



Application Manual

Contents

1 General	3
2 Useful Information	3
Working with AEROFLEX® tubes	3
Working with AEROFLEX® sheets	3
General information about gluing	4
3 Insulation of pipes and fittings with AEROFLEX® tubes	4
Insulation of pipes by sleeving-on AEROFLEX® tubes	4
Insulation of pre-installed pipework	5
Insulation of pipes with self-adhesive AEROFLEX® tubes	7
Using the AEROFLEX® Template	9
Insulating Tee-connections with AEROFLEX® tubes	12
Insulation of tapered pipes with AEROFLEX® tubes	15
Insulation of valves with AEROFLEX® tubes	16
4 Insulation of pipework using AEROFLEX® sheets	18
Insulation of straight pipes with AEROFLEX® sheets	19
Insulation of a bend with AEROFLEX® sheets	20
Insulation of a reducer with AEROFLEX® sheets	22
5 Insulating flanges with AEROFLEX® sheets	23
6 Insulating a valve with AEROFLEX® sheets	25
7 Insulation of an angled stopcock with AEROFLEX® sheets	28
8 Insulation of tanks and vessels with AEROFLEX® sheets	30
9 Multi-layer insulation	33
10 Insulation with self-adhesive sheets	34

1 General

- Clean surfaces – Ensure that the surfaces are clean, dry and free from grease (if necessary apply AEROFLEX® SPECIAL CLEANER).
- Do not insulate plants and machines while they are in operation! In order to let the glue cure completely any newly insulated equipment shall be taken into operation not sooner than 36 hours after the insulating had been finished.
- Never pull on joints when sealing them, push only!
- Observe any assembling instructions of the applied tools, adhesives, additives etc.
- Work with high quality tools (fresh AEROFLEX® adhesive, AEROFLEX® SPECIAL CLEANER, sharp knives, good brushes etc.)
- Mind the different AEROFLEX® adhesives (AEROSEAL TF or AEROSEAL TF/HT when working with AEROFLEX® KKS and HF, AEROSEAL FIRO (TF) when working with AEROFLEX® FIRO)

2 Useful Information

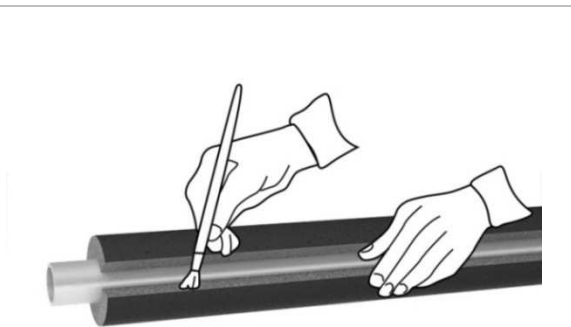
Working with AEROFLEX® tubes

Gluing the edges of an AEROFLEX® slit tube

To glue edges, sleeve the tube around a larger diameter pipe so the edges do not overlap and stick together unintentionally and apply the glue. Consider the flash-off time. Then slide the prepared tube over the pipe to be insulated, and now stick together the edges starting from the tube ends to the middle.

Mind to glue also the joints to the other tubes.

Make sure that all seams are closed correctly and fitted under compression.



In case of a short or thin tube, just roll up the tube and apply the glue as shown.

In this way the tube can be rolled and laid quickly and easily on the pipe.



Working with AEROFLEX® sheets

Determine the circumference

The dimension of the circumference and thus the sheet dimension is to determine by laying a strip of AEROFLEX® insulation around the pipe to be insulated, apply without pressure or tension.

Cut the strip where the ends overlap.

Strip thickness has to be equal to the thickness of the sheet.



Gluing the edges of AEROFLEX® sheets

For the insulation of large diameter pipes, sheets should be cut and glue shall be applied properly to both edges.

For the best results, a thin, even layer of AEROFLEX® glue is to apply by a brush with short, hard bristles. Consider the flash-off time.

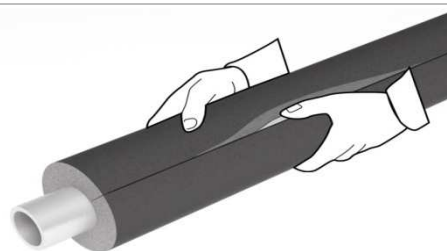
For the perfect joint press the edges closely against each other. Before taking the next step check on the stability of the joints.



Roll the sheets around the pipe and close the joints while pressing with both hands the edges firmly against each other, starting at the far ends, working to the centre to avoid irregular joints.

Consider the flash-off time.

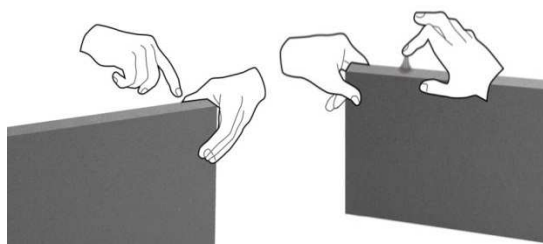
As final touch press again the joints against each other.



General information about gluing

Before pressing the ends together check with your finger tip on the glue if the flash-off time was long enough.

Basic rule: Check with your finger tip if the applied glue a) glue gets stringy or b) feels cold. In both cases the flash-off time is to extend.



3 Insulation of pipes and fittings with AEROFLEX® tubes

Insulation of pipes by sleeving-on AEROFLEX® tubes

Not yet installed pipework may easily be insulated by just sleeving over the AEROFLEX® tubes.

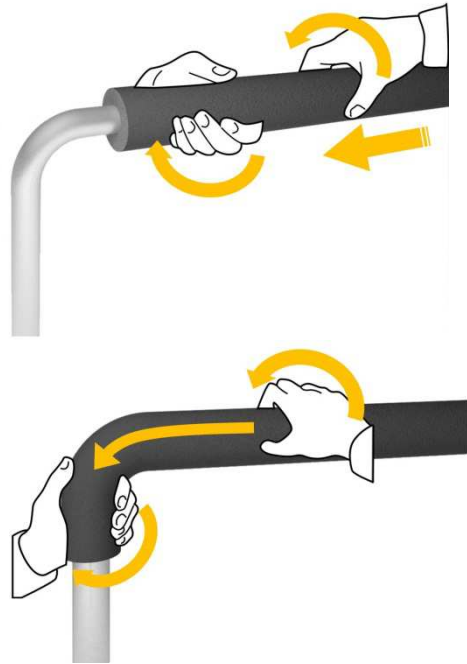
Even on pipe bends or elbows the insulation can be easily slipped on. However with tight bends (small diameters) there is a risk of compression of the insulation at the throat of the elbow. In this case and at that point the thickness of the insulation is being reduced. Thus the calculated thickness for the refrigeration/air-conditioning insulation thickness is not given any more and this may cause local condensation.

For the installation of pre-insulated self-adhesive tubes consider the additional risk of compression strain on the adhesive lining in the elbow area, which may lead to an opening of the joints.

Please note: If the insulation is subject to compression and as a result, there is strain on the glued joints, segmented bends have to be cut (see page 9).

3 Insulation of pipes and fittings with AEROFLEX® tubes

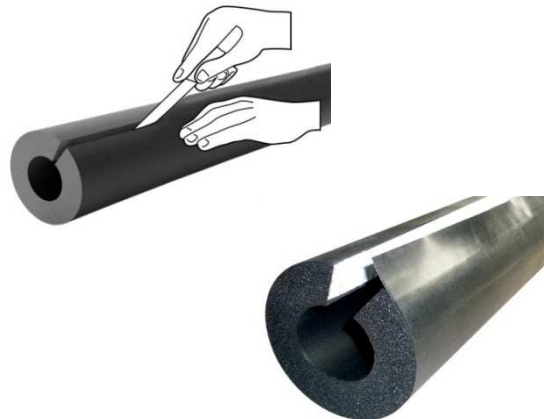
Note: To ease the tube installation, push the tube in rotatory motions on the pipe. Always push AEROFLEX® tubes over the pipe. Do not pull!



Insulation of pre-installed pipework

For the insulation of pre-installed pipework the AEROFLEX® tubes need to be cut open in the length. AEROFLEX® tubes are also available pre-slit, with and without self-adhesive tape (AEROFLEX® KKS is available only with self-adhesive tape).

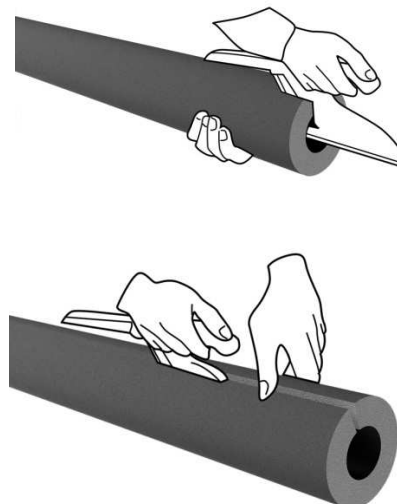
Note: To avoid damages inside the tube, keep the knife at a low angle when slitting tubes.



In order to allow a proper and solid joint, the cut edges shall be even and plain.

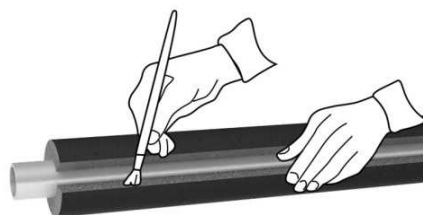
Recommendation: Use the AEROFLEX® cutter which is ideal for longitudinal cuts. It's special grab handle assure a proper and straight cut.

Note: Oval tubes should always be split on the flat side.



