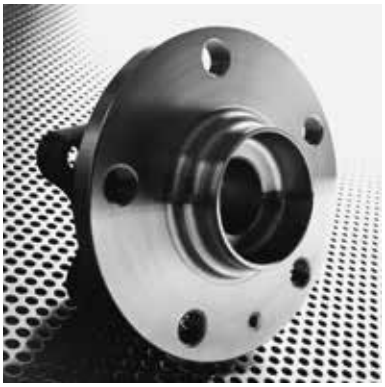
SURFACE COATING MACHINES



sprimag



From A like automotive ...



... about C like cosmetics ...



... and M like musical instruments ...



... to Z like zipper.



COATING MACHINES
FOR PARTS FROM A TO Z

When it comes to the coating of surfaces, Sprimag with its coating systems is one of the first choice partners, whether for external or internal coating. The type of coating system depends on the kind of surface and the material as well as on the geometry of the part and the production output. Sprimag coating lines are ideally suited for the coating of metal parts, plastic parts, rubber-to-metal parts, glass and many other materials. Especially in the automotive sector and in the cosmetics industry, the coated surfaces have to meet the highest requirements in terms of appearance and functionality, which is why many well-known customers from these industries trust in us for years.

Substrates

- Metal
- Plastic
- Glass
- Ceramic

Coating Material

- Solvent-based coating
- Water-based coating
- UV-based coating
- Powder coating
- Glazing
- Rubber-to-metal bonding
- Stop-off coating
- 2K / 3K coating material
- Zinc flake / zinc dust

Functional Coating

- Corrosion protection
- Anti friction
- Bonding agent
- Scratch resistance
- Anti fog
- Hardcoat
- Anti adhesion

Decorative Coating

- General coating
- Metallic coating
- Piano Black
- Soft touch
- Day & Night design
- PVD / metallizing

Ask us what we DON'T coat ...

FROM THE IDEA
TO THE FINAL COATING SYSTEM

No matter whether you coat plastic, metal or glass: Finding the perfect individual solution for your application is only possible if you consider the entire process chain and each individual process step. From pretreatment to automatic part handling, coating and drying to quality assurance. Together, we develop a plant concept that is optimally tailored to your requirements. Thanks to our in-house Applications Center, we can carry out painting trials and test series in advance.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2


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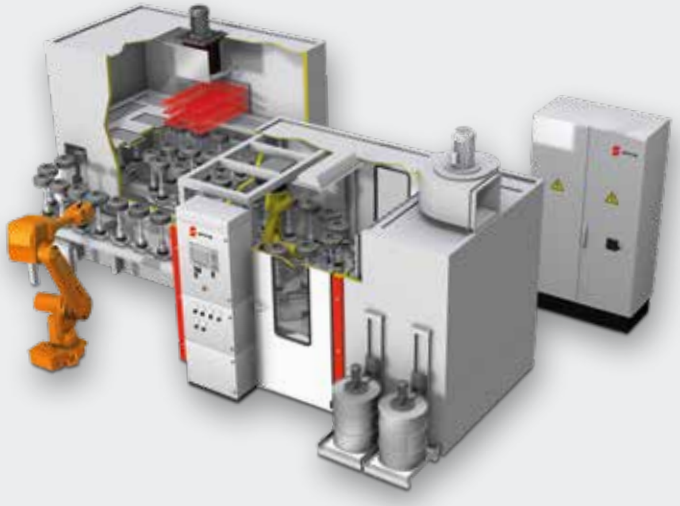
Since we have always manufactured our application technology in-house, even special coating requirements are no problem for our team of coating experts. For an efficient and safe operation of your coating machine we offer individual training courses. Even after a project has been completed, we are always available to our customers with our spare parts service and a competent service team.



3

1 Consulting
2 Developing and trials in our Applications Center
3 Developing machine design
4 Inhouse manufacturing of the application technology
5 Assembly and commissioning
6 Trainings
7 Service and spare parts supply

6

7

SPRIMAG APPLICATIONS CENTER
CONSULTATION, TESTING AND DEVELOPING

Sprimag is one of the few suppliers on the market able to not only design and manufacture coating machines but also develop the appropriate application technology. Beginning with spray guns, diaphragm pumps, fluid pressure regulators through complete paint supply systems including mixing unit, we provide everything from a single source. In the Applications Center new technologies are developed and existing technologies optimized. There we also carry out practice-oriented trial series in order to define the optimum overall process for coating your workpieces. For many applications we can carry out tests with metal, plastic or glass parts, which we coat with solvent, water and UV paint. The extensive testing opportunities in the Sprimag Applications Center allow us to provide a production simulated solution which is perfectly aligned with your process.

Modern Equipment with a Robot Coating Solution
Sprimag supplies a wide range of state of the art coating machines which meet all your needs: A wide range of coating systems and our own application technology. The core of our Applications Center is a large scale modular coating unit, and the ability to combine various pretreatment and drying methods to simulate most any production process.

