

Transformer Concept with six-axis robot



System 3R

When all you need is everything, it's good to know that there is one company that you can count on to deliver complete solutions and services. System 3R equips world-class electrical discharge machines (EDM), Laser texturing and Additive Manufacturing through to first-class Milling by Tooling, Automation and software systems — all backed by unrivalled customer service and support — we, help you raise your game and increase your competitive edge.

Swedish design and quality

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System 3R offer automation solutions with industrial robots, both stationary and rail versions within the Die & Mold and Precision Production sector.

System 3R six-axis robot solutions covers applications in terms of ...

- ... transfer weight from 70-700 kg
- ... radial reach, up to 3 400 mm
- ... complexed transfer movements
- ... parts handling

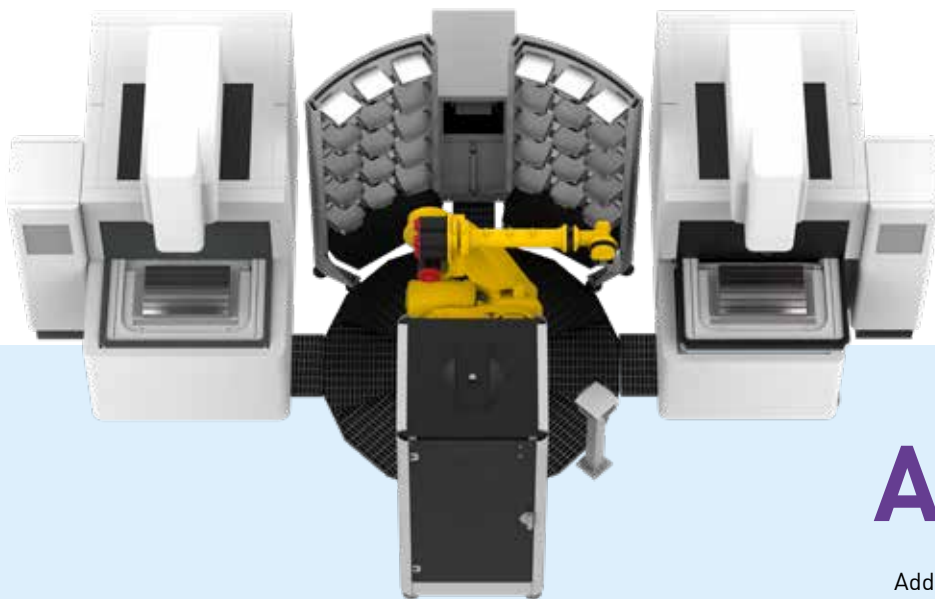
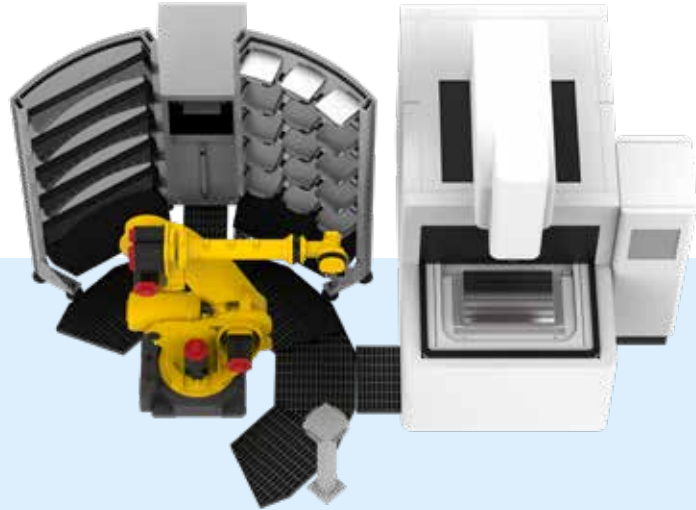
- Whatever the Automation requirement, the System 3R six-axis robot solution can be tailored to serve your needs : customer-specific solutions.
 - Modern technology & smart technical solutions using standardized modules allow for cost-effective yet flexible Automation
 - User-friendly cell management software: complex Automation made easy!
 - Everything from your single source supplier
- Achieve greater return on your investment !**

