



# Coating Lines



Czech coating lines  
and technology manufacturer



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# Coating lines from professionals

We are a Czech producer of coating lines operating on the market since 1993. We perfectly understand our industry and we will find the best solution for you. We consider innovations to be a necessary part of our strategy.

We believe in the technologies we offer and consider them the best you can find on the market. To remain at the forefront of the industry we must show diligence, perseverance and a great effort. It's not always easy but that is the reason why we enjoy it.



Quality



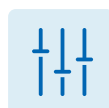
Expertise



Effectivity



Automation



Controls



Support

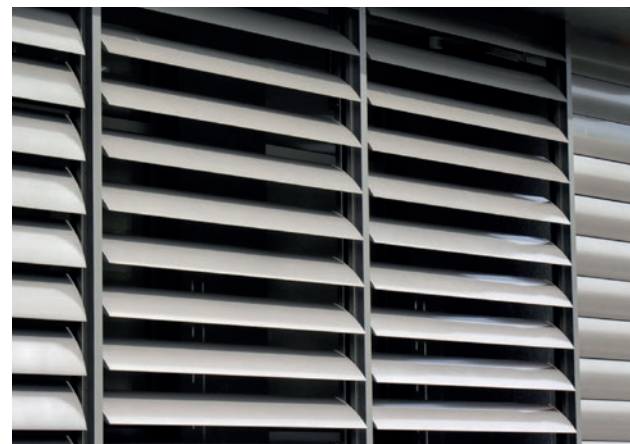




# Industries

We have experience in many fields. Whether you work in automotive, construction industry or you have a commercial painting shop, we will always find the best solution for you.

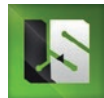
- Automotive industry
- Agricultural machinery
- Product for construction industry
- White goods and household products
- Aluminum processing
- Engineering
- Energy industry
- Commercial coating shops



## Our clients



Selected projects





## Services



### Online support

We know both the entire coating process and the control software very well and we provide online support for our customers. We identify possible problems 24/7 and advise you immediately on how to proceed.



### Surface Quality Institute

We follow current trends; we strive for maximum automation in accordance with Industry 4.0. We come up with innovations in process optimization. We offer a virtual launch of technology, advice on environmental protection or problem-solving during painting. We focus on collaborative robotics and the development of new application methods.



### Training and consultancy

We provide training for coating facility operators, technologists and coating facility managers. We will advise you on the design of technologies and prepare project documentation. We provide audits of existing technologies which improve operational efficiency.



### Own production plant

Thanks to our own production we can assemble the coating line precisely according to your requirements. Our production plant covers an area of 3,000 m<sup>2</sup>, which is about a half of the football field. We have trained professionals both in the production and assembly teams and we use state-of-the-art technologies.

## Research and development

We follow current trends and we maximize our effort to be in accordance with the Industry 4.0 concept. We introduce solutions for non-simple and complicated coating as well as virtual simulation of processes as an innovation for optimization. Focus is aimed mainly on collaborative robotics and new application development.

Our well experienced team with their modern tools delivers a successful competitive advantage.

**50+**

innovation projects

**3 500**

corrosion simulations  
per year





## Respect to the environment

**During the designing, realization and even in operation of all our technologies we always care about protecting the environment.** We use modern technologies to meet that goal successfully.

We design coating lines to use energy effectively with the lowest energy consumption possible. That is how we indirectly contribute to emission reduction within obtaining of energy resources.

**Even though waste air is produced while operating of the coating line, clean air is secured by the bio filtration technology.** The waste substances and 100% of smell are transformed and removed using microorganisms. This technology is called BAT.

To fulfill even the strictest limits for the waste water which is drained to the sewerage, we ensure that, within design and realization phase, the neutralization station is fully operational.

**We are proud members of the project Zelená firma (Green company)** which is focused on ecological recycling of electronic waste and batteries.



## Service center

We have an extensive service department and a team of top technicians in the field. Warranty and post-warranty service of coating lines is one of our strong points.



Service line for the  
**Czech republic**

**+420 800 050 271**

- Warranty and post-warranty service of coating lines
- Reconstruction and modernization
- Moving of coating lines
- 24/7 Hotline





## Custom-made powder coating lines

**Powder coating lines are complex technological devices for the final surface treatment.** The most common is the surface treatment of metal products but, under certain conditions, it is also possible to powder coat plastic products or wood-based materials.

Depending on the operation requirements, it is possible to choose from several types of coating lines. The technology can be **manual or automatic, loading or continuous**. All coating lines can be equipped with **robots on different nodes**. There are several options and combinations.

The implementation of turnkey projects comes with a great responsibility regarding the wide range of equipment and systems. We are aware of the high demands of our customers; therefore, we respond quickly and professionally. **Our team will help you choose the optimal solution for your operation.**



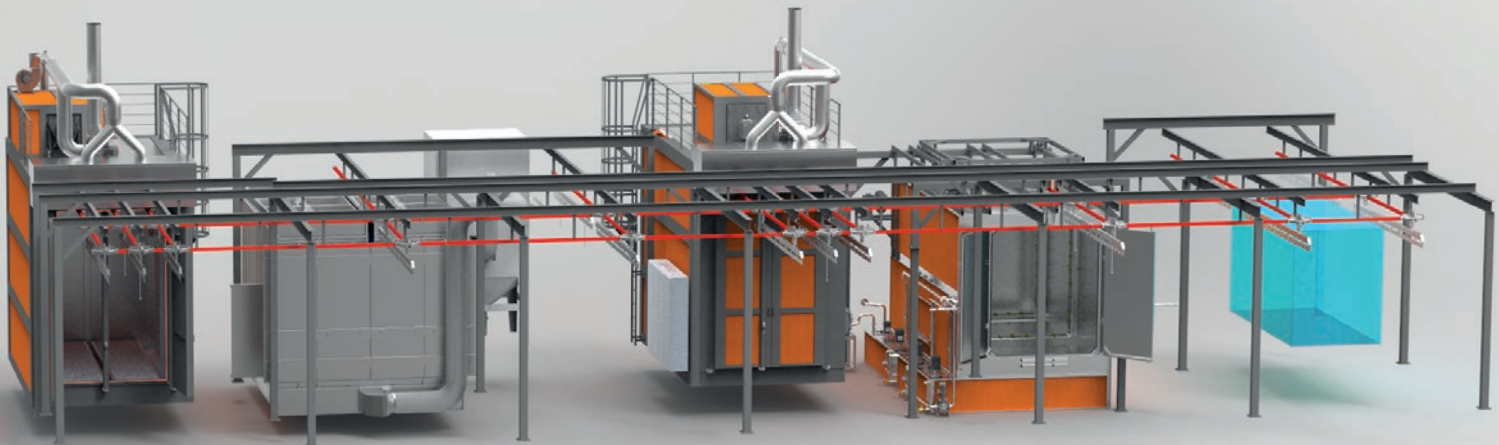
## Basic overview

### Chamber line with manual conveyor

- ✓ Variability
- ✓ Easy operation
- ✓ Quick color changes
- ✓ Maintenance
- ✓ Favorable price

**TIP**

**Price-performance ratio**  
**Controls**



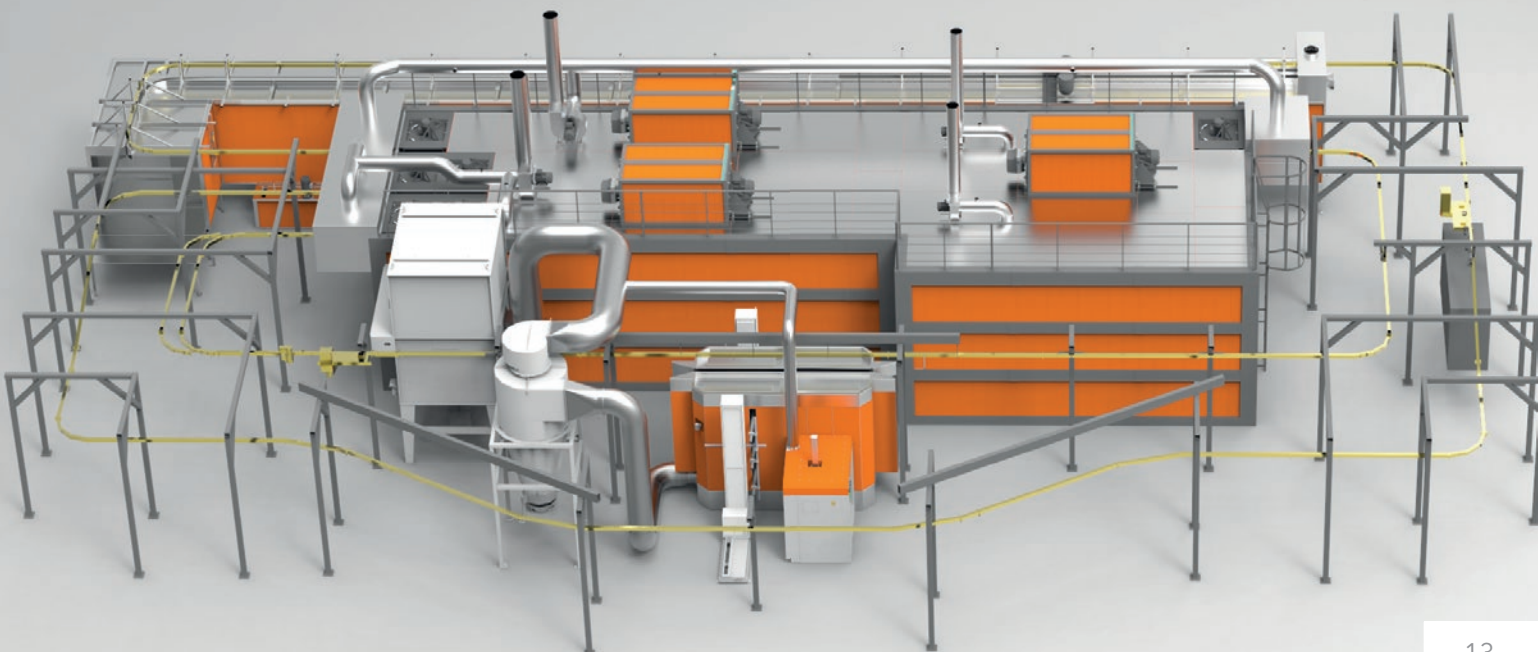


## Continuous line with automatic painting booth

- ✓ Capacity
- ✓ Cost per m<sup>2</sup> of coated surface
- ✓ Achievable quality
- ✓ Maintenance

