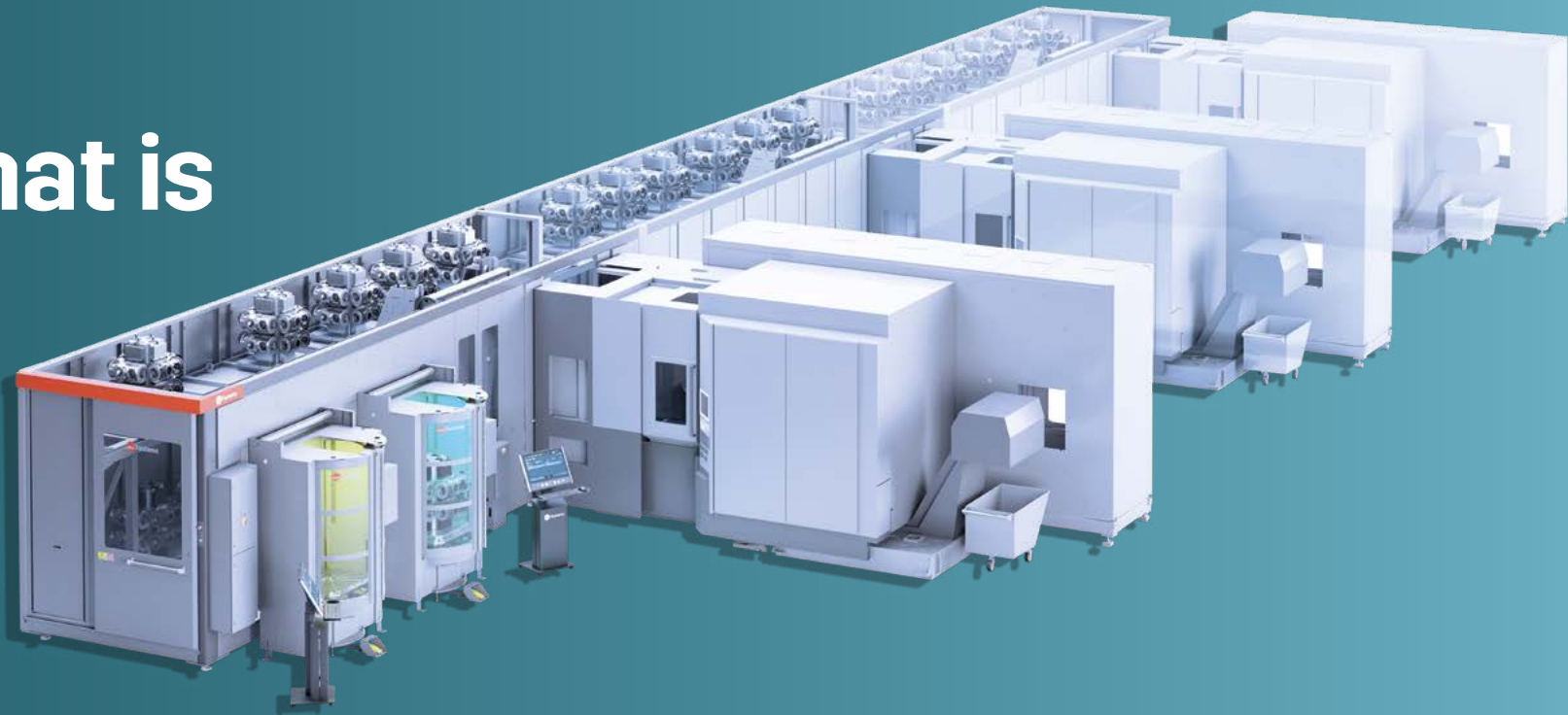




Easy and extendable automation for milling machines.