Scalable Automation

Grows with your needs

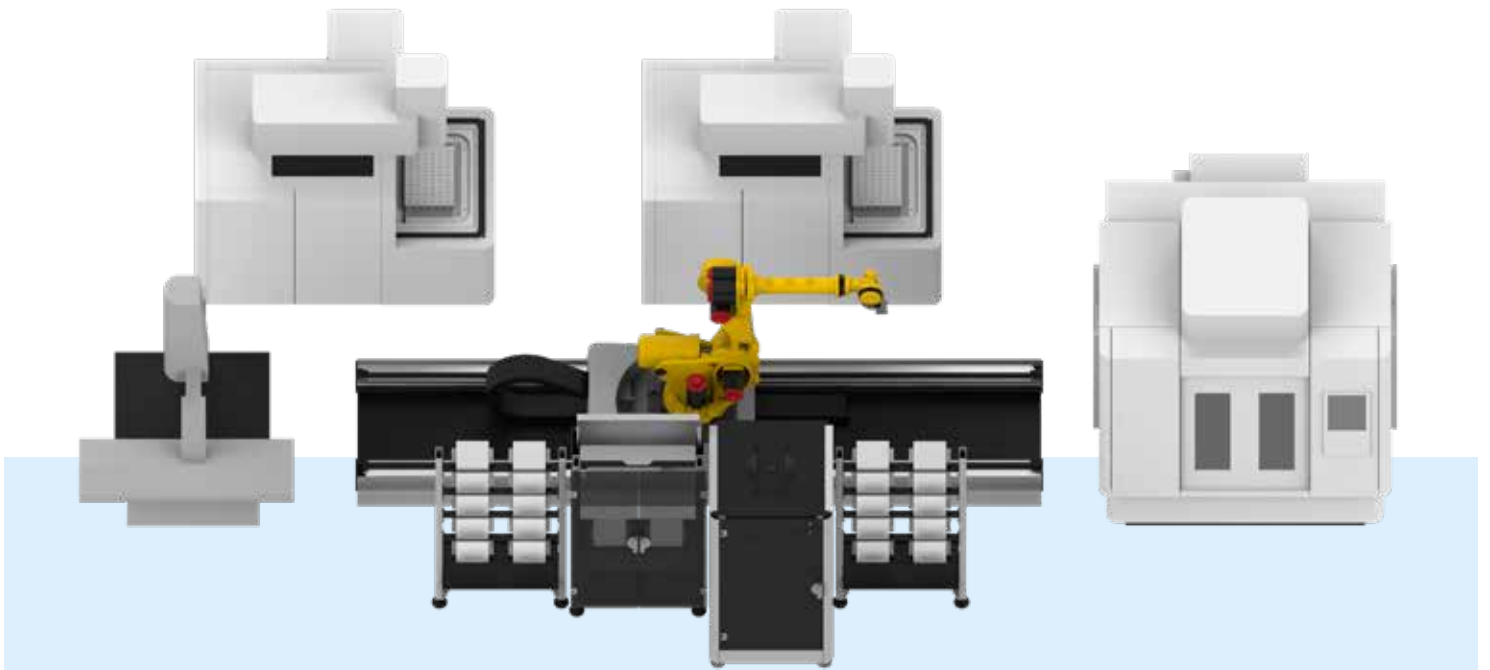
Begin with a single machine and small magazine capacity.

Begin



Add

Add a second machine and a rotary magazine for more capacity.



Place the robot on rails and add magazine capacity to serve additional machines, or start with a similar solution from the beginning.

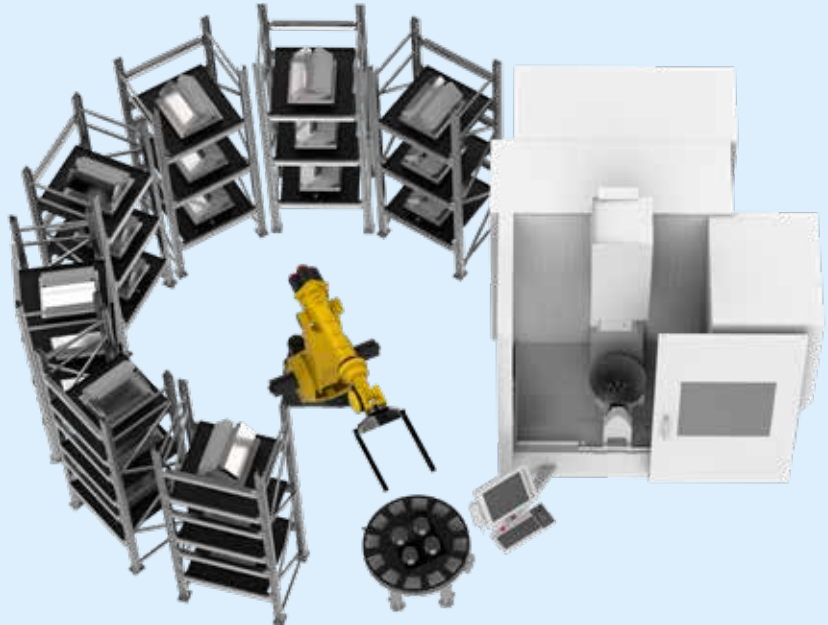
E X T E N D

Customer-specific Solutions

Tailored to serve your needs

Milling application

- Model 360 – Stationary robot
- Milling machine
- Rack magazines
- Loading/index station