**TIP**

Process  
Capacity

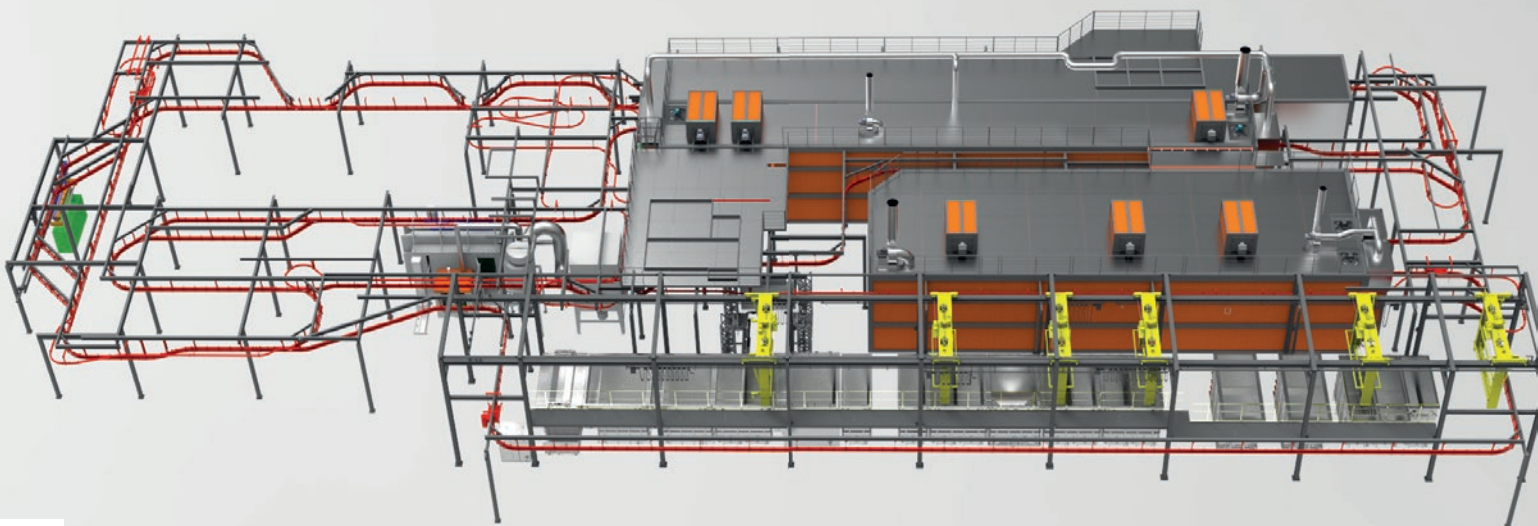


## Tact line with automatic painting booth

- ✓ Quick color changes
- ✓ Possibility of more painting booths
- ✓ Possibility of E-coat
- ✓ Conveyor load capacity
- ✓ Achievable quality

**TIP**

**Controls  
Automation**





## Surface pre-treatment

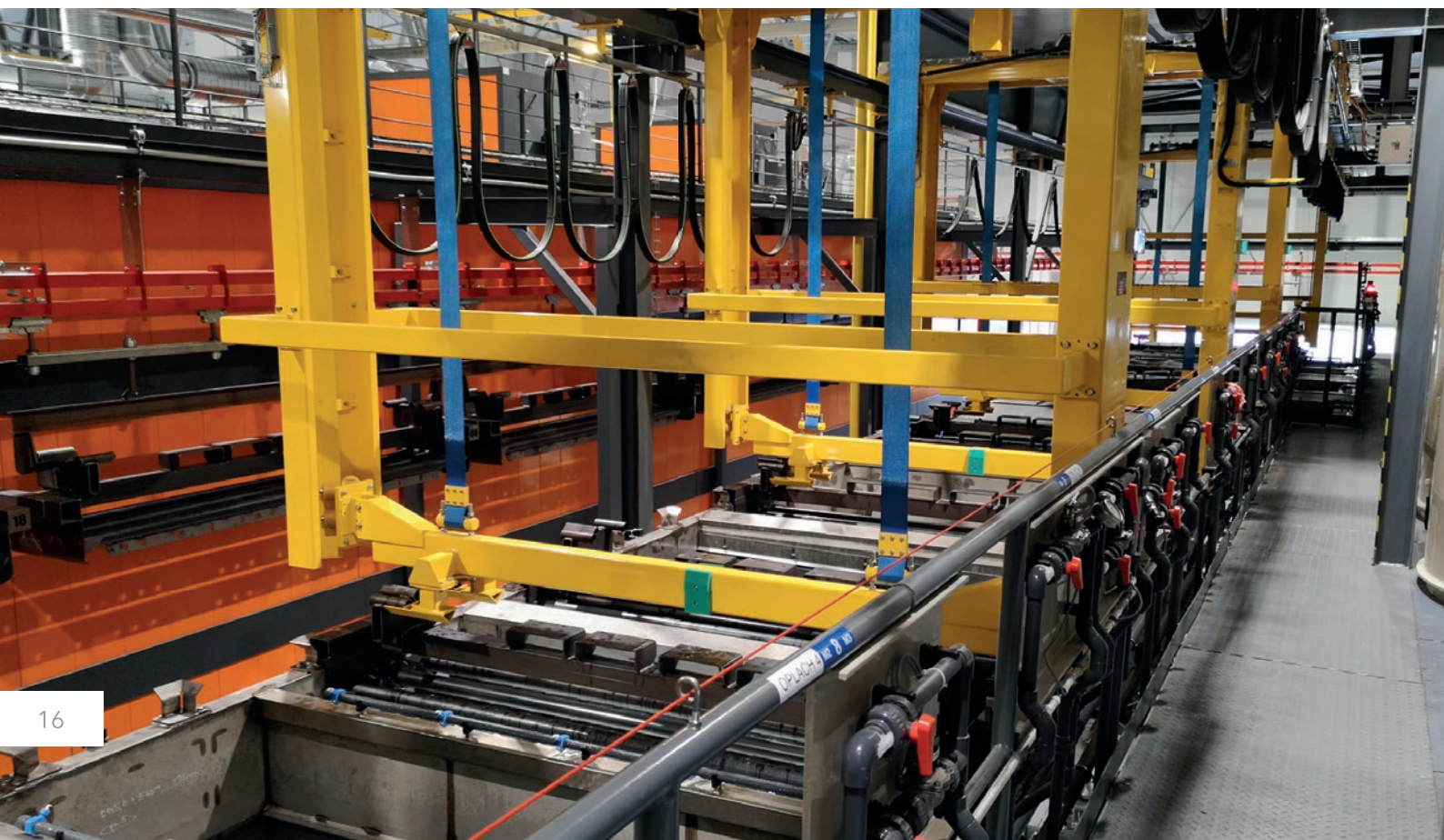
Depending on the processed material and the way of using the product we will propose the most suitable method of cleaning before painting. The surface is treated by manual high-pressure spraying in a loading washing box, consequently in a tunnel or by immersion.

Processes like iron phosphating, zinc phosphating, chromating and others, are applied with respect to the environment which the product will be exposed to, material structure and desired corrosion resistance.



## Pre-treatment by immersion

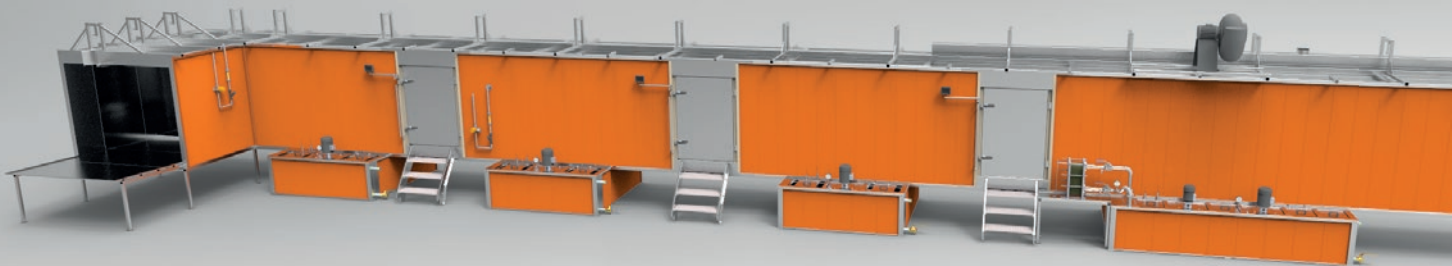
- ✓ Oversized parts
- ✓ Small parts in large series
- ✓ Parts with complex shapes
- ✓ Variable number of stages





## Tunnel pre-treatment

- ✓ Spray application
- ✓ Capacity
- ✓ Continuous operation
- ✓ Number of stages depending on technology



## Chamber pre-treatment

- ✓ Space saving
- ✓ Spray application
- ✓ Up to 12 stages
- ✓ Best for small series





## E-coat

The cataphoretic method is based on the principle of accumulation of paint by electric current. It is an unmatched way of surface treatment in terms of quality and durability.

