

# **| SL-1 Side Door Type Compact automation solution**

**~ Practical, Easy to Operate and Affordable!**

# SL-1 + FANUC ROBODRILL Match combination



SL-1



FANUC ROBODRILL  
X-axis 500

## Compact . Efficient

\*Meets automation needs for small product series

**SL-1** is your fully integrated solution for automation in production. With flexible robot units, you can combine various processing steps with minimal personnel investment, providing universal support for both **High Mix small and large volume production.**

It can be used as a standalone unit or integrated with a machine tool, or as a part of a broader production line. Suitable for integrated automation solutions for **High Mix small and large volume production.**

# What can you do with SL-1?

- ✓ **SL-1** is a material loading and robotic integration feeding system.
- ✓ **Suitable** for feeding systems for milling, cleaning, and inspection applications.
- ✓ **SL-1** is placed near the processing machine, reducing retrieval and delivery time, especially when combined with the performance of FANUC ROBODRILL, making production more efficient.
- ✓ **SL-1** The secret to storing a large number of workpieces is using movable containers to store trays; when there is a need for production during weekends or night shifts, you can prepare additional containers in advance for quick replacement, achieving uninterrupted operation.
- ✓ **SL-1** uses trays to carry pieces, whether arranged in a matrix or with random visual placement.
- ✓ **The** tray size of SL-1 is 12.6x15.4" (320mm x390mm), making it particularly suitable for producing bicycles, semiconductors, and related small and irregular pieces, while still meeting the weight that one person can handle.
- ✓ **SL-1** Paired with a touchscreen panel, the production progress is displayed, making it more intuitive and user-friendly for operators.
- ✓ **The** control system is based on an industrial computer architecture, enabling flexible communication with peripheral machines.



# Side portal type - trolley storage silo system

Mobile container



## Advantages

- **Advantage 1 :**
  - The area is extremely small, with a width of only 27.6 " /700 mm
  - Can be placed near the processing machine to speed up the material change process.
  - Side door access allows for unimpeded front space of CNC machines.

# Side portal type - trolley storage silo system

Mobile container



## Advantages

- **Advantage 2 :**
  - The material cabinet is independent and movable, flexible in interchange, and high in mobility and autonomy
  - The multi-layer design of the containers offers high storage capacity, extending production hours during night shifts and weekends.
  - The mobile containers can be used with multiple CNC machines, allowing for fast exchanges without disrupting production.
- **Advantage 3 :**
  - The robot unit is located above the tray for agile pick and place operations.
  - The material storage system is modular, making it easy to integrate with the machine.

# Side portal type - trolley storage silo system

Mobile container

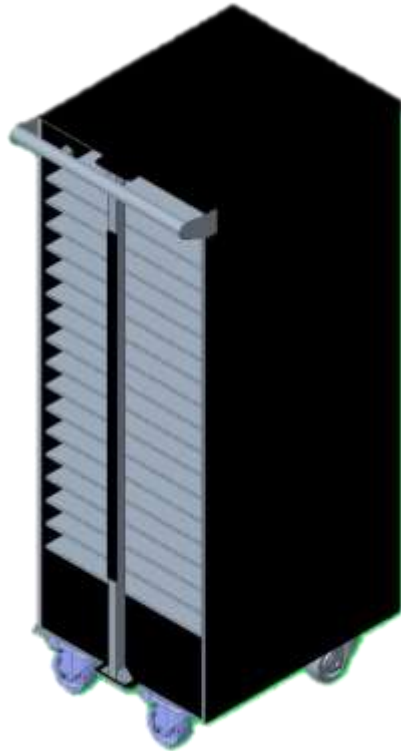


## Advantages.

### • Advantage 4:

- Touchscreen panel, user-friendly operation.
- Displays production status, intuitive and easy to learn.
- PC-based system, easy integration with peripheral systems.
- The system can be paired with vision systems, facilitating **High Mix small and large volume** diverse production.
- The system can record multiple production items for quick changeovers.
- The system can record error messages for information collection.
- The system is highly autonomous with minimal operator intervention needed.

# Specifications for Mobile Container



Mobile container

\*Standard package - trays not included

\*Trays are for illustration purposes only!

