



MAZATEC SMS

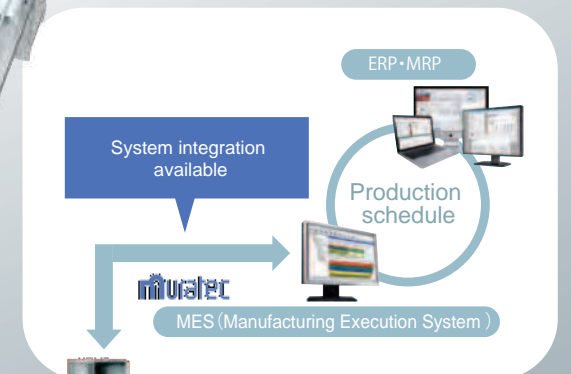
Large capacity, high efficiency automated system for high-mix, low-volume production

Integration of flexible manufacturing system and AS/RS technologies

- Maximum 16 machines, 8 setup stations, 240 pallets
- Flexible system length and height layout
- Maximum 6 types of stocker sizes available to meet your production requirements
- Stocker crane for high speed loading / unloading
- Loading station allows access from two directions and area sensor for safety
- Smooth PMC controller for convenient machining management
- System integration with ERP available



Shown with available equipment
(loading station, synchronized loading station and
loading station with robot)



Smart factory solutions

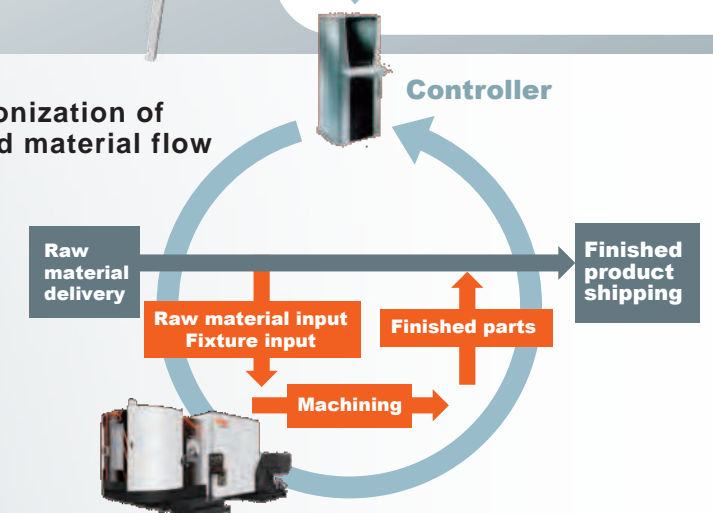
MAZATEC SMS

[SMART MANUFACTURING SYSTEM]

Integration with production management system available

- Synchronization of machining systems and automatic storage & retrieval system
- Machining and loading / unloading performed according to production control system

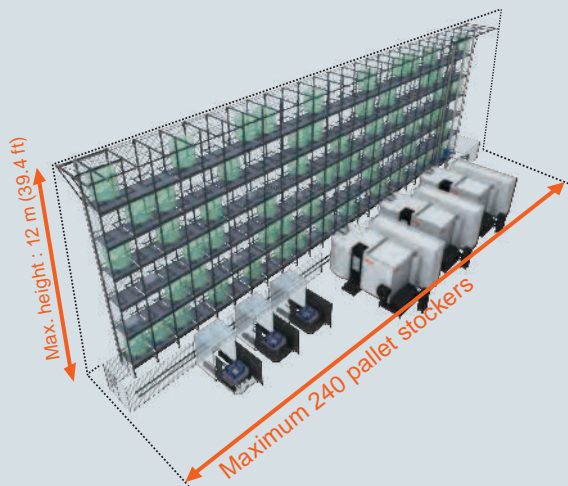
Synchronization of
data and material flow



Features

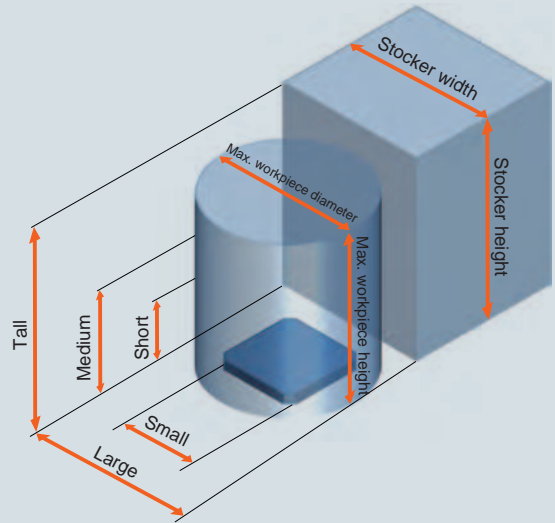
Large capacity

Automated storage system (length and height) can be designed according to your factory space requirement. Stocker maximum height is 12 m (39.4 ft.)