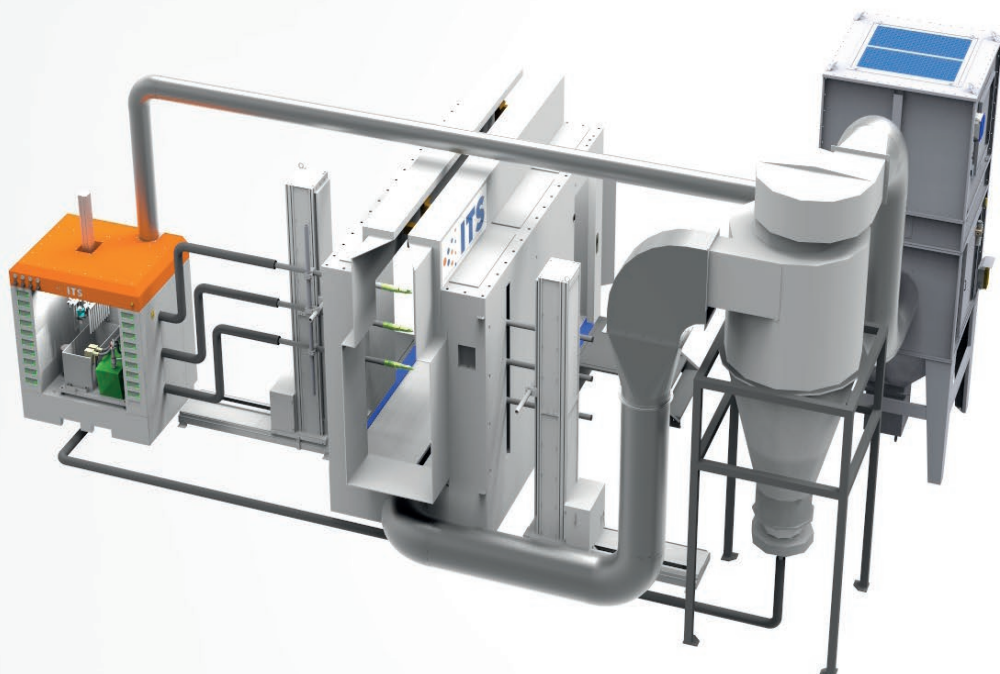
Ensuring high corrosion resistance, excellent efficiency with the regeneration system, low environmental pollution due to the water-based system as well as low fire risk make this application desirable for its excellent technological properties.

- ✓ For steel, aluminum and galvanized products
- ✓ For complex parts and assembled products
- ✓ Immersion system
- ✓ Capacity



## Coating booths

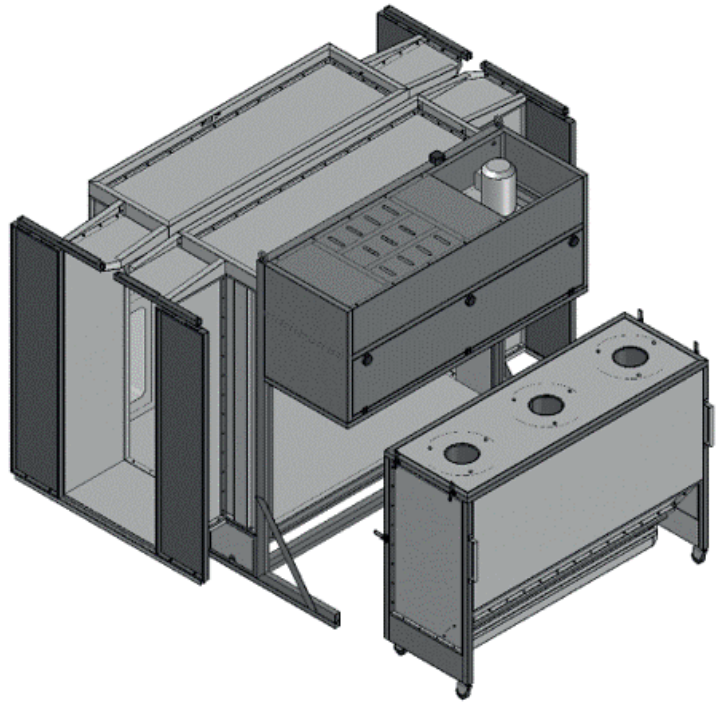
As in the case of surface pre-treatment, there are several types of coating booths. The determining parameters include an inquiry whether a quick change of color, color recirculation or the quick cabin cleaning is required. While choosing a suitable type of a coating booth, it is important to know whether the application of powder paint will proceed automatically or manually. Our experts will help you to choose the best solution for your operation.





## Booth with integrated filter

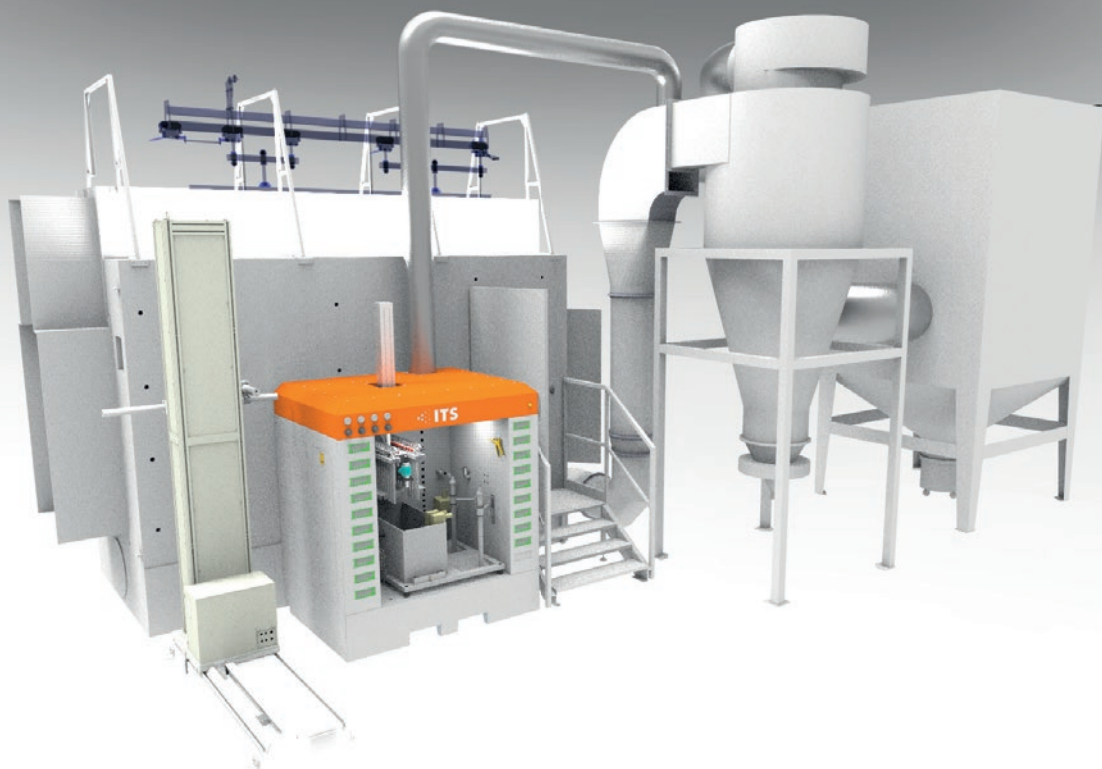
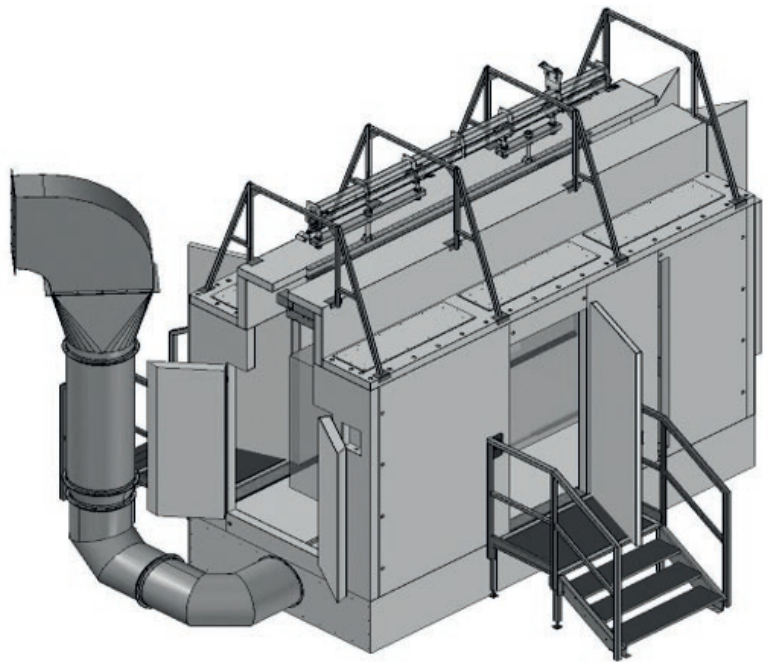
- ✓ Continuous or chamber
- ✓ Made of stainless steel
- ✓ Integrated filter
- ✓ Easy operation
- ✓ Quick color changes
- ✓ Ready for color recirculation





