



KOREMA®
KOMPENSATORENWERK
RHEIN-MAIN GERMANY



General guidelines for storage and installation

KOREMA®-Expansion Joints are construction components made of high performance materials incorporating more than 40 years' experience. Project specific identification plates are attached to every KOREMA® expansion joint for easy cross reference.

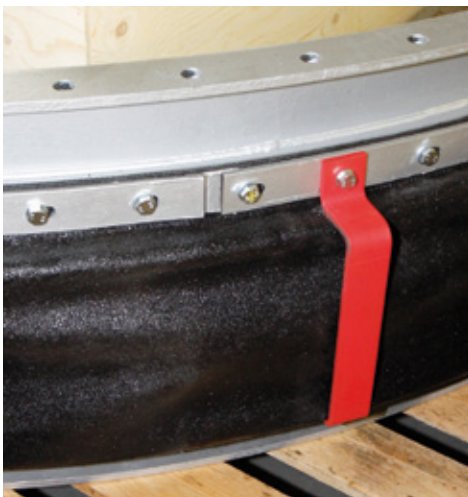
Store under cover and off the ground to prevent water damage. Expansion joints that have been stored in temperatures below 10 °C (50 degF) should be gradually warmed to approx 20 °C (70 °F). Note — work slowly treated materials are stiff when cold, PTFE foil also becomes brittle.

Installation Damaged joints should be returned to the factory unless KOREMA® determines that field repair is possible and provides specific instructions. To reduce the risk of damage, installation of the joints should be completed during the last phase of the project.

For safety reasons do not install expansion joints that have been damaged in transit or during installation. Do not expose the expansion joints to flammable materials such as paints, solvents or penetrating and rust inhibiting fluids. Do not paint the fabric. Do not insulate over the expansion joint.

KOREMA® always recommends internal liners — but there are exceptions, check with the factory for an application specific decision. Special construction without the liner is available but only after consultation with KOREMA®.

- Design and operating conditions will determine the size of the clamp bars, hole spacing and the type of fastener to be used:**
- there should be no sharp edges or burrs.
 - for optimum sealing characteristics fabric joint flange holes = bolt diameter.
 - corners should be radiused.
 - for split clamp bars the end should butt together and a bridging plate should be used for improved sealing.
 - after commissioning and start up the fasteners must be checked and retightened. See sheet for recommended torque.
 - use yellow/ red installation bars for slip in assemblies.
- Always consult with KOREMA® before specifying or ordering metal components.



Sealing

General note – dismantling and reassembly of a fabric expansion joint. The material in the flange area compresses once the fasteners have been tightened which can result in leakage and cause the bolts to become loose.

Flange areas

Although the belt type profiles secured by straps can be designed for pressures up to 100 mbar (40"WG) the use of bolted connections is preferred for both U-profile and belt profile types if operating pressures are greater than 50 mbar (20"WG). For applications at pressures above 200 mbar (80"WG), for pressure pulsations or for optimum sealing characteristics special elastomeric seals can be vulcanized onto the flange areas to provide improved sealing. Coating the metal flange surfaces with graphite before installing the fabric joint will also provide improved sealing.

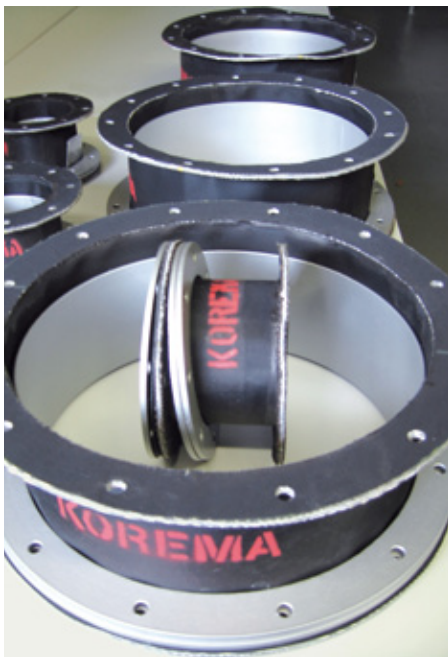


Installation of expansion joints with integral flanges (U type)

