

Vision VR48 Series 5 Installation Guide

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Factory Settings

Braille Inserter Offset

X _____ Inches _____ mm _____
Y _____ Inches _____ mm _____

This is ONLY the Installation Guide.
PLEASE review the complete User
Manual for your machine, which will be
installed on your computer after the
software installation is completed.

Vision VR48 Series 5 Installation Guide

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Revised: 5/14/2020

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1 Introduction

This guide contains information to prepare the owner of a Vision VR48 for the proper installation of their machine. It is the customer's responsibility to read through this guide and make sure the work area, electrical and computer requirements are met. If for any reason, there are questions about these requirements, please call your Vision representative as soon as possible.

In the following sections, the complete machine and Vision software installation will be outlined.

Please call or email your Vision distributor or the Vision service department at Vision for assistance if you have any questions with this procedure. The Vision service department phone number is 1-602-439-0600 and the email address is service@visionengravers.com.

FOR MORE DETAILED INFORMATION, PLEASE REFER TO THE USER GUIDE FOR YOUR MACHINE INSTALLED WITH THE VISION SOFTWARE. USER GUIDES ARE ALSO AVAILABLE ONLINE AT <http://www.visionengravers.com/support/vision-engraver-manuals.html>

1.1 Computer Requirements

Minimum System Requirements:

CPU:	Intel i5 2.6-3.0GHz
Hard Drive:	5 GB free space
RAM:	8 GB
Operating System:	Windows 10 (32/64 bit) Windows 8 (32/64 bit) Windows 7 (32/64 bit)
	NOTE: Windows updates must ALL be installed
Ports:	1 USB port for security dongle 1 USB port for Ethernet adapter to connect machine

Suggested System Requirements

CPU:	Intel i7 2.6-3.0GHz (or faster)
Hard Drive:	500 GB SSD (or larger)
RAM::	16 GB (or more)
Operating System:	Windows 10 (64 bit)
Ports	1 USB port for security dongle 1 USB port for Ethernet adapter to connect machine

1.2 Vision Software Security Device

IMPORTANT:

The Vision software is available in two versions; one with a USB dongle, and one that is "dongleless" and is loaded on to a USB Memory stick. If your machine was delivered with, or you currently have the silver, white/blue or orange software dongle, DO NOT LOSE IT!

The Vision software will **NOT** run without the dongle plugged into the computer.

USB Stick



Dongles



1.3 General Electrical and Facility Requirements

Machine Model	Requirements
VR48 Router - T-Slot Table With Standard 3 HP Router Head With Optional 5 HP Router Head	One 220 VAC 50 Amp Single Phase (Vision machine) One 220 VAC 50 Amp Three Phase (Vision machine)
VR48 Router - Vacuum Table With Standard 3 HP Router Head With Optional 5 HP Router Head	One 220 VAC 50 Amp Single Phase (Vision machine) AND One 220 VAC 30 Amp Single Phase (vacuum pump) One 220 VAC 50 Amp Three Phase (Vision machine) AND One 220 VAC 30 Amp Single Phase (vacuum pump)
Optional Equipment Engraving Chip Removal System Router Extraction System	Required in addition to the machine power above: One 110 VAC 15 Amp OR One 220 VAC 10 Amp One 220 VAC 20 Amp Single Phase
Optional Equipment Requiring Compressed Air Supply UNIST Misting System NSK 50,000 RPM Spindle	Required in addition to the machine power above: Clean Dry Compressed Air Supply 60 - 90 PSI One 110 VAC 15 Amp OR One 220 VAC 10 Amp Single Phase AND Clean Dry Compressed Air Supply 1 SCFM @ 40 PSI

NOTE: In addition to the above requirements, a standard outlet is required for the computer.

1.4 Important VR48 Unloading Information

Unloading the Crate - IMPORTANT INFORMATION

Please follow these guidelines when unloading the crated machine from the freight truck.

The VR48 is shipped in a large framed crate with all accessories loaded under the machine.

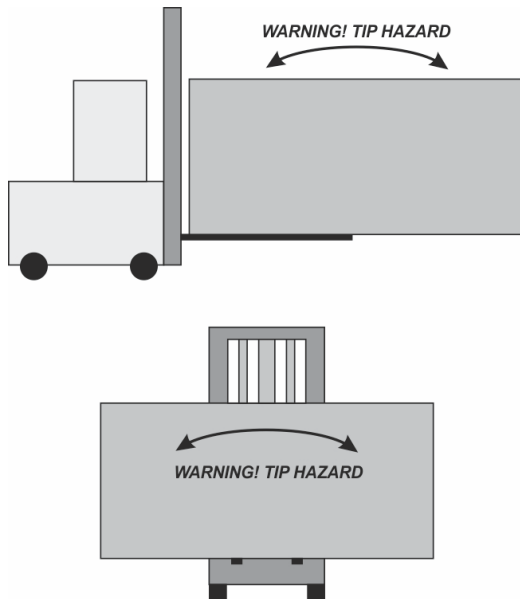
The crate presents a significant tip hazard when using lower capacity fork lifts.

When unloading the crate from the freight truck, it is highly recommended that an experienced fork lift operator or rigging company be utilized.

The forklift must have a minimum capacity of 6,000 lbs and 6' or longer forks.

Keep crate close to ground level when transporting on fork lift.

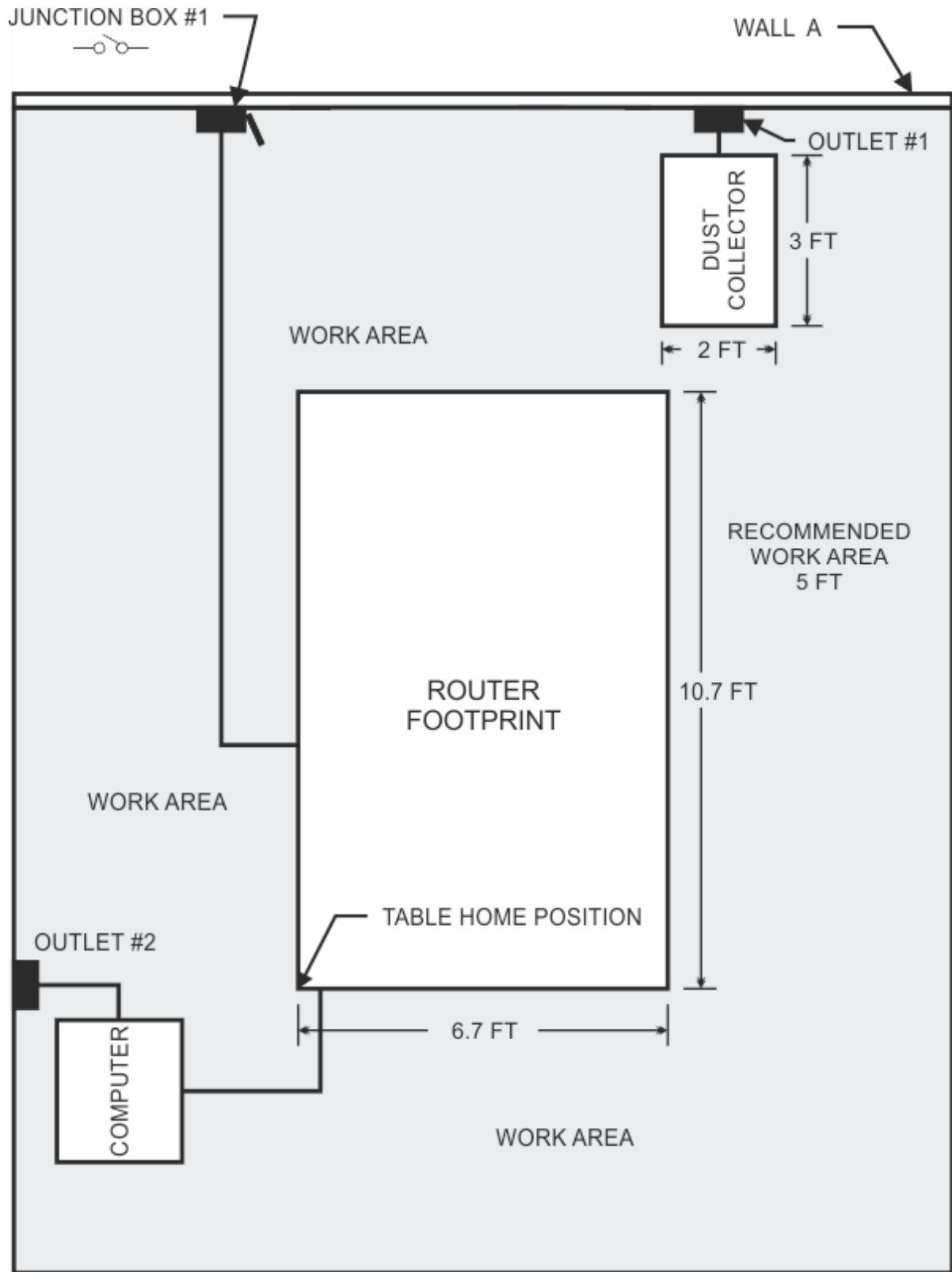
Unload machine from crate before transporting machine into facility.



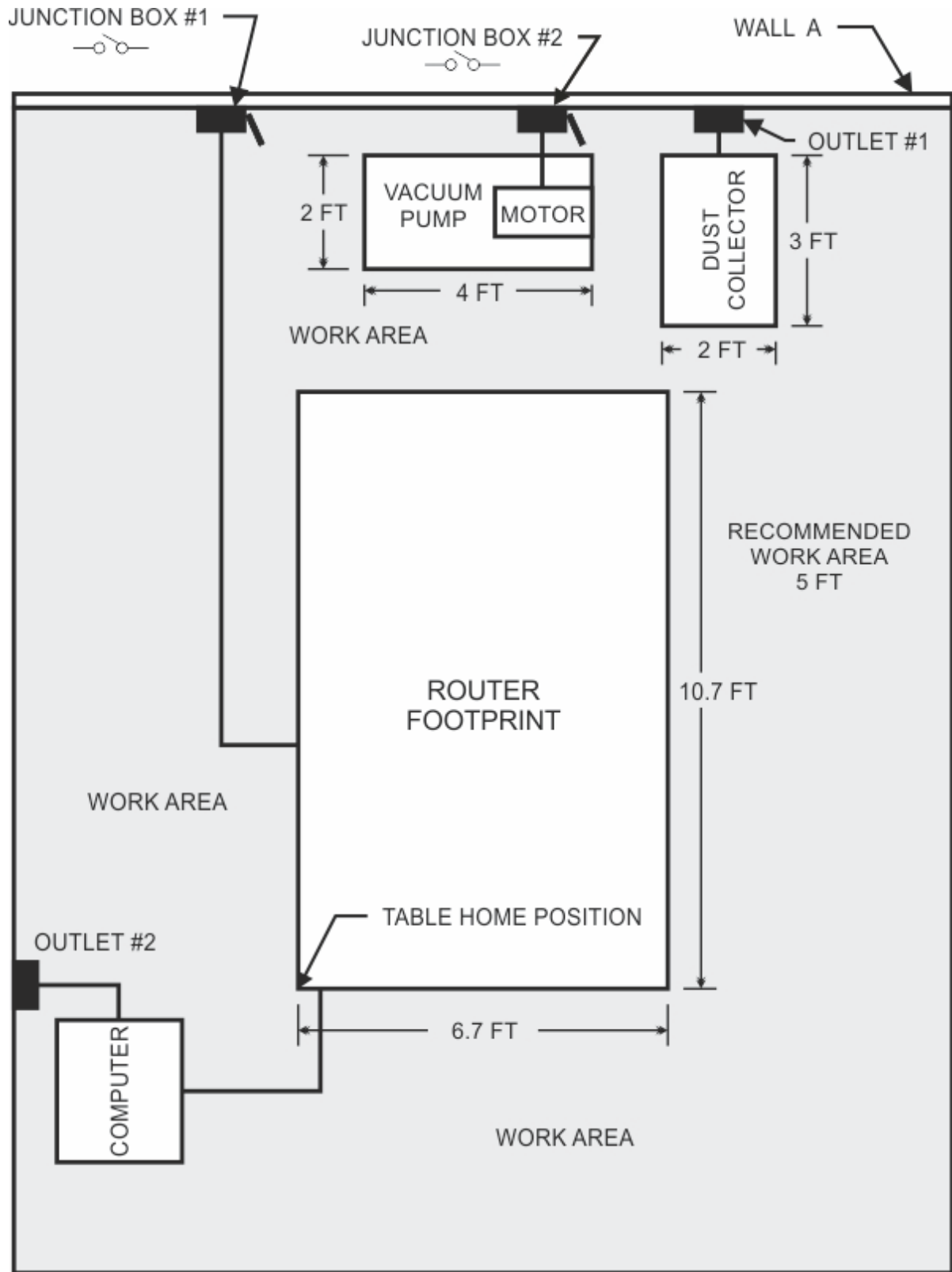
2 Machine Setup

2.1 Layout Diagrams

2.1.1 VR48 T-Slot table



2.1.2 VR48 Vacuum table



2.2 Installation

It is highly recommended that the computer being used to operate the Vision machine be connected to the internet. This will allow a Vision Technical Support representative to connect remotely to assist when needed.

NOTE: This is only a recommendation and is not needed for daily use of the Vision equipment.

