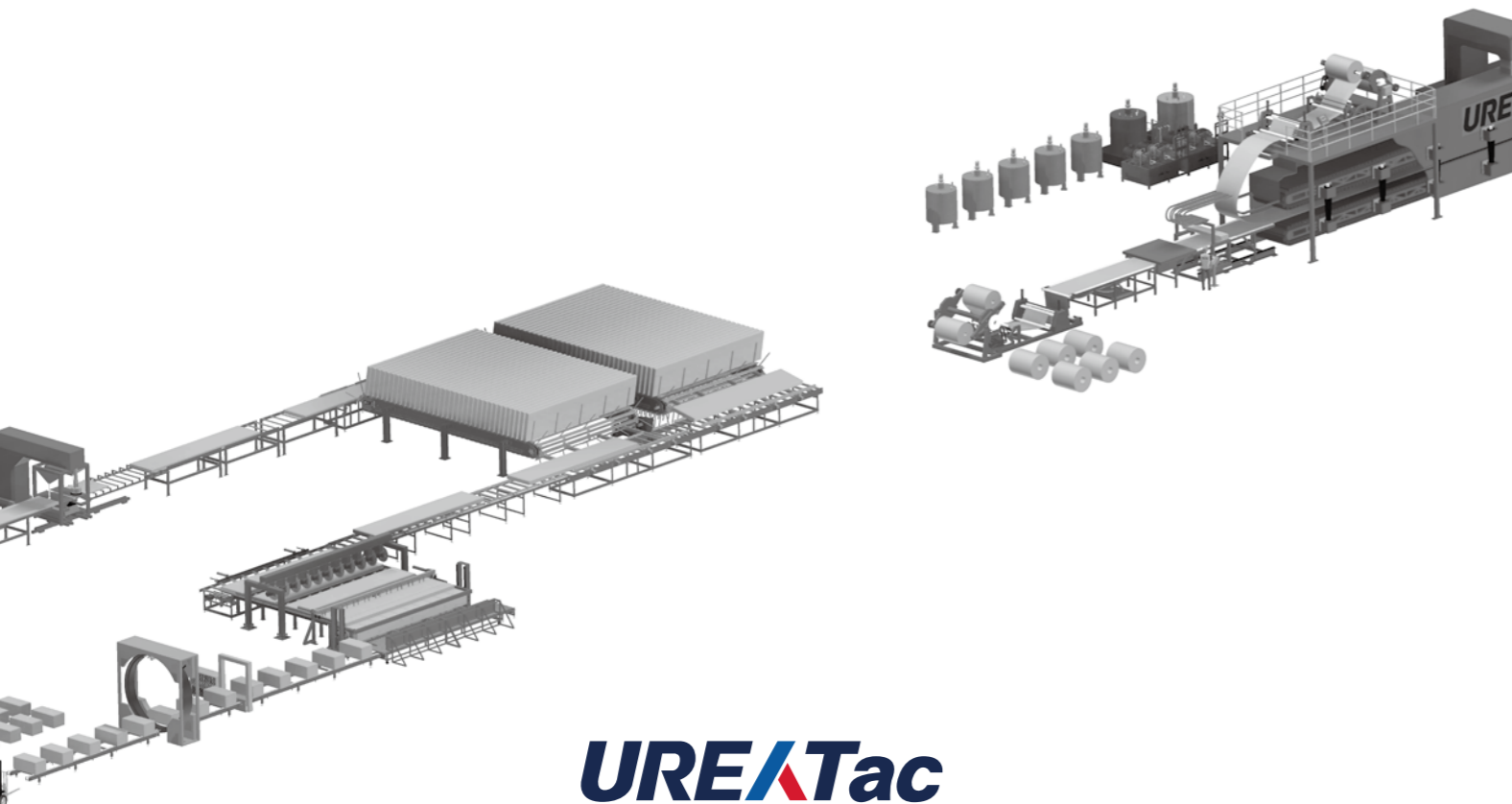


All Kind of Sandwich Panel Production Line



UREATac
UREATac CO., LTD.

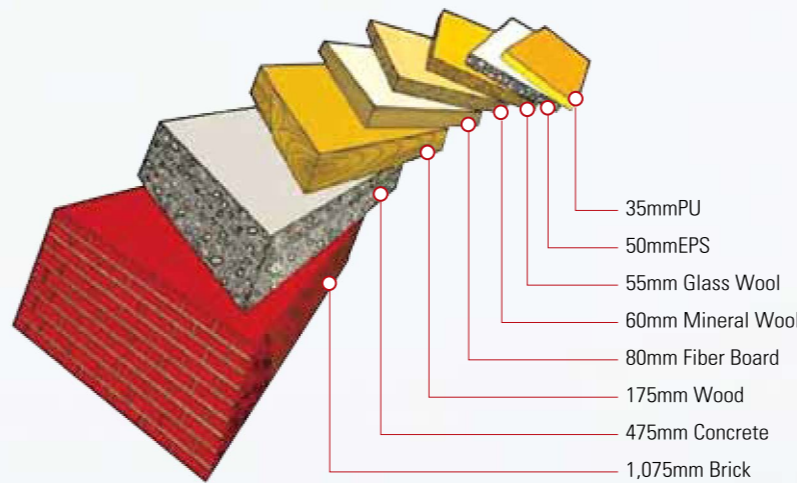
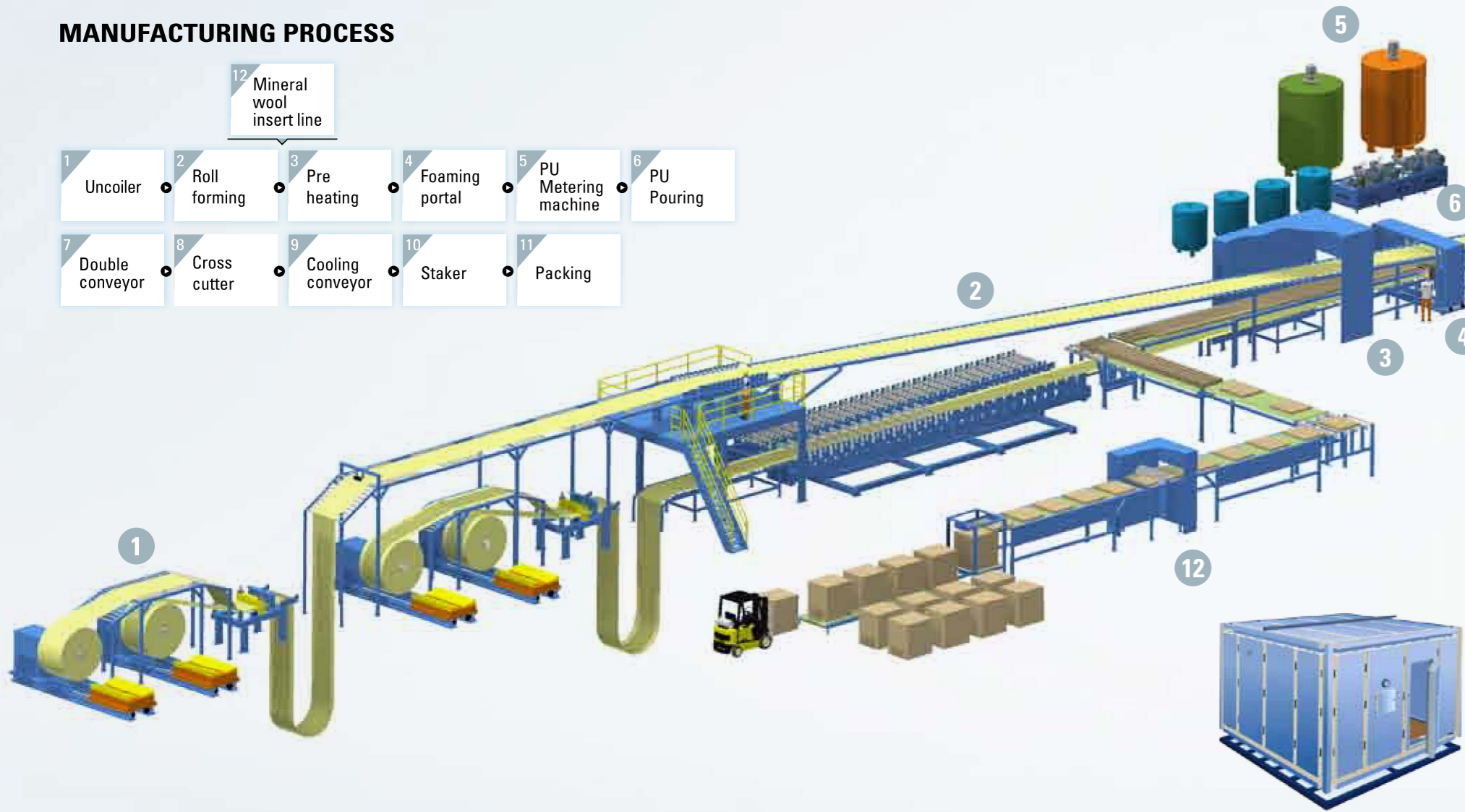
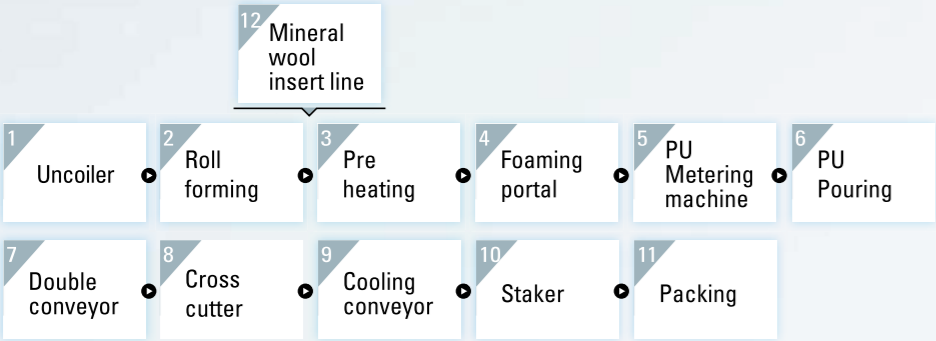
The Creation of Future-oriented Value!
World Standard Competitive Company,
UREATac!