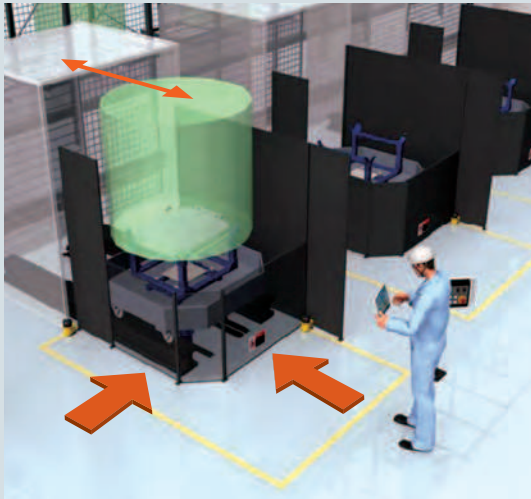
High space efficiency

Maximum 6 types of stocker sizes, with different heights and widths are available to meet your production requirements.



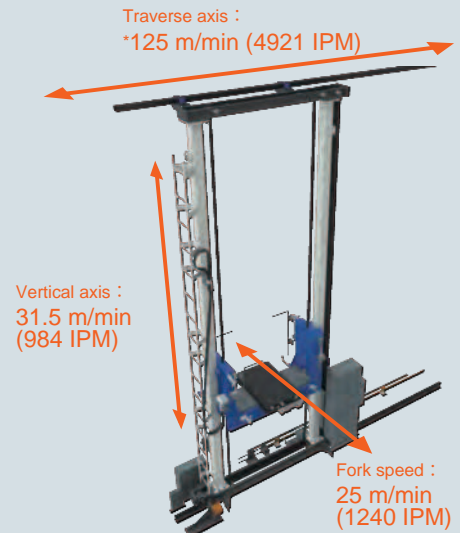
Ease of operation

Pallet can be accessed from 2 directions during setup. The area sensor detects intrusion within the yellow lines shown below to ensure the same safety level as a door on the loading station.



High speed loading / unloading

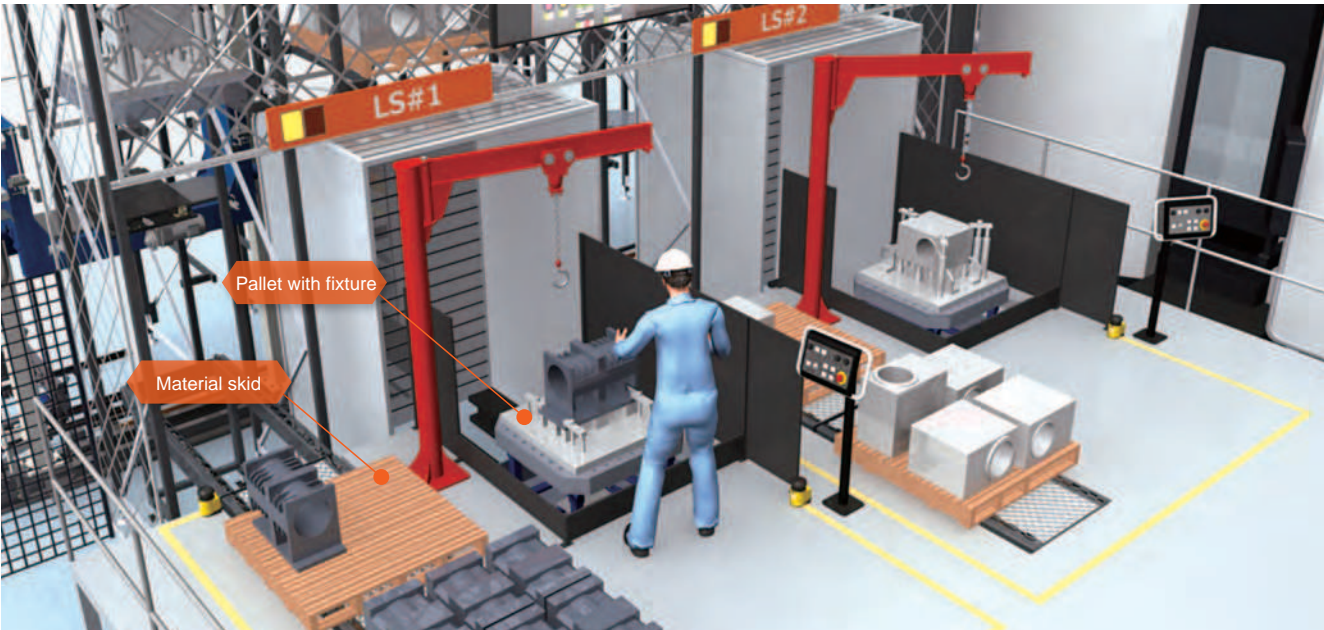
The high-speed positioning of the stocker crane ensures minimum pallet lading / unloading cycle times.