2.2.1 Electrical Requirements

1. A qualified and licensed electrician must be used to complete all wiring and grounding of the machine according to all state, local, and national electrical codes.
2. Make sure all Junction Boxes and Outlets are mounted according to all state, local and national electrical codes.
3. Junction Box #1 (50 Amp, 220 VAC, Single Phase for 3 HP router motor **OR** 50 Amp, 220 VAC, Three Phase for 5 HP router motor) will power the router table, spindle, and controls. It is typically mounted on Wall A, approximately 36 to 48 inches above the floor surface. The box should be level with the left edge of the router table. (Refer to Installation Layout Diagrams).
4. Junction Box #2 - for machines equipped with Vacuum Tables ONLY - (30 Amp, 220 VAC, Single Phase) will power the Vacuum Pump. Mounting should be on Wall A and between 36 inches and 48 inches above the floor surface. If locating the vacuum pump as shown (Refer to Installation Layout Diagram), locate Junction Box #2 no greater than 4 feet from Junction Box #1. Junction Box #2 can also be another outlet if you are using the plug supplied with the vacuum unit - check all local, state, and national electrical code.
5. Outlet #1 (20 Amp, 220 VAC, Single Phase) should be mounted on Wall A as shown (Refer to Installation Layout Diagram - Section 2.1). This can also be another Junction Box if the Dust Collector is to be direct wired to its electrical source. The dust collector is approximately 2 feet x 3 feet and is on wheels.
6. Outlet #2 (15 Amp, 110 VAC, Single Phase) should have multiple standard three prong sockets for the computer. It is typically located near the bottom left corner of the router table (home position) as shown (Refer to Installation Layout Diagram).
7. **Wiring needs to be completed to the junction boxes, outlets, etc. before the scheduled first installation/machine orientation day.**

2.2.2 Locating the Router

1. A doorway of at least 80 inches wide and 80 inches high is required in order for the router to be moved into your facility.
2. Locate machine indoors on a flat surface and on a solid foundation.
3. Temperature must remain between 40°F and 85°F.
4. Do not expose machine to direct sunlight, rain, vibration, dampness, or explosive environments.
5. A forklift is required to remove the crate from the shipping truck and to locate the equipment in the building. The forklift must have a minimum capacity of 6,000 lbs and 6' or longer forks.
6. A pallet jack is required to level the router table.
7. The router table footprint is approximately 6.7 feet x 10.7 feet. A designated work area of at least 5 feet is strongly recommended around all sides of the machine to ensure ease of operation, material handling, cleaning, maintenance and safety.
8. Typically, the vacuum pump is between the router table and Wall A (Refer to Installation Layout Diagram - Section 2.1). Please note the orientation of the pump and motor.

2.2.3 Connections

The Main Power Switch is located on the left side of the VR48.



The main power supply is connected to the Main Electrical Box on the left side of the VR48. Remove the cover (if installed) and make the connections as shown below. Ground is connected to the bare wire and common leads are connected to the two shielded wires. The supply for this connection is Junction Box #1 (220 VAC, Single Phase). NOTE: If the 5 hp router spindle is purchased, 220 VAC, Three Phase power is needed).

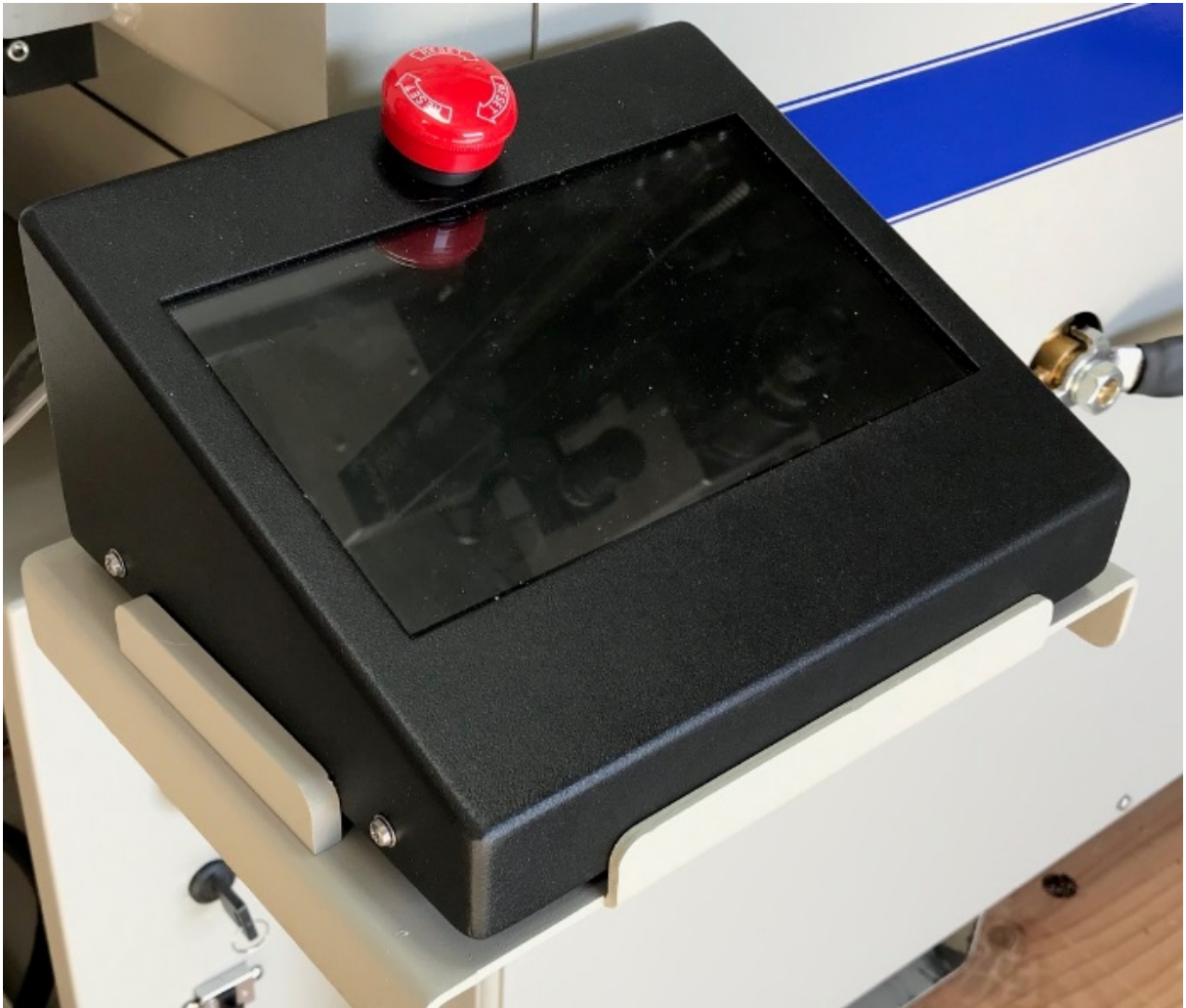
Note: The picture below is for illustration purposes only. The power cable should enter the Main Electrical Box through the hole in the left side of the box as shown in the above picture.



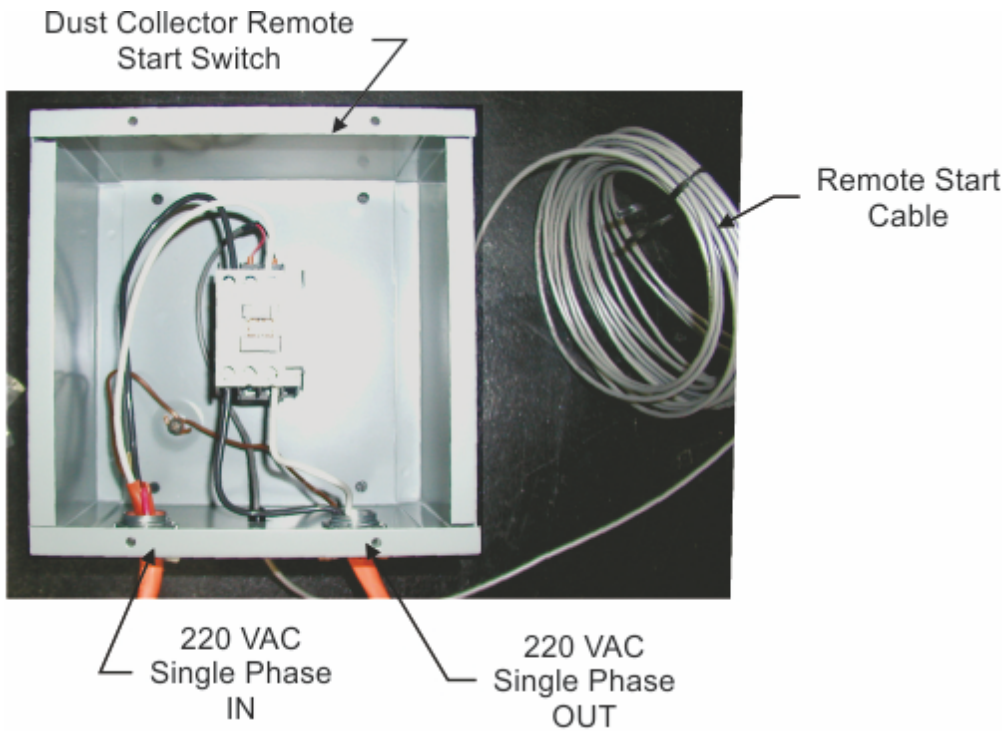
On the front of the control box for VR48 Router, there are five connection ports; One is an Computer Ethernet port used to connect your computer or network to the on-board Series 5 Controller, the second two are for the Pendant, the fourth is a USB port to connect a computer to the optional DACS Camera System, and the fifth is to connect the Remote Start Switch for the Dust Collector System.

Plug the network cable (or the crossover cable) into the BOTTOM Ethernet port on the VR48, then either plug the network cable into your network (or hub), or using the crossover cable, plug into the network port on your computer. Plug the Pendant cables into the Pendant and Pendant Port on the VR48. Connections for the DACS Camera System are detailed in a separate section of this manual. Connect the Dust Collector Remote Start Cable to the Remote Start Port using the supplied cable.



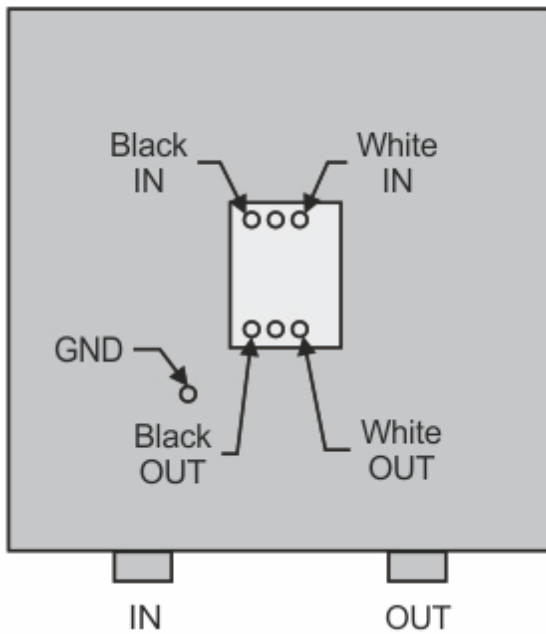


The Dust Collector Remote Start Switch will need to be connected. For ease of operation, a remote start switch and cables can be used to turn on the dust collector automatically when a job is being run. The supply for this connection is from Outlet #1 (220 VAC, Single Phase, 20 Amp or 110 VAC 25 Amp).



Wiring for this switch is shown below. The input and output wires should be connected as shown. Both input and output ground wires can be connected to the single GND location shown. The switch can be wall mounted at a location convenient for the user.

Typical Remote Start Wiring



The Remote Start Cable is connected to the Remote Start Port on the front of the machine's control box.



Vision Series 5 pendant (rear view)

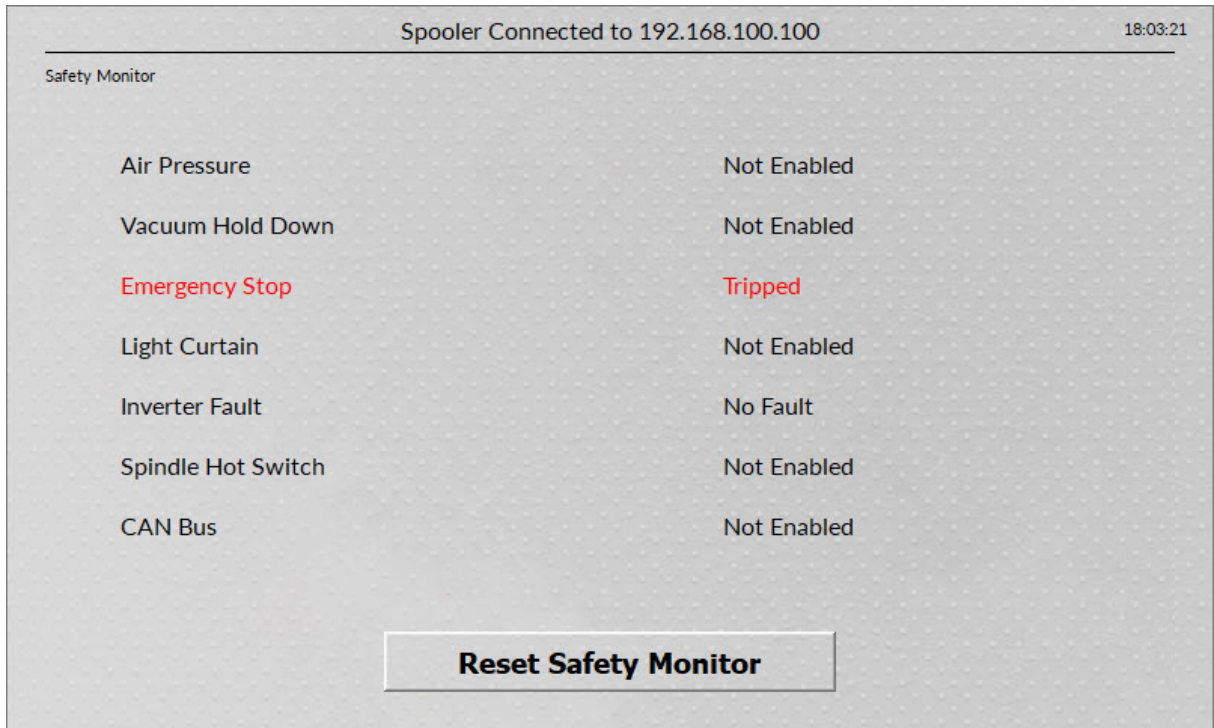


NOTE: If the emergency stop screen below appears on the LCD when the machine is powered on, then an emergency stop is triggered.

