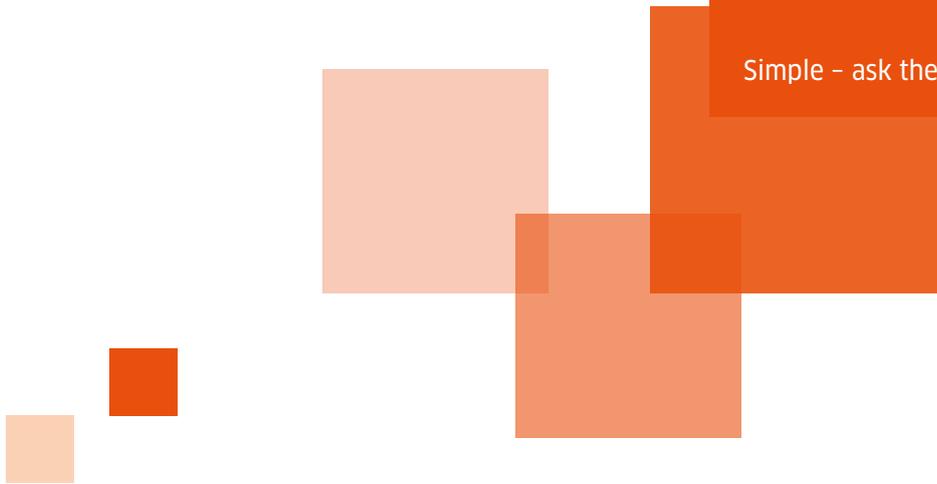




AUTOMOTIVE

How is it possible to extend production facilities and save money?

Simple - ask the experts.



OPTIMUM FLOW OF GOODS IN EVERY DIRECTION

Today's automotive industry expects maximum speed, precision and efficiency in every area.

Manufacturing processes in the automotive industry make particularly high demands on intra-logistics. From raw material supply to final assembly of cars, all the necessary components must reach their point of use safely and ready for use. Ensuring materials handling solutions work in perfect harmony, including between individual work areas, requires a partner who can provide solutions for the whole production process. Lödige Industries is just this partner.

From high-bay warehousing for pressed components, bodywork, engines and gearboxes, through every type of materials handling system, to control engineering, we supply the solutions from a single source. The Lödige portfolio covers every requirement in vehicle production.



Lödige solutions and products ensure the automotive industry runs **efficiently, safely and economically, throughout the world.**

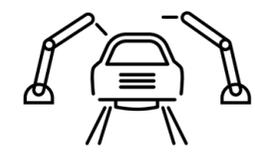


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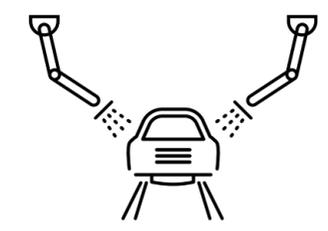
PRESS SHOP
Materials handling systems for end-of-line as well as solutions for tool maintenance and tool handling
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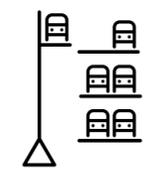
BODY SHOP
Materials handling and control systems for an efficient body shell stage
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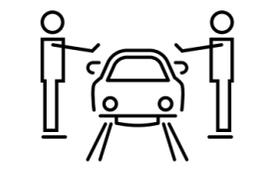
PAINT SHOP
Powerful materials handling and control solutions at every stage of the painting process
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WAREHOUSING AND ORDER PICKING
Warehousing and order picking for the production flow
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FINAL ASSEMBLY
Flexible solutions for secure and high throughput final assembly
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SERVICE
With remote support, individual maintenance agreements and complete conversion and modernisation services, all from one source
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PRESS SHOP

From end-of-line, through rack handling, to automated storage: Lödige has complete control of all the materials handling processes required in the press shop – including tool handling and systems for improved tool maintenance.

Ergonomic tool maintenance

Safe provision of pressed components

Coil handling up to 40 t



Lifting and tilting tables up to 40 t

Linked materials handling systems

Connection to pressed component storage

SAFE HANDLING OF PRESSED COMPONENTS

Pressed components are transported from the press by conveyor belt systems and stacked in racks or heavy-duty boxes. They are then automatically transported to the pressed component store where they remain until they are required for further processing. Every stage uses Lödige technology – from end-of-line materials handling systems and rack handling, right through to automated storage of pressed components.

