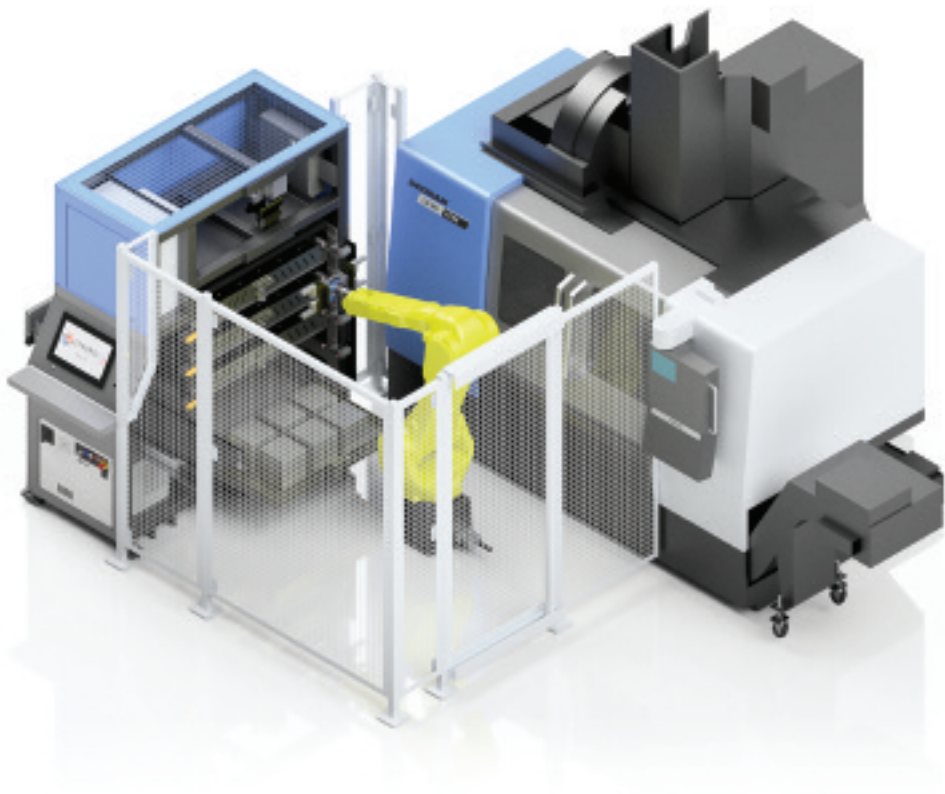


SYNERGi 25:

**Flexible Automated Manufacturing Cells
from Mills CNC Automation.**



SYNERGi 25:

Greater than the sum of its parts.

SYNERGi is the brand name of our flexible, automated manufacturing cells, and SYNERGi 25, denoting a 25kg robot payload capacity, is the name of a specific manufacturing cell we hold in stock for customers.

