

# FITTING INSTRUCTIONS

INSUL-TUBE® / INSUL-TUBE® XT  
INSUL ROLL / INSUL ROLL XT  
INSUL SHEET



TECHNICAL  
INSULATION

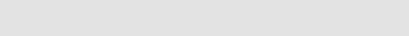
# INDEX

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- GENERAL ..... 5
- USEFUL INFORMATIONS ..... 7
  - Working with INSUL-TUBE® ..... 7
  - Working with INSUL ROLL..... 8
  - General information about gluing..... 9
- INSUL-TUBE® ..... 11
  - Insulation by push over of INSUL-TUBE® ..... 11
  - Insulation of pre-installed pipework ..... 12
  - If there is a need to braze the underlying pipe..... 14
- THE SELF-ADHESIVE INSUL-TUBE® XT ..... 17
  - Insulation of pipes with self-adhesive INSUL-TUBE® XT ..... 18
- THE NMC TEMPLATE ..... 21
  - Cutting exmples for elbows and bends..... 22
  - Insulation of elbows and bends with the NMC template..... 23

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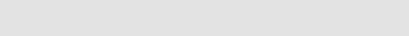
ISOLATION TECHNIQUES WITH INSUL-TUBE® (XT).....	25
Insulation of an elbow with pipes of different diameters .....	25
Insulating Tee-connections with INSUL-TUBE® .....	26
Insulation of tapered pipes with INSUL-TUBE® .....	30
Insulation of valves with INSUL-TUBE® .....	32
 ISOLATION TECHNIQUES WITH INSUL ROLL (XT) .....	 36
Insulation of straight pipes with INSUL ROLL (XT) .....	36
Insulation of a bend with INSUL ROLL (XT).....	37
Insulation of a reducer with INSUL ROLL (XT) .....	40
Insulating flanges with INSUL ROLL (XT) .....	42
Insulating a valve with INSUL ROLL (XT) .....	44
Insulation of an angled stopcock with INSUL ROLL (XT) .....	47
Insulation of tanks and vessels with INSUL ROLL (XT).....	50
Multi-layer insulation .....	52
Insulating with self-adhesive INSUL ROLL XT .....	54



# GENERAL

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- Clean surfaces with NMC-fix Cleaner. Ensure that the surfaces are clean, dry and free from grease.
- Turn off the equipment completely, before insulating. You must wait 36 hours before you can use the equipment again in order to ensure the curing of the glue.
- Never pull on INSUL-TUBE® when sealing them, push only!
- Observe the installation instructions of tools, adhesives, additives etc. used.
- Work with high quality tools (NMC-fix, NMC-fix Cleaner, sharp knife, good brush), specific tooling in assembly kit NMC.
- If joints between tubes are to be secured with INSUL TAPE®, additionally, the following must be observed:
  - The surface of the tubes must be clean, that means dry and free of dust and oil or similar contaminants
  - INSUL TAPE, must not be wrapped around the tubes under tension
  - Before the joints are secured with INSUL TAPE, the joint adhesion must be diffused
  - There must be sufficient overlap (min 30 mm)



## USEFUL INFORMATION

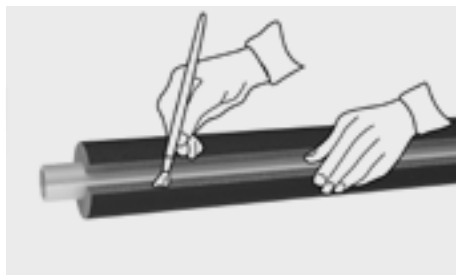
### Working with INSUL-TUBE® tubes

#### Gluing the edges of slit tube INSUL-TUBE®

To glue edges, sleeve the tube around a larger diameter pipe so the edges do not overlap, stick together unintentionally and apply glue NMC-fix. Consider the flash-off time. Then slide the prepared tube over the pipe to insulate, and stick the edges together, starting from the tube ends to the middle. Mind to glue also the joints to the other tubes. Ensure that all seams close correctly and fit under compression.

Tubes, which are thin and short, can be rolled up applied with the glue as shown in the drawing.

By doing this the tube can be rolled and laid quickly and easily on the pipe.



## USEFUL INFORMATION

### Working with INSUL ROLL sheets

#### Determine the circumference

The dimension of the circumference and thus the sheet dimension is to determine by laying a strip of INSUL ROLL sheets around the pipe to insulate, 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 INSUL ROLL sheets

For the insulation of large diameter pipes, cut sheets and apply glue NMC-fix properly to both edges. For the best results, a thin, even layer of glue NMC-fix is to apply with a brush with short, hard bristles. Consider the drying time.

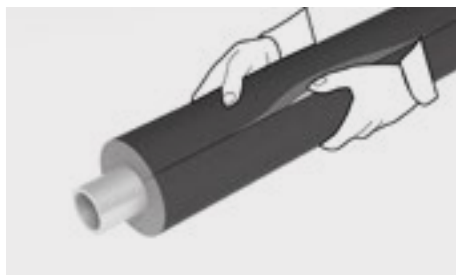
In order to obtain a perfect joint, press the edges closely together. Before further processing, check the stability of the joints.



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

Consider the drying time.