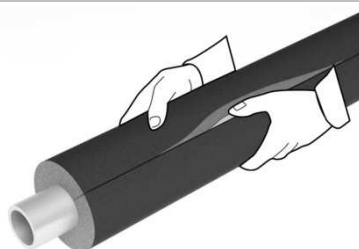
3 Insulation of pipes and fittings with AEROFLEX® tubes

Arrange the tube, the edges apart, and apply an even layer of AEROFLEX® glue. After the flash-off time push the tube over the pipework.



In case the insulation is already set on the pipework before applying the glue, separate the ends and apply the glue in a thin and even layer.

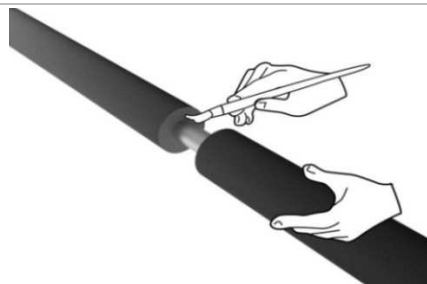
After the flash-off time and the finger tip test, seal the tube, press the joints firmly together, working from the ends to the centre.



When a section of tubing has been positioned satisfactorily, fix at least one end with AEROFLEX® glue to the pipe.



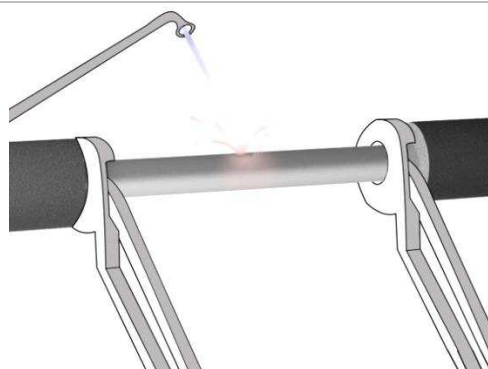
Apply glue to the tube edges already in place and to the edges of the tube to be fitted to.



Push the end of the tubes together and press firmly.

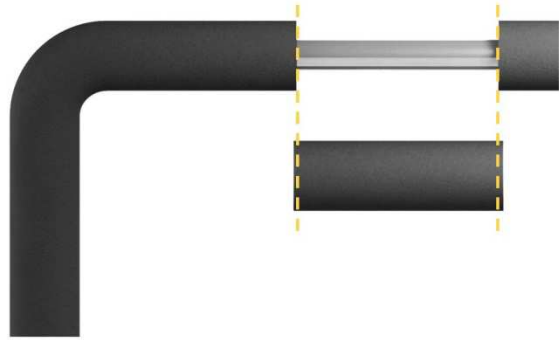


If the underlying pipe has to be brazed, free the pipe for a gap of 25-30 cm length of insulation. The pipes have to cool down completely and only then the insulation can be completed.

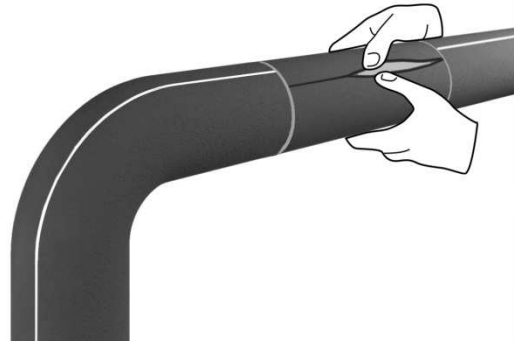


3 Insulation of pipes and fittings with AEROFLEX® tubes

When filling in a gap between two tubes, cut the insert a little longer than necessary (a couple of millimetres) to ensure that there is enough compression and avoid a reduction of insulation properties



Cut the insert in the length and seal the edges. Consider to glue all the joints properly.



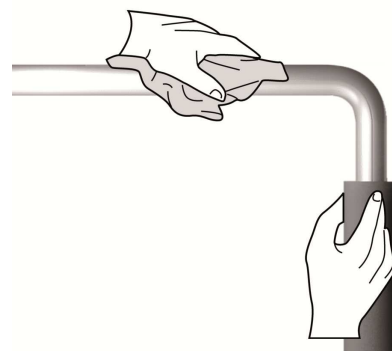
Insulation of pipes with self-adhesive AEROFLEX® tubes

The use of self-adhesive AEROFLEX® tubes is particularly recommended for pre-installed pipework where a pre-insulation is not possible.

The advantages of the use of self-adhesive tube are the easy application and the time saving mounting. The self-adhesive AEROFLEX® tubes can be applied on pipe bends as well, however avoid overlaps and additional compression on the glued joints.



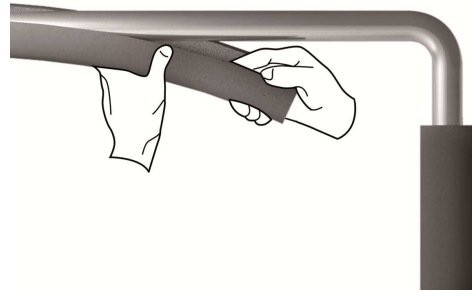
Clean the pipework from any dust, dirt, oil and water with AEROFLEX® SPECIAL CLEANER. Install self-adhesive tubes in ambient temperatures of +15°C to +35°C.



3 Insulation of pipes and fittings with AEROFLEX® tubes

Place the AEROFLEX® tube on the pipe. Do not remove the protection stripe of the self-adhesive!

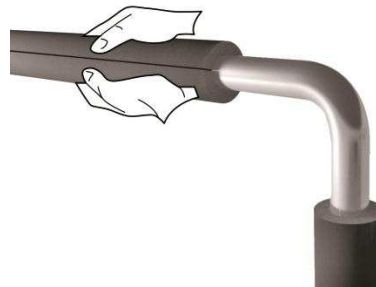
Ensure an easy access to the slit side of the tube when placing the tubes on the pipework.



Pull the ends of the cover strips of the self-adhesive edges and remove them slowly on both sides.



Close the slit and press firmly the joints together in order to ensure a permanent seal.

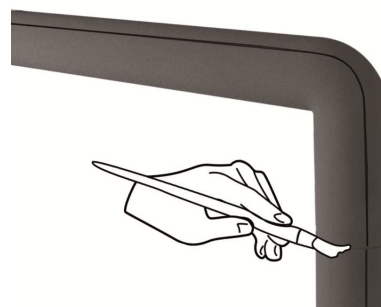


Push in rotatory motions the AEROFLEX® tube along the pipe

Do not pull the insulation!



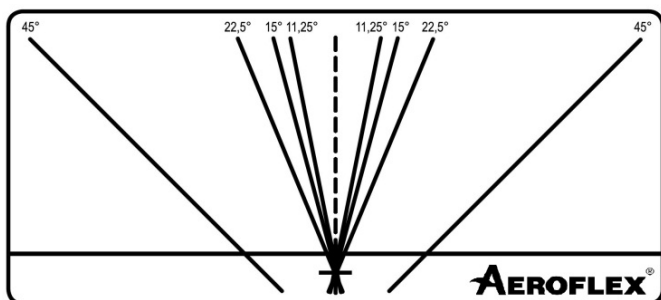
Seal all joints with AEROFLEX® glue. Do not stretch when sealing joints.



Using the AEROFLEX® Template

The fabrication of bends and Tees using AEROFLEX® tubes requires tubes to be cut into different angles. In order to make this process easier and quicker, the AEROFLEX® template is provided on each AEROFLEX® box:

1. Cut out the AEROFLEX® template and place it on a proper table or worktop.
2. Line a tube of AEROFLEX® across the template parallel along the horizontal base line.
3. Select the required angle cut from the template and cut along this line. Ensure that the tube is in a fix position and cannot move.
4. Put the cut-outs together in correct position.



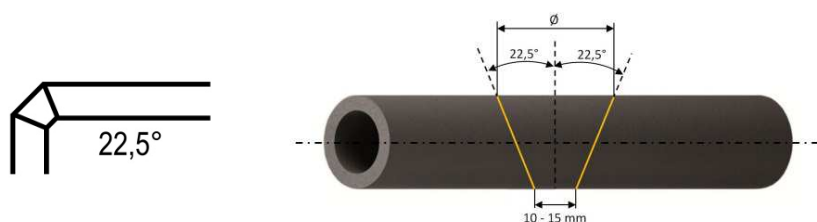
90° Elbow cover with AEROFLEX® tube



45° Elbow cover with AEROFLEX® tube

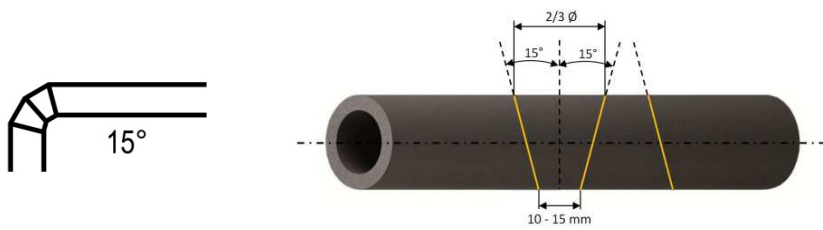


Segment bend with one middle part with AEROFLEX® tube

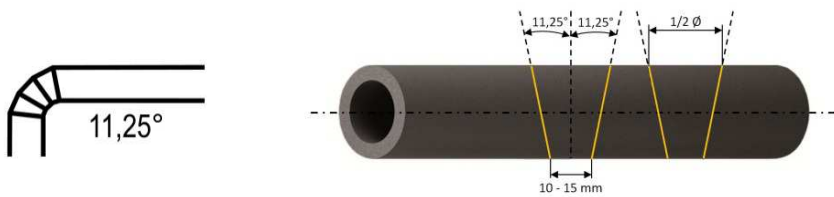


3 Insulation of pipes and fittings with AEROFLEX® tubes

Segment bend cover with two middle parts with AEROFLEX® tube



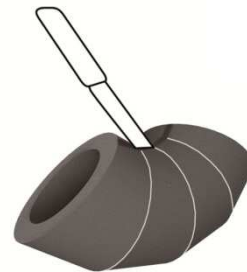
Segment bend cover with three middle parts with AEROFLEX® tube



After preparing the precise cuts the parts have to be arranged correctly and glued together.