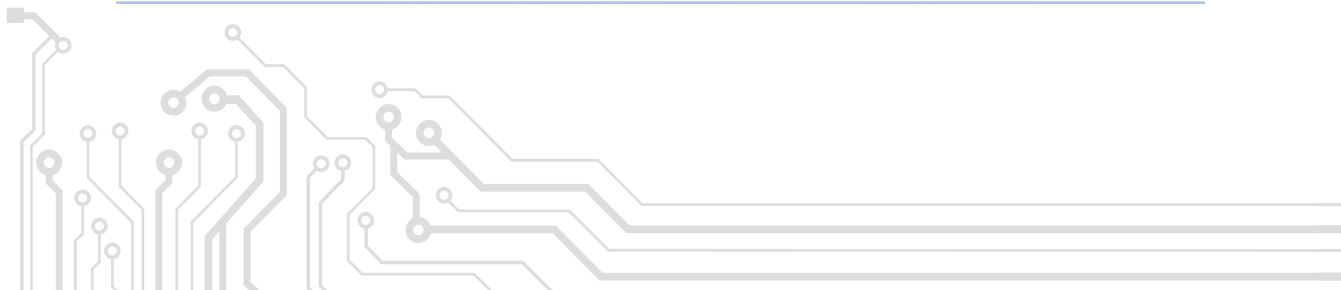
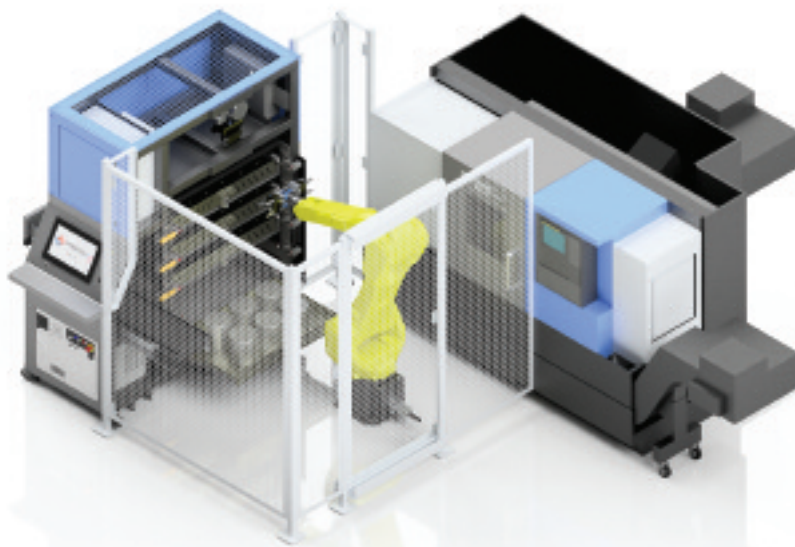
SYNERGi 25 automated cells are powered by our own (Mills CNC Automation) proprietary (SYNERGi) software and, at the heart of every system, is a sophisticated and intuitive HMI that incorporates a wide-range quality control, monitoring and inspection features and capabilities.

SYNERGi 25 systems are versatile and scaleable, and can be integrated with Doosan lathes, machining centres and mill-turn machines. They can also be custom designed and built to meet customer's specific application requirements, and can be expanded to operate with more than one Doosan machine tool.

If you are looking to embrace unmanned and lights-out operations - SYNERGi 25 automated cells are the ideal and proven high-productivity and high-efficiency manufacturing solution.

SYNERGi 25 automated cells are supplied, as standard, with:

- *a high-capacity industrial robot*
- *an automated two-way draw system for stacking, storing and loading workpieces and machined components*
- *a 17" Touchscreen HMI*
- *an inspection and parts' ejector conveyor*
- *an air blast end effector*
- *locating plates*
- *pneumatic 2 or 3 jaw grippers*
- *integrated SICK safety systems, and industrial robot fencing.*



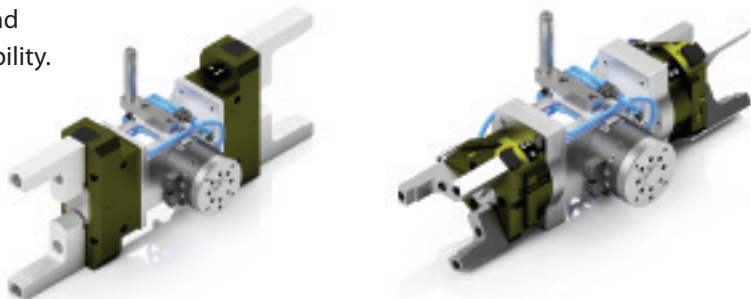
SYNERGi 25: Automated (standard) cell equipment.

SYNERGi 25 systems feature a Fanuc industrial robot, a five (two-way) drawer system for part loading and a 17" touchscreen with onboard SYNERGi software.

(The system illustrated also shows an optional part turnover station).