Coating Trials
Coating trials are carried out in accordance with the requirements and needs of the customer. Through this process our customers see firsthand the results they should expect from their system under production conditions.

Application Experience

Sprimag is continuously working with paint suppliers to improve coating processes. Together, we are your first contact for application expertise. Optimal coating results can only be achieved if application technology and coating system are perfectly matched.

PRECISE COATING WITH THE **COMPACT ROUND TABLE MACHINE**

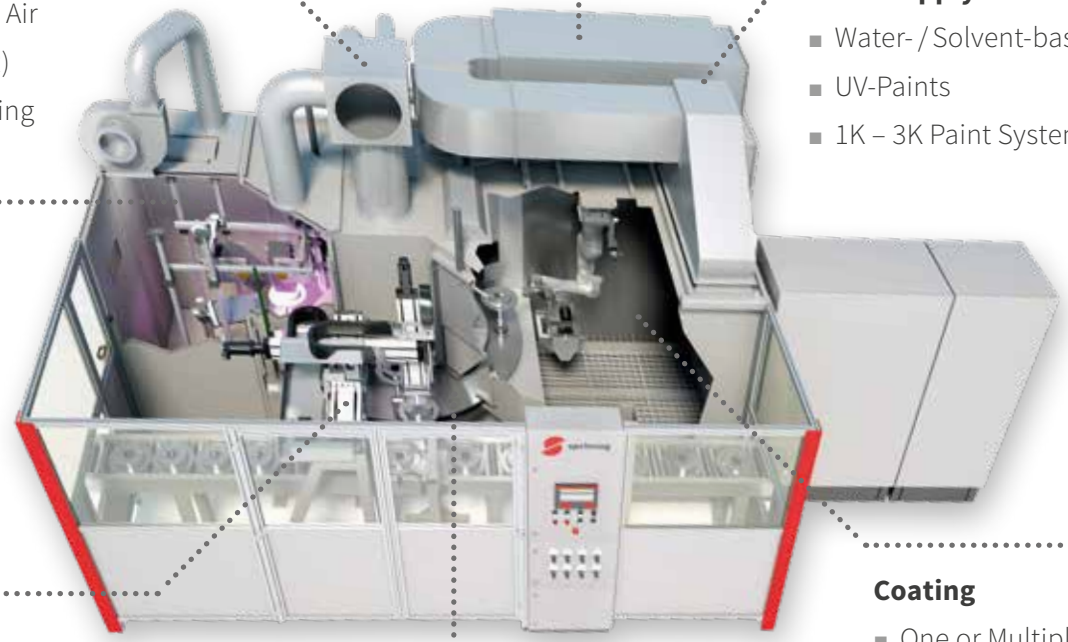
The Sprimag Round Table Coating Machine is characterized by its compact footprint. Modularly adaptable to the particular coating task, the rotary machine is preferably used for surface coating of small quantities or short process times.

Flash-off
- Temperature Control
- Infrared (IR)

Air Technology
- Supply Air Conditioning
- Exhaust Air Purification

Drying
- Circulating Air
- Infrared (IR)
- UV Hardening
- Induction

Paint Supply
- Water- / Solvent-based Paints
- UV-Paints
- 1K – 3K Paint Systems



Cooling
- Temperature Control

Pretreatment
- CO_2-Snow Blasting
- Ionization
- Flaming / Plasma

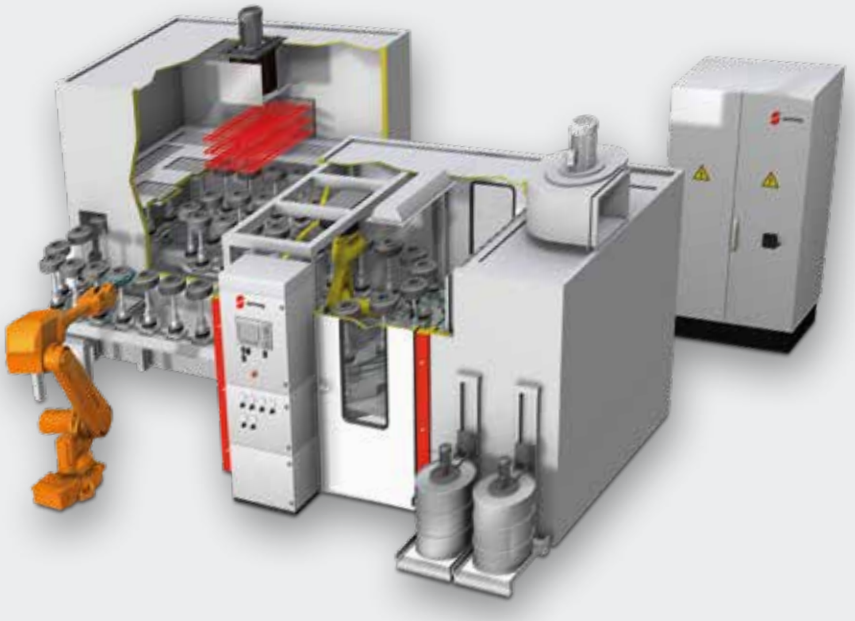
Coating
- One or Multiple Cabin Concept
- Robot
- Linear Axis