## Specification.

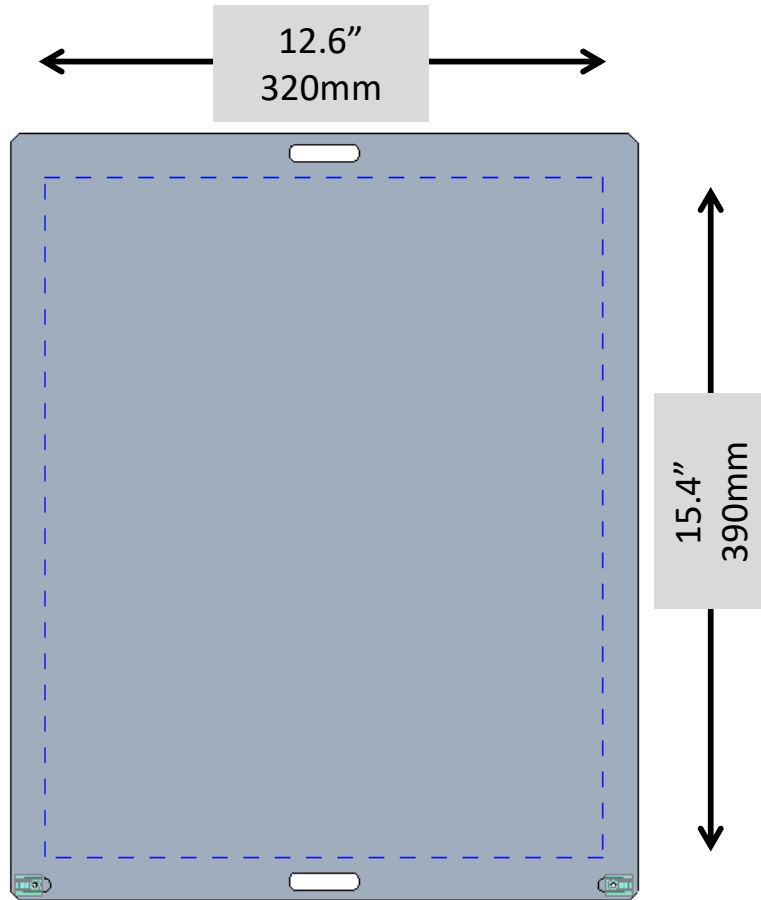
- **Specifications:**

- The mobile container features tray stacking.
- The container has 16 layers with adjustable tray placement positions based on the height requirements of the workpieces..

- **Features:**

- The container can be easily integrated with and swapped out from the machine.
- For example: the container can move within the facility, and transferred to an inspection room without the need for a carrier change, reducing labor and time.
- After placing the workpieces on the tray, the tray area is compact, allowing operators to move it easily and safely.
- During automated production, spare containers can be used to replace and replenish workpieces outside the machine simultaneously, without affecting downtime. The container swapping speed, both front and back, is fast, ensuring high efficiency with minimal manpower.

# Trays Specifications



- **Specifications:**

- Internal space inside the tray (within the dashed lines):  
Width: 12.6x15.4" / 320mm x390mm
- Material: Aluminum
- Allowable load on single layer: 44lb/20kg