Milling application

- Model 360 on rail
- Three Milling machines
- Washing machine
- Rack magazines
- Loading/index station





Milling application

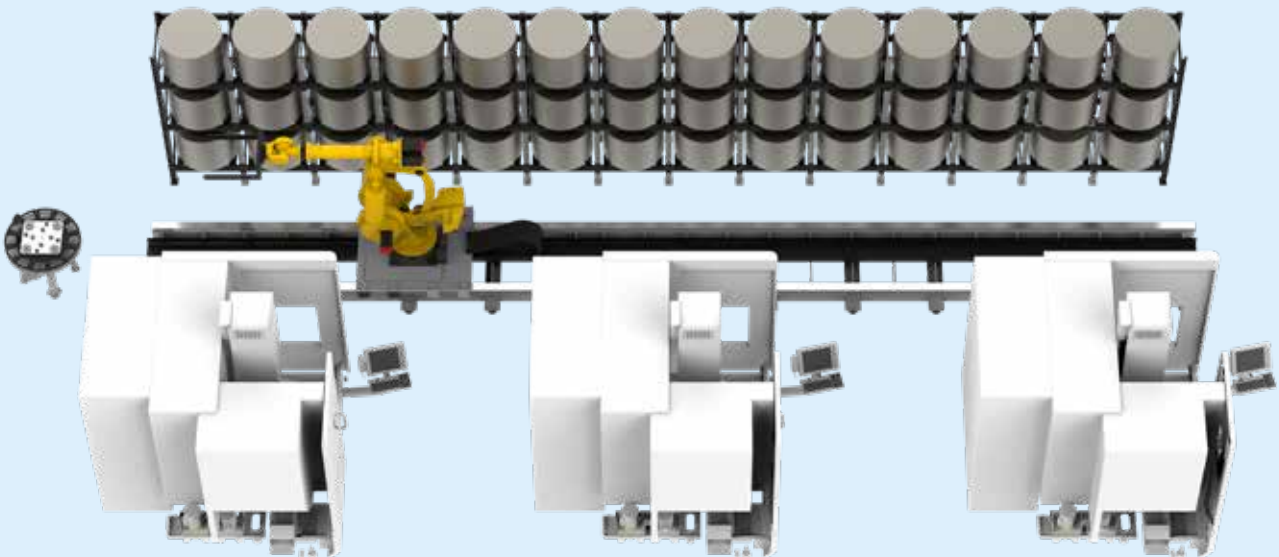
Model 700 – Stationary robot
 Milling machine
 Rack magazines
 Loading/index station



