

Automation Laboratory Presses Molding Presses HP-RTM Presses Ski Presses Multi Processes Sports Industry SCM-Presses Panel Presses Hydraulic Presses Temperature Control of Materials Automotive Industry Thermoforming **Presses in Perfection** Heating Systems Aerospace Industry Electric Spindle Presses Material Transfer Aviation Industry

Perfection has proven itself.  
The nature demonstrates it daily.



**Langzauner**  
PERFECT

# PERFECTION



## Langzauner in Numbers

- 13 mechanical design engineers
- 8 software engineers
- 12 field service engineers
- More than 100 qualified employees
- 8.000 m<sup>2</sup> production area
- Successful since 1924
- 100% family owned

# PERFECTION

## Perfection is in our DNA

Perfection is an inner attitude. Not since yesterday, since 1924 we have been developing, producing and perfecting precision machines as a family-run company. What started as woodworking, we have consistently transferred to the composite industry and automation solutions. This perfection is codified in our DNA. **The model for this: nature.**

## The greatest crosslink between customer expectation and our execution: Perfection

Your business is automotive, aeronautic, aerospace or sport? If so perfection would be an essential competitive advantage. Perfection does not follow the main stream, it follows the ideal racing line. What makes the difference: Perfect customized solutions – perfect know-how and teamwork within all employees – perfect powerfull and efficient heating systems up to 450 °C – perfect pressure from 1,5 t up to 5.000 t – perfect energy efficiency makes the significant difference.



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# CROSS-LINK WITHIN THE BRANCHE

When the AMRC Composite Centre were in need of a research and development heated press Langzauner offered the most innovative and attractive package.

They have delivered a robust and reliable press with the flexibility to achieve high temperature composite research.

The level of support from Langzauner has been excellent with 4 years of successful partnership delivering numerous, high quality projects, for large international aerospace, and automotive OEM's.

**Conrad Sdao**, Factory Manager Composite Centre



**Advanced Manufacturing  
Research Centre**



Well-known material suppliers as Solvay rely on Equipment from Langzauner made in Austria. We work in very close relation with their engineers to understand the process needs.

At the application center in Heanor a high flexible 1,600 t composite press was supplied to ensure every possible process treatment to new developed materials.



# INDUSTRIES

## Aviation Industry

Today, modern aircraft consist for the most part of light-weight composite materials. This is supported by significant advantages in terms of safety, economy and comfort. Many of these components are manufactured on composite presses by Langzauner, because renowned international aviation suppliers are among our customers.



## Automotive Industry

Most of our dream cars include our knowledge: Langzauner presses are used by the leading vehicle suppliers. The result is bonnets, spoilers and other components for a wide range of automobile manufacturers – even the most exclusive sports car manufacturers in the world.



## Aerospace Industry

Langzauner presses deliver quality at the highest level – even for the feel of the stars. In aerospace, many parts are made of lightweight composites. This is supported by significant advantages in terms of safety and economy. Many of these components are manufactured on composite presses by Langzauner because well-known international space suppliers are among our customers.



## Sports Industry

Winners rely on technology from Langzauner – for decades. More than 40 years ago, the sports industry was the first industry to recognize and make use of the enormous potential of fiber-reinforced plastics. Even then, Langzauner was part of it. Back in the 70s, presses were developed and produced for the ski industry.



