



CORPORATE
PROFILE
LAMINATION



“Value your time”

Luigi Baldassin

CORPORATE **LINES** AND **PROCESS**

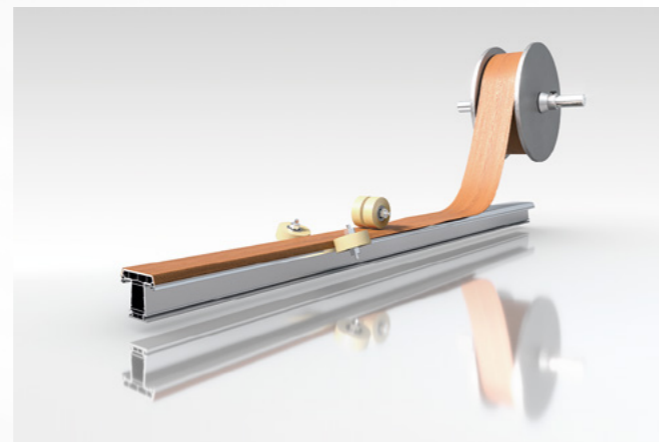
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WPR was born from Remo Baldassin's dream to live by doing what he loves. This is how a simple dream has turned into a company that has become the leading producer of wrapping machines for profiles and panels.



REMO BALDASSIN
CEO



With the ambitious objectives of making the operators' working lives easier, increasing company profitability and creating new applications, WPR has conquered the world of profile wrapping and made countless friends.

