

# Smart-Compact Painting-Line



## Smart-Compact-Painting-Line

# Low space requirement

There is often little space in existing building structures for the integration of a complex coating system. This is where our Smart Compact Painting Line concept comes in. Unlike conventional continuous systems, the RIPPERT Smart Compact Painting Line allows for individual system configuration. Various pre-treatment options such as CO<sub>2</sub> cleaning, plasma, flaming and ionisation can be integrated into this modular concept.

Depending on the operating mode, 1 to 3-layer paint application and wet-on-wet coating are possible. Both water-based and solvent-based paint systems can be processed. Paint mist separation is carried out regeneratively and sustainably by the patented RIPPERT rotary brushes in the lower process level. The concept offers several options for drying. Thermal drying in a space-saving and energy-efficient rotary dryer or UV curing at a stationary or robot-guided UV lamp. The concept offers several options for drying. Thermal drying in a space-saving and energy-efficient rotary dryer or UV curing on a stationary or robot-guided UV lamp. On request, additional infrared drying can be integrated into the rotary dryer.



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# Compact design

The base frame supports can be individually equipped using a universal component holder. The central handling interface enables the integration of additional process steps. If required, process data can be recorded and component-related system data can be evaluated. Centralised robot handling replaces conventional conveyor technology, thereby offering greater process stability and accuracy. The flexible handling robot also allows for different process times. The elimination of conveyor technology in the paint booth minimises contamination problems. In addition, operating energy costs are reduced because the conveyor chain does not draw heat from the dryer.

The compact booth dimensions are mainly operated in recirculation mode. The rotating unit in the paint booths enables painting on both sides. The variable adjustability of the painting position enables considerable paint savings compared to a continuous system. Another feature of this system design is that the cycle time of the system is equal to the painting time.





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# Modular · Scalable · Expandable

This modular, scalable and expandable system concept is particularly suitable for the production of series and small series. It is suitable for a wide range of parts of different types and sizes that need to be painted precisely and evenly.

- Compact design
  - Low space requirements maximise production area
  - Modular expandability
- Individual, scalable and modular system design
  - Various pre-treatment options (ionisation, CO<sub>2</sub>, flaming, plasma)
  - 1–3 layer coating application, wet-on-wet also possible
  - Use of one or more coating booths
- Integration of additional process steps possible
  - Laser perforation, inkjet, pad printing
- Various drying options
  - Thermal, infrared, UV, laser
- Central robot handling without conveyor technology
  - Higher process reliability and efficiency
  - Stationary or with travel axis
- No conveyor technology in the coating area
  - Fewer problems due to contamination
- No conveyor technology in the oven
  - Lower energy costs