# AUTOMATION PRESSES

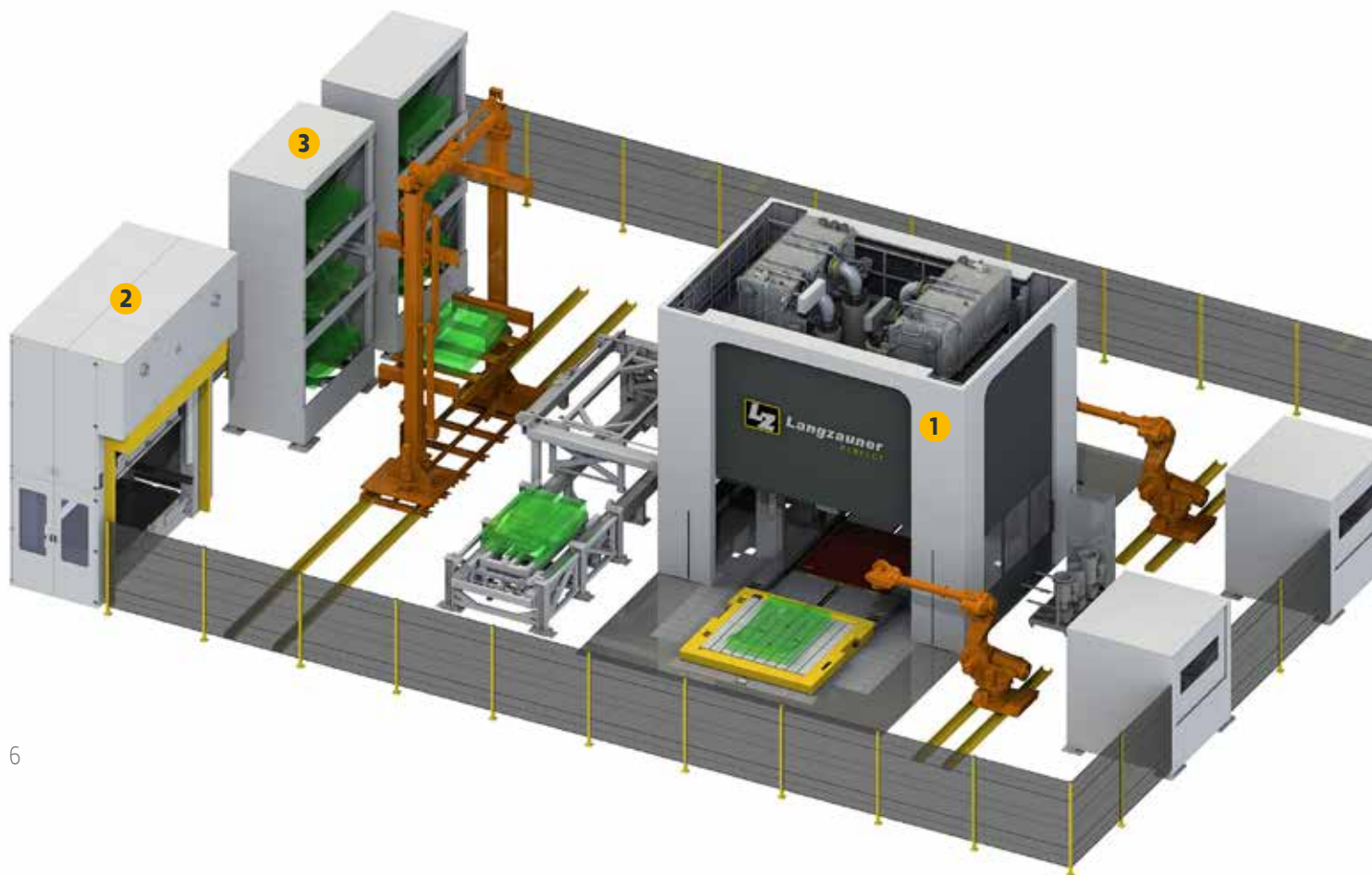
## Langzauner ensures well designed and reliable production flow

Are you looking for a solution to increase the productivity of your production with **tailor-made automation**? We have the necessary concept in the Talon. Regardless of whether you use press processes, our flexibility has already enabled us to implement countless press projects for automated production.

With **Langzauner "Perfect Production"**, we take over the superior control and give your product and plant park sustainable quality assurance and longevity.

Only when all relevant system components work together perfectly, a production works efficiently, safely and economically. Our automation solutions convince with efficiency and practicality, even with highly complex requirements.

**Comprehensive knowledge and state-of-the-art automation tools** enable every Langzauner press to be optimally integrated into the user-specific environment. The precise control of transfer systems, feeders, loading and stacking systems ensures high output, uncompromising quality and maximum safety in production.



## 1 Hydraulic Presses

Langzauner presses set standards in the development of composite materials and processes. Our portfolio includes Cold Molding Presses, Laboratory Presses, Multi Processes, PCM – Prepreg Compression Molding, Panel Presses, Sandwich, Crush Core, Honeycomb, SCM BMC GMT, Sintering Presses, Ski/Snowboard Presses, Thermoforming, Thermoplastic, ...



## 2 Cleaning Stations / Safety Gates / Working Tables

It is not possible to forego human intervention completely in any production line. For example, a complex loading procedure, a continuous cleaning cycle or random quality assurance of tools call for human intervention in the process.



## 3 High Bay Warehouse Systems

Automated movements and intelligent, closely arranged storage bins belong to a well thought-out concept to make transport routes as short as possible.



