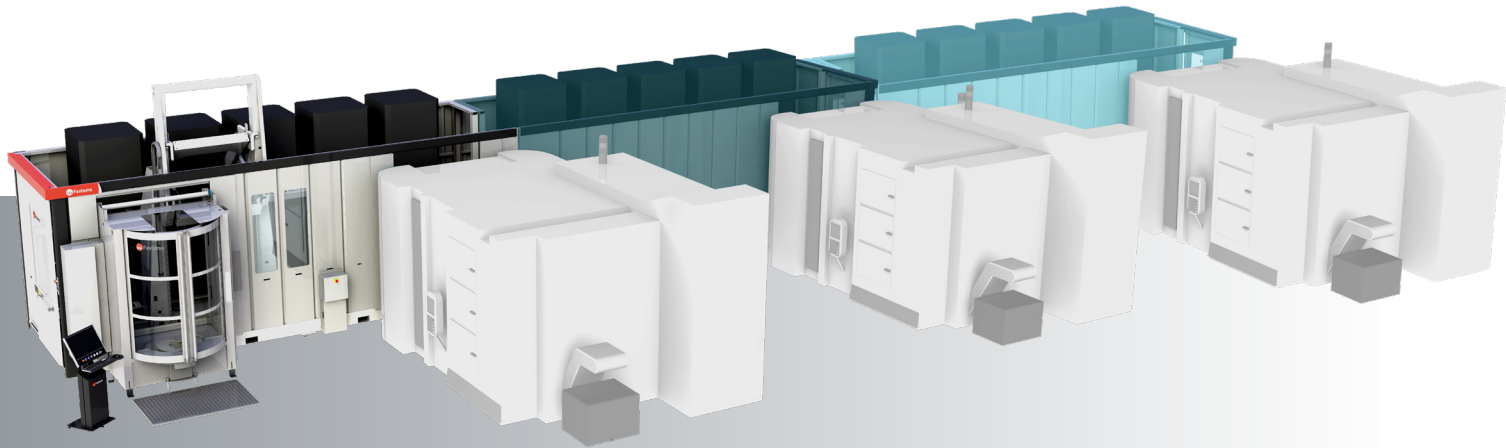




# Easy and extendable automation.

Flexible Pallet Container (FPC)

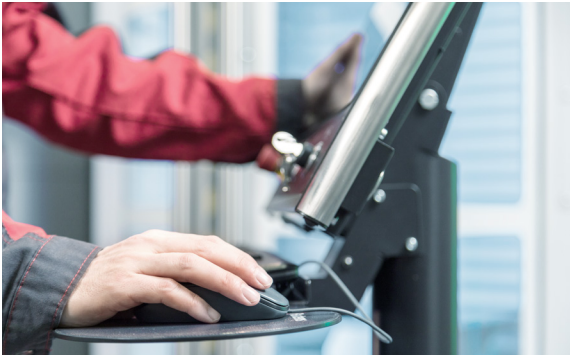
# Investment that is never lost.



- **FAST INSTALLATION**  
with standardized solution
- **EASILY SCALABLE**  
from 1 to 3 machine tools
- **LEAN MANUFACTURING**  
production just in time
- **FAST PAYBACK**  
2.5 times faster payback



Automating machining processes and enabling continuous, unattended operation are proven ways to improve productivity and profits. Make the most out of 8,760 hours a year with the compact and versatile Flexible Pallet Container that is easy to use and can be extended later with a minor investment.



## Typical payback with 2 machine tools

250 %  
faster  
payback

	No automation	With automation
Investment cost *	800,000 €	1,100,000 €
Machining hours/year **	3,200 h	10,200 h
Machine tool utilization rate	40 %	85 %***
Total income per year (machining sales price 100 €/h)	320,000 €	1,020,000 €
Payback time	2.5 years	1 year

\* calculated with 2 x 5-axis HMC  
\*\* 50 weeks, 5 days per week, 2 manned shifts (+1 unmanned when automated) per day  
\*\*\* no spindle time loss due manual setup changes + unmanned night shift



