



Machine Tending Solution

NOTHING ELSE. JUST LABOT.

SIMPLE. RELIABLE. EFFECTIVE.

Machine Tending Solutions Tailored to Your Production Environment

LABOT PRODUCT LINE-UP



SD

Collaborative Automation



MD

Dual Efficiency



MT

Continuous Flow

The name **LABOT** blends "Labor" and "Robot".
Labot embodies our vision: replacing monotonous manual work with intelligent automation.

It streamlines repetitive loading and unloading tasks in CNC machining, enhancing productivity while ensuring consistent and stable operations.

Backed by extensive automation system design experience, LABOT is engineered for reliable performance across diverse machining environments.



SQ

Flexible Handling

SR

Space Saver

SD

STANDARDIZED COLLABORATIVE ROBOT MACHINE TENDING SOLUTION

Labot SD is a smart automation solution that works seamlessly with collaborative robots to optimize workflow on the shop floor.

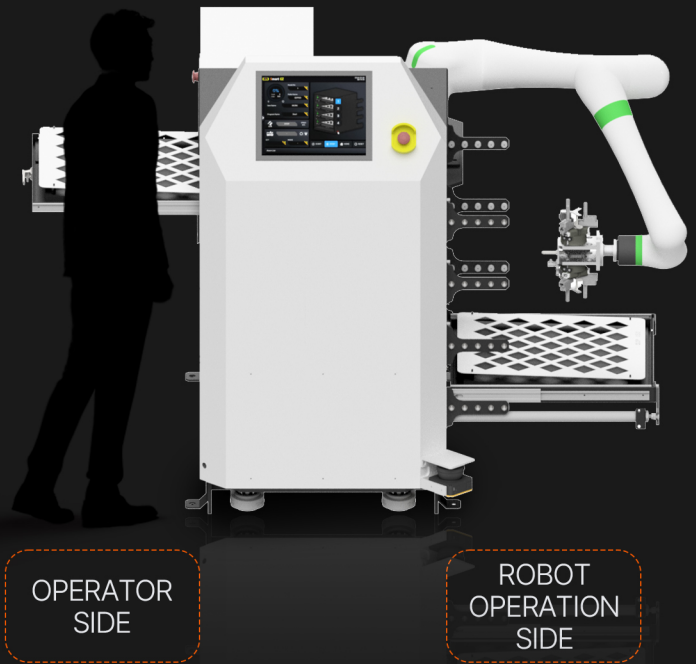


01 Multi-Layer Drawer System

A multi-layer drawer structure enables efficient handling of multi-layer pallets, improving productivity and reducing cycle time.

02 Dual-Sided Operation System

Dual-zone operation separates operator and robot work areas, enabling simultaneous material handling while maximizing productivity and space efficiency.



SPECIFICATIONS

Dimensions (WxLxH) / Weight	1422×1400×1950 mm (56.0"×55.1"×76.8") / 680 kg (1499 lb)	
Control Software	Smart EZ	
Number of Drawers	4	
Power Supply	3 kVA	
Pneumatic Pressure	5 bar (72.5 psi)	
Robot	Fanuc Robot	CRX-20iA/L (20 kg / 44.1 lb Payload)
	Universal Robot	UR10e (12.5 kg / 27.5 lb Payload)
Robot Hand (Standard)	Dual 3-Jaw gripper (4.3 kg / 9.48 lb)	
Robot Hand Gripper Control	Pneumatic	
Workpiece Diameter (min / max)	24mm - 100mm (0.94" - 3.93")	
Workpiece Length (min / max)	10mm - 120mm (0.39" - 4.72")	
Workpiece Capacity - Drawer (max)	70 kg (154.3 lb)	
Pallet Capacity (pieces) (Per drawer / Total)	ø30 mm (1.18")	85 / 340
	ø40 mm (1.57")	61 / 244
	ø50 mm (1.96")	41 / 164
	ø75 mm (2.95")	25 / 100
	ø100 mm (3.93")	14 / 56
Safety	Laser Scanner Sensor	Standard
	Safety Fence	Option

MD



DUAL MACHINE TENDING SYSTEM FOR TWO-MACHINE OPERATION

Labot MD is a booth-type automation solution designed to maximize productivity and floor space efficiency in multi-machine environments.