# AUTOMATION PRESSES

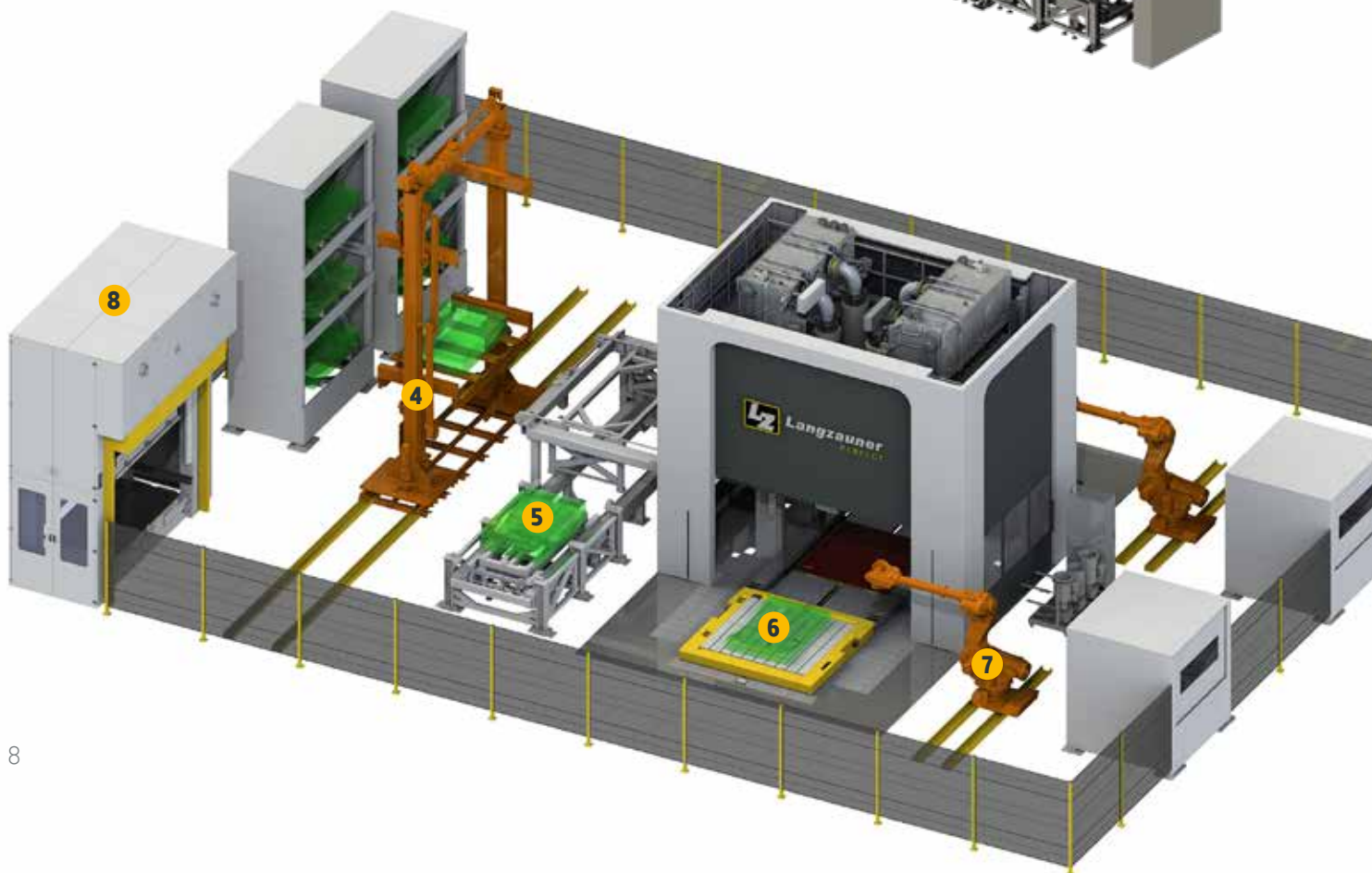
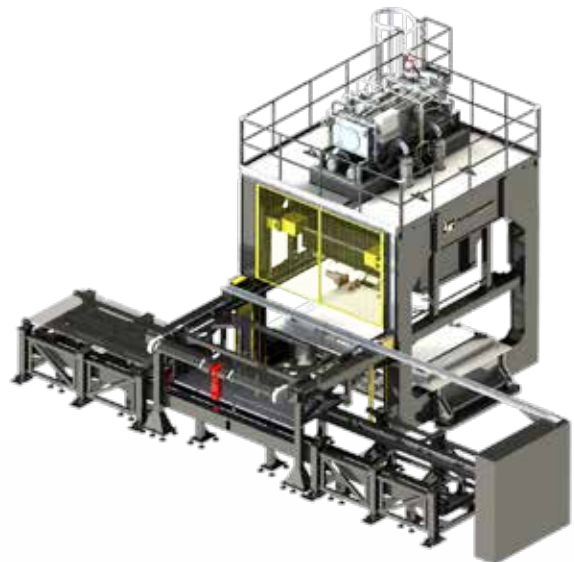
## 4 Stacker Cranes

stacker cranes are the engine and heart of every automation line. Each stacker crane is adapted in the in-house design office to the respective static and dynamic conditions.