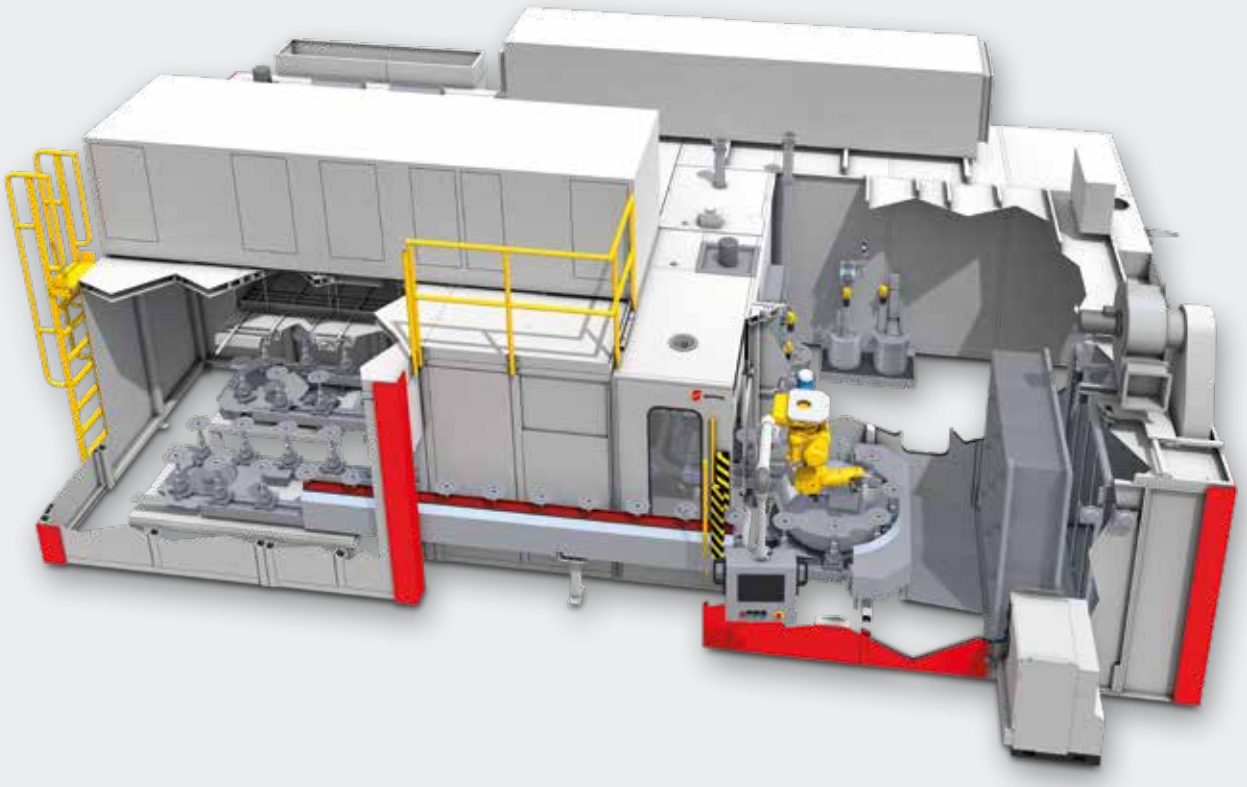
As an automated coating system based on the spindle principle, the Round Table Coating Machine is ideally suited for coating rotationally symmetrical parts such as brake discs, wheel hubs and wheel bearings. Especially where a high positioning accuracy is required, such as for the internal coating of sleeves, (perfume) bottles and bearing shells, the rotary machine convinces with its precise coating performance. A common application for this system is surface coating with rubber-metal bonders or UV paints. The Round Table Machine can also be used for fast-drying water-based and solvent-based paints.

