



therma**smart**® PRO

Prefab it yourself

Installation Manual v 1.0

DISCLAIMER:

The information in this document is based on our current state of technical knowledge. Due to the variety of possible influences during installation and combination of products, the insulator is responsible for any necessary verification of certain information. For the current technical product specifications, we refer to the relevant products and the related datasheets. Any copy, duplication or reprint requires a written agreement by Thermaflex International Holding bv.

Responsible publisher: Thermaflex International Holding bv

Table of Contents

01. General	4
02. Prefab it yourself	6
03. Welding process	9
04. Tools	10



01. General

Tailoring to all possible needs, we offer 3 main connection solutions to seal off your system! This includes, basic glues, factory prefabricated connections, and our heat plate tool to prefab-it-yourself at the speed of light!

The heat plate provides a polyfusion welding technique for tubular Thermaflex insulation material. Delivering a solid and homogenous joining for the prefabrication of insulation fittings on-site or in your workshop as preparation.

Simple process:

- The welding process is simpler than the use of glue.
- Standard tooling - heating element (standard butt fusion heating element with PTFE (Teflon) coating can be used)

Speed - Time saving:

- Very fast process compared to glue up to ID 114mm tubular insulation
- Enormous time savings due to prefabrication of standardizes fitting insulation and specific fitting insulation with tubular insulation

Solid welding connection:

- Homogenous polyfusion welding process, glue free!

Sustainability:

- Environmental friendly joining technique
- No additional adhesive



3-001-01_F1



3-001-01_F2






3-001-01_F3

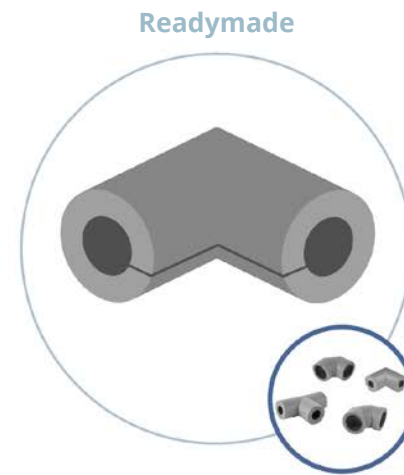
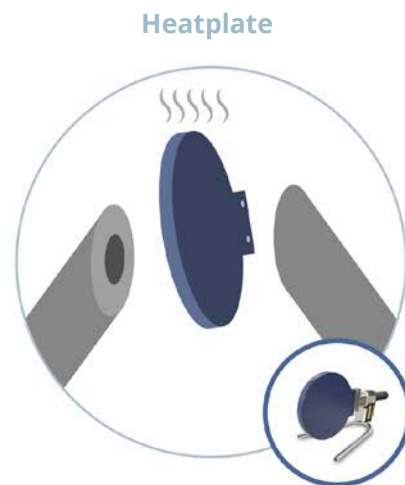
Solidifying your system

Craftsmanship in the forefront

Connections are often the most vulnerable and time-consuming part of an insulation system. So when it comes to efficiently insulating an installation, the type of connections should be carefully considered. To tailor to all possible needs, we offer 3 main connection solutions to seal off your system: from your basic glues, to factory prefabricated connections, and a heat plate tool to prefab-it-yourself at the speed of light.

Rating:

-  Ease & time savings
-  Reliability
-  Health
-  Sustainability



3-001-01_F4

02. Prefab it yourself

Preparation

1. Heat up the heating element

Heat surface to the temperature of 180°C.

Important!

Ambient temperature 5°C - 35°C

1.



3-001-01_F5

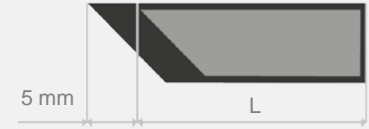
2. Length allowance

For melting provide an additional length of + 5mm to the original length of each fitting.

Important!

Respect the country specific health and safety regulations for working with high temperature electrical equipment.

2.