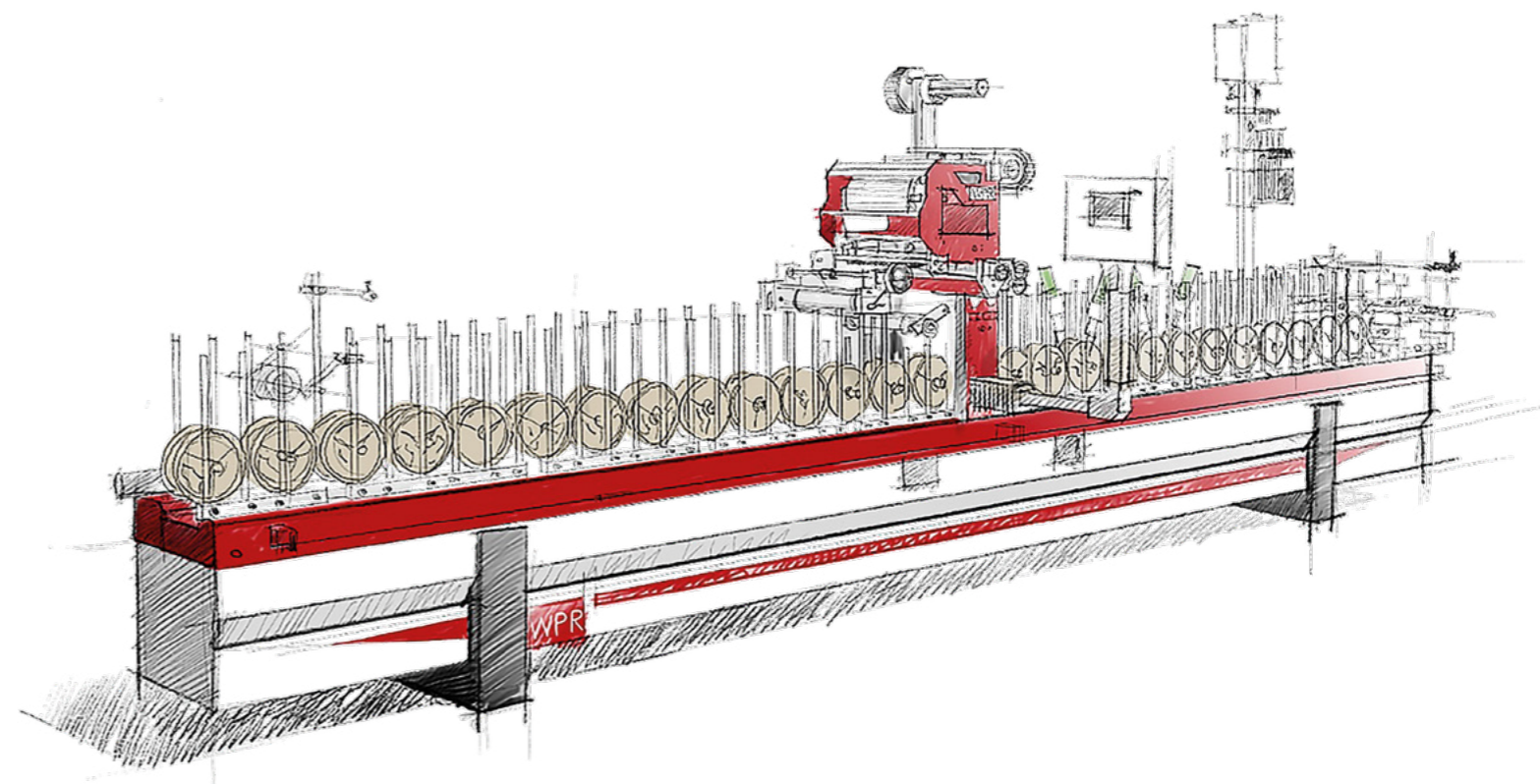


WPR/TAKA IN THE WORLD



Our machines provide impeccable wrapping results on an extensive range of materials including PVC, aluminum, MDF, solid wood, and chipboard guaranteeing high productivity and flexibility to meet the specific needs of each client.

OUR MISSION IS SIMPLE: TO MAKE OUR CUSTOMER'S SMILES THE CENTER OF EVERY SINGLE IDEA!



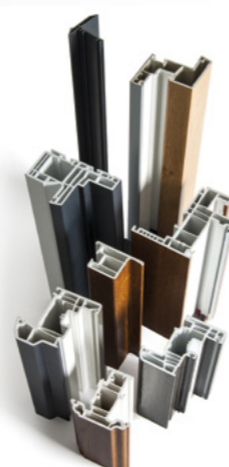


ALWAYS READY FOR NEW CHALLENGES! PLANNING FOR TOMORROW, INSPIRED BY STRONG PRINCIPLES

"Since I was young my family's entrepreneurial spirit has stuck with me: based on that, I have developed a whole career based on a passion for the world of chemistry"
– Giorgio Costenaro

In 2003 emerging new markets gave us the opportunity to develop synergy with WPR, already a leader in profile wrapping technology for many years. WPR's technical expertise and knowledge of the market together with a drive to invest in growth resulted in the first and only company to offer a complete package to customers, WPR/TAKA.

The collaboration between the Costenaro family and the extended WPR family led to the establishment of new production plants not only for reactive polyurethane adhesives but also for key raw materials. Located in the North-East of Italy, TAKA is steps away from the main ports and at the crossroads of some of the most historically important trading routes. Always within reach of the customers, TAKA has become the center of excellence for research and development.



REMO BALDASSIN
CEO



GIORGIO COSTENARO
CEO

Giorgio Costenaro's mission in a world of continuous change is passing on his experience, passion, perseverance, respect, love and dedication to work to his son and future generations.



GIACOMO COSTENARO
RESEARCH AND DEVELOPMENT



THREE MODERN PRODUCTION FACILITIES PROVIDE VAST CAPACITY,
PERFECT TIMING AND MAXIMUM QUALITY.



TAKA 1
PRODUCTION
OF SPECIAL
HMPUR



TAKA 2
PRODUCTION
OF RAW
MATERIALS



TAKA 3
PRODUCTION
OF HMPUR
AND LOGISTICS



OUR STRENGTH:

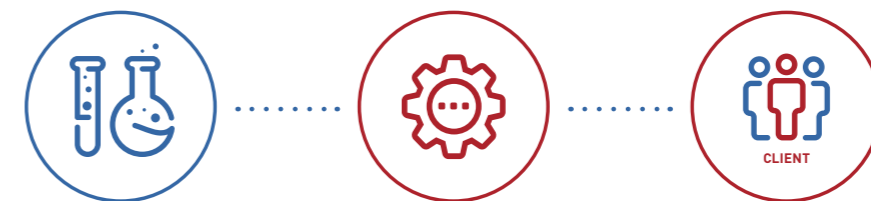
WPR/TAKA is the only company in the world to bring together the manufacture of wrapping machines with the production of high quality adhesives. We provide our clients with an unparalleled knowledge of the entire profile and panel wrapping process. Consequently, we are committed to offering systems and services that guarantee reliable production down to the last detail.