01 Dual Machine Tending Capability

One MD can tend two machines simultaneously, minimizing idle time and maximizing overall production efficiency.



02 Front Drawer with Inside-Out Access

The front drawer design allows easy access from the front, enabling quick pallet loading and unloading with minimal space requirements.



SPECIFICATIONS

Dimensions (WxLxH) / Weight	3700×1570×2000 mm (145.6"×61.8"×78.7") / 2,660 kg (5,864 lb)	
Control Software	Smart EZ	
Number of Drawers	5	
Power Supply	5 kVA	
Pneumatic Pressure	5 bar (72.5 psi)	
Robot	Fanuc Robot	M-20iD/35 (35 kg / 77.1 lb Payload)
		M-710iC/50 (50 kg / 110.2 lb Payload)
	Hyundai Robot	UH020 (20 kg / 44.1 lb Payload)
		HH050 (50 kg / 110.2 lb Payload)
Robot Hand (Standard)	Dual 3-Jaw gripper (4.3 kg / 9.48 lb)	
Robot Hand Gripper Control	Pneumatic	
Workpiece Diameter (min / max)	20mm ~ 200mm (0.79" ~ 7.87")	
Workpiece Length (min / max)	20mm ~ 150mm (0.79" ~ 5.91")	
Workpiece Capacity - Drawer (max)	350 kg (771.6 lb)	
Pallet Capacity (pieces) (Per drawer / Total)	ø30 mm (1.18")	165 / 825
	ø50 mm (1.96")	68 / 340
	ø75 mm (2.95")	39 / 195
	ø100 mm (3.93")	22 / 110
	ø160 mm (6.29")	10 / 50
	ø200 mm (7.87")	5 / 25
Safety	Safety Fence	Standard (Booth Type)
	Laser Scanner Sensor	Option

MT



AN AUTOMATION SYSTEM BASED ON A 180-DEGREE INDEXING TURNTABLE

Labot MT maximizes machine uptime through a 180-degree indexing turntable, enabling continuous loading and unloading with fast, flexible part handling.



01 Dual-Station Loading System

Compatible with up to six pallet types, the split-turnstile system enables fast and efficient material handling. The honeycomb-style pallet design increases storage capacity by up to 30%, while the semi-circular turntable supports continuous operation and quick part transfer.

02 Dual-Sided Operation System

The dual-sided operation system enables simultaneous loading and unloading for improved productivity. Its bi-directional turntable design allows operators and robots to work in parallel while minimizing setup and changeover time to less than 10 minutes.



SPECIFICATIONS

Dimensions (WxLxH) / Weight	1820×1685×2000 mm (71.7"x66.3"x78.7") / 890 kg (1962 lb)	
Control Software	Smart EZ	
Number of Pallets	2	
Power Supply	5 kVA	
Pneumatic Pressure	5 bar (72.5 psi)	
Robot	Fanuc Robot	M-20iD/35 (35 kg / 77.2 lb Payload)
	Hyundai Robot	UH020 (20 kg / 44.1 lb Payload)
Robot Hand (Standard)	Dual 3-Jaw gripper (8.6 kg / 18.9 lb)	
Robot Hand Gripper Control	Pneumatic	
Workpiece Diameter (min / max)	24 mm - 200 mm (0.94" - 7.87")	
Workpiece Length (min / max)	20 mm - 400 mm (0.79" - 15.75")	
Workpiece Capacity - Drawer (max)	500 kg (1102 lb)	
Pallet Capacity (pieces) (Per table / Total)	ø30 mm (1.18")	145 / 290
	ø50 mm (1.96")	61 / 122
	ø75 mm (2.95")	33 / 66
	ø100 mm (3.93")	22 / 44
	ø160 mm (6.29")	7 / 14
	ø200 mm (7.87")	5 / 10
Safety	Safety Fence	Standard
	Laser Scanner Sensor	Option

SQ

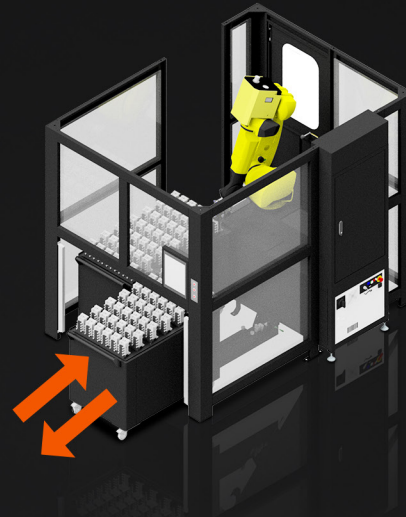
FLEXIBLE MATERIAL HANDLING WITH A CART-BASED SYSTEM

Labot SQ features a cart-based loading system designed for vise handling applications, enabling flexible material transport and continuous operation regardless of space or distance constraints.