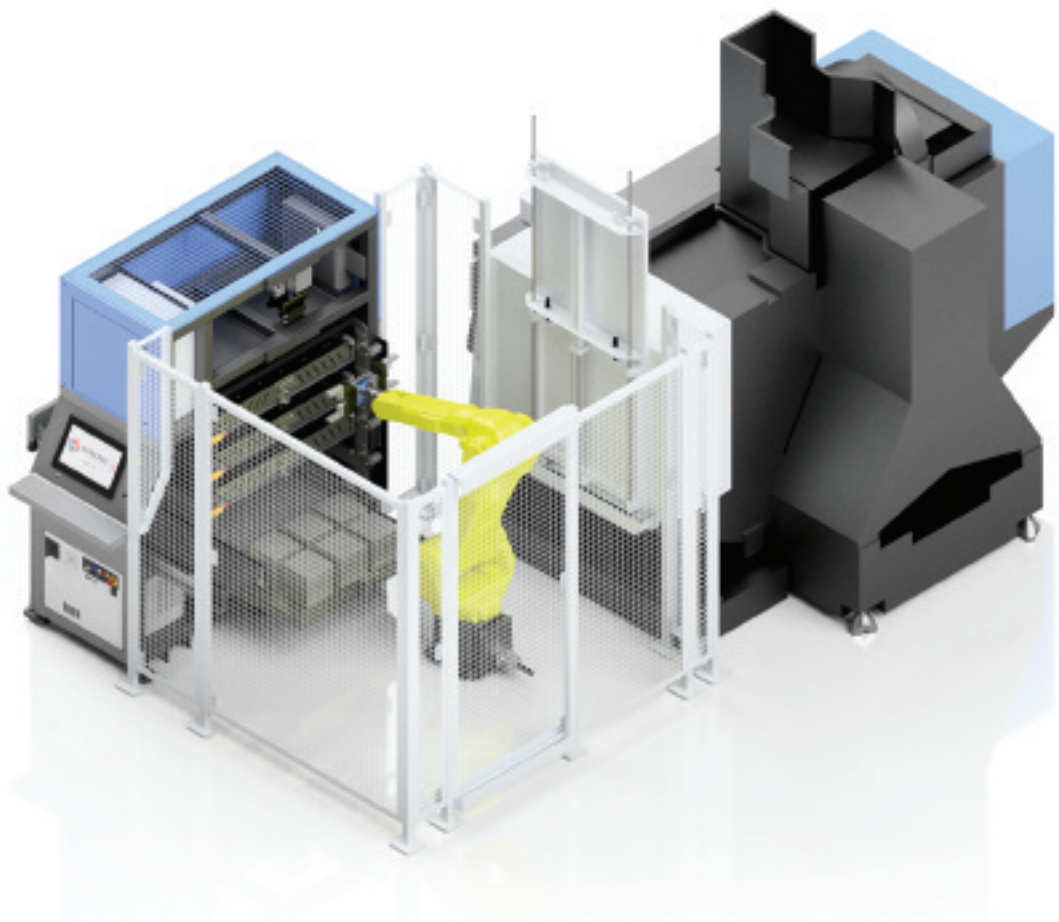


SYNERGi 25 systems are supplied with either a two or three jaw end effector with air blast capability.



SYNERGi 25:

Automated manufacturing cell featuring a Doosan machining centre (1).