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**
over 2 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 productivity with 2 machine tools

	No automation	with automation
Investment cost*	800,000 €	1,170,000 €
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 y 6 m	1 y 2 m

3 X
results



Comparison on 3 types of standardized automation systems

	Machine tool with APC	Pallet pool	Flexible pallet container
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

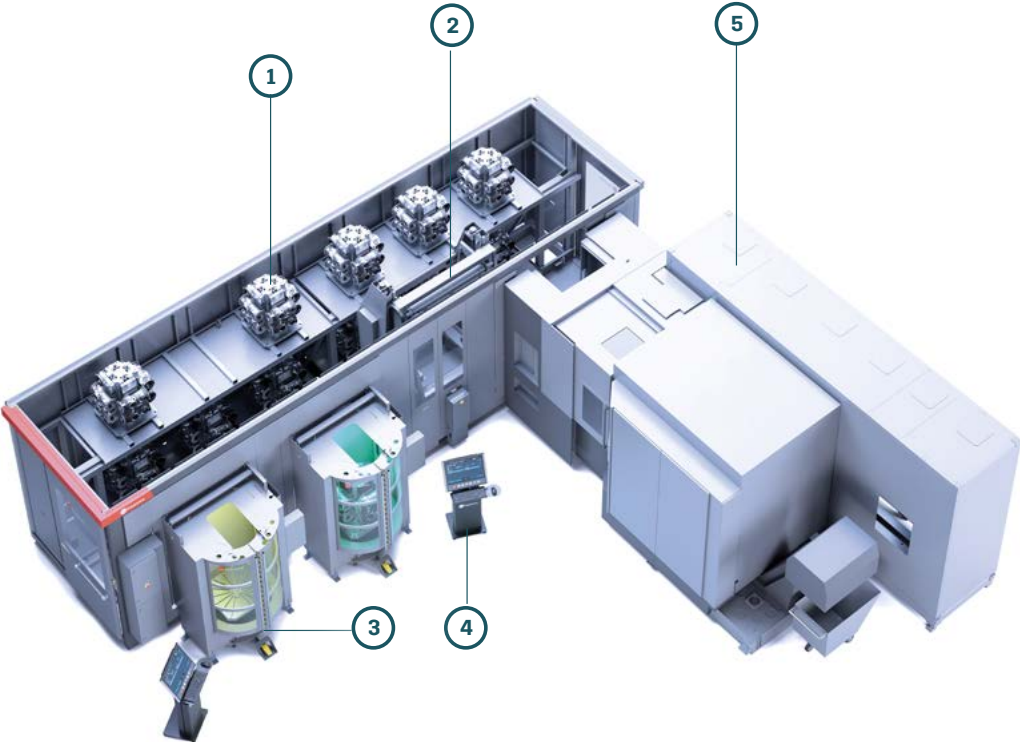
* calculated with a 2 x 5-axis HMC and 24 pallets

** 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

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

Basic components of Flexible Pallet Container (FPC)



- 1 Pallet storage**
- Buffer storage for machining pallets
 - High pallet capacity for long unmanned periods
 - Automatic coolant handling for clean factory floor

- 2 Stacker crane**
- Transports pallets within the system
 - Decreases factory floor forklift traffic

- 3 Loading station**
- Part and fixture set-ups
 - Ergonomic and safe operator environment

- 4 Cell controller**
- MMS automation software to plan, run and monitor production
 - Adaptable just-in-time production control
 - Control of multiple machine tools

- 5 Horizontal machining center**
- Extendable with additional machine tools whenever needed



1 machine + 12 pallets



2 machines + 24 pallets



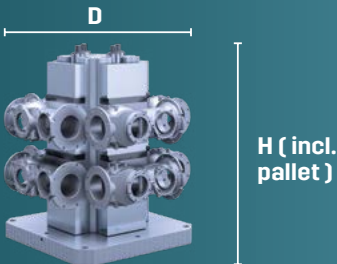
3 machines + 36 pallets



	FPC-750* XL		FPC-1000*	FPC-1800*	FPC-3000*
Load weight incl. pallet (kg)	750		1,000	1,800	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 800 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	1,325	1,800
Storage capacity by container unit	12	16	10	12	6
Lenght, base container (mm)	7,200	9,235	7,530	9,240	11,500
Lenght, extension container (mm)	6,880	8,980	7,270	8,980	11,500
Width (mm)	2,250		2,380	2,380	3,600
Height, container (mm)	2,800		2,800	2,880	2,900
Maximum height (mm)**	3,850		4,150	4,280	2,900
Control system	Fastems MMS		Fastems MMS	Fastems MMS	Fastems MMS