MOVE HEAVY LOADS SAFELY

Quick and safe coil handling is essential in the automotive industry. Moving a coil to the machine where it is next needed as efficiently as possible, but without compromising safety at work provisions, requires a materials handling system which is designed to take particularly heavy loads. Lödige offers a comprehensive portfolio of products for storing, turning and handling coils weighing up to 40 tonnes.

TOOL MAINTENANCE MADE EASY

Lödige offers tilting and lifting platforms for maintaining and repairing press tools. These platforms provide safe and ergonomic tool handling up to 40 tonnes. The tilt function provides optimum angles of inclination.

TOOL HANDLING IN THE PRESS SHOP

A large number of different tool sets for different pressing tools are necessary in the press shop. In order to store these tool sets on roll containers in the minimum space, Lödige has developed a special tool handling storage system specifically for the automotive industry. Our tool handling systems are available in two variants, as a storage and retrieval system or as a hoist system with telescopic forks.

PRECISION HANDLING FOR HEAVY LOADS

BODY SHOP

For an efficient body shell process, the correct bodywork components must be reliably brought from their intermediate storage areas and production lines to be assembled. Lodige's materials handling and control solutions automate this procedure.

Connection to the pressed component store

Connection to bodywork store

Conveying on several levels possible



Horizontal materials handling systems

Control connection to robotic systems

High levels of automation possible

EFFICIENCY IN THE BODY SHOP

The pressed components are removed from the intermediate store and transported to the body shop. The journey from the pressed component store to the body shop and the work stations within the process is made possible by linked materials handling systems from Lodige.

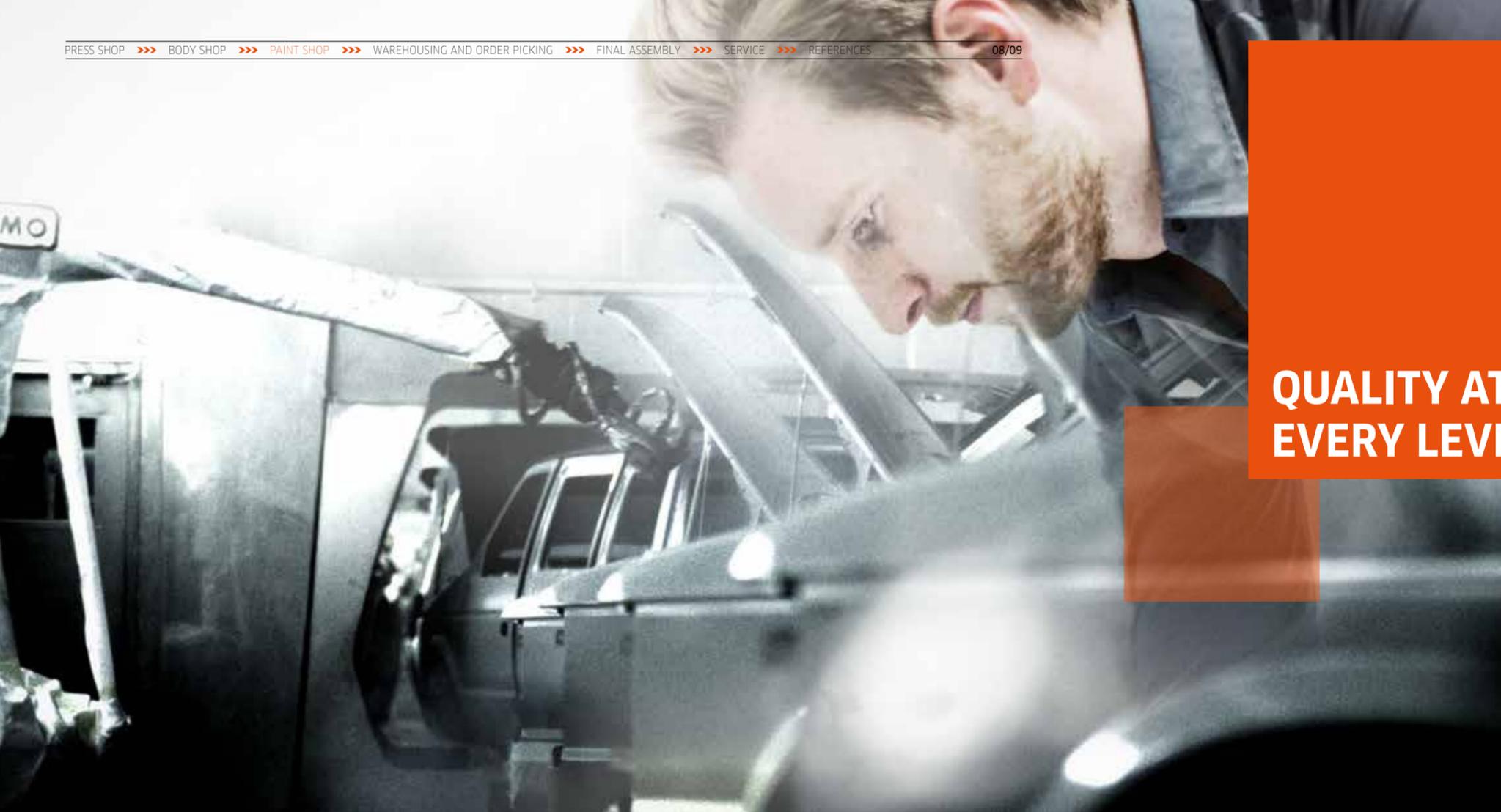
At the end of the body shell stage, the bodies are automatically stored in high-bay warehousing until they are sent to the paint shop for further work.