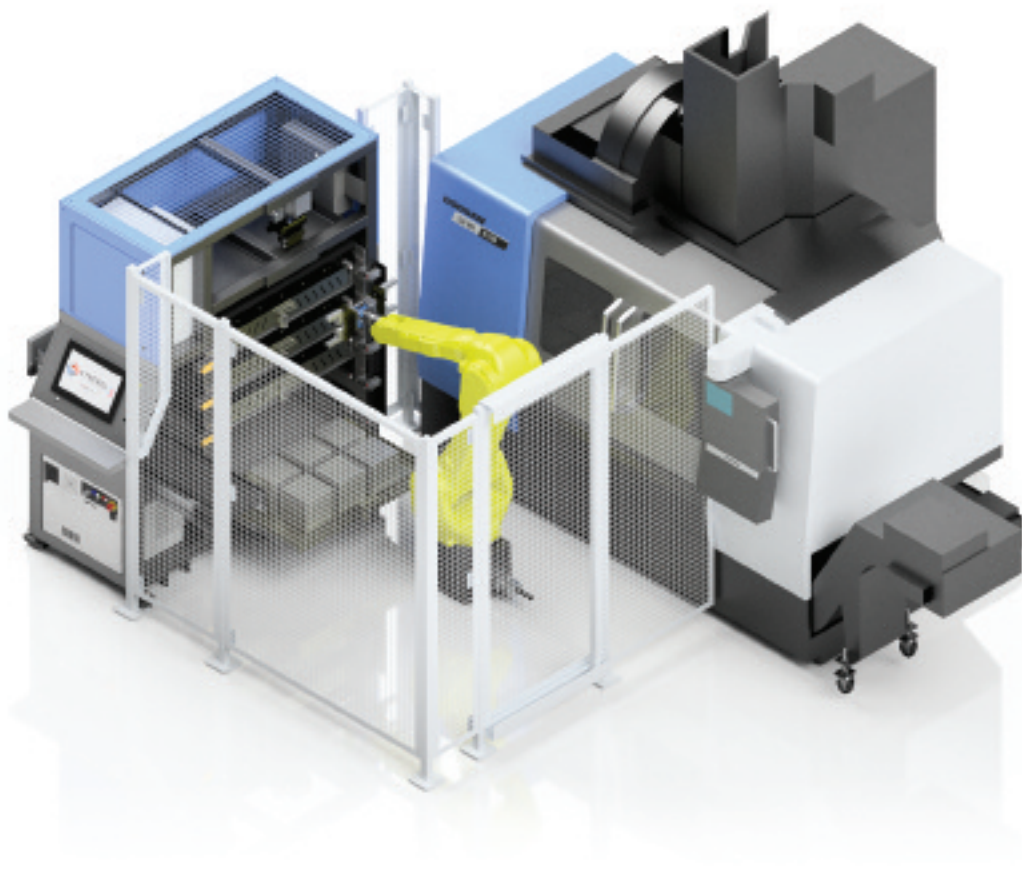


-
- Single Doosan machining centre option with side door unload/load capability.
 - Optional part turnover station located on top of the five drawer (two way) part loading system.



SYNERGi 25:

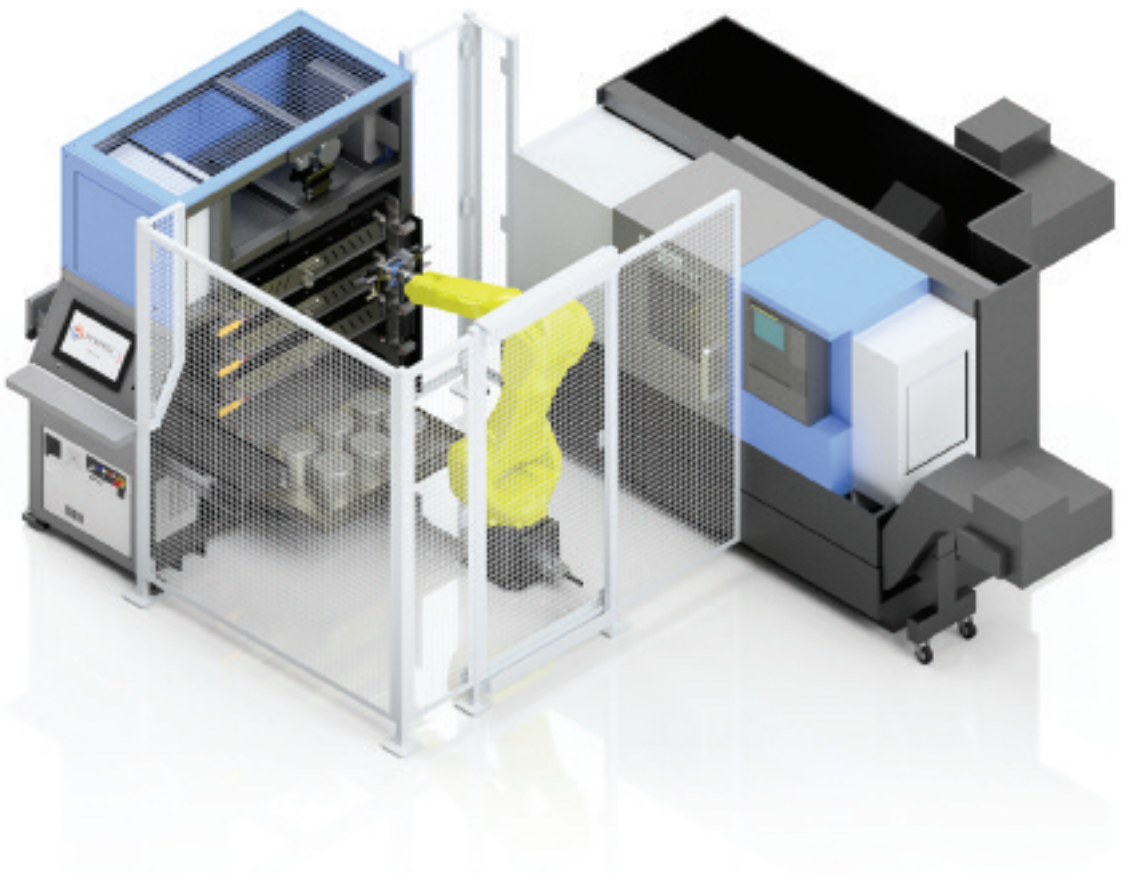
Automated manufacturing cell featuring a Doosan machining centre (2).



-
- Single Doosan machining centre option with front door unload/load capability.
 - Optional part turnover station located on top of the five drawer (two way) part loading system.

SYNERGi 25:

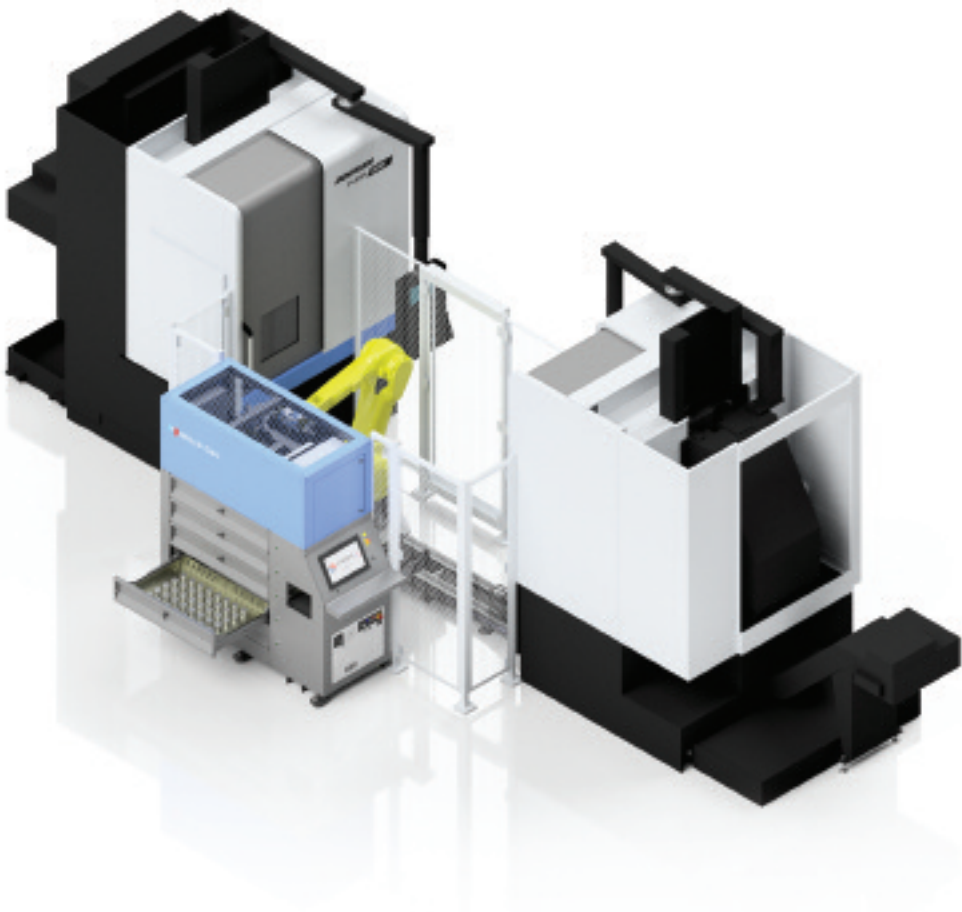
Automated manufacturing cell featuring a Doosan lathe.