Automation



Milling



Milling application

Model 700 on rail
 Three Milling machines
 Rack magazines
 Loading/index station



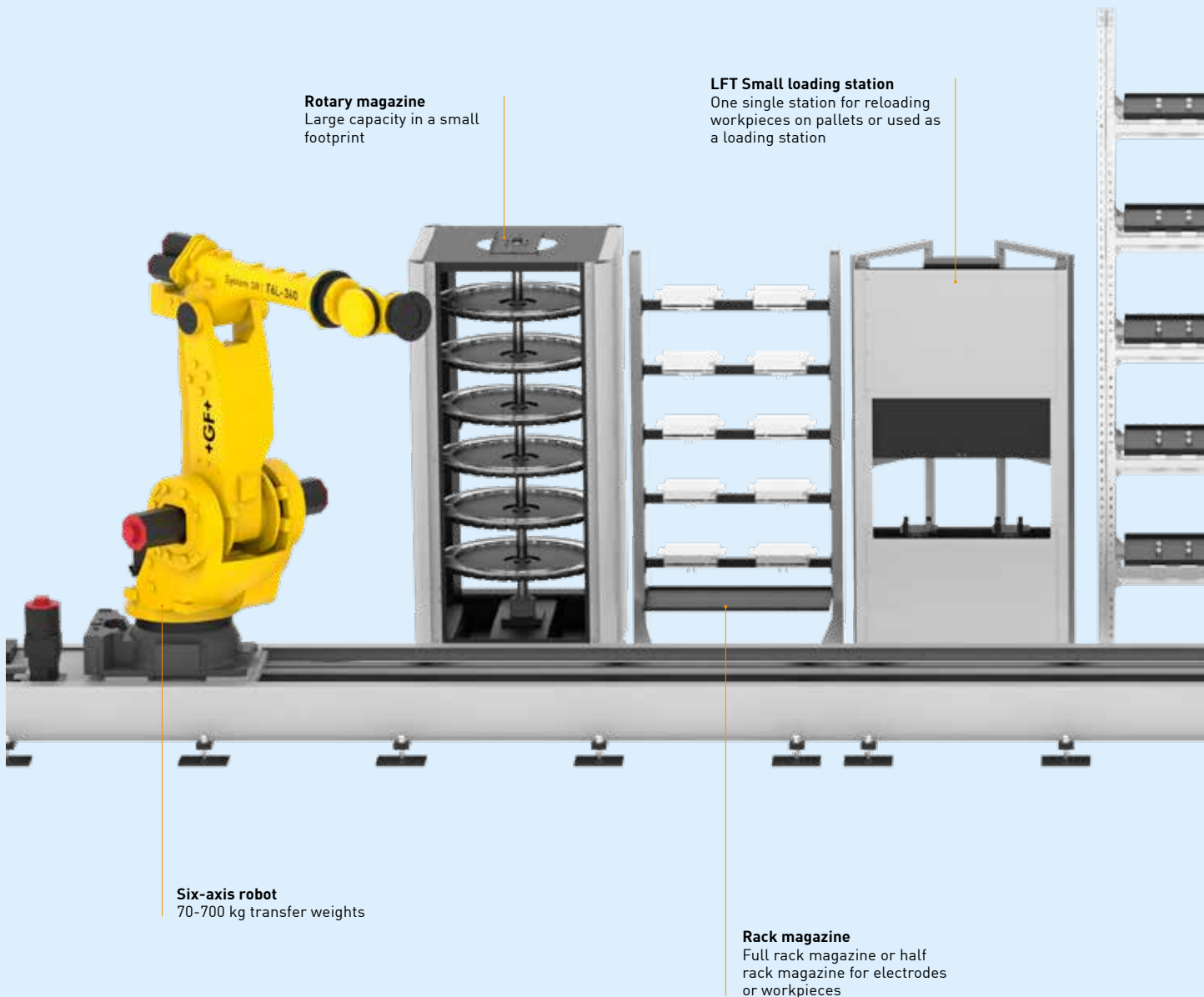
Automation



Milling

Standardized modules

For cost-effective solutions

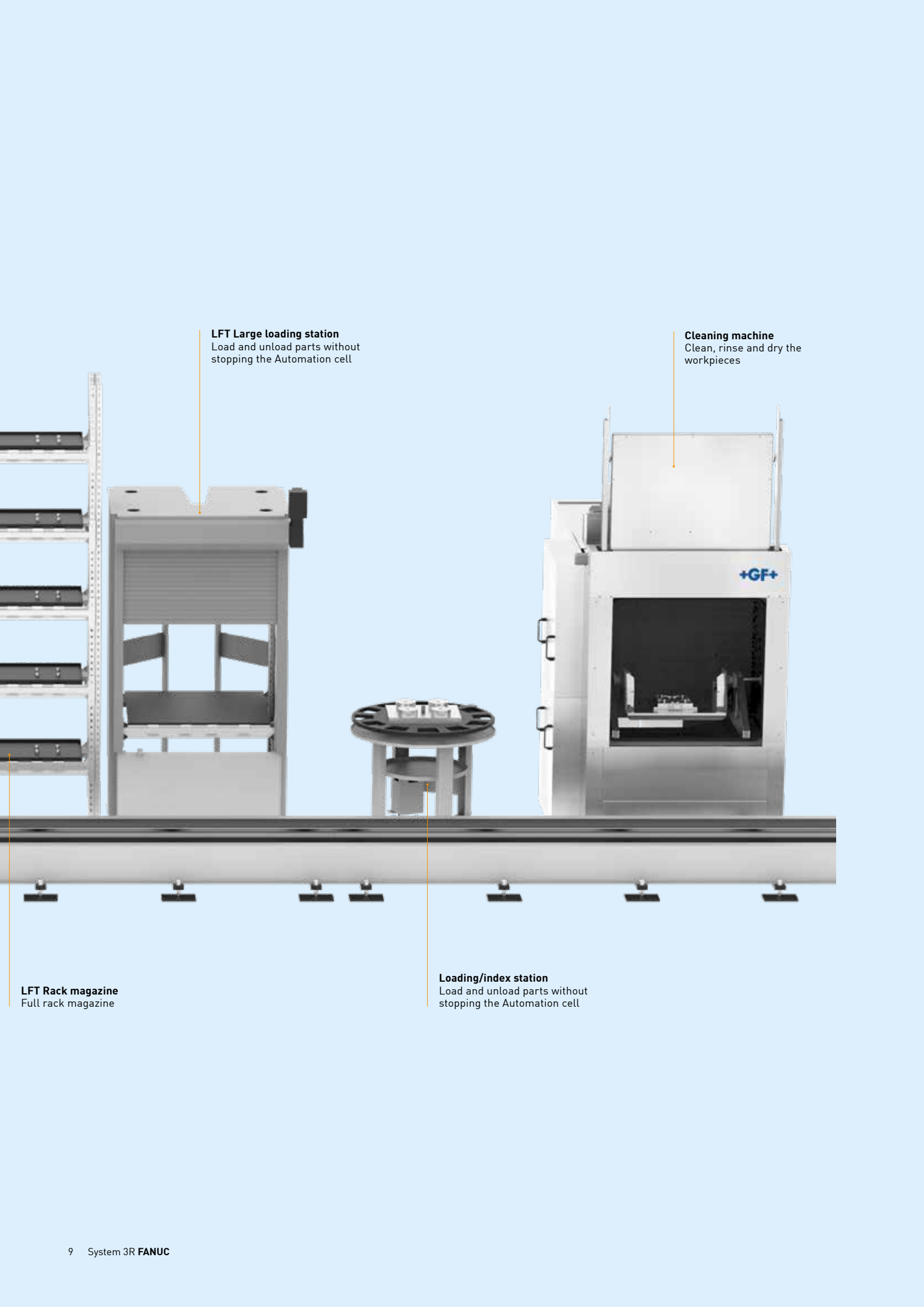


Rotary magazine
Large capacity in a small footprint

LFT Small loading station
One single station for reloading workpieces on pallets or used as a loading station

Six-axis robot
70-700 kg transfer weights

Rack magazine
Full rack magazine or half rack magazine for electrodes or workpieces