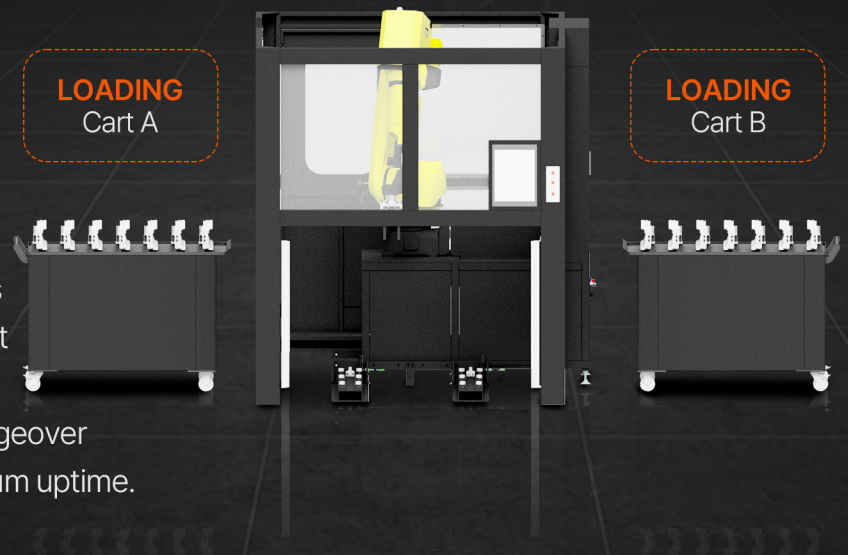
01 Quick-Shift Cart Loading System

The quick-shift cart loading system enables seamless material handling and transportation with enhanced mobility, free from location or distance limitations. Equipped with four versatile cart options, the system flexibly adapts to various workpiece sizes and weights for efficient and stable loading operations.



02 Dual-Cart Operation System

The dual-cart operation system enables simultaneous loading and unloading for continuous operation and improved productivity. Its parallel workflow allows operators and robots to work efficiently without interruption, while alternating cart operation minimizes setup and changeover time for rapid transitions and maximum uptime.



