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LEN

INSULATION

# TROCELLEN ISO-HANGER

Insulating pipe-hangers

Thermal insulation



# Iso-Hanger

## HOW TO AVOID THERMAL BRIDGES WHEN INSTALLING PIPES

Whenever you need to secure a pipe in a cooling and air-conditioning plant there is always the risk of creating a so-called "thermal bridge", i.e. a heat loss between the pipe and the bracket if these are allowed to come into direct contact.

A thermal bridge not only reduces the efficiency of the thermal insulation of the pipe and thus the overall system performance, it can also lead to condensation in the cooling and air-conditioning plant with the risk of damage to the plant caused by the resulting water.

It is therefore crucial that the brackets are provided with perfect insulation, and of the right thickness to guarantee the required thermal conductivity and vapour barriers established during design phase.

**ISO-HANGER** pipe-hangers guarantee insulation of the entire plant due to the fact that they are taped to the insulated pipes making up the line, with planned fixing points, and thus meet the insulation properties required.

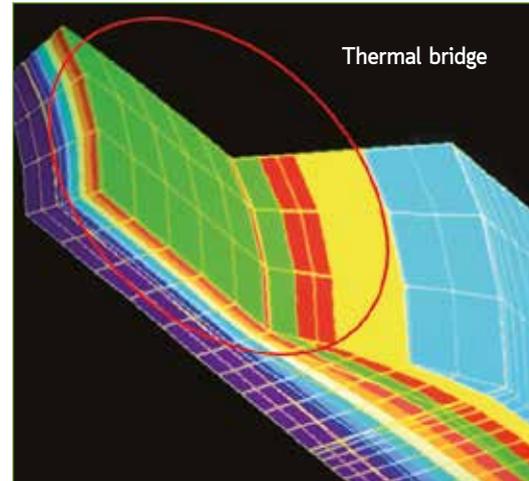
## IL PRODOTTO ISO-HANGER

**ISO-HANGER** pipe-hangers is made of **TROCELLEN CL1**, chemically cross-linked polyethylene foam, that has been successfully used for more than forty years to create thermal insulation and soundproofing for pipes and ducts. Its main properties are:

- Closed cells
- Density: 100 kg/m<sup>3</sup> (guaranteed high mechanical strength)
- Good vapour barrier
- Fire reaction: Class 1 according to Italian regulation
- CFC-free, does not contain fibers, asbestos, etc.
- Long duration, non-rusting, non-cracking, no loss in thermal resistance
- Moisture-proof
- Needs to be protected from direct sunlight if used outdoors.

### TROCELLEN ISO-HANGER RANGE

DN (mm)	ISO-HANGER THICKNESS				ISO-HANGER PIR THICKNESS		
	13	19	25	32	32	40	50
10							
15							
20							
25							
32							
40	40				50		
50							
65	40				50		
80							
90							
100	40				50		
125							



Thermal curve simulation of a partially insulated section of piping containing coolant at 7°C, showing temperature trend.

The environmental conditions mean the dew point=23°C: thermal bridging occurs on the non-insulated surface of the pipe, leading to condensation.



ISO-HANGER with copper pipe

**ISO-HANGER** pipe-hangers are produced by laminating several layers of Trocellen foam to create a sheet whose thickness thus becomes the width of the support.

The supports are then cut from these sheets using ultra high pressure water-jet cutting. This makes for high precision shaping, including the internal slit that lets you wrap the insulation around the pipes and the special slot closure designed to minimize the risk of heat loss.

Other types available:

**ISO-HANGER PIR**

Insulating supports for pipes made with rigid PU, laminated with **TROCELLEN CL1**, thickness 10 mm and metalized film.



## TECHNICAL CHARACTERISTICS

TECHNICAL DATA				
TECHNICAL CHARACTERISTICS	NORM	UNIT	TROCELLEN ISO-HANGER	TROCELLEN ISO-HANGER PIR
Density	ISO 845	Kg/m <sup>3</sup>	100	83+30
Compressive stress strength at 10% deformation	ISO 3386/1	kPa	126	970
Working temperature: cold pipe		°C	-100/+40*	-180/+120*
Thermal conductivity coefficient at 0 °C (λ-value)	Intern method	W/mK	0,049	0,036
Duration in warehouse	Unlimited if not exposed to direct sunlight			
Colour	Grey anthracite			
Water vapour diffusion factor (μ-value)	EN ISO 12572	-	≥ 9000	
Diameter and thickness tolerances		mm	+/- 0,5	

\* for higher temperatures, please contact our technical service

## INSTALLATION INSTRUCTIONS

1. Place the **ISO-HANGER** around the pipe and apply some MATIBLOCK glue on both sides of the slot closure.
2. Close the insulating support, making sure the glued surfaces adhere perfectly.
3. The special profile of the slot closure helps you to align the surfaces properly so that the entire thickness of the insulation is exploited properly.
4. Fit the metal brackets. When tightening the screws, make sure that the thermal insulation is not crushed (to avoid reducing its insulating efficiency).
5. Seal the joints between the ISOCOMPACT pipe insulation and the **ISO-HANGER** using MATIBLOCK glue.



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## TROCELLEN\*

Trocellen is the first choice European polyolefin foam-solution provider. Through continuous innovations and successful partnerships we dedicate ourselves to one goal: protecting and providing comfort for people.

After more than 40 years, with 600 employees at seven sites and many cooperating companies, various partner universities, institutes and designers we offer solutions for our business partners in various industries such as construction and insulation, automotive, leisure and professional sport, adhesive tapes, footwear and packaging.

\*Trocellen is the member of Furukawa Group.



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50° 49' N	07° 09' O	Germany
40° 28' N	03° 21' O	Spain
41° 53' N	12° 28' O	Italy
47° 30' N	19° 02' O	Hungary
02° 54' N	101° 28' O	Malaysia
35° 40' N	139° 49' O	Japan FURUKAWA