Figure:
Bodywork components are transported safely and quickly to their destination on racks.



**SAFE AND
POWERFUL**



QUALITY AT EVERY LEVEL



LÖDIGE INDUSTRIES

PAINT SHOP

Safe transport and short throughput times – Lodige’s material handling solutions easily accommodate all the demands made on them whether within the paint shop or in provision and intermediate storage after the painting process.

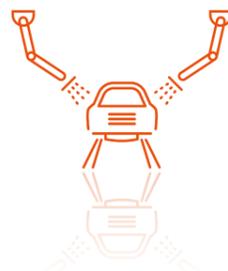
Figure:
Whether on the painting line or for the quality control: Lodige’s materials handling systems safely transport parts through each step in the process.

BRILLIANT MATERIALS HANDLING PERFORMANCE IN THE PAINTING PROCESS

Linked materials handling systems move the body from the store to the paint shop. A range of solutions are used in the paint shop, including internal and external materials handling systems. Complex material flow systems can be individually designed – all from a single modular system of materials handling elements such as skid roller conveyors, rotary and swing tables, eccentric lifting tables, chain conveyors, skid stackers and lifting equipment.

After painting, the body is automatically transferred to storage. Lodige offers both the necessary materials handling systems and all associated control technology from a single source.

Materials handling in multiple dimensions



Connection to body shell store

Connection to intermediate store

Work stations

Materials handling systems and control technology from one source

Internal and external materials handling systems

STORAGE & ORDER PICKING

In the automotive industry, storage in high-bay warehousing and precise, sequential provision are a vital part of the production process.

Custom-made racking systems

Storage for every sort of component

Optimum use of space



Connection to internal materials handling systems

Quick and safe storage

Storage, materials handling and control technology – all from one source

AUTOMATED STORAGE. SAFE ACCESS.

For space-saving storage and quick supply of parts, bad split Lödige offers high-bay warehousing, custom-made for the automotive industry. This includes storing bodywork, engines and gearboxes as well as pressed components and logistics stores for Euro pallets. We make sure that your storage system makes optimum use of the available space and is connected to your production process in the best possible way. This includes the pre-storage area for high-bay warehousing as well as picking and packing areas, with all the necessary control technology solutions.

Figure: Automated picking system with work stations for despatching spare parts.



FULLY AUTOMATED STORAGE

FINAL ASSEMBLY

The many different processes included in final assembly require precisely timed provision of parts and ergonomic support for manual work.

