Mazak AUTOMATION RANGE

LEADING THE WORLD IN AUTOMATION

	CNC Turning Centers					**Vertical** Machining Centers			**Multi-Tasking** Machines		**5-Axis** Machining Centers				**Horizontal** Machining Centers	
	QUICK TURN	QTE	MULTIPLEX W	HQR	DUAL TURN 200	VCN	VCE	VTC 530C 760C	INTEGREX i-H	INTEGREX i-V e-V	VARIAXIS i c-600	CV5-500	VARIAXIS i-300	VERSATECH	HCN	HCR
PART LOADING																
Gantry Loader System	Japanese models only	■	■	■	■				■							
TA Automation	■	■ ★							■							
MA Automation						■	■ ★	■ ★ ★			■	■				
PALLET LOADING																
PALLETECH										■	■			■	■	■
Auto Work Changer (AWC)													■			
MPP (MULTI PALLET POOL)											■				■	■
Pallet Changer (2-PC)										■	■				■	■
Pallet Changer (6-PC)															■	
TOOL LOADING																
Tool Transport System										■	■				■	

Automation preparation options are available on many MAZAK machines

Mazak machines for ease of integration with most automation providers.

★ Retrofit/special option only

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GANTRY LOADER SYSTEM

Mazak's gantry loader system is a turnkey automation solution that has ultra-fast loading and unloading resulting in an immediate increase in productivity and profitability.

WHAT'S IT FOR?

- High volume applications
- Ultra-fast loading and unloading
- Unmanned operation
- Increased versatility and flexibility with chuck and shaft work
- Turnkey solution
- Shared tooling across multiple machines
- Improved tool management

WATCH **GANTRY** VIDEOS

FIND OUT MORE - **GANTRY**

GANTRY LOADER INTEGRATES WITH:

- QUICK TURN — FULL SPEC
- QTE — FULL SPEC
- MULTIPLEX W — FULL SPEC
- HQR — FULL SPEC
- INTEGREX i-H — FULL SPEC
- DUAL TURN 200 — FULL SPEC

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TA AUTOMATION
(TURN ASSIST)

In modern manufacturing environments and job shops the combination of a machine and robot solution can free CNC operators to perform higher value tasks.

With a high capacity patented stacking plate, the operator is free to programme, setup and manage multiple machines leading to a lower cost-per-part, higher margins and increased profitability.
The **TA (TURN-ASSIST)** is an easy-to-programme robot cell integrated with Mazak's Smooth CNC, ideal for small to medium lots sizes.

WHAT'S IT FOR?

- Increasing lights out and unmanned running
- Small to medium lot sizes
- Improved machine and operator utilisation

MAIN FEATURES

- Unique workpiece stacking principle
- Interchangable workpiece support pillars
- Layout and setup of pillars guided by Graphical User Interface

WATCH **TA SERIES** VIDEOS

FIND OUT MORE - **TA SERIES**

Robot	Payload	Workpiece capacity (single cycle)	Workpiece capacity (double cycle)
TA-12	12kg	6kg	7kg
TA-25	25kg	15kg	15kg
TA-35	35kg	20kg	25kg

GUI design for robot application
– consistent with Smooth control

TA SERIES INTEGRATES WITH:

QUICK TURN **FULL SPEC**

INTEGREX i-H **FULL SPEC**

QTE **FULL SPEC**

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MA AUTOMATION (MILL ASSIST)

The combination of a machining centre with automation can give machine users more cutting hours, increased productivity and greater profitability.

A high productivity machine, such as the CV5-500, can be equipped with a MA (Mill-Assist) machine tending robot to enable unmanned and lights-out running.

WHAT'S IT FOR?

- Increased unmanned and lights-out running
- Low to medium batches
- Improved machine and operator utilisation
- Versatile Stocker unit
- Double gripper hand for simultaneous load and unloading of workpieces.
- Easy programming (no specialist robot programming knowledge required)

WATCH MA AUTOMATION VIDEOS

FIND OUT MORE - MA AUTOMATION

Delivering increased machine utilisation **and lower investment recovery time**

GUI design for robot application
– consistent with Smooth control

Robot	Payload	Workpiece capacity (single cycle)	Workpiece capacity (double cycle)
MA-25	25kg	14kg	14.5kg
MA-35	35kg	14kg	24.5kg

Double gripper hand for simultaneous load and unload of workpieces

MA AUTOMATION INTEGRATES WITH:

- VCN — FULL SPEC
- VCE — FULL SPEC
- VTC-530C — FULL SPEC
- VARIAXIS C-600 — FULL SPEC
- CV5-500 — FULL SPEC
- VTC-760C — FULL SPEC

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PALLETECH

PALLETECH is Mazak's flagship automation solution for manufacturing environments challenged by shorter product lifecycles, a fast-changing order mix and short lead times.

Its modular design with multiple pallet stockers can hold a range of different components, facilitating fast changes between jobs, with reduced setup times. The cell delivers more machining time, shorter lead times and increased profitability.

WHAT'S IT FOR?