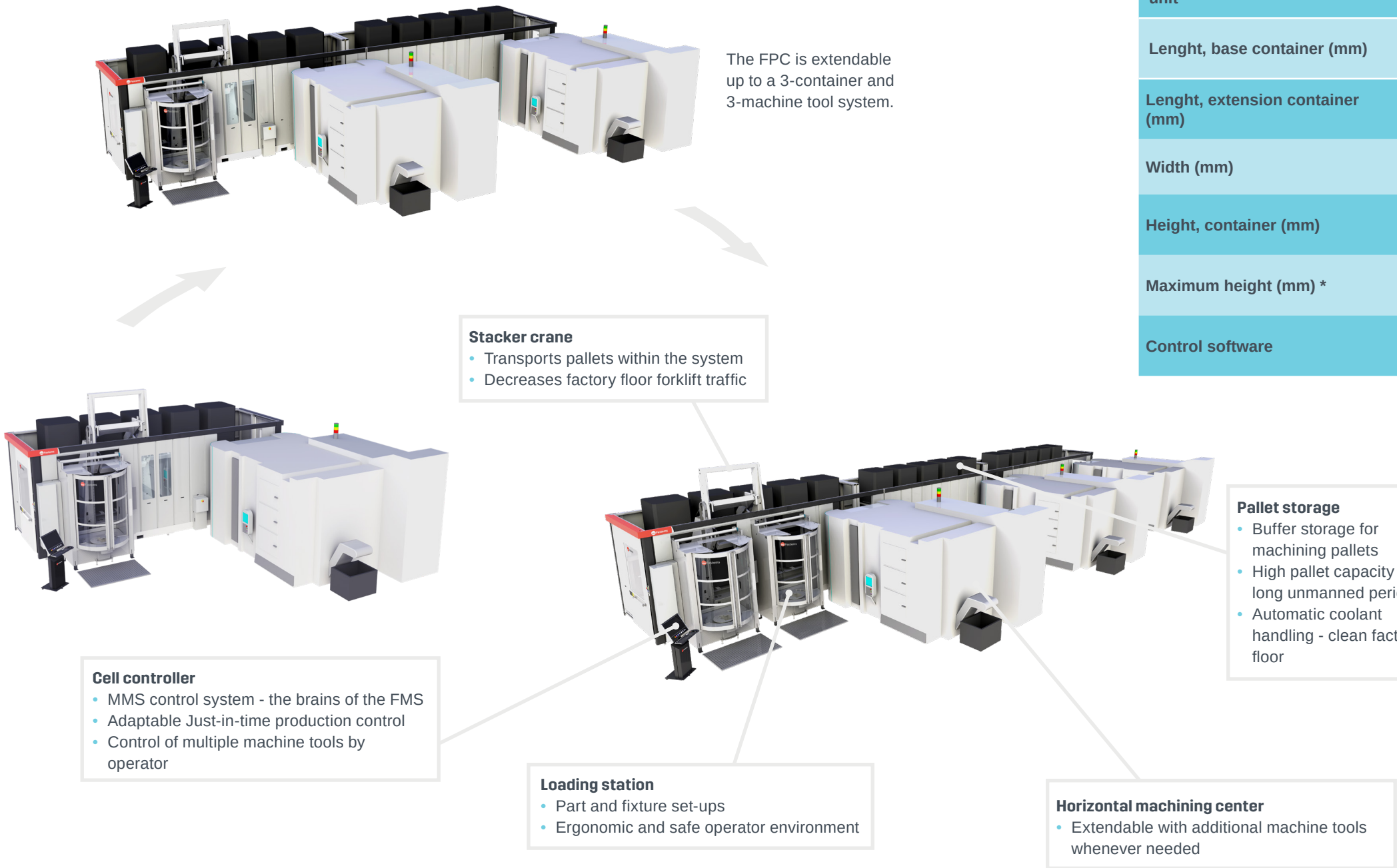
## Comparison on 3 types of standardized automation systems

	Machine tool with APC	Pallet pool	FPC
Pallets per machine tool	2	6	12
Production hours per year *	4,000	5,000 + 35 %	6,000 + 50 %
Average machine utilization	40 %	65 %	85 %
Machine tools controlled by 1 operator	1	1	3
Shared fixtures between machine tools	–	–	✓
Extendable system	–	–	✓
Cost of extension	Buy a new system	Buy a new system	Low cost
Unmanned production capacity (pallets)	1	6	Up to 36
Production reports	No	Per machine	Entire system
Real-time automatic KPI reports	–	–	✓
Order priority	Manual	Manual	Automatic
Auto-scheduling	–	–	✓
Production order management	–	–	✓
System availability	Low	High	High

\* 50 weeks, 5 days/week, 3-shift operation (2 manned)



# Basic components of Flexible Pallet Container (FPC)



Technical data	FPC-750	FPC-1000	FPC-1500	FPC-3000
Load weight incl. pallet (kg)	750	1,000	1,500	3,000
Nominal machine pallet size (mm)	400 x 400 or 500 x 500	500 x 500 or 630 x 630	630 x 630 or 630 x 800	800 x 800 or 1,000 x 1,000
Load size (X x Z mm)	750 x 750	950 x 950	1,050 x 1,000	Ø 1,600
Load rotational diameter (Ø mm)	800	1,250	1,250	1,600
Load height, incl. pallet (H mm)	900	1,100	1,200	1,800
Storage capacity by container unit	12	10	10	6
Lenght, base container (mm)	7,200	7,530	9,240	11,500
Lenght, extension container (mm)	6,880	7,270	8,980	11,500
Width (mm)	2,250	2,380	2,380	3,600
Height, container (mm)	2,800	2,800	2,800	2,900
Maximum height (mm) *	3,850	4,050	4,150	2,900
Control software	MMS			