3-001-01_F10

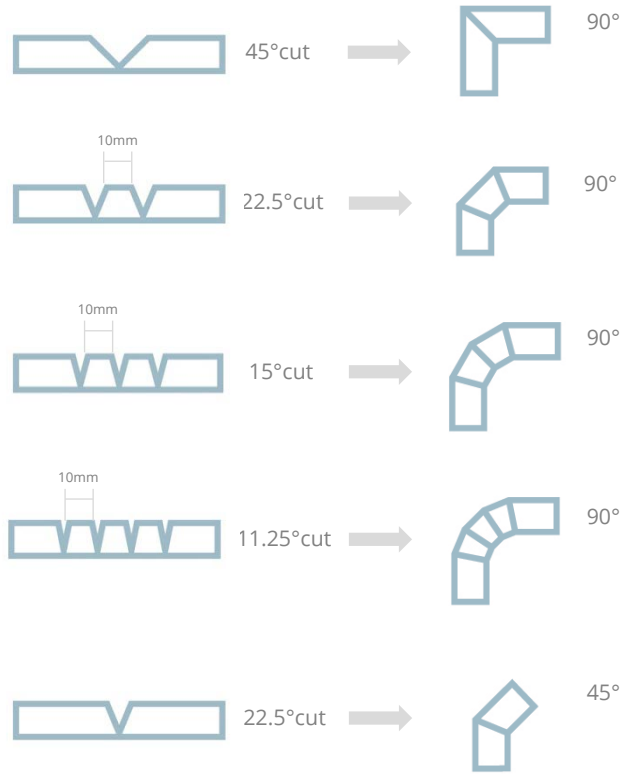
Required tools:



3. Cut fitting segments

Cut fitting segments with the help of the Thermaflex cutting matt or mitre box in accordance to the figures beneath.

Bends 90° and 45°



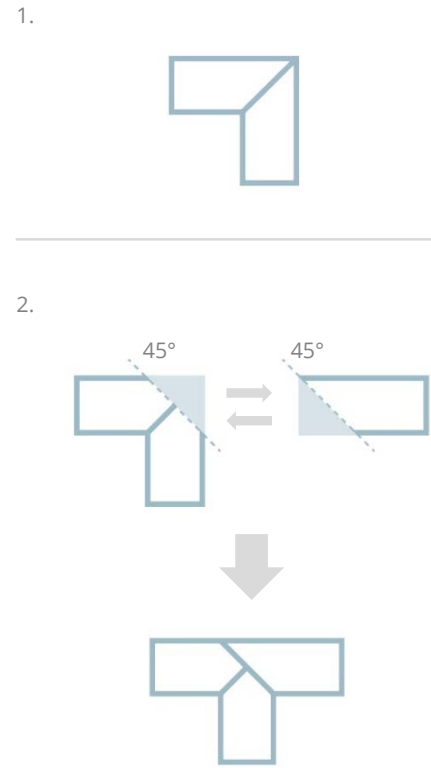
3-001-01_F6

Pre-fabricating a 90° or a 45° bend involves a simple process.

Step one: Cut out V-shaped pieces.

Step two: Weld.

T-piece 90°



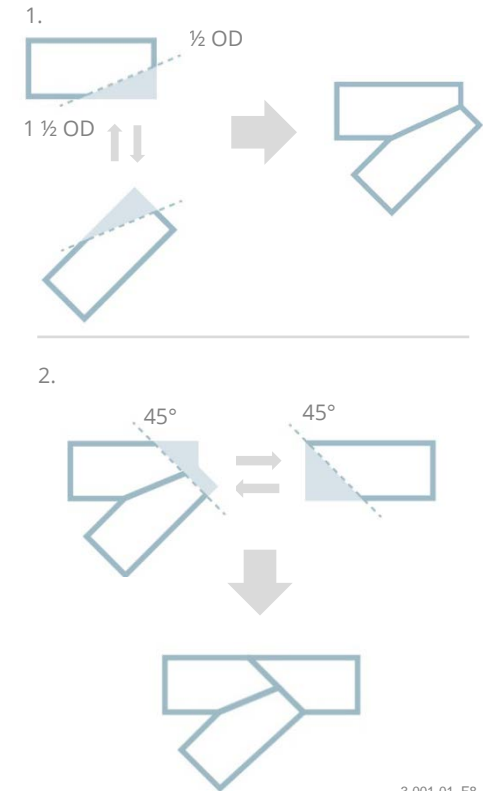
3-001-01_F7

Pre-fabricating a 90° T-piece involves a two-step process.