This can either be one of the three emergency stop buttons on the table, the emergency stop button on the pendant or the electronics cabinet door is not installed.

Release the emergency stop buttons by twisting them until they "pop up". Also ensure that the electronics cabinet door is installed and secure.

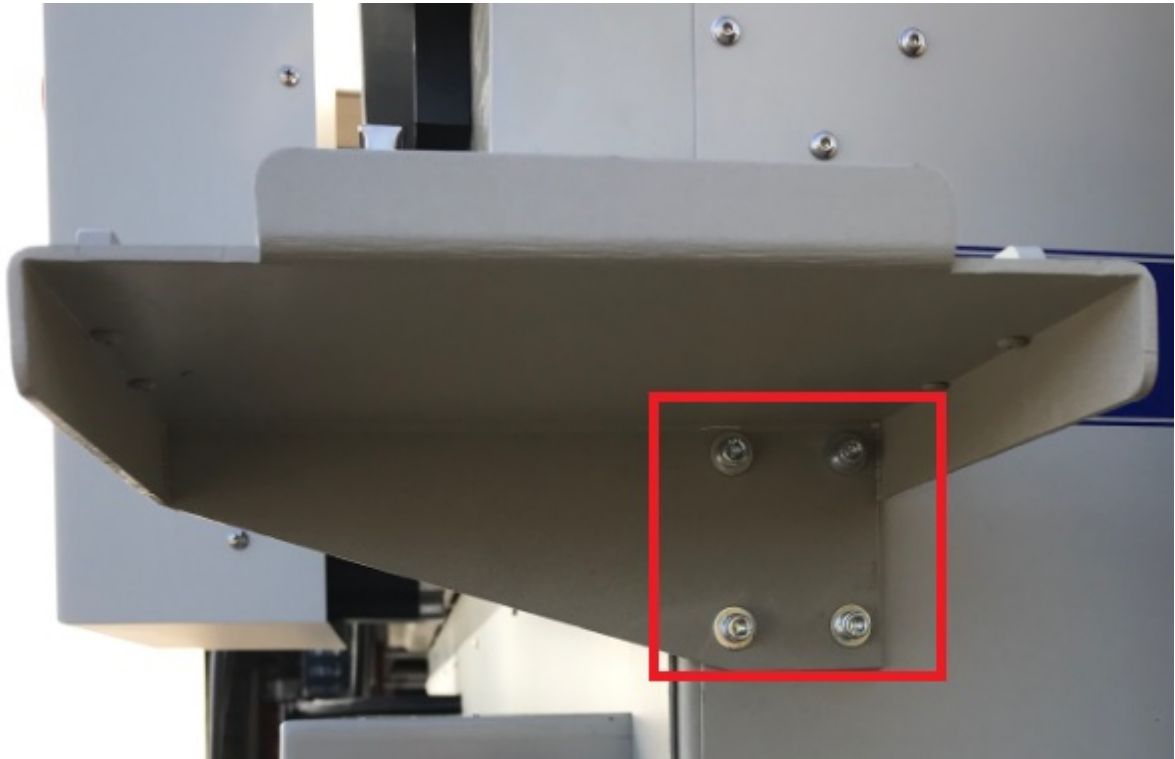
This will clear the emergency stop screen.



The machine is now connected. Please continue to the network setup section.

2.2.4 Pendant Holder Installation

The Touch Screen pendant holder for the VR48 can be mounted on the front of the machine. To install the Pendant Holder, remove the four screws on the machine and mount the holder to the machine as shown below. Place the Pendant in the Holder to keep it secure when the machine is being used.



2.2.5 Levelling the Machine

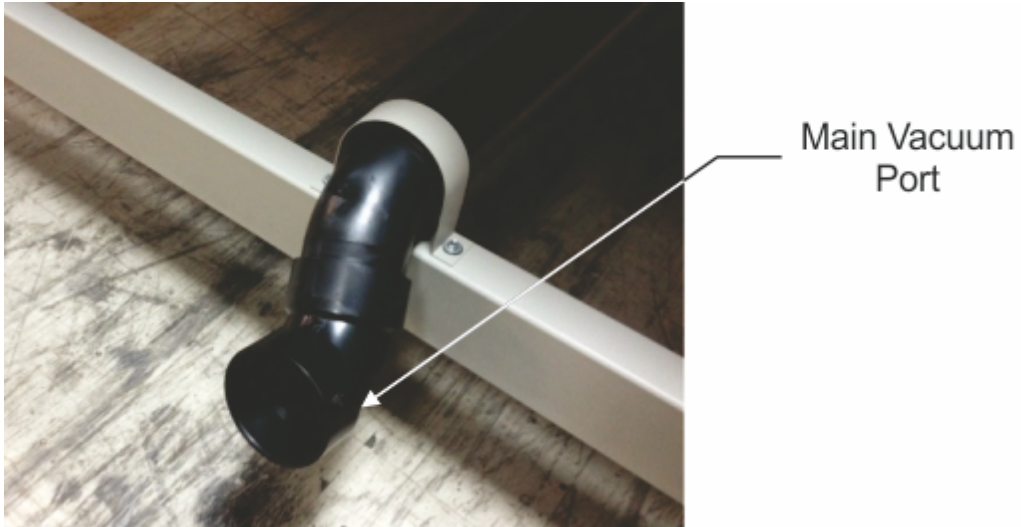
1. Make sure the machine has been properly located at your work-site.
2. It is not necessary to bolt your machine to the floor in your facility. However, a solid, stable foundation is required to support the machine's weight.
3. There should be a leveling bolt in each of the four machine legs.
4. Place a precision leveling gauge on the machine's table top and adjust the leveling bolts until the machine is level in both the horizontal and vertical directions.

2.2.6 Scheduling Installation

1. Please schedule an electrician to arrive and connect the electric to the router table, vacuum pump motor, and dust collector to the junction boxes and outlets prior to the first day of installation/machine orientation. Please contact Vision at 602-439-0600 or service@visionengravers.com if you or the electrician has any questions.
2. If the electrician has not connected the electric prior to the onsite installation, please call Vision ASAP in order to reschedule installation/machine orientation. If Vision personnel arrive and the electrical connections are not ready and the electrician is not present, there will be an additional charge \$750/day while waiting.

2.2.7 VR48 Vacuum Pump Connection - Vacuum Table Model Only

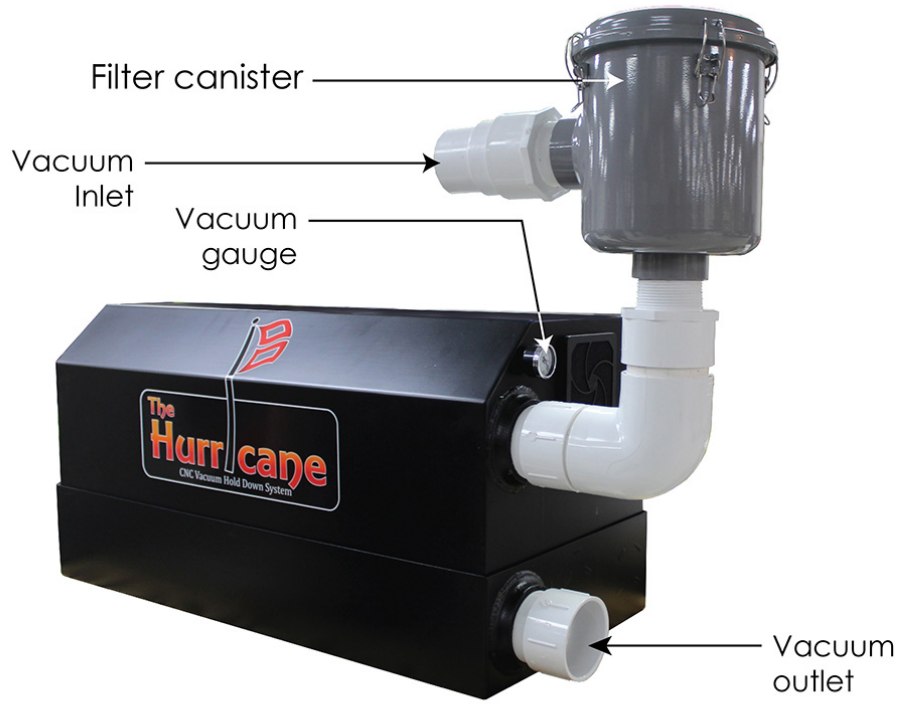
The Main Vacuum Port for the VR48 is located at the foot of the machine. To connect the vacuum pump to the machine, use the supplied 3" diameter vacuum hose and connect one end to the vacuum pump and the other end to the Main Vacuum Port on the machine. If a longer connection is needed, use 3" diameter schedule 80 PVC pipe.



The vacuum pump has been equipped with an electrical connector designed for a 30 amp, 220 VAC, single phase power supply. A qualified and licensed electrician must be used to complete all wiring and grounding of the vacuum pump according to all state, local, and national electrical codes.



The photo below shows the vacuum inlet, outlet, gauge, and filter.



2.3 Network Connection

NOTE - This following section is shown on a Windows 10 PC. For Windows 7 or Windows 8, the screens are slightly different.

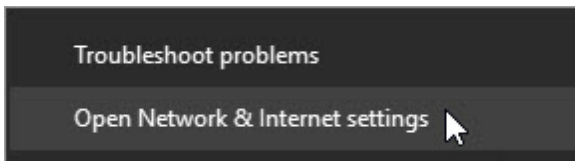
Plug the USB end of the USB to Ethernet adapter into any open USB port on the computer.



Right click on the Windows network icon in the lower right corner of the Windows screen.





Select "Open Network & Internet settings".



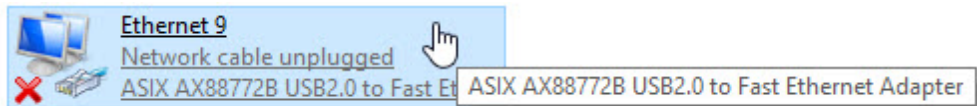
Select "Change adapter options".

Change your network settings

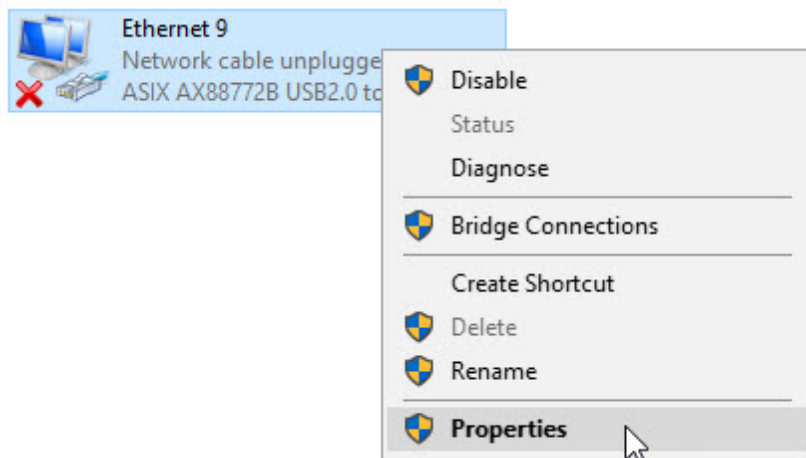
 **Change adapter options**
View network adapters and change connection settings. 

 **Sharing options**
For the networks you connect to, decide what you want to share.

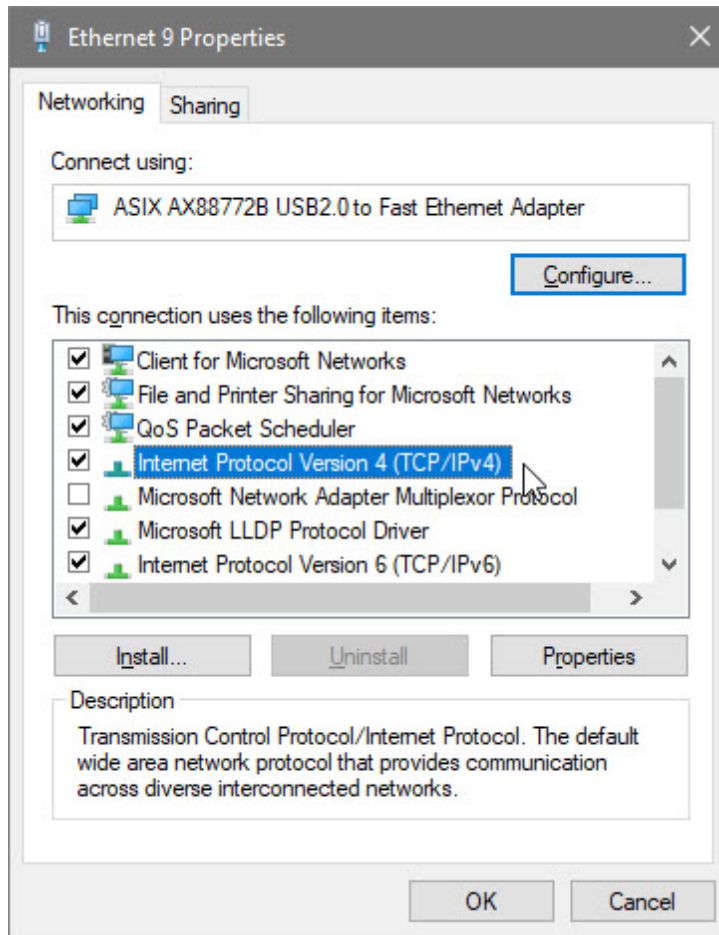
Right click on the Asix USB Ethernet connection.