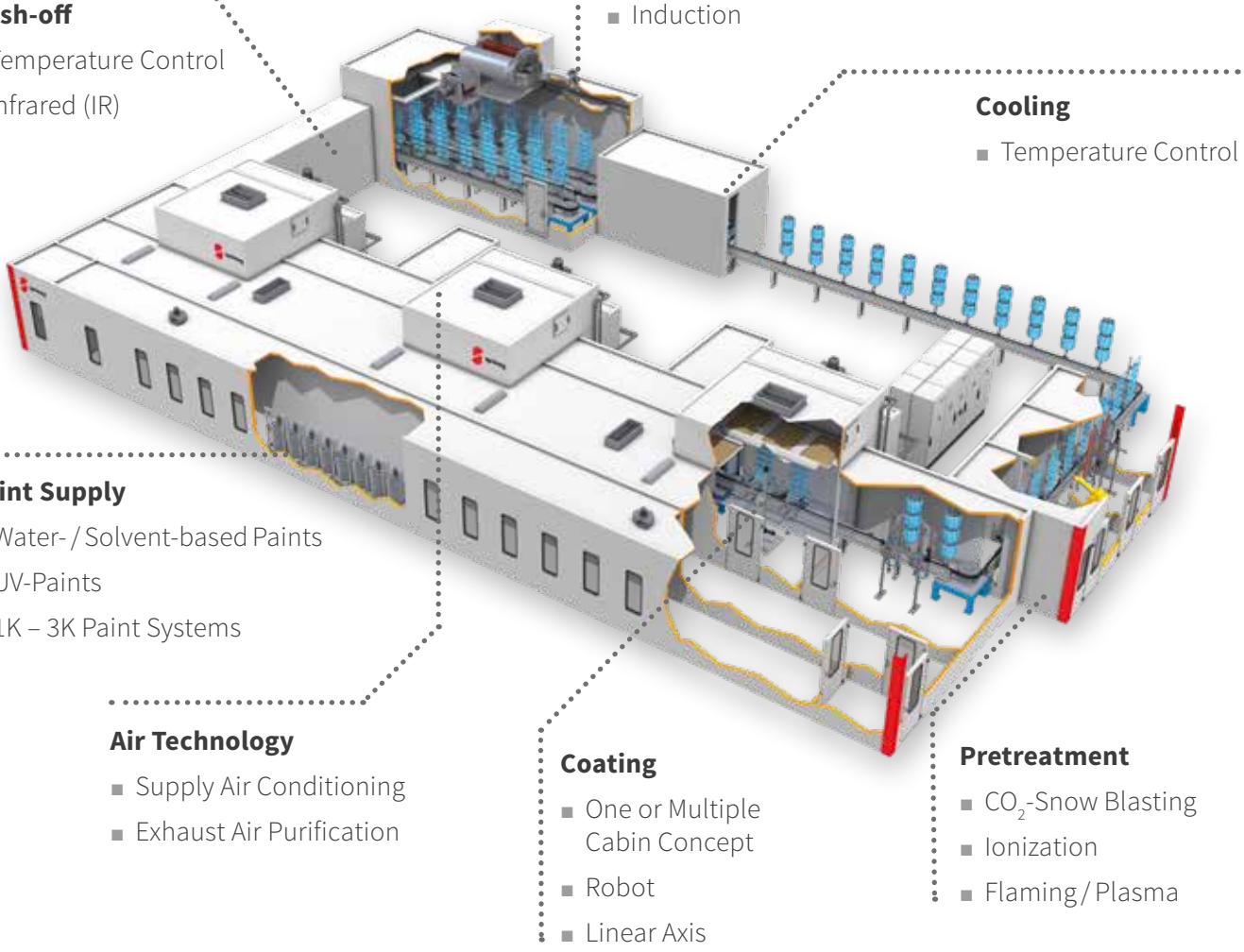
Thanks to its small footprint, the Round Table Coating Machine is often integrated into production lines as a compact painting system, thus providing a cost-effective and economical inline coating solution.

PRECISE COATING WITH THE **HIGH-PERFORMANCE CHAIN-ON-EDGE MACHINE**

The Sprimag Chain-on-edge Machine is characterized by its robust and cost-optimized machine design. These coating systems can be adapted modularly to the respective coating task and are preferably used for the coating of large quantities or long process times.