COMPREHENSIVE KNOWLEDGE OF CHEMISTRY AND MECHANICAL ENGINEERING **ENABLES US TO DEVELOP CUSTOMIZED SOLUTIONS.**

WPR/TAKA'S KNOWLEDGE AND EXPERIENCE INTEGRATES ALL **ASPECTS OF WRAPPING TECHNOLOGY:**

hot melters, slot nozzles, wrapping machines and adhesives, provide our clients with a single partner dealing with all aspects of the wrapping process. Our team of experts offers extensive service: from technical assistance and modernization of production lines to application consultation and personalized training courses.



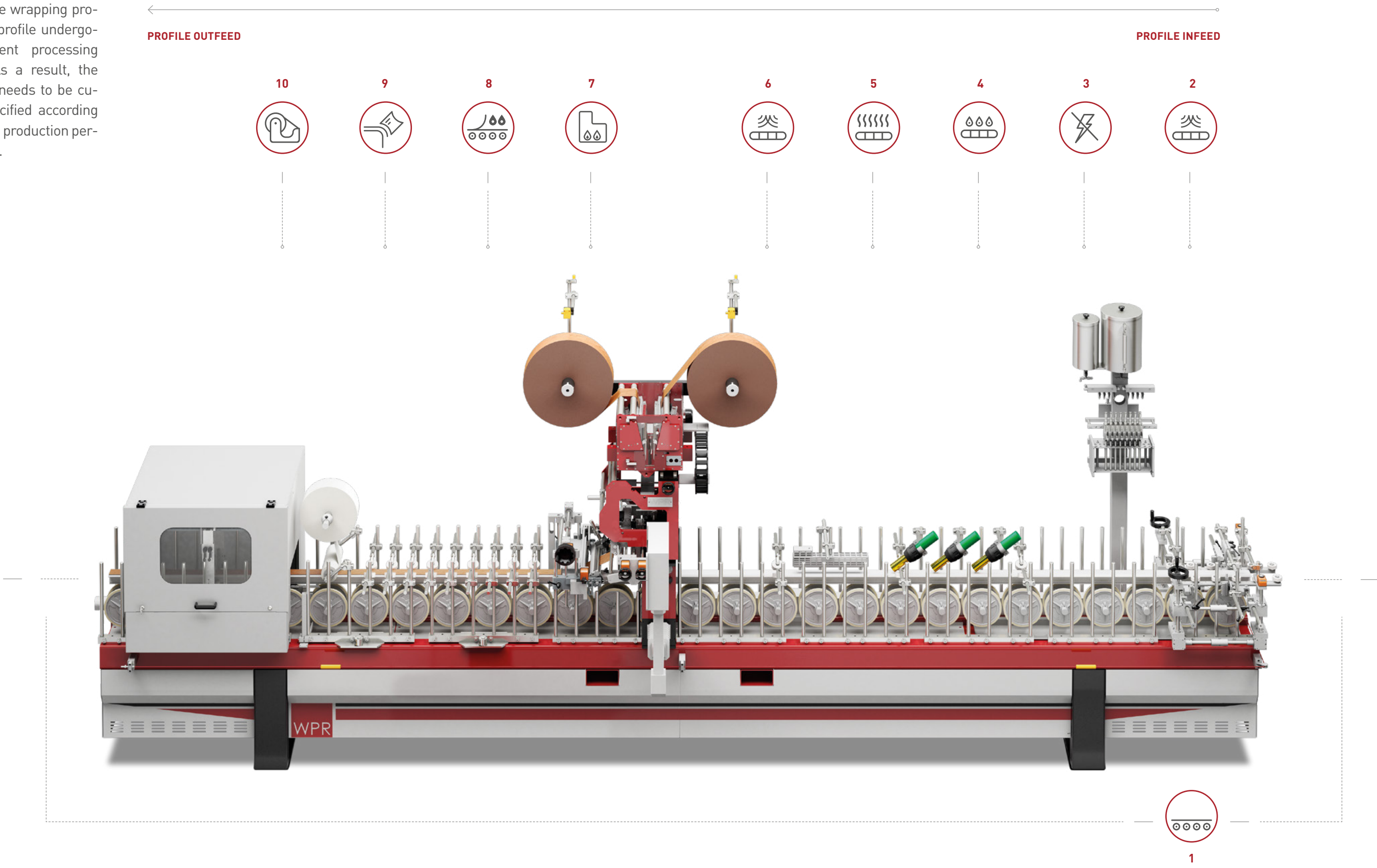
OUR APPLICATIONS
ARE ALWAYS **BY YOUR SIDE:**