As a final touch, press once again the joints against each other.



## General information about gluing

Doing the "finger test" helps you to check whether the applied glue NMC-fix dried sufficiently.

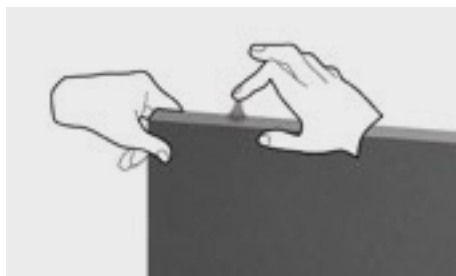
**Basic rule:**

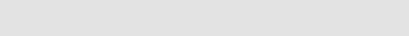
Check with your finger tip if the glue NMC-fix

a) still gets stringy and/or,

b) still has a cold feel

In both cases, the drying-time must be extend.



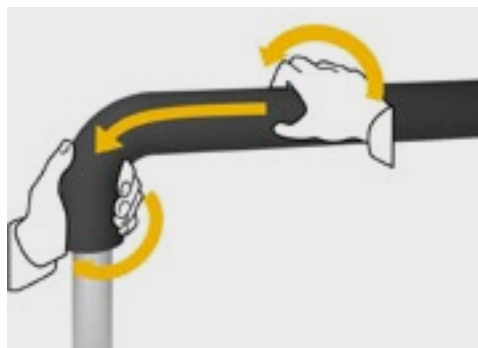


# INSUL-TUBE®

## Insulation by push over of INSUL-TUBE®

Pipes not yet installed could easily be insulated by just pushing over INSUL-TUBE®. Even on pipe bends or elbows, the insulation can easily be slipped on. However, with tight ends (small diameters) there is a risk of compression of the insulation in the angle break of the elbow. This will prompt to a reduction of the insulation thickness. As a result, the necessary insulation thickness for refrigeration/air-conditioning is not going to be achieved and can 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.

**Note:** To ease the tube installation, push the tube in rotatory motions on the pipe. Always push INSUL-TUBE® over the pipe. Do not pull!

# INSUL-TUBE®

## Insulation of pre-installed pipework

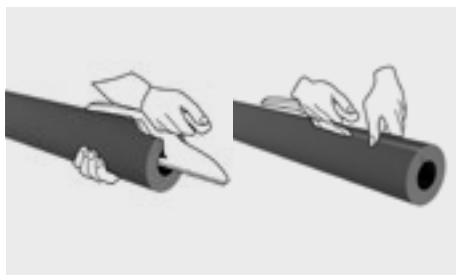
For the insulation of pre-installed pipes, cut the INSUL-TUBE® tubes open in the length. INSUL-TUBE® tubes are also available pre-slit, non-adhesive and self-adhesive

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

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

**Recommendation:** Use the NMC cutter, which is ideal for longitudinal cuts. The special grab handle assures a proper and straight cut.

**Note:** Split oval tubes always on the flat side.



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

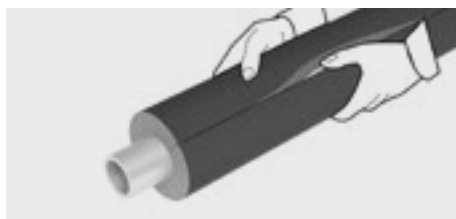
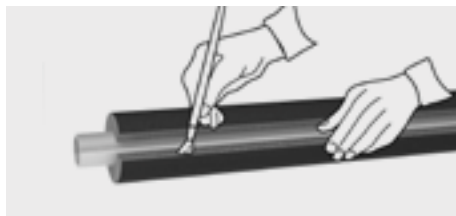
In case the insulation is already set on the pipework before applying the glue, separate the ends and apply the glue in a thin and even layer.

After evaporation of the glue and the finger test, seal the tube, and press the joints firmly together, working from the ends to the centre.

After installing a section of tubing in its final position, fix at least one end with NMC-fix glue to the pipe.

Apply glue to the tube edges already in place and to the subsequent tube.

Push the end of the tubes together and press firmly.

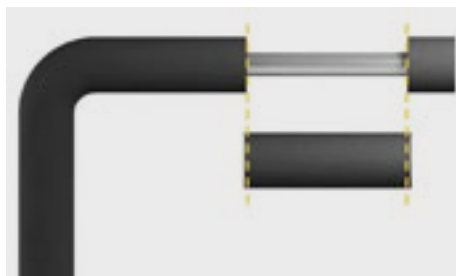


## If there is a need to braze the underlying pipe

If there is a need to braze the underlying pipe, 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 is to be completed.