*Pallet size 400 mm x 400 mm (15.75" x 15.75") and 500 mm x 500 mm (19.69" x 19.69") :100 m/min (3937 IPM)

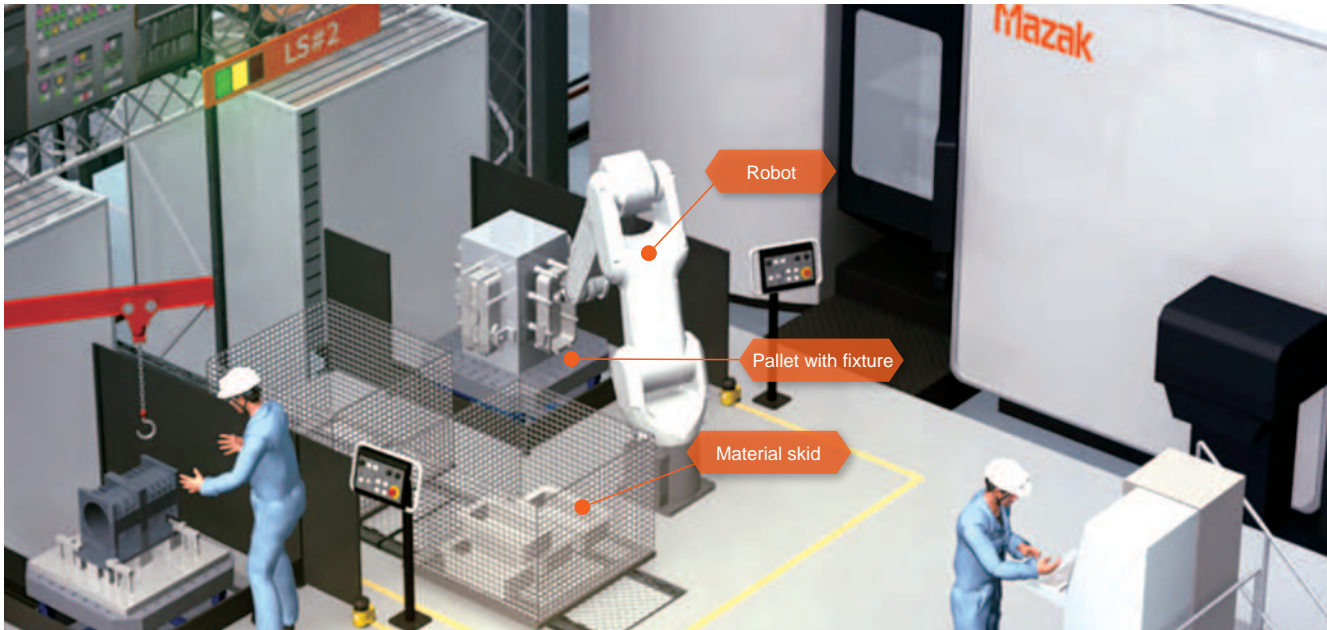
Available synchronized setup station

The skid with the required material is brought to the loading station area the same time as the machine pallet is brought to the loading station for high efficiency.