 FIND OUT HOW THE 
WRAPPING PROCESS WORKS 

WRAPPING MACHINES FOR **EXTERIOR**

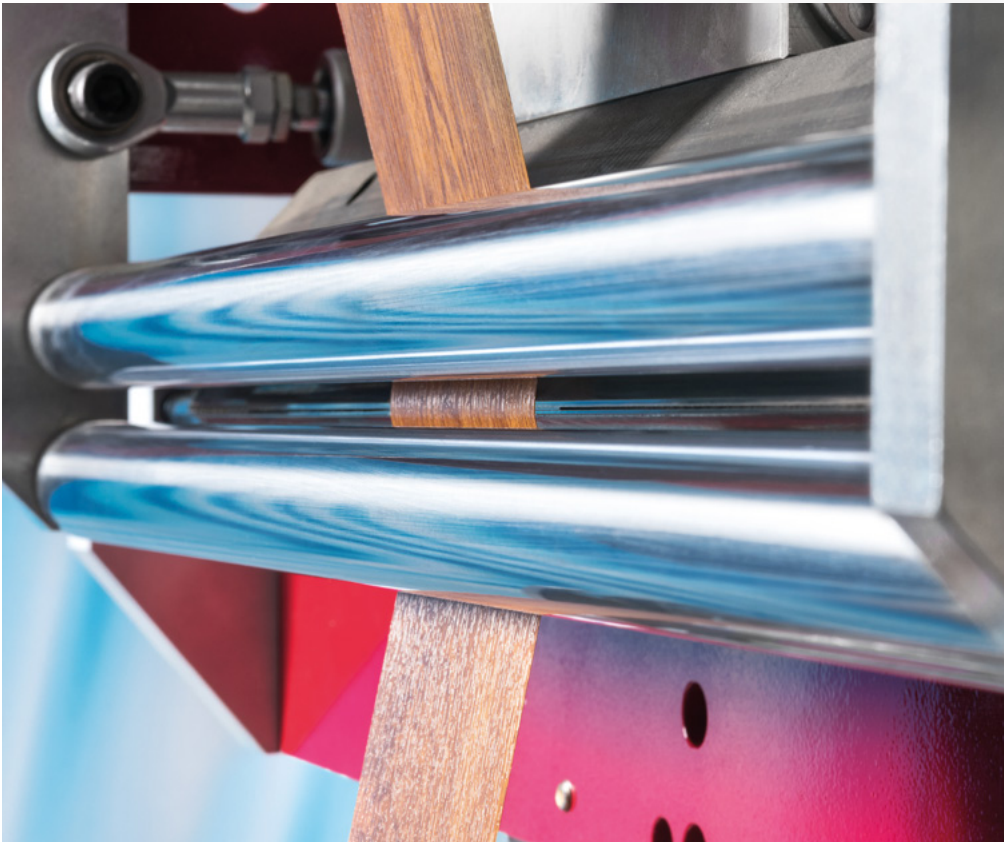
During the wrapping process the profile undergoes different processing stages. As a result, the machine needs to be custom specified according to desired production performance.



THE WRAPPING OF **PVC**
PROFILES AND PANELS

Profile and panel wrapping consists in applying decorative foils with the help of PUR adhesives, in order to give to each surface the desired aesthetic properties.

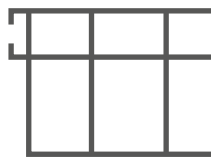
Decorative foils are made of various materials such as; paper, CPL, veneer, PVC, PET, PP and many more. To produce a high-quality finished product the wrapping process must be rigorously controlled, and all materials must conform to existing specifications. The machines must be designed in such a way that every stage of the process – from surface treatment to bonding – is impeccable and controlled.