Major Customers



PU Sandwich Panel Production Line

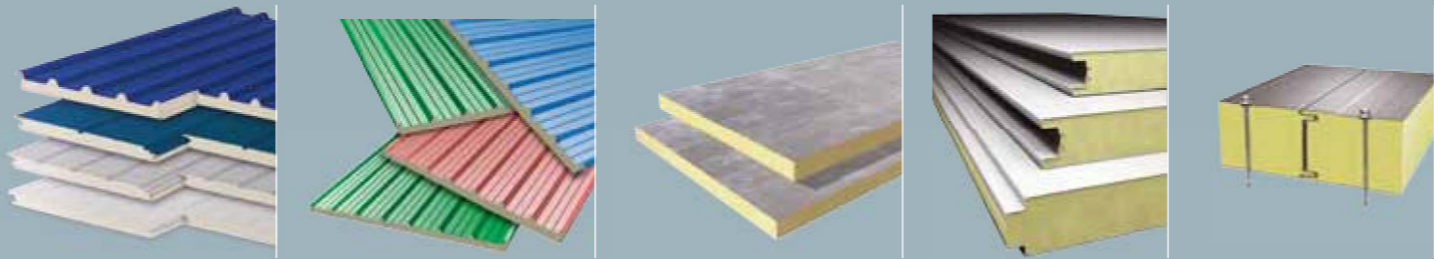
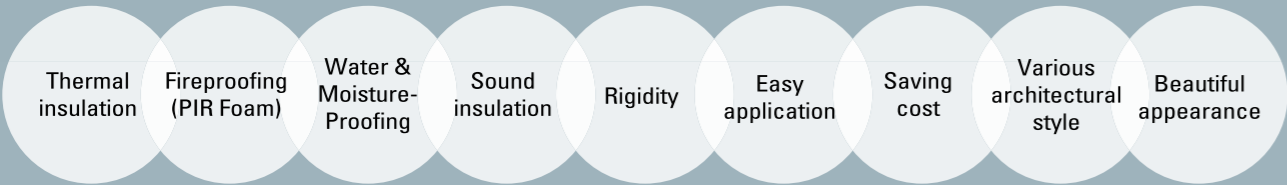
MANUFACTURING PROCESS



PRODUCTION PROCESS

- The production process starts with uncoiling of the upper and lower sheet layer. The two uncoiling groups with two uncoilers each together with an automatic strip connection machine allow a coil change without any plant stop.
- The Roll Forming machine forms the layer to the required shape. The setup of rolls for the lower sheet layer on a coil car enables the production change from wall to roof profiling on the shortest possible time.
- Mineral wool slabs are cut into filler strips, rotated and fed in between the sheet layers during the production of sandwich panels with a mineral wool core. Additional trapezoidal filler strips are cut and inserted to fill the ribs of a roof panel. Both operations are automatic and online.
- After that the sheet layer run though a preheating station and are heated to achieve a uniform reaction of the later
- Two or multi-component high pressure metering machines are dosing the components in the appropriate amount. The even distribution of the foam mix is done with an oscillating coating gantry.
- The steel layers and the mineral wool resp. The reacting foam enter the doble belt. The foam or the glue cures in this slat conveyor which can be seen as a continuously moving mould. The now endlessly formed sandwich ribbon is cut afterwards with a cross cutter to the requested panel length.
- After the cooling of the panels in the cooling conveyor the panels are stacked onto pallets. The finished stacks are automatically stretch-wrapped with PVC foil and can then be taken off from the machine for delivery.
- The de-centralized control system of the entire plant with precess and production data control together with a plant visualization system allows to constantly control all production parameters for constant product quality.

ADVANTAGE OF PUR SANDWICH PANEL



01

Uncoiler

Uncoiler for lower and upper facing. Uncoiler units including coil loader, pressing rollers, band edge control system, band delivery drivers, shearing, band connecting stations, looping station, delivery roller table.

Advantage : Time-saving(and therefore also cost-saving) continuous coil and band exchange standstill of the facility.



02

Roll Forming

Roll Forming machines to shape surfaces and edges of the wall, roof and sectional door elements.

Advantage : Good accessibility and minimum profile exchange times by the serial installation of the profiling machines. Driving the profiling tool sets by means of DC motor including electronic control guarantees the synchronous inlet of the two metal widths into Double Conveyor facility without tension or thrust.



03

Pre Heating



04

Potal & PU Foaming



Foaming Potal to apply the raw material mixture by means of the oscillating mixhead.

Variocontrol drive including intergrated mass balance, longitudinal travelling mechanism for highly accurate adaptation to the production speed, adjustment for the mixhead as to height, exhaustion system for reaction gas.

05

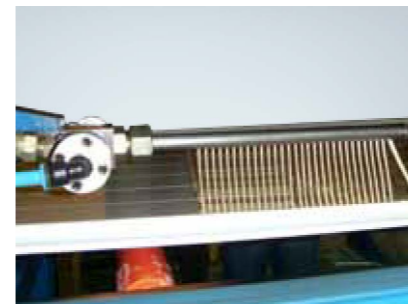
PU Foaming Machine & Tank Station

PU Foaming Machine Axial piston, series piston, single piston and diaphragm pumps to process the different components. Design of the entire "Wet part" complying with the environmental requirement.



06

PU Pouring



07

Double Slat Conveyor



Double Conveyor Guarantees optimal surface quality of the facings.

Advantage : Torsionally rigid framework construction permits maximum foaming pressure. Precise production accuracy guarantees exact evenness and parallelism of upper and lower conveyors. Ground supporting steel lates prevent geometric impressions on the facings.

Special surface treatment of the plate surface.

07-1
Side Block



07-2
Heating System



08
Cross Cutter

Cross Cutter to cut the continuous element hank to preprogramed lengths. Belt saw for longitudinal saw and cut edge cleaning machine as well as sound insulation cabin, exhaustion device and filtering installation.