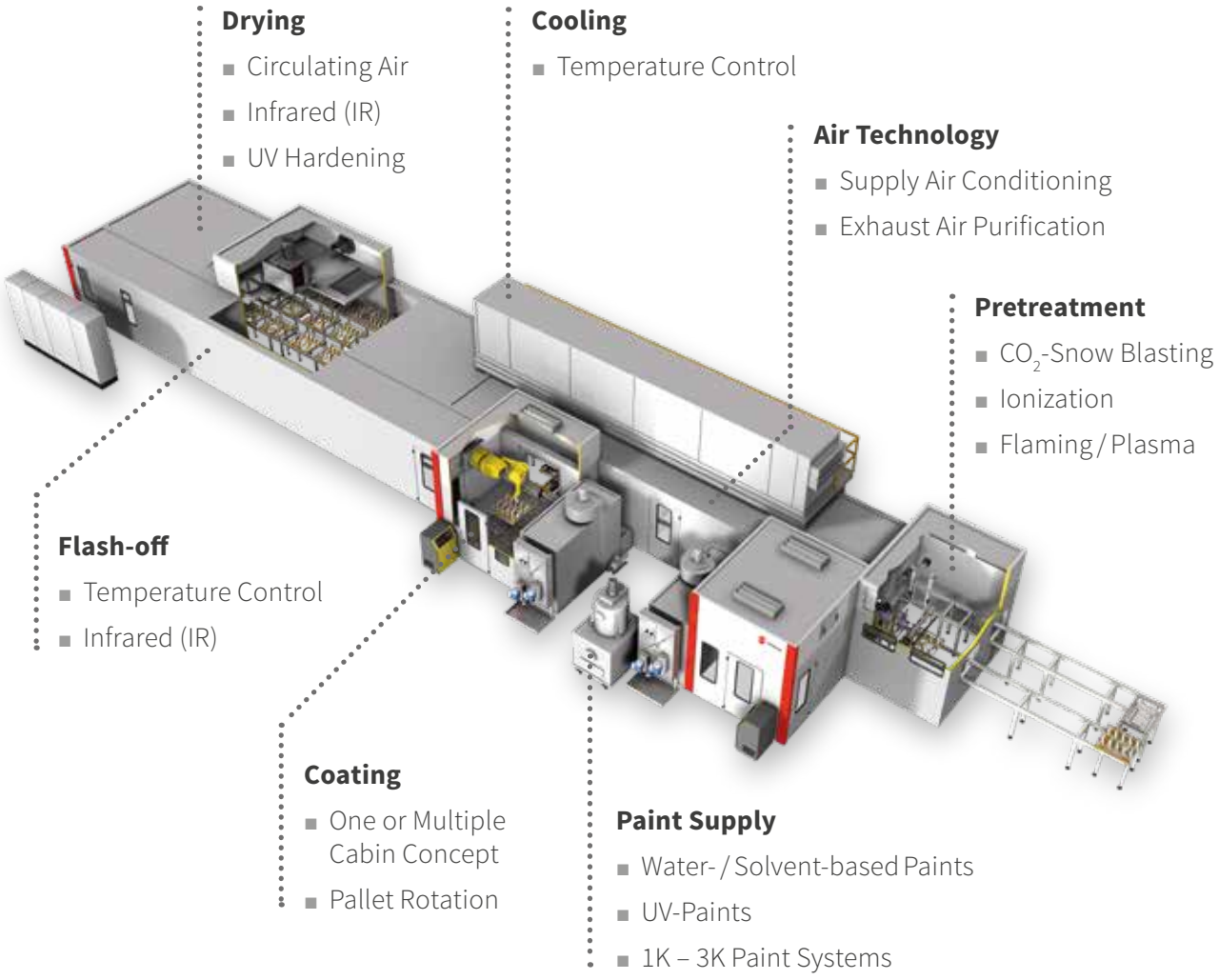


As an automatic coating system based on the spindle automatic principle, the Chain-on-edge Machine is ideal for coating rotationally symmetrical parts such as: brake discs, wheels (wheel hubs or bearings), bottles or sleeves. But also other parts can be coated with chain-type machines with single or multiple parts per fixture. Examples include door handles, emblems, side mirrors, valve housings or irons.

By taking advantage of the layout flexibility a chain conveyor offers, a Chain-on-edge Coating Machine can be adapted to the local conditions and thus an integration into existing production environments can be made possible.

PRECISE COATING OF COMPLEX PARTS WITH THE **ROBOT SHUTTLE**

The innovative Robot Shuttle System is ideally suited for coating demanding 3D plastic parts or parts with complex geometries, such as automotive accessories, automotive interior parts or front panels for electronic equipment. The flexibility of the coating system is practically unlimited due to the low set-up effort and the simple programming of the coating robot. Installing the paint robot high on the sidewall of the spray booth generates not only unrestricted movement for the robot, but also frees the cabin ceiling of obstacles that could impede the linear airflow through the mezzanine filter panels which compose the entire ceiling. The design of a Robot Shuttle System cannot be more sophisticated.