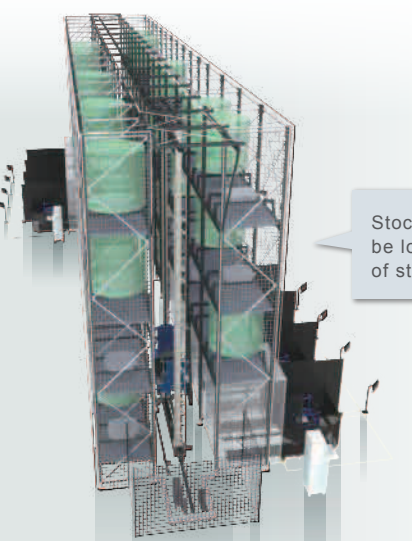
Available synchronized setup station with robot

Robot loads material and unloads finished parts for automated operation.



System layout


Flexible level layout




Stocker maximum height is 12 m (39.4 ft.)

Stocker and loading station can be located on both sides of stacker crane.


Pallet dimension [mm (inch)]	Max. number of levels
□ 400 (15.75")	7
□ 500 (19.69")	7
□ 630 (24.8")	6
□ 800 (31.5")	5
□ 1000 (39.37")	3



15 pallets (3 levels × 5 pallets)
Machine : 1, Loading station : 1



30 pallets (6 levels × 5 pallets)
Machine : 1, Loading station : 1



Maximum 240 pallet stockers

150 pallets (6 levels × 25 pallets)
Machine(s) : 1 ~ 6, Loading station(s) : 1 ~ 4

System length can be expanded after initial installation in response to increased production requirements


Management system

SMOOTH PMC controller machining management system

Production data and status can be monitored using the SMOOTH PMC controller machining management system. The system uses a 23" touch panel for ease of operation.

System monitor display

Current system status (machines and pallet position) is displayed.



Simulation display

Load display

Upcoming load on machines and loading station(s) are displayed.

Missing tool list display

A list is prepared showing the tools that are required for upcoming production that are not yet in the machine magazines.

List of tools that are not required


A list is prepared showing the tools in the machine magazines that are not required for upcoming production. This is helpful when loading required tools.

Simulation

Parts name and number of parts that are forecasted to be finished in the upcoming operation are displayed. Accurate completion time can be known even in a tight schedule.

Data display

A wide range of data results are shown by using a variety of graphic displays. These displays make it convenient for system administrators to analyze operations.

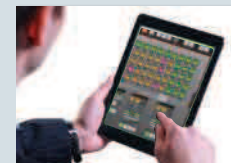


Analysis of machining time and setup time

One week operating results data

Network connection

Operation status monitoring available for an office PC or tablet connected to a network.



MAZATEC SMS Specifications

Pallet size [mm (inch)]		400 × 400 (15.75" × 15.75")	500 × 500 (19.69" × 19.69")	630 × 630 (24.8" × 24.8")	800 × 800 (31.5" × 31.5")	1000 × 1000 (39.37" × 39.37")
Max. number of machines	16					
Machines	Horizontal machining centers	HCN-4000	HCN-5000 HCN-5000/50 HCN-6000	HCN-6800	HCN-8800 MEGA 8800 μ-8800	HCN-10800 μ-10800
	5-axis machining centers	—	—	VORTEX i-630V/6	VORTEX e-1250V/8 VORTEX i-800V/8	VORTEX e-1600V/10
	Multi-tasking machines	—	INTEGREX i-500V/5	INTEGREX i-630V/6	INTEGREX e-1250V/8 INTEGREX i-800V/8	INTEGREX e-1600V/10
Pallet stocker	Max. number of pallets	240				
	Levels			3 ~ 6	3 ~ 5	3
Loading station	Max. number	8				
Stocker crane	Number	1				
	Traverse axis [m/min (IPM)] empty/with load	100 / 80 (3937 / 3150)	125 / 100 (4921 / 3937)			To be advised
	Fork speed [m/min (IPM)] empty/with load	25 / 20 (984 / 787)				To be advised
	Vertical axis [m/min (IPM)] empty/with load	31.5 / 20 (1240 / 787)				To be advised

Note : Above data only applicable for MAZATROL SmoothX / SmoothG CNC

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