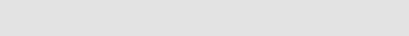
When filling in a gap between two tubes, cut the insert a little longer than necessary (a couple of millimetres) to ensure that there is enough compression and avoid a reduction of insulation properties



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







## THE SELF-ADHESIVE INSUL-TUBE®XT

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For pre-installed pipework where a pre-insulation is not possible, the use of self-adhesive INSUL-TUBE® tube is highly recommended

The advantages of the using self-adhesive tubes are the easy application and the time saving mounting. Moreover, the insulation of bows can be done with self-adhesive INSUL-TUBE® tubes as well, however avoid overlaps and additional compression on the glued joints

# THE SELF-ADHESIVE INSUL-TUBE® XT

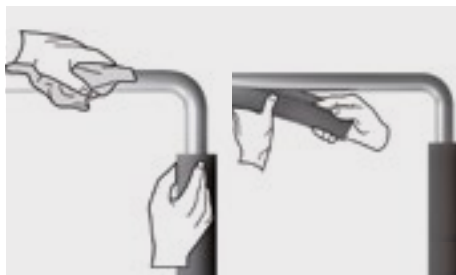
## Insulation of pipes with self-adhesive INSUL-TUBE® XT

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

Place the INSUL-TUBE® 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.

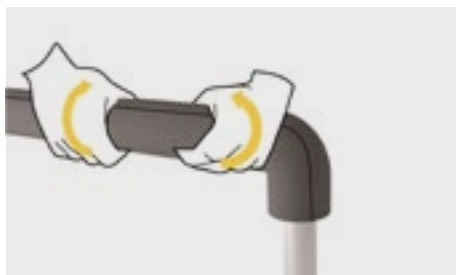


Close the slit and press firmly the joints together in order to ensure a permanent seal.



Push in rotatory motions the INSUL-TUBE® tube along the pipe

Do not pull the insulation!

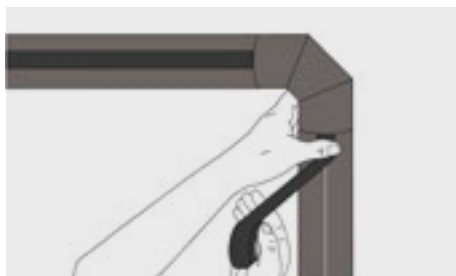


Seal all joints with NMC-fix glue. Do not stretch when sealing joints.



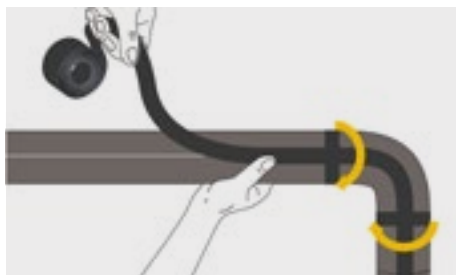
In the area of bends, it is always recommend to cut segment bends. Secure the straight tube sections additionally with NMC TAPE.

**Note:** In case of securing additionally joints or longitudinal seams, use NMC TAPE, but only after the solvents are diffused completely (after 24 to 36 hours).



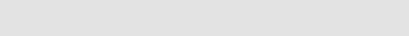
In case, NMC TAPE is used in the area of the bend radial adhesion must be carried out in addition.

**Note:** For radial gluing, ensure that the NMC TAPE is not glued under tension.



The procedure for INSUL-TUBE® XT/L products is identical to INSUL-TUBE® products. The tube has to be glued completely on straight pipework (glue the joints first, than close the tape). When glued, push the tube in rotatory motions on the pipe.





# THE NMC TEMPLATE

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The fabrication of bends and tees is easier and quicker by using the NMC template. For this purpose, INSUL-TUBE® tubes, if required, need to cut into different angles.

# THE NMC TEMPLATE

## Cutting exemples for elbows and bends

90° Elbow cover with INSUL-TUBE® thanks to a 45° cut



45° Elbow cover with INSUL-TUBE® thanks to a 22,5° cut



90° Elbow cover with INSUL-TUBE® thanks to 22,5° cuts



90° Elbow cover with INSUL-TUBE® thanks to 15° cuts



90° Elbow cover with INSUL-TUBE® thanks to 11,25° cuts



## Insulation of elbows and bends with the NMC template

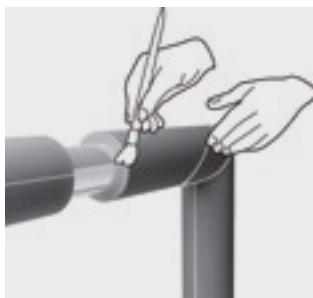
Procedure to cut bend and tees while using the NMC template:

- Cut out the NMC template or use the one from de NMC TOOLBOX and place it on a proper table or worktop.
- Line a tube of INSUL-TUBE® across the template parallel along the horizontal base line.
- 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.

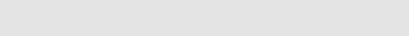
Then you have to put the cut parts together in correct position to glue the parts together...



...Verify the adhesive strength of the parts glued together...



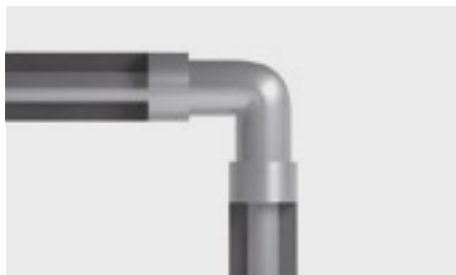
...cautiously cut the elbow piece along its throat. Fit the insulation elbow on the pipe and apply glue on the edges. You may apply the glue on the joints before or after placing the elbow on the pipework. Press the joints together to seal. Carefully glue the joints of the elbow and of the straight tube positioned on either side.



