

ROBOFlex™

VALUE PACKAGE



Basic Description

The Productivity, Inc., RoboFlex model VP (Value Package) is a versatile and economical way to bring untended automatic parts loading into your manufacturing business. The innovative, yet simple design incorporates the field proven FANUC LR-Mate200iDL industrial robot and your small drill/tap machine or small lathe into an automated production center. The complete unit is capable of automatic untended part production in an affordable package.

Features and Benefits

Pre-Engineered to be Versatile and Maximize Investment

The production cell is pre-engineered to provide easy application in many different situations and is capable of running different parts. New parts can be added quickly with only minimal investment for new handling hardware. The RoboFlex VP is available with several different options to further enhance its versatility.

Totally Self-Contained

The RoboFlex VP module is mounted on a moveable base. The high quality cabinet and welded steel platform hold the robot, control and the in-feed drawers. This minimizes the amount of floor space taken up by the unit. Machine tool access is easy via our built in safety gate.

Rugged, Fenced System Platform

The one piece welded platform provides a secure mount for all system components. The powder coated platform comes ready to install on its three point contact base. The three contact areas sit on a non-skid rubber foot to allow stable installation on

uneven floors. Floor anchor points are provided to assure stable operation. The floor surface has a non-slip surface added.

Standard Electrical Interface

The common electrical interface points are:

- Door Open/Close*
- FIXT1 Open/Close
- FIXT2 Open/Close
- Air Blow On/Off
- Drawer 1 – Reset
- Drawer 2 – Reset
- Cycle Start
- Fence Open
- E-Stop

**In some cases the robot can manually open/close a door. Call for details.*

Simple Operation

The RoboFlex VP module is simple to operate. The operator places part blanks into a precut template placed on the top surface of the each part drawer. The operator then closes the feeder drawer and places the CNC machine into automatic operation. Then the operator starts the automatic operation of the robot. Parts will automatically process until the drawers run out of parts.

Included Components

Robot

- FANUC LR Mate 200iDL long-arm 6 axis robot arm
- FANUC R30iA control
- FANUC Motion Bundle software (includes Collision Guard)



End of Arm Tool

- Gripper face plate stem adapter
- Gripper mounting head with three faces
- (2) Schunk PZN-50Plus 3 jaw pneumatic gripper
- Schunk spring actuated pusher plate for load gripper
- 2 sets of plain gripper jaws
- 2 solenoid valves for actuating grippers
- Electrical wiring
- Air tubing
- Arm dress-out