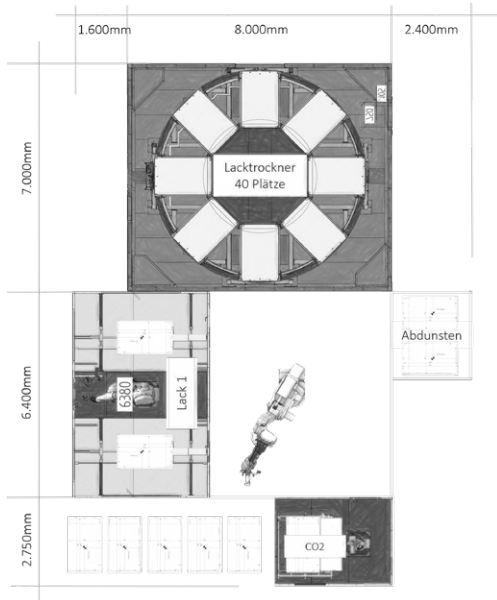
## Smart-Compact-Painting-Line

# Key Facts

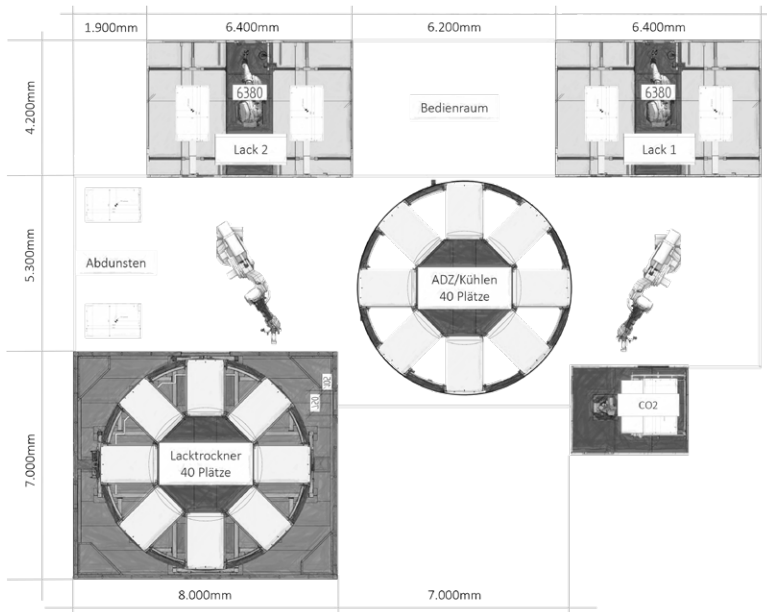
- Cycle time = painting time
  - 60–180 seconds per base frame
  - > Depending on the painting time
- Compact cabin dimensions
  - predominantly in recirculation mode
- Double-sided painting with rotating device
  - Significant paint savings thanks to optimal painting position
- Various options for paint mist separation (wet/dry)
  - Patented ink mist separation RTS rotation
  - > Renewable/Sustainable
- Water- and solvent-based coating systems are possible
- Process data acquisition and evaluation possible for components – RIPPert MES
- Space-saving, energy-efficient rotary dryer
  - Reduces operating costs and carbon footprint



## 1-cabin plant



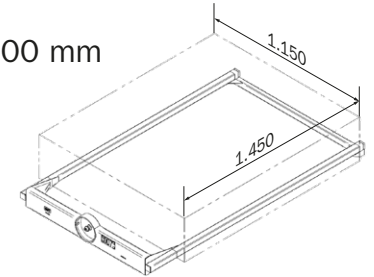
## 2-cabin plant



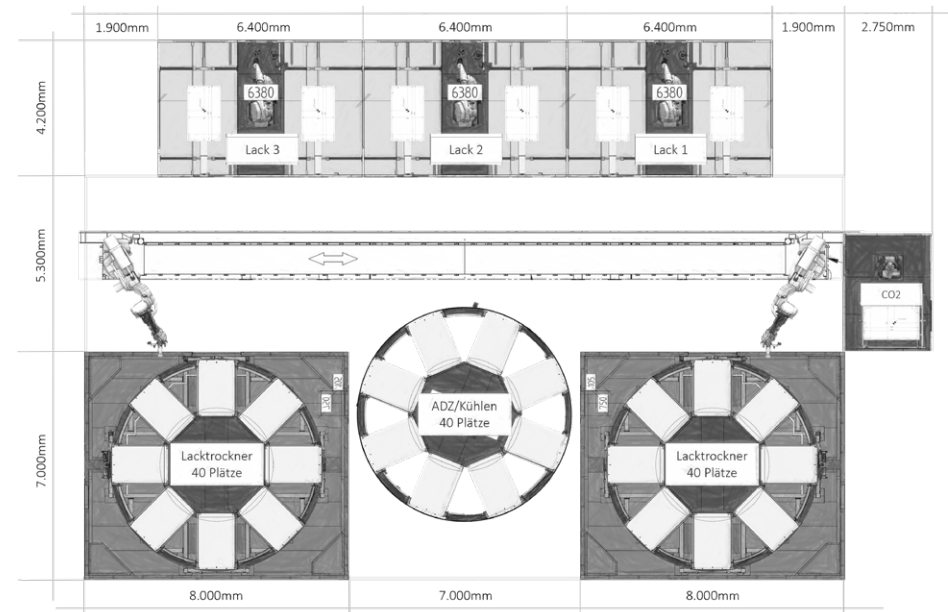
## Smart-Compact-Painting-Line

# base frame carrier

- Dimensions: 1,700 x 1,000 mm
  - Component: 1,600 x 1,150 x 500 mm
- Loading capacity: up to 45 kg
  - less own weight ca. 20 kg
- Central handling interface
  - Universal mount for specific workpiece carriers
  - Adjustments to process steps possible
- Support lengths of up to 2,200 mm can also be achieved
- Base frame carrier can be loaded and unloaded 'offline'
- Thermally and chemically strippable



## 3-cabin plant





**Solutions to the point!**

# References



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