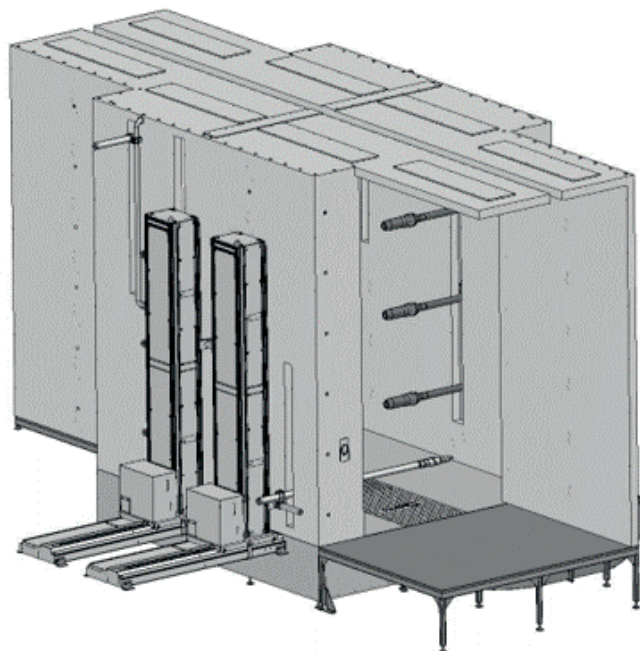
## Booth with external suction

- ✓ Continuous
- ✓ Made of stainless steel or plastic
- ✓ Automatic and manual painting
- ✓ Easy operation
- ✓ Quick color changes



## Stainless steel automatic booth

- ✓ Suitable for one color
- ✓ External suction
- ✓ Easy maintenance
- ✓ Ready for color recirculation





## Plastic automatic booth

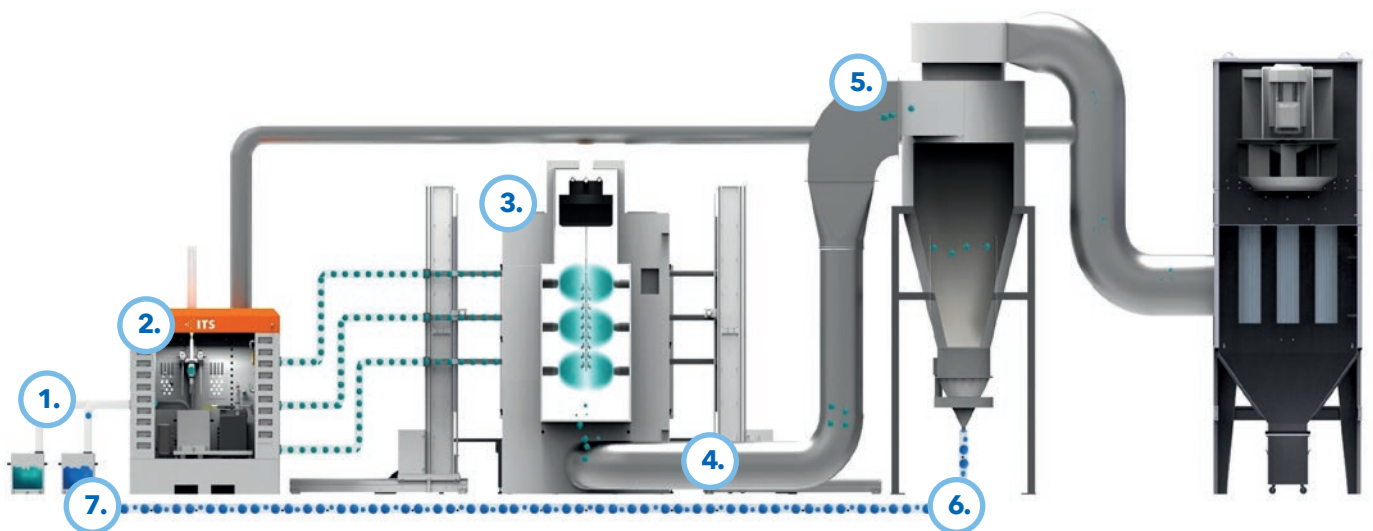
- ✓ Ready for Inobell application technology
- ✓ Quick color changes
- ✓ Easy maintenance
- ✓ Ready for color recirculation
- ✓ Quick cleaning



# Powder recirculation

The powder paint, which is not effectively applied to the painted product, is sucked out of the painting booth. To reduce the consumption of powder paint, and thus increase financial savings, it is advisable to return the separated powder in the form of recycled material.

However, many customers still do not reuse the returned powder paint. It's a very effective system for increasing efficiency. In combination with the PowderVision powder center, ITS offers a comprehensive solution for saving your costs.



1. New powder paint
2. PowderVision powder center
3. Painting process in the powder booth
4. Excess color extraction from booth
5. Reusable powder separation in cyclone
6. Separated powder return
7. Recycled powder paint

# Powder center

## PowderVision

Based on many years of experience, we have developed our own powder center. We call it PowderVision. Different levels of equipment will satisfy even the most demanding customers and their requirements. PowderVision is the heart of an operation in achieving excellent results for automatic application of powder paints.

- ✓ Automatic powder ratio control
- ✓ Accurate dosing of recycled powder
- ✓ Quick cleaning of guns
- ✓ Sensors without calibration

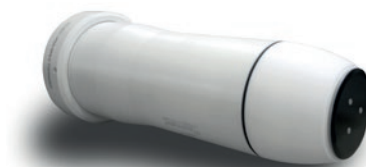




## Application technology

As a standard, we supply our coating lines equipped with the Sames application technology. On request, we can also integrate an application technology from other reputable manufacturers.

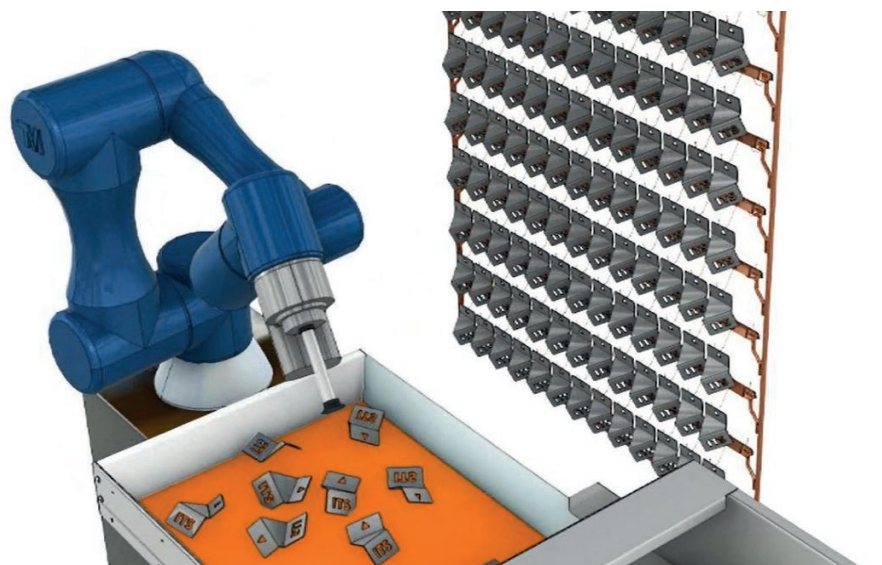
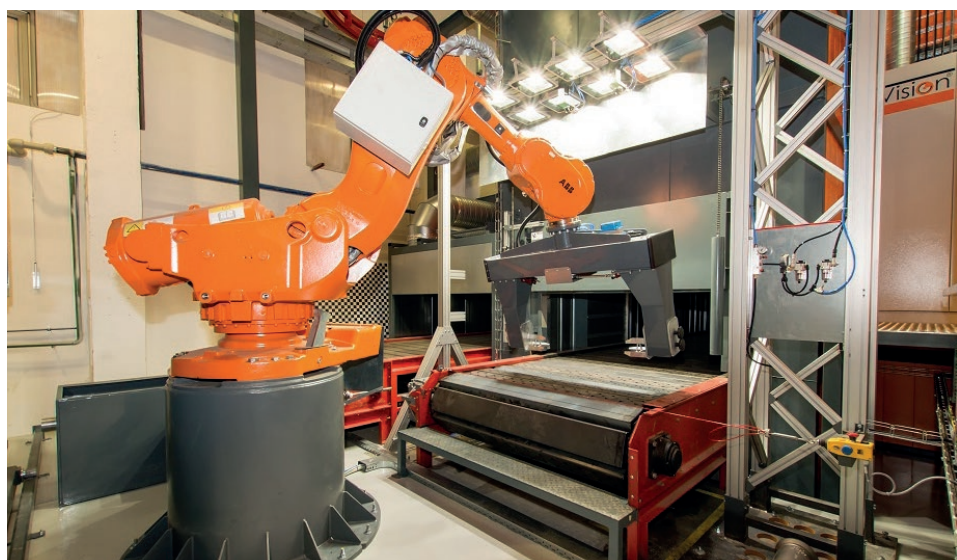
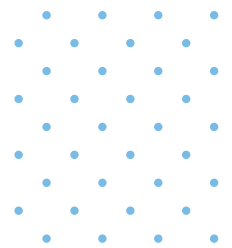
- ✓ Automatic guns
- ✓ Powder projectors - Inobell
- ✓ Manual guns
- ✓ Trolleys with manual gun



## Robotic coating

The use of robotic powder paint application is useful especially in the painting of complex products and large series. Other ways to automate the entire coating line include the use of a robot for automatic hanging of the products or the deployment of a mobile robot for a trouble-free supply of material to the coating line.