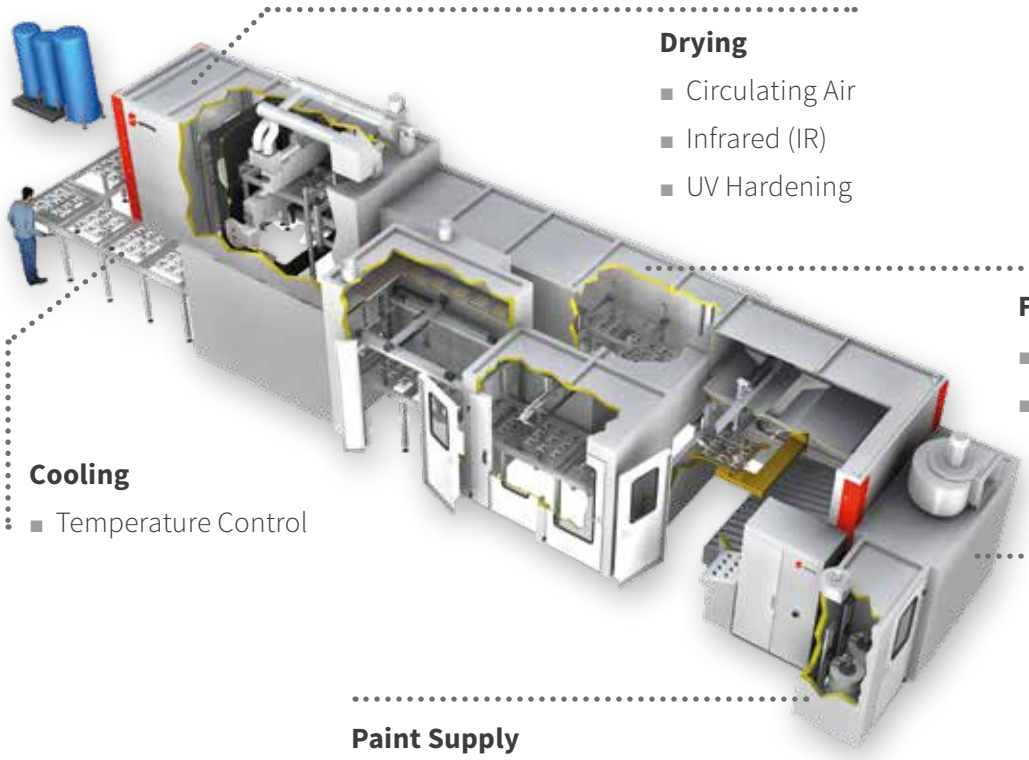


Flexible material flow concept with pallet conveyor technology

For years Sprimag has been successfully implementing pallet conveyor technology for highly flexible horizontal coating. This makes a flexible material flow concept possible, which can include bypasses, junctions and switches.

PRECISE COATING OF 3D-PARTS WITH THE **THREE-AXIS COATING MACHINE**

The Sprimag Three-axis Coating Machine is an extremely versatile system for coating applications with the highest quality requirements. It is suitable for coating flat parts, where a specified layer thickness must be precisely held within very tight tolerances. This may be: automotive interior parts, face plates, control buttons or keyboards (laser paint coatings, Day & Night design).
The parts to be coated are carried on a conveying axis inside the spray cabin. Coating is carried out by one or several spray guns, which are mounted on a reciprocating axis installed transverse to the conveying direction. During the coating program, the pallet can be rotated via a third axis so that coating can take place in one or more cross passages.



Drying
- Circulating Air
- Infrared (IR)
- UV Hardening

Flash-off
- Temperature Control
- Infrared (IR)

Cooling
- Temperature Control

Coating
- One or Multiple Cabin Concept
- Pallet Rotation

Paint Supply
- Water- / Solvent-based Paints
- UV-Paints
- 1K – 3K Paint Systems

The work pieces are conveyed through the coating process on a pallet which is not fixed to the conveying system. Both "stop and go" and continuous modes of operation with different process speeds within the coating system are possible.

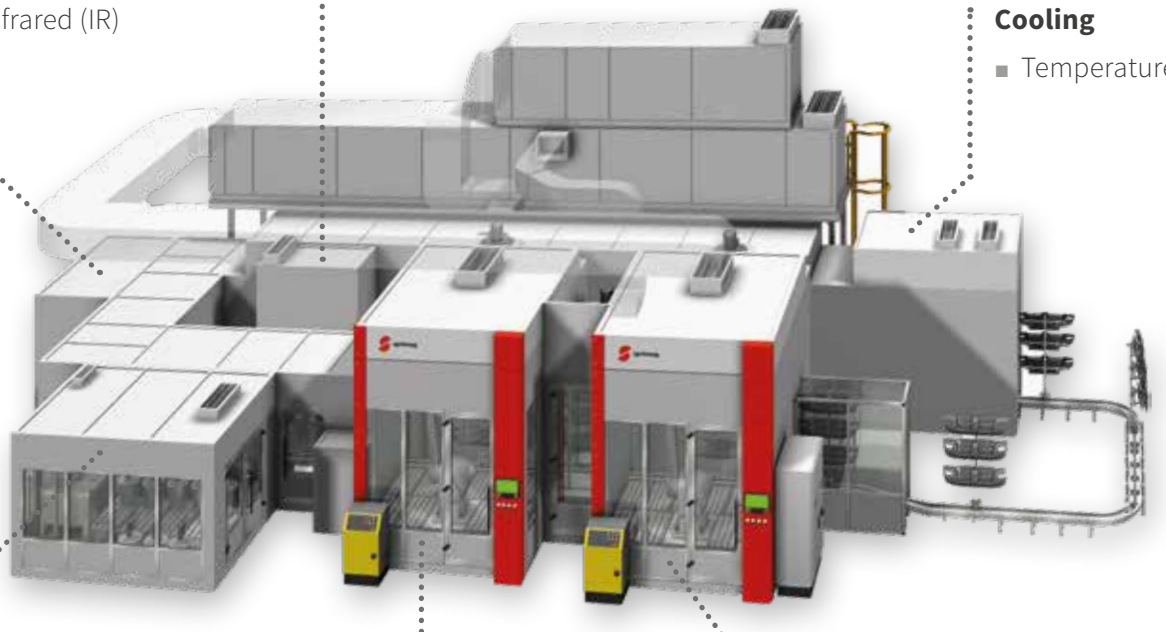
PRECISE COATING OF LARGE COMPONENTS WITH THE **FLOOR CONVEYOR**

Today, Floor Conveyors are indispensable when feeding larger components. A typical feature is a continuous or indexing operation. Depending on the individual requirements of the parts to be fed, Sprimag has simple Single Line Floor Conveyors as well as flexible versions such as Power & Free systems available. All process steps, from the pretreatment to evaporation and drying up to cooling can be integrated into Sprimag's floor conveyors.