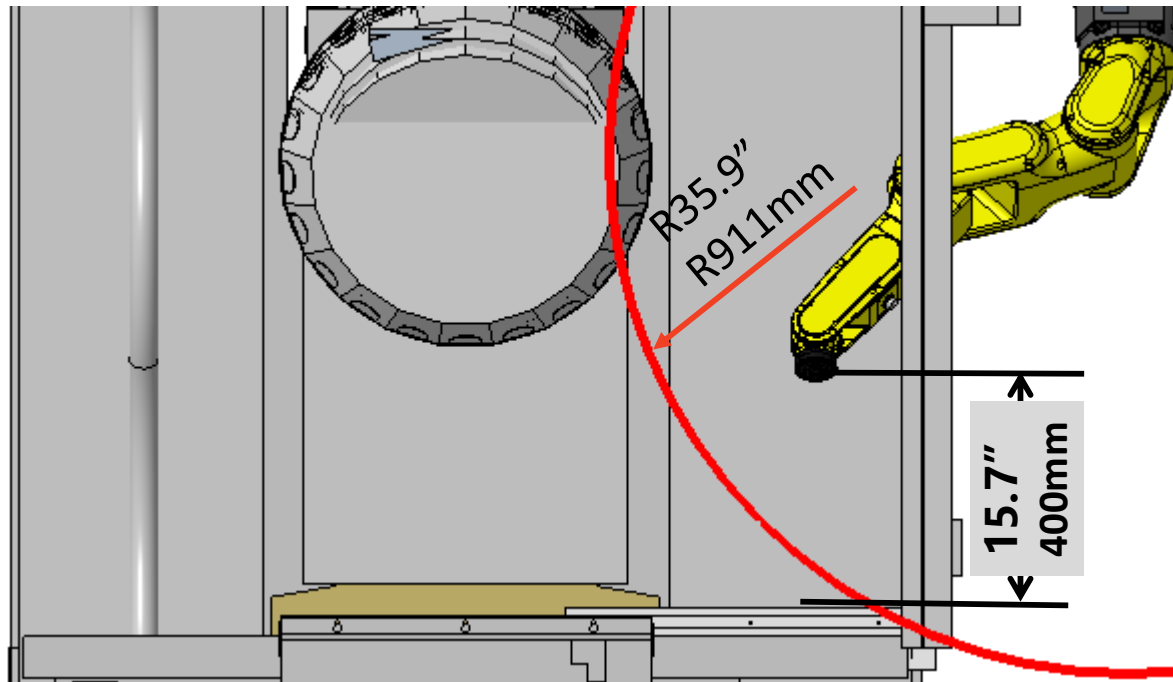
- **Reference for tray placement quantity:**

Part dimensions ("/mm)	Part height ("/mm)	Single layer quantity (units)	Total number of storage bins (units)
Ø65	2.3/58.8	20	320
Ø28	1.3/33	80	1280
3.8x2.4/96x60	0.5/12	35	560
1.2x1.7/30x43	0.7/17	63	1008

\* the actual placement of materials and weight depends on design specifications.



# Configuration of Machine Tool Space



## Compatible CNC Machine:

FANUC ROBODRILL X-axis 500

X-axis travel: 19.7" /500mm

## Robot space:

The robot's sixth axis is approximately 15.7" /400mm from the worktable.

This space is reserved for configuring the fourth or fifth axis and related clamping fixtures for the mid-plate.