DECORATIVE FOIL

↓ ↓ ↓
HOTMELT


↓ ↓ ↓
PRIMER



PROFILE


PARTS OF THE MACHINE
AND **STAGES OF THE PROCESS**

- 1




MACHINE BED:

The length of the machine must be calculated based on the materials to be wrapped, the desired working speed, the geometry of the profiles and, in the case of PVC, the type of primer being used.
- 2




PRE-HEATING OF THE PROFILE:

Pre-heating the profile is required to improve its wettability during the primer application. The choice of the quantity of necessary IR lamps or heaters is based on the same principle governing the choice of the length of the machine bed.
- 3




PROFILE DE-IONISATION:

Electrostatic charges tend to attract impurities on the surface thus affecting adhesion and, in some cases, even the aesthetic uniformity of the finished product. Therefore, it is important to consider systems for removing the electro-static charges that can appear as a result of friction caused by the rubber rollers used to transport the profiles.
- 4



PRIMER APPLICATION:

Primer application is necessary for both PVC and aluminum profile wrapping in order to achieve optimal adhesion. PVC profiles are characterized by very low surface energy which causes the adhesive to be unable to wet the surface adequately. Applying a primer increases the surface energy and the adhesive's ability to wet the surface. Primer can be applied in several ways, from the traditional felt system to more innovative ones like WPR's HRP (High Resolution Primer) system. With the use of next generation, environmentally friendly primers, the amount of applied primer must be monitored closely making it necessary to use an automatic primer dosing system.
- 5




PRIMER DRYING:

This operation is very important to eliminate the liquid organic substances in the primer. The type of primer (low boiling or high boiling substances) and the working speed determine the number of hot air guns required. Drying is accomplished with the use of jets of hot air with different ranges based on the type of primer and speed of the work.




- 6




PROFILE HEATING BEFORE BONDING:

Heating the surface before bonding is required to avoid thermal shock upon contact between the hot melt adhesive and the profile when there is excessive cooling of the surface before pressing.
- 7




MELTING OF THE ADHESIVE TANK MELTERS OR DRUM MELTERS:

Polyurethane hot melt adhesives must undergo a preliminary melting process which is performed inside specific pre-melting units. Once melted, the adhesive is pumped toward the slot nozzle by means of a gear pump. The specific amount of adhesive applied is crucial to achieving a quality bond and a perfect surface finish on the profile.
- 8




APPLICATION OF THE ADHESIVE SLOT NOZZLE:

The slot nozzle applies adhesive to the foil. It must be perfectly applied to ensure a successful bond and a quality surface finish. This is especially important when using glossy, opaque or non-embossed foils. A low-quality application causes surface defects such as orange-peel effect, delamination, stripes and dots. WPR glue heads guarantee precise application thanks to special highly abrasion-resistant lips, AISI 316 stainless steel filters and the exclusive WPR Control Flow distribution system.
- 9



ROLLERS FOR PRESSING THE FOIL ON THE PROFILE (wrapping):

A sequence of pressure rollers made of silicon rubber adapt to the profile shape and provide continuous even pressure over the entire profile geometry.
- 10