After gluing the joints the piece needs to flash-off and rest for a little while. Before you take the next step make sure that the parts stick together properly. Only then cautiously cut the elbow piece along its throat.

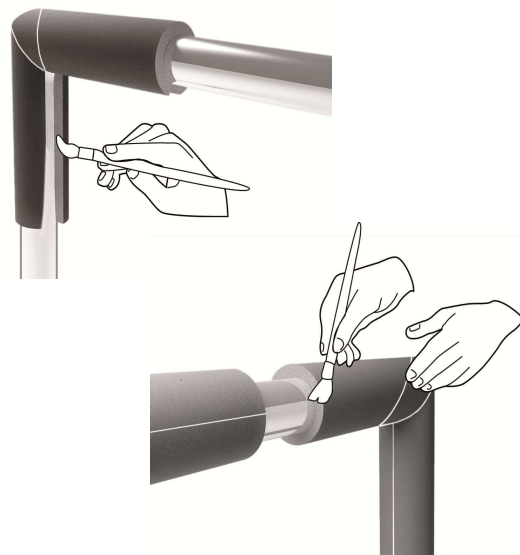


Fit the insulation elbow on the pipe and apply glue on the edges.

You may apply the glue on the joints before or after placing the elbow on the pipework.

Press the joints together to seal.

Carefully glue the joints of the elbow and of the straight tube positioned on either side.

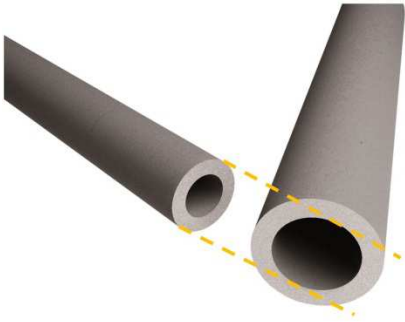


Insulation of an elbow with pipes of different diameters

In case the elbow shows a larger outer diameter than the straight pipes, these pipes shall be insulated at first as explained before.

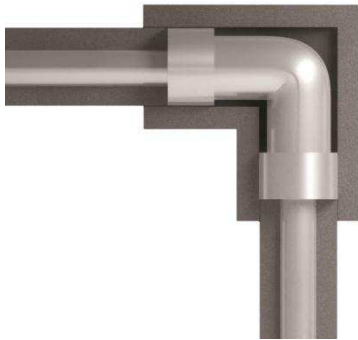


Then take a tube with an inner diameter equal to the outer diameter of the smaller tubes already installed on either side.

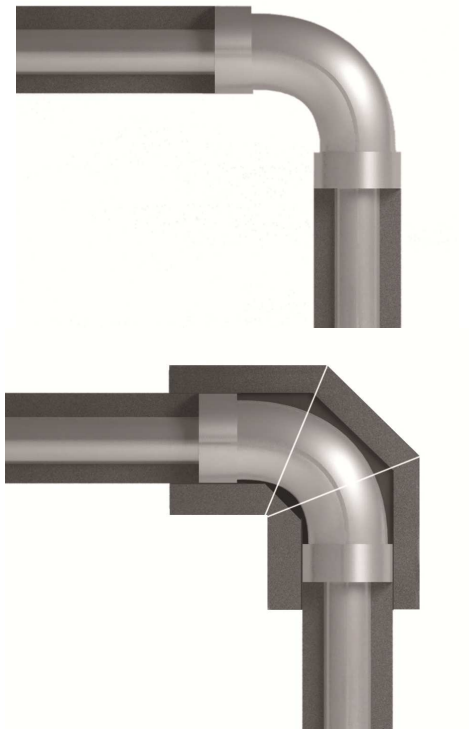


As shown on the previous pages, make of the larger tube an appropriate cover for the elbow.

Note: The outer insulation of the elbow has to overlap the insulation of the straight pipes and shall be glued properly onto them.



Same procedure applies for the insulation of segment bends with different diameters.



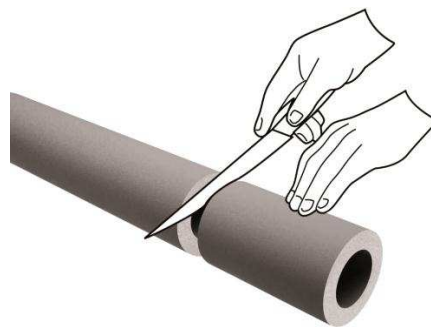
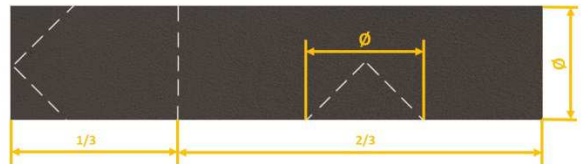
Insulating Tee-connections with AEROFLEX® tubes

There are different methods of insulating a Tee-connection: By a 45° cut-out of two tubes or by punching a hole.

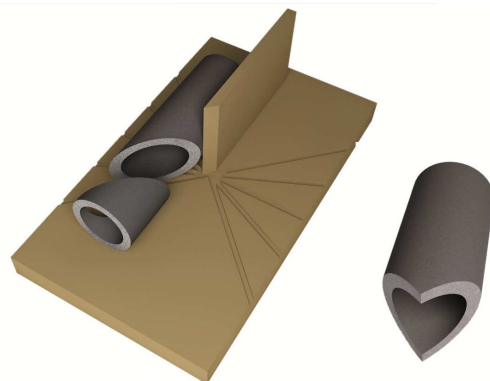


Tee-piece with a 45° cut-out

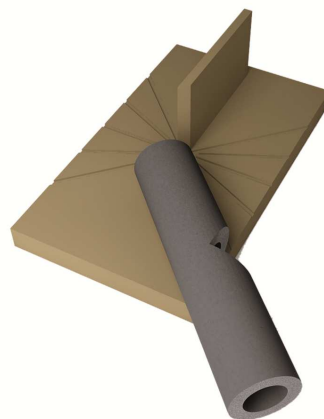
Cut the AEROFLEX® tube: Cut off only one third of the original length. The total length shall be long enough to cover the three pipes connected by the Tee-connection.




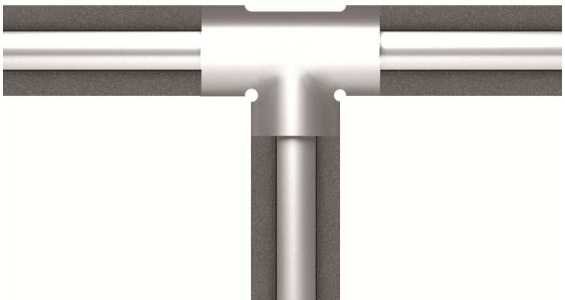
Use the AEROFLEX® template. As shown on the picture, cut from the smaller tube 2 angles each of 45°. Cut each starting from the middle of the tube.



Take the longer part and cut from the middle a 90° hole by making two 45° cuts. The hole should have the same cross-section as the outside of the tube so that the two sections fit perfectly.



3 Insulation of pipes and fittings with AEROFLEX® tubes

<p>Glue the cut edges and stick them together into the shape of a "Tee".</p>	
<p>Make sure glue is dry and sticks firmly, then slit the Tee-piece cover as shown on the picture. The glue may be applied to the joints before or after the cover is placed on Tee-connection of the pipe. Apply the glue on the joints.</p>	
<p>Place the cover on the Tee-connection. Apply the glue if not already done. Consider the flash-off time. Press firmly the joints together.</p>	
<p>If the adjacent pipes are smaller in diameter than the Tee-connection, they need to be insulated before the Tee-connection itself.</p>	
<p>Make a Tee-cover as earlier described. However use a tube with an internal diameter equal to the external diameter of the neighbouring tubes.</p>	

AppMan_en_V3_08/2015

3 Insulation of pipes and fittings with AEROFLEX® tubes

Apply the Tee-cover which should overlap the edges of the other insulated tubes. Carefully place it and glue the joints and the surfaces in contact with the other tubes.

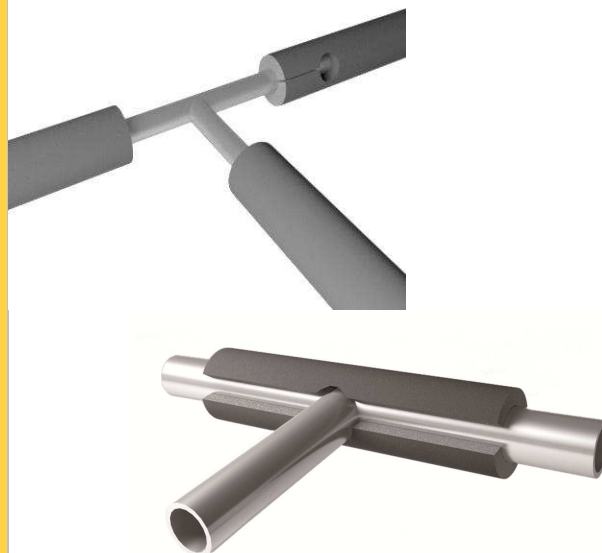


Tee-cover by a punched hole

Punch a hole in the tube – with a sharpened part of e.g. a copper pipe of the right diameter – forming the crossbar of the “Tee”.