-
- Single Doosan lathe option with front door unload/load capability.
 - Optional part turnover station located on top of the five drawer (two way) part loading system.

SYNERGi 25:

Automated manufacturing cell featuring two Doosan machines (vertical turning lathes).



-
- Two Doosan machine tool option with front door unload/load capability.
 - Optional part turnover station located on top of the five drawer (two way) part loading system.
 - 7th-axis robot transfer unit rail positioned between the the two machines.



SYNERGi 25:

Technical Specifications.

*Standard cell specifications:
Doosan lathes and machining centres*

Industrial Robot

- Fanuc 6 axis industrial robot: 25kg
- Maximum work load per gripper: 10kg
- Maximum work load per EOAT: 20kg
- Energy and air rotary unit: Standard
- Pneumatic grippers: 3-jaw (lathes)/
2-jaw (milling)
- Built-in air cleaning system: Standard
- Electronic clamping: Standard

Loading system

- 5 drawer load system: Standard
- Maximum height of part: 200mm
- Maximum weight - each draw: 200kg
- Part grid plates: 1 set
- Draw dimensions: 900 x 450mm

HMI

- 17" Touchscreen: Standard
- Separate waterproof keyboard: Standard
- USB Port: Standard
- Internet connection: Standard

Safety and Inspection systems

- SICK integrated systems: Standard
- Guarding with sliding door: Standard
- Inspection conveyor: Standard

Other features

- Electrical supply: 415V/50HRZ
3 phase & Neutral
- Air supply: 6 Bar
- Dimensions/floorspace: 2050 x 770 x 2200mm

SYNERGi software features

- Administration levels
- Job selection - (new/existing)
- Machine and Gripper Jaw selected from database
- Automatic part handling allocation
- Part tracking
- Cleaning function
- Inspection and wear offset facility
- Process run-out or batch run-out
- Automatic robot recovery
- Pre-production flight check
- Alarm messaging
- Part stacking

Options Available

- Increased payload of robot for heavier components
- 7th axis rail for multiple machine loading
- Floor scanner in lieu of hard guarding
- Programmable servo actuated grippers
- Bespoke component grid plates for drawers

In addition to our standard SYNERGi systems we can also design and build a customised SYNERGi automated manufacturing cell to your exact specifications.

For more information on SYNERGi 25 and our bespoke manufacturing cell systems - call Mills CNC Automation on **01926 736736. For more information on Mills CNC Automation visit www.millscnc.co.uk**