Flash-off
- Temperature Control
- Infrared (IR)

Drying
- Circulating Air
- Infrared (IR)
- UV Hardening

Cooling
- Temperature Control



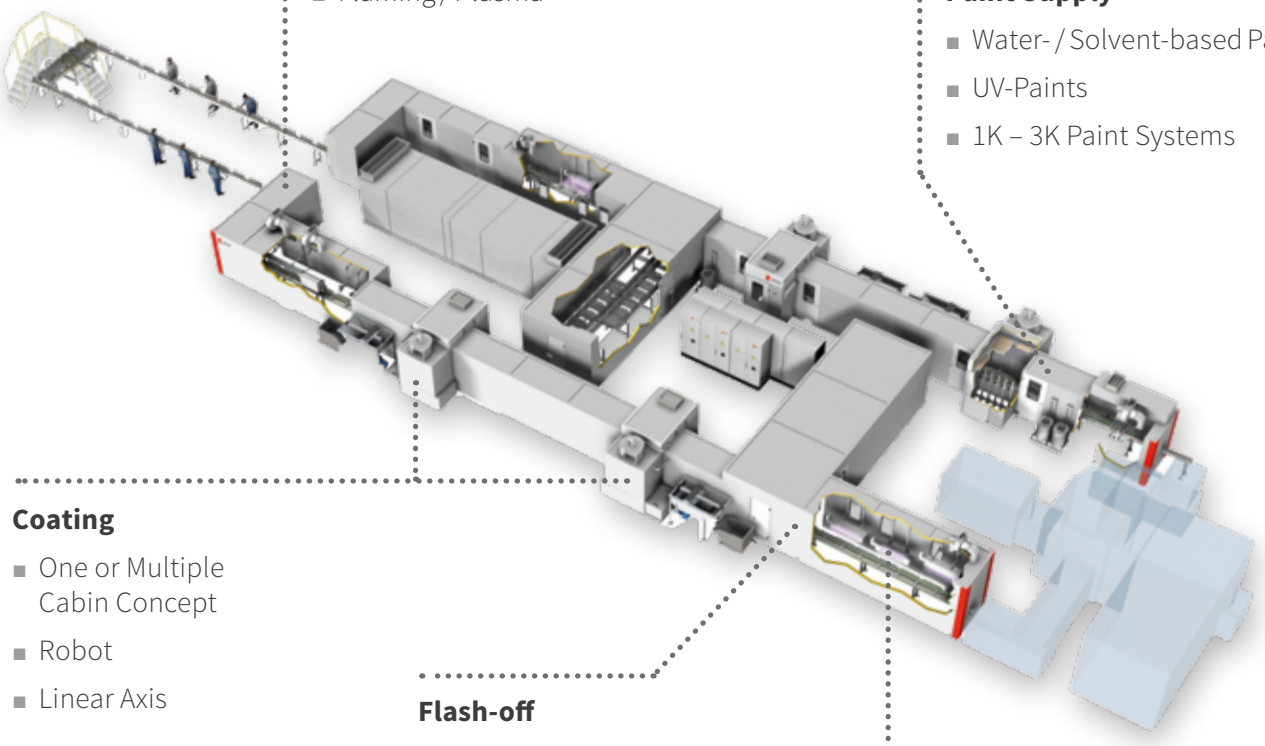
Paint Supply
- Water- / Solvent-based Paints
- UV-Paints
- 1K – 3K Paint Systems

Coating
- One or Multiple Cabin Concept
- Robot
- Linear Axis

Pretreatment
- CO_2-Snow Blasting
- Ionization
- Flaming / Plasma

PRECISE COATING OF LARGE QUANTITIES WITH THE **BAR COATING MACHINE**

Especially in the glass and cosmetics industry, bar conveyors are a frequently used system concept. The reasons for this are the extremely high production quantities, the resulting process and conveyor speeds as well as the mostly individual and discontinuous method of transportation.
Several workpieces arranged lengthwise on an Automatic Bar Feeder are moved discontinuously at high speed through the continuously conveying coating process. All process steps such as pretreatment, evaporation, drying and cooling can also be easily integrated into the Sprimag Automatic Bar Feeders. And as the workpiece carrier can be released from the base carrier, the Bar Feeder system can also be used in combination with metallization/PVD processes. Within the provision of such concepts, Sprimag can already look back on many years of experience.