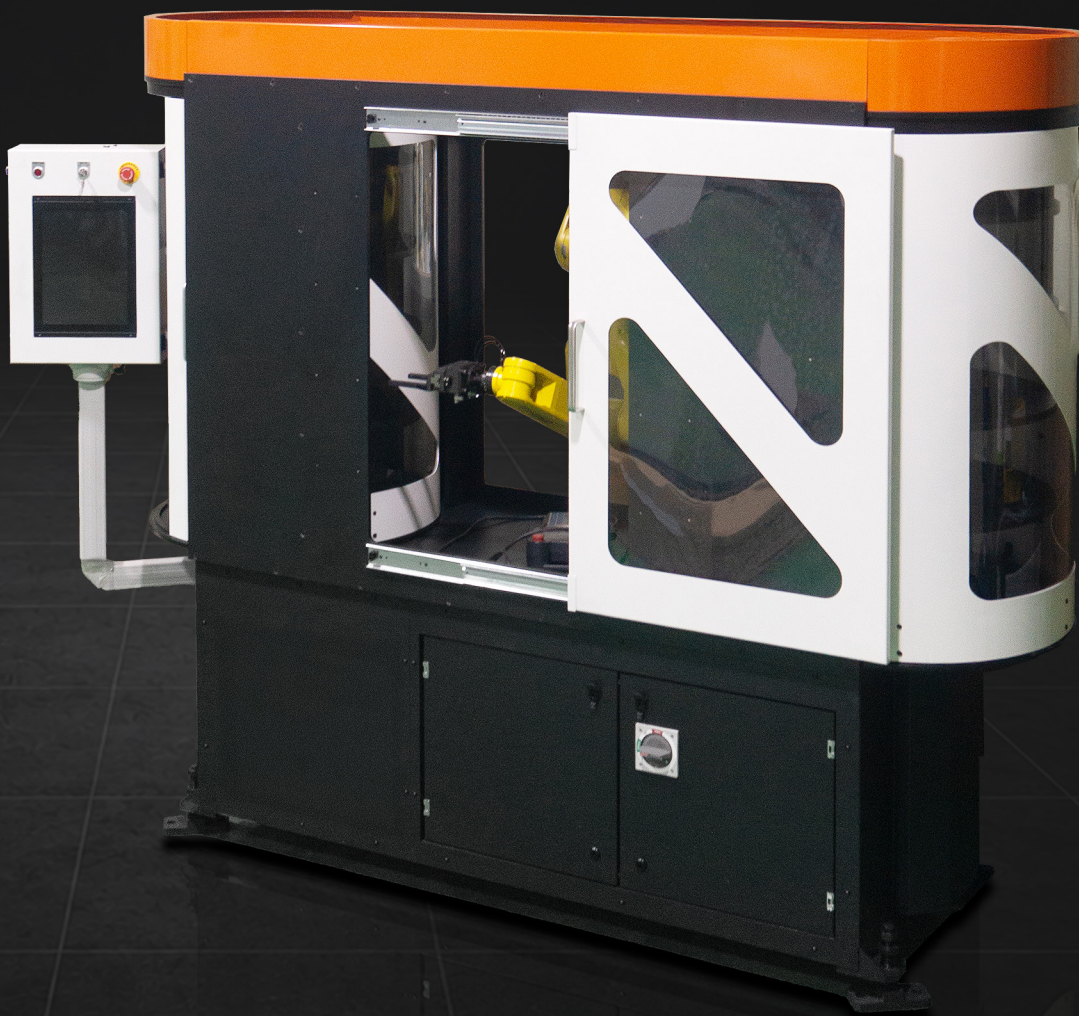
SPECIFICATIONS

Dimensions (WxLxH)		2060×2600×2200 mm (81.1"×102.3"×86.6")		2060×3600×2200 mm (81.1"×141.7"×86.6")	
Weight		1500 kg (3,307 lb)			
Control Software		Smart EZ			
Power Supply (kVA)		5 kVA			
Pneumatic Pressure (bar)		5 bar (72.5 psi)			
Robot		Fanuc Robot	M-20iD/35 (35 kg / 77.2 lb Payload)		
			M-710iC/50 (50 kg / 110.2 lb Payload)		
		Hyundai Robot	UH020 (20 kg / 44.1 lb Payload)		
			HH050 (50 kg / 110.2 lb Payload)		
Robot Hand (Standard)		Dual 3-Jaw gripper (8.6 kg / 19.0 lb)			
Robot Hand Gripper Control		Pneumatic			
Dimensions of Cart (LxWxH)		1220×700×850 mm (48.0"×27.5"×33.4")			
Number of Carts		2, 4			
Vise Arrangement		3×5	4×4	5×6	6×7
Max. Workpiece Dimensions (mm)		205×205×90	205×150×150	166×120×100	120×120×100
Max. Workpiece Dimensions (in)		8.1"×8.1"×3.5"	8.1"×5.9"×5.9"	6.5"×4.7"×3.9"	4.7"×4.7"×3.9"
Workpiece Capacity (Per Cart / Total)	2 Carts	15 / 30	16 / 32	30 / 60	42 / 84
	4 Carts	15 / 60	16 / 64	30 / 120	42 / 168
Safety		Safety Fence		Standard	
		Laser Scanner Sensor		Option	

SR

SPACE-SAVING MACHINE TENDING WITH A SLIM STRUCTURE

Labot SR is a compact machine tending solution designed for vise handling applications. Its dual-turntable system enables simultaneous loading and unloading while maximizing productivity in space-constrained environments.



