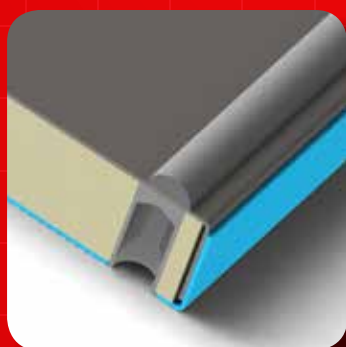




# INSULATING SANDWICH PANELS

Polyurethane | Mineral Wool



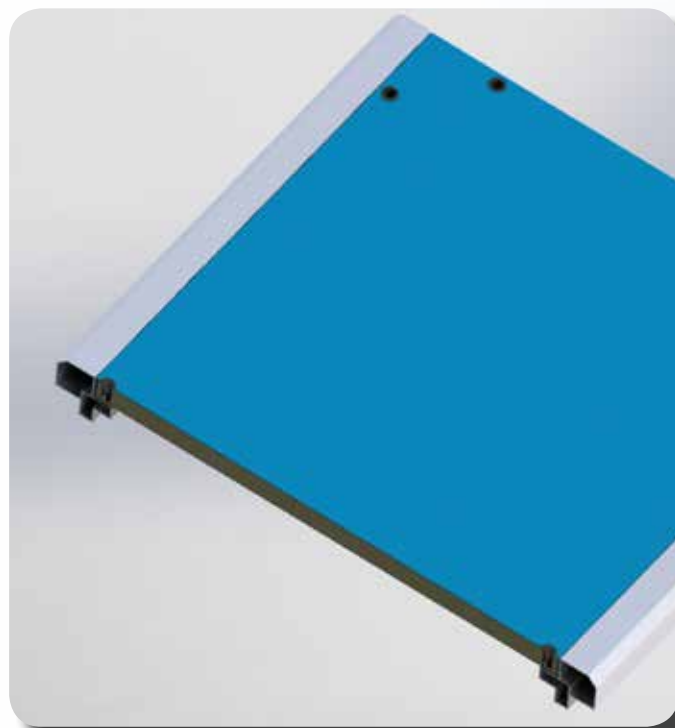
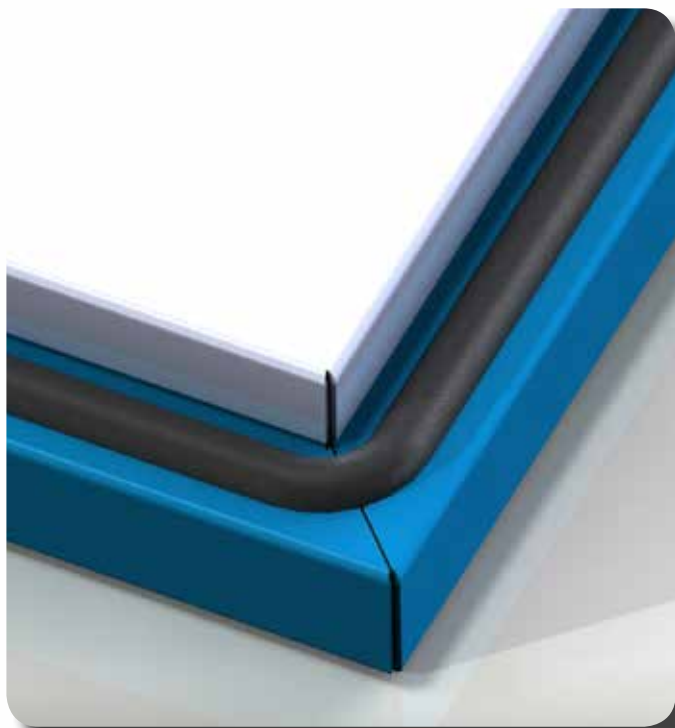
[www.trec.it](http://www.trec.it)

Member of CISQ Federation





# POLYURETHANE SANDWICH PANELS



Custom made sandwich panels, made up of two molded sheet assembled one within the other. Insulation achieved by **polyurethane foam** injection with average density of 40 kg/m<sup>3</sup>. Possibility to perform holes and machining for the subsequent application of handles, hinges, doors...