Platform

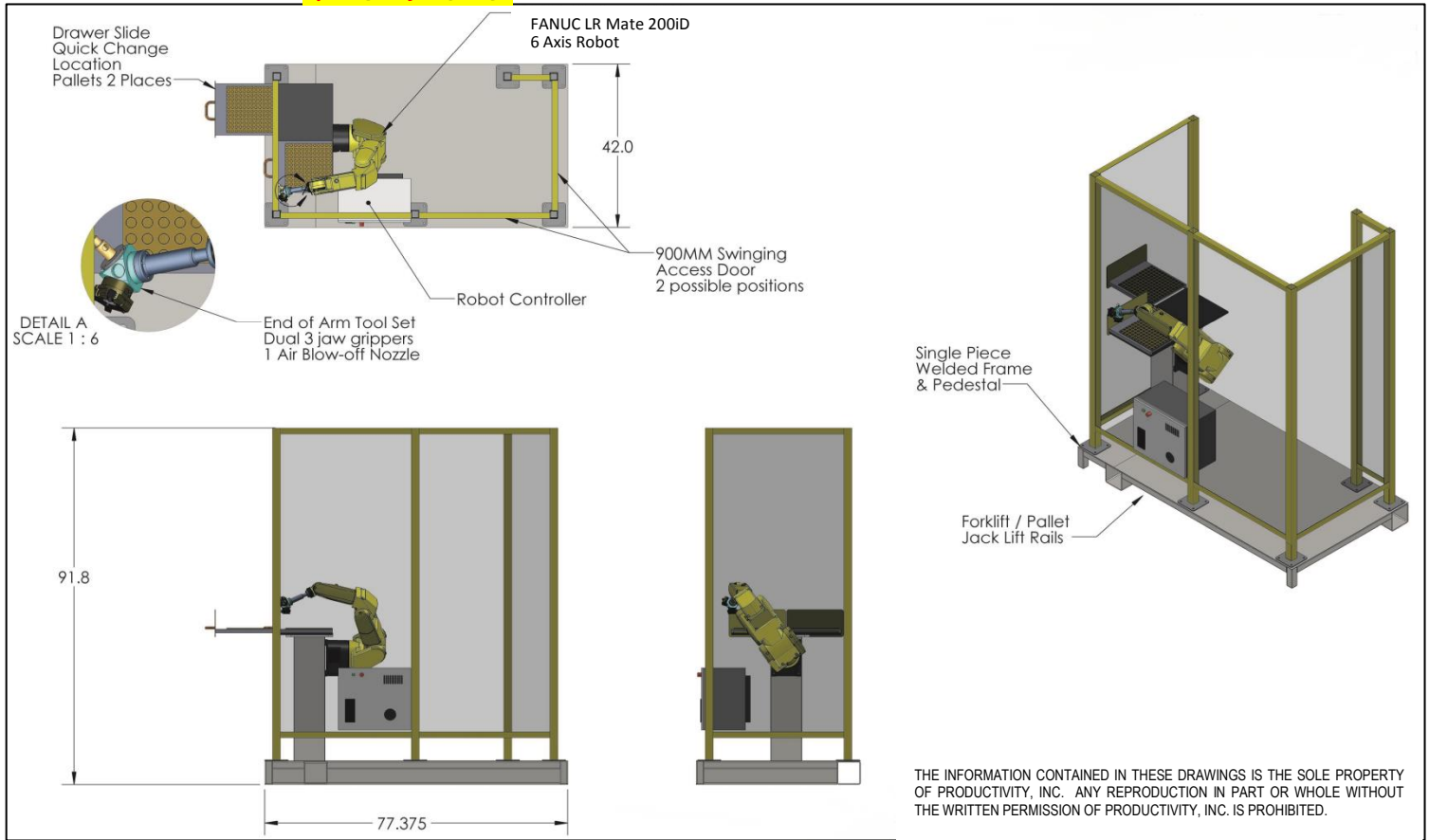
- Welded steel platform, powder coat paint
- Rugged wire mesh guarding panels
- Dual drawer (14" x 15") tray parts holding system

Electrical Controls

- PLC CPU for controlling I/O
- Pre-installed electrical wiring points
- 20' multi-conductor cable for interface connections
- Connection point diagrams for common interface points
- Ethernet switch for distribution of I/O
- 24V power supply for cell I/O

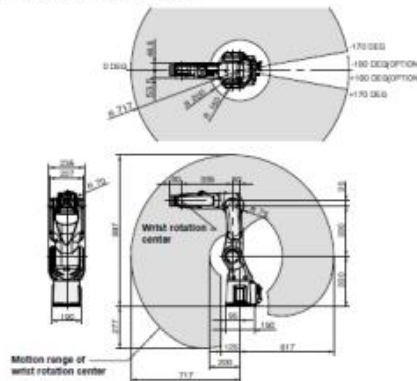
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FANUC Robot LR Mate 200iD Operating space



Specifications

Model		LR Mate 200iD
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)
Reach		717mm
Installation (Note 1)		Floor, Upside-down, Angle mount
J1 axis		340°/360° (option) / 1450°/s
J2 axis		5.93 rad/0.28 rad (option) / (7.85 rad/s)
Motion range (Maximum speed)	J3 axis	240° (380°/s)
	J4 axis	4.28 rad (6.63rad/s)
	J5 axis	420° (520°/s)
	J6 axis	7.33 rad (9.08rad/s)
	J6 axis	380° (550°/s)
Max. load capacity at wrist		7kg
Allowable load moment at wrist		16.6 N·m
Allowable load inertia at wrist		16.6 N·m
J4 axis		9.4 N·m
J5 axis		0.47 kg·m²
J6 axis		0.47 kg·m²
Repeatability		± 0.02 mm
Mass (Note 2)		25 kg
Installation environment		Ambient temperature : 0~45°C Ambient humidity : Normally 75%RH or less (No dew nor frost allowed), Short term 95%RH or less (within one month) Vibration : 0.5G or less

Note 1) Angle mounting needs J1 and J2 axis motion range restriction.
Note 2) Without controller.
Note 3) Those liquids that deteriorate the sealing members, such as organic solvents, acids, alkalis, and chloric coolants, must not be used.