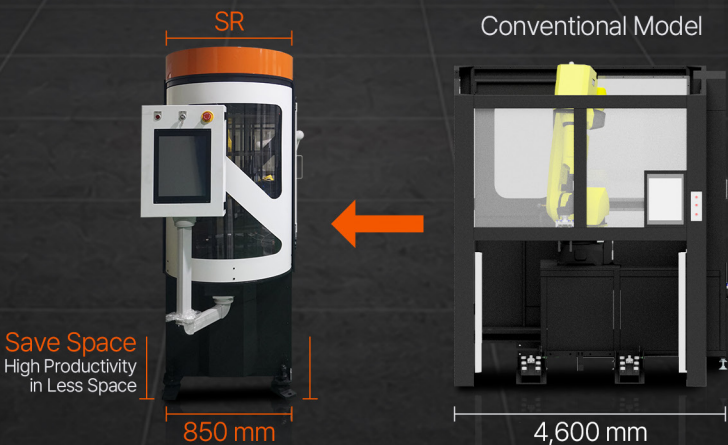
01 Dual Turntable Operation System

The dual turntable system enables simultaneous loading and unloading for continuous operation. Its parallel workflow allows operators and robots to work seamlessly together, while minimizing setup and changeover time for maximum uptime.



02 Space-Saving Slim Design

The slim structure maximizes productivity while minimizing installation space. Its compact footprint allows efficient operation even in limited production environments.



SPECIFICATIONS

Dimensions (WxLxH) / Weight	850×2800×2200 mm (33.5"×110.2"×86.6") / 1990 kg (4387 lb)	
Control Software	Smart EZ	
Power Supply	3 kVA	
Pneumatic Pressure (bar)	5 bar (72.5 psi)	
Robot	Fanuc Robot	LR Mate 200iD/14L (14 kg / 30.8 lb Payload)
	Hyundai Robot	HH7 (7 kg / 15.4 lb Payload)
Robot Hand (Standard)	Gripper for VISE	
Loading Stage	5 tiers × 2	
Loading Arrangement	12	8
Workpiece Dimension (LxWxH)	100×100×80 mm (3.9"×3.9"×3.1")	100×160×80 mm (3.9"×6.3"×3.1")
Safety Fence	Standard (Booth Type)	

CORE TECHNOLOGIES

FLEXIBLE HANDLING, ENHANCED SAFETY,
AND RELIABLE PERFORMANCE.

LABOT's core technologies
drive your productivity forward.

01

Multi-Function Hand (Gripper)

Handles workpieces of varying sizes and shapes without the need for gripper changeover.

Equipped with dual-sided grippers and an air blow function for efficient and stable handling across diverse applications.

-  **Versatile Workpiece Handling**
Accommodates various sizes and shapes of workpieces with one gripper.

-  **Air Blow Function**
Removes dust and debris for secure and reliable gripping.

-  **Dual-Sided Gripper**
Enables handling from both sides for stable, flexible workpiece gripping.

-  **Wide Material Compatibility**
Handles a wide variety of workpieces for flexible production.

02

Integrated Safety System

A comprehensive safety system featuring safety fences, safety doors, door locks, and laser scanners ensures secure operation while protecting both operators and equipment.



Safety Fence



Safety Door



Door Lock



270° Laser Scanner



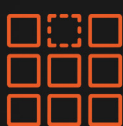
03

Customizable Pallet System

Honeycomb-style pallet trays can be customized to accommodate various workpiece sizes and shapes, maximizing storage capacity and operational flexibility.



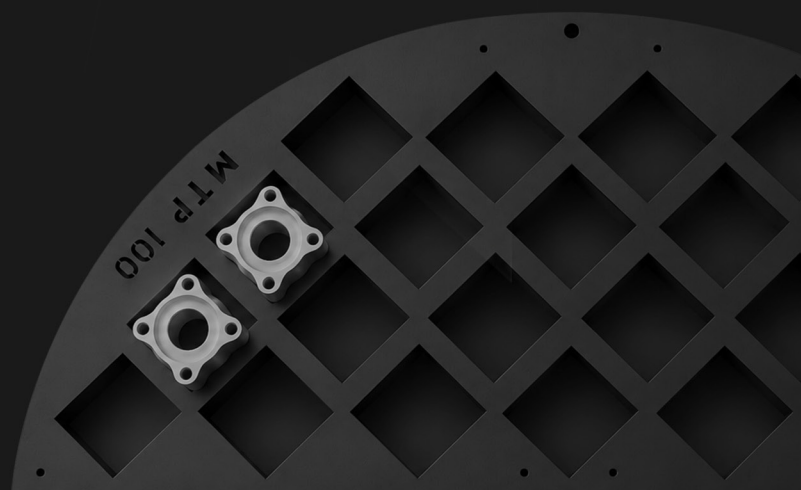
Honeycomb Structure



Custom Layout



High Storage Capacity



SMART-EZ

SIMPLIFY AUTOMATION.
ANYONE CAN OPERATE LABOT EASILY.