## MAIN BENEFITS

- **Thermal insulation** uniform and continuous over the entire panel;
- **Strength and durability** guaranteed by the structure of the panel realized with sheet metal containment;
- **Aesthetic result:** a wide range of colors and surface finishes always makes it possible to obtain the desired aesthetic effect;
- **Cost reduction:** using pre-finished panels, the customer doesn't need machinery for sheet metal working and for foaming.



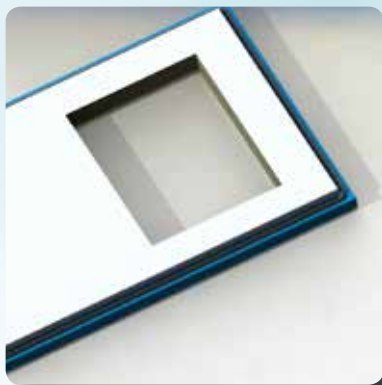
Polyurethane foam with **EU MARINE EQUIPMENT (MED) CERTIFICATION** from **RINA S.p.A.** is available.

## SHEET METAL / POLYURETHANE SANDWICH PANELS

### TECHNICAL FEATURES

Dimensions	Custom production Up to 3000x1500 mm
Panel thickness	Standard 23-25-40-45-60 mm On request up to 100 mm
Sheet metal thickness	From 0.5 up to 2.0 mm
Materials	Galvanized steel sheet Skin-plate Prepainted steel Stainless steel Aluminum
Insulation	Polyurethane foam Average density: 40 kg/m <sup>3</sup>
Flat version	✓
Thermal Break version	✓
Possible workings	Any drilling on request
Insulation thermal conductivity	0,0246 W/mK
Fire reaction EN 13501-1:2009	B s3, d0





## STRENGTH AND DURABILITY

Our sandwich panels thanks to the materials used and the construction techniques are structurally robust.

Panels have good mechanical properties in terms of deformation and compression resistance.

These properties are maintained unchanged over time.



## CUSTOM MADE PRODUCTION

We can provide tailor-made panels, ready to be assembled, placing on customer specification: screw guide bushings for fixing, holes for handles and hinges, notches for the passage of pipes and systems for attachment to existing structures.



## A LOT OF APPLICATIONS

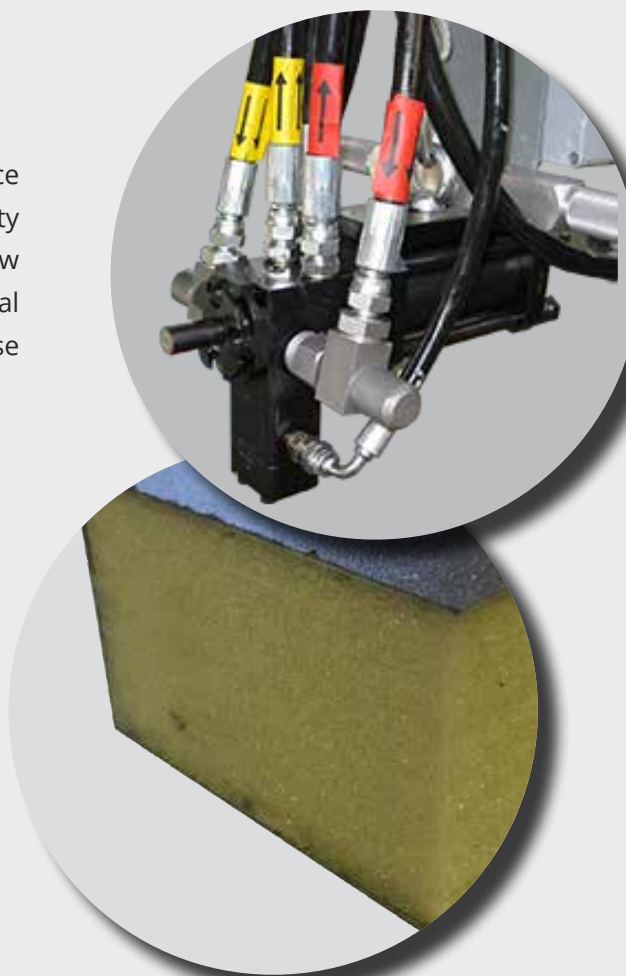
Some of the possible fields of application are: air handling units, insulation panels, cold rooms, doors, elevator cabins, partition walls, ceilings, sound booths for industrial equipments...