We have a lot of experience with the integration of robotic systems in coating lines in accordance with the Industry 4.0 concept.





# Drying and curing furnaces

While designing and implementing all furnaces, we pay attention to optimal performance and heat distribution throughout their inner space. Thanks to this, we are able to achieve a constant temperature in the scale of few degrees.

We design furnaces as either chamber or continuous. These can be divided into different temperature zones. This solution ensures that the optimal drying / firing curve is achieved even for complex parts.

- Heating method:**
- ✔ Direct or indirect gas heating
  - ✔ Hot air
  - ✔ Light fuel oil
  - ✔ Infrared
  - ✔ Hybrid and special\*





# Cooling tunnels

The cooling tunnels are recommended when it is necessary to manipulate with a product right after the firing process. Depending on the technology used, they are divided in a) cooling with external air intake and exhaust and b) air-conditioned closed circuits. Cooling tunnels are mainly used for a safe manipulation but also for staff comfort in coating lines. Even the coating lines with basic solution without the cooling tunnels are designed to extract heat out of a coating line.

- Benefits:**
- ✓ Cooling by exterior air
  - ✓ Air-conditioned closed circuit
  - ✓ Safe manipulation with products
  - ✓ Staff comfort increase





# Conveyors

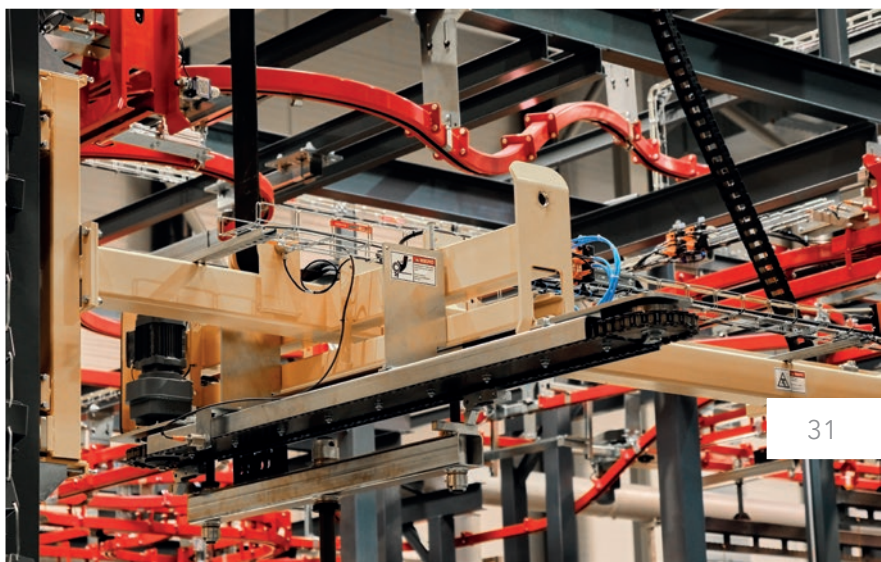
We supply our coating shops with conveyors from the world's leading manufacturers with many years of experience. The range of overhead conveyor systems includes simple manual solutions, powered single lines and complex Power&Free systems.

## Manual:

- ✔ Trolleys
- ✔ Conveyor with shifter
- ✔ Conveyor with junctions

## Continuous:

- ✔ Overhead continuous conveyor
- ✔ Power&Free





## Neutralization stations

Whenever a chemical pretreatment is a part of the technology, it is necessary to neutralize these precisely pre-defined rinsing waters. ITS neutralization stations can be delivered partially or fully automated, including an automatic calibration of pH sensors. The operators are only required to check the technology and take care of the refills.





## Vacuum evaporating systems

Another alternative for neutralizing of rinsing waters are the vacuum evaporators. The final product is distilled water, suitable for reuse or discharge into drains on the one hand and for a concentrate intended for professional disposal on the other hand. This solution is especially suitable for operations with difficult-to-reach limits for discharge into the sewer.



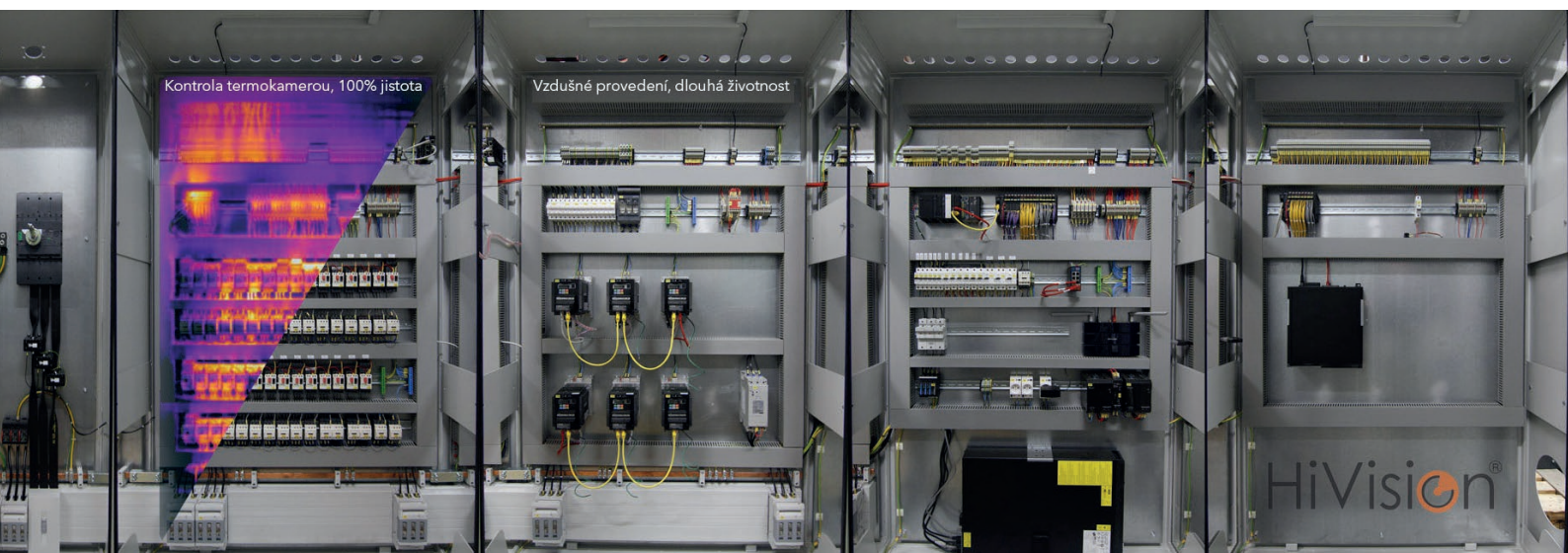
# HiVision® Control system



Video HiVision

HiVision is a comprehensive system developed on the basis of many years of experience in the field of coating line management. In line with the latest trends, it offers a clear user interface using the up to 40" touch screen terminals. The possibility of extending the control modules with additional functions or customization of the system makes the HiVision system the best available solution on the market.

- ✓ 4.0 Industry ready
- ✓ 24/7 on-line support
- ✓ Additional modules
- ✓ Integration in the company ERP
- ✓ Database for data collection