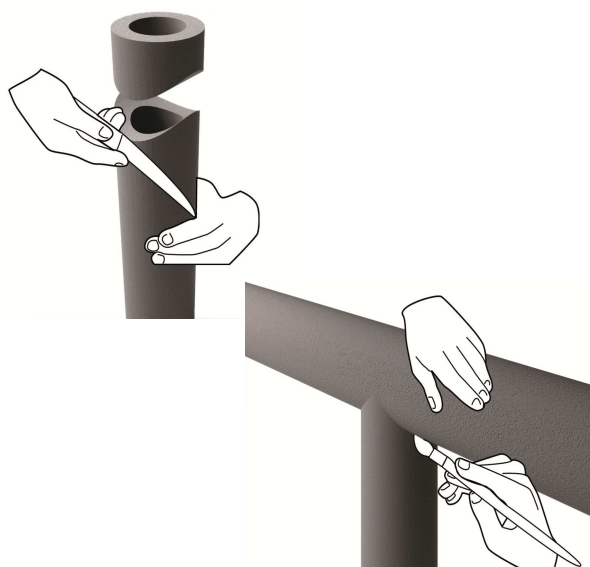


Slit this section of the tube open (half through the hole) and slide it over the pipe.



The joint for the lower branch is created by cutting a U-shaped form out of a second piece of tube.

Align the lower tube in such a way that it fits perfectly onto the hole of the upper tube and glue the pieces together.



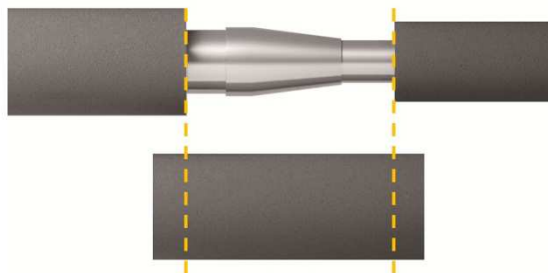
Insulation of tapered pipes with AEROFLEX® tubes

When insulating a tapered pipe that connects two pipes of different diameters, leave sufficient space between the insulation of the pipes on both sides.

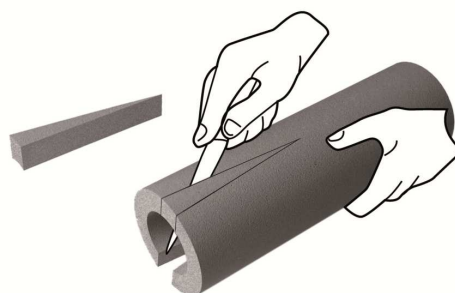


Take a piece of AEROFLEX® tube with the same diameter as the larger one of the already insulated tubes.

Note: Cut the tube a little bit longer than the distance between the two insulated tubes ends.



Cut out two equal wedges...



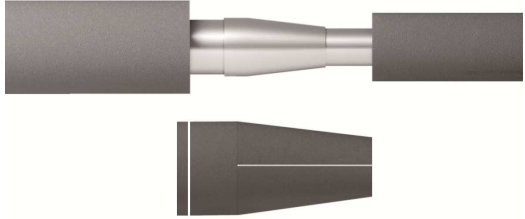
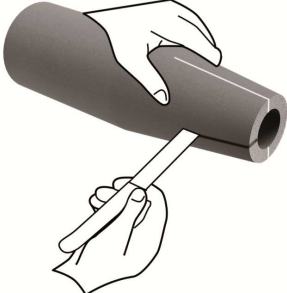
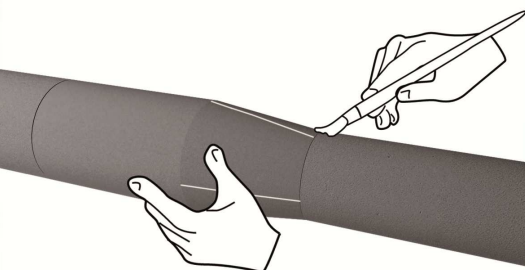
...and glue the joints of the cut-outs together so the diameter of the tube end is being reduced.



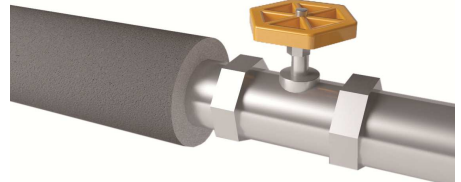
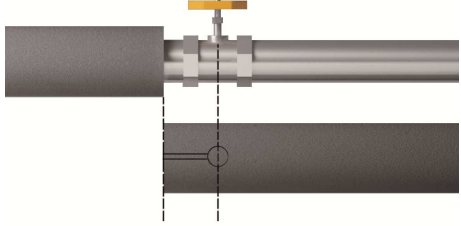
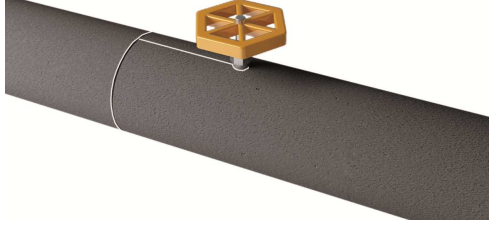
Trim the length of the smaller end so the tube diameter matches to the smaller end of the tube.



3 Insulation of pipes and fittings with AEROFLEX® tubes

<p>Shorten the other end too, so that the connection piece fits properly into the gap between the two insulated pipes.</p>	
<p>Cut the cover piece lengthwise and place it on the pipe connection.</p>	
<p>Then glue the joints together, also the tube ends with the insulation of the pipes.</p>	

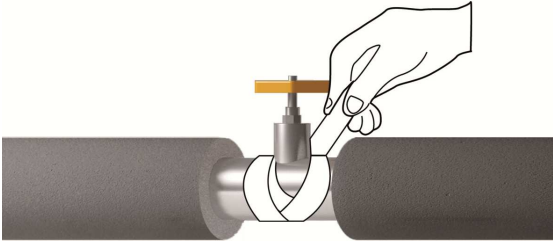
Insulation of valves with AEROFLEX® tubes

<p>Valves can be insulated in several ways, depending on type and size.</p>	
<p>Small valve stem From the edge of the AEROFLEX® tube, make a cut long enough to house the valve and punch a hole to fit the stem.</p>	
<p>Fit the tube tightly around the valve and glue the joints together, then attach it to the adjacent tube.</p>	

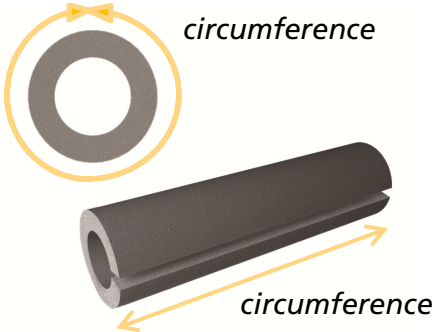
3 Insulation of pipes and fittings with AEROFLEX® tubes

Large diameter valve stem

Insulate the pipe right up to the valve on both sides. Wrap AEROTAPE around the base of the valve.



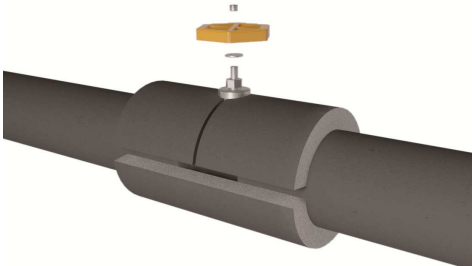
Cut a piece of tube of AEROFLEX® as long as the circumference of the tube already placed and cut it lengthwise.



Flatten the tube and make a longitudinal cut punch a hole at its end for the valve housing.



Place the cover around the valve so the sleeve overlaps the ends of the two underlying tubes. If necessary, remove the stopcock.



Apply glue and stick the sleeve's joints. If necessary, the stem of the stopcock can also be insulated by applying a ring-shaped tube cut from one of the off-cuts.



4 Insulation of pipework using AEROFLEX® sheets

AEROFLEX® tubes can be ordered for pipes with an outer diameter up to 168 mm (AEROFLEX® KKS and HF up to 165 mm). Larger pipes have to be insulated with AEROFLEX® sheets. It is also possible to insulate pipes with even smaller diameters by using AEROFLEX® sheets. Carefully avoid stress in the seams, caused by the bending of the sheets.

Please refer to the following charts a recommendation which AEROFLEX® sheet materials can be used for which pipes.

AEROFLEX® FIRO Sheets	Pipe outer diameter in mm				
	≥ 88,9	≥ 114	≥ 139	≥ 159	≥ 408
3 mm	●	●	●	●	●
6 mm	●	●	●	●	●
10 mm	●	●	●	●	●
13 mm	●	●	●	●	●
16 mm	●	●	●	●	●
19 mm	●	●	●	●	●
25 mm		●	●	●	●
32 mm			●	●	●
50 mm					●

AEROFLEX® KKS AEROFLEX® HF Sheets	Pipe outer diameter in mm					
	≥ 88,9	≥ 114	≥ 139	≥ 159	≥ 193	≥ 408
3 mm	●	●	●	●	●	●
6 mm	●	●	●	●	●	●
10 mm	●	●	●	●	●	●
13 mm	●	●	●	●	●	●
16 mm	●	●	●	●	●	●
19 mm	●	●	●	●	●	●
25 mm			●	●	●	●
32 mm					●	●
38 mm					●	●
50 mm						●

These indications are only recommendations and based on our present knowledge level. They do not release the buyer from the obligation to test the suitability of each by themselves.