Pretreatment
- CO2-Snow Blasting
- Ionization
- Flaming / Plasma

Paint Supply
- Water- / Solvent-based Paints
- UV-Paints
- 1K – 3K Paint Systems

Coating
- One or Multiple Cabin Concept
- Robot
- Linear Axis

Flash-off
- Temperature Control
- Infrared (IR)

Drying
- Circulating Air
- Infrared (IR)
- UV Hardening

OPTIMAL RESULTS
START WITH IDEAL **PRETREATMENT**

For optimal coating results parts being coated must be free of contamination and have their surface pretreated before the coating process itself begins. Sprimag offers a full range of cleaning and surface treatment options. At Sprimag, pretreatment is as environmentally friendly as possible.

Power Wash

- Cleaning of the surface by spray nozzles
- Water-based cleaning systems
- Chemical and physical cleaning effect

Ionization

- Removing dust particles by neutralizing the surface
- One or more ionization bars
- Static or moving systems
- Optimized supply of fresh air and exhaust air

Flaming

- Activation of the surface by gas flame
- Burner stationary or movable
- Automatic ignition and monitoring of flame

CO_2-Snow Blasting

- Cleaning of the surface
- Homogeneous cleaning result
- Suitable for sensitive and fine structured surfaces
- Solvent and residue free
- Requires minimal space

Plasma

- Selective surface activation
- High process speed
- Inexpensive, environmentally friendly pretreatment
- Robotic controlled integration in the production line
- Can also be used for temperature-sensitive parts

EFFICIENT **DRYING AND COOLING** WITH ECONOMICAL TREATMENT

Depending on the paint used and the characteristics of the component, different drying processes are used. Years of experience enable us to find the right drying process for the individual needs of our customers, which perfectly matches the overall process and guarantees the best coating results. Sprimag is continuously looking for alternative, environmentally friendly and economical solutions.

Drying with Circulating Air

- Very consistent curing temperature due to innovative air guidance methods
- Low energy consumption through optimum insulation
- Temperature ranges from ambient up to 250 °C
- Special version up to 350 °C

Drying with Induction

- Quick, clean and economical
- Very exact control of time and temperature
- Linear or profile inductors available to match part shape
- Very high temperature achieved in a short time
- Requires minimal space

Drying with UV

- Full curing in a matter of seconds by UV radiation
- Number of lamps depending on output, paint, geometry
- Spectra of emission adjusted to type of paint
- Safety stand by circuit, lockable systems

Drying with Infrared

- Brings heat directly where required
- Ambient air is not heated which saves energy
- Gas or electrically heated
- For preheating, forced evaporation, drying
- Near-Infrared

Cooling Zone

- Rapid cooling down of the parts after drying
- Cooling air intake from the outside or recirculating air system with heat exchanger

APPLICATION TECHNOLOGY FROM OUR OWN MANUFACTURING AND COMPETENT SERVICE

Quality made in Germany: This also applies to the Sprimag application technology, which is manufactured at our company headquarters in Kirchheim / Teck and can therefore be optimally adapted to the coating process. Thanks to our own parts manufacturing we can meet even the most unusual coating requirements and our wide range of nozzle sets is constantly growing. For this reason, customized products and special nozzles are also no problem. From spray guns and diaphragm pumps to complete paint supplies, we offer our customers tailor-made solutions.

Sprimag offers a wide range of services starting with commissioning, to extensive training measures for the operating personnel, to customer service who also takes care of repair and onsite or remote maintenance. Sprimag is also at the customer's assistance with advice and action for long-standing coating systems: Services are guaranteed – as well as the complete supply of spare and wear parts, including application technology. For Sprimag, convincing products and competent service go hand in hand.

Spray Guns

Material Pressure Regulators

Machine Equipment Accessories

Paint Supplies

Pumps

Material Filter

The standard range of application technology and spare parts are available for download in this brochure:

Service Contact

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E-Mail: service@sprimag.de

Our services at a glance:

- Spare Parts
- Process Start-up
- Process Support
- Training and Consulting
- Maintenance and Inspection
- Remote Maintenance
- Modification and Modernization

SPRIMAG COATING SYSTEMS
HIGH-END TECHNOLOGY MEETS TRADITION

Since 1925 Sprimag has enjoyed a leading position for automated coating solutions. Sprimag developed units for functional and decorative coating of mass-produced parts as well as for internal coating of metal packagings such as tubes, cans and beverage bottles. Coating units from Sprimag are well proven and are often considered as benchmarks in terms of quality, precision and reliability. With highly qualified and experienced employees from the initial consultation through the engineering, application development, manufacturing, and assembly, installation and commissioning, to the after-sales service, Sprimag is able to meet customer needs flexibly, cost efficiently and ensuring the best quality. Through continuous improvements in all process steps and activities Sprimag is constantly improving its services to its customer.

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