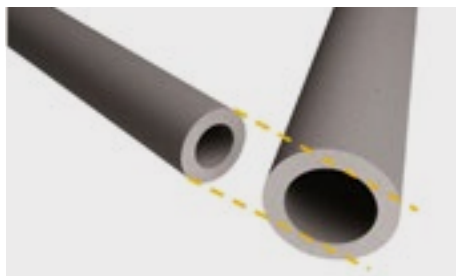
# INSULATION TECHNIQUES WITH INSUL-TUBE® (XT)

## Insulation of an elbow with pipes of different diameters

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



Then take an INSUL-TUBE® 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 needs to be glued properly onto them.



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



# INSULATION TECHNIQUES WITH INSUL-TUBE® (XT)

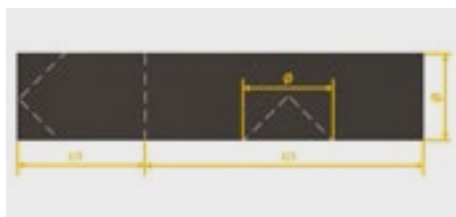
## Insulating Tee-connections with INSUL-TUBE®

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



### Tee-piece with a 45° cut-out

Cut the INSUL-TUBE® 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 NMC 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.



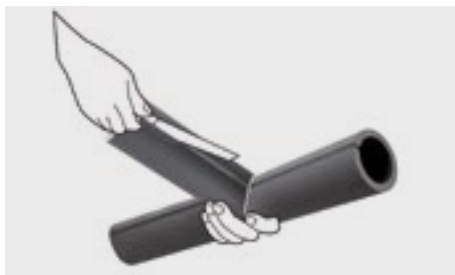
Glue the cut edges and stick them together into the shape of a "Tee".



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## Insulating Tee-connections with INSUL-TUBE®

Make sure glue is dry and sticks firmly, then slit the Tee-piece cover as shown on the picture. Apply the glue to the joints before or after the cover is placed on Tee-connection of the pipe.



Place the cover on the Tee-connection. Apply the glue if not already done. Consider the flash-off time. Press firmly the joints together.



# INSULATION TECHNIQUES WITH INSUL-TUBE® (XT)

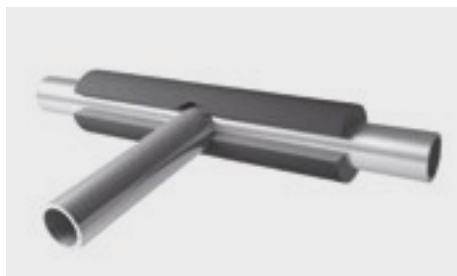
## Insulating Tee-connections with INSUL-TUBE®

### 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.

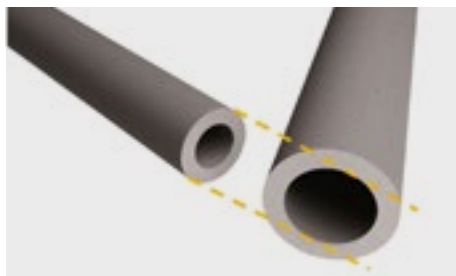


## Insulating Tee-connections with INSUL-TUBE®

If the adjacent pipes are smaller in diameter than the Tee-connection, they need to be insulated before the Tee-connection itself.



Make a Tee-cover as earlier described. However, use a tube with an internal diameter equal to the external diameter of the neighbouring tubes.



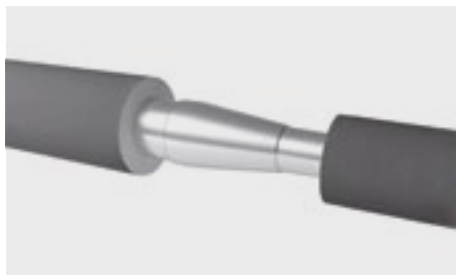
Apply the Tee-cover, which should overlap the edges of the other insulated tubes. Carefully place it and glue the joints and the surfaces in contact with the other tubes.



# INSULATION TECHNIQUES WITH INSUL-TUBE®

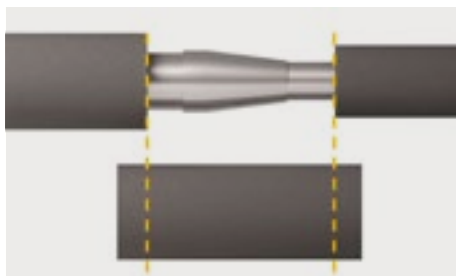
## Insulation of tapered pipes with INSUL-TUBE®

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 INSUL-TUBE® 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 surfaces together, to reduce the diameter of the tube end.

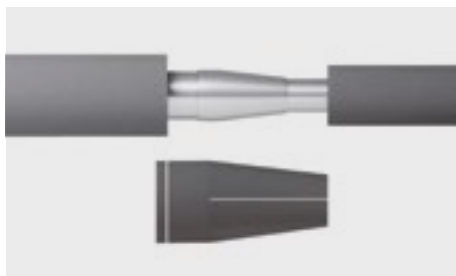


## Insulation of tapered pipes with INSUL-TUBE®

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



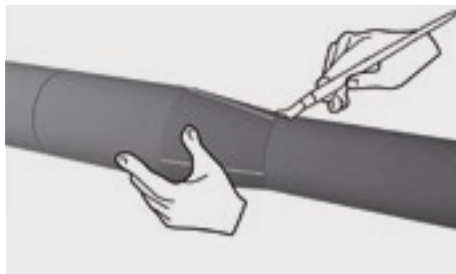
Shorten the other end too, so that the connection piece fits properly into the gap between the two insulated pipes.



