

ENGINEERING
TOMORROW'S
PRODUCTION



Production Solutions for the Automotive Industry

Pioneering, intelligent and future-oriented.

Manz AG – Pioneer for Innovations

For over 30 years, Manz AG has been setting standards with its efficient machines and systems for selected growth industries. Our claim **“engineering tomorrow’s production”** underscores our aspiration as an innovation driver for future markets.

With our technologies and innovative production solutions, we serve different sectors and industries. Our diversified lineup creates Synergy effects from which our customers benefit to a great extent.

Future market automotive and e-mobility

We bundle our extensive expertise and experience in technology fields such as automation, assembly, laser and measurement technology in pioneering production solutions for the automotive industry. We continue to develop these further – and thus make a significant contribution to the success of our customers.

As competent technology and process experts for the automotive industry, we bundle competencies from all areas into tailor-made and customer-specific production solutions.

We support OEMs and their suppliers with our machines and systems to optimize their production processes and make them more efficient.

We are taking targeted steps to expand our process and technology portfolios, offering our customers new opportunities to realize components even more quickly, easily and more cost-effectively.



Manz AG

- Established in 1987
- Headquarters in Reutlingen, Germany
- Other branches in Slovakia, Hungary, Italy, China, Taiwan, the US and India
- Approx. 1,400 employees worldwide, including around 500 engineers

Core technologies

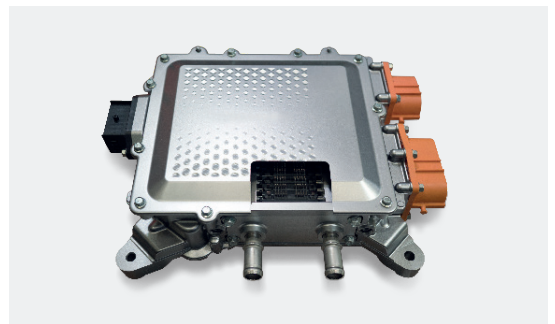
- Automation
- Assembly
- Laser
- Inspection Systems
- Digital Printing

Our portfolio for the automotive industry: solutions that drive the market

With increasing digitization and rapid further development in the direction of e-mobility, the automotive industry is facing major challenges. Our aim is to actively contribute to this progress as a development partner and pioneer in this field.



Manz AG is one of the leading providers of production equipment for li-ion battery cells and modules as well as for capacitors for electromobility, stationary energy storage and electronic products. In this field we have been setting global standards for many years. In addition, together with our customers and cooperation partners, we are developing the battery factory of the future to build a sustainable and competitive battery industry in Europe.



Another focus for the e-drive sector are fully automated production lines for cell-contacting and battery management systems as well as inverters.



Production systems for displays, electronic components and controller as well as sensors and cameras for assistance systems complete our automotive portfolio.

We develop efficient machine and system concepts for e-mobility as well as for numerous vehicle components – e.g. for:

- Li-ion battery cells and battery modules
- Cell-contacting systems
- Battery management systems and inverters
- Displays
- Electronic components and control units
- Sensors and cameras for assistance systems

Manufacturing solutions for the mobility of the future

With increasingly efficient production systems for central components of the electric powertrain, Manz supports the automotive industry in its transformation toward e-mobility.



E-mobility plays a key role in the development of new mobility concepts and in achieving climate targets. The sales figures for electric cars are rising steadily.

Overall, however, the market is not yet showing the expected growth momentum. This is due to the comparatively high price of electric cars and the fact that their range is still not entirely satisfactory in the eyes of customers.

Using creative and innovative engineering, we are working hard on production solutions that improve performance parameters and reduce costs for li-ion batteries.

Automation, digitization, integration and scalability of production processes play a key role.

This is exactly where our software platform **smart-PRODUCTIONKIT**, comes into play, with which produced parts and workpiece carriers can be completely traced. This is how we ensure the quality and safety of the Production lines and the products made on it.

Our automation solutions ensure

- Improved process and resource efficiency
- Complete traceability
- Reduced production and per piece costs
- Optimized process precision
- Investment security
- Shorter time to market
- Increased performance parameters for the final product

Innovative and fast production processes for the li-ion battery production

Manz AG is one of the leading suppliers of production equipment for li-ion battery cells and modules as well as capacitors. We have been setting global standards in this field for many years.