## 5 Mold Tool Shuttle Systems and intelligent Pre-heating Systems

Mold tool changes are offered at Langzauner in a variety of forms and degrees of automation. From simple spring-loaded roller strips to a fully automated unmanned tool change system, Langzauner covers the entire field of tool automation.



## 6 Material Transfer – Linear 2D

Automated material transfer is driven by unit costs or by time-dependent process requirements.



## 7 Robotics for Component Handling – Material Transfer 3D

In automation, where linear systems reach their limits in terms of flexibility, multi-axis robots are used. The key in this type of automation lies in the gripper technology.

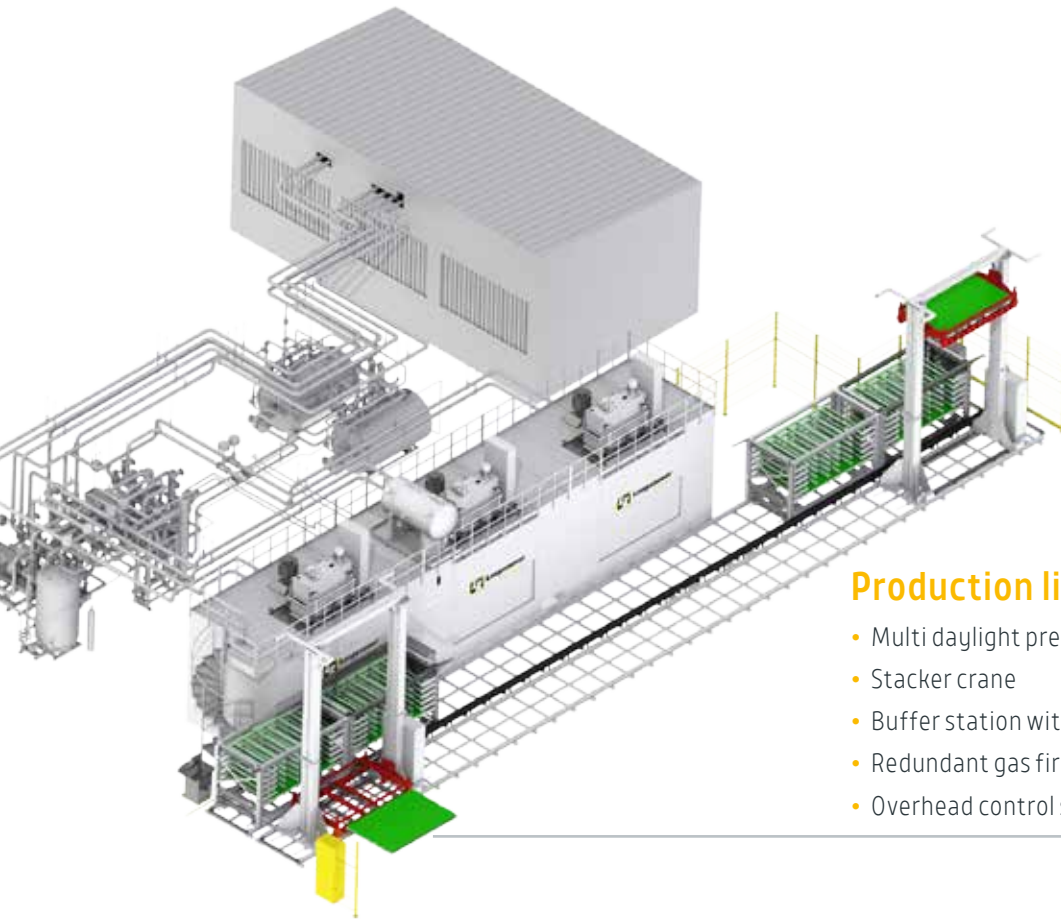


## 8 Opening Stations

It is not possible to forego human intervention completely in any production line. For example, a complex loading process, a continuous cleaning cycle, or random quality assurance of tools call for human intervention in the process. In addition, Langzauner offers a variety of ways to disturb not the production flow.



