

V E R S A **B U I L T**
R O B O T I C S



UR Lathe Automation System Safety Manual

Safety Warnings

Validity and Responsibility

The information in this manual does not cover all equipment that can influence the safety of the complete system. The complete system must be designed and installed in accordance with the safety requirements set forth in the standards and regulations of the country where the system is installed. The integrator of VersaBuilt products are responsible for ensuring that the applicable safety laws and regulations in the country concerned are observed and that any significant hazards in the complete application are eliminated. This includes, but is not limited to:

- Performing a risk assessment for the complete system
- Interfacing other machines and additional safety devices if defined by the risk assessment
- Setting up the appropriate safety settings in the software
- Ensuring that the user will not modify any safety measures
- Validating that the total system is designed and installed correctly
- Specifying instructions for use
- Marking the system installation with relevant signs and contact information of the integrator
- Collecting all documentation in a technical file; including the risk assessment and this manual

**Before implementation and use of system, read and understand the Universal Robot manuals.*

Limitation of Liability

Any safety information provided in this manual must not be construed as a warranty, by VersaBuilt, that the system will not cause injury or damage, even if the system complies with all safety instructions.

Safety Warnings

DANGER: The VersaBuilt Lathe Automation System is an industrial machine tool designed to be operated by trained personnel only. Devices within the Automation System may move suddenly and without warning. Serious or fatal crushing injuries can occur from contact with the robot, gripper or vises.

Before deploying the Lathe Automation System, a safety risk assessment must be completed in accordance with local, state and/or federal requirements.

The Lathe Automation System should only be used by trained operators.

UR Robot Safety Settings

DANGER: Do not operate the Lathe Automation System without first reviewing and validating the safety settings stored in the UR Robot.

Running the Lathe Automation System with the UR Robot safety configuration without sufficient safety limitations may create dangerous conditions for operators that may come into contact with the system.

Specifications

MultiGrip Gripper, Clamping Force

Air Pressure (psi)	Gripper Clamp Force (lbf)
20	10
30	15
40	19
50	24
60	29
70	34
80	39
90	44
100	49
110	54
120	58

Risk Mitigation

VersaBuilt System Controller

The VersaBuilt System Controller includes electronically actuated pneumatic valves for controlling grippers and optionally a pneumatic door. There is addition I/O for controlling Chuck actuations. The VersaBuilt System Controller IOs are not safety rated and may actuate pneumatics unexpectedly. A pneumatic supply valve with lockout provision is provided to remove pneumatic energy from the VersaBuilt System Controller.

DuoGrip Gripper

The DuoGrip Gripper is controlled by the Robot IO signals. The pneumatic configuration of the Lathe Automation System includes an option to remove pneumatic energy from the gripper using the VersaBuilt System Controller pneumatic supply valve.

Safety Warnings

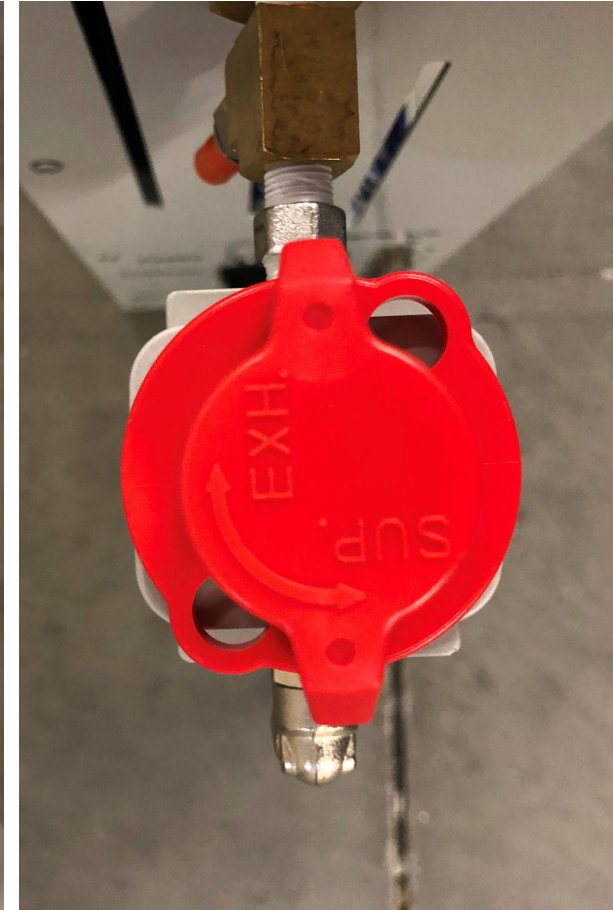
The pneumatic supply valve should be turned to the off position when the system is not in use

Lock-Out-Tag-Out procedure:

In the OFF position, the lock holes will line up in order to allow operator to lock pneumatic supply valve closed. We suggest cycling the vise via hand valves until all compressed air is expressed after closing the valve.



OFF Position



ON Position