Insulation of straight pipes with AEROFLEX® sheets

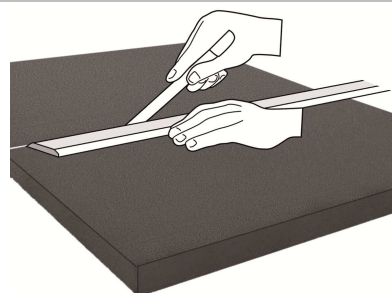
Determine the circumference of the pipe as described in Chapter 1 “Useful Information”.

Note: Always measure with a strip of AEROFLEX® of the thickness to be used for the insulation and do not stretch the strip!

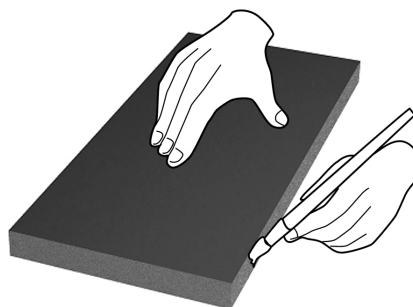


Mark the length on an AEROFLEX® sheet and cut carefully along the line.

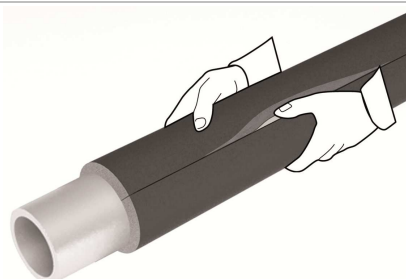
To ensure accurate results, use a metal ruler.



Apply an even layer of AEROFLEX® adhesive along each edge and allow drying.

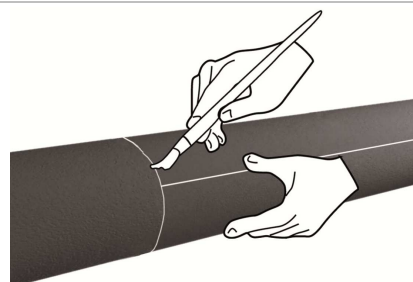


Wrap the insulation sheet around the pipe and press the glued joints together; starting at the ends, then the centre and then working along the rest of the length.



Glue the insulation sheet to the subsequent sections along the length of the pipe.

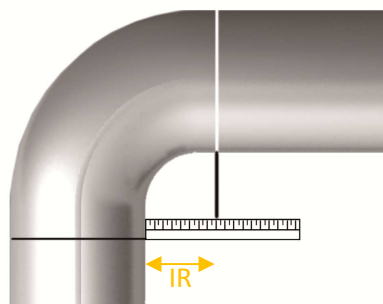
If the tube thus created is not correctly lined up, push one against the other slipping the brush in the gap and twist until they are aligned.



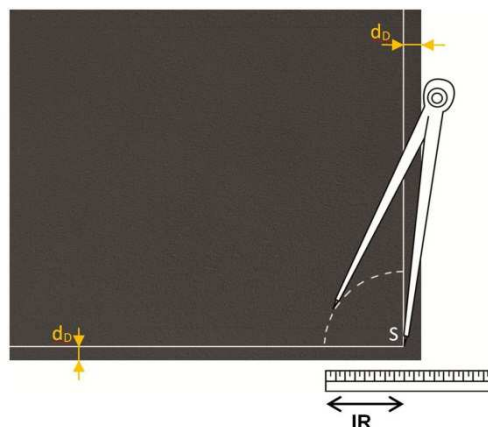
Insulation of a bend with AEROFLEX® sheets

To insulate a bend of a large diameter pipe, calculate its radius and mark it out on an AEROFLEX® sheet.

First of all, measure the inner radius (IR) of the bend using a ruler and a rule lying perpendicular to it, as shown in the diagram.

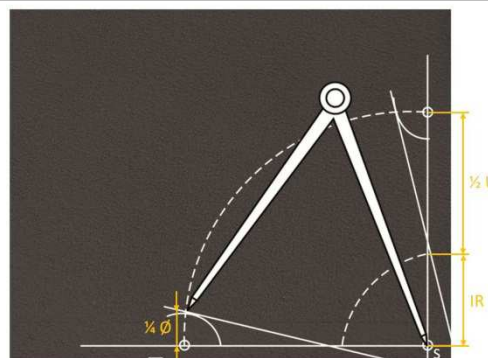


Mark the insulation thickness (d_b) with a horizontal and a vertical line on an AEROFLEX® sheet. Transfer IR with a compass to the sheet as shown.

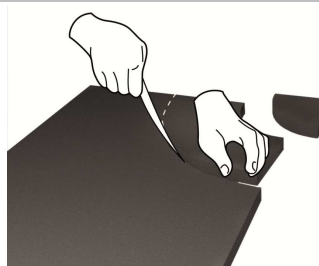


Add the missing measurements as shown in the diagram to the AEROFLEX® sheet.

U = circumference
 \emptyset = pipe diameter

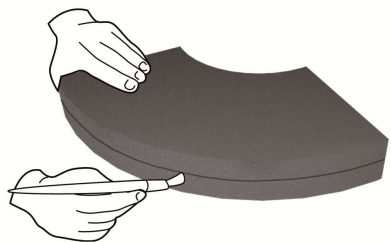


Cut around the outline carefully and use it as a template to cut out a second section.



4 Insulation of pipework using AEROFLEX® sheets

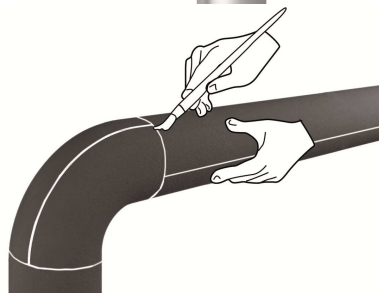
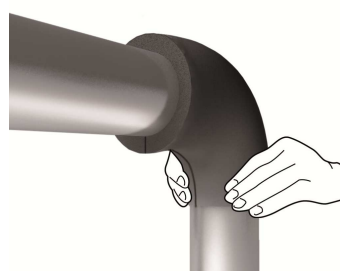
Holding the two sections together with the smooth surface on the outside, apply AEROFLEX® glue to the outer edges. Allow the glue to dry and stick the edges together, starting from the two far ends. Make sure that the two sections have bonded securely on the inside by pressing your fingers along the joint.



Next spread the glue along the inside joints and leave to dry.

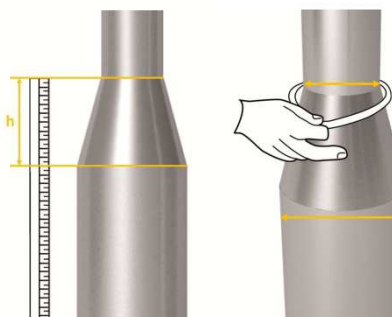
Wrap the AEROFLEX® insulation around the pipe and press the joints tightly together.

Ensure the insulation butts precisely up against the tubing to be fitted on either side.

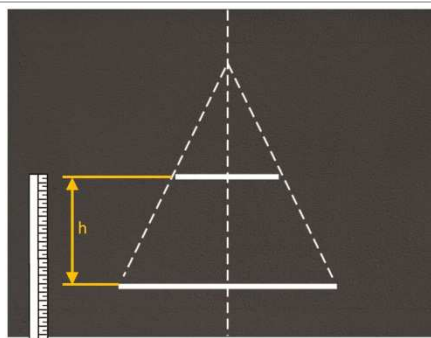


Insulation of a reducer with AEROFLEX® sheets

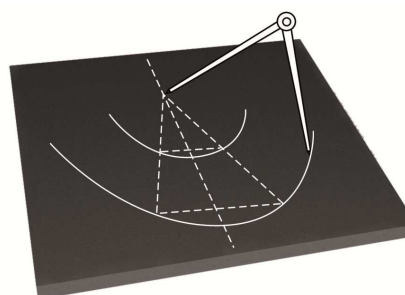
To insulate a reducer that connects pipes of different diameters, take measurements and mark them out on an AEROFLEX® sheet. Measure the height of the reducer including both welds. Also measure the diameters of the two pipes by using a calliper. Add twice the thickness of the AEROFLEX® sheet to both diameters.



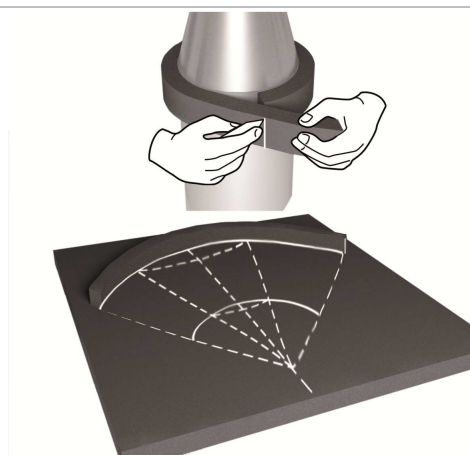
Carry over all measurements onto the AEROFLEX® sheet. Draw two lines from the ends of the measurements until they converge on a centre point.



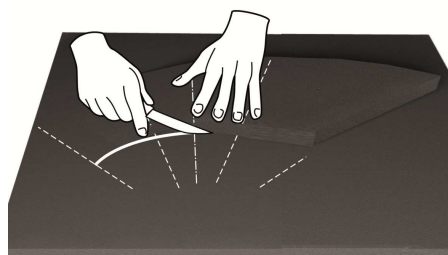
Using a compass, measure the distance between the point of intersection and the two diameters and draw two arcs as shown in the diagram.