* Ask for compact XS versions for tight spaces

** Height in the area of stacker crane (FPC-750-1800)



FEATURES

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

1 One machine control and pallet size per system.

Manufacturing Management Software MMS

- Drag-and-drop production order
- Ready-made interfaces for hundreds of machine tools
- Recognizes resource bottlenecks in advance
- Automatic KPI reporting



Easy production control

FPC is controlled by Fastems Manufacturing Management Software (MMS). With hundreds of ready-made machine tool interfaces you can enjoy the MMS benefits right from the day one.

MMS offers a single-view user interface with drag-and-drop production ordering and allows bringing new workpieces into the system in under 60 seconds. MMS also automatically tracks and reports the key performance indicators in real time.

Choose from 3 MMS plans

STANDARD

Easy to operate - enabling continuous, unattended production for you.

- Pallets are machined based on order-based work queue or FIFO.
- Intuitive user interface with guidance helps operator to focus on the most important tasks.
- Optional ERP interface.

ADVANCED

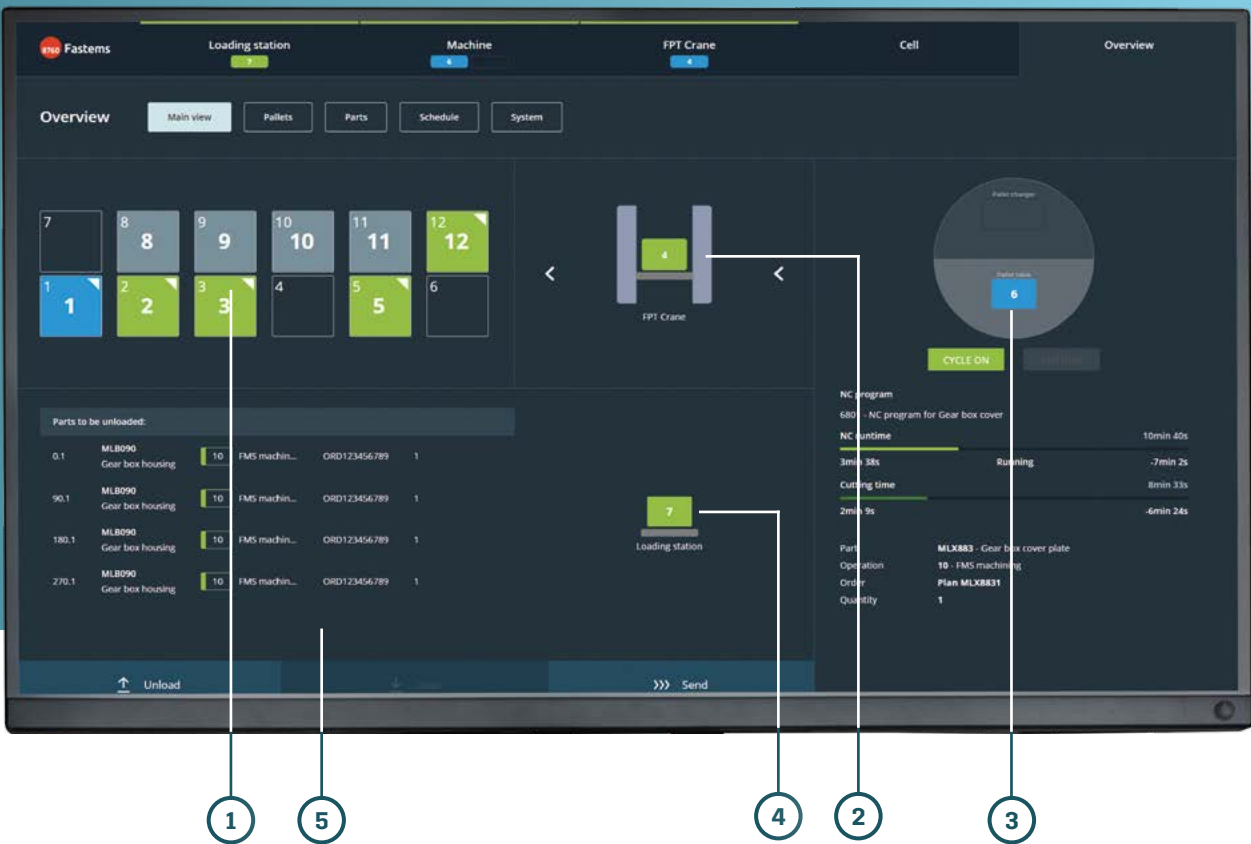
Offers transparent and predictive ways to keep you in control.

