

THANK YOU FOR CHOOSING ROBOTIQ

This step-by-step guide will allow you to **install** and **use** your **CNC Machine Tending Kit** on e-Series Universal Robots.



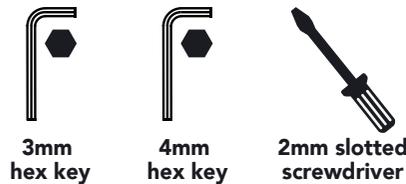
1. WHAT IS SUPPLIED?

Standard upon delivery of CNC-RWC5-ES-UR-KIT

Dual Gripper Hand-E.....CUR-ES-DUAL-HND
Hand-E Fingertips Starting Kit.....HND-TIP-START-KIT
Hand-E Fingertips Extender Kit.....HND-TIP-EXT-KIT
2F85 Fingertip Conversion Kit.....AGC-TIP-CONV-KIT
Grooved Fingertips for 2F-85, v4.....AGC-TIP-205-085
Machine Tending Copilot Kit.....CP-MT-ES-UR-KIT
Robotiq Wrist Camera Kit (optional).....RWC5-UR-KIT
Required hardware



2. TOOLS YOU NEED



3. GET THE LATEST

Visit: robotiq.com/support

DOWNLOADING THE URCAP

1. Select product > CNC Machine Tending Kit > Universal Robots > Software > CNC Machine Tending Software.
2. Select **DOWNLOAD ZIP**.
3. **Decompress** Zip file to a USB stick. Three URCap files are included.



BEFORE OPERATING THE GRIPPER, PLEASE READ INSTRUCTION MANUAL.



4. MOUNTING

i For easier mounting, move the robot tool flange to make it point upwards.

! IF YOUR KIT DOES NOT INCLUDE THE WRIST CAMERA, SKIP TO SUBSECTION "MOUNTING THE ADAPTER PLATE AND HAND-E GRIPPERS".

MOUNTING THE WRIST CAMERA

1. Place the Wrist Camera on the tool flange. Align with the dowel pin already installed on the Wrist Camera.
2. Insert a dowel pin into the top part of the Wrist Camera, then place the tool plate unto the Wrist Camera. Align using dowel pin.
3. Insert a dowel pin into the tool plate, then place the adapter plate unto tool plate.

MOUNTING THE ADAPTER PLATE AND HAND-E GRIPPERS

4. Insert four M6 screws and toothlock washers into the adapter plate, and secure it to the tool flange.
5. Insert a dowel pin into a socket of the adapter plate.
6. Place a gripper coupling on the socket, and align using the dowel pin.
7. Secure the gripper coupling to the adapter plate with four M6 screws and toothlock washers, using a 4mm hex key.
8. Secure Hand-E to the gripper coupling with four M5 screws and toothlock washers, using a 4mm hex key.
9. Repeat steps 4, 5, 6, 7, and 8 for the second Hand-E gripper.
10. Secure the M8 splitter to the front of the adapter plate with two M4 screws and lock washers, using a 3mm hex key.
11. Connect the M8 splitter to the robot tool connector.

i For details on using the "Fingertips Extender Kit" or the "2F85 Conversion Kit", please refer to the instruction manual of the CNC Machine Tending Kit.



DO NOT CONNECT YOUR GRIPPERS TO THE M8 SPLITTER YET. THIS WILL BE DONE AT A LATER STAGE, WHEN CONFIGURING YOUR GRIPPERS ON THE TEACH PENDANT.