SMART-EZ is an intuitive control system that enables anyone to set up, operate, and monitor the system easily and efficiently.



SMARTER • EASIER • FASTER

Everything you need for simple and smart operation.



Easy Setup

Quick installation and configuration without complex programming.



Intuitive UI

User-friendly interface enables simple and fast operation.



Real-Time Monitoring

Monitor system status and performance in real time.



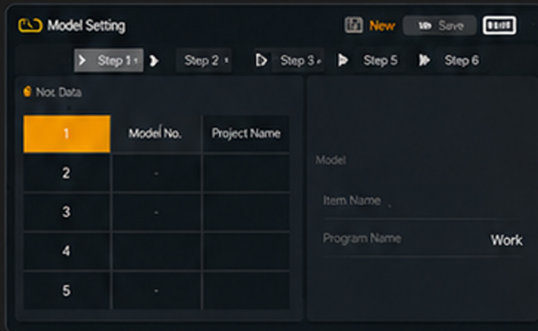
Smart Diagnostics

Detect errors quickly and reduce downtime with smart alerts.

SMART-EZ WORKFLOW

6 Steps to set up a machine tending program with Smart-EZ

1 Select Model

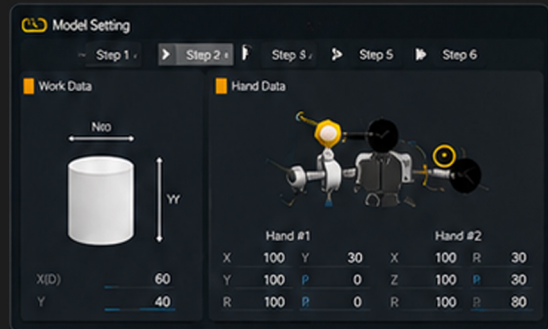


No.	Model No.	Project Name
1		
2		
3		
4		
5		

Model: _____
Item Name: _____
Program Name: _____ Work

· Select a model number and set the project name.

2 Configure Model



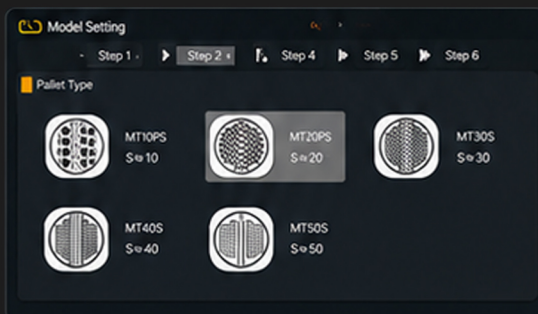
Work Data: X(D) 60, Y 40

Hand Data:

Hand #1				Hand #2			
X	100	Y	30	X	100	R	30
Y	100	P	0	Z	100	P	30
R	100	P	0	R	100	P	80

· Set shape of the work piece and robot hand

3 Select Pallet Type



Pallet Type:

MT10PS S=10	MT20PS S=20	MT30S S=30
MT40S S=40	MT50S S=50	

· Select optimum tray size for the chosen work piece

4 Set Workpiece Position



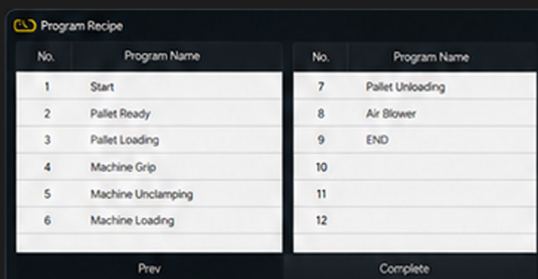
Clamping: Height 30, Outside 30

Hand: Outside, Inside

Shape: Outside, Square

· Select workpiece shape (Rodund/Square) and clamping method (Inside/Outside)