# PRODUCT EXAMPLES AUTOMATION



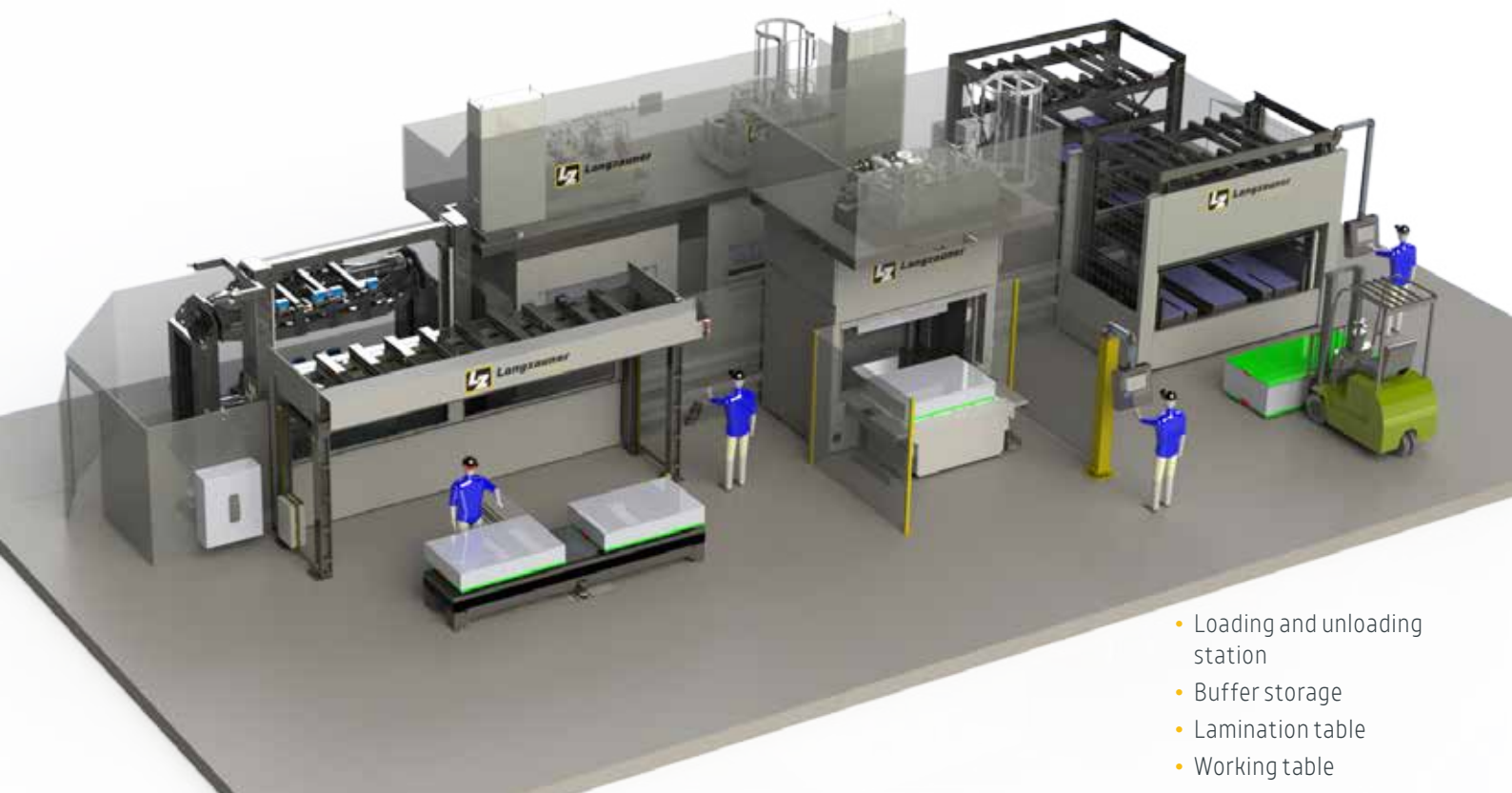
## Production line for sandwich panels

- Multi daylight presses
- Stacker crane
- Buffer station with automatic loading and unloading
- Redundant gas fired heating system
- Overhead control system incl. data management