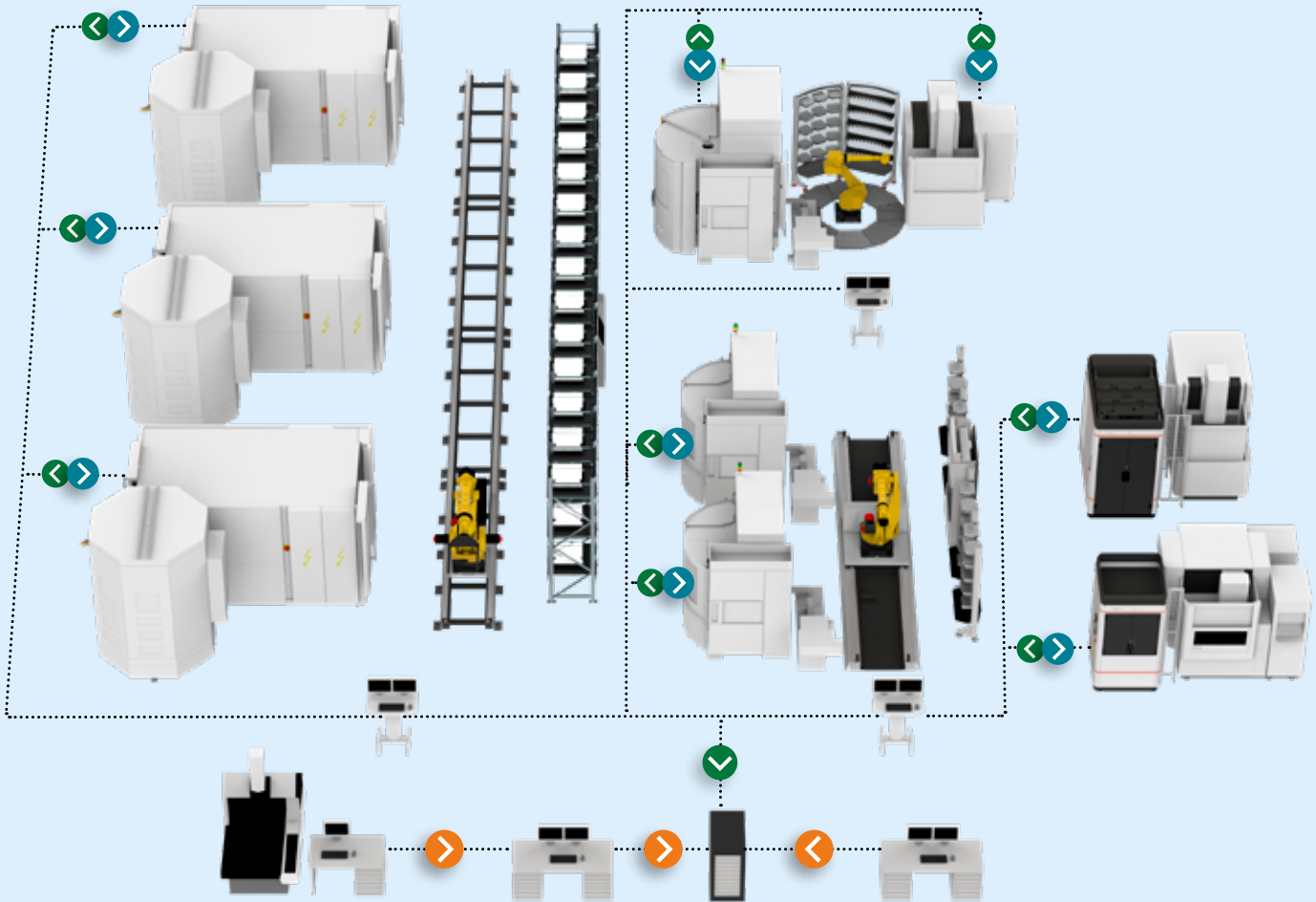


LFT Large loading station
Load and unload parts without
stopping the Automation cell

Cleaning machine
Clean, rinse and dry the
workpieces

LFT Rack magazine
Full rack magazine

Loading/index station
Load and unload parts without
stopping the Automation cell



WSM – WorkShopManager

User-friendly Cell Management Software

- Necessary data is entered quickly and in a structured manner.
- Quick, precise overview of the entire process chain
- Increased flexibility: The order of priority can be changed at any time.
- Simpler, safer preparation of automated cells
- The risk of errors due to the human factor is minimized.
- Increased process security



.....> Preparation – WorkCenter

- Create an order
- Assign operations and NC programs
- Retrieve offset values
- Release the order for production

.....> Monitoring – CellMonitor

- Display status of all cells
- Display status of individual machines and processes

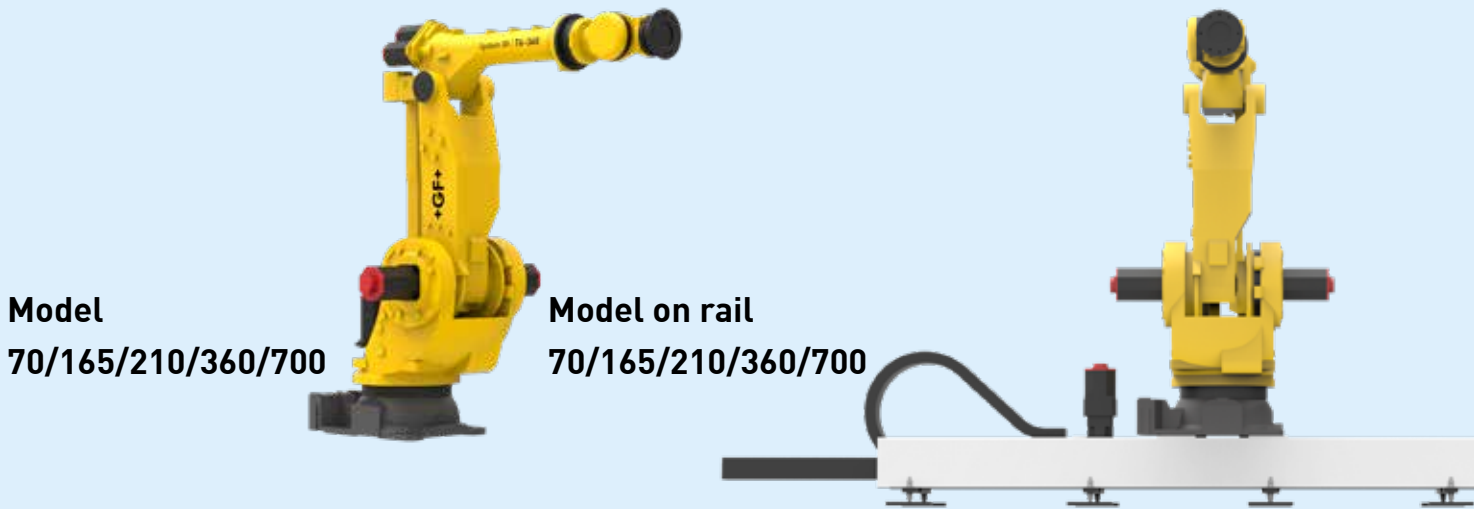
Statistics – WSM Statistics

- Retrieve and analyze cell utilization data
- Retrieve and analyze order data

.....> Execution – CellManager

- Manages the pallet ID codes and magazine positions
- Creates priority lists
- Automatically starts available jobs in the order of the priority list
- Updates the information in the database with the status and machining times of individual orders