09
Cooling Conveyor

Advantage : Program controlled stacking to optimize stacks of element to meet product users' requirements.
Use of vacuum suction device to treat element surface with care as well as for

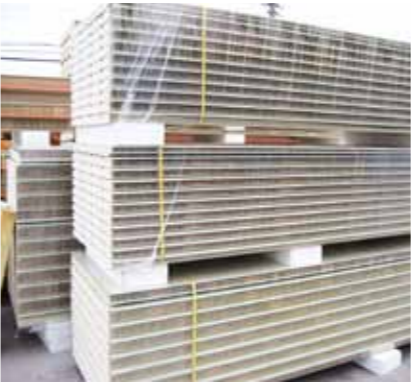


10
Stacker

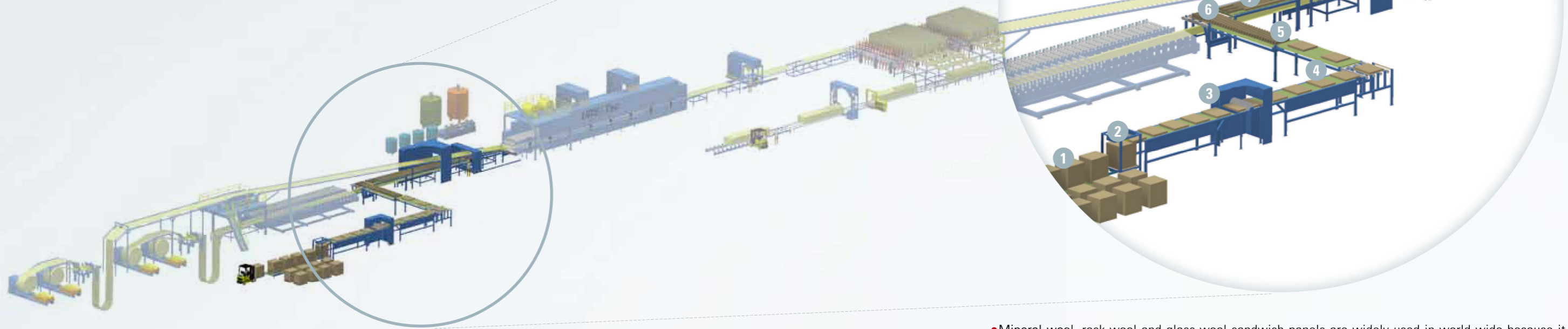
Crosshead design for separate stacking of 1A and 2A rated products.



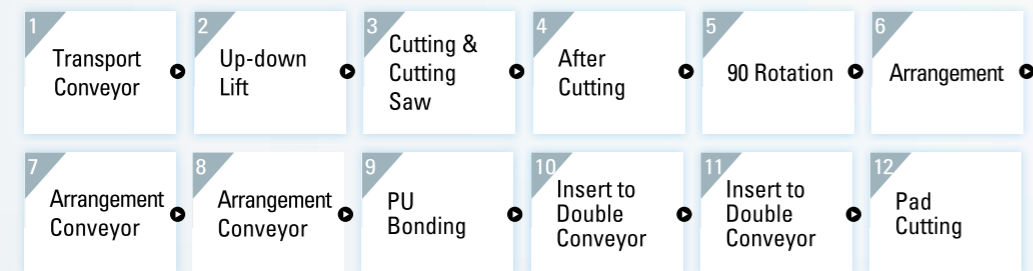
11
Packing



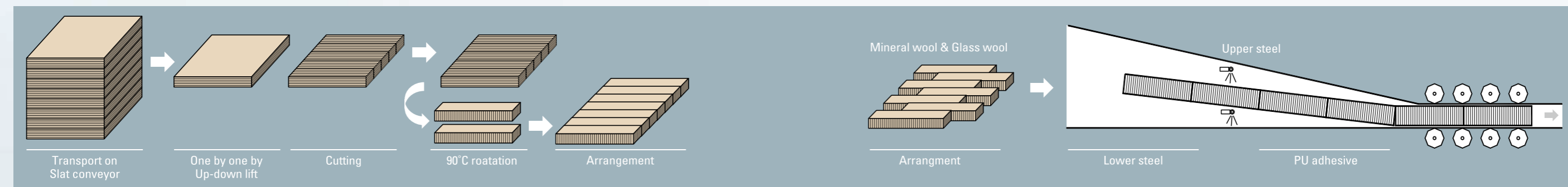
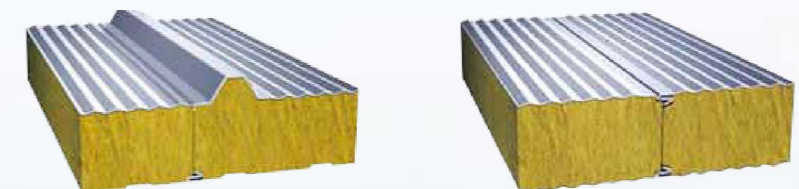
Mineral Wool(Glass Wool) Sandwich Panel Production Line



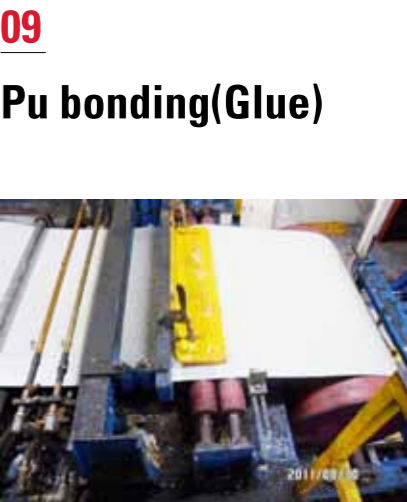
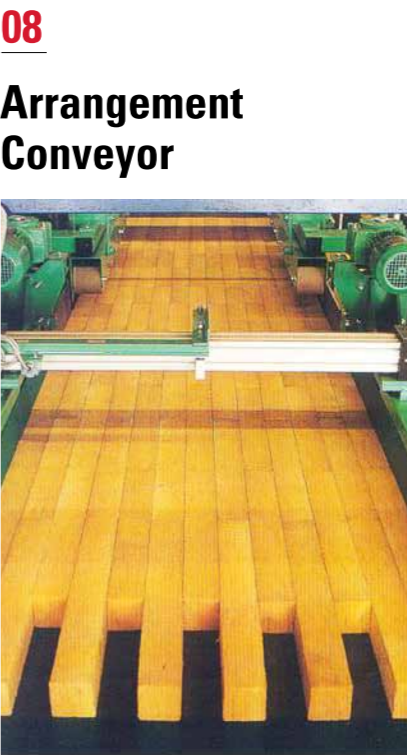
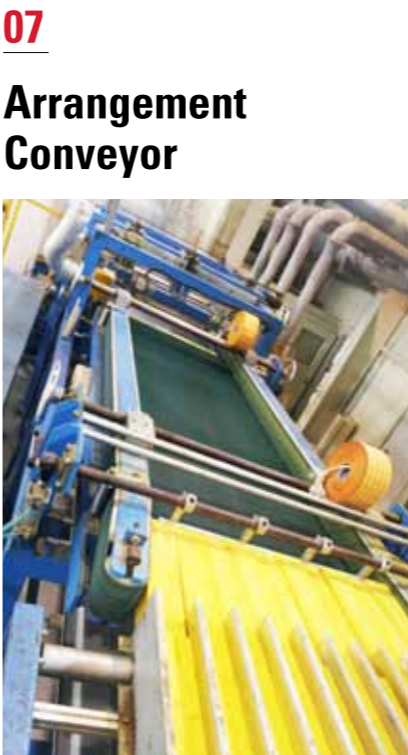
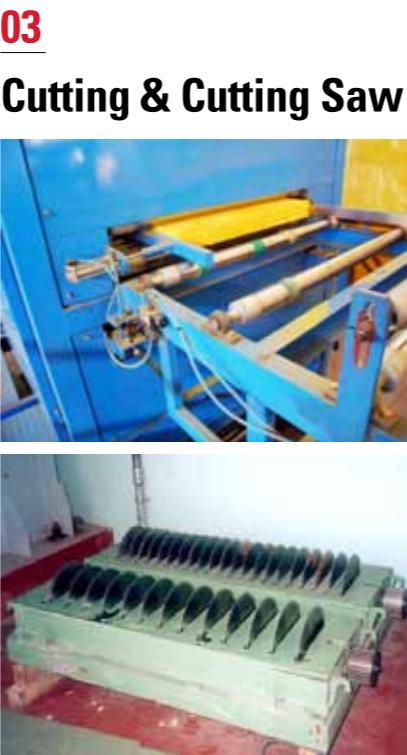
MANUFACTURING PROCESS



- Mineral wool, rock wool and glass-wool sandwich panels are widely used in world wide because it has excellent nonflammability, sound absorption and high strength, and it doesn't make a toxic gas against fire.
- UREATac mineral wool and rock wool sandwich panel production line is a fully automation equipment system to produce various shapes of sandwich panels continuously and efficiently using mineral wool, glass wool and rock wool as a core material.
- UREATac mineral wool and rock wool sandwich panel production line are already recognized its value by sandwich panel producing companies with various technical researches and a level services.