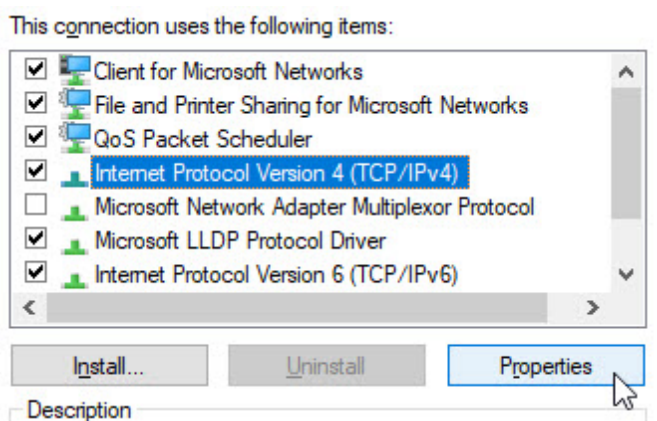
Select Properties.



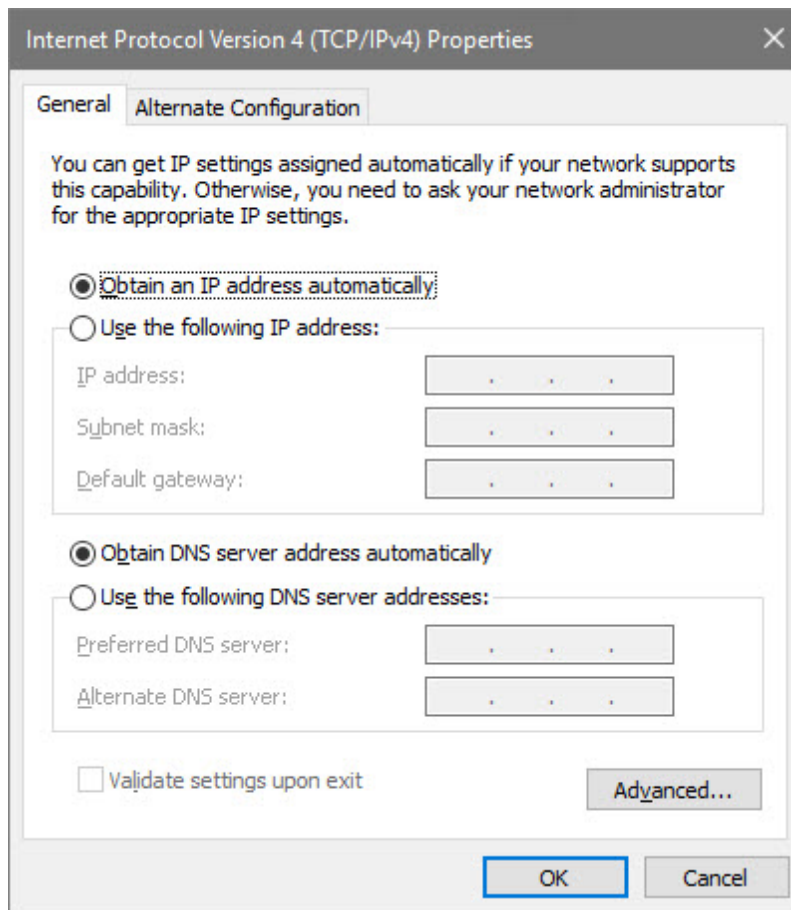
Select "Internet Protocol Version 4 (TCP/IPv4)".



Select Properties.



The screen below will appear.



Enter the settings below.

Select: **Use the following IP address:**

Enter an IP address of: **192.168.100.100**

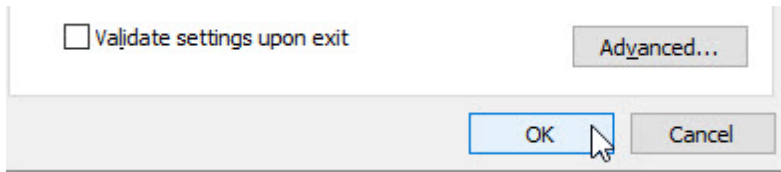
Enter a Subnet mask of: **255.255.255.0**

Obtain an IP address automatically

Use the following IP address:

IP address:	192 . 168 . 100 . 100
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	. . .

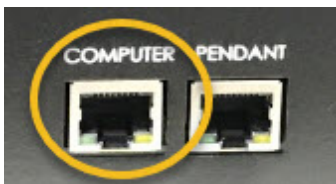
Select OK.



Plug one end of the network cable into the USB to Ethernet adaptor.



Plug the other end of the network cable into the **COMPUTER** connection in the back of the Vision Series 5 controller.



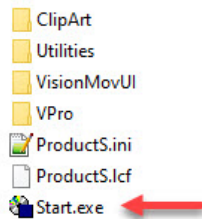
The network connection is now complete. Please continue to the network setup section.

2.4 Vision Mov UI Software Installation

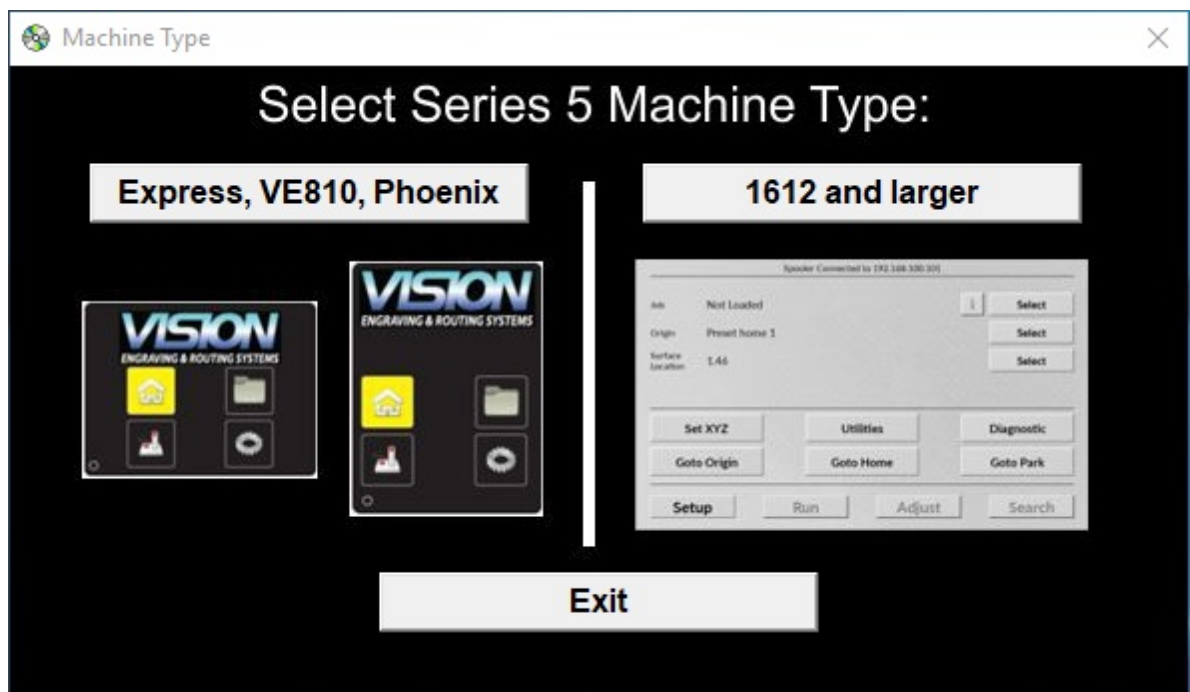
Power the Vision Series 5 controller on with the switch on the front.

Insert the Vision USB dongle into the USB port on the computer. Navigate to the USB dongle in Windows File Explorer.

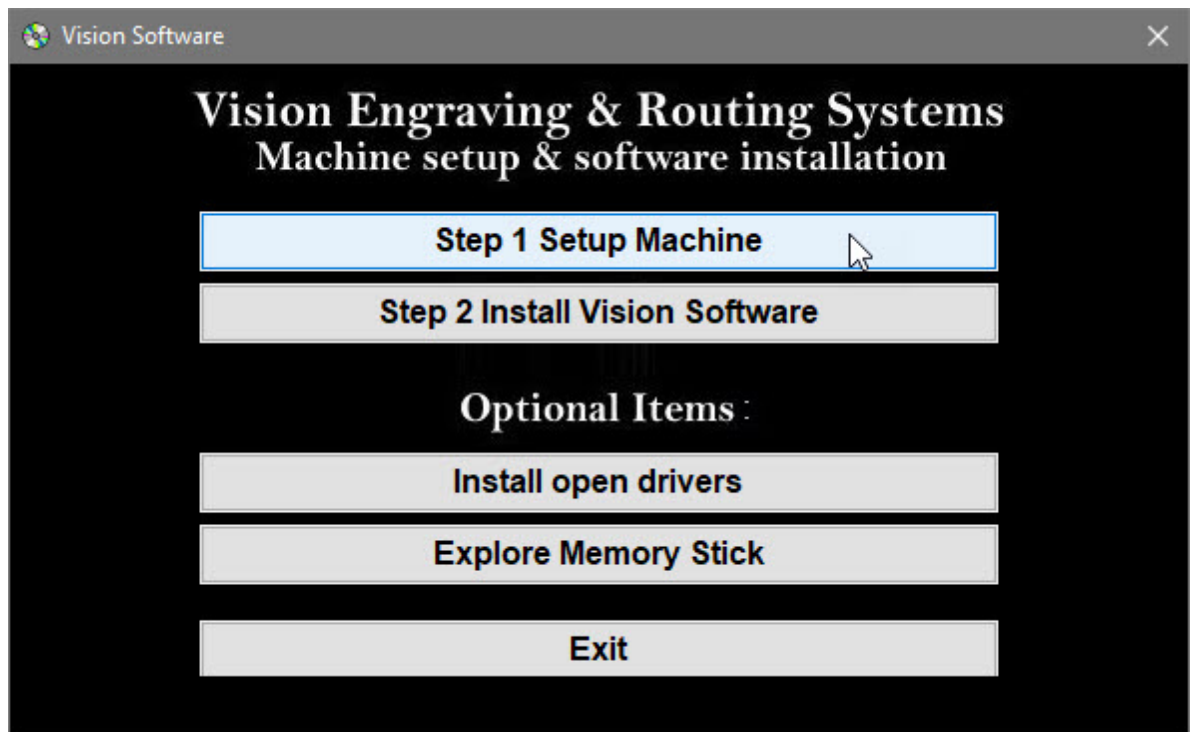
Select the **Start** or **Start.exe** file to begin.



Select **1612 and larger**.

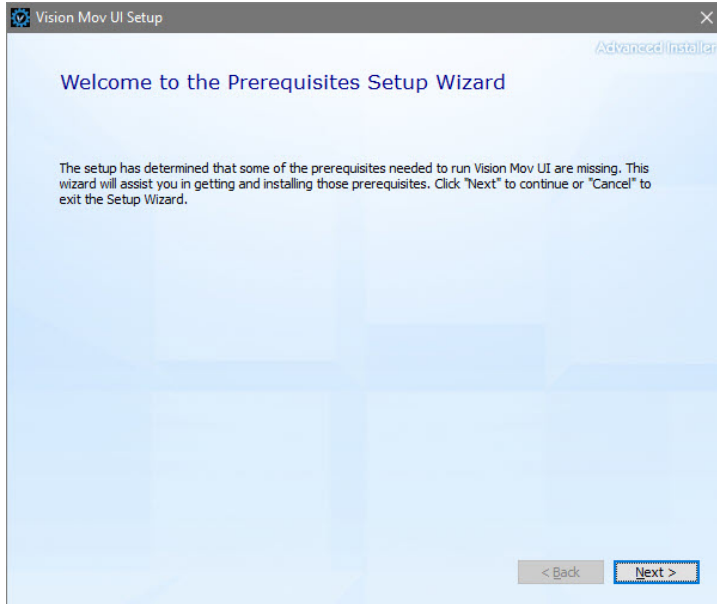


Select **Step 1 Setup Machine**.



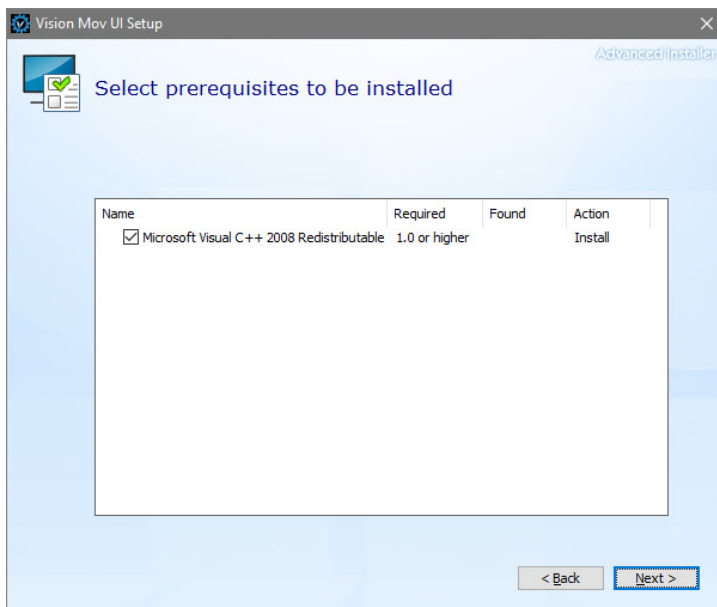
Select **Next** on the "Prerequisites Setup Wizard" screen.