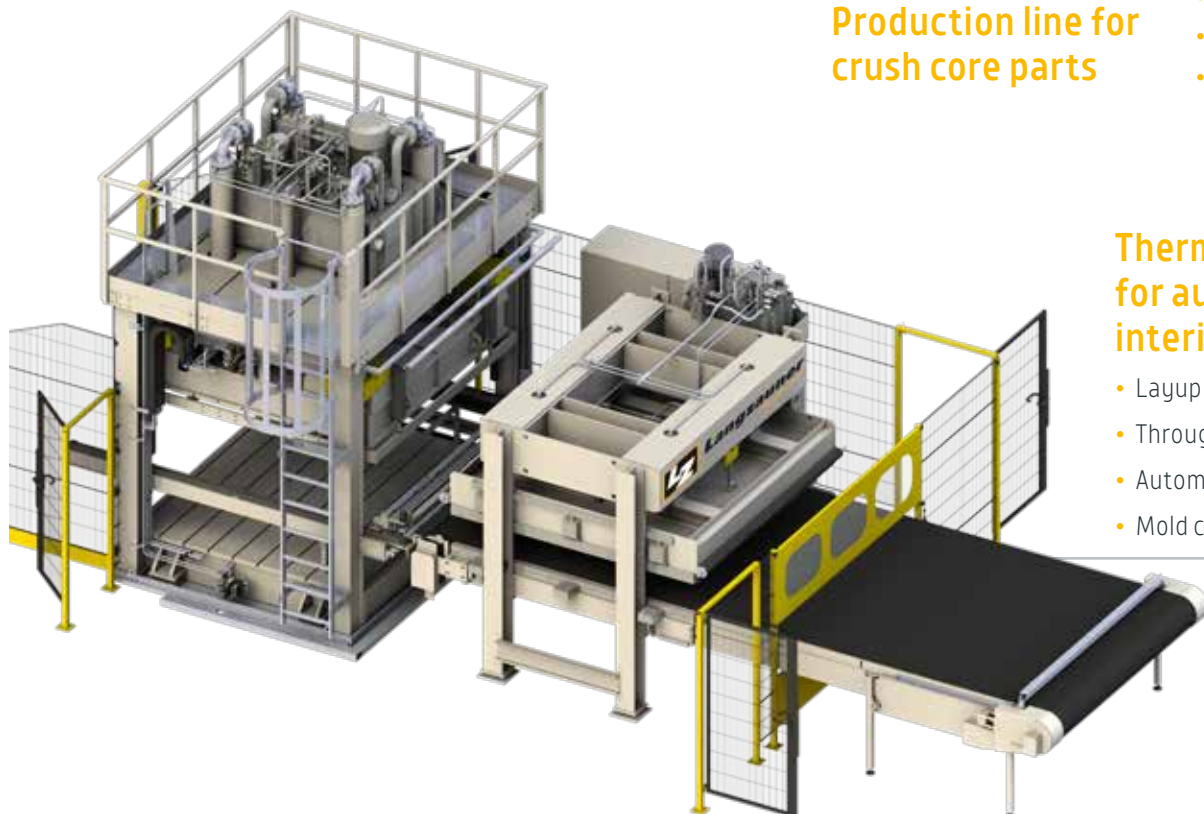
## Mold transport system

- Loading and unloading station
- Presses
- Stacker crane
- Buffer storage



### Production line for crush core parts

- Loading and unloading station
- Buffer storage
- Lamination table
- Working table
- Stacker crane
- Presses
- Opening station



### Thermoforming line for automotive interieur

- Layup station
- Through feed heating press
- Automatic material transfer
- Mold carrier press



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# TECHNOLOGY

## State of the art complex hydraulic systems

Langzauner continuously develops the hydraulic systems used for their presses. The non plus ultra of the hydraulic drives is the servo hydraulic system in combination with the software management from Langzauner. Speed regulated drives combine high accuracy with extreme energy savings at the same time.



## Our Presses offer:

- Hydraulic press systems up to 50,000 kN
- Multi Daylights
- Through feed systems
- Servo hydraulics, high accuracy and energy efficiency (details and servo hydraulics)
- Active parallel control
- Turnkey production lines for mass production
- Storage and retrieval machines
- Warehousing
- Handling
- Robotic and gripper technology for loading and unloading
- Single or double shuttle table
- Heating and cooling systems
- heating plates and cooling plates
- Vacuum Systems
- Flexible software with full traceability
- Data backup



# PROCESSES

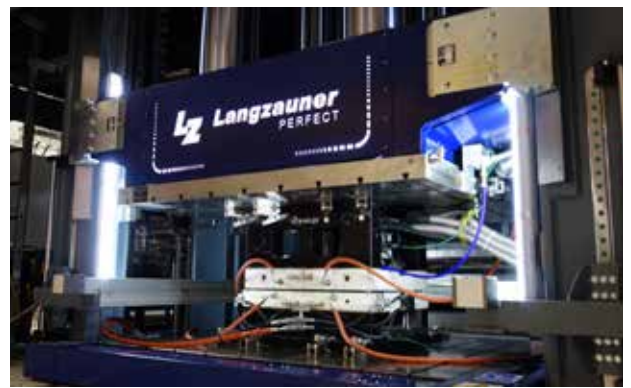
## Sandwich, Crush Core, Honeycomb Hot Presses

for the production of very lightweight, high-strength composite molded parts made of glass-fiber reinforced plastics (GRP) and "Crushed Core" honeycomb profiles.



## HP-RTM (High Pressure Resin Transfer Molding)

Our presses supply RTM components of any size in perfect quality. Even large components can thus be effectively produced, for. B. on pressing surfaces of 9,000 x 1,600 mm.



## Thermo Forming

Thermoplastics: Langzauner's knowledge brings ideas into shape.



## PCM – Prepreg Compression Molding

Langzauner produces and develops tailor-made press systems in various sizes and configuration levels.