\* Height in the area of stacker cran (FPC-750-1500)

**Features**

- 1-3 containers per system
- 1-3 machine tools per system \*
- 1-2 loading stations per system
- Integrated coolant handling
- MMS cell controller with touch panel
- Can be installed next to a wall

\* One machine control and pallet size per system.



# Manufacturing Management Software MMS

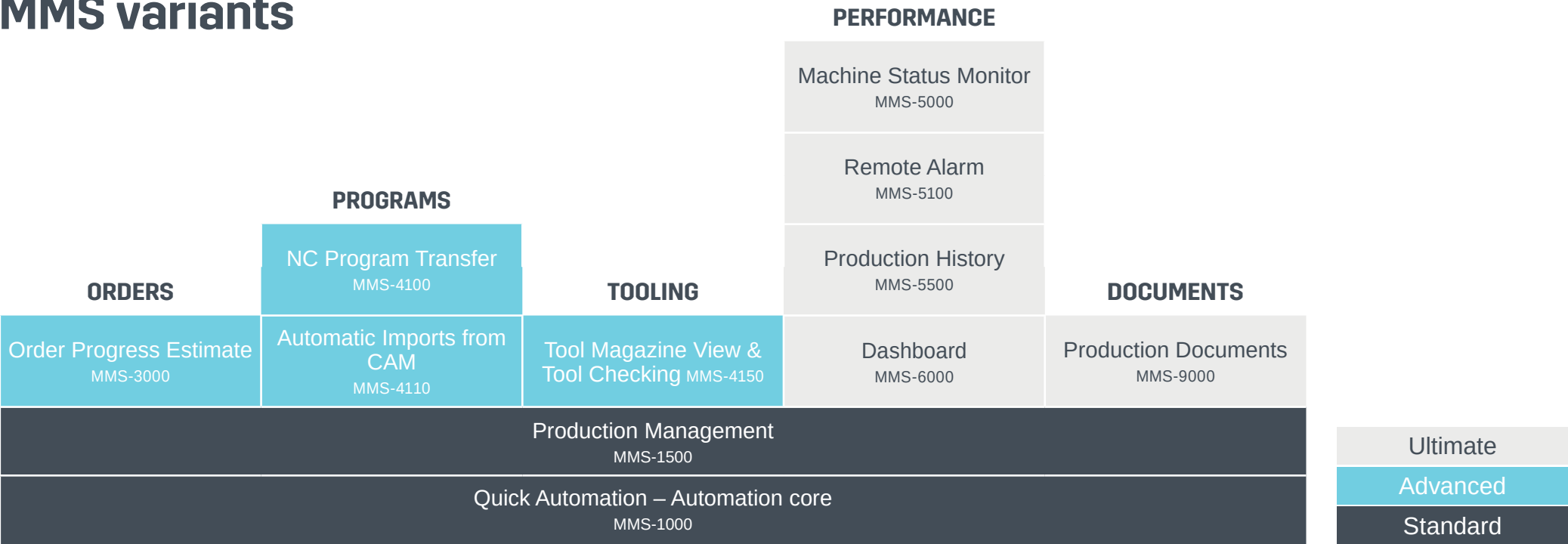
## TRANSPARENT PROCESS CONTROL

MMS is the industry's most advanced production planning and execution software. The MMS is always one step ahead by automatically calculating the optimized production workflow and necessary resources based on orders. MMS adapts automatically to changes in the daily production schedule and displays information to maintain the production output.



- Adaptive for changes
- Automatic production scheduling
- Recognizes bottlenecks in advance
- Automatic resource balancing

# MMS variants



## STANDARD

- Easy to operate - Enabling continuous, unattended production for you.
- Pallets are machined first-in first-out, or you can use order based production mode
  - Intuitive user interface with guidance lets operator to focus on the important