NOTE: This screen will **not** appear if the Windows feature is already installed on the computer.



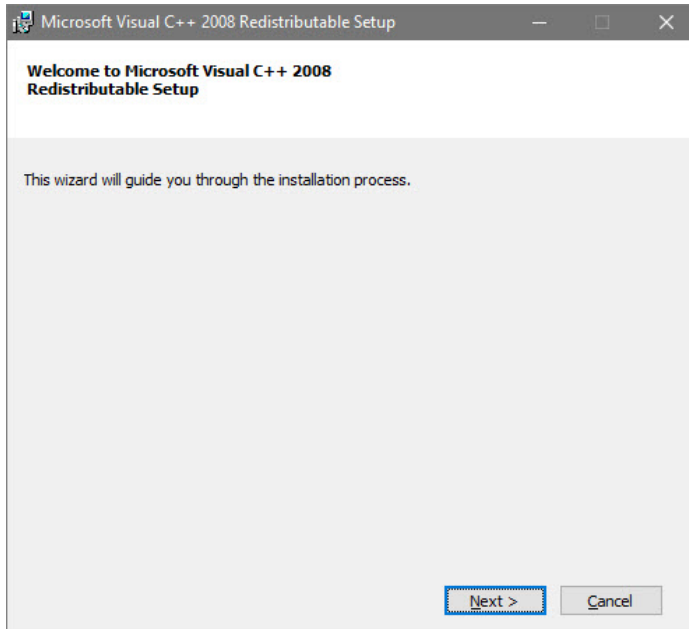
Select **Next** on the "Prerequisites" installation screen.

NOTE: This screen will **not** appear if the Windows feature is already installed on the computer.



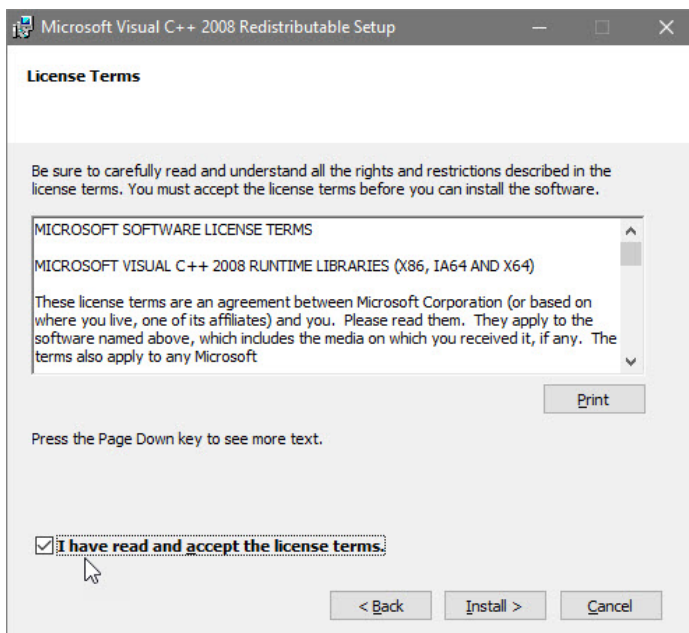
Select **Next** on the "Microsoft Visual C++ installation" screen.

NOTE: This screen will **not** appear if the Windows feature is already installed on the computer.



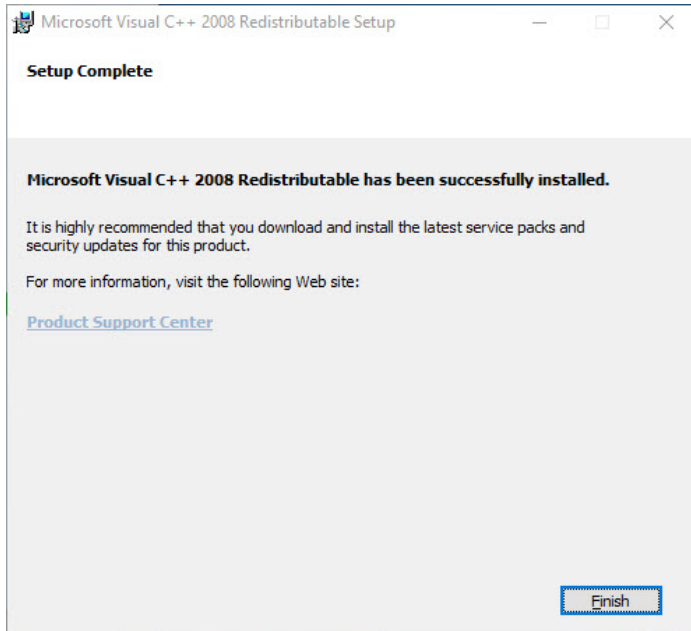
Select the **I have read and accept the license terms** box then select **Install**.

NOTE: This screen will **not** appear if the Windows feature is already installed on the computer.

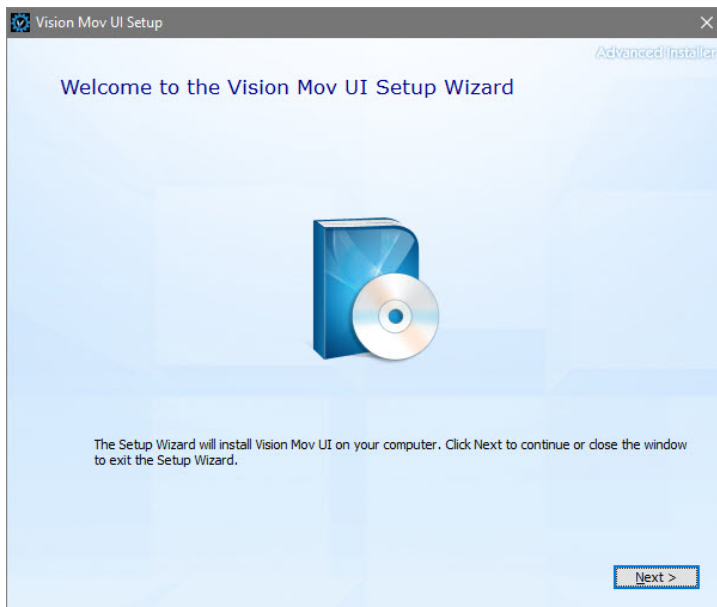


Select **Finish** on the "Setup Complete" screen.

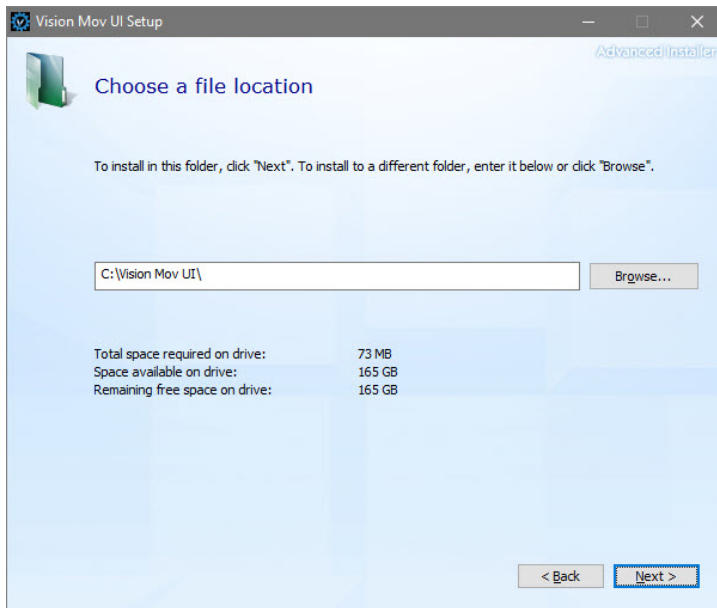
NOTE: This screen will **not** appear if the Windows feature is already installed on the computer.



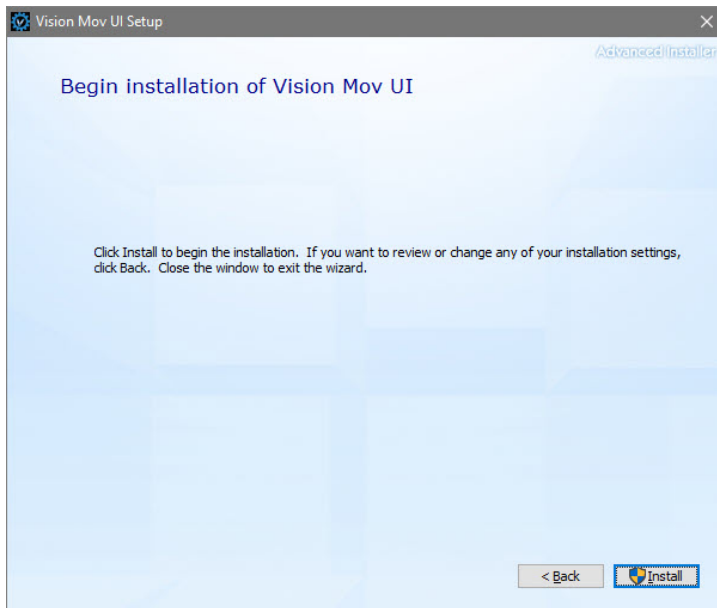
Select **Next** on the "Welcome screen".



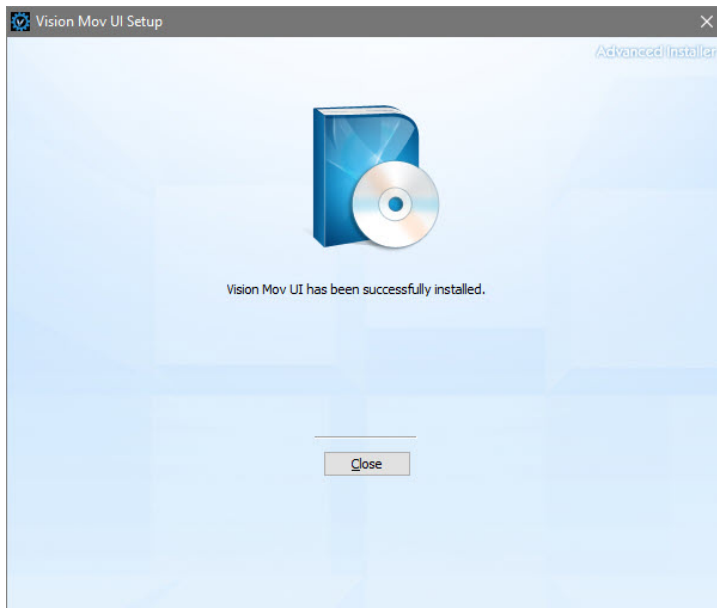
Select **Next** on the "Choose a file location" screen.



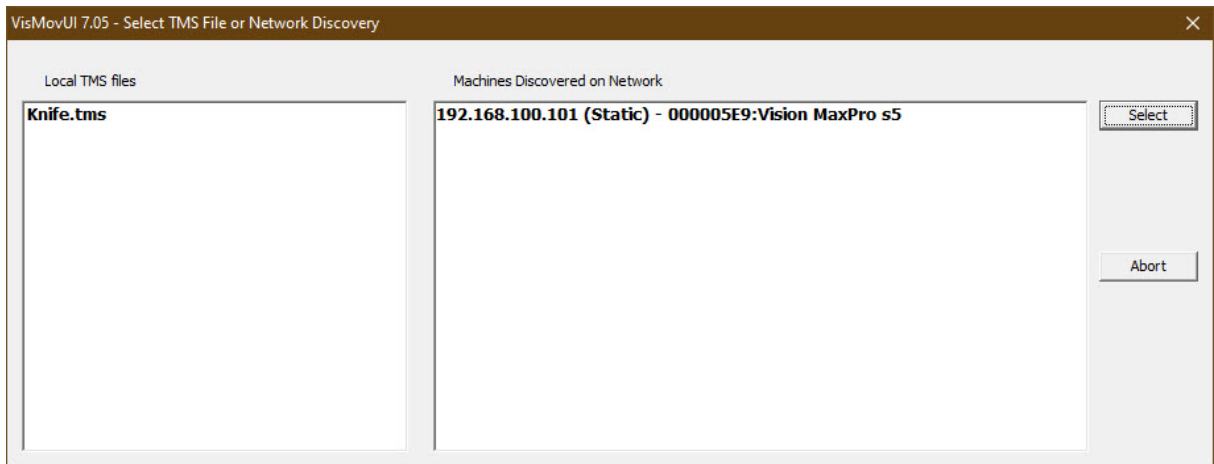
Select **Install** on the "Begin installation" screen.