SMOOTH FINAL ASSEMBLY

Ergonomic work platforms

Efficient preparation of different assemblies

Connection to high-bay warehousing

Linked materials handling systems

Automation

Quick access to assemblies in intermediate storage

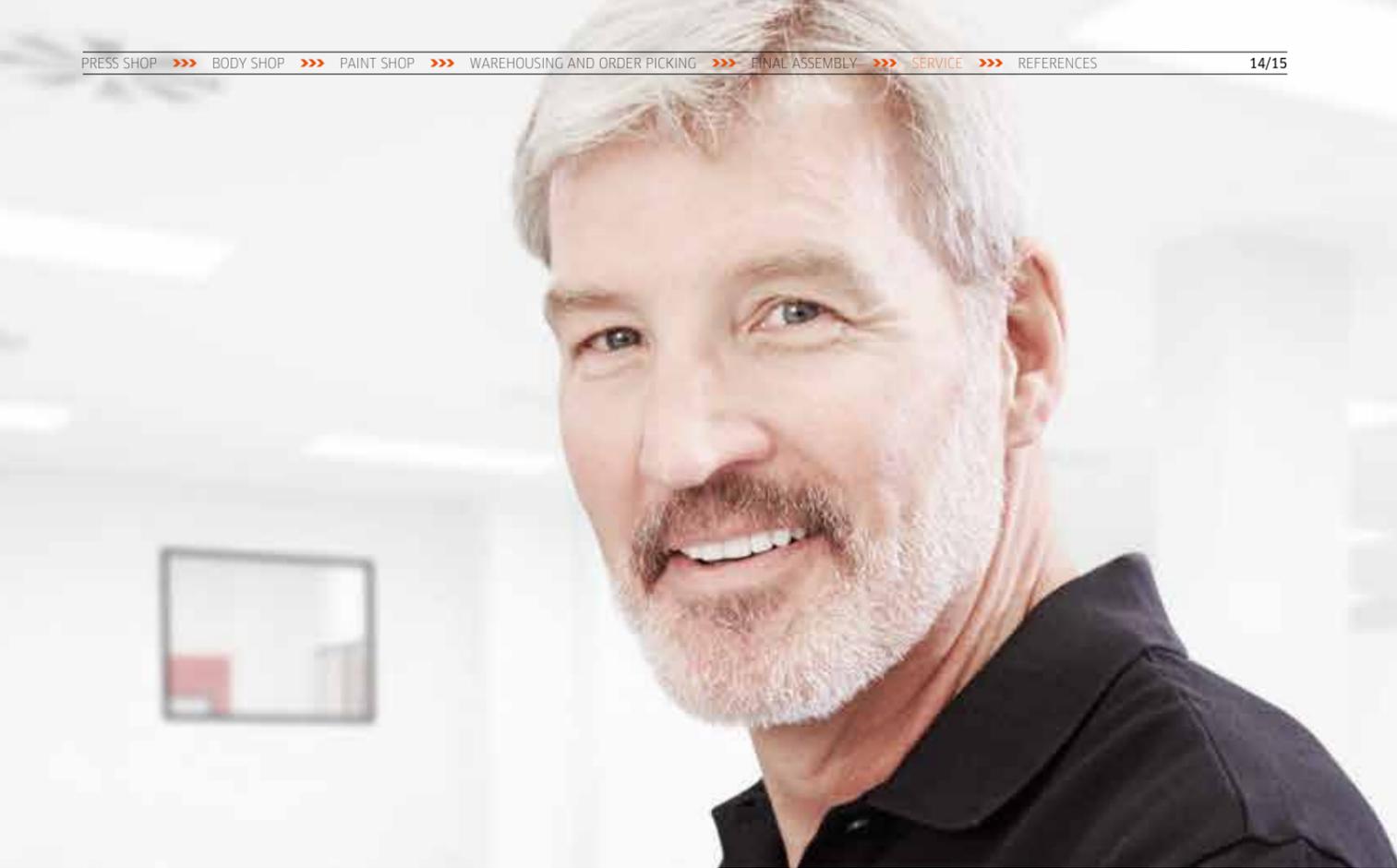


POWERFUL. EFFICIENT. ERGONOMIC.

All the parts needed for final assembly are brought together via linked materials handling systems. The tasks are carried out on special trays which are mounted on ergonomic lifts. The trays run on driven roller conveyors. Both the storage and placement of the parts and assemblies required from stores can be achieved using linked Lödige materials handling systems.