Measure the circumference of the widest pipe using an AEROFLEX® strip of the same thickness as the sheet. Mark the centre of the circumference on the strip and line it up on the larger of the two arcs. Draw two lines from the ends of the strip to the centre of convergence.



Cut out carefully.



5 Insulating flanges with AEROFLEX® sheets

Glue the edges and after they have dried, fit the insulation to the reducer. Press the two edges together starting at the far ends.

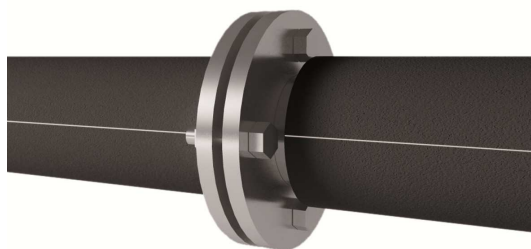


Glue the upper and lower edges and attach the other AEROFLEX® sections.

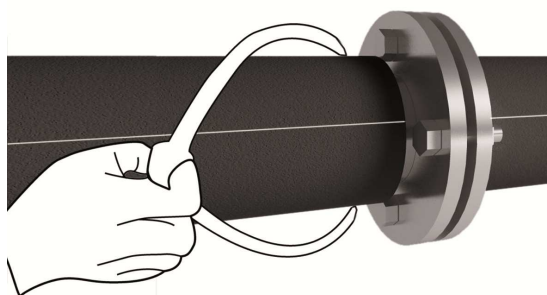


5 Insulating flanges with AEROFLEX® sheets

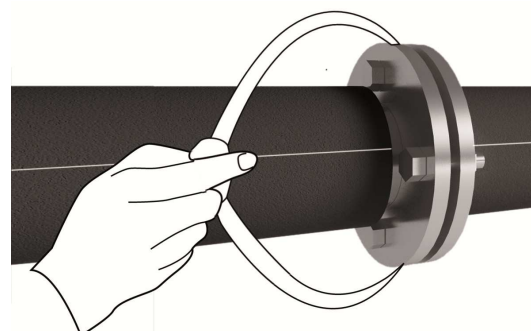
When insulating a flange, firstly insulate the pipes as far as the flange on either side. Depending on the diameter of the pipes, you can use either AEROFLEX® tubes or AEROFLEX® sheets.



Measure the diameter of the insulated pipe...

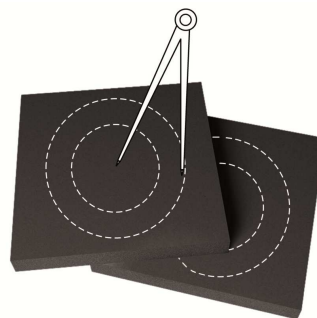


...and that of the flange.

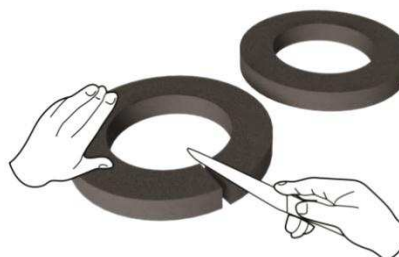


5 Insulating flanges with AEROFLEX® sheets

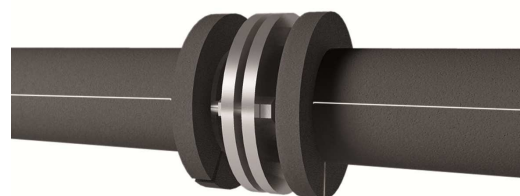
Transfer the measured diameters on an AEROFLEX® sheet using a compass.



Cut out the rings and open them on one side to get them around the pipes.

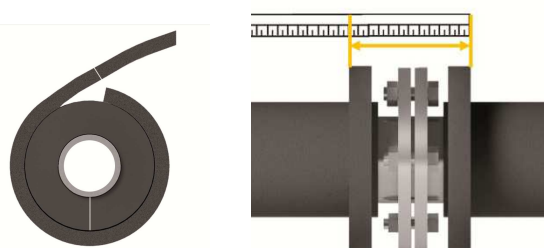


Position the rings around the ends of the insulated pipes and adhere the opening with AEROFLEX® adhesive.

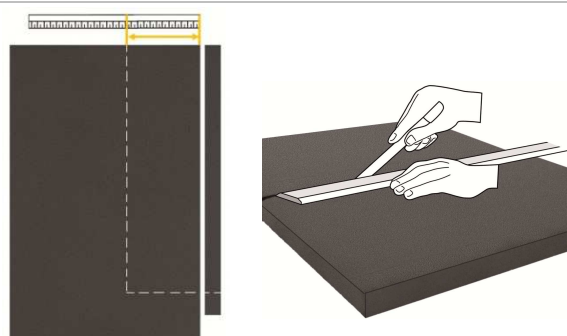


Use an AEROFLEX® strip of the same thickness to measure the circumference of the installed ring.

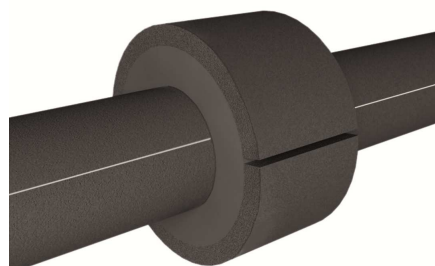
Also measure the distance between the two rings, including the thickness of the insulating material itself.



Draw the measurements on an AEROFLEX® sheet and cut out the sleeve section.



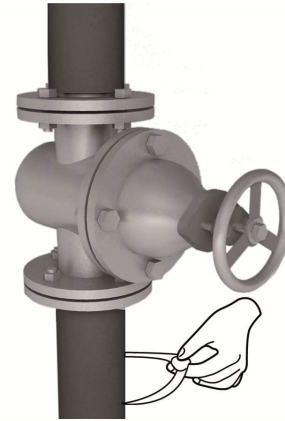
Mount the sleeve section around the rings and adhere all edges.



6 Insulating a valve with AEROFLEX® sheets

Before starting to insulate the valve, first fit tubing to the pipes either side of it.

Then measure the diameter of the insulated pipes and the flanges. Use these measurements to calculate the relevant radiuses.



Mark the two calculated radiuses on an AEROFLEX® sheet twice by using a compass.

Afterwards cut out the rings carefully and make an opening so that they can be fitted over the pipes.



Put a ring on the outside of each flange and stick their edges together with AEROFLEX® adhesive.

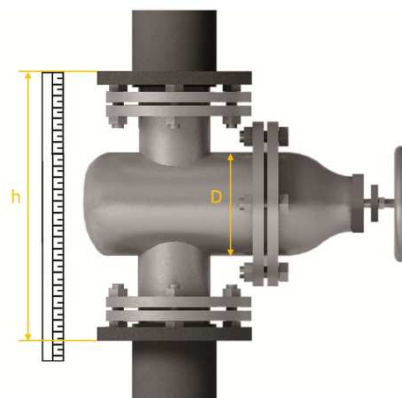
Also stick the insulation rings with the insulation installed already on the pipes.



Use a strip of AEROFLEX® in order to measure the circumference of one of the rings.

Measure the distance between the rings, including the thickness of the rings themselves.

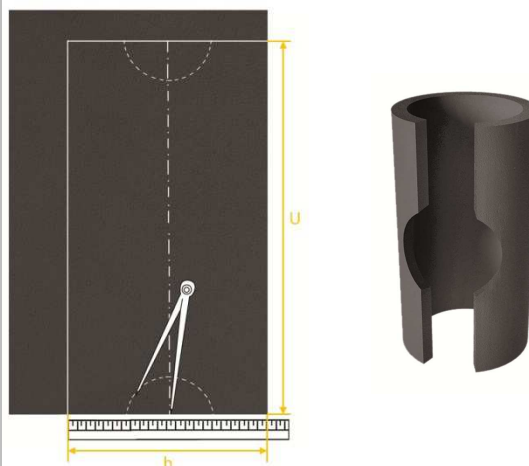
The diameter of the stopcock housing has to be measured, too.



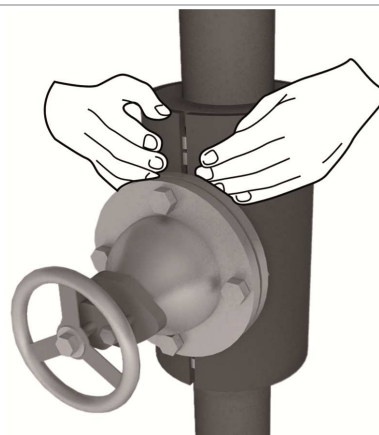
6 Insulating a valve with AEROFLEX® sheets

Transfer these determined parameters onto an AEROFLEX® sheet. Place the compass at the end of the centreline on the sheet and draw a semi-circle at each end with the same radius as the stopcock.

h = height between the rings
 U = circumference of the rings



After cutting around the outline, put adhesive on the joining edges. Once the adhesive is dry, fit the sheeting around the rings and stick the edges together.