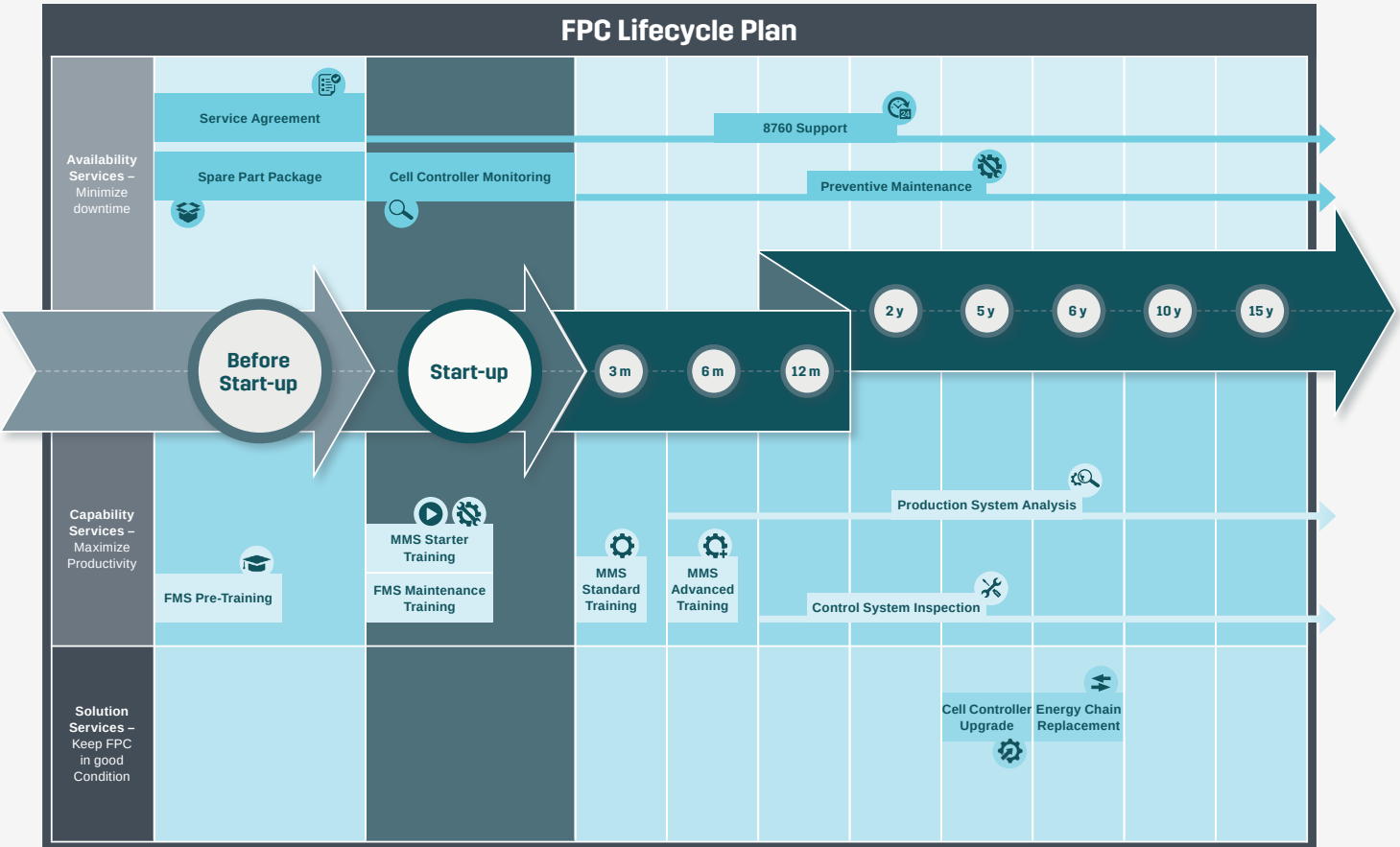
## ADVANCED

- Offers transparent and predictive ways to keep you in control.
- Extended manufacturing resource simulation for up to 96 hours
  - The MMS checks that all the needed NC programs and tools are available via machine tool integration
  - Order completion dates are calculated up to 6 months ahead

## ULTIMATE

- Utilize your data.
- Define your key performance indicators and view them at a glance with customizable Dashboard
  - Real-time machine status monitoring for continuous production optimization
  - Real-time remote monitoring with alarm functionality for unmanned production

# Keep your performance in maximum with Lifecycle Services.



# We are Fastems. We are here for you.

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"At Fastems, we believe that building and maintaining a strong manufacturing base is essential for the development of our society and the well-being of the people."

That is why we do everything in our power to increase the competitive advantage of our customers and to make their production facilities as efficient, profitable and forward-thinking as possible – through intelligent digitization and process automation.

- Decades of industry experience and more than 4,000 successfully installed systems worldwide
- Systems that optimize your time cycles, reduce costs and improve the usability of your existing machinery

- Systems that have been developed with the health and safety of your personnel in mind
- 24/7 support to ensure maximum productivity during all 8,760 hours of the year

We look forward to helping you determine the potential of your manufacturing processes and to finding a solution that is right for you!



Subject to technical changes



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