Step one: Produce a 90° bend.

Step two: Find an additional piece of tube insulation of the same size; then, cut both pieces to fit together like shown in figure 1 and weld.

T-piece 45°



3-001-01_F8

Pre-fabricating a 45° T-piece involves a two-step process.

Step one: Produce a 135° bend as shown in figure 1.

Step two: Cut the bend and the tube insulation to fit together like shown in figure 1 and weld.

Important! For melting provide an additional length of + 5mm to the original length of each fitting.

Joining

1. Melt fitting component interface

Press both components onto the heating element and follow the following sequence.

Equalize surface:

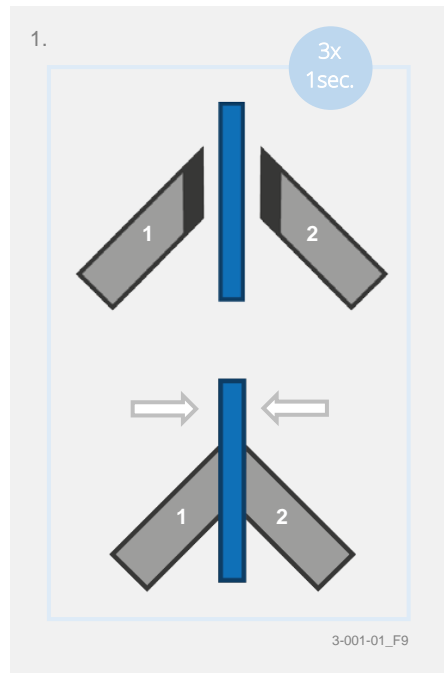
- **Press:** 1 second (equalize surface)
- Remove from heating element
- **Press:** 1 second (equalize surface)
- Remove from heating element

Heat up surface:

- **Press:** 1 second (heat up time)

Important!

Lightly press fitting components onto the heating element.

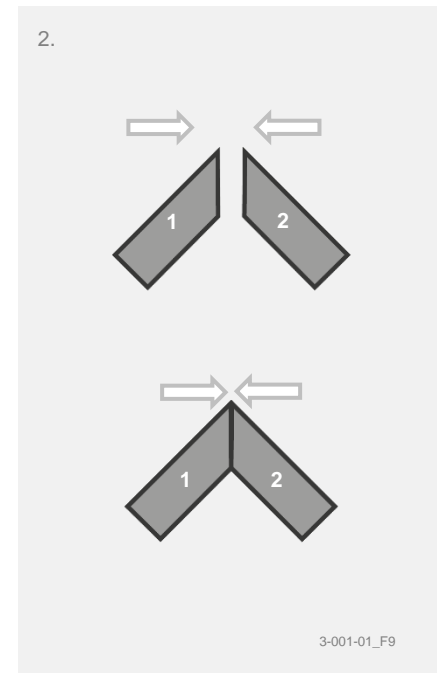


2. Joining

Join the two fitting components within 2 seconds (dwell time) after removing from the heating element and secure fittings by holding firmly with pressure for 3 seconds (welding time). After the welding process the two components are bound and homogenously joined.

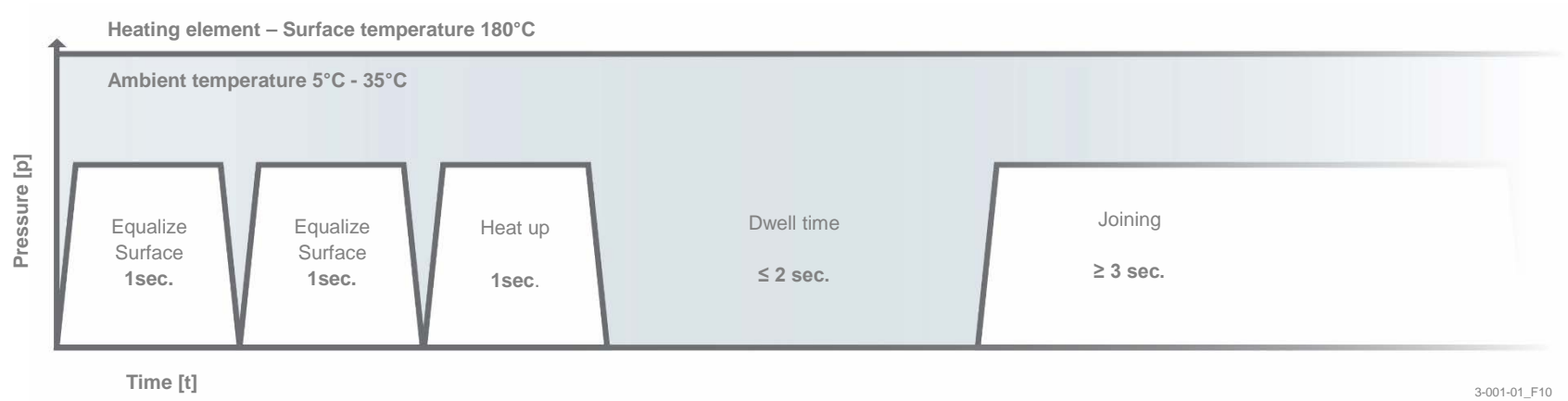
Important!