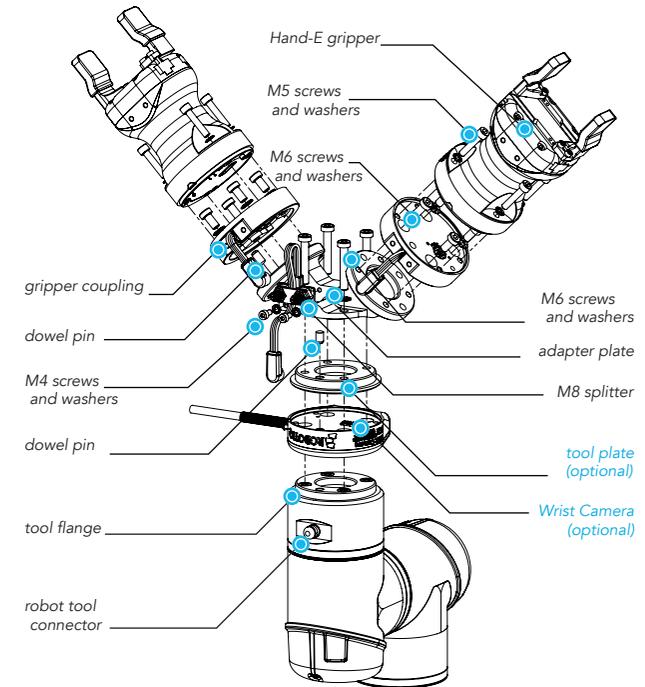


Figure 1. Exploded view of the CNC Machine Tending Kit, Wrist Camera included.



5. SOFTWARE INSTALLATION

1. Have a USB stick that contains the required **.urcap** files (**SEE SECTION "GET THE LATEST"**).
2. Insert the USB stick in the robot teach pendant.
3. Tap the triple bar icon in the upper right corner, and select **Settings**.
4. Tap the **+** sign.
5. Open required **.urcap** files:
 - Grippers: **UCG-X.X.X.urcap**
 - Machine Tending Copilot: **UCS-X.X.X.urcap**
 - Wrist Camera (optional): **UCC-X.X.X.urcap**
6. Tap the **Restart** button to activate the URCap files.
7. The **Gripper** and **Active Drive** toolbars will display shortly after software has been installed.
8. Connect to the robot controller the provided USB dongle containing the Machine Tending Copilot license.



6. DETECTING GRIPPERS

1. Initialize the robot.
2. On your Teach Pendant, tap **Installation > URCaps > Gripper > Dashboard**.
3. Connect a Hand-E gripper cable to the M8 splitter.
4. Tap **Scan**, select the dropdown list, and assign a new gripper ID. Note the ID you just assigned.
5. Select **Activate**.
6. Disconnect your activated gripper from the M8 splitter, and connect the second Hand-E gripper.
7. Repeat steps 5 and 6 for the second gripper. Make sure to select a different gripper ID from the one used for the first gripper.
8. Reconnect the first gripper to the M8 splitter.
9. To check that both grippers communicate properly with the robot, select the **Activate** and **Reactivate** buttons, located next to each gripper.



Figure 2. Activating two Hand-E grippers on the Teach Pendant.

- i** To find out how to set each gripper tool center point, as well as how to specify the overall payload of your Kit, and much more, refer to the instruction manual of the CNC Machine Tending Kit, or to the Robotiq eLearning platform.



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7. WIRING (for Wrist Camera)



A 2MM SLOTTED SCREWDRIVER IS REQUIRED FOR THIS STEP.

1. Connect the red wire of the device cable to a 24V pin of the robot controller.
2. Connect the black wire of the device cable to a 0V pin of the robot controller.

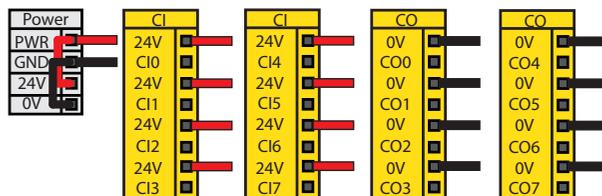


Figure 3. Wiring the Wrist Camera to the robot controller.

3. Connect the 4-port USB hub splitter to the USB port of the robot controller.
4. Connect the Wrist Camera USB cable to the USB hub.
5. Make sure the following USB dongles are connected to the USB hub splitter:
 - Vision Server (server is packaged with the Wrist Camera .urcap download; copy to a USB stick)
 - Vision license
 - Machine Tending Copilot license



CNC MACHINE TENDING KIT

QUICK START GUIDE

For installation on e-Series Universal Robots



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