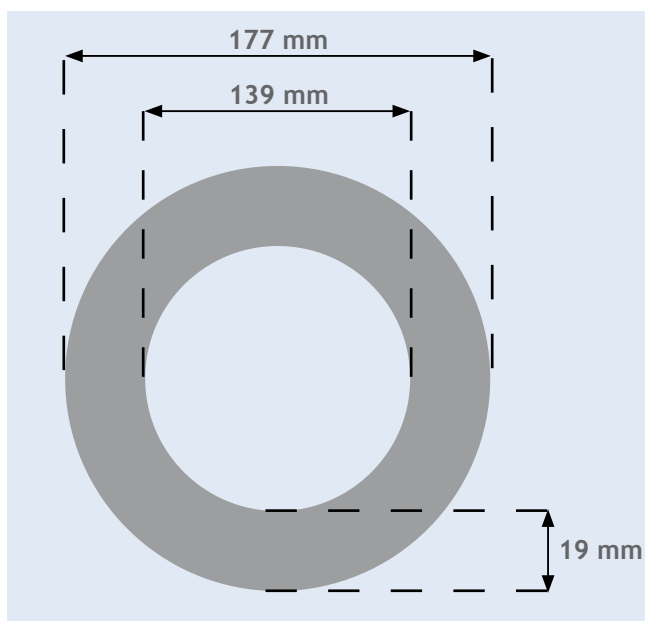


# EUROBATEX® HF (HALOGEN FREE)

This installation Guide illustrates the basic rules to follow in order to achieve the correct installation of all of our Flexible Elastomeric Foam products.

In the specific case of halogen free products, whose formulations do not contain any PVC and are therefore less tough and more susceptible to tearing, it is highly advisable that these installation techniques followed carefully and in full.

- 1 Consider the ratio between the insulation thickness of the product and the Outside Diameter of the pipe to be insulated (in the example given below the pipe has an O.D of 139 mm and it is to be insulated with Eurobatex HF sheet having a thickness of 19 mm).



Whilst the inner surface of the FEF sheet would wrap around the 139 mm circumference of the pipe easily, the external surface of the same piece of sheet needs to traverse the insulated diameter of the pipe which is  $139 + 19 + 19 = 177$  mm. It is therefore clear that if the sheet is cut to fit the pipe diameter and not the insulated diameter that the FEF material will be stretched significantly and subject to a high level of tensile stress. The recommended installation technique is to measure the insulated diameter i.e. the external circumference.

We advise to measure the external circumference using a stripe of the insulation sheet to be installed at least 30 cm width. The inner surface of the sheet may appear to be a little loose when applying it to the pipe but this technique means that the full width of the joint will be fitted in compression which will ensure that the adhesive bonds correctly and this installation method will have no adverse effect upon the thermal performance of the product.

- 2 When installing sheet material on pipes it is essential to ensure that the stresses which occur in the glued seam as a result of bending of the sheet are not too high. These stresses will increase as insulation thickness increases and as pipe diameter decreases; the table below specifies which thicknesses of Eurobatex HF sheet can be satisfactorily installed to which pipe sizes:

| Insulation sheet thickness | Pipework outer diameter |          |          |          |          |
|----------------------------|-------------------------|----------|----------|----------|----------|
|                            | ≥ 89 mm                 | ≥ 114 mm | ≥ 139 mm | ≥ 159 mm | ≥ 219 mm |
| 6 mm                       | ✓                       | ✓        | ✓        | ✓        | ✓        |
| 10 mm                      | ✓                       | ✓        | ✓        | ✓        | ✓        |
| 13 mm                      | ✓                       | ✓        | ✓        | ✓        | ✓        |
| 19 mm                      |                         |          | ✓        | ✓        | ✓        |
| 25 mm                      |                         |          |          | ✓        | ✓        |
| 32 mm                      |                         |          |          |          | ✓        |

- 3 When installing Eurobatex HF sheet on to pipework which will operate at line temperatures above ambient temperature it is important to realise that the increase in temperature will cause the product to expand. This expansion will cause an increase in product dimensions which will be greatest in the case of the external circumference of the sheet material. This expansion can cause tensile stress in the outer surface. In order to mitigate this effect it is important to make an allowance for thermal expansion during the installation process.
- 4 It is advisable to follow the natural curve of rolled sheet when applying Eurobatex HF sheet to pipework.
- 5 It is recommended that Eurobatex HF pipe insulation is used in preference to Eurobatex HF sheet when applying the product to pipes with an Outside Diameter ≤ 139 mm; this will greatly reduce the risk of installation problems caused by tensile stresses in the external surface of the product.
- 6 For the insulation of bends using flat sheets, see section 5.2 - large radius bends - of the installation manual. The instructions will supply advice to ensure a correct installation without submitting the insulation to tearing.