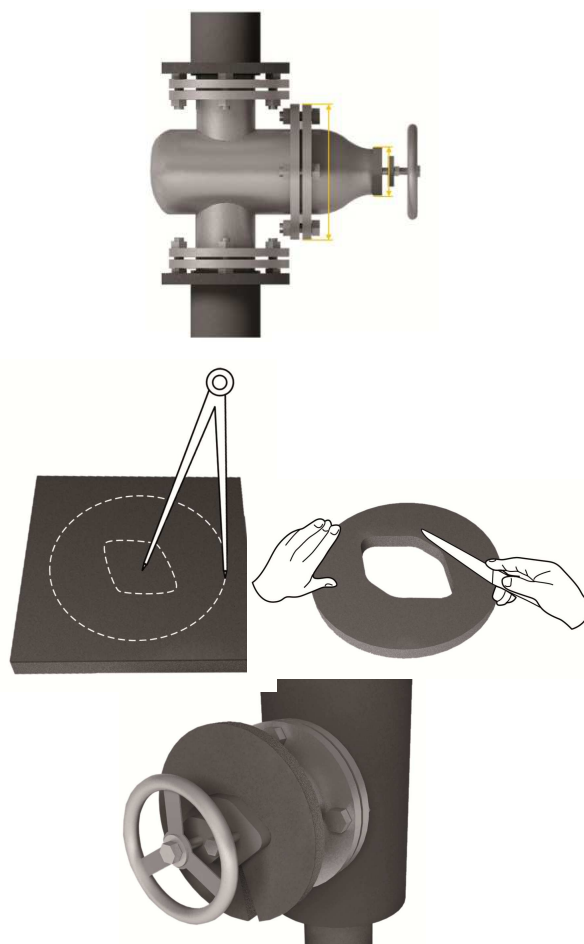


Next, calculate the shape of the disc for the front flange. Measure the circumference of the supporting flange and the form of the face plate around which the disc must fit.

Mark out these measurements on a piece of AEROFLEX® and cut the disc out.

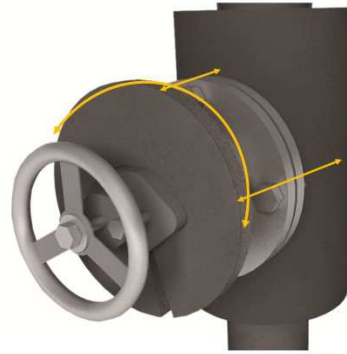
Make an opening so that the disc can be fitted over the face plate.

Position the disc and stick the edges together with AEROFLEX® adhesive. Make sure to stick the inside edges to the face plate, too.

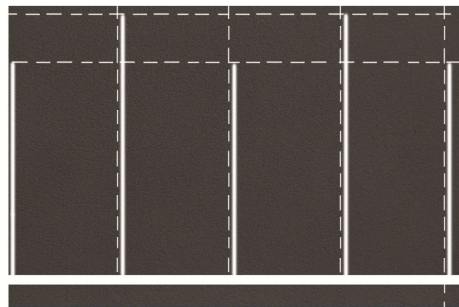


6 Insulating a valve with AEROFLEX® sheets

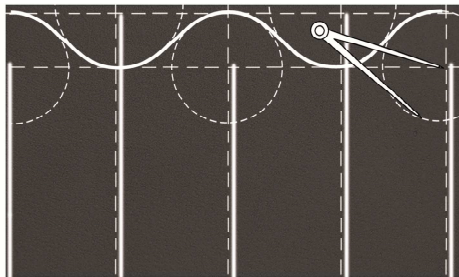
Measure the circumference of the disc and also the distance between the disc and the existing insulation at its nearest and furthest points (see diagram).



Mark the measurement out on a piece of AEROFLEX® of the same thickness and divide its length into four equal parts. Also mark the determined distances on the existing lines as shown.



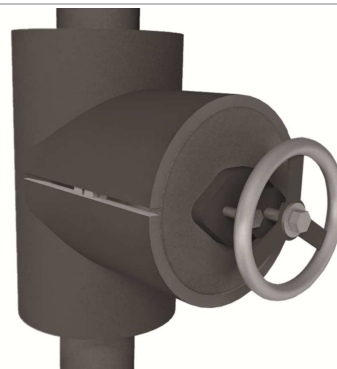
Use the difference in the two lengths as a radius, draw circles around the ends of the lines. Use the arcs of the circles; draw a continuous line to link them up, as illustrated.



Cut along the line carefully using a sharp knife.
To ensure a tight adhesive seal, cut the edges of the upper, convex curves towards the AEROFLEX® inner surface.



Adhere the leading, straight edges and let them dry. Then fit the resulting sleeve around the disc.
Connect the sleeve with the insulation around the main stopcock housing using AEROFLEX® adhesive.
Check if all parts have been stuck together correctly.



7 Insulation of an angled stopcock with AEROFLEX® sheets

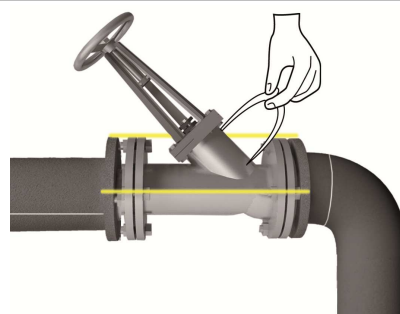
Before insulating an angled stopcock, first insulate the pipes either side of the flanges and the flanges themselves as already known from the chapters before.



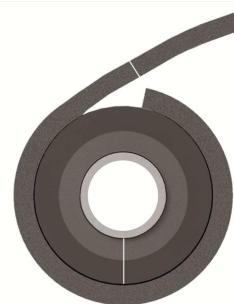
Measure the distance between the two AEROFLEX® rings, including the material itself, and the distance between each ring and the stopcock housing.



Measure the diameter of the base of the stopcock housing.

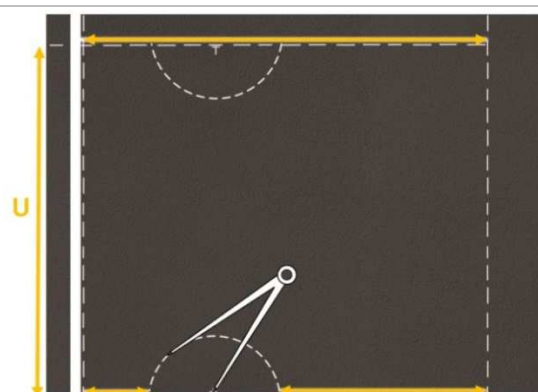


Measure the circumference of the rings at the flanges.



Mark these determined parameters on an AEROFLEX® sheet as shown in the diagram. Use the radius of the stopcock's base to draw the semi-circles.

U = circumference of the rings



7 Insulation of an angled stopcock with AEROFLEX® sheets

Cut out the piece, wrap it around the rings to seal the central housing, and then stick the edges together using AEROFLEX® adhesive.

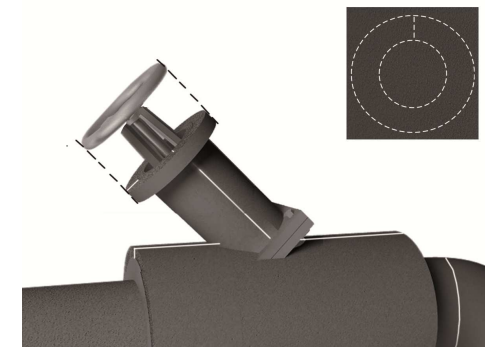


Insulate the stopcock mechanism using a cut-out of an AEROFLEX® sheet.

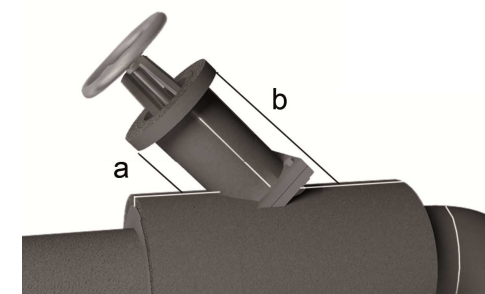


Cut out a ring of AEROFLEX® in the size of the stopcock wheel. The inner diameter should be the same as the outer diameter of the sleeve already attached.

Attach this ring at the end of the insulated section as shown using AEROFLEX® adhesive.



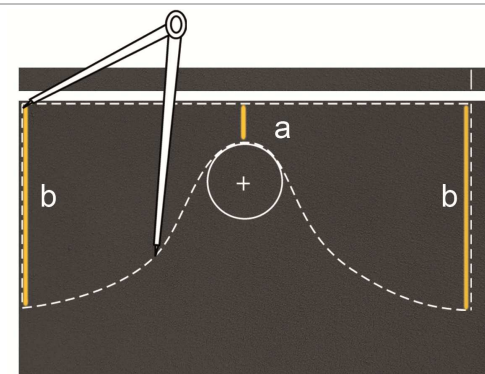
Determine the shortest (a) and the longest (b) distance from the ring of AEROFLEX® to the insulation around the strainer body.



Measure the ring's circumference and transfer it to an AEROFLEX® sheet.

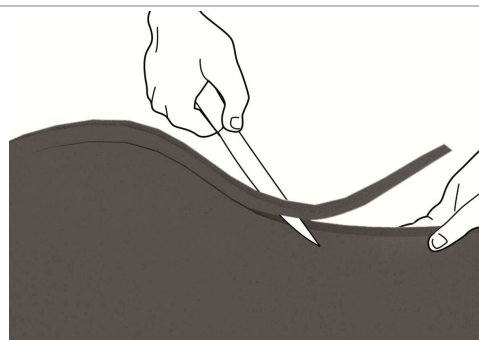
Draw the shape of the sleeve on the AEROFLEX® sheet using a compass and the measurements taken. The diameter of the circle at the end of line "a" equals 1/4 of the pipe diameter including the insulation thickness.

Join the circles using a compass.