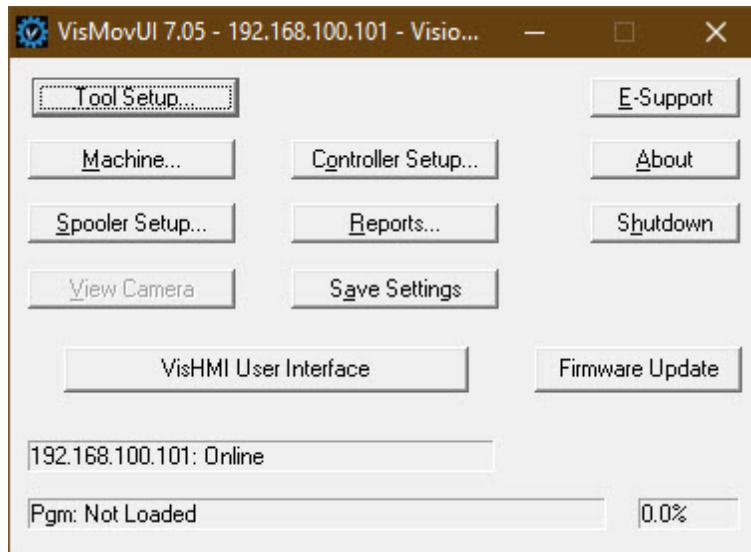
Select **Close** on the "Successful Install" screen.



The VisMovUI screen will appear. Select the Machine in the "Machines Discovered on Network" screen and click **Select**.



The VisMovUI program will appear. Select the **Minimize** button.

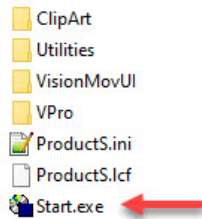


The Vision Move UI program is now installed. Please continue to the network setup section.

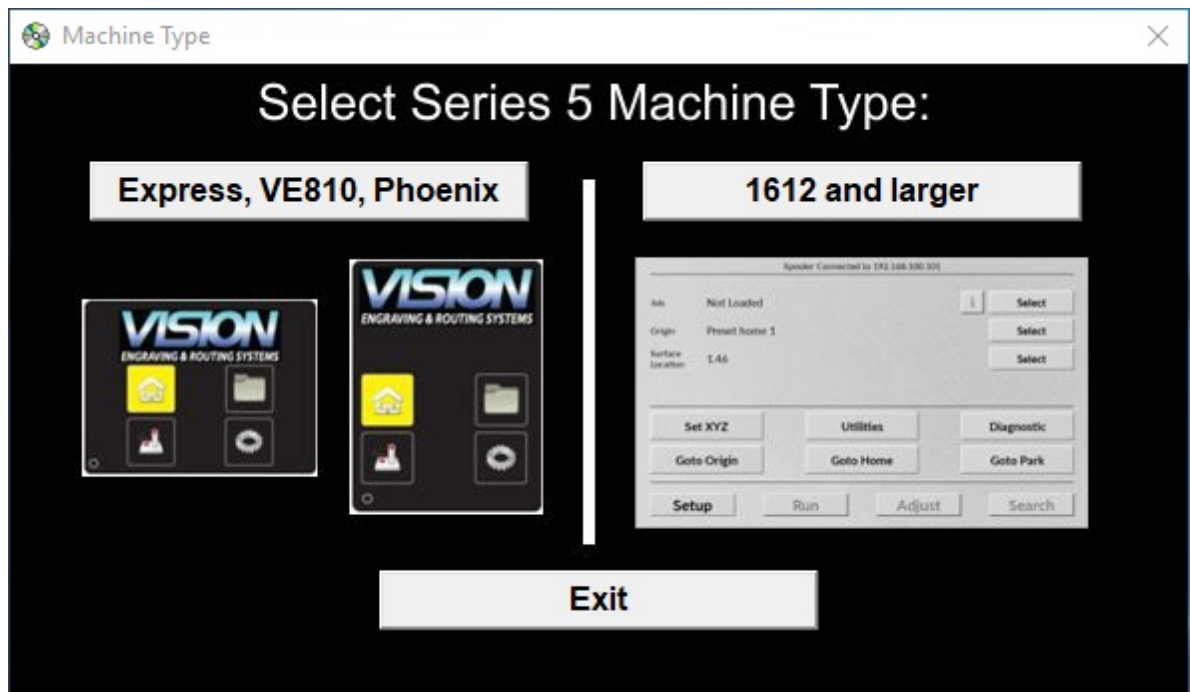
2.5 Vision Software Installation

Insert the Vision USB dongle into the USB port on the computer. Navigate to the USB dongle in Windows File Explorer.

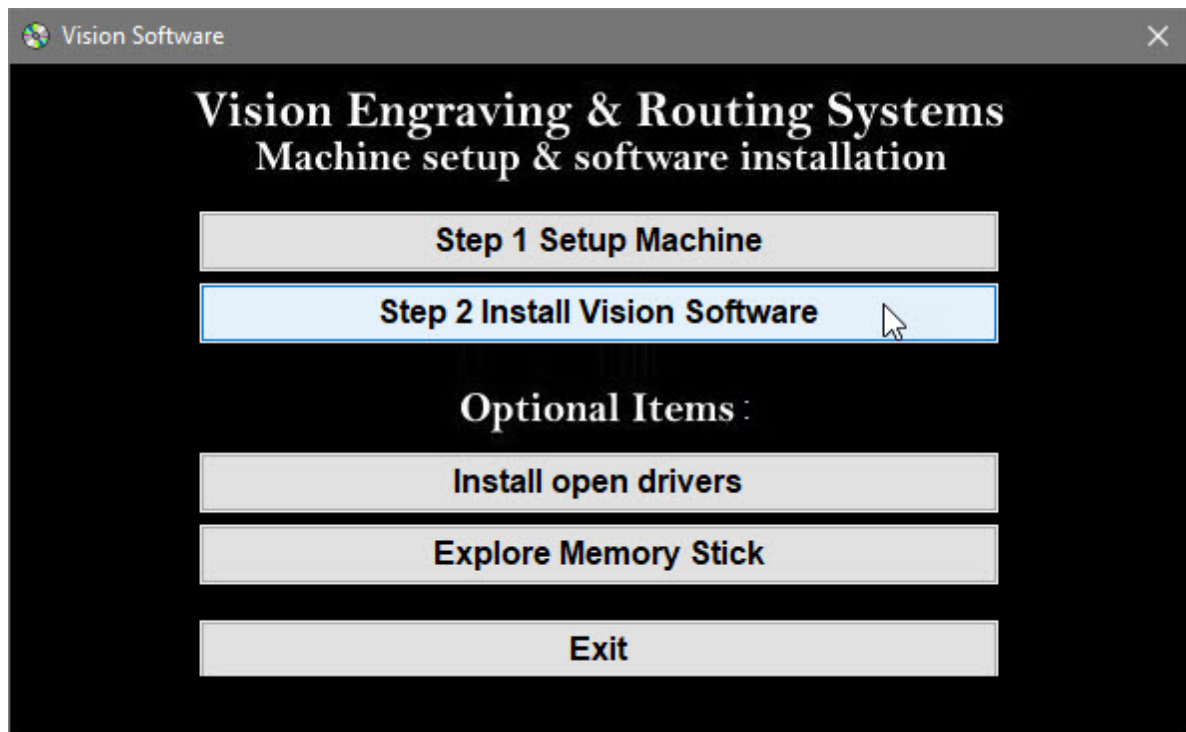
Select the **Start** or **Start.exe** file to begin.



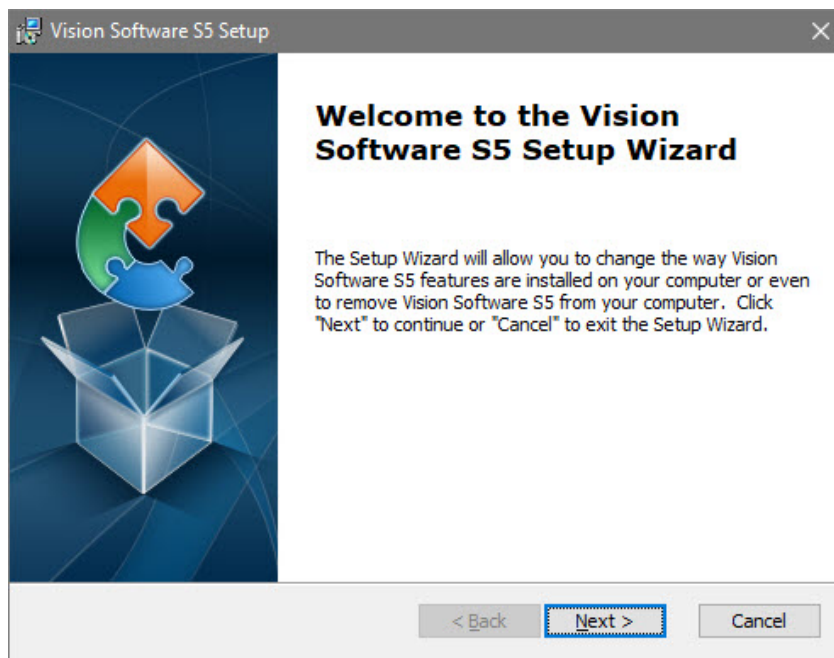
Select **1612 and larger**.



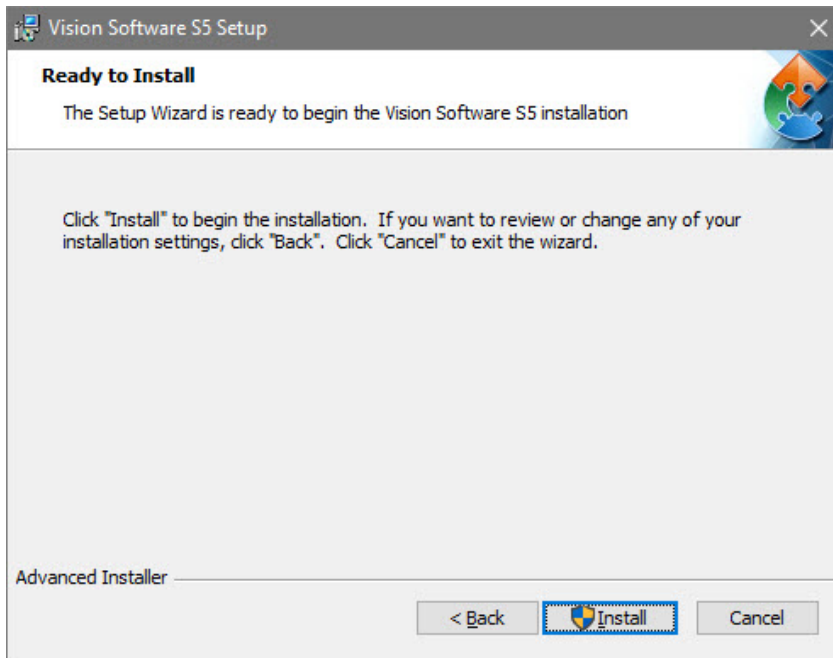
Select **Step 2 Install Vision Software**.



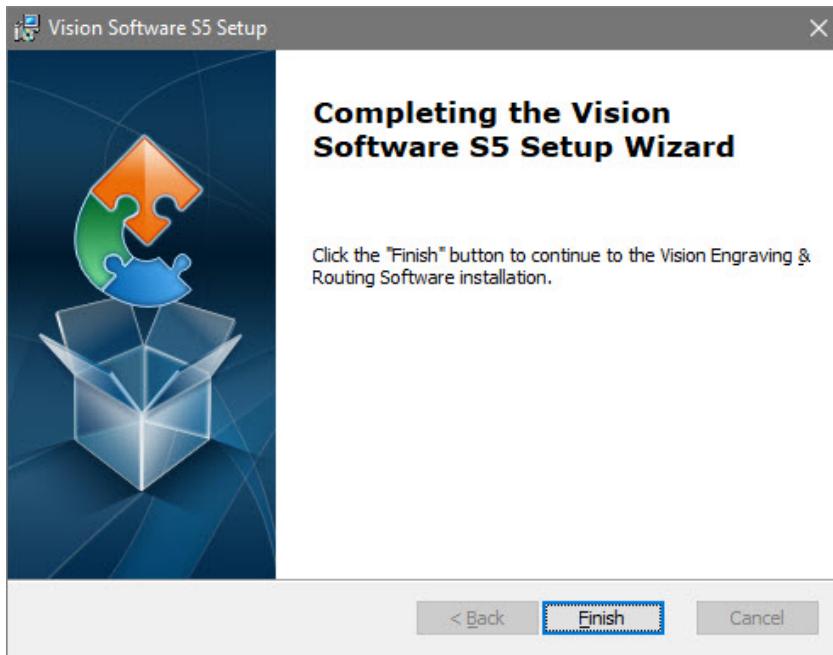
Select **Next** on the "Welcome" screen.



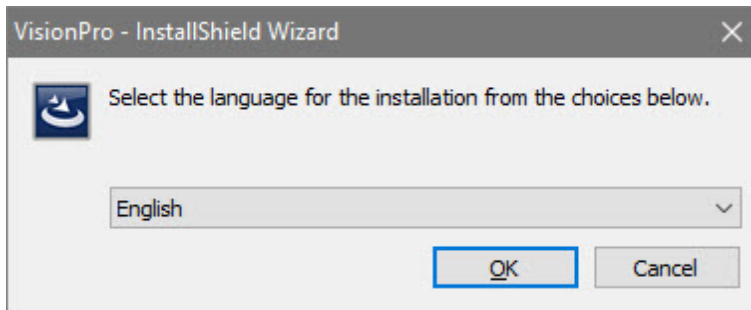
Select **Install** on the "Ready to Install" screen.