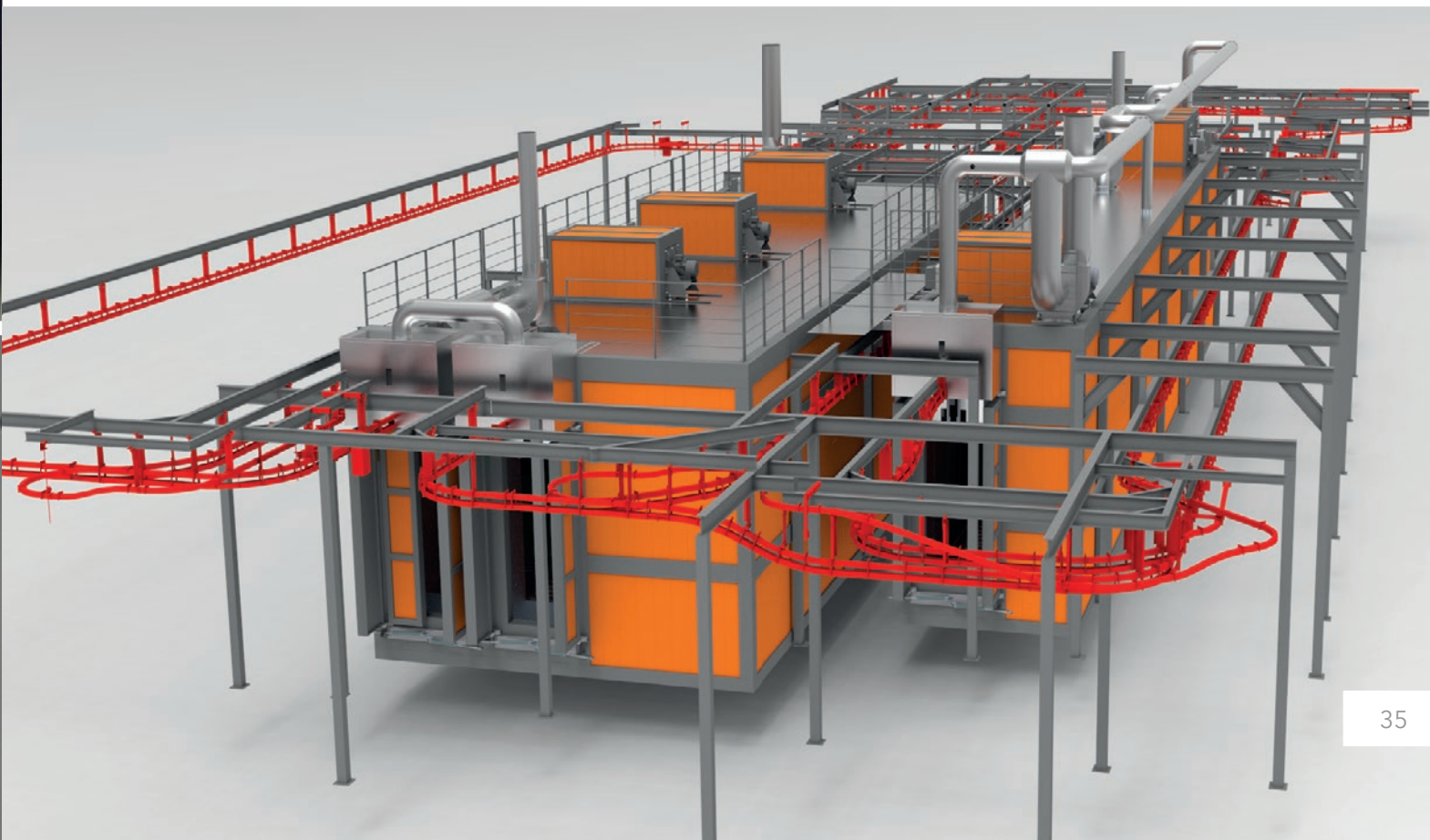




## Standard solutions

In addition to solving turkey powder coating projects, we also offer standardized solutions. It is a suitable alternative for smaller operations or also in case a partial replacement of a complex coating line is needed.

For these purposes, we have developed a modular solution that allows us to optimize production costs and shorten delivery times. Acquiring a partial node of a coating line has never been easier. The main determining parameter for choosing a suitable solution is the size of a painted part. The type and size of the technology then derives from it.

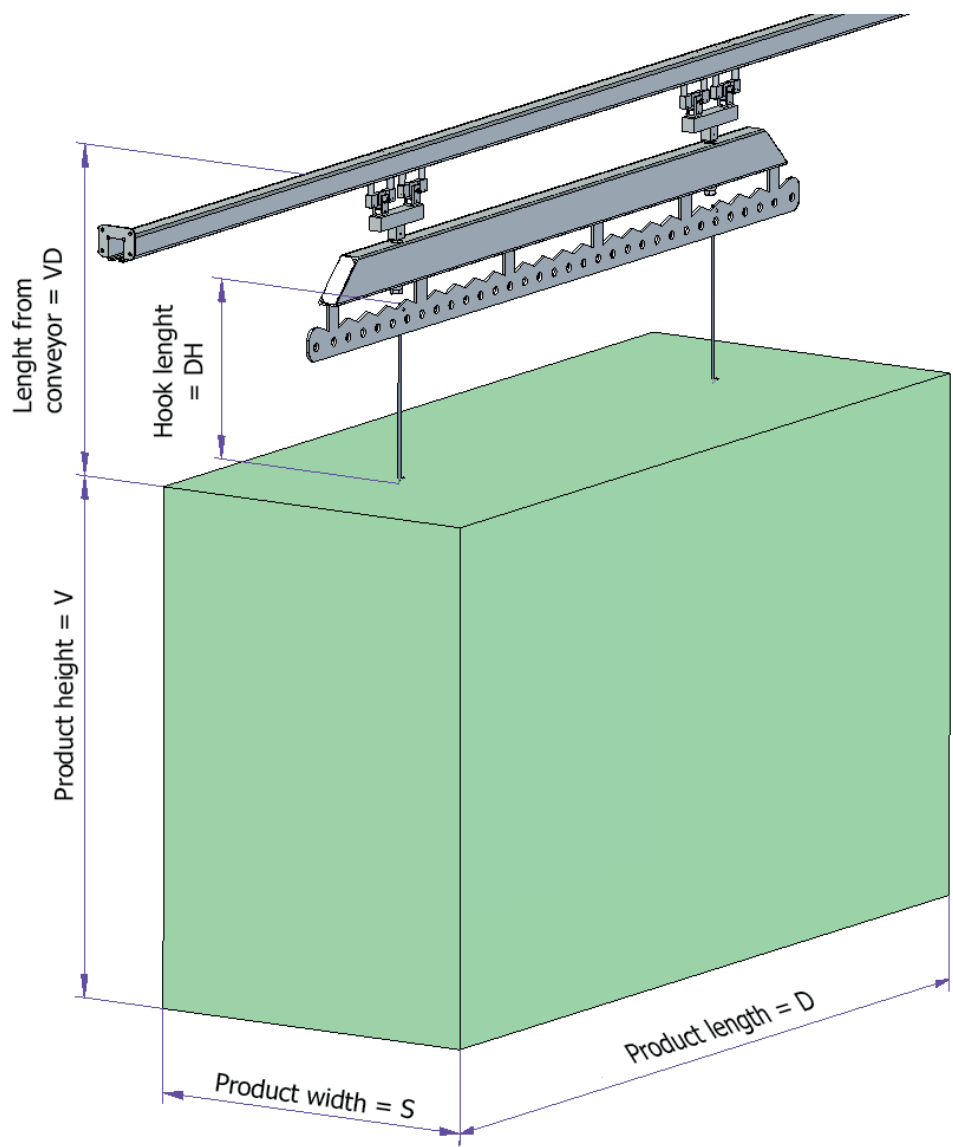




# Dimensions setup of painted parts

Basic parameter that affects the size of a typified device. You can choose from combinations of the basic dimensions of the maximum size of a painted part.

Width = W	Height = H	Length = L	Weight
500	1600	2000	100
1000	2000	2500	300
1500	2500	3000	500
2000	-	3500	1000
-	-	4000	2000
-	-	4500	-



## Painting booth with external dry filter

- Parts are loaded on an overhead conveyor (manual or driven). Spraying is usually done manually and the operator moves inside the booth, around the part to be coated
- The air flow is vertical from the ceiling to the exhaust on the floor
- A cyclone separator for powder recycling can be placed in front of the dry filter
- Stainless steel design