Technical specifications



	Models 70/165/210/360/700	Models on rail 70/165/210/360/700
Payload	70, 165, 210, 360, 700 kg. 155, 366, 466, 800, 1555 lbs	
Max. X-reach	70 kg = 2050 mm, 165-360 kg = 2655 mm, 700 kg = 2832 mm 70 kg = 80.7 in, 165-360 kg = 104.5 in, 700 kg = 111.5 in	
Max. Z-reach	1400 mm 55.12 in	
Max. C-rotation	360-370°	
Stationary cell, max. # of machines	Up to 3	
Linear cell, max. # of machines	Up to 12	
Rail type	Standard Heavy	
Max. rail length	Standard 20 m, 787 in Heavy 30 m, 1181 in	
Max. transfer weight (pallet and workpiece)	70 kg, 155 lbs (Model 70) 165 kg, 366 lbs (Model 165) 210 kg, 466 lbs (Model 210) 360 kg, 800 lbs (Model 360) 700 kg, 1555 lbs (Model 700)	

Accessories

LFT half rack magazine, max pallet size	850 x 550 mm (33.5 x 21.6 in)
LFT full rack magazine, max pallet size	850 x 800 mm (33.5 x 31.5 in)
Half rack magazine, max pallet size	480 x 400 mm (18.9 x 15.7 in)
Full rack magazine, max pallet size	700 x 450 mm (27.6 x 17.7 in)
Rotary magazine, max. pallet size	320 x 320 mm (12.6 x 12.6 in)
Multiple loading station	Depending on tooling and number of positions
LFT loading station	850 x 800 mm (33.5 x 31.6 in)
Loading station	max. 200 kg (440 lbs), 450 x 450 mm (17.71 x 17.71 in)
Loading/index station	570 x 570 mm (22.4 x 22.4 in)
Cleaning machine	max. 200 kg (440 lbs), 500 x 500 mm (19.68 x 19.68 in)

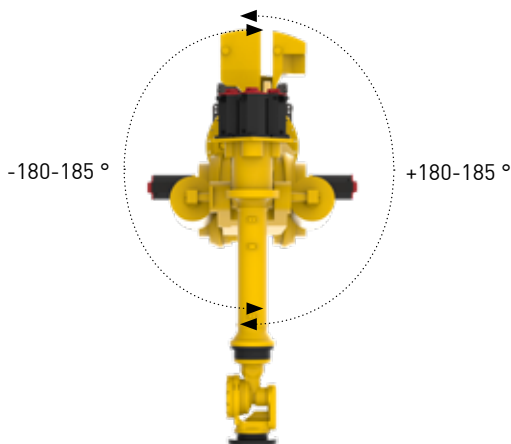
Technical specifications



Rail type

Standard (only for 70 & 165 versions)

Heavy



*** Depending on model/type**

- Model 70 = 1757 mm (69 in)
- Model 165 = 2081 mm (82 in)
- Model 210 = 2115 mm (83 in)
- Model 360 = 2285 mm (90 in)
- Model 700 = 2565 mm (101 in)

**** Depending on model/type**

- Model 70 = 1717 mm (67.6 in)
- Model 165 = 2322 mm (82 in)
- Model 210 = 2387 mm (91 in)
- Model 360 = 2415 mm (95 in)
- Model 700 = 2810 mm (110.6 in)

Model 70

Reach capacity: 2050 mm, 80.7 in.
C-Rotation: 360°

Model 165

Reach capacity: 2655 mm, 104.5 in.
C-Rotation: 370°

Model 210

Reach capacity: 2655 mm, 104.5 in.
C-Rotation: 370°

Model 360

Reach capacity: 2655 mm, 104.5 in.
C-Rotation: 360°

Model 700

Reach capacity: 2832 mm, 111.4 in.
C-Rotation: 360°

Robot rail

Max robot travel, Standard: 20 m (787 in)
Max robot travel, Heavy: 30 m (1181 in)

Max number of machines

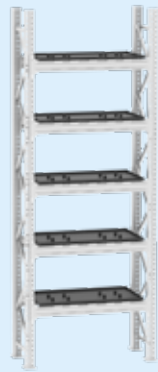
Stationary cell: 3
Linear cell: 12

Technical specifications

Magazines



Rotary



LFT half rack



LFT full rack



Half rack



Full rack

Magazines are available in two basic designs: rack and rotary.