## POLYURETHANE FOAM

The rigid polyurethane foam provides high performance in terms of **thermal insulation**. The thermal conductivity value is between 0.024 and 0.028 W / mK. This very low value makes it possible to achieve high levels of thermal insulation using thicknesses significantly lower than those required using other insulating materials.

Main features:

- Excellent thermal insulation;
- Thermal conductivity doesn't change over time;
- **Lightness** and **resistance to mechanical stress**;
- Resistance to biological agents;
- Inhibition in the development of condensation and mold;
- Environmentally friendly: inert and non-biodegradable: in case of disposal in landfills is not a pollution factor.





# MINERAL WOOL SANDWICH PANELS



Custom made sandwich panels, made up of two molded sheet assembled one within the other. Insulation achieved by **mineral wool**, standard density 100 kg/m<sup>3</sup>

In order to obtain the best performances in terms of acoustic insulation, the panels can be supplied also in *Silent version*. In this case the panels have the inner side (where the noise is coming from) made of perforated sheet metal. The insulation has a protective layer against chalking.

## MAIN BENEFITS

- **Reaction to fire:** A1 class (EN 13501-1)
- **Sound insulation:** the structure of the sandwich panels and mineral wool insulation ensure a good acoustic performance;
- **Strength and durability** are guaranteed by the structure of the panel realized with sheet metal containment;
- **Cost reduction:** using pre-finished panels, the customer doesn't need machinery for sheet metal working.

## SHEET METAL / MINERAL WOOL SANDWICH PANELS

### TECHNICAL FEATURES

Dimensions	Cproduction Up to 3000x1500 mm
Panel thickness	Standard 25-50-60-100-120 mm Other thicknesses on request
Sheet metal thickness	From 0,5 up to 1,5 mm
Materials	Galvanized steel sheet Skin-plate Prepainted sheet Stainless steel Aluminum
Insulation	Mineral Wool 70 kg/m <sup>3</sup> - 100 kg/m <sup>3</sup>
Flat version	✓
Thermal Break version	✓
Silent version	✓
Possible workings	Any drilling on request
Insulation Thermal Conductivity	0,034 W/mK
Reaction to fire EN 13501-1:2009	A1



## MINERAL WOOL

Besides being a natural material and having excellent thermal insulation capacity, the mineral wool is also a good **sound-absorbing material**.

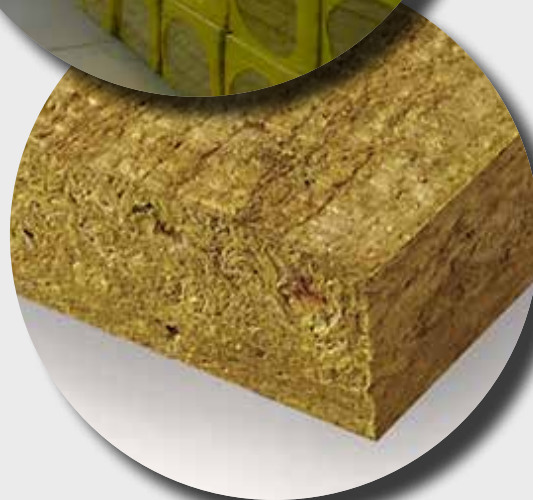
It does not retain water or moisture, and also has an excellent fire behavior: it doesn't contribute to the development or spread of fires.