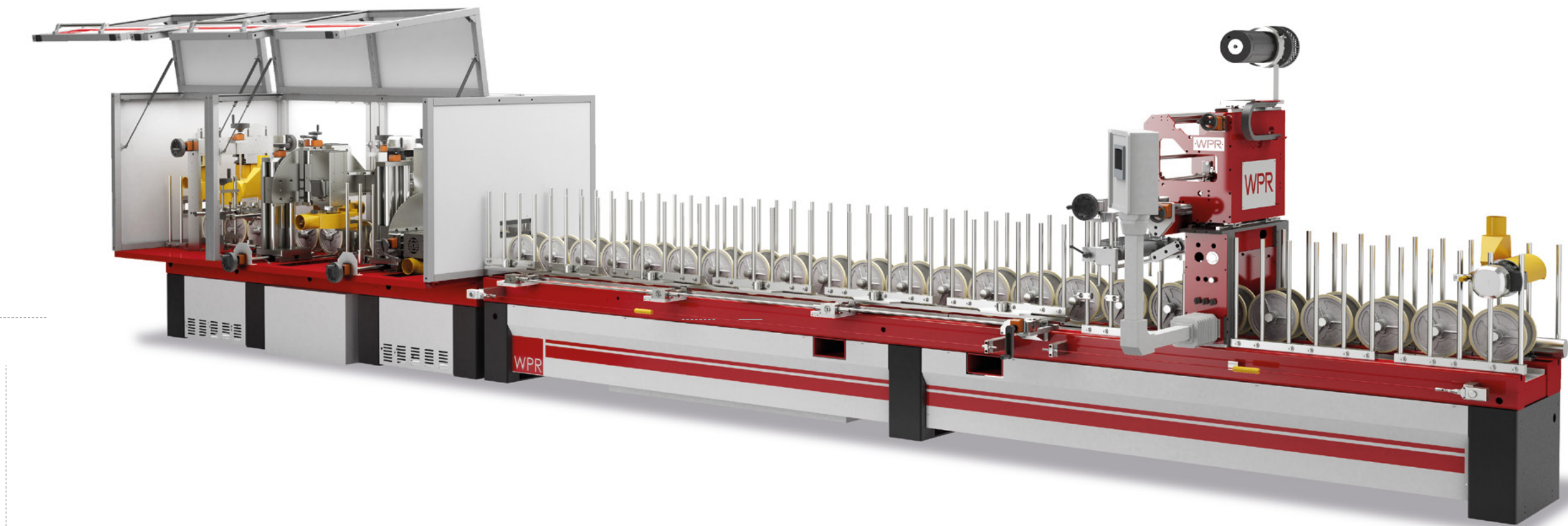
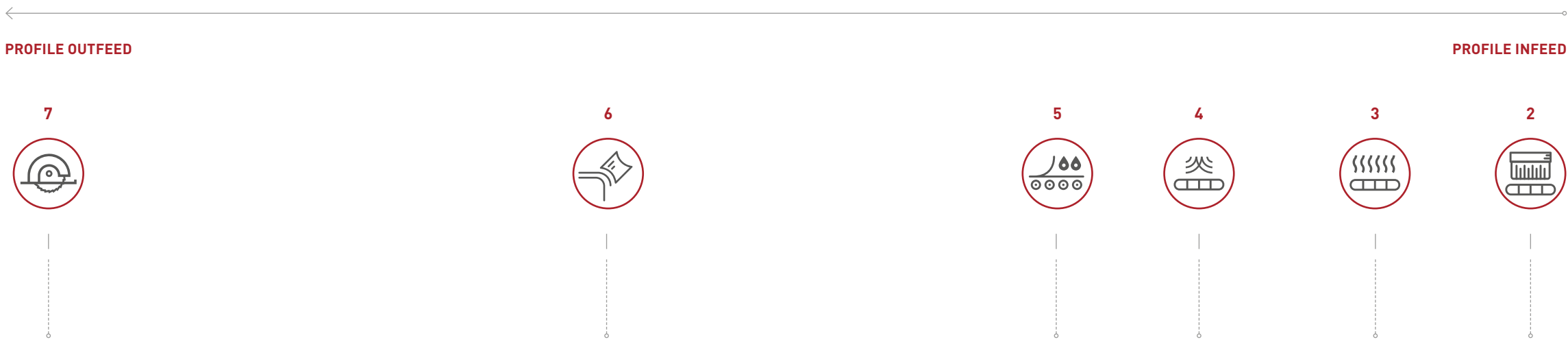
ROLLERS FOR THE APPLICATION OF THE PROTECTIVE TAPE:

Essential to protect the profiles in the warehouse and during transport.

 **FIND OUT HOW THE WRAPPING PROCESS WORKS** 

WRAPPING MACHINES FOR **INTERIOR**

During the wrapping process, the profile will undergo different processing stages: therefore, the machine needs to be specified according to the desired performance of production.