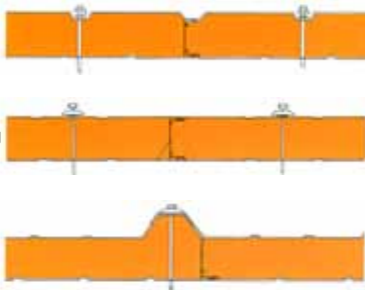


01
Transport Conveyor

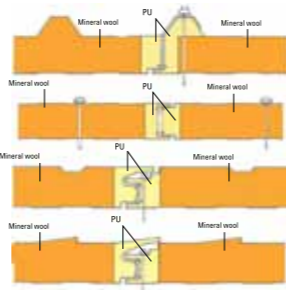


Mineral Wool Panel

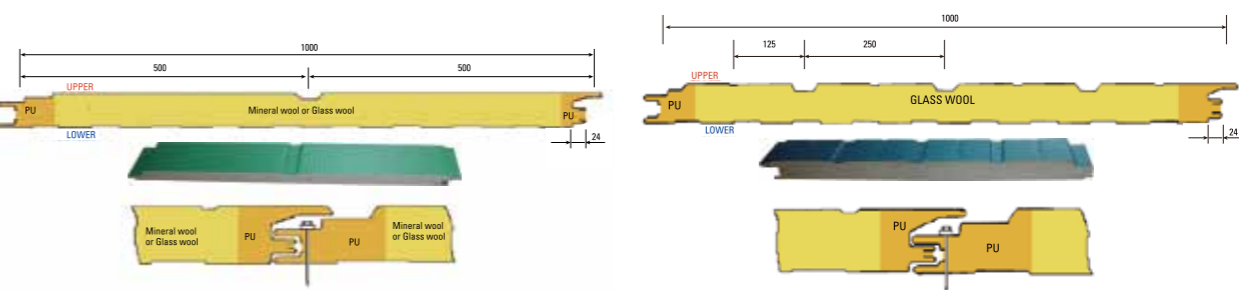
- Wall & RP
- Wall-grooving & SS
- Roof



Mineral Wool + PU Panel

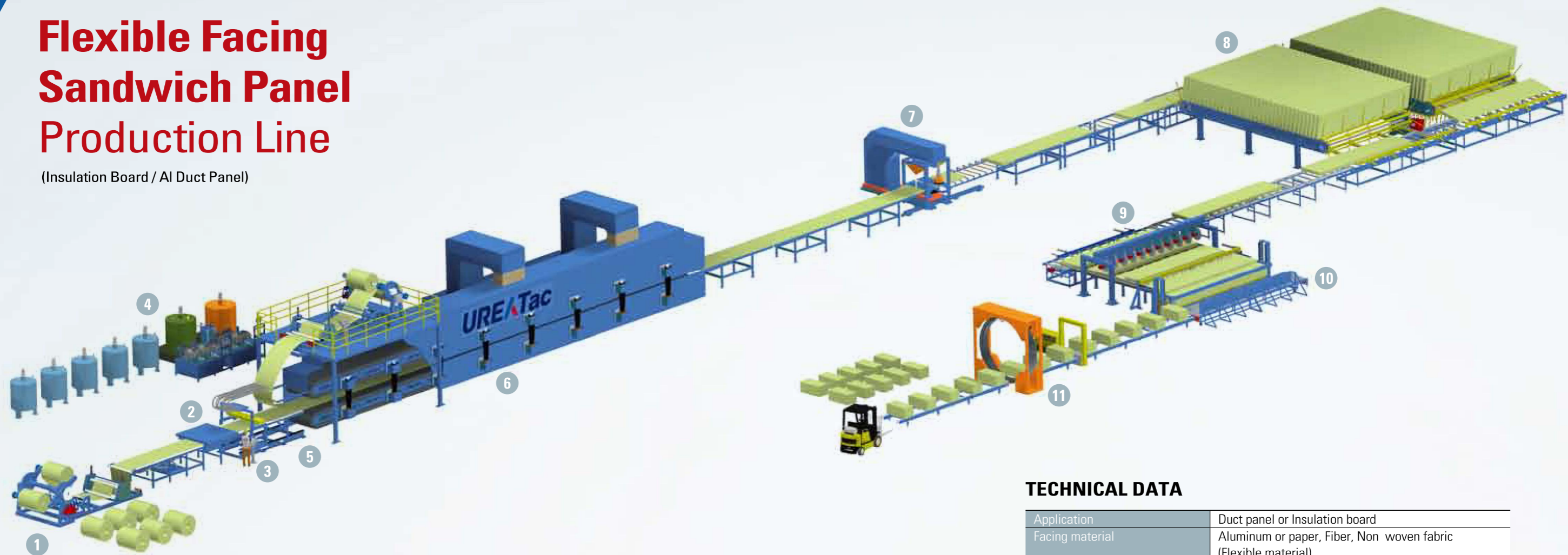


Mineral Wool + PU Panel(Boltless Wall Panel)

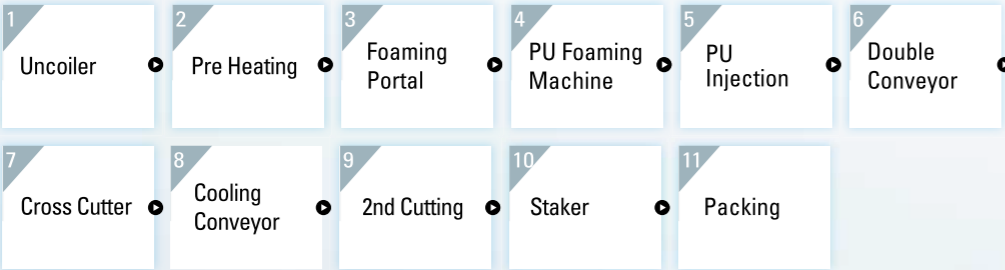


Flexible Facing Sandwich Panel Production Line

(Insulation Board / AI Duct Panel)

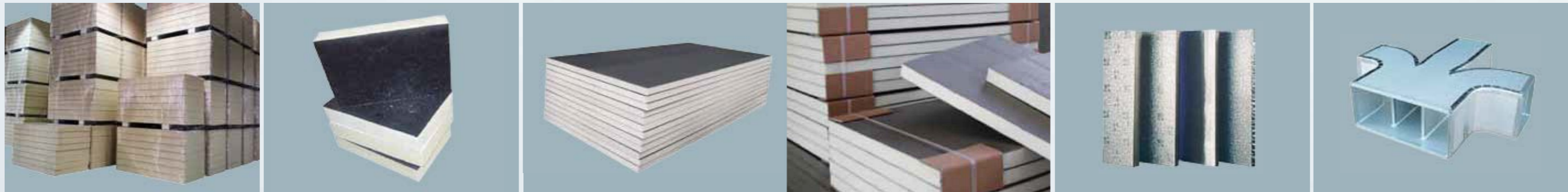


MANUFACTURING PROCESS



TECHNICAL DATA

Application	Duct panel or Insulation board
Facing material	Aluminum or paper, Fiber, Non woven fabric (Flexible material)
Production speed	5~40 m/Min
Working height	approx. 1.200mm
Panel width	1,200mm
Panel thickness	15~150mm pressure machine
Foam system	PUR or PIR Rigid foam
Foam density	Approx. 35~65 kg/m³
Length of double conveyor	20~40m
Building Inner height	6m
Factory length	70~120m
Factory width	20~25m
Electric consumption	400 kw
Required man power	5men



01

Uncoiler

Uncoiler is drive type, and is installed two each at the upper part and the lower part separately. It is very difficult for the flexible facing such as paper, mineral shear non woven, aluminum foil differently on steel plate to entry into a double belt conveyor when it is untied from uncoiler. So, auto centering device(E.P.C.) and tension control device should be installed to the uncoiler.

Facing materials : Soda kraft paper, Aluminium foil, mineral shear non oven, etc.