Main features:

- Thermal insulation;
- Noise insulation;
- Completely fireproof;
- Highly draining;
- Environmentally friendly.

The mineral wool has a very low cost which in fact makes it preferable to other types of insulation.

The material is not harmful to health and is fully bio-soluble.



### FLEXIBLE PRODUCTION

We offer a complete product range and the possibility of making any customization, in terms of materials, processes and construction characteristics.

Thanks to a flexible production system, we can supply small batches for each variant or size.



### ENGINEERING SERVICE

The customer can provide the specifications for the making of the product together with the executive drawings or send a list of the dimensions and the required processes: our technical department will carry out the design of the panels by providing a real "turnkey" service.



### PRODUCT TRACEABILITY

All panels are uniquely identified by an alphanumeric code which allows to trace the production lot and the characteristics of the product (type of insulation, dimensions, materials used).

This allows you to easily identify the component during the assembly of the machinery.



## COLOR COLLECTION

Our insulated panels are available in several versions of material, color and surface finish.

In the following are only some examples. Materials and colors can be combined to obtain panels with inner and outer sides completely different and personalized.

### PVC COATED STEEL

WHITE



LIGHT GREY



MED GREY



DARK GREY



BLUE



SAND



SILVER



GREEN



### PREPAINTED STEEL

RAL 9010



RAL 9002

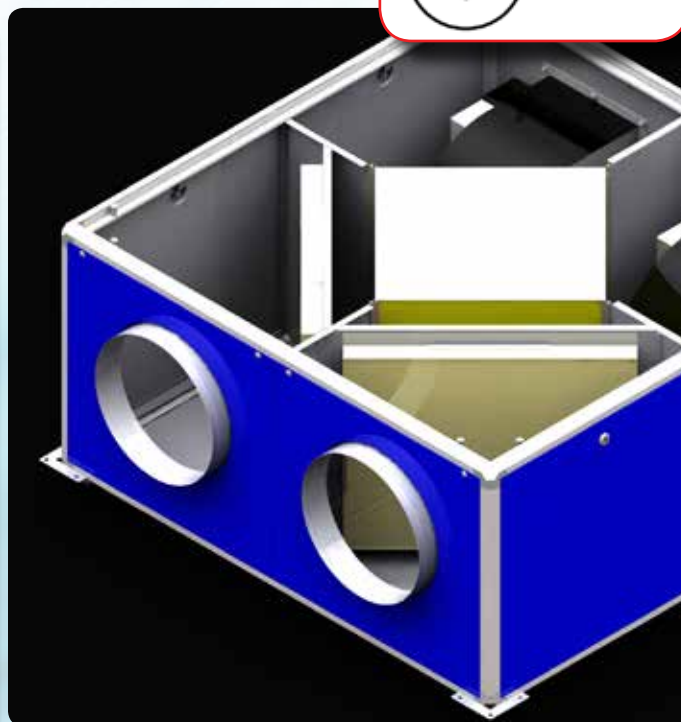


RAL 7035



### MATERIALS HOT DIP GALVANIZED STEEL - STAINLESS STEEL - ALUMINIUM PERALUMAN - PERFORATED STEEL

# ANTIMICROBIAL PANELS



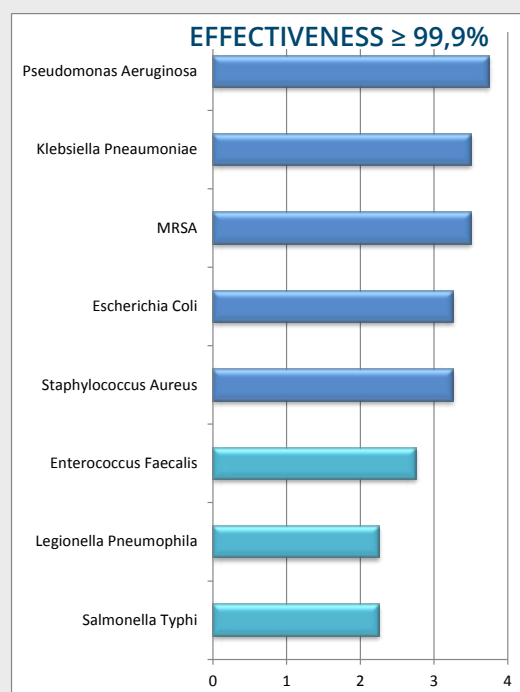
The air-handling systems and industrial plants often have parts not easily accessible. Inadequate cleaning could cause the spread of bacteria with the appearance of fungi, molds, algae and even unpleasant odors.

Our insulating panels made using sheet metal with **antimicrobial coating**, provide an effective and certified protection (ISO 22196:2011) against a vast panorama of microorganisms:

- Escherichia Coli;
- Staphylococcus Aureus;
- Staphylococcus Aureus Methicillin Resistant (MRSA);
- Klebsiella Pneumoniae;
- Salmonella Typhi;
- Enterococcus Faecalis;
- Pseudomonas Aeruginosa;
- Legionella Pneumophila.

The product keeps its properties unchanged over time requiring no maintenance.