Cut the cover piece lengthwise and place it on the pipe connection.



Then glue the joints together, also the tube ends with the insulation of the pipes.



# INSULATION TECHNIQUES WITH INSUL-TUBE® (XT)

## Insulation of valves with INSUL-TUBE®

Valves can be insulated in several ways, depending on type and size.



### Small valve stem

From the edge of the INSUL-TUBE® tube, make a cut long enough to house the valve and punch a hole to fit the stem.



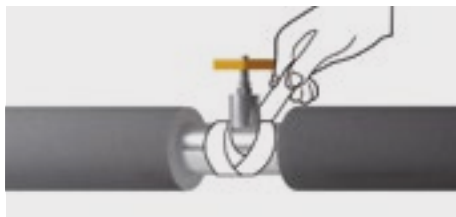
Fit the tube tightly around the valve and glue the joints together, then attach it to the adjacent tube.



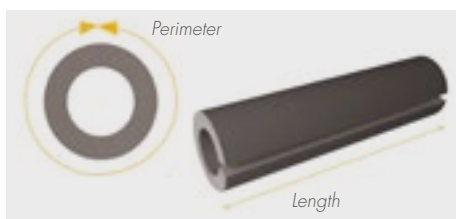
## Insulation of valves with INSUL-TUBE®

### Large diameter valve stem

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



Cut a piece of tube of INSUL-TUBE® 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.

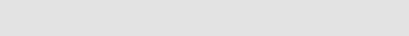


Place the cover around the valve so the sleeve overlaps the ends of the two underlying tubes. If necessary, remove the stopcock.



Glue the overlapping parts, as well as the joints with NMC-fix. If necessary, the handle of the stopcock can be insulated too by applying a ring-shaped tube cut from one of the off-cuts.





# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

INSUL-TUBE® tubes can be ordered for pipes with an outer diameter up to 114 mm. Larger pipe diameters have to be insulated with INSUL ROLL sheets. It is also possible to insulate pipes with even smaller diameters by using INSUL ROLL sheets. Carefully avoid stress in the seams, caused by the bending of the sheets.

The following chart demonstrates which INSUL ROLL sheet materials can be used for which pipes

INSUL ROLL (XT)	Outside diameter of pipe in mm				
	≥ 88,9	≥ 114	≥ 139	≥ 159	≥ 408
6 mm	■	■	■	■	■
9 mm	■	■	■	■	■
13 mm	■	■	■	■	■
16 mm	■	■	■	■	■
19 mm	■	■	■	■	■
25 mm		■	■	■	■
32 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 TECHNIQUES WITH INSUL ROLL (XT)

## Insulation of straight pipes with INSUL ROLL

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

**Note:** Always measure with a strip of INSUL ROLL sheet of the thickness to be used for the insulation and do not stretch the strip!

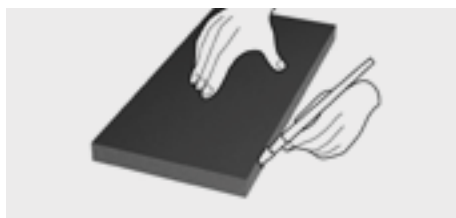
Mark the length on an INSUL ROLL sheet and cut carefully along the line.

To ensure accurate results, use a metal ruler.

Apply an even layer of NMC-fix adhesive along each edge and allow drying.

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

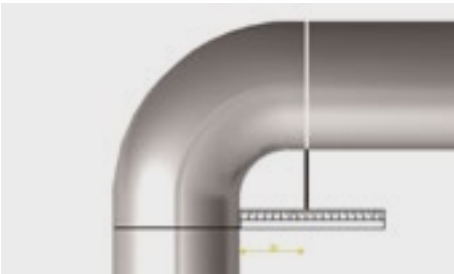
If the tube thus created is not correctly lined up, push one against the other slipping the brush in the gap and twist until they are aligned.



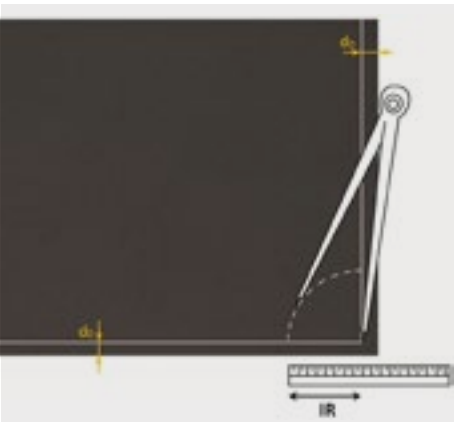
# Insulation of a bend with INSUL ROLL

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

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

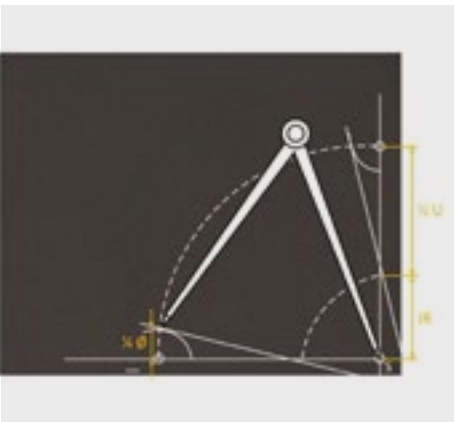


Mark the insulation thickness (dD) with a horizontal and a vertical line on an INSUL ROLL sheet. Transfer IR with a compass to the sheet as shown.