- Fine scheduling includes production order and resource simulation for up to 96 hours in advance.
- 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

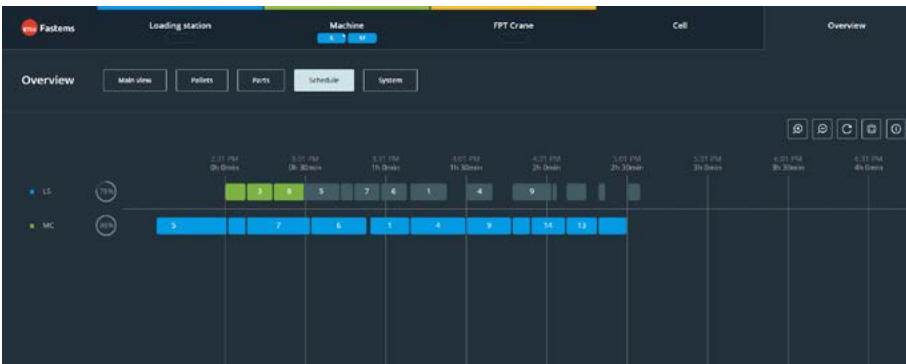
Utilize your existing manufacturing data.

- 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.



At a glance

- 1 **Pallet storage overview**
- Drag and drop the pallet for machining
- 2 **Stacker crane status**
- 3 **Machine tool view**
- Current NC program and machined part details
- 4 **Loading station status**
- 5 **Operator loading/unloading backlog tasks**