03

Foaming Portal

The oscillating movement of the mixing head is essential to achieve an optimum application of the PU or PIR-mixture onto the lower facing layer.

The mixing head is actuated by means of an A.C servo motor and its toothed belt enables a fre programmable oscillating movement across the total panel width.



04

PU Foaming Machine

It is designed for mixing and metering the raw material Polyol, Iso, Pentane, Additive and Catalysts.



02

Pre Heating

The simple preheating device by infrared rays or quartz heater should be installed which is safety for a fire.

Because the chemical reaction of the urethane is activated at the proper temperature, preheating facing with proper temperature before foaming the urethane liquid is a important process that makes the chemical process of Urethane more activated and makes the adhesive strength better.



05

PU Injection

PU material is outputted from outlet pipe of the mixing head onto the lower facing layer while moving crosswise along the Foaming Portal (Coating Gantry)



06

Double Conveyor



The double belt is designed to contain the uprising pressure during the foam reactive process by the action of a screw jack ensure the required flexible facing panel thickness.

The double belt conveyor conveys a continuous panel from PU foaming portal to the cutter while containing upper, lower and lateral uprising pressure while keeping up the uniform thickness and facing of the finished panel.

06-1

Heating System

PU foam dispensed between the upper and lower coil has the perfect chemical reaction and curing process at regular temperature. This unit is designed for providing a heated air to maintain a regular temperature for such process.

Gas boiler or electric heater system is the ideal power for heating device that must provide the heated air separately to the upper and lower slat conveyor.



06-2

Side Block

This unit is designed for preventing PU foam from leaking out of panel lateral by a set of plastic blocks and maintaining uniform foaming while double belt conveyor presses PU foaming pressure and conveys PU panel.

The plastic block of side block takes panel lateral and the required kinds of plastic blocks are made by the required panel thickness.



07

Cross Cutting

The perfect cutting unit has to have the cutting speed is synchronized with the panel conveying speed.

This cutting unit has to be also operated by the manual or automatic control.

The gantry is set at the rear and the saw unit is positioned at the right-hand side as viewed from direction of production. In this position, the band saw blade may also be exchanged.



08

Cooling Conveyor

When customer want to produce PIR panel, this cooling conveyor is necessary to cool down the heat of PU panel. In the production of PIR panel (self extinguishing panel), which is produced a lot recently, as it reacts at higher temperature and generates more heat than general PU panel, cooling conveyor to cool the panel just produced down gradually at room temperature is needed. If the panel is not cooled down into load, there is a high chance of panel's contraction and transformation.



09

2nd Cutting



10

Stacker



11

Packing

This is packing machine by PVC wrapping or shrinkage film and PP bending the filed panels by stacker.

This is the last manufacturing process of board panel line.



12

Al Duct Panel Production Line



12-1

PU Injection for Al Duct Panel



12-2

Embossing Machine



Discontinuous Panel Production Line

Cold Room Panel Production Line
(2+2 System)



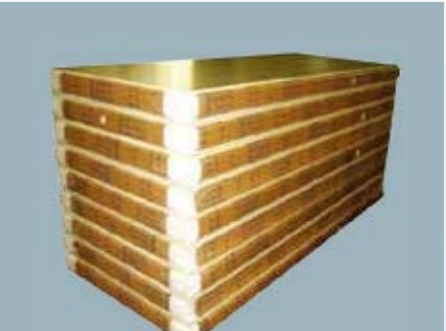
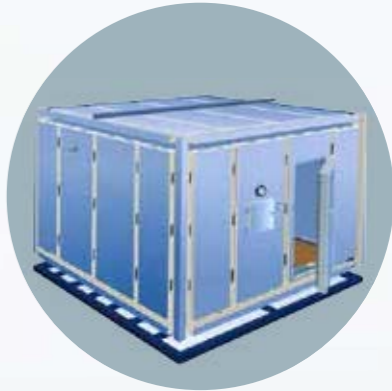
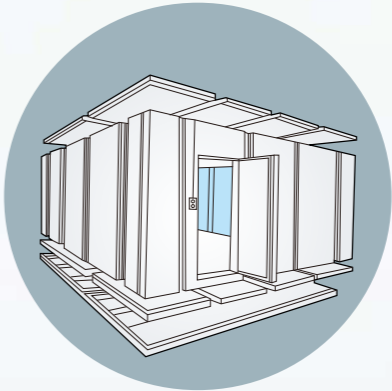
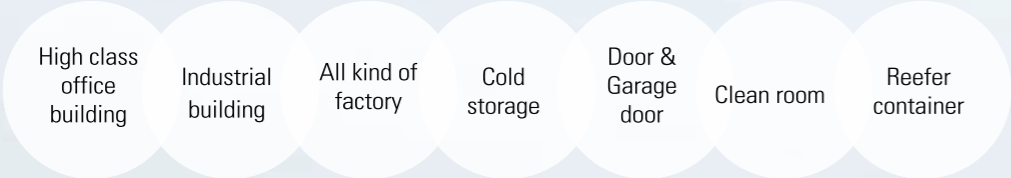
MANUFACTURING PROCESS



THE SPECIFICATION OF PANEL & STEEL

Coil	Color coated or stainless steel
Steel thickness	0.45 ~0.8mm
Panel width	400 ~1,200mm
Panel length	1.5 ~ 12m
Panel thickness	50~200mm