Add the missing measurements as shown in the diagram to the INSUL ROLL sheet.

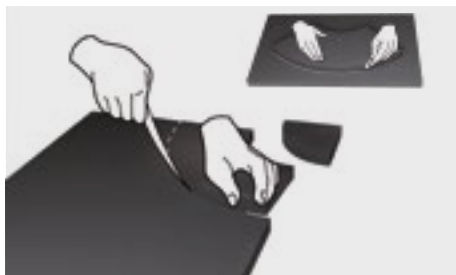
U = circumference  
 $\varnothing$  = pipe diameter



# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

## Insulation of a bend with INSUL ROLL

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



Holding the two sections together with the smooth surface on the outside, apply NMC-fix 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.



Wrap the INSUL ROLL insulation around the pipe and press the joints tightly together.



## Insulation of a bend with INSUL ROLL

Subsequently, glue the inner cut surface with NMC-fix glue and place the moulding over the bend.



Wrap the INSUL ROLL 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 TECHNIQUES WITH INSUL ROLL (XT)

## Insulation of a reducer with INSUL ROLL

To insulate a reducer that connects pipes of different diameters, take measurements and mark them out on an INSUL ROLL sheet.

Measure the height of the reducer including both welds.

Measure the diameters of the two pipes by using a calliper.

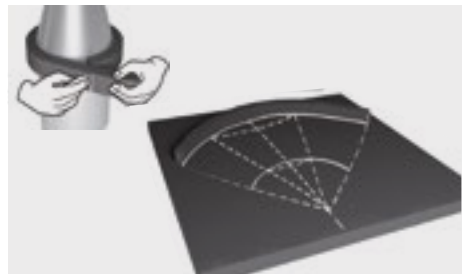
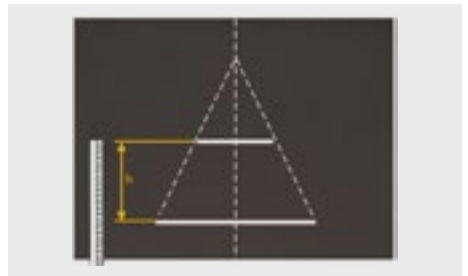
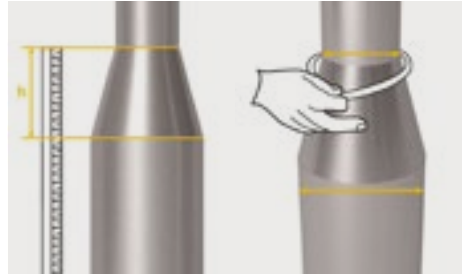
Add twice the thickness of the INSUL ROLL sheet to both diameters

Carry over all measurements onto the INSUL ROLL 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 INSUL ROLL 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.



## Insulation of a reducer with INSUL ROLL

Cut out carefully with a sharp knife.



Glue the edges with NMC-Fix glue and fit the insulation, after drying to the reducer. Press the two edges together starting at the far ends.



Glue the upper and lower edges with NMC-Fix glue and attach the other INSUL ROLL sections.



# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

## Insulating flanges with INSUL ROLL

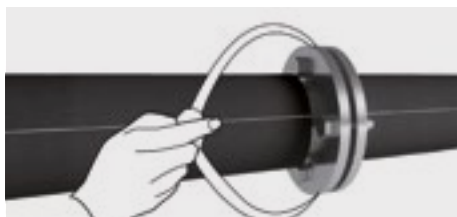
When insulating a flange, firstly insulate the pipes as far as the flange on either side. Depending on the diameter of the pipes, you can use either INSUL-TUBE® tubes or INSUL ROLL sheets.



Measure the diameter of the insulated pipe...



...and that of the flange.



Transfer the measured diameters on an INSUL ROLL sheet using a compass. Cut out the rings and open them on one side to get them around the pipes.



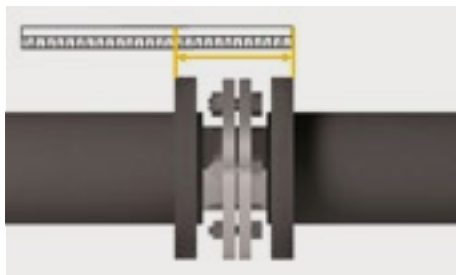
Position the rings around the ends of the insulated pipes and adhere the opening with NMC-fix adhesive.