## Application recommendation:

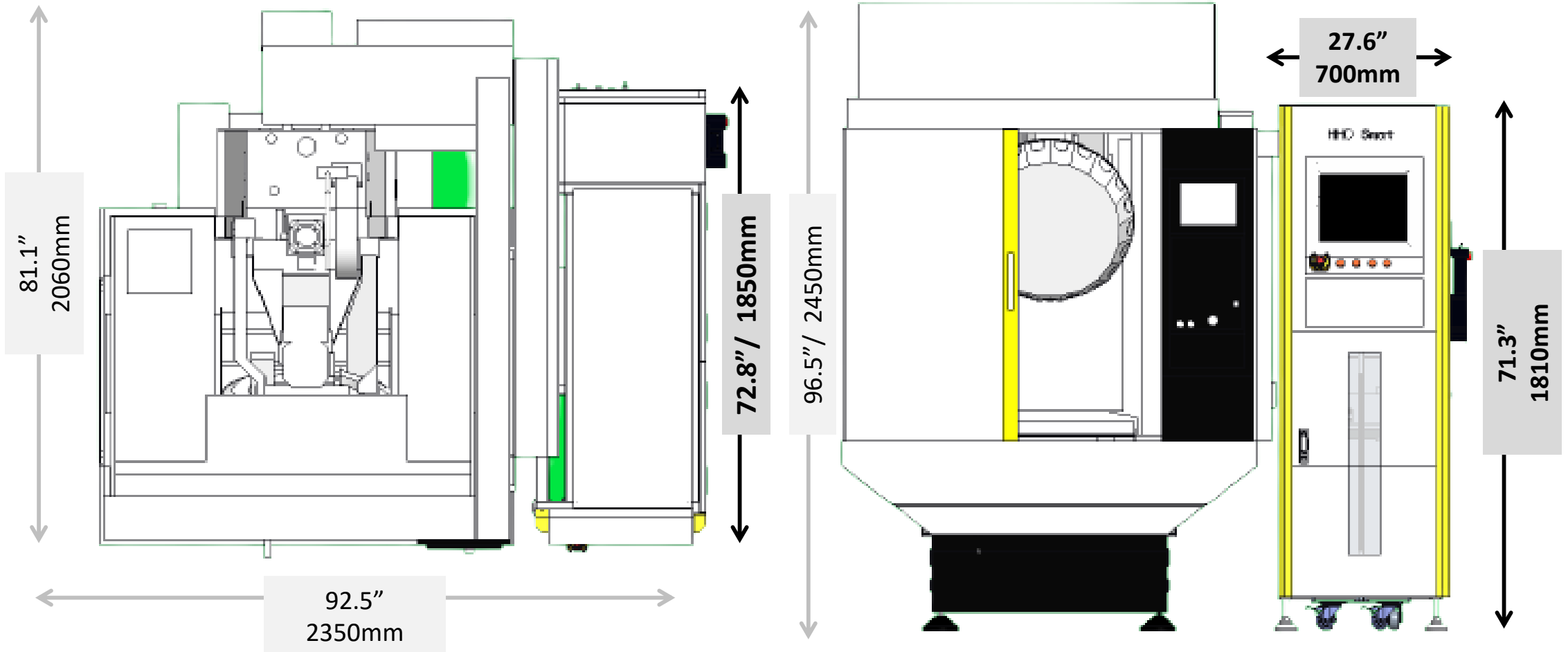
- Combine with a four or five-axis mid-plate design to shorten the pick and place distance.

# Robot, Communication, and Footprint Specifications



	Description	
	FANUC Or as per customer requirements	
<b>Robot Type</b>	FANUC Type	LR Mate 200iD/7L
	Payload robot	15.4lb / 7kg
	FANUC Max. reach(X, Y) ( "/mm)	35.9" / 911mm , 64.7" / 1643mm
<b>Interface Specifications</b>	Interface specifications	Standard configuration    IO-Link
		Optional                    Physical I/O cards, hardware, etc.
	<b>Dimensions:</b>	
<b>Footprint Specifications</b>	Length * Width * Height ( "/mm)	72.8" x27.6" x71.3" / 1850mmx700mmx1810mm
	FANUC ROBODRILL X-axis500	81.1" x92.5" x96.5" / 2060mmx2350mmx2450mm
	Total Integrated Footprint( "/mm)	

# Footprint Illustration



# Application Areas



# Ideation. Realization.



- **Ideation:**

- We understand that business owners want to know how automation affects finances, what its cost's are, and what advantage it can bring to you. Therefore, automation's primary purpose is to enable the company's ability to compete in the long run.
- When it comes to the implementation of CNC automation in the production line, the challenge is not in choosing the brand and price of robotic arms but in planning the utilization of automation. The needs of each business owner vary, with differences in facilities, manpower, products, and more. These factors cannot be resolved simply by comparing prices.
- It's ideal when repetitive tasks and production of products during nights and weekends can be carried out with greater autonomy through automation!
- Planning for automation is highly customized, but we believe we can assist you through this process.

# Ideation. Realization.



- **Realization:**

- Like procuring CNC machines, there are many peripheral considerations that need to be taken into account, with utilization rates being the main one. After evaluating your organizational manpower, product output, process sequences, inspection requirements, facility layouts, information flow configurations, etc. , we will provide a planning diagram that aligns with your expectations, ensuring successful implementation.
- Planning doesn' t account for all variables , but our years of integration experience demonstrate that we can help you realize your needed automation plan. The only thing left now is for you to call us!
- **We welcome you to contact us and look forward to working together to achieve your automation goals.**



Marlin & Sons  
Catch the best

**Marlin & Sons Co. Ltd.**

**Taichung, Taiwan P:8864-2249-3490 F: 8864-2249-2446 E:**

**[marlinauto@bbluesman.com](mailto:marlinauto@bbluesman.com) W: [bbluesman.com](http://bbluesman.com)**