USAGE



01-02

Upper and Lower Platen



03

Pressing Machine



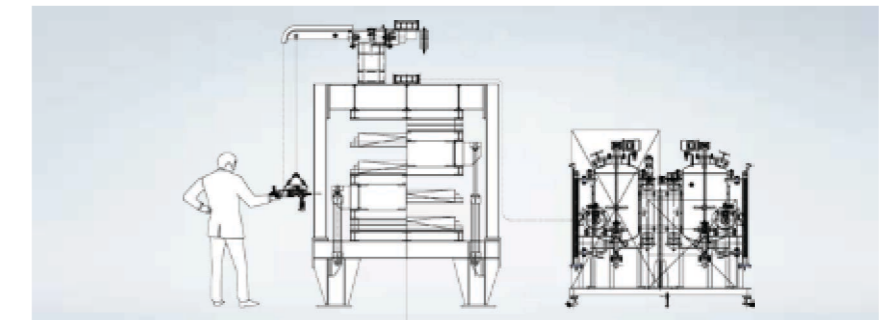
04

PU Foaming Machine



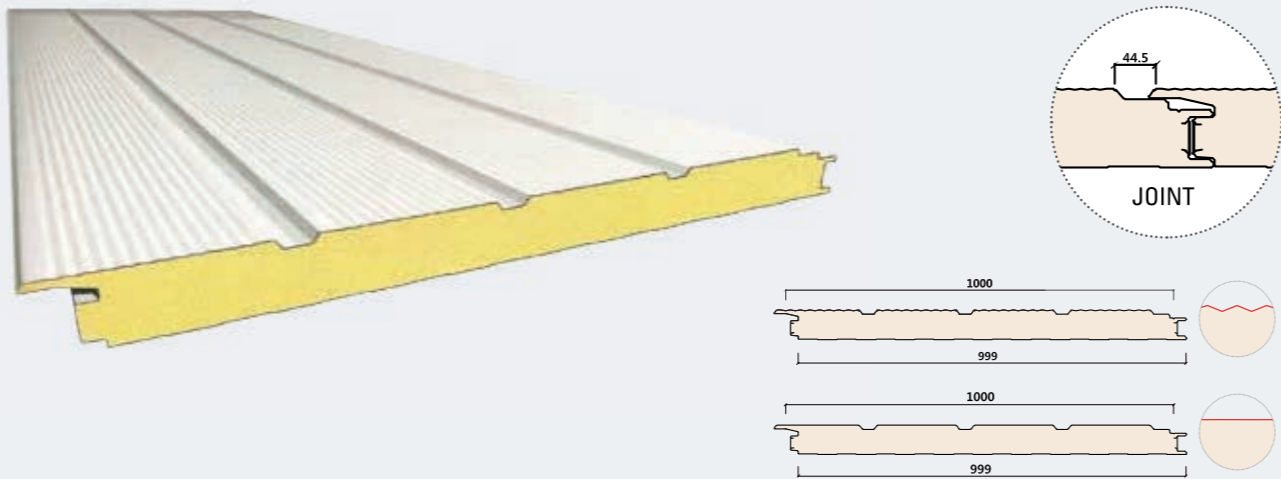
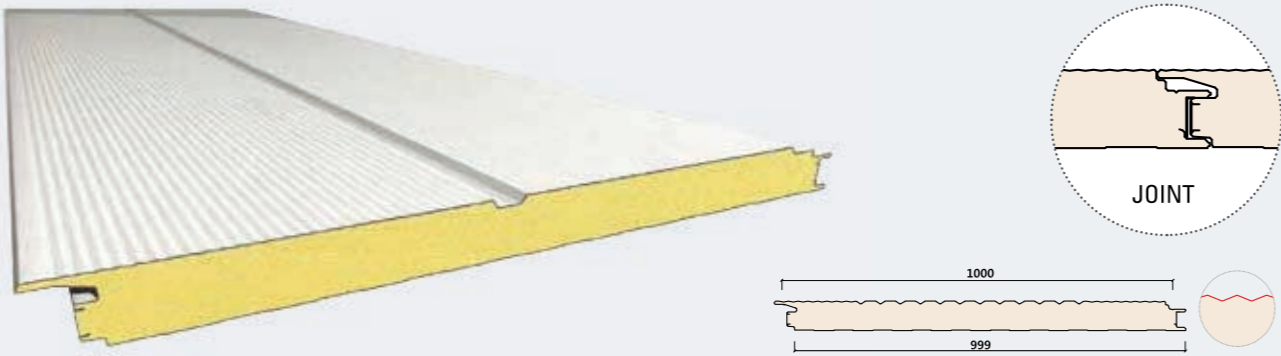
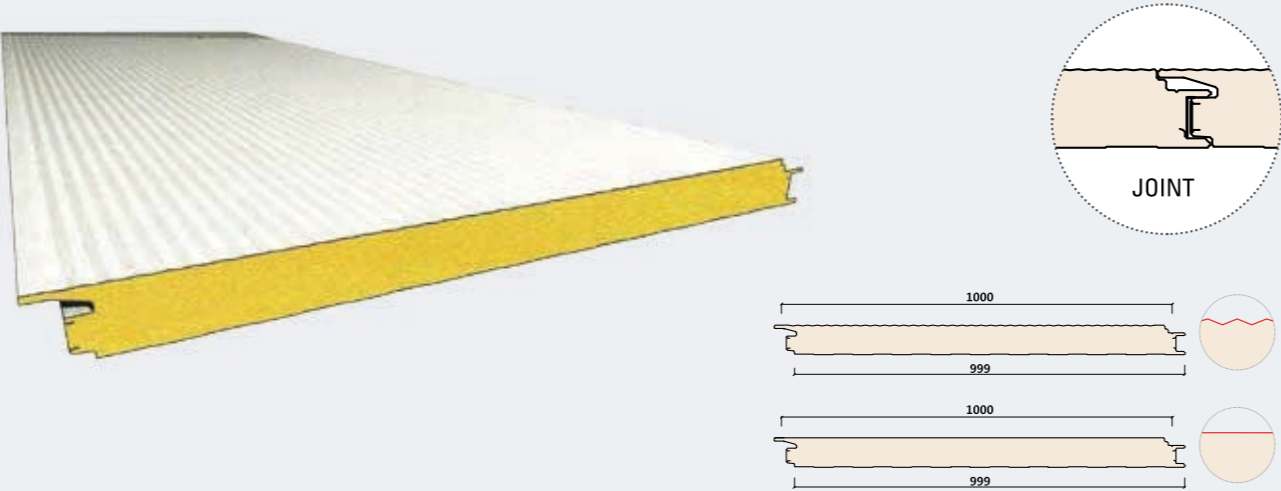
05