# PROCESSES

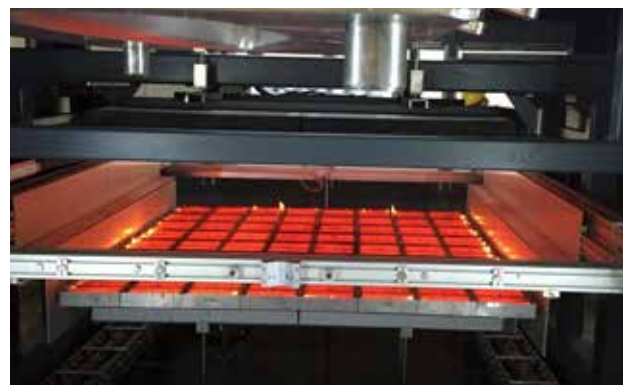
## SMC BMC GMT

As with all production processes, these presses can also be equipped with special solutions for the automated loading of the plant with raw material or for the discharge of the finished components.



## Thermoplastic

This system technology is used to process PPS, PEI or PEEK. All systems are tailored exactly to the needs of the customers.



## Multi Processes

Flexible process parameters like pressure, time, temperature, distance allows to replicate all different kinds of composite processes.



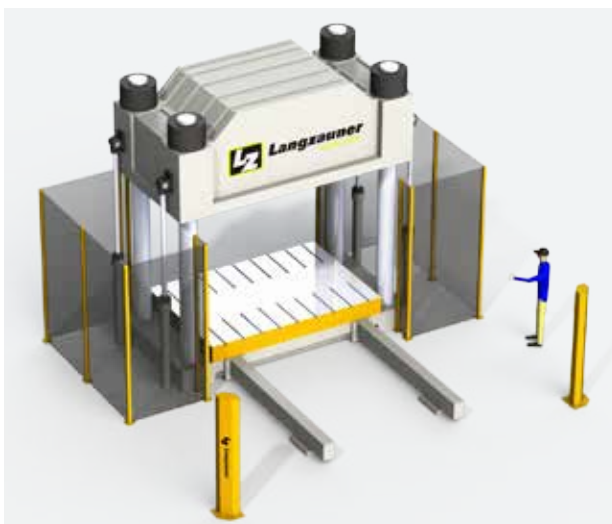
## Multi Processes

For decades, the major fiber manufacturers in the industry, research institutes and universities count on our expertise.



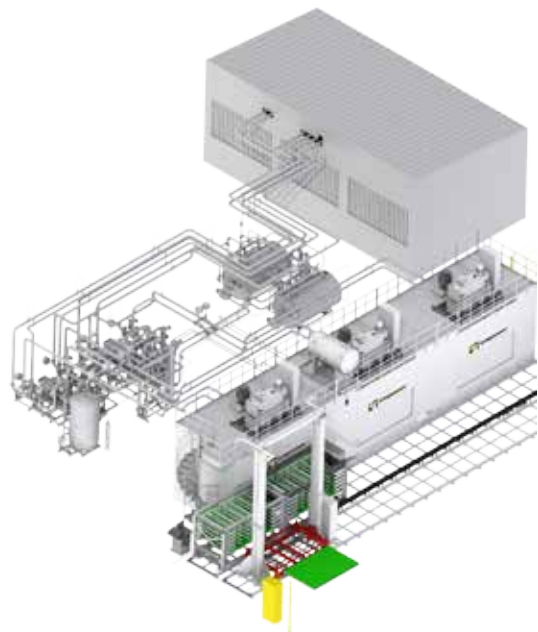
## Short Stroke Presses

The short stroke press from Langzauner allows to replicate more efficient processes with a higher accuracy. Higher performance with lower machine height.



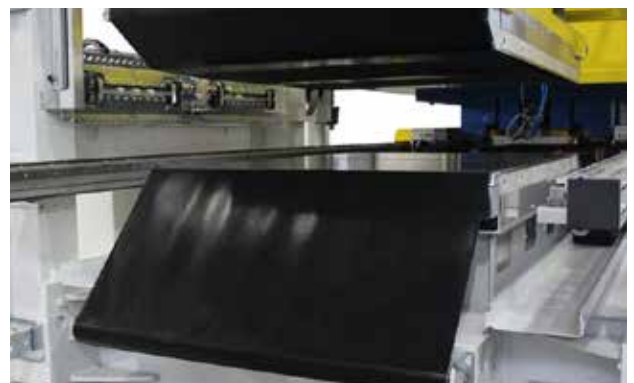
## Temperature Control of Heating Plates and Mold Tools

Langzauner offers not only hydraulic pressure, but also the perfect temperature for your process.



## Temperature Control of Materials

In essence, Langzauner distinguishes between contact heating and contactless temperature control when it comes to material temperature control.