- High-mix, low volume production
- High-volume production
- Flexible manufacturing
- Reduced in-process inventory
- JIT production
- 1 machine = 6 pallets, Multiple machines = multiple pallets

SMOOTH PMC

Data driven manufacturing
FMS control / management software – unsurpassed ease of system operation to meet sudden changes in schedule.

Designed for ease of operation
The Smooth PMC server controls overall system operation according to the registered production.

WATCH **PALLETECH** VIDEOS

FIND OUT MORE - **PALLETECH**

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240
pallet expandability, shorter lead times and increased profitability

Loading station operation panel

Smooth PMC

PALLETECH EXPANDABILITY:

12 PALLETS

24 PALLETS

240 PALLETS

PALLETECH INTEGRATES WITH:

- INTEGREX i-V — FULL SPEC
- INTEGREX e-V — FULL SPEC
- VARIAXIS i — FULL SPEC
- VERSATECH — FULL SPEC
- HCN — FULL SPEC
- HCR — FULL SPEC

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AUTO WORK CHANGER

The VARIAXIS i-300 AWC (Auto Work Changer) looks and performs like no other 5-axis automation solution.

It is designed to deliver a lower cost price per component, faster return-on-investment and improved profitability.The AWC is ideal for manufacturers requiring increased flexibility to meet the challenges of machining complex components. Equipped with a full scheduling system, large tool magazine and Smooth AWC software, the VARIAXIS i-300 AWC delivers outstanding productivity, best-in-class accuracy and unsurpassed control.

WHAT'S IT FOR?

- Highly flexible manufacturing
- High-mix, low-volume production
- High accuracy machining of small parts
- High accuracy machining of complex workpieces
- Compact floor space

Smooth AWC software
for easy scheduling and monitoring

32 position Auto Work Changer
(max. workpiece Ø350 x H315 x 65kg)

Tool storage capacity
from 145 tools up to 505 tools

WATCH **AWC** VIDEOS

FIND OUT MORE - **AWC**

AWC INTEGRATES WITH:

VARIAXIS i-300 AWC **FULL SPEC**

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MULTI PALLET POOL

MULTI PALLET POOL (MPP) is Mazak's automation solution designed to boost machine utilisation by extending unmanned running time – ultimately shortening machine investment payback and improving profitability.

The MPP is a compact multi-pallet stocker system, the modular stocker can be expanded after the initial installation in line with any increase in production demand.

WHAT'S IT FOR?

- Limited scale automation
- Compact floorspaces
- Extended unmanned running
- Shorter machine investment recovery

SMOOTH MPP

- Monitoring
- Instruction display
- Production results display

All pallets are located the same distance from the center of the pallet loader for efficient pallet changing.

WATCH MPP VIDEOS

FIND OUT MORE - MPP

MPP INTEGRATES WITH:

- VARIAXIS i FULL SPEC
- HCR FULL SPEC
- HCN FULL SPEC

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PALLET CHANGER

2-PALLET CHANGER

- Rotary 2-pallet changer
- The next workpiece can be setup during the machining of the current workpiece for higher productivity.

6-PALLET CHANGER

- A major advantage is that with the 6 Pallet Changer, multiple workpieces can be set up. One way to keep your machine spindle working, while additional setups or unloading operations are taking place, is through pallet changing.

WHAT'S IT FOR?

- 2-pallet changer provides excellent operator working space inside the 2-pallet changer
- Multiple workpieces can be setup on 6 pallets making unmanned operation able to be performed over extended periods of time
- Load next workpiece during the machining of current workpieces for increased productivity and reduced machine idle time.
- Rotary-type changes enable quick transitions with heavy workpieces for higher productivity

WATCH VIDEO

FIND OUT MORE

Multiple workpieces can be setup on the 6-pallets

6-pallet changer

VARIAXIS i -700 with 2-Pallet changer

2 PC INTEGRATES WITH:

- INTEGREX i-V — FULL SPEC
- VARIAXIS i — FULL SPEC
- HCN — FULL SPEC
- HCR — FULL SPEC

6 PC INTEGRATES WITH:

- HCN — FULL SPEC
- INTEGREX e-V — FULL SPEC

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TOOL TRANSPORT

Machine utilization significantly increases by the extended automatic operation time. The number of stored tools in the machine magazine can be minimized. Special tools can be shared among machines. Tool transport system allows automatic tool transportation within the PALLETECH system by linking the Smooth Tool Management (option) and Smooth PMC.

Tools used in the PALLETECH system are intensively setup with the tool stocker; tools that are not in the machine magazine will be automatically transported from the tool stocker or another machine within the PALLETECH system when necessary. In addition, broken tools or those that have used all the preregistered tool life are automatically returned to the tool stocker.

WHAT'S IT FOR?

- Shared tooling across multiple machines
- Improved tool management
- High volume applications
- Unmanned operation
- Turnkey solution

WATCH **TOOL TRANSPORT** VIDEOS

FIND OUT MORE - **TOOL TRANSPORT**

TOOL TRANSPORT INTEGRATES WITH:

- INTEGREX i-V — FULL SPEC
- HCN — FULL SPEC
- VARIAXIS i — FULL SPEC
- INTEGREX e-V — FULL SPEC

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