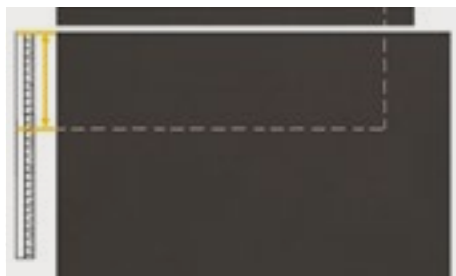
## Insulating flanges with INSUL ROLL

Use an INSUL ROLL strip of the same thickness to measure the circumference of the installed ring.

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



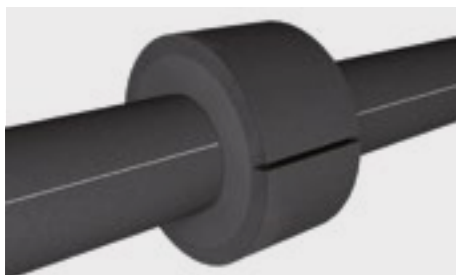
Draw the measurements on an INSUL ROLL sheet.



Cut out the sleeve section with the help of a ruler.



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



# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

## Insulating a valve with INSUL ROLL

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 radii. Mark the two calculated radii on an INSUL ROLL sheet twice by using a compass.

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



Put a ring on the outside of each flange and stick their edges together with NMC-fix adhesive.

Stick the insulation rings with the insulation installed already on the pipes.



Use a strip of INSUL ROLL sheet 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 must be measured too.



Transfer these determined parameters onto an INSUL ROLL 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.

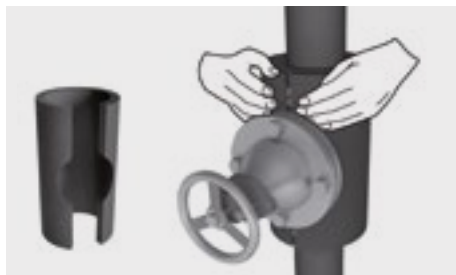
$h$  = height between the rings

$U$  = circumference of the rings



## Insulating a valve with INSUL ROLL

After cutting around the outline, put NMC-fix glue 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 flange around which the disc must fit.



Mark out these measurements on a piece of INSUL ROLL and cut the disc out.

Make an opening in order to fit the disc over the face flange.



Position the disc and stick the edges together with NMC-fix glue. Make sure to stick the inside edges to the face plate, too.



# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

## Insulating a valve with INSUL ROLL

Measure the circumference of the disc, measure the distance between the disc and the existing insulation at its nearest and furthest points.



Mark the measurement out on a piece of INSUL ROLL sheet of the same thickness and divide its length into four equal parts. 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 INSUL ROLL sheet 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 NMC-fix glue.

Check if all parts have been stuck together correctly.

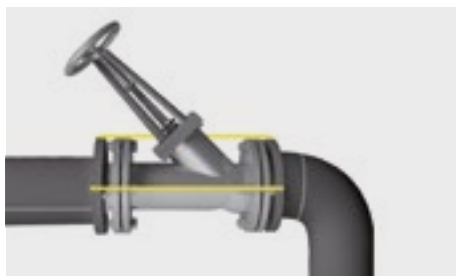


## Insulation of an angled stopcock with INSUL ROLL

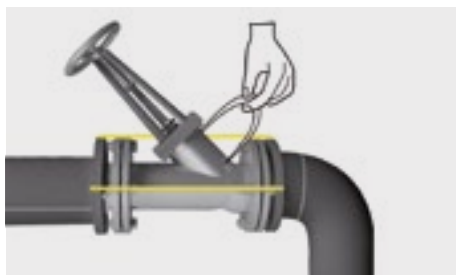
Before insulating an angled stopcock, first insulate the pipes either side of the flanges and the flanges themselves as already known from the chapters before.



Measure the distance between the two INSUL ROLL 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.



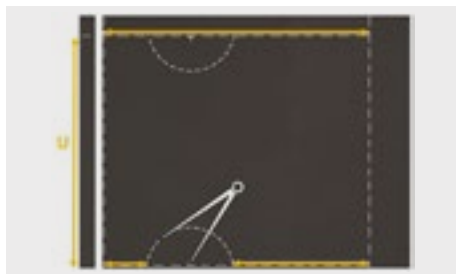
# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

## Insulation of an angled stopcock with INSUL ROLL

Mark these determined parameters on an INSUL ROLL sheet as shown in the diagram.

Use the radius of the stopcock's base to draw the semi-circles.

$U$  = circumference of the rings



Cut out the piece, wrap it around the rings to seal the central housing, and then stick the edges together using NMC-fix glue.



Insulate the stopcock mechanism using a cut-out of an INSUL ROLL sheet.



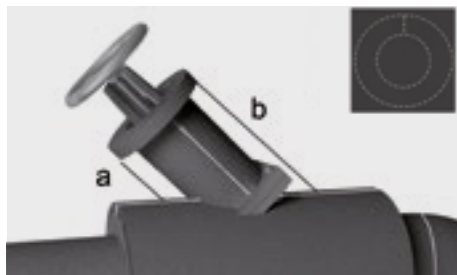
Cut out a ring of INSUL ROLL sheet in the size of the stopcock wheel. The inner diameter should be the same as the outer diameter of the sleeve already attached.

Attach this ring at the end of the insulated section as shown using NMC-fix glue.