Each magazine unit consists of a number of shelves (determined by the height of the workpieces in question).

Rotary magazine

Tooling*	Pos.**	Size in mm (in)
Dynafix	4	320 x 320 (12.6 x 12.6)
	5	290 x 290 (11.4 x 11.4)
GPS 240	4	320 x 320 (12.6 x 12.6)
	5	290 x 290 (11.4 x 11.4)
	6	260 x 260 (10.2 x 10.2)
Macro-Magnum	8	210 x 210 (8.27 x 8.27)
	10	185 x 185 (7.28 x 7.28)
	12	160 x 160 (6.3 x 6.3)
GPS 120	12	160 x 160 (6.3 x 6.3)
Macro	36	65 x 65 (2.56 x 2.56)

Option Rapid ID scanning

LFT Full rack magazine

Tooling*	Pos.**	Size in mm (in)
Dynafix	1	850 x 800 (33.4 x 31.5)
	2	400 x 800 (15.7 x 31.5)
GPS 240	1	850 x 800 (33.4 x 31.5)
	2	400 x 800 (15.7 x 31.5)
Delphin	1	850 x 800 (33.4 x 31.5)
	2	400 x 800 (15.7 x 31.5)

LFT half rack magazine

Tooling*	Pos.**	Size in mm (in)
Dynafix	1	850 x 550 (33.4 x 21.6)
	2	500 x 500 (19.7 x 19.7)
GPS 240	1	850 x 550 (33.4 x 21.6)
	2	500 x 500 (19.7 x 19.7)
Delphin	1	850 x 550 (33.4 x 21.6)
	2	500 x 500 (19.7 x 19.7)

Full rack magazine

Tooling*	Pos.**	Size in mm (in)
Macro	12	70 x 200 (2.75 x 12.2)
Macro 116	6	150 x 150 (5.9 x 5.9)
Macro-Magnum	4	210 x 210 (8.27 x 8.27)
	5	170 x 170 (6.7 x 6.7)
Dynafix	2	400 x 400 (15.75 x 15.75)
	1	700 x 500 (27.56 x 19.68)
GPS 70	10	95 x 95 (3.74 x 3.74)
GPS 240	3	275 x 275 (10.83 x 10.83)
	2	400 x 400 (15.75 x 15.75)
Delphin	2	400 x 400 (15.75 x 15.75)
	1	700 x 500 (27.56 x 19.68)

Half rack magazine

Tooling*	Pos.**	Size in mm (in)
Dynafix	1	480 x 400 (18.9 x 15.75)
GPS 240	1	480 x 400 (18.9 x 15.75)
Delphin	1	480 x 400 (18.9 x 15.75)
		400 x 400

Options Additional shelves
Door for loading from behind

* Other tooling upon request

** Positions per level
Note: The maximum height of the workpiece depends on the number of levels

Technical specifications

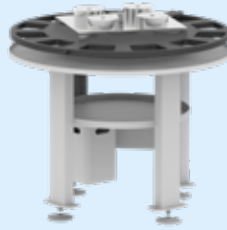
Accessories



Multiple loading station



LFT loading station



Loading/index station



Cleaning machine

Multiple loading station & LFT Loading station

Used for loading and unloading without the need to stop the Automation cell

The station is equipped with ID antennas and presence sensors.

It can be configured to meet the requirements of tooling type and part sizes.

Loading/index Station

Used for preparing the workpieces with a indexing table.

Max. workpiece size, round: dia. 800 mm (31.5 in)

Max. workpiece size, square: 570 x 570 mm (22.4 x 22.4 in)

Max. load: 500 kg (1111 lbs)

Load or work preparation area for all standard tooling

Indexable every 30°

Collecting tray for oil & flushing liquid

Presence detection

Cleaning machine

A washing machine intended for cleaning, rinsing and air drying metal components placed on a pallet.

The unit consists of an insulated cabinet with a lifting door, fixed spraying system and a rotating fixture for the pallets. The unit is automatically loaded by the robot.

Maximum part size

500 x 500 x 500 mm (19,7 x 19,7 x 19,7 in)

including pallet, chuck and workpiece

Maximum weight

200 kg (440 lbs) including pallet, chuck and workpiece

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