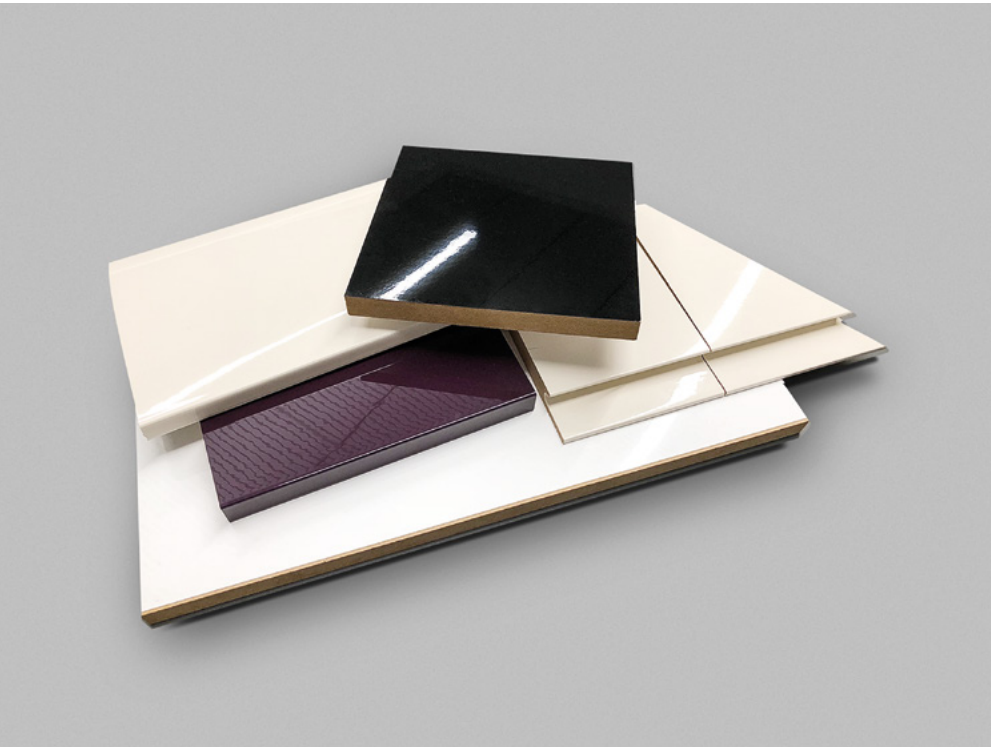
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THE WRAPPING OF **WOOD PROFILES**
AND PANELS


The wrapping of profiles and panels is sometimes called “nobilitation” (from the verb “to nobilate”, to ennoble, to make noble, to make “nice”). This is the process of improving the surface of the substrate by using decorative foils and hot melt polyurethane adhesive to achieve a desired aesthetic effect.


Decorative foils are made of various materials such as paper, CPL, veneer, PVC, PET, PP and many more.


To produce a high-quality finished product the wrapping process must be vigorously controlled, and the material used must conform to required specifications set forth by component and furniture manufacturers. The machinery used in this process must be designed in such a way that every stage of the process – from surface treatment to bonding – is impeccable and controlled.




PARTS OF THE MACHINE AND **STAGES OF THE PROCESS**


- 


LENGTH OF THE MACHINE
The length of the machine bed must be calculated based on the materials to be wrapped, desired working speed, geometry of the profiles and in the case of aluminium profiles for internal fittings, need to be equipped with specific brushes for the elimination of aluminium rust.
- 

BRUSHES FOR CLEANING OF THE PROFILE/PANEL
The preparation and cleaning of supports is required in order to guarantee a high level of finish, especially when it comes to finishes with polished foils. For panel/profile cleaning, brushes with a good extraction system are installed before the bonding phase. These brushes eliminate any residue from the surface.
- 

**PROFILE HEATING
BEFORE BONDING:**
Heating the surface before bonding is required to avoid thermal shock upon contact between the hot melt adhesive and the profile when there is excessive cooling of the surface before pressing. Heating is usually performed by means of IR Lamps or air heaters. The use of IR lamps provides a better effect by allowing heat to penetrate deeper into the material and last longer.
- 

**MELTING OF THE ADHESIVE
TANK MELTERS OR DRUM MELTERS**
Polyurethane hot melt adhesives must undergo a preliminary melting process which is performed inside specific pre-melting units. Once melted, the adhesive is pumped toward the slot nozzle by means of a gear pump. The specific amount of adhesive applied is crucial to achieving a quality bond and a perfect surface finish on the profile.