PU Injection

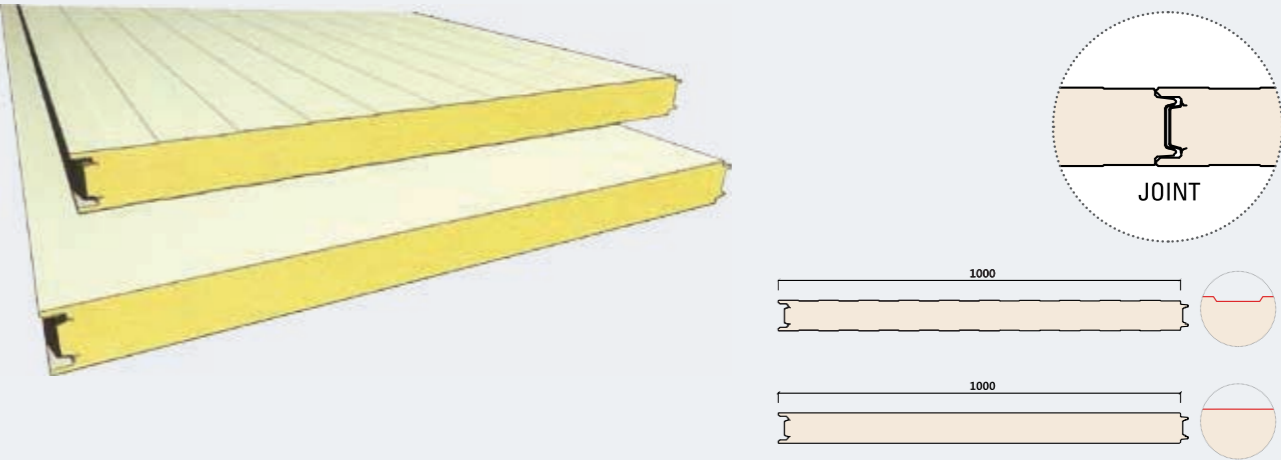


PU SANDWICH PANELS

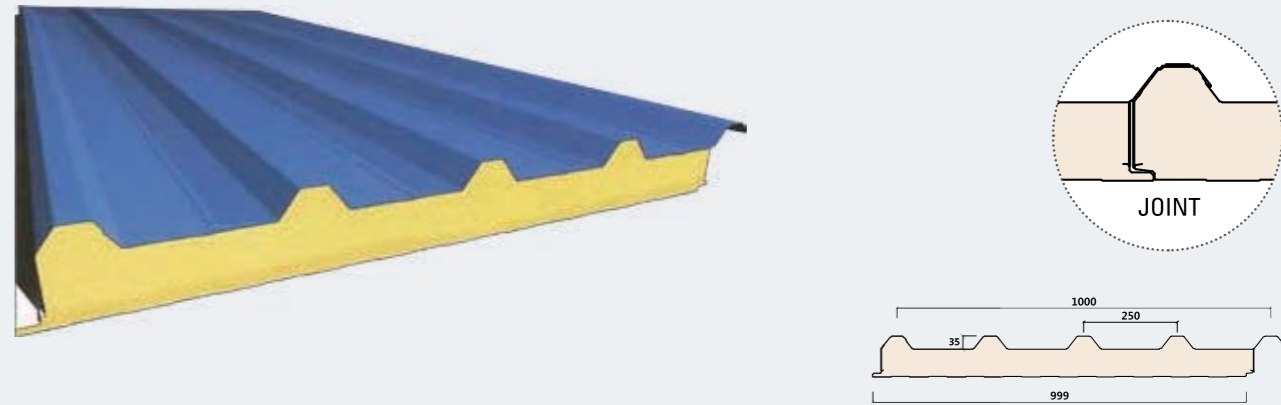
BOLTLESS WALL PANEL



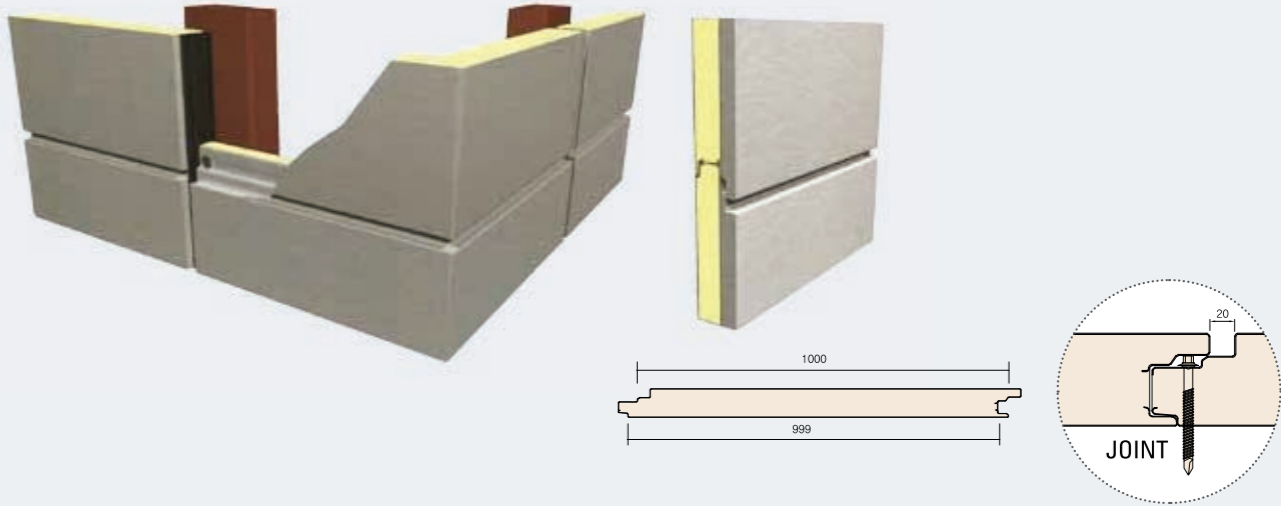
WALL(SS, COLD ROOM) PANEL



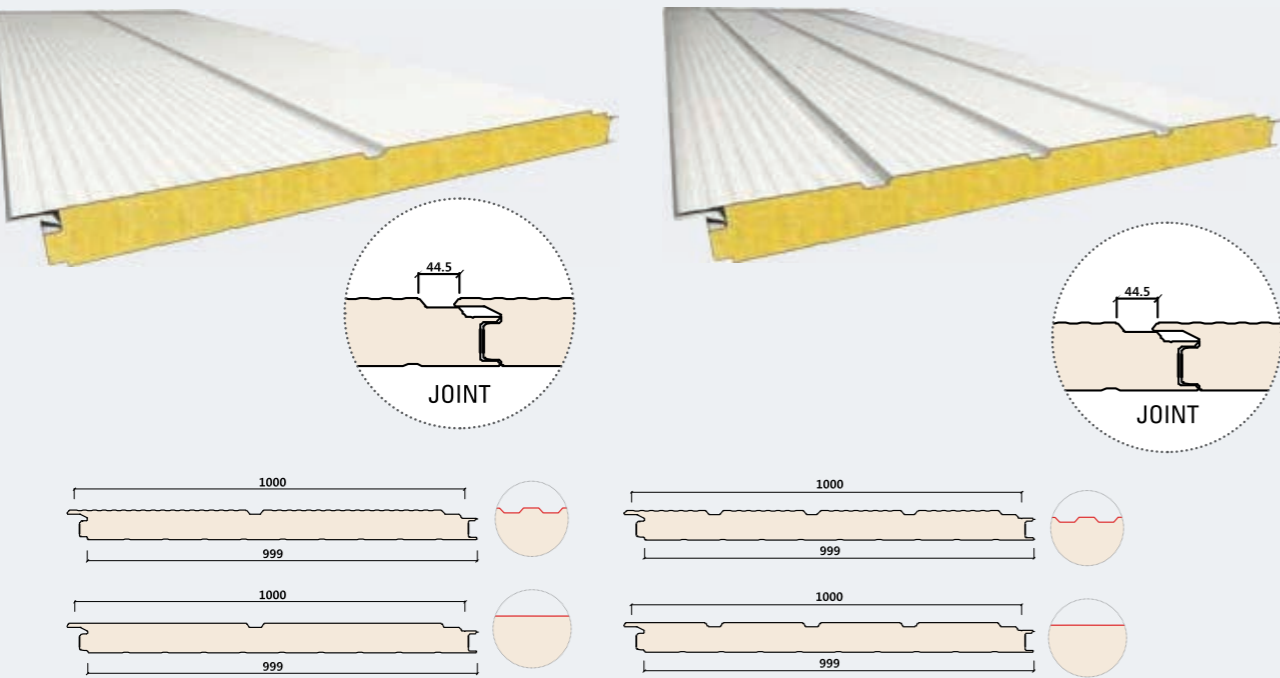
ROOF PANEL



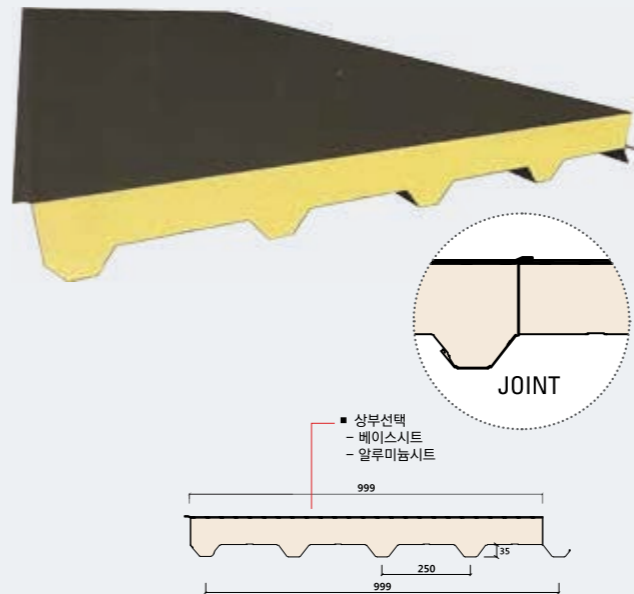
METAL PANEL



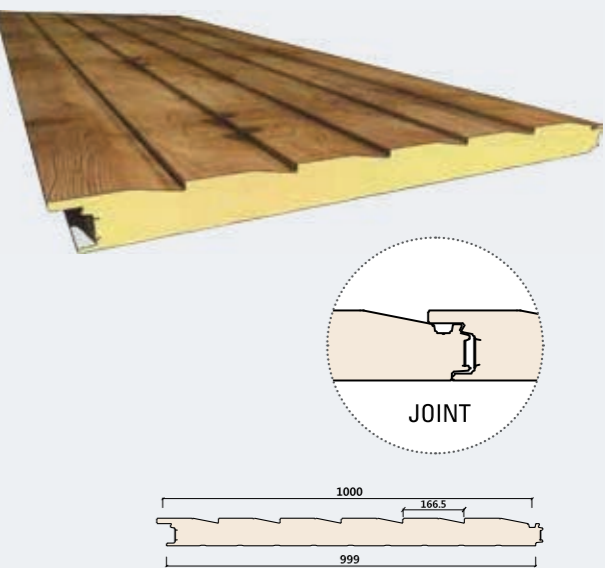
MINERAL WOOL PANEL(BOLTLESS)