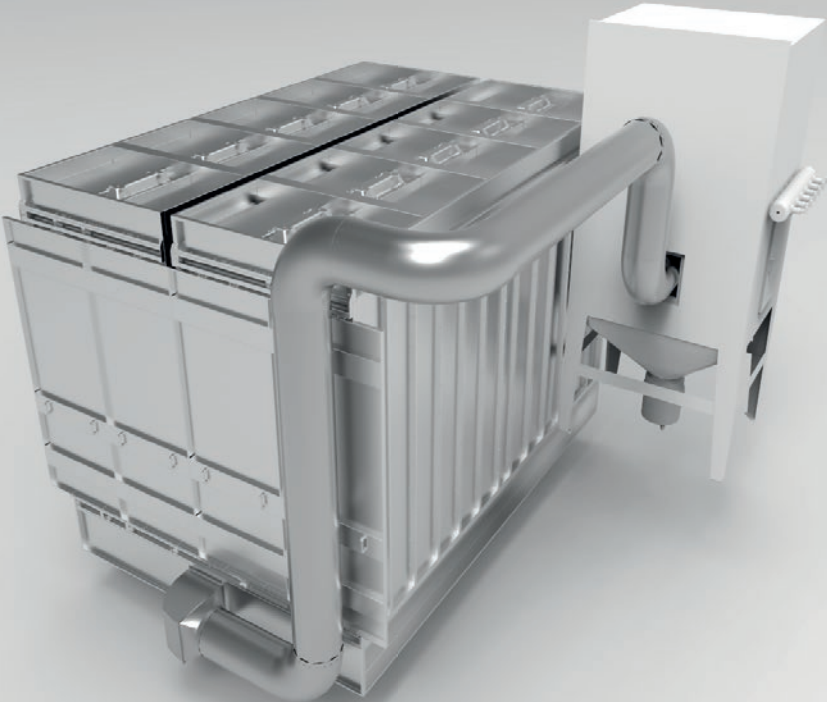
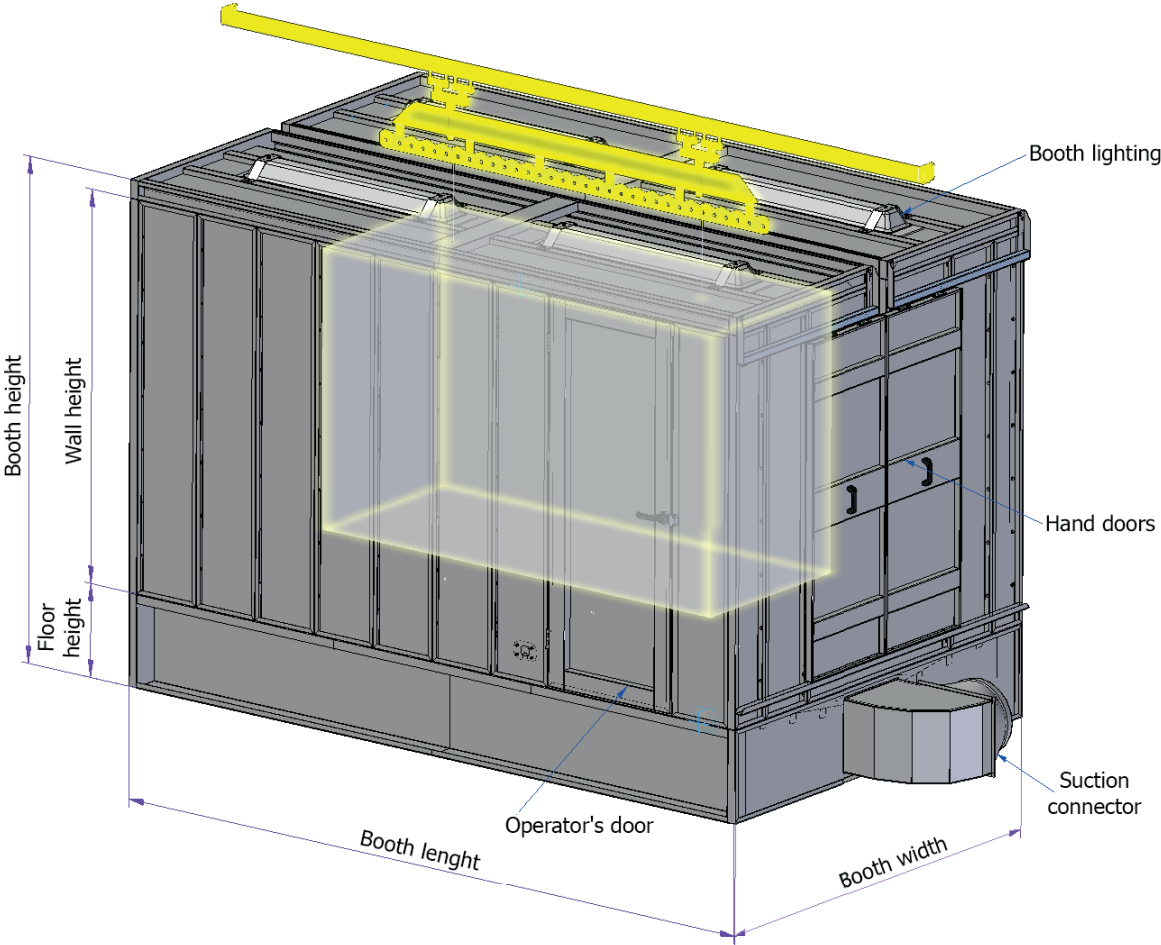
### Dimensions of painting booths

The size of a painting booth is determined by the maximum dimensions of the painted parts. Please choose the dimensions from the table and send them to us. Based on that, we will choose the most suitable solution for you.

Max. product height	>	Booth height	Wall height	Floor height
1600	>	1900	2200	500
2000	>	2400	2600	
2500	>	2900	3100	

Max. product length	>	Booth length	Max. product width	>	Booth width
2000	>	3400	500	>	1900
2500	>	3900	1000	>	2400
3000	>	4400	1500	>	2900
3500	>	4900	2000	>	3400
4000	>	5400			
4500	>	5900			

The painting booth cannot be operated without adequate extraction. This ensures the safety of the working environment with regard to the risk of explosion. According to the legislation, it is necessary to install a smoke detector and fire extinguishing system.





# Filtration painting booth

- Filter cartridges with exhaust fan are a part of a painting booth. Filter modules can be disconnected and used for return of the powder or the same filter modules can be used without paint recycling
- Continuous or chamber
- Suitable for both automatic guns with manipulators and manual painting
- Stainless steel design with a lacquered support frame

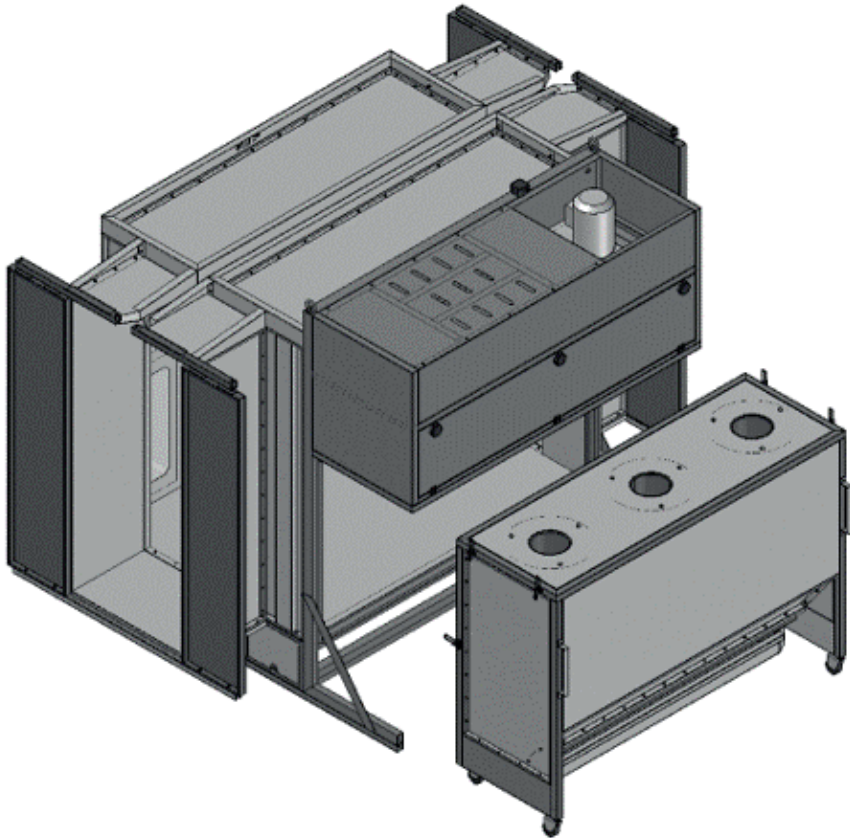
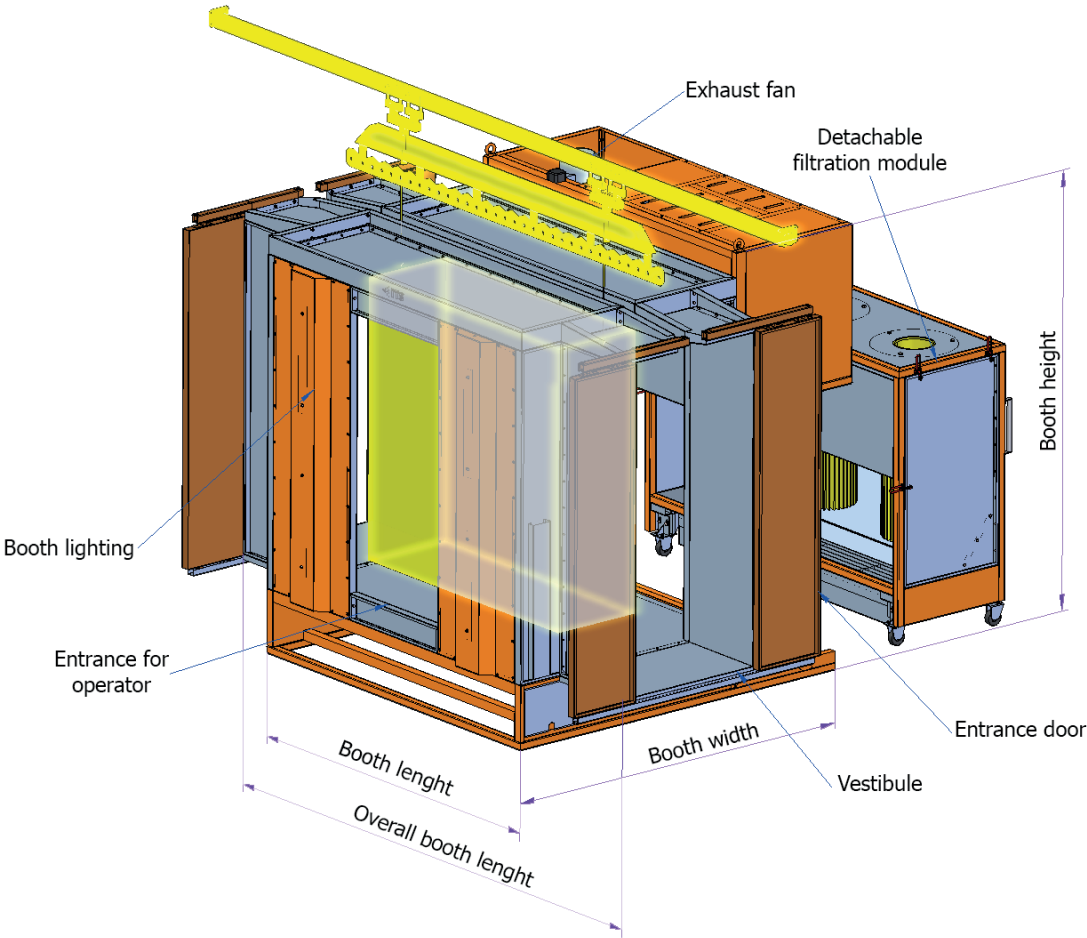
## Dimensions of painting booths

The size of a painting booth is determined by the maximum dimensions of the painted parts. Please choose the dimensions from the table and send them to us. Based on that, we will choose the most suitable solution for you.

