Program Template EXPLAINED

Dual Gripper Setup and Programming

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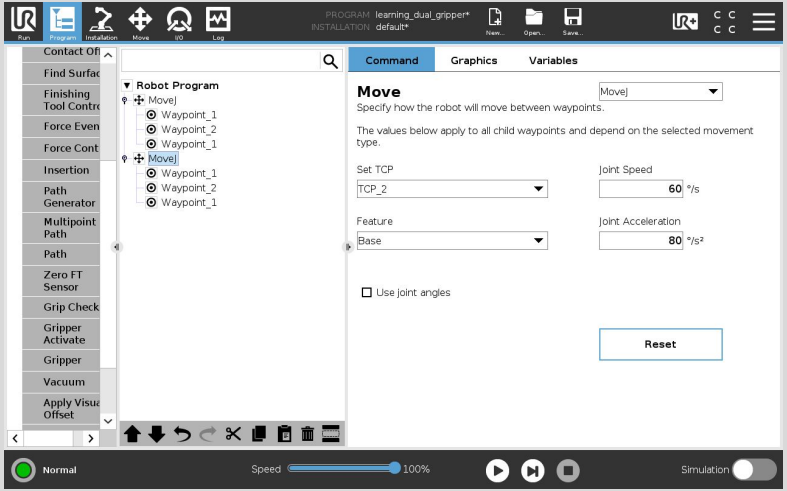
eLearning

PROGRAM TEMPLATE USING Dual Gripper

Description

Use this document to help you program your application using the template for the **Dual Gripper.** You can learn more about the steps on how to program your first Dual Gripper application such as CNC Machine Tending application using the available video for this course.

Visit ***elearning.robotiq.com*** for more details.



What you will need

- Robotiq Dual Gripper
- Latest URcap - Gripper URCap
- Universal Robot UR3e, UR5e, UR10e or UR16e
- Program Template:**Template_Dual_Gripper.urp**

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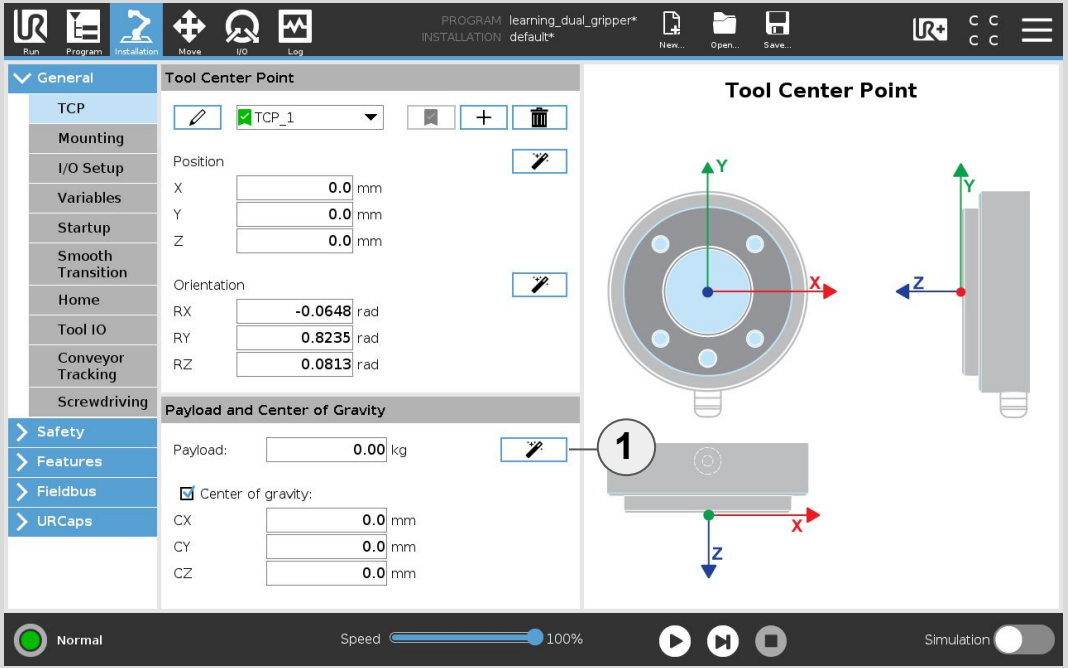
