fabric is woven out of threads made out of different rovings. The rovings are assembled out of specified number of endless Refrex® filaments with a fibre diameter of 10-12 micron. No binders are added, only a "sizing", a temporary coating which protects the Refrex® fibers during the weave process. Refrex® 1200 and 1400 filaments and textiles are non-oxidizing, non-hygroscopic, chemically stable, have a low conductivity and a good abrasion resistance.





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### Refrex® 1200 and 1400 fabric types

To assure the reliability at extreme temperatures, the corresponding Refrex® sewing yarns are used to make this a 100% Refrex® product. Fixing systems are up to the requirement of our clients and vary from endless stainless steel fixing profiles, separate (tube by tube) fixing bands and Refrex® tie-cords, fully inserted in the Refrex® fabric topside of the multi tube bellow.

#### We can provide you with the right seal!

From design to delivery, from small to large sizes, from prototype to series production. The wide knowledge of high temperature resistant fabrics, our qualified people and specially developed machinery ensure that your high temperature sealing problem is solved.

If you would like to have supervision and/or inspection at your site as well, we will gladly be at your service.

#### Advantages Refrex® multi tube bellows:

- Prevent cold air ingress
- Can absorb axial and lateral movements
- Decrease heat loss and therefore reduce energy costs
- Have a payback period of approximately 12 –14 months
- Are temperature resistant up to 1370°C