Max. product width	>	Booth width	Filtration booth width
500	>	1500	2250
1000	>	2000	2750
1500	>	2500	3250
2000	>	3000	3750

Max. product height	>	Booth height	Filtration booth height
1600	>	2250	2600
2000	>	2650	3000
2500	>	3150	3500

Max. product length	>	Booth length	2 vestibules booth length
2000	>	3100	4100
2500	>	3600	4600
3000	>	4100	5100
3500	>	4600	5600
4000	>	5100	6100
4500	>	5600	6600





# Chamber pre-treatment

- 3 stage pre-treatment (degreasing + rinsing + rinsing with demineralized water)
- Stainless steel design
- Painted steel construction
- The spray rollers move in the direction of the conveyor and ensure perfect spraying of the entire part
- Reduced water consumption due to a cascade
- Active bath heating via plate heat exchanger (boilers not included)
- Demineralized water production is not included
- Exhaust fan for steam

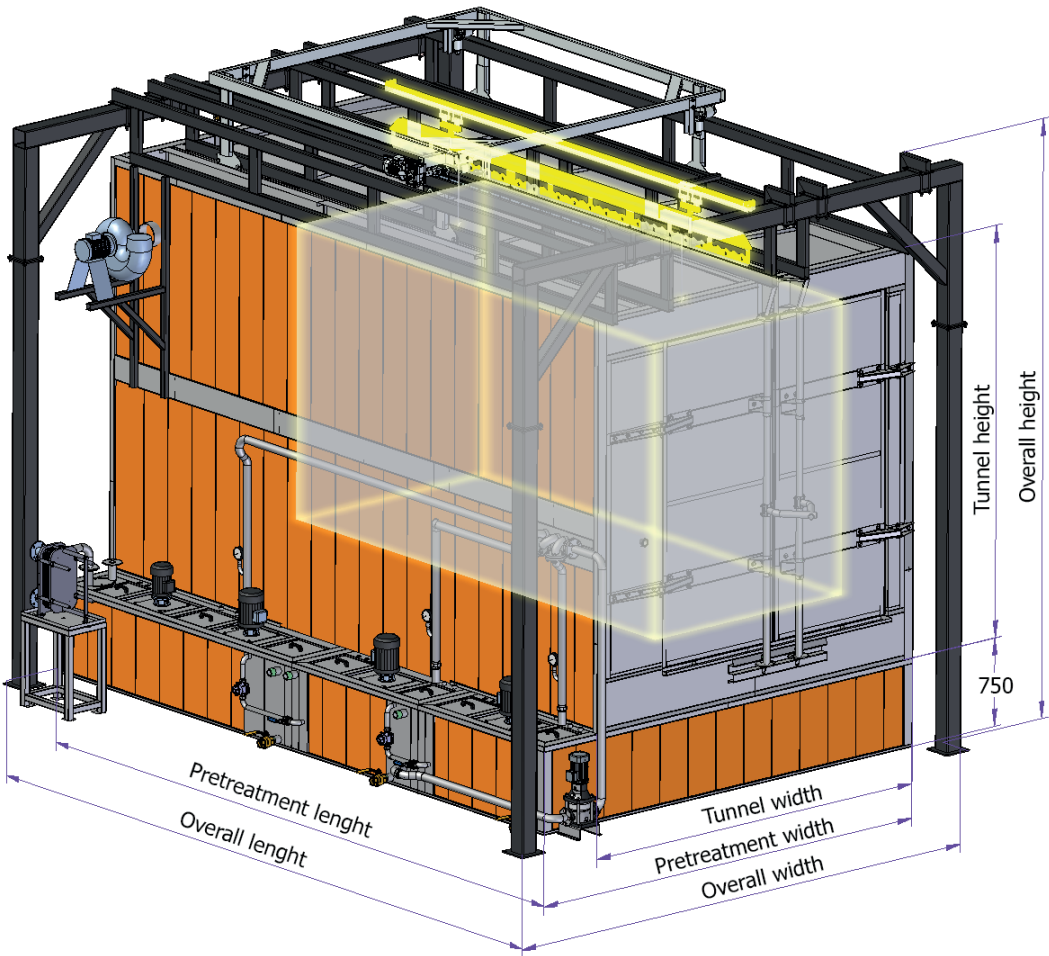
## Dimensions pre-treatment chambers

The size of a pre-treatment chamber is determined by the maximum dimensions of the painted parts. Please choose the dimensions from the table and send them to us. Based on that, we will choose the most suitable solution for you.

Max. products width	>	Tunnel width	Pretreatment width	Overall width
500	>	1900	2450	3200
1000	>	2400	2950	3700
1500	>	2900	3450	4200
2000	>	3400	3950	4700

Max. product height	>	Tunnel height	Overall height
1600	>	2600	4200
2000	>	3000	4600
2500	>	3500	5100

Max. product length	>	Pretreatment length	Overall length
2000	>	3600	4000
2500	>	4100	4500
3000	>	4600	5000
3500	>	5100	5500
4000	>	5600	6000
4500	>	6100	6500





# Curing and drying chamber

- Heating on the side wall or ceiling
- Direct / indirect gas heating
- Electric heating as an alternative

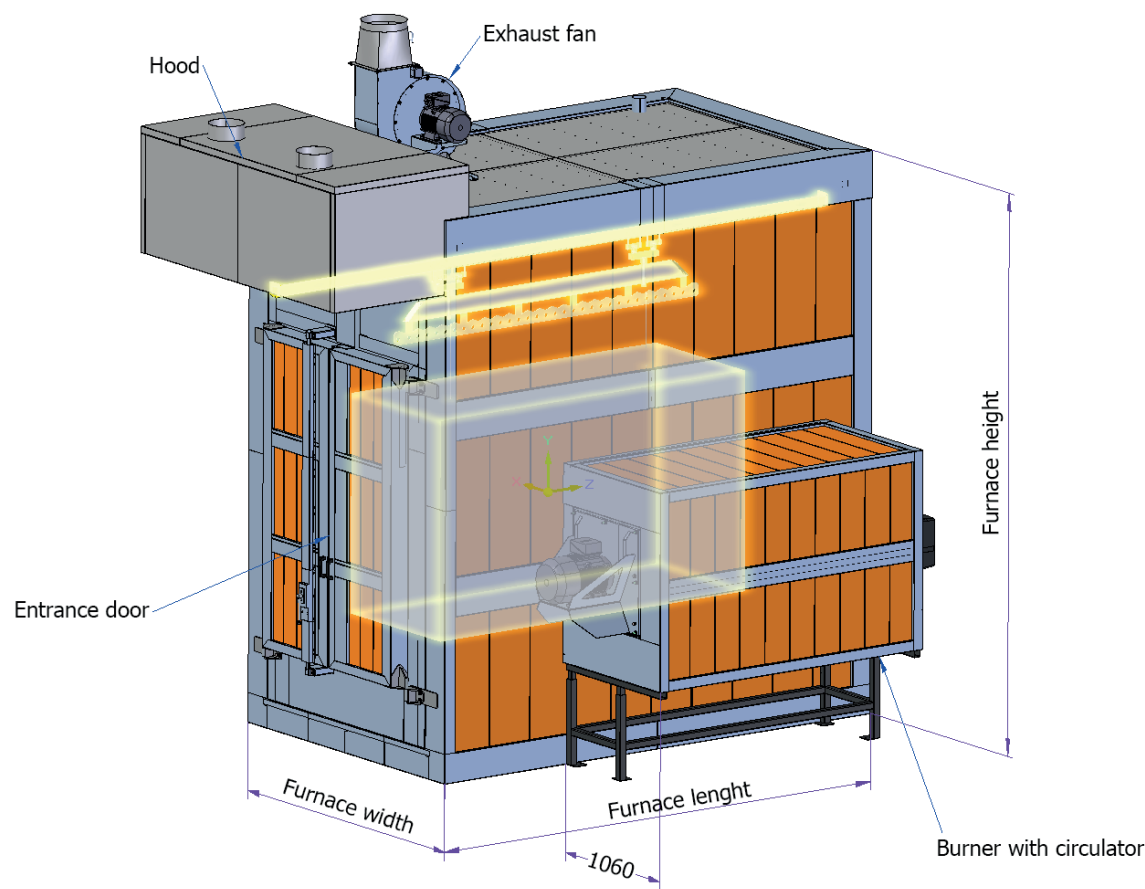
## Dimensions of chambers

The size of a curing/drying chamber is determined by the maximum dimensions of the painted parts. Please choose the dimensions from the table and send them to us. Based on that, we will choose the most suitable solution for you.

Product width	>	Furnace width
500	>	1600
1000	>	2100
1500	>	2600
2000	>	3100

Product height	>	Furnace height
1600	>	3900
2000	>	4300
2500	>	4800

Product length	>	Furnace length
2000	>	3000
2500	>	3500
3000	>	4000
3500	>	4500
4000	>	5000
4500	>	5500



We are looking for  
new partners...







We are here for you.  
We are experts in coating.

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- [www.itsbrno.com](http://www.itsbrno.com)



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