5 Configure Recipe

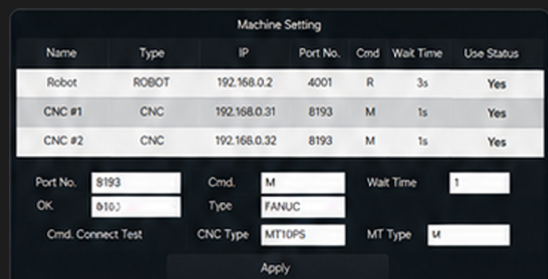


No.	Program Name	No.	Program Name
1	Start	7	Pallet Unloading
2	Pallet Ready	8	Air Blower
3	Pallet Loading	9	END
4	Machine Grip	10	
5	Machine Unclamping	11	
6	Machine Loading	12	

Prev Complete

· Refer to existing program setting and simply drag-and-drop to set up the recipe

6 Connect CNC Machine



Name	Type	IP	Port No.	Cmd	Wait Time	Use Status
Robot	ROBOT	192.168.0.2	4001	R	3s	Yes
CNC #1	CNC	192.168.0.31	8193	M	1s	Yes
CNC #2	CNC	192.168.0.32	8193	M	1s	Yes

Port No. 8193 Cmd. M Wait Time 1
OK 8193 Type FANUC
Cmd. Connect Test CNC Type MT10PS MT Type M

Apply

· Select connected CNC machine to begin operation

LABOT PRODUCT COMPARISON

Compare key specifications and choose the right solution for your process.

LABOT SPECIFICATION								
				Labot MT	Labot SD	Labot MD	Labot SQ	Labot SR
Properties	Min. Workpiece Diameter			0.94" (24 mm)	0.94" (24 mm)	0.79" (20 mm)	Customized according to vise	
	Max. Workpiece Diameter			7.87" (200 mm)	3.93" (100 mm)	7.87" (200 mm)		
	Min. Workpiece Length			0.79" (20 mm)	0.39" (10 mm)	0.79" (20 mm)		
	Max. Workpiece Length			15.75" (400 mm)	4.72" (120 mm)	5.91" (150 mm)		
	Width			71.65" (1,820 mm)	55.98" (1,422 mm)	145.67" (3,700 mm)	81.10" (2,060 mm)	33.46" (850 mm)
	Length (Depth)			66.34" (1,685 mm)	55.12" (1,400 mm)	61.81" (1,570 mm)	102.36" (2,600 mm)	110.23" (2,800 mm)
	Height / Fence Height			78.74" (2,000 mm)	76.77" (1,950 mm)	78.74" (2,000 mm)	86.61" (2,200 mm)	86.61" (2,200 mm)
	Weight (Excluding Robot)			1,962 lb (890 kg)	1,499 lb (680 kg)	5,864 lb (2,660 kg)	3,307 lb (1,500 kg)	4,387 lb (1,990 kg)
	Robot Hand (Standard) Weight			19.0 lb (8.6 kg)	9.5 lb (4.3 kg)	19.0 lb (8.6 kg)	Customizing according to vise	
	Pneumatic Pressure			72.5 psi (5 bar)				
	Power Supply			5 kVA	3 kVA	5 kVA	5 kVA	3 kVA
	Power Supply Voltage			3-phase	1-phase	3-phase	3-phase	3-phase
				220 VAC	220 VAC	220 VAC	220 VAC	220 VAC
	Fanuc Robot	CRX-20iA/L	44.1 lb (20 kg)		●			
		LR Mate 200iD/14L	30.9 lb (14 kg)					●
		M-20iD/35	77.2 lb (35 kg)	●		●	●	
M-710iC/50		110.2 lb (50 kg)			●	●		
Hyundai Robot	UH020	44.1 lb (20 kg)	●		●			
	HH050	110.2 lb (50 kg)			●			
Universal Robot	UR10e	27.6 lb (12.5 kg)		●				