After the welding process, **carefully** clean the heating element surface with a **thick** and **dry** paper cloth.



03. Welding process

Polyfusion welding of tubular ThermaSmart PRO insulation



3-001-01_F10

04. Tools

The following tools are required for polyfusion welding of tubular insulation.

Polyfusion welding

Polyfusion welding

Butt welding unit

For solid and homogenous joining.

Butt welding unit for polyolefin insulation with PTFE-coated heating element 230V, 50-60Hz according to DVS. Available with 110V. Temperature preset for polyfusion welding of ThermaSmart PRO tubular insulation at 180°C. Heating element \varnothing 200 mm and \varnothing 300 mm. Support stand.

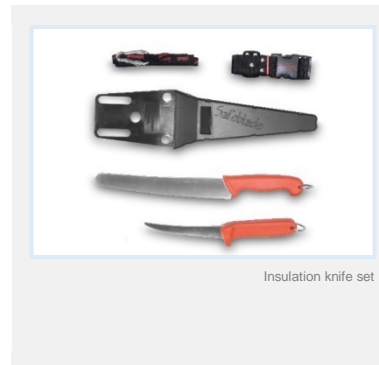


Knives & cutters

Specialized 25cm, and 12.5cm insulation knife set

For serious insulation functionality.

The double insulation knife set has been developed for fast, efficient and comfortable cutting and shaping of ThermaSmart PRO insulation. The 2 knives are accompanied by a locking safety holster, belt and lanyard to ensure maximum safety, and convenient transportation.



Whetstone

Keep it sharp.

A sharpening stone is included to keep your knives razor-sharp, and ensure the best and smoothest possible cuts.



Measurement & marking

Talmeter (3m)

Measure it. Mark it. Craft it.

The ideal marking measure for insulation craftsmen. This white, impact-resistant steel tape measure has both millimeters and diameters, combining marking and measurement edges so you can quickly and simply measure and mark both internal and external lengths.

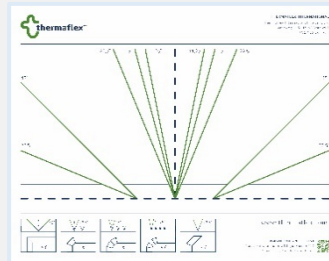


Talmeter

Cutting mat

Cut to fit.

Use our Thermaflex-designed cutting mat for optimal angular precision, covering all the cutting angles you need. Perfectly suitable for all your elbows, bends, T and Y pieces, you name it. The cutting mat is made for both right and left handed craftsmen.



Cutting mat

Folding ruler

Unfolding precision.

Our folding ruler measures cm, inch and angular degrees all in one handy, compact tool.



Folding ruler

Marker

Swift and sure.

Draw out exactly where you need to cut, shape, or carve with our black insulation marker.



Folding ruler

Mitre box (optional)

Cut to fit.

Use the mitre box for optimal angular precision, covering all the cutting angles you need. Perfectly suitable for all your elbows, bends, T and Y pieces, you name it.



Mitre box



WWW.THERMAFLEX.COM

Thermaflex International Holding b.v.

Veerweg 1, 5145 NS Waalwijk

The Netherlands



Installation video's.



Installation manuals.