Figure:
Components, assemblies, engines and gearboxes are all brought together during final assembly.





**OUR EXPERTISE
FOR YOUR
PROCESS**

SERVICE

Lödige continues to help you, even after the finished installation has been handed over. Whether maintenance, refurbishment or modernisation, our engineers and technicians have the expertise to help you.

Individual maintenance packages

24-hour availability

Remote diagnostics



Installation optimisation

Conversion concepts

Optimisation services

MODERNISATION

Working with existing production facilities is an integral part of our business. We will help you tackle your modernisation project by developing solutions which meet your objectives and fit seamlessly into your production environment – whether for Lödige systems or another manufacturer's.

REFURBISHMENT

As a full-service provider, we will naturally take on projects in specific production areas. Our engineers will provide you with advice at the planning stage and stay with you throughout the whole process – including building and commissioning the finished solution.

SERVICE

Our extensive, nationwide network of service engineers is available to you at any time for service and maintenance work. We are available 24/7 via our service hotline and can answer many questions already on the phone or via remote access. If required, we can quickly provide the necessary on-site manpower.

INTELLIGENT SOLUTIONS FOR INTRALOGISTICS

CURRENT REFERENCES

- | | |
|----|--|
| 01 | AUDI AG , INGOLSTADT |
| 02 | BMW AG , MUNICH, DINGOLFING, REGENSBURG, ROSSLYN (SOUTH AFRICA), SPARTANBURG (USA) AND SHENYANG (CHINA) |
| 03 | DAIMLER AG , SINDELFINGEN |
| 04 | MAN AG , MUNICH |
| 05 | MINI , OXFORD (UK) |
| 06 | PORSCHE AG , ZUFFENHAUSEN, LEIPZIG |
| 07 | VW AG , WOLFSBURG, BAUNATAL, EMDEN AND HANOVER |

EXPERIENCE

We have been accumulating expertise while helping companies from a wide range of industries since 1948.

ECONOMICAL AND RELIABLE SOLUTIONS

We focus strongly on making systematic use of synergies and enabling consistent exchange of knowledge within the company to provide extremely economical and reliable solutions.

AFTERSALES SUPPORT

Our bespoke maintenance services guarantee that your systems operate reliably at the lowest possible cost.

OPTIMUM QUALITY

As our customers' satisfaction is our top priority, we always aim to achieve maximum quality.

GLOBAL NETWORK OF REGIONAL LOCATIONS

Thanks to our worldwide presence, you can always access our accumulated expertise.