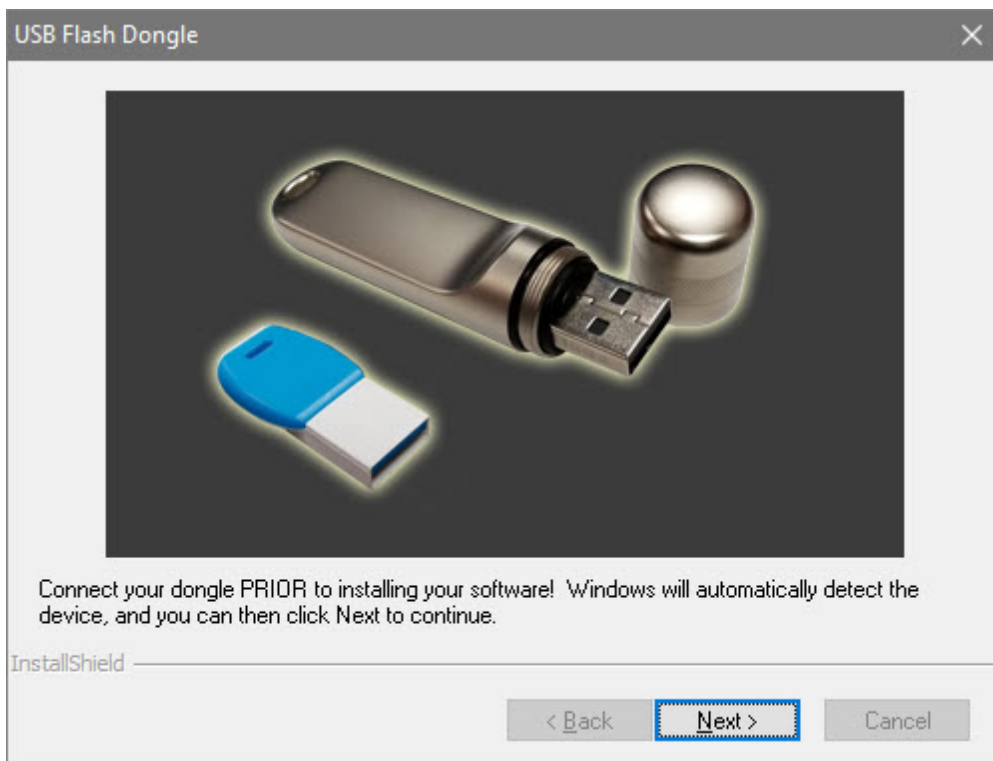
Select **Finish** on the "Complete Install" screen.



Select the language desired and select **OK** on the "Vision Pro install" screen.

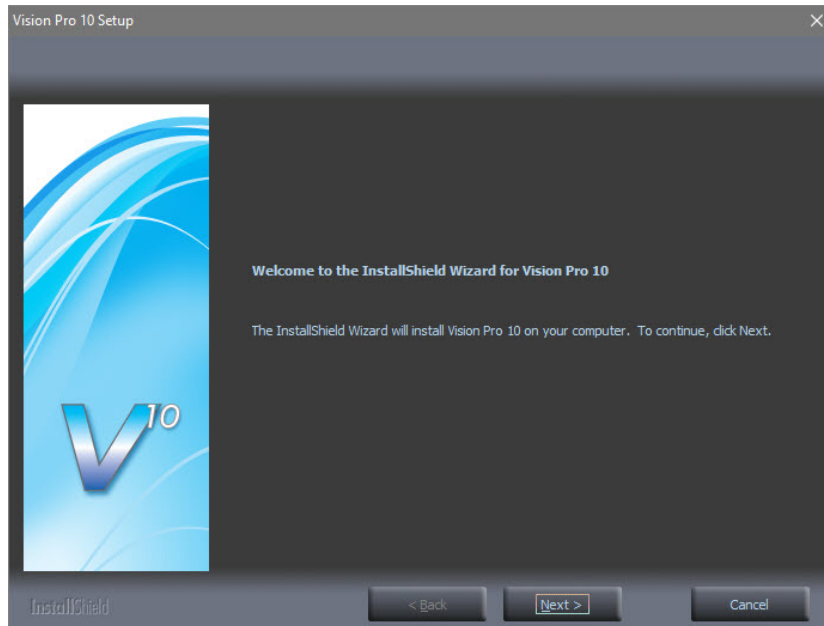


Make sure the USB dongle is installed and select **Next** on the "USB Flash Dongle" screen.

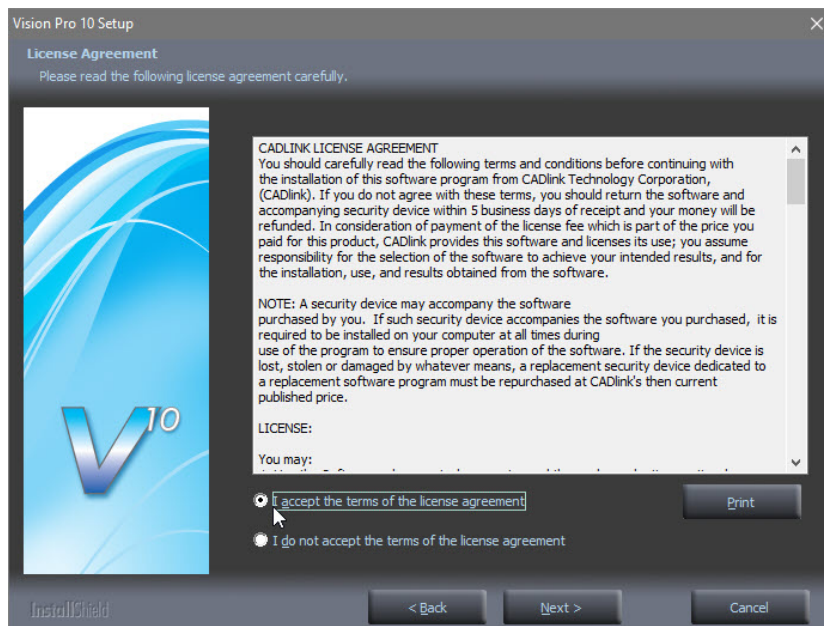


Select **Next** on the "Vision 10 setup" screen.

NOTE: The installation will display "Vision Pro 10 Setup", "Vision Expert 10 Setup" or "Vision Express 10 Setup" depending on which version has been purchased.

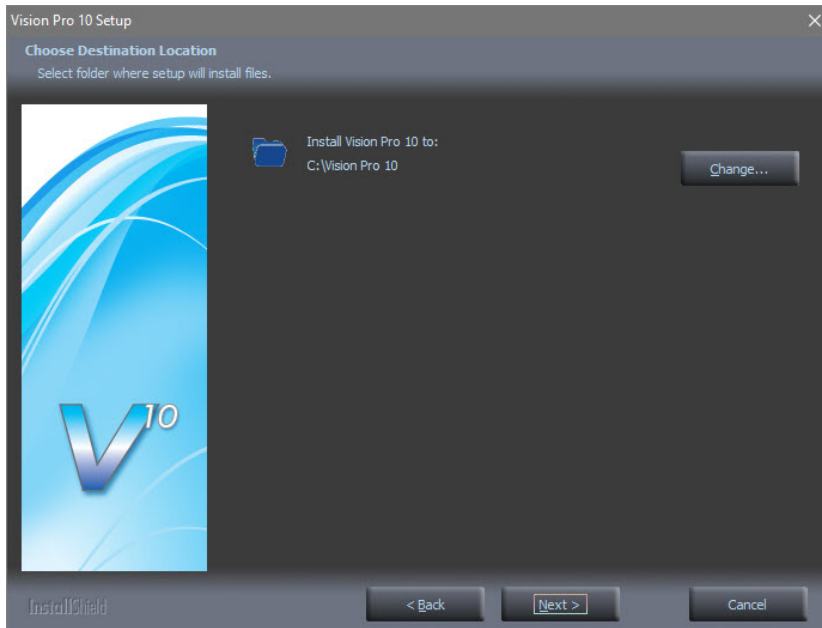


Select the **I accept the terms of the license agreement** box then select **Next** on the "License Agreement" screen.

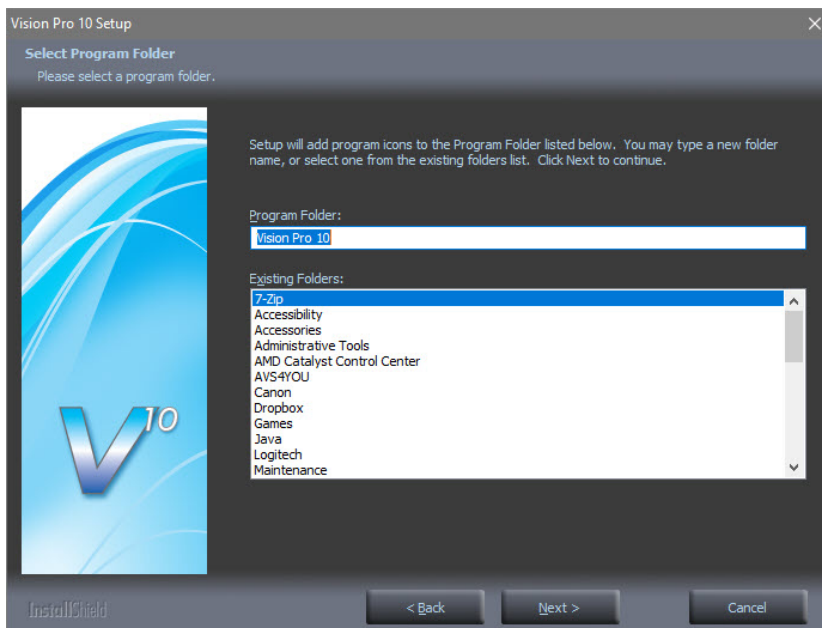


Select **Next** from the "Choose Destination Location" screen.

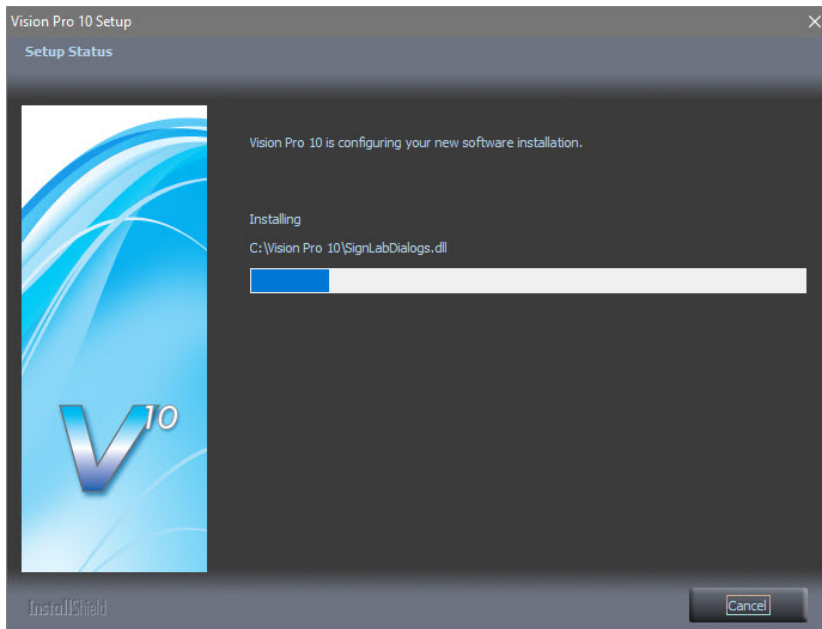
NOTE: The installation folder will be either "C:\Vision Pro 10", "C:\Vision Expert 10" or "C:\Vision Express 10" depending on which version has been purchased.



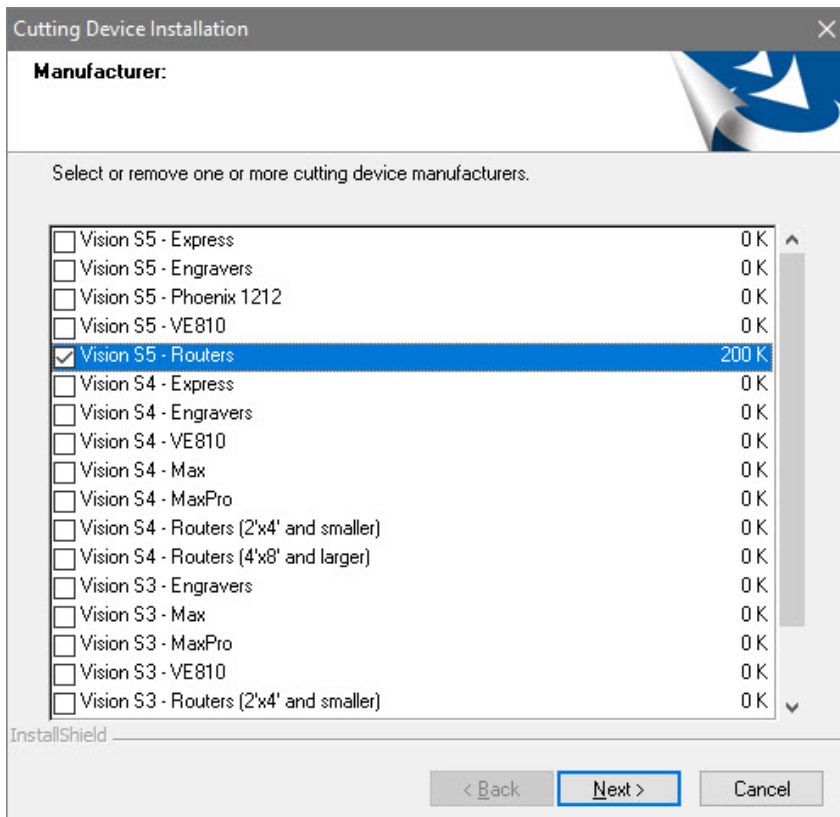
Select **Next** on the "Program Folder" screen.