# PRODUCT EXAMPLES STAND ALONE

## RTM-Press 300T

Pressing area:	3,000 x 2,000 mm
Pressing force:	3,000 kN
Opening:	1,900 mm
Max. temperature:	200 °C
Cooling:	no
Mode of operation:	Upstroke



## Hybrid – Panel Press & Molding Press 220T

Pressing area:	2,500 x 1,500 mm
Pressing force:	2,200 kN
Opening:	1,500 mm
Max. Arbeitstemperatur:	200 °C
Cooling:	yes
Mode of operation:	Upstroke

### Characteristics:

This press can transform into a heated multi daylight press within a very short period

## Molding Press 650T

Pressing area: 2,500 x 1,300 mm  
Pressing force: 6,500 kN  
Opening: 2,000 mm  
Mode of operation: Upstroke

### Characteristics:

Servohydraulic drives for high precision and energy efficiency; sliding table



## SMC-Press 1600T

Pressing area: 3,000 x 1,800 mm  
Pressing force: 16,000 kN  
Opening: 2,000 mm  
Mode of operation: Upstroke

# COMPETENCE + SERVICE



## All development and production steps from a single source

From the development to the production of individual parts up to the assembly, all work steps carry the handwriting from the house of Langzauner.

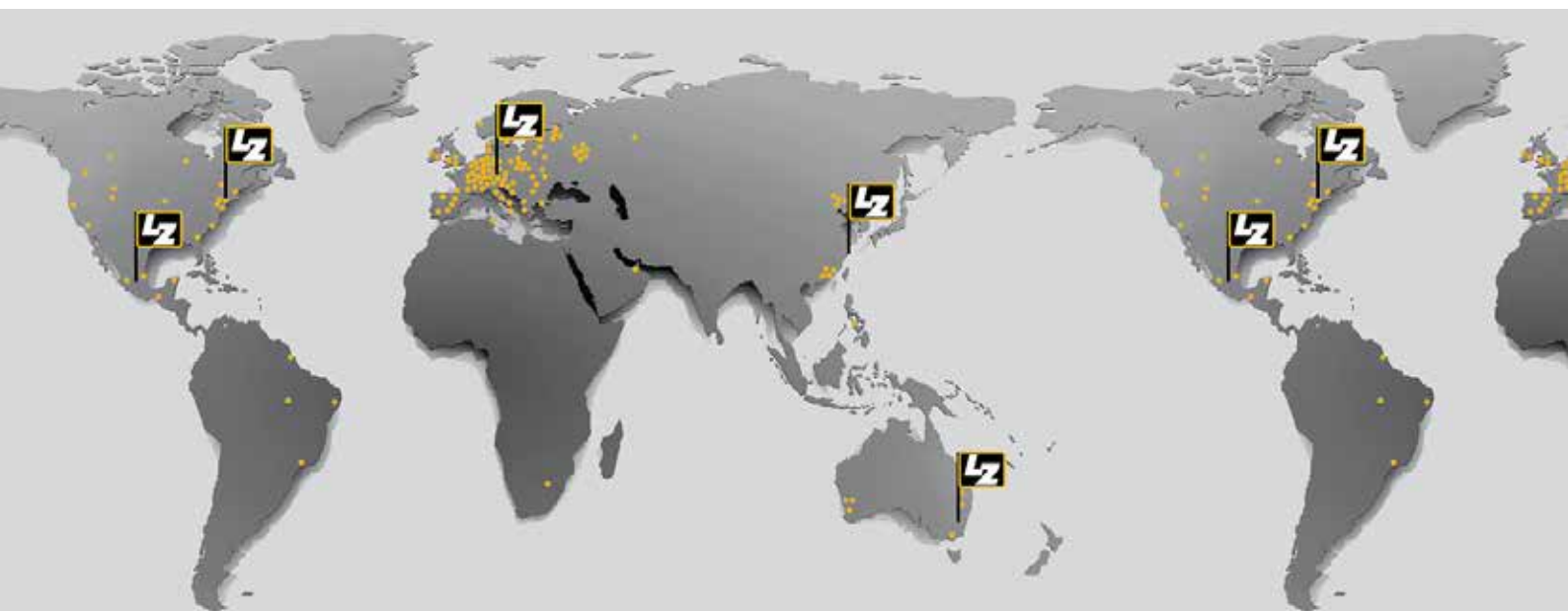
**The result:** Each machine produced is tailored optimally to the needs of each customer.

## Service is a promise

**Service is as important as the quality of our products.**

You will benefit all year long from the service of our highly skilled and mobile service technicians with fast responses and minimal downtimes.

## Global Service



# REFERENCES



Check out more about Langzauner:

[www.langzauner.at](http://www.langzauner.at)



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