## LOG REDUCTION IN THE NUMBER OF MICROORGANISMS

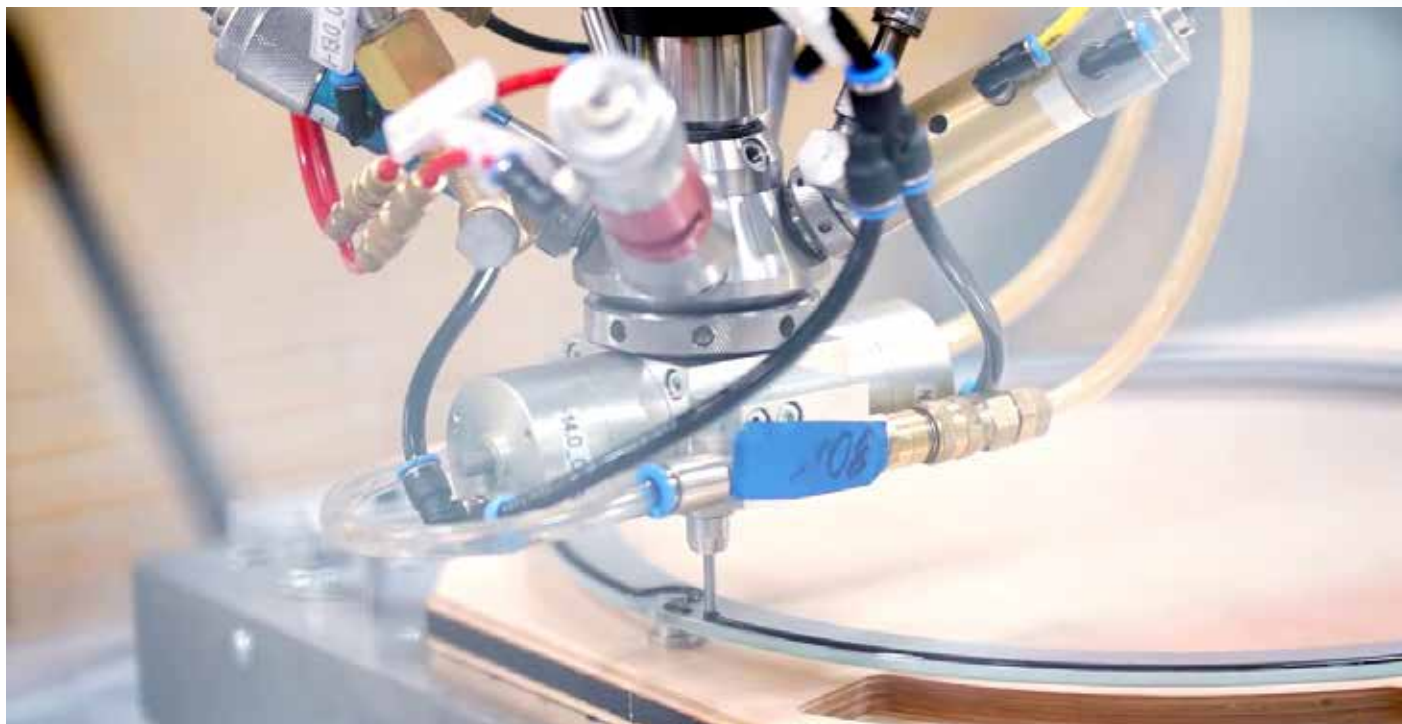


2<n<3	From 99.0% to 99.9%	Good reduction of bacterial growth, significant antibacterial action
>3	Over 99.9%	Excellent reduction of bacterial growth, very effective antibacterial action





# THIXOTROPIC FOAM GASKET



Thixotropic Foamed In Place Gasket (FIPG) made directly on the product through a two-component polyurethane dosing machine whose head is moved by a 6-axis anthropomorphic robot. The polyurethane gasket remains perfectly bonded with the metal support on which it is dispensed, thus increasing the practicality of the panels in all subsequent assembly or maintenance phases. Efficient watertightness is often of vital importance to the finished product. The gasket must therefore have specific characteristics such as softness, elasticity and flexibility, resistance to chemical agents and aging.

TRE C robotic production plant can make high quality gaskets with excellent consistency of the result.

## Main advantages

- Reduction of the overall assembly cost of the part - manual gasket application operations are avoided;
- Maximum process flexibility - it is possible to make gaskets of any size and section;
- Technically functional and aesthetically flawless result - errors due to the manual application of the gasket are eliminated, which has no junction points and therefore possible leakage



# ABOUT US

We are specialized in the production of customized sheet metal panels, made with flexible and cutting-edge systems.

The panels can be insulated with **polyurethane, mineral wool, sheet foam** and much more.