The installation will continue.

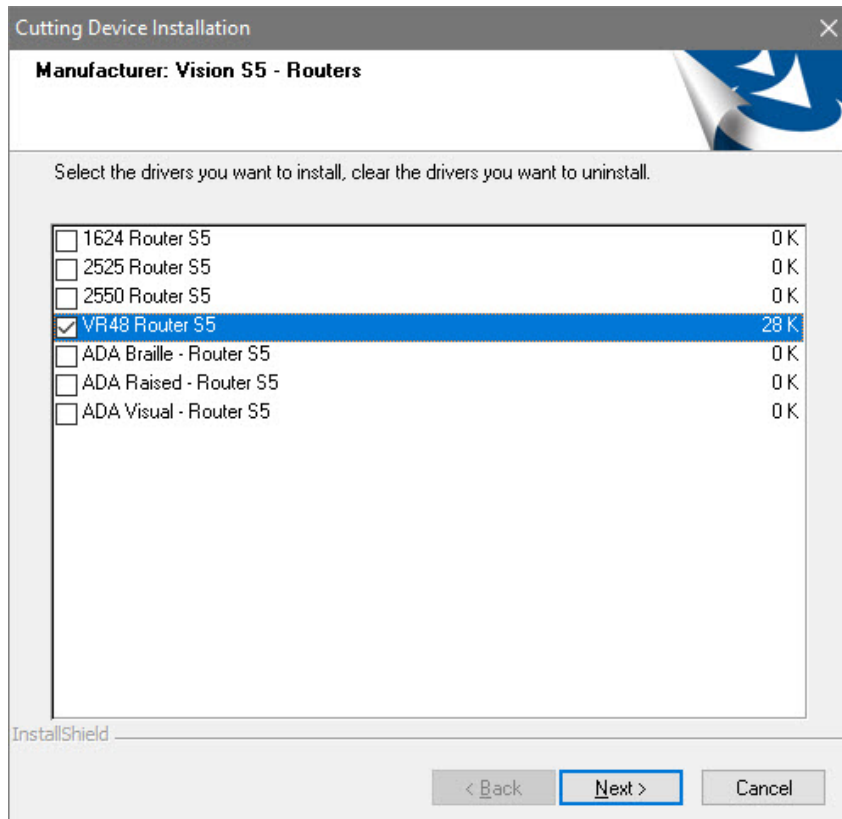


Select **Vision S5 - Routers** and select **Next**.

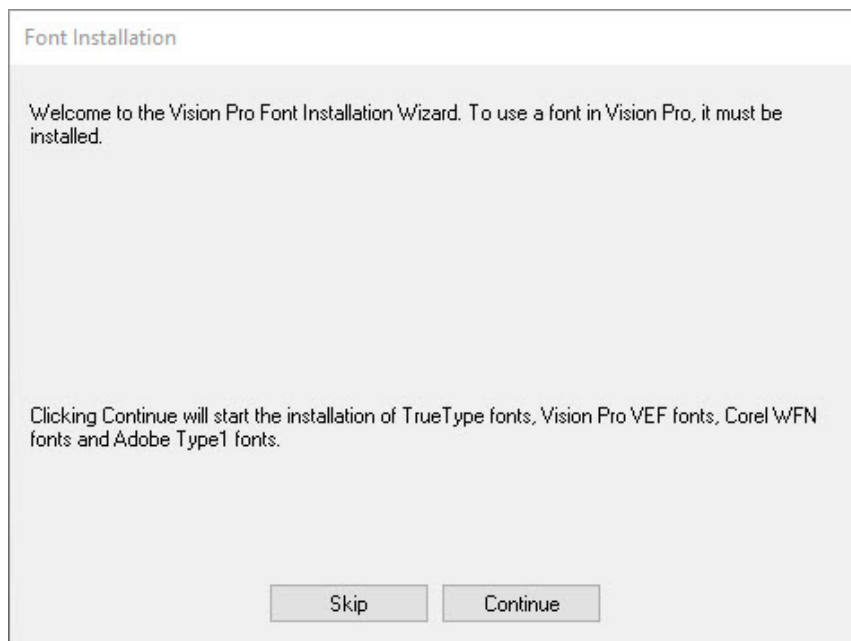


Select the **VR48 Router S5** driver and select **Next**.

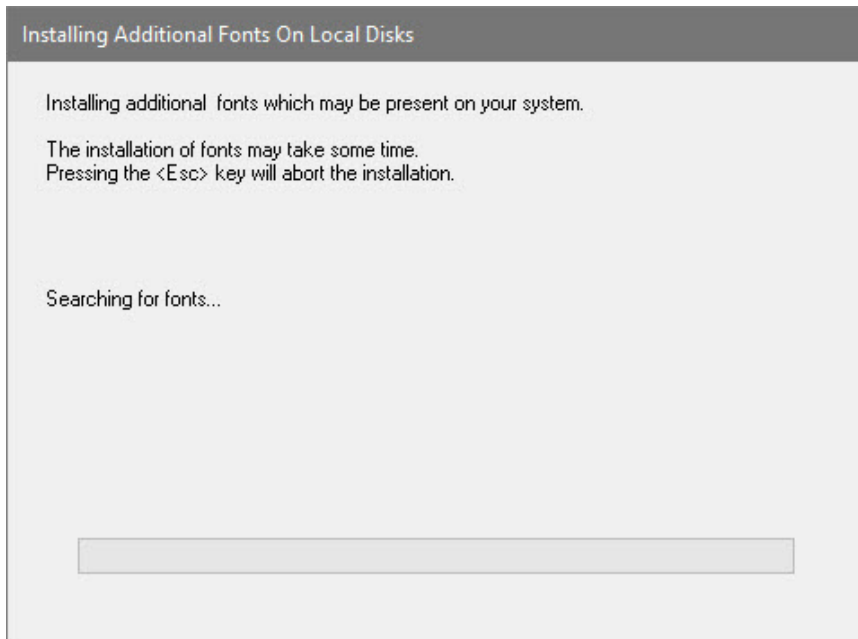
NOTE: If ADA drivers or a center origin driver is needed, select them also.



Select **Continue** on the "Font Installation" screen.

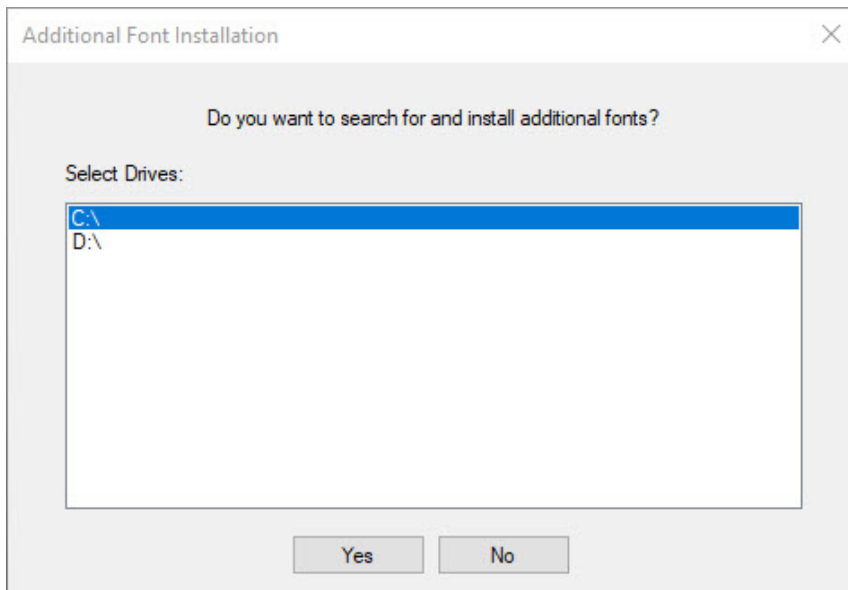


The installation will search for Vision fonts.



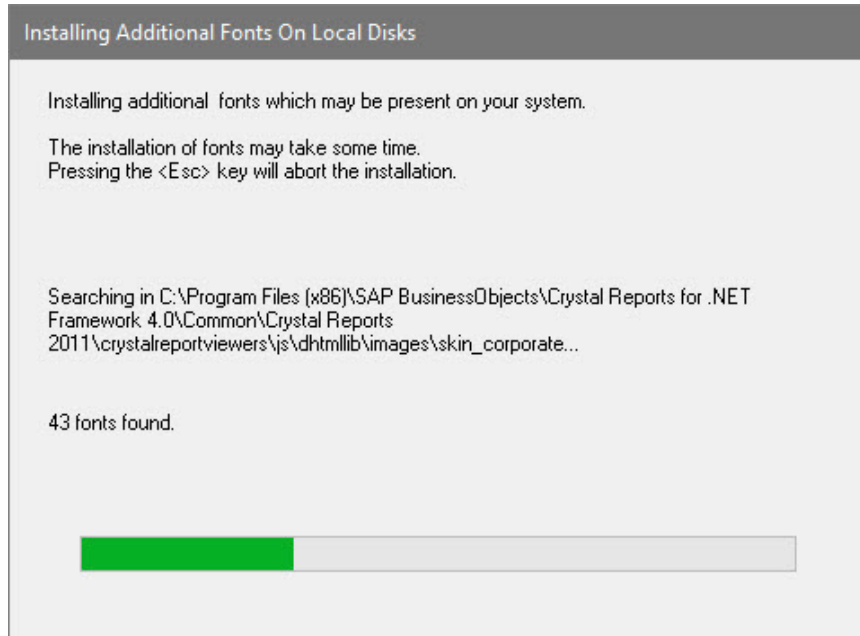
Select the disk drive to search for additional fonts that may be on the computer and select **Yes**.

NOTE: Typically drive C:\ is selected.

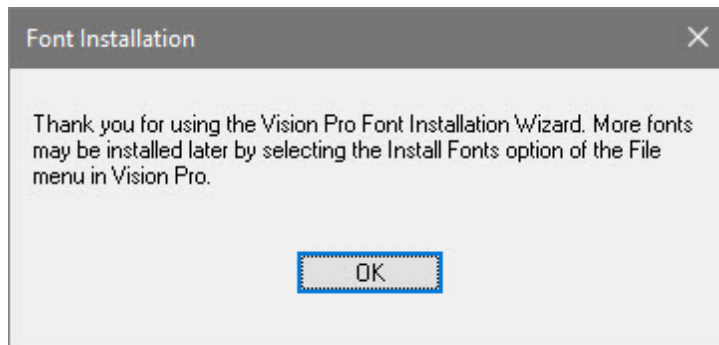


The installation will search for additional fonts.

NOTE: This may take a few minutes.

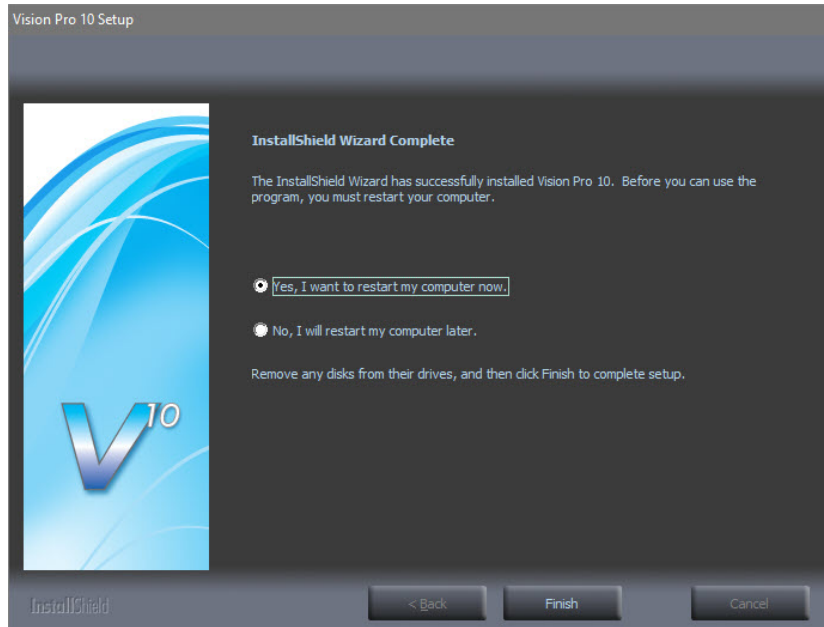


Select **OK** on the "Font Installation Complete" screen.

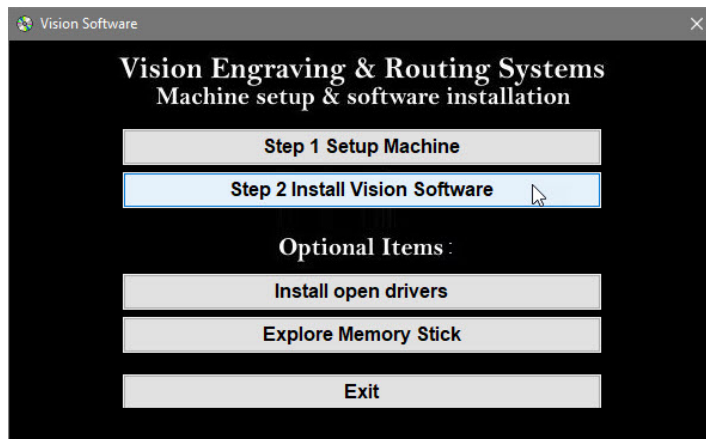


Select **Finish** to complete the installation.

NOTE: The install may or may not ask to restart the computer.



Select **Exit** from the initial screen.



The Vision 10 software and Vision Manuals icon will now be on the Windows desktop.