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**APPLICATION OF THE ADHESIVE
SLOT NOZZLE**
The slot nozzle applies adhesive to the foil. It must be perfectly applied to ensure a successful bond and a quality surface finish. This is especially important when using glossy, opaque or non-embossed foils. A low-quality application causes surface defects such as orange-peel effect, delamination, stripes and dots. WPR glue heads guarantee precise application thanks to special highly abrasion-resistant lips, AISI 316 stainless steel filters and the exclusive WPR Control Flow distribution system.
 - 

**ROLLERS FOR PRESSING THE FOIL ON THE PROFILE
(wrapping):**
A sequence of pressure rollers made of silicon rubber adapt to the profile shape and provide continuous even pressure over the entire profile geometry. The line must also be equipped with air heaters to ensure proper wettability of the adhesive at all wrapping points.
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TRIMMING MILLS
This system provides precise trimming of excessive, sliced, or CPL foil.



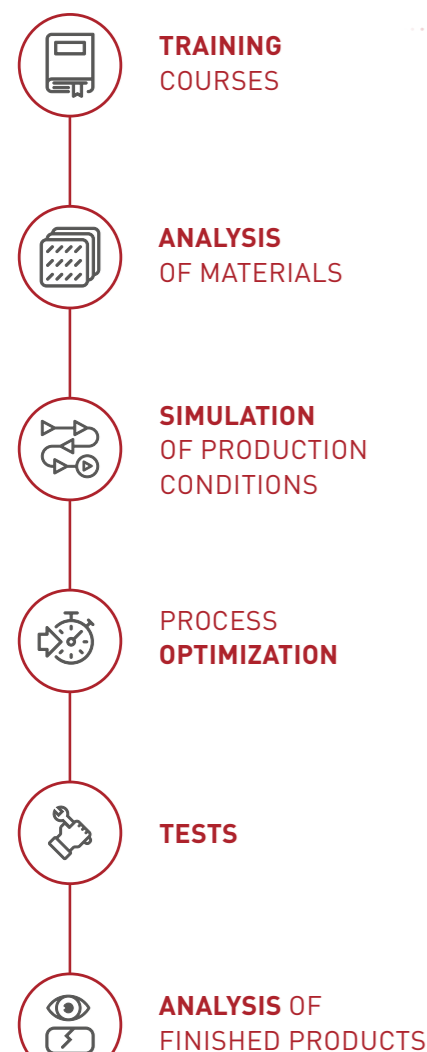
WPR TAKA ACADEMY: RESEARCH, EDUCATION, TRAINING

The WPR/TAKA ACADEMY was established to institutionalize the tireless work of research, development, practical innovation and quality control that has always been the beating heart of WPR/TAKA



THE MISSION OF THE **WPR/TAKA ACADEMY** IS TO **TRANSFER KNOWLEDGE** OF THE WRAPPING PROCESS THROUGH **CUSTOMIZED TRAINING PROGRAMS** WITH DIFFERENT LEARNING MODULES BOTH IN CLASS AND ON THE SHOP FLOOR

THE **ACADEMY** OFFERS:



THE QUALITY CONTROL LAB IS EQUIPPED WITH STATE-OF-THE-ART INSTRUMENTS TO PERFORM BONDING TESTS ON DIFFERENT MATERIALS.

DEVELOPMENT OF CUSTOMIZED ADHESIVES

APPLICATION TESTS ON THE **UNPROCESSED MATERIALS**:

PVC, wood and wood derivatives, panels and edgebanding

- Tests for the evaluation of bonding
- Research and development in terms of application
- Evaluation of the wettability of foils and profiles

APPLICATION TESTS ON **FINISHED PRODUCTS**:

EXTERIOR:

- Peeling after 72 hours*
- Hydrolysis 6 weeks at 70°C and 98%UR*
- Cold peeling (24 hours at -10°C) *

INTERIOR:

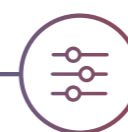
- Evaluation of bonding
- Peeling with dynamometer
- Heat resistance
- Water resistance

* Tests according to GZ RAL 716

OUR TRAINING PROGRAMS INCLUDE:



Application parameters
and materials
characteristics



Control of the process
parameters



Quality control
on the finished
product



FOR FURTHER INFORMATION AND TO BOOK
SEMINARS AND TESTS PLEASE CONTACT
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