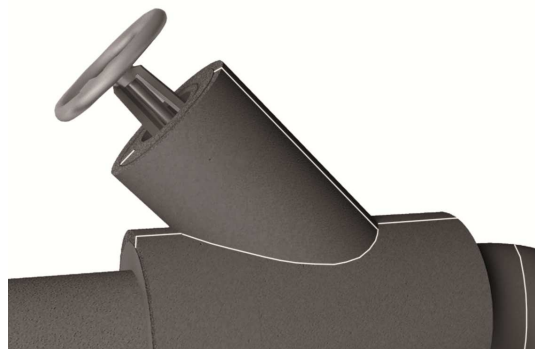


8 Insulation of tanks and vessels with AEROFLEX® sheets

Cut the part along the line and bevel the curved edges towards the inner surface when cutting out.



Attach the insulation material around the ring and adhere the connecting surfaces together.



8 Insulation of tanks and vessels with AEROFLEX® sheets

Usually there are two alternatives to insulate a tank.

Either insulate the domed top sides and bottom of the tank or sometimes only the domed top and sides (due to location of the tank or vessel). We will show the latter as an example.

Before insulating, clean the whole surfaces carefully with AEROFLEX® SPECIAL CLEANER.



First of all, insulate the tank walls.

Use the same method as with piping. Measure the circumference of the tank with a strip of AEROFLEX® and measure the height.

Mark the dimension out on a sheet of AEROFLEX® and cut out.



8 Insulation of tanks and vessels with AEROFLEX® sheets

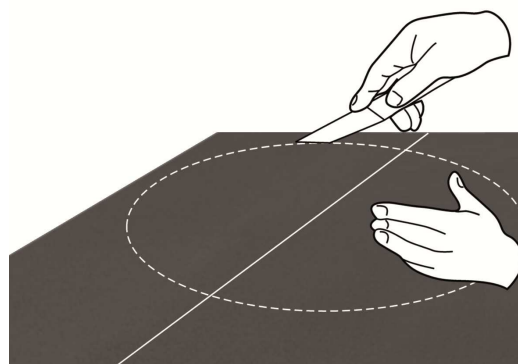
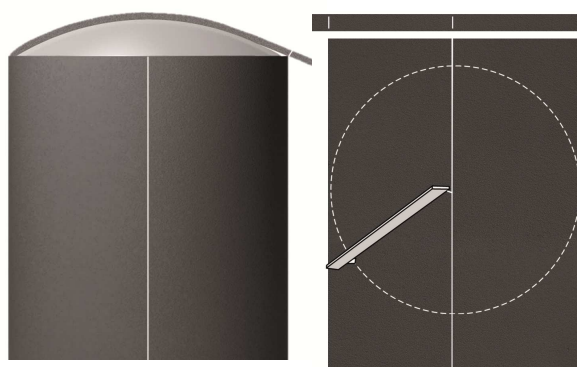
Spread AEROFLEX®-adhesive over the entire surface of the sheet with a flexible spatula, brush or roller then apply adhesive to the tank or vessel. Apply adhesive to the edges of the sheet and place the sheet in position and join the edges together.



To insulate the domed surface, first measure its overall diameter with a strip of the same AEROFLEX® sheet as to be used.

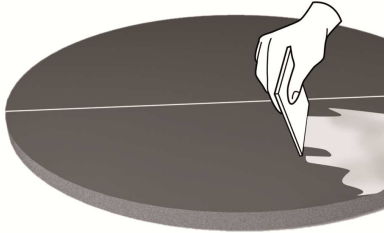
Use the diameter to calculate the radius and draw the complete circumference on an AEROFLEX® sheet.

Cut out the circle accurately.



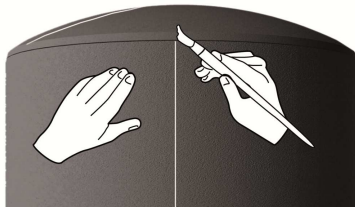
8 Insulation of tanks and vessels with AEROFLEX® sheets

Coat the disc and the top of the tank with AEROFLEX® adhesive. When adhesive is dry, place the AEROFLEX® disc on the top of the tank and press it down firmly from the centre outwards to avoid it moving.



When the sheet is firmly attached, adhere the edges all way round.

Leave to dry, then press firmly together.



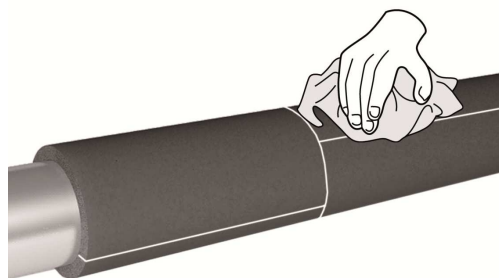
9 Multi-layer insulation

If it is necessary to apply more than one layer of AEROFLEX®, one sheet can be applied on top of another.

To install the first layer, see pages before.

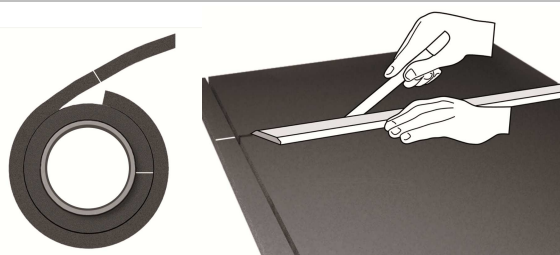


Clean the surface of the first layer using AEROFLEX® SPECIAL CLEANER.



Measure the circumference using a strip of AEROFLEX® with the same insulation thickness as the second layer.

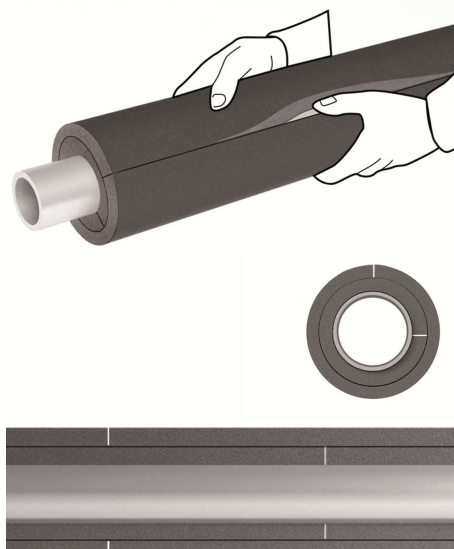
Cut out an AEROFLEX® sheet to the size required.



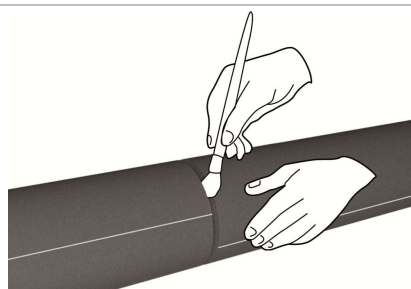
Apply AEROFLEX® adhesive to the edges of the sheet to be fitted.

Wrap the insulation around the tubing, ensuring that seams are staggered.

Note: Do not stick the two layers together, as the individual sheets may be subject to different degrees of expansion or contraction when the plant is operational.



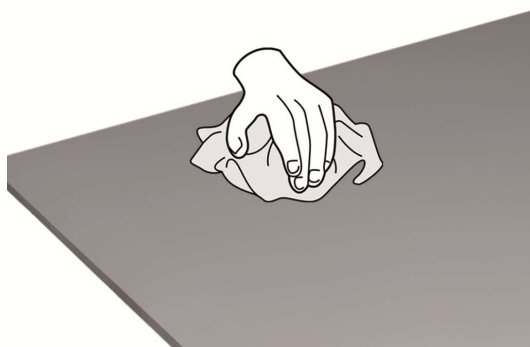
Seal all butt joints with adhesive.



10 Insulation with self-adhesive sheets

When working with self-adhesive AEROFLEX® sheets, it is important that the surfaces to be adhered are dry, clean and free of oil.

Therefore clean all surfaces with AEROFLEX® SPECIAL CLEANER.

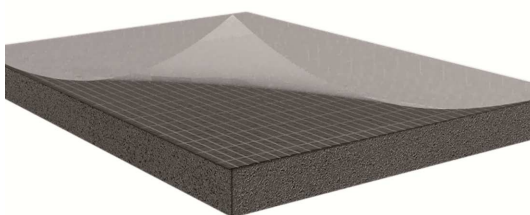


Cut out the size required of the roll.



Lift the leading edge of the backing paper.

Note: Do not use self-adhesive AEROFLEX® sheets where the ambient temperature is lower than +15°C or exceeds +35°C!

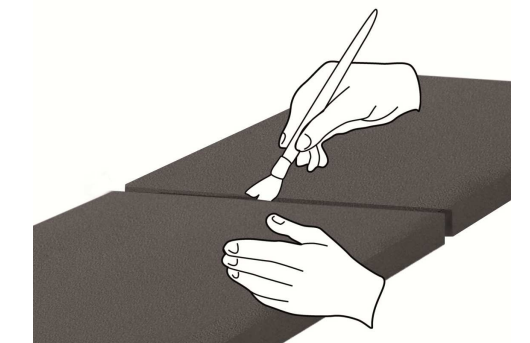


Line the edge up and stick it down. Pull the backing paper off gradually, pressing the material down as you go.

Do not pull the AEROFLEX® sheet with too much force, as this can lead to stresses in the sheet and a reduction of the insulation thickness.



Stick the edges of each length of AEROFLEX® to the successive one.



10 Insulation with self-adhesive sheets

Similarly to the insulation of tanks with normal AEROFLEX® sheets, tanks can be insulated with self-adhesive sheets.



When the sheeting is firmly attached to the tank, stick the leading edges together with AEROFLEX® adhesive.

The insulation of the tank's top follows the same procedure as with the non-adhesive sheets.