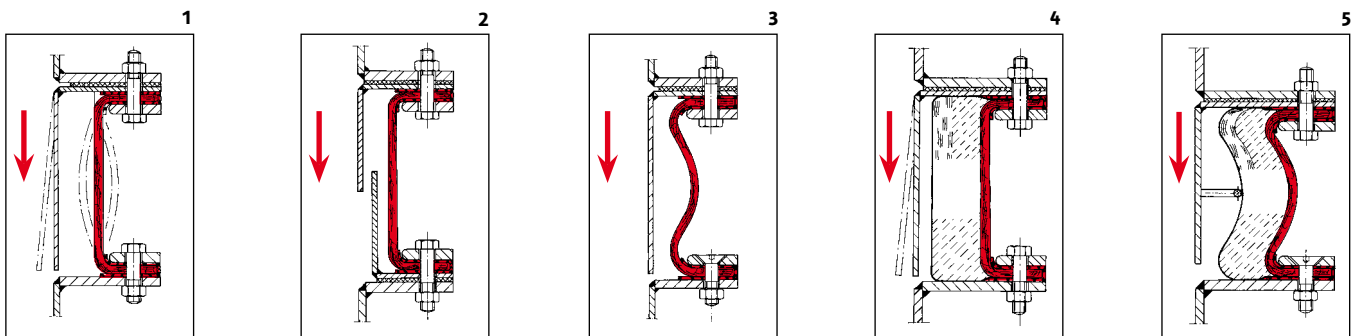
Construction types: A₃, AC₃, B₃, BC₃

Expansion joints with pre-punched bolt holes are the easiest to install. Check the installation length at 4 diametrically opposite points for accuracy – allowable tolerance +/- 6mm (1/4") Start from a fixed point – 12 o'clock for circular joints and the corners for rectangular joints – and fit at least 4 equally spaced bolts in each flange. Once the weight is supported the remaining fasteners can be installed and tightened.

Expansion joints without holes — properly support the joint then drill the bolt holes using the metal clamp bar as a template. Note – drill diameter = bolt diameter for optimum seal.



Flanges and clamp bars must be straight and without sharp edges. Bolt heads must not rub against the expansion joint — important for type E₃ joints – use countersunk head screws or equal.



Figures 1, 2 and 3
U-type expansion joints – various liner configurations.

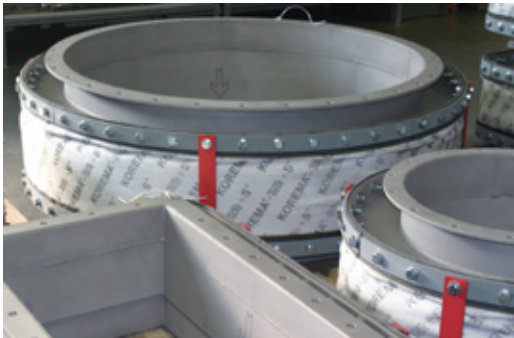
Bolt heads to expansion joint side

Figures 4 and 5
U-type expansion joints with insulation – for dust laden and hitemp applications.



Installation of belt type "OPEN" expansion joints with prepared ends

Belt type construction types: A1, B1



Check the installed length (distance between the flange ends plus 2 x clamping width). Construction length of the belt is always greater than the installed length. Locate the splice at the highest point. Start fitting the clamp bars at the lowest point and work towards the top of the duct.

If clamp straps are used make sure that they are located 5 — 10 mm from the outer edge of the belt. Ensure that the belt materials are flat — no creases or wrinkles.
The expansion joint must be installed in its neutral position i. e. unstressed.

