

Experiencing service up close

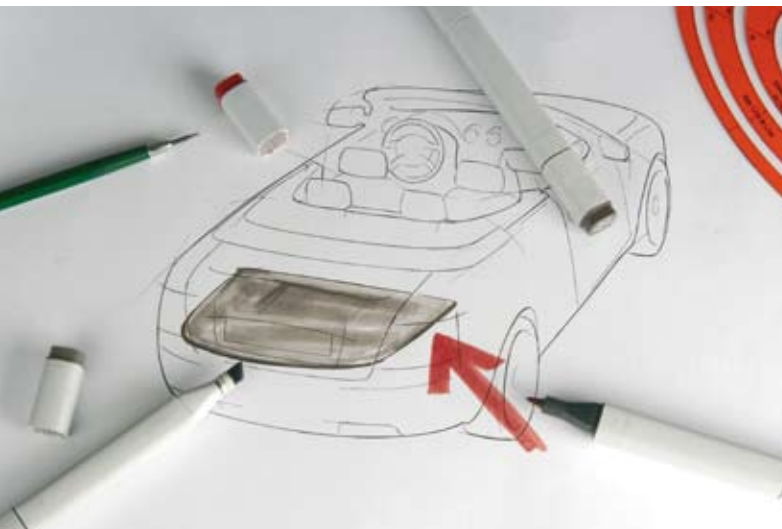
The PUR-CSM Center in the technical laboratory of Hennecke GmbH not only proves the company's innovation potential and technological leadership in the field of PU processing. Together with and for the customers, Hennecke further opens up new areas of use and trend-setting applications.

The Service Center with a size of 300 square meters is equipped with state-of-the-art PU processing technology and is available for process development and raw materials testing under close-to-production conditions. Training, demonstrations to customers and matching tests will be carried out as well. Another service is the fabrication of sample parts.

Hennecke thus provides the spatial and technical capabilities for developing and spreading innovative technologies hand in hand with the customers, enabling them to respond flexibly and timely to new market demands.

This new range of services also makes a crucial contribution to involving system partners for raw materials, technologies and machine engineering in the development process at a very early stage and to jointly designing and implementing customized solutions ready for mass production.

In addition, the PUR-CSM Center offers a great variety of possibilities connected to the following PU manufacturing technologies.



PUR-CSM (Composite Spray Moulding)

This technology comprises diverse tried and tested PU spray technologies for the production of fibre-reinforced components or compound mouldings made of unfilled or filled PU systems. The core element of all spraying variants is the innovative Hennecke spray technology with its excellent spray quality and other key features.

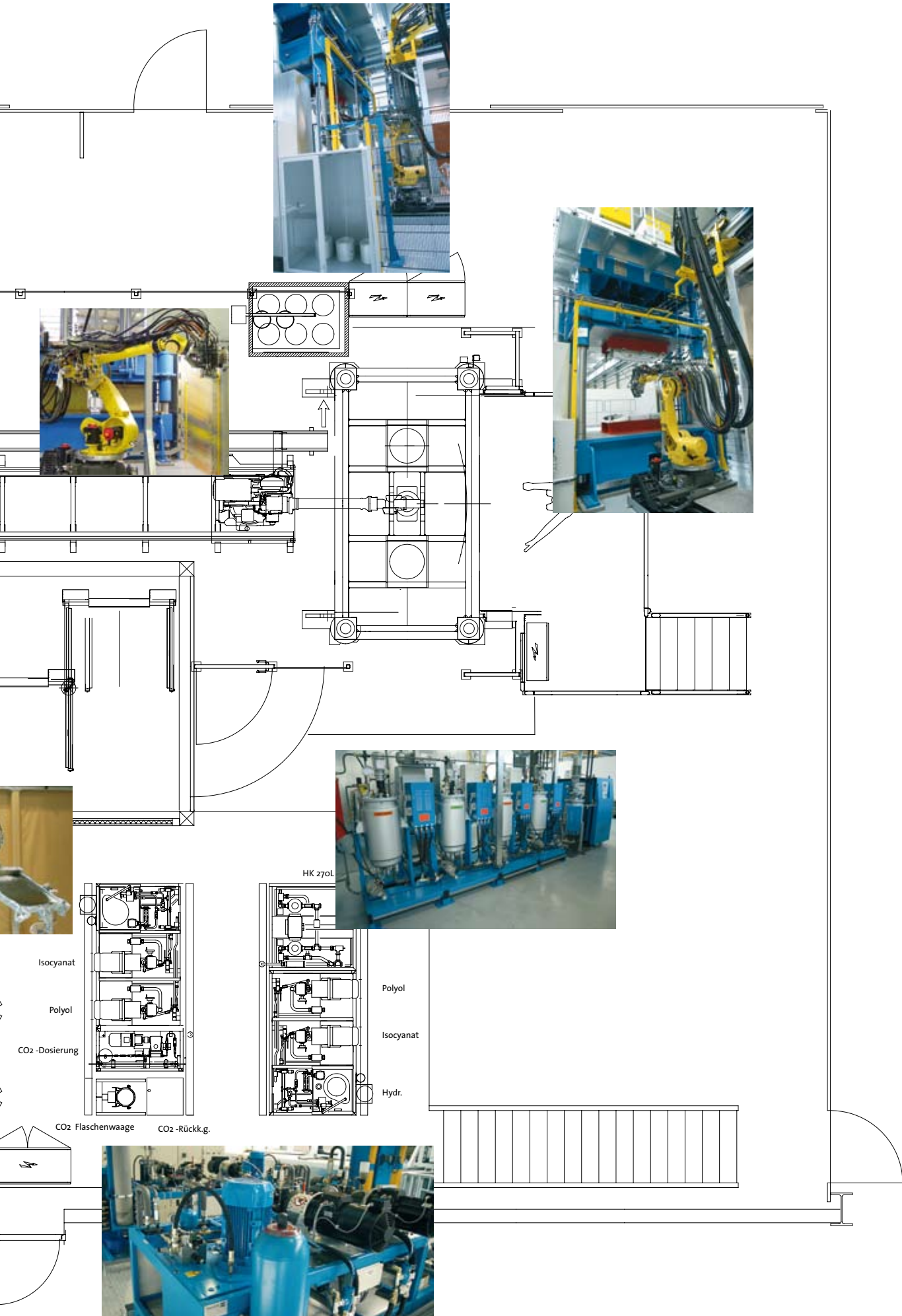
RIM (Reaction Injection Moulding)