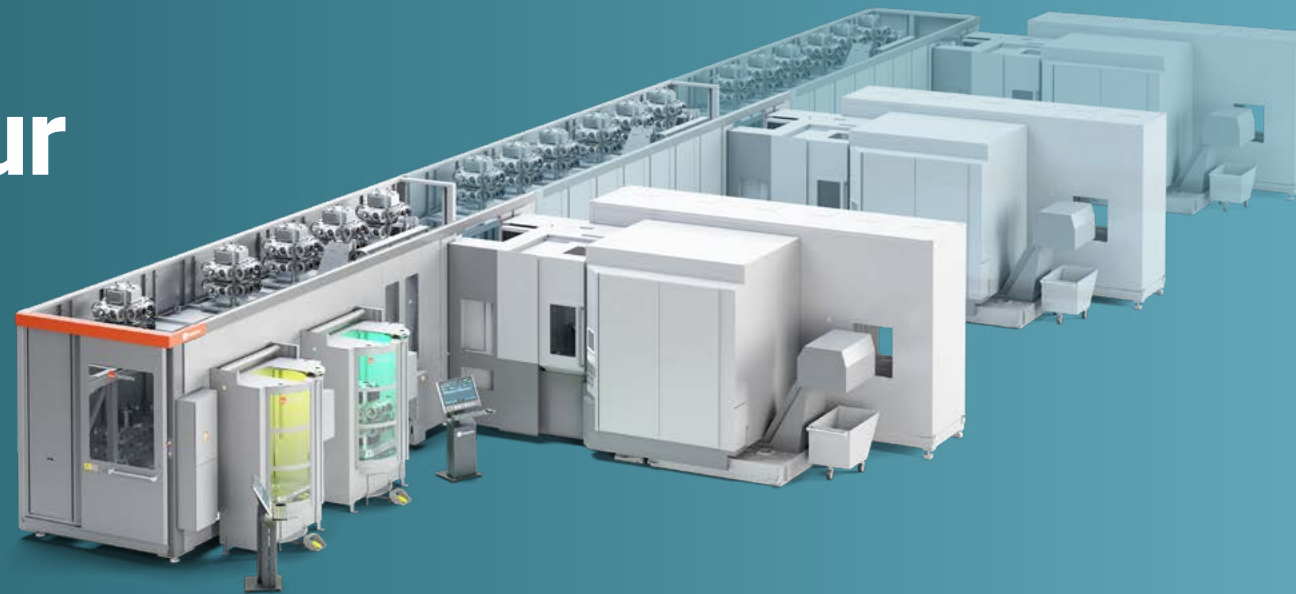


MMS can schedule production automatically based on production orders or FIFO.

WHEN	TOOL	REQUIRED	MISSING LIFE
2:38 PM	6001 Shoulder milling tool CoroMill 390	1 pcs	00:00:55
2:38 PM	6044 Ball nose cutter for roughing CoroMill® 216	16 pcs	05:40:05
2:38 PM	6056 Deep and narrow grooving CoroMill QD	3 pcs	02:10:10
4:41 PM	3006	3 pcs	03:07:16

MMS Advanced package enables tool planning and status views for the easier cutting tool maintenance.

Run and grow your operations...



...throughout the system lifecycle.

Stay aware & optimize your system

myFastems – Your Digital Service

BE INFORMED

- Real-time information and notifications, accessible anywhere and anytime
- First-aid tips and recovery instructions available for proactive problem-solving

ENHANCED SERVICE MANAGEMENT

- Easy access to service history and reports
- Guided spare part inquiries with photos
- Recommendations on replacing spare part key components

WE ARE ONE CLICK AWAY

- Increase system* run time with direct access to our 24/7 assistance
- Get support more efficiently with error-coded support requests

EXTENDED PERSPECTIVE

- Follow service KPIs (utilization, automation index, MTBF, MTTR) for improvement opportunities based on measured data)
- Utilize the full potential of your system with optional monthly reports for comprehensive system insights.

Unleash the full potential of your manufacturing

Lifecycle Services

EVERYDAY RELIABILITY

Benefit from Genuine Fastems Spare Parts

- Expert spare part support and engineering over the lifecycle
- Ensure the fitting spare parts for your system
- 12-month warranty
- Flexible delivery globally
- Express shipment option

Contact Your Local Service Team

- Quick troubleshooting and system recovery
- Local service engineers speaking your language

GROW TOGETHER

Modify and Extend Your Systems

- Enhance your system via software update and new modules
- Extend with additional hardware

Build Your Skills & Competence

- Comprehensive training for operators and maintenance personnel
- Process optimization support by our experts

ALWAYS AVAILABLE

Ensure Your Optimal Operations - Also in The Long Run

- Preventive maintenance: scheduled on-site visits from Fastems experts
- 8760 support: professional 24/7 technical remote support
- Security, compliance, and productivity updates to your control systems.
- Tailored software development
- Care management services



Rethink your CNC manufacturing.

- Production is a team play. We help you to integrate your data systems, machines and people to work as ONE. By doing so you reduce costs, increase revenue, improve lead times and ensure consistent quality while minimizing waste, WIP and delays.

Fastems supplies intelligent CNC automation, software and services for high mix CNC manufacturing. We are an open integrator with a library of ready-made machine interfaces for over 90 different machine tool brands.

KEY NUMBERS:

- 40+ years of automation experience
- 5,000+ installations in Europe, North America, and Asia
- extendable & long-life systems
- 24/7 customer support

Read more at
www.fastems.com/fpc