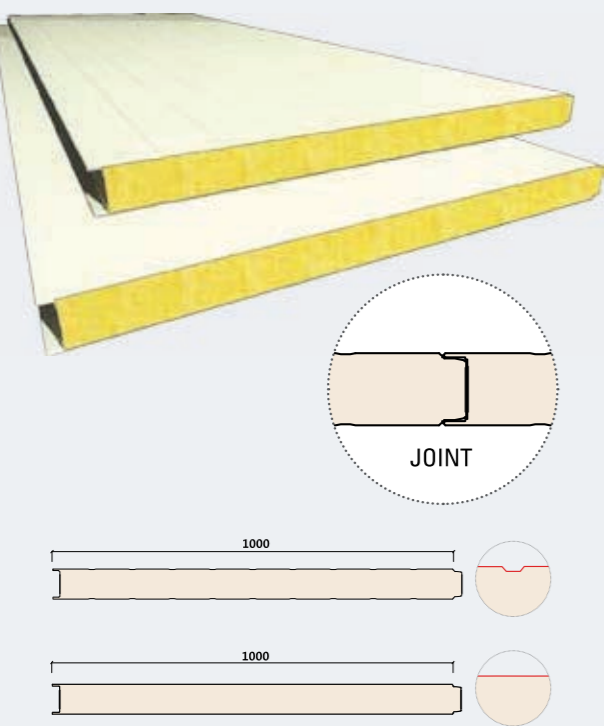
PU DECK PANEL



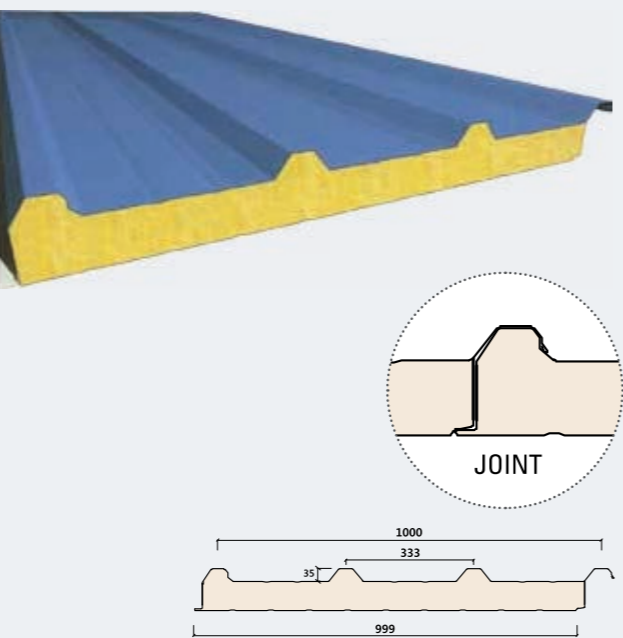
PU SIDING PANEL



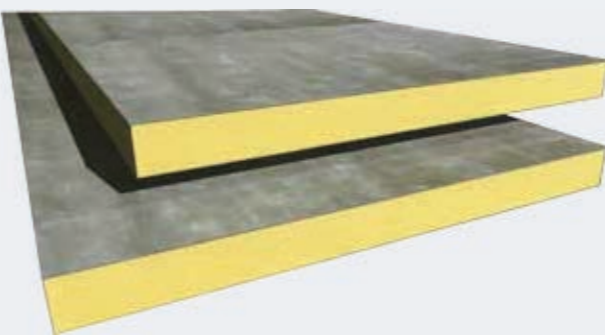
MINERAL WOOL WALL PANEL



MINERAL WOOL ROOF PANEL



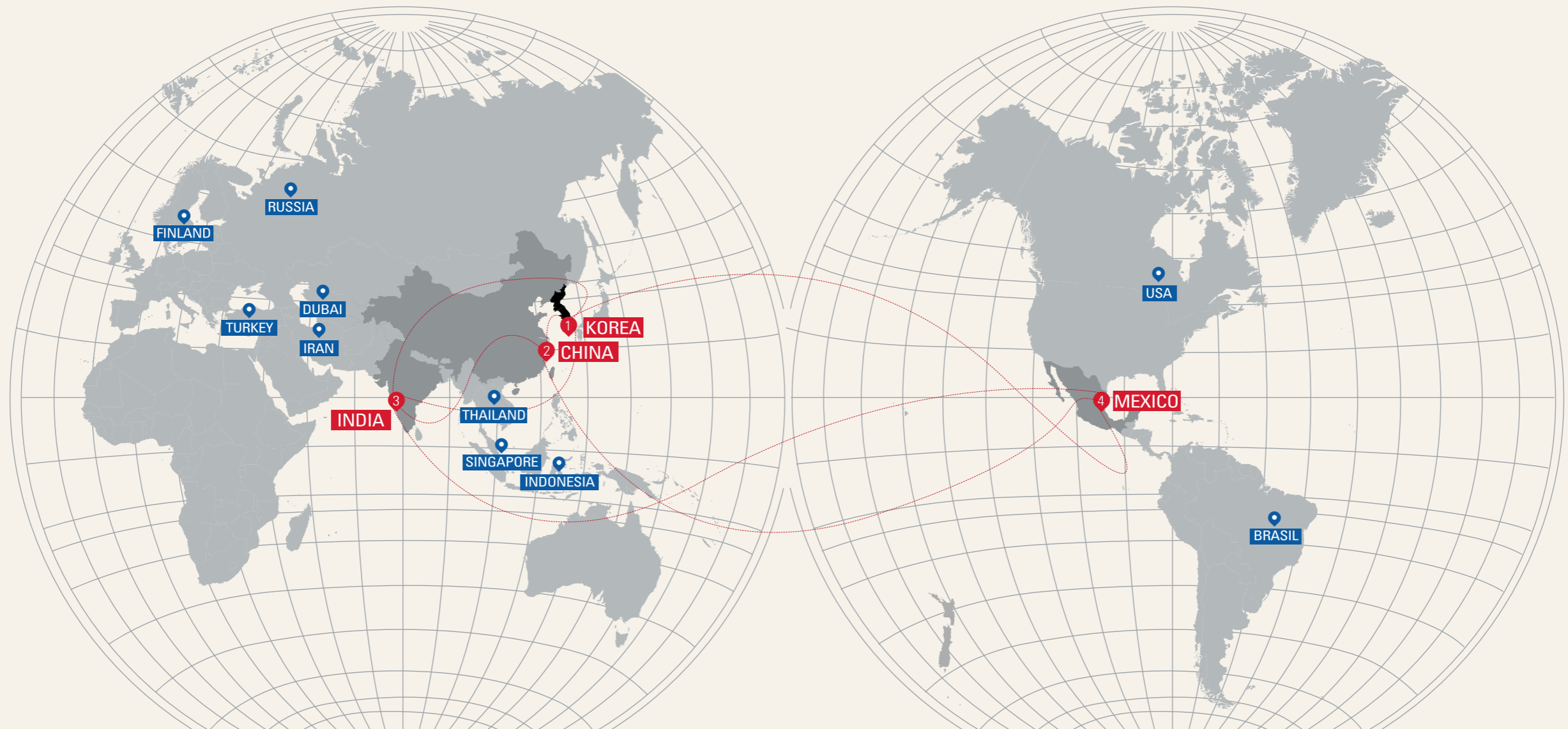
PU BOARD PANEL



PU AL DUCT PANEL



The Global UREATac!



1 UREATac KOREA

108, Jayumyeok 3-gil, MasanHoewon-gu, Changwon-si, Gyeongsangnam-do, Korea
TEL : +86-55-261-9110
FAX : +82-55-261-9188
E-mail : sales@ureatac.co.kr



2 UREATac CHINA

No.30, Wupu Road, Suzhou Industrial Park, Jiangsu Province, China)
TEL : +86-512-6281-8699
FAX : +86-512-6281-8799
E-mail : taihao0903@163.com



3 UREATac INDIA

Sr. No. 33, Office No. 404, 4th floor , Building A, East Court, Phoenix market City, Nagar Road, Pune-411014.
TEL : +91-20-62090500
FAX : +91-20-67090500
E-mail : sanchit.k@ureatacindia.com



1st Factory



The 2nd Factory

4 UREATac MEXICO

Lbs Monterrey Mexico.S.A de C.V
AVE.Luis Donaldo colosio NO.288-A, Desarrollo Industrial el sabinal, Apodaca N.L Mexico C.P. 66640
TEL : +52-81-8145-3501
FAX : +52-81-8145-3501
E-mail : ventas@lbsmm.com.mx



UREATac CO., LTD.

UREATac CO.,Ltd.

108, Jayumuyeok 3-gil, MasanHoewon-gu,
Changwon-si, Gyeongsangnam-do, Korea

TEL : +82-55-261-9110 | FAX : +82-55-261-9188

E-mail : sales@ureatac.co.kr

UREATac CHINA

(Suzhou UREATac Technology CO.,Ltd.)

中国江苏省苏州市工业园区吴淞路30号
(No.30, Wupu Road, Suzhou Industrial Park,
Jiangsu Province, China)

TEL : +86-512-6281-8699 | FAX : +86-512-6281-8799

E-mail : taihao0903@163.com

UREATac INDIA

(UREATac India Pvt. Ltd.)

Sr. No. 33, Office No. 404, 4th floor , Building A,
East Court, Phoenix market City, Nagar Road,
Pune-411014.

TEL : +91-20-67090500 | FAX : +91-20-67090500

E-mail : sanchit.k@ureatacindia.com

UREATac MEXICO

(Lbs Monterrey Mexico.S.A de C.V)

Lbs Monterrey Mexico.S.A de C.V
AVE.Luis Donaldo colosio NO.288-A, Desarrollo
Industrial el sabinal, Apodaca N.L Mexico C.P. 66640

TEL : +52-81-8145-3501 | FAX : +52-81-8145-3501

E-mail : ventas@lbsmm.com.mx