Our automatic production lines allow the continuous cutting and folding of panels without intermediate handling and without the need for manual operations.

The high automation allows to obtain custom-made panels (width, length and thickness of the panel) with low incidence of setup (time and therefore costs) for product change and high precision (narrow dimensional tolerances).

The aesthetics of the product is also significantly superior to discontinuous cutting and bending solutions since the semi-finished products do not have to be stored and then moved between the processing stages.

Using our line it is possible to produce **panels from very small (250 mm in length) up to very large, i.e. over 3 meters**. The qualitative result is excellent regardless of the size of the piece.

The company has obtained for some years the **ISO 9001:2015** quality certification with **RINA S.p.A.**

Certification scope:

**PRODUCTION OF METALLIC PANELS, WALLS AND FALSE CEILINGS**





## Registered office

Via Volta 2  
22036 Erba (CO)  
ITALY

## Offices and Factory

Via Piani dei Resinelli 9  
22036 Erba (CO)  
ITALY

Phone: +39 031 641717  
vendite@trec.it  
www.trec.it

© 2020 TRE C

Information regarding the products are based on the present state of our knowledge.

Published specifications are subject to change without notice.

Product suitability for an area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. The publication of these data, even partial, is forbidden without written permission from TRE C.

For any specific request, please contact our sales department.



Member of CISQ Federation



CERTIFIED MANAGEMENT SYSTEM  
ISO 9001

CERTIFICATE No. 36496/18/S

# Insulating Sandwich Panels Polyurethane | Mineral Wool