RIM technology is used to quickly meter and mix a multi-component PU system, inject the reaction mix into the mould cavity and rapidly cure the PU moulding. Today's major field of application of the various RIM technologies (RIM, RRIM, SRIM and SkinRIM) is the efficient manufacture of most differently dimensioned PU mouldings for the automotive industry within a very short period of time.

General moulded foam applications

Manufacture of diverse mouldings.





Technical specifications

Mould carrier SSH 30-20:

➤ Mould clamping plate dimensions	3 x 2 m ²
➤ Clamping force:	600 t (upper clamping plate swivel-mounted)
➤ Max. mould weights	
total	20 t
upper mould part	10 t
➤ Min. mounting height:	300 mm
➤ Max. opening stroke:	1,900 mm
➤ Hydraulic core puller:	max. 10
➤ Extraction system:	for spray application and open pouring
➤ Accessibility:	
Front:	operator via platform
Back:	robot via linear axis
➤ Mould temperature control:	oil or water

Automation technology:

Functions of the 9-axis robot unit:

- Spray application in mould carrier and spray cabin
- Mixture dispense into open/closed mould
- Automatic pick-up and handling of semi-finished products
- Mould equipment with inserts, fastening elements etc.

Filling /spraying robot:

➤ Carrying force axis 6:	125 kg
➤ Linear axis for range-extension	
➤ Max. range:	
in the mould carrier:	3 x 2 m ²
in the spray cabine:	6 x 3 m ²



Rotary table module with tilting axis for receiving the mould in the spray cabin:

➤ Diameter:	2,5 m
➤ Mould weight:	max. 3000 kg
➤ Automatic tilting:	± 60°
➤ Mould temperature control:	water

Gripper for semi-finished products (fiber mats, honeycomb cores etc.):

➤ Gripper system 1	
width of semi-finished product:	800 - 1,400 mm (manually adjustable)
depth of semi-finished product:	max. 1,100 mm (manually adjustable)
➤ Greifersystem 2	
width of semi-finished product:	max. 2,200 mm (manually adjustable)
width of semi-finished product:	max. 1,400 mm (manually adjustable)

Metering technology:

➤ Various metering machines of the Topline HK and HT series	
➤ Output range:	(10) 15 - 500 g/s
➤ Number of components:	7
■ Isocyanate	2
■ Polyol, unfilled	2
■ Polyol, filled	1
■ Additional components such as colour, blowing agent	1
■ Online-metering of CO ₂ (Novaform technique)	1
➤ More metering machines from our portfolio can be provided on request	
➤ Gas-loading with AEROMAT	
➤ Degassing of main components via vacuum-proof tanks	

Control system:

- Wintronic metering machines
- Process data acquisition and analysis (SPC)
- Plant visualization



Technologies

PUR-CSM spraying techniques

- CSM for Baypreg®-Sandwich
- CSM for Multitec®
- CSM for Baydur®
- CSM for Bayflex® (heavy layers)
- CSM for Baytec® Reactive (spray-on skins)

Services

- Contract development
- Matching of moulded parts
- Sample series production
- Series-related training
- Technology demonstrations

RIM-technologies

- RIM / RRIM
- SRIM
- SkinRIM (cast skins)

General moulded foam applications



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Hennecke 
Polyurethane Technology

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