TURNKEY SUPPLIER OF INTRALOGISTICS SOLUTIONS

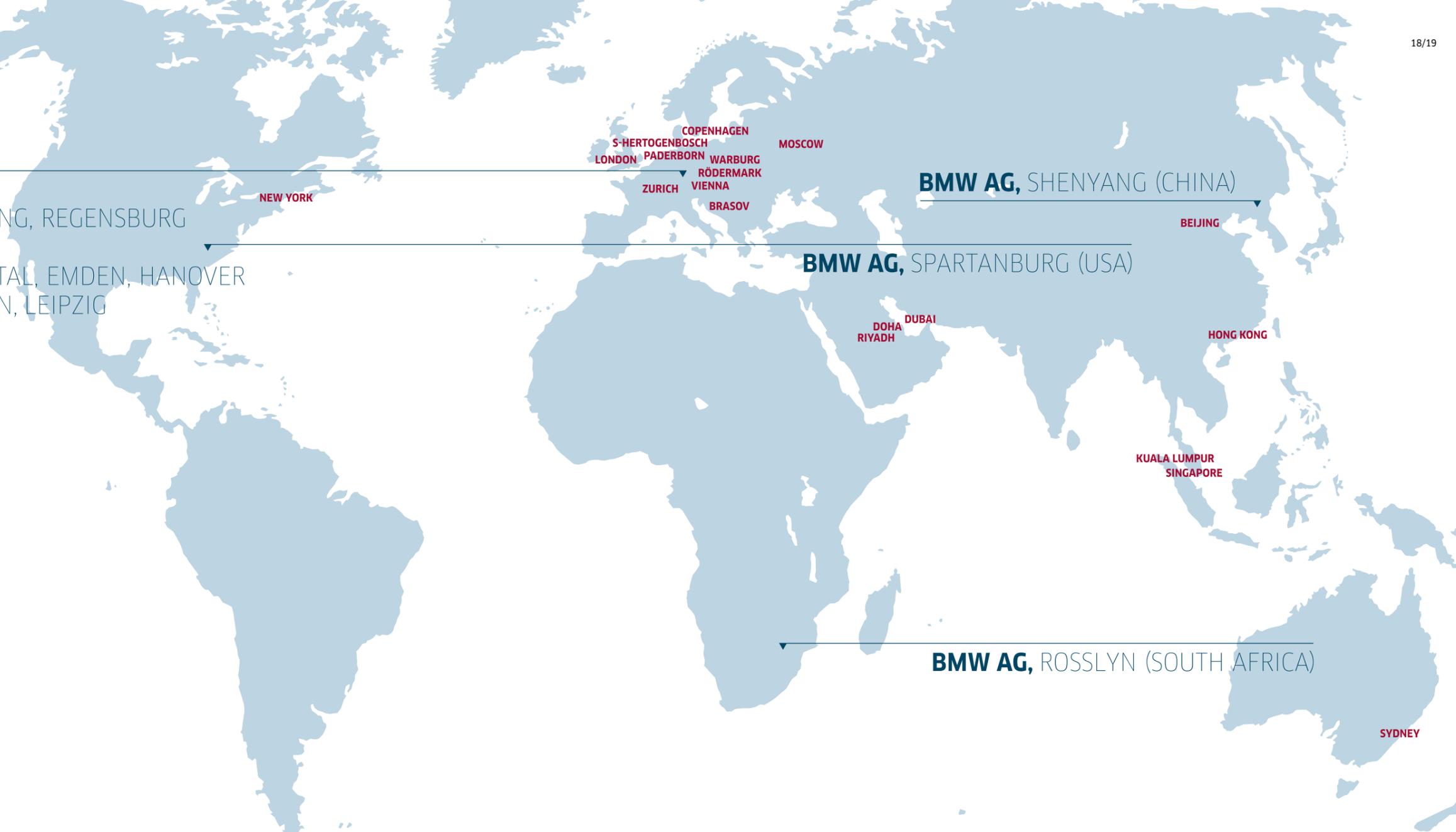
As a general contractor we offer turnkey warehouse and material handling systems as well as whole premises upon request.



AUDI AG, INGOLSTADT
BMW AG, MUNICH, DINGOLFING, REGENSBURG
MAN AG, MUNICH
VW AG, WOLFSBURG, BAUNATAL, EMDEN, HANOVER
PORSCHE AG, ZUFFENHAUSEN, LEIPZIG
DAIMLER AG, SINDELFINGEN
MINI, OXFORD (UK)

References
 Worldwide locations of Lödige Group

GLOBAL PRESENCE



LÖDIGE INDUSTRIES GROUP

Founded in 1948, Lödige Industries has its headquarters in the German town of Warburg. The Group now has an international presence with sites in Europe, Asia, the Middle East and the United States. As a medium-sized, owner-managed enterprise, Lödige Industries employs more than 1,000 people worldwide. Lödige Industries supplies solutions for a broad range of industries and specialises in providing complex material flow systems for logistics tasks.

- AIRPORT LOGISTICS**
High-performance logistics solutions for air cargo.
- LIFT SOLUTIONS**
Technical expertise for high-performance lift solutions.
- SPECIAL MACHINES**
Mechanical engineering perfected – special machinery for individual requirements.
- SERVICE**
Expert fast services for individual assets & systems.
- NO BARRIER SOLUTIONS**
Barrier-free solutions for everyday applications.
- INTRALOGISTICS**
State of the art systems for automated handling of goods and merchandise.
- CAR PARK SOLUTIONS**
Space-saving and secure car parking - with solutions designed by Lödige Industries Group.
- LIFTING TABLE SOLUTIONS**
High-quality solutions for loading and unloading vans and trucks.
- LOGISTIC SOFTWARE**
Software solutions for automating material flows and processes.

www.lodige.com