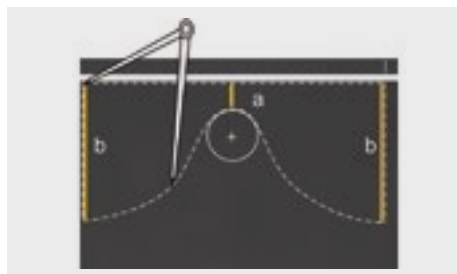
## Insulation of an angled stopcock with INSUL ROLL

Determine the shortest (a) and the longest (b) distance from the ring of INSUL ROLL sheet to the insulation around the strainer body.



Measure the ring's circumference and transfer it to an INSUL ROLL sheet.

Draw the shape of the sleeve on the INSUL ROLL sheet using a compass and the measurements taken. The diameter of the circle at the end of line "a" equals  $\frac{1}{4}$  of the pipe diameter including the insulation thickness.



Join the circles using a compass.

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 with NMC-fix glue the connecting surfaces together.



# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

## Insulation of tanks and vessels with INSUL ROLL

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 NMC-fix Cleaner.

Initially, insulate the tank walls.

Use the same method as with piping. Measure the circumference of the tank with a strip of INSUL ROLL sheet and measure the height.

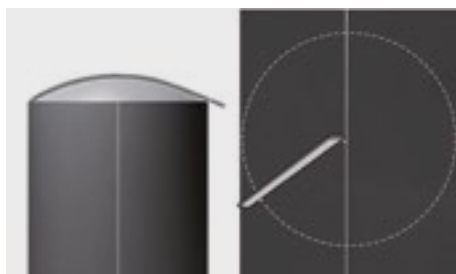
Mark the dimension out on a strip of INSUL ROLL sheet and cut out.

Spread NMC-fix glue over the entire surface of the sheet with a flexible spatula, brush or roller then apply adhesive to the tank or vessel.

Apply NMC-fix glue to both edges of the sheet, 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 INSUL ROLL sheet as used.

Use the diameter to calculate the radius and draw the complete circumference on an INSUL ROLL sheet.



## Insulation of tanks and vessels with INSUL ROLL

Cut out the circle accurately.



Coat the disc and the top of the tank with NMC-fix adhesive.



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



Once the INSUL ROLL sheet firmly attached, adhere the edges all way round.



Leave to dry, than press firmly together.



# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

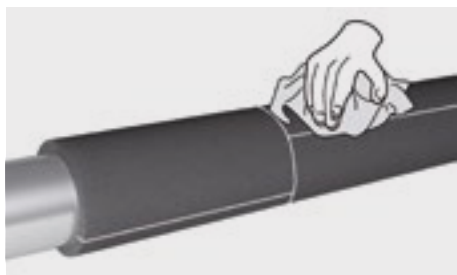
## Multi-layer insulation

If it is necessary to apply more than one layer of INSUL ROLL sheet, one sheet is to apply on top of another.

To install the first layer, see pages before.



Clean the surface of the first layer using NMC-fix Cleaner.



Measure the circumference using a strip of INSUL ROLL sheet with the same insulation thickness as the second layer.



Cut out an INSUL ROLL sheet to the size required.



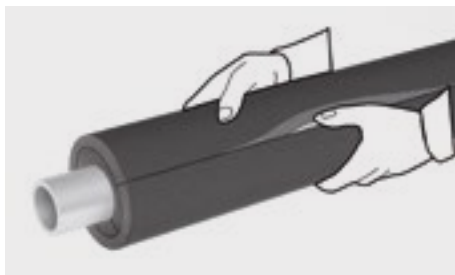
## Multi-layer insulation

Apply NMC-fix glue to the edges of the sheets to fit.

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 NMC-fix glue.



# INSULATION TECHNIQUES WITH INSUL ROLL (XT)

## Insulation with self-adhesive INSUL ROLL XT

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

Therefore clean all surfaces with NMC-fix Cleaner.

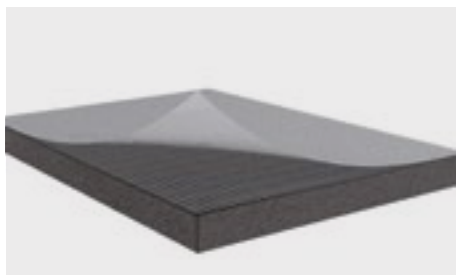


Cut out the size required of the roll.



Lift the leading edge of the backing paper.

**Note:** Do not use INSUL ROLL XT sheets where the ambient temperature is lower than  $+15^{\circ}\text{C}$  or exceeds  $+35^{\circ}\text{C}$ !



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 INSUL ROLL XT sheet with too much force, as this can lead to stresses in the sheet and a reduction of the insulation thickness.



## Insulation with self-adhesive INSUL ROLL XT

Adhese the edges of each length of INSUL ROLL with NMC-fix to the successive one.



Similarly, to the insulation of tanks with normal INSUL ROLL sheets, an insulation with self-adhesive sheets can be done.



Once the sheeting firmly attached to the tank, stick the leading edges together with NMC-fix glue.

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



[www.nmc-insulation.com](http://www.nmc-insulation.com)

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