With our technology portfolio for the production of a wide range of different battery cells – from wound button cells to stacked pouch cells – we play a major role in the continued development of li-ion battery technology.

High speed for the battery production of the future

Thanks to our efficient production processes for manufacturing stacked or wound battery cells, more and more precise and at the same time more stable cell structures can be realized extremely quickly.

The impact on the performance parameters of the batteries are correspondingly positive. In addition to the high level of process accuracy, our modern automation systems for increasing throughput also have a significant impact on the reduction in production costs.

Our production portfolio:

- Production solutions for
 - Cylindrical
 - Prismatic
 - Pouch battery cells
- Machines and systems for
 - Manufacturing wound or stacked battery cells
- Production solutions for
 - Battery electric vehicles (BEV),
 - Plug-in hybrid electric vehicles (PHEV)
 - Hybrid electric vehicles (HEV)

	Slitting/ Notching		Drying	Cutting		Stacking			Tab Welding	Packaging	Filling	Pre-formatting
	Laser	Mechanical		Laser	Mechanical	Single Sheet Stacking	Flat Winding & Winding	Lamination				
E-Mobility Pouch and prismatic	■	■	■	■	■	■	-	■	■	■	■	■
E-Mobility Cylindrical	■	■	■	-	-	-	■	-	■	■	■	■

■ Manz
 - Irrelevant in the process

Our modular assembly platform

LightAssembly – made just for you

Especially for the needs of the automotive industry, we have developed high-performance production solutions based on our modular *LightAssembly* platform that enable the greatest possible flexibility, reliability and cost-efficiency.

The *LightAssembly* platform accelerates and simplifies complex assembly and process steps thanks to intelligent end-to-end automation of work steps. For example, the *LightAssembly* links very different and highly demanding processes in the production of batteries or cell-contacting systems into a perfectly orchestrated process chain, from goods receiving to processes like ultrasonic welding, screwing, laser welding and final quality control.

For maximum productivity, flexibility and cost-effectiveness, the *LightAssembly* can be individually configured according to the modular principle and is almost infinitely scalable. It covers all requirements: from the individual machine for laboratory production to systems for pilot, small and large-scale series production to complete assembly lines and turnkey solutions for mass production.

Our system portfolio includes:

- Prototypes/laboratory systems
- Individual systems
- Integrated production lines for pilot, small and large-scale series
- Turnkey solutions



Manz *LightAssembly* for assembly
The Stand-Alone Version

Process modules for manual loading and unloading



Manz *LightAssembly* for assembly
The Basic Model

Loading and unloading unit, transport conveyor, two lifts and one process station



Manz *LightAssembly* for testing and assembly
One Expansion Option

Loading and unloading unit, transport conveyor, two lifts, multiple process stations and stations for parts matching, inspection, labeling and quality assurance. Adaptable to the needs of the specific customer.

LightAssembly:

Your advantages at a glance

The *LightAssembly* combines a variety of key advantages: maximum flexibility, outstanding process technology and excellent availability. Their strengths are particularly evident in the manufacture of components for the electric drive train.



Flexibility & scalability

Freely configurable, requirement-specific production solutions: from laboratory machines to mass production, from manual work stations to fully automated assembly, from individual systems to fully integrated production lines.



Availability & reliability

Technologies that have been tried and proved in numerous customer projects and the use of standard modules ensure fast delivery and commissioning, as well as high availability.



Speed & changeability

The modular structure, software-controlled set-up and the high level of integration of the *LightAssembly* platform make it easy to adjust production to new requirements while saving time and money.



Process reliability & quality

Our applications are characterized by excellent process reliability, are seamlessly integrated, digitally controlled and monitored in real time.



Data-based & networked production

Data-based controls and evaluations increase throughput and profitability. The intelligent use of machine and operating data makes it possible to control process parameters even during production and increase performance parameters systematically.



All from a single source

From concept to project planning, construction and installation of your production line up to the construction and commissioning of the system plus user trainings, remote maintenance and after-sales service.



Further information

Produce cell-contacting systems highly efficiently and flexibly.

Read our insert "Production solutions for cell-contacting systems. Innovative and forward-thinking."

Our Locations



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