LABOT SPECIFICATION

			Labot MT	Labot SD	Labot MD	Labot SQ	Labot SR
Standard Specifications	Smart-EZ Software and Touch PC		●	●	●	●	●
	Fanuc CNC Communication Protocol		●	●	●	●	●
	Machine Interface I/O Contact		●	●	●	●	●
	Separator Tray Type		●	●	●	●	●
	Gripper Stroke Adjustment System		●	●	●	●	●
	Gripper Pneumatic Air Regulator		●	●	●	●	●
	Cleaning with Air Blow Nozzle		●	●	●	○	○
	Suitable for Tending One Machine		●	●	●	●	●
	Suitable for Tending Two Machines		-	-	●	●	-
Optional Accessories	Suitable Single Gripper		○	○	○	-	-
	Suitable Dual Gripper		○	○	○	-	-
	Suitable for Round Workpiece	3-Jaw gripper	○	○	○	-	-
	Suitable for Rectangular Workpiece	2-Jaw gripper	○	○	○	-	-
	Safety Fence		●	○	●	●	●
	Safety Door & Safety Door Lock		●	○	●	●	●
	Safety Laser Scanner Sensor		○	●	○	○	-
	Residual Emulsion / Oil Collecting Area on Workpiece		○	○	○	○	○
	Machine Interface	Ethernet/IP	○	○	○	○	○
		Profibus	○	○	○	○	○
		FL-net	○	○	○	○	○

- Standard
 ○ Optional
 - Not Applicable

DISCOVER OUR SOLUTIONS FOR THESE BRANDS:

LABOT solutions work with CNC machines from leading brands, and adapt to a wide range of industries and applications.

AKIRA-SEIKI
PRECISION CNC MACHINE TOOLS

AWEA

AXA

Biglia

Bridgeport

brother

Campt

MICROCUT

**CINCINNATI
MACHINES**

CMZ

DAHLI
MACHINERY INDUSTRY CO., LTD.

DATRON

DMG MORI

**DN
SOLUTIONS**

emco

FANUC

+GF+

Gleason

GROB

HMS

HEDELIUS

HELLER

HERMLE

HURCO

HWACHEON

**HYUNDAI
WIA**

INDEX TRAUB

KITAMURA

LEADWELL

MATEC
GmbH

Matsuura

Mazak

MTRent

Nakamura-Tome

OKK

LOKUMA

Pinnacle

POSS

Quaser
Group

**SMART
MACHINE TOOL**

SMEC

SPINNER

TAKISAWA

Tongtai

VICTOR

XYZ
Machine Tools

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WE'VE GOT YOU COVERED

LABOT is committed to providing reliable support every step of the way, ensuring optimal performance and peace of mind.



Technical Support

Our experts are ready to help with remote and on-site support to minimize downtime and solve issues quickly.



Maintenance Service

Regular maintenance programs help ensure long-term reliability and maximum uptime.



Spare Parts Supply

We provide genuine spare parts with fast delivery to keep your operations running smoothly.



Training & Setup Support

Comprehensive training and setup assistance help your team get the most out of LABOT systems.



FLEXIBLE AUTOMATION TASKS

LABOT systems are designed to handle a wide variety of tasks to fit your production needs.



Loading



Unloading



Gripping



Air Blow
Cleaning



Position
Alignment



Palletizing /
Depalletizing

BUILT ON EXPERIENCE. DRIVEN BY INNOVATION.

Youngchang Robotech has continuously innovated and expanded its capabilities to deliver the best automation solutions for our customers.



- **2026** New Pyeongtaek Factory Groundbreaking | Youngchang Robotech America Established (Illinois, USA)



- **2024** Official Launch of LABOT



- **2022** Designated as a Root Technology Specialized Company



- **2020** ISO 9001 Certified | Headquarters Showroom Expanded



- **2019** Authorized Hyundai Robotics Distributor



- **2017** Approved Supplier to Hyundai Steel | Approved Supplier to KEPCO



- **2014** Approved Supplier to Hyundai Motor Company



- **2013** Universal Robots Agency Agreement Signed



- **2012** Corporate R&D Center Established



- **2002** Youngchang Engineering Founded

From our beginning in 2002 to the launch of Labot in 2024,
we continue to create value for our customers through innovation and trust.

GIMHAE, KOREA

Headquarters & Factory 1



PYEONGTAEK, KOREA

Factory 2



SCHAUMBURG, IL

US Sales / Supply



Experienced

Long-standing
expertise in
manufacturing and
automation



Innovative

Continuous innovation
to solve real-world
manufacturing
challenges



Reliable

Quality and reliability
you can count on



Customer Focused

Delivering value
that drives our
customers' success

Since 2002,
YOUNGCHANG ROBOTECH has specialized in
manufacturing industrial automation solutions **engineered in Korea**.

LABOT is built on over 20 years of
manufacturing and automation expertise.

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