Belt type construction types: AC1, BC1

KOREMA® construction types with pre-insulation

Before starting installation of the expansion joint belt:

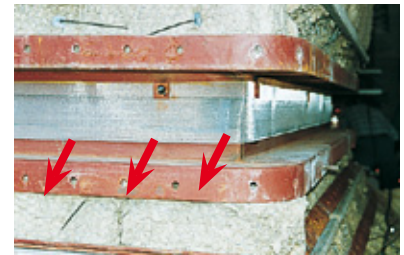
- locate the stainless steel mesh in the void and secure as instructed by KOREMA®.
- lay the insulation batts on top of the mesh, fill the space evenly, do not pack.



1. Steel frame without expansion joint — check dimensions before assembly.



2. V4A alloy mesh to be folded on each side ...



3. ... and fix on one side.



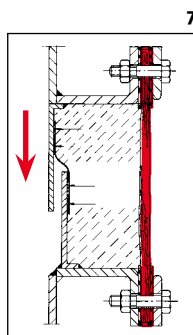
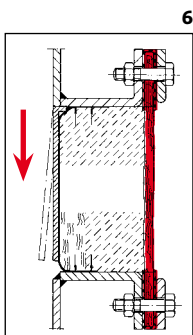
4. Mineral wool is installed.



5. Place the pre-insulation layer on top of the mineral wool.



6. Assembly of the multilayer expansion joint.



Figures 6 and 7
AC-1 belt type with internal insulation for high temperature service. The belt profile can also be preset — convex (for positive pressure) or concave (for negative pressure)

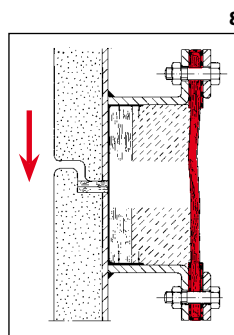
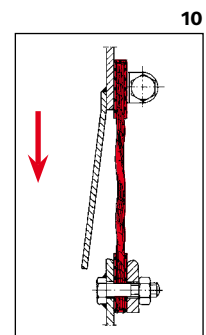
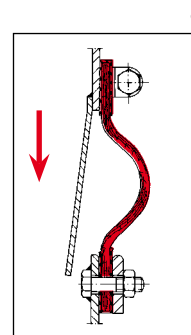
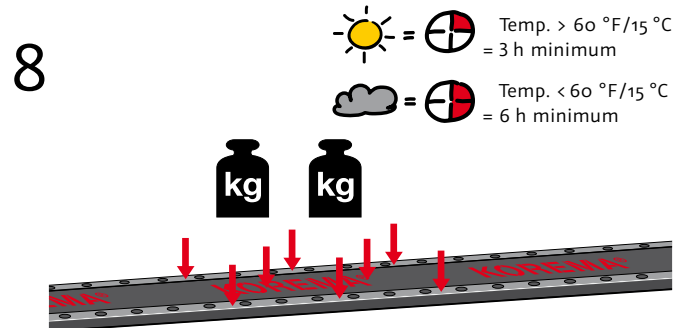
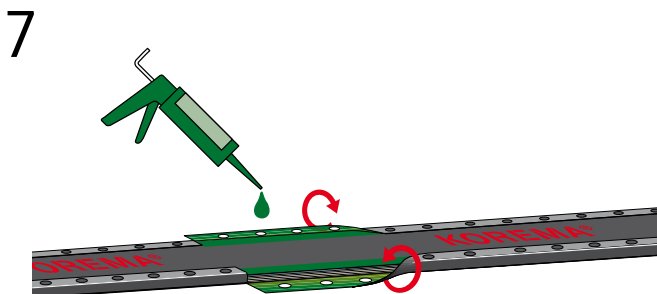
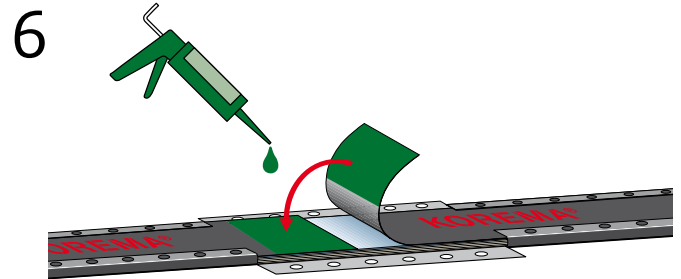
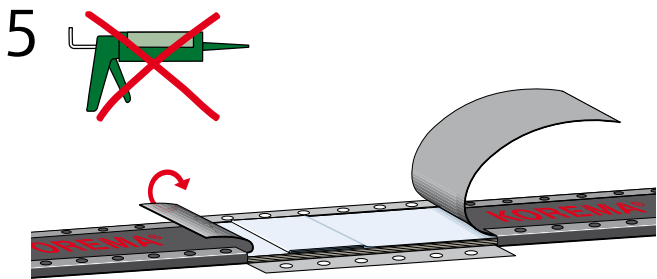
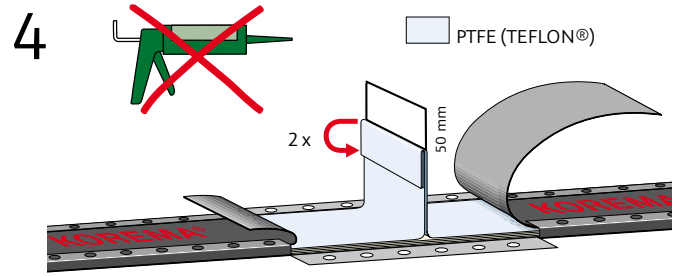
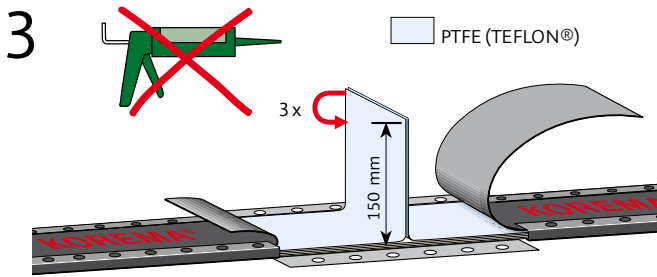
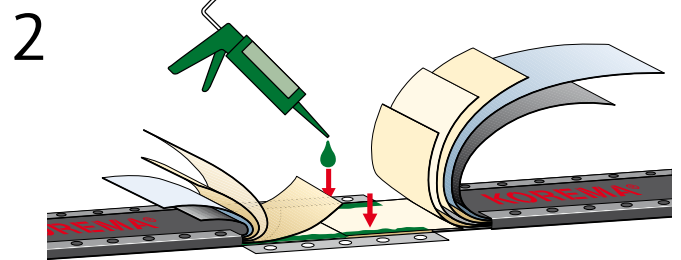
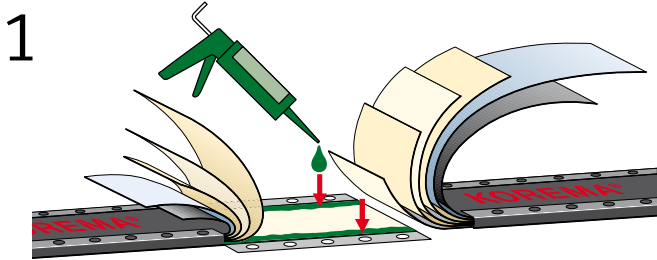


Figure 8
Extremely high temperature service, duct is refractory lined and stepped to permit movement



Figures 9 and 10
A-1 profile for easy installation directly onto the duct and can be secured by gearclamps

Splicing instructions — “OPEN” expansion joints with prepared ends



Always locate the splice at the highest point of the duct.

Figures 1 and 2 Inner layers — apply adhesive in flange areas only.

Figures 3, 4 and 5 PTFE foil — **no adhesive required** — for best results fold exactly as shown.

Figure 6 Outer layer overlap area — cover both surfaces evenly with a thin coating of adhesive and press together.

Figure 8 Clamp splice area and allow the adhesive to cure.

Please call the KOREMA® Service Department if you have any questions.

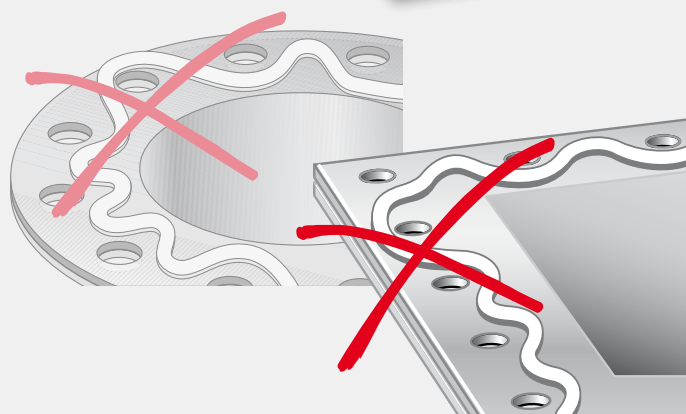
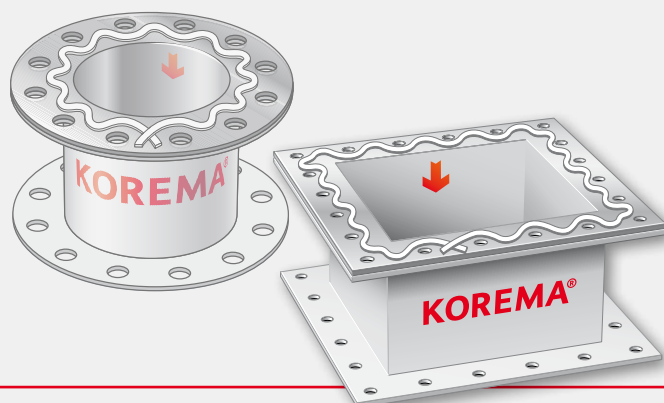
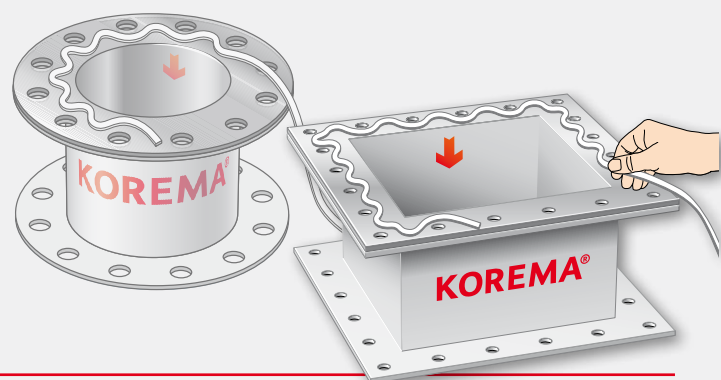
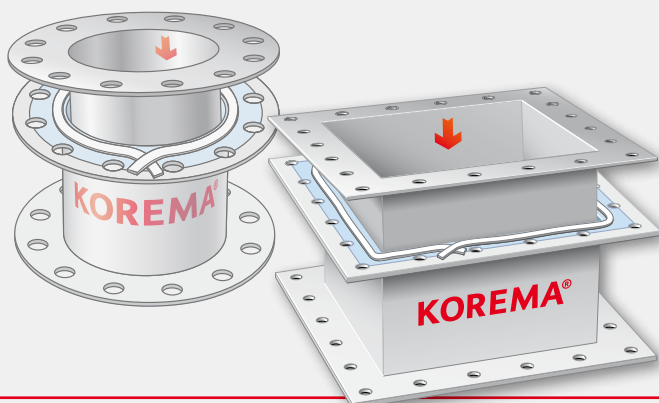
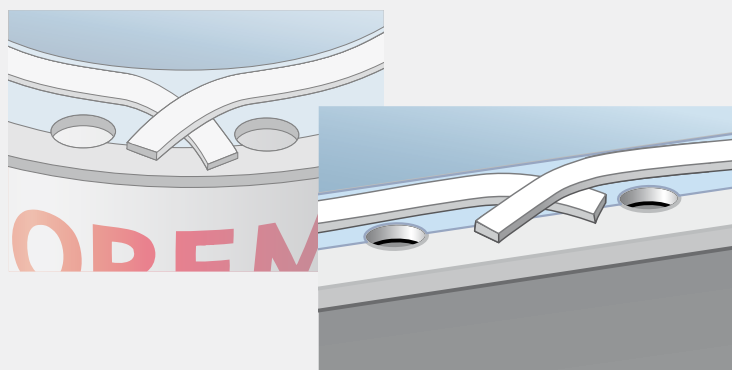
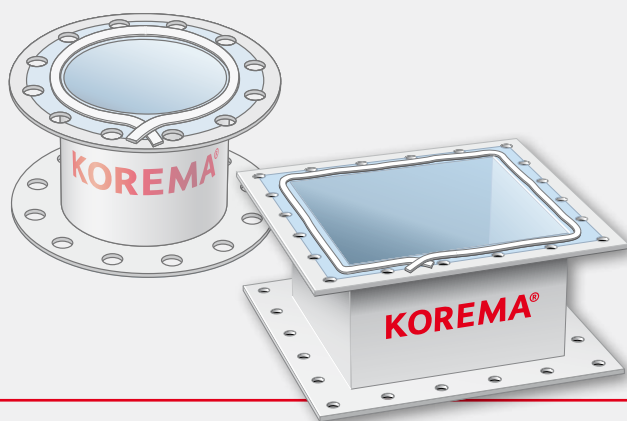
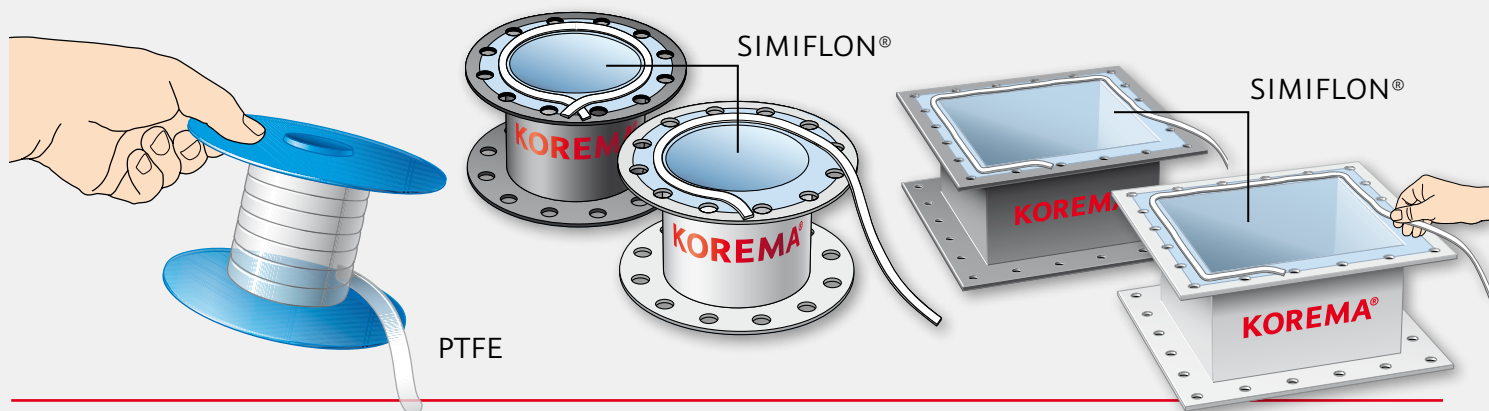
SIMIFLON®

Correct use of the PTFE sealing tape



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ELTROFLON®

Correct use of the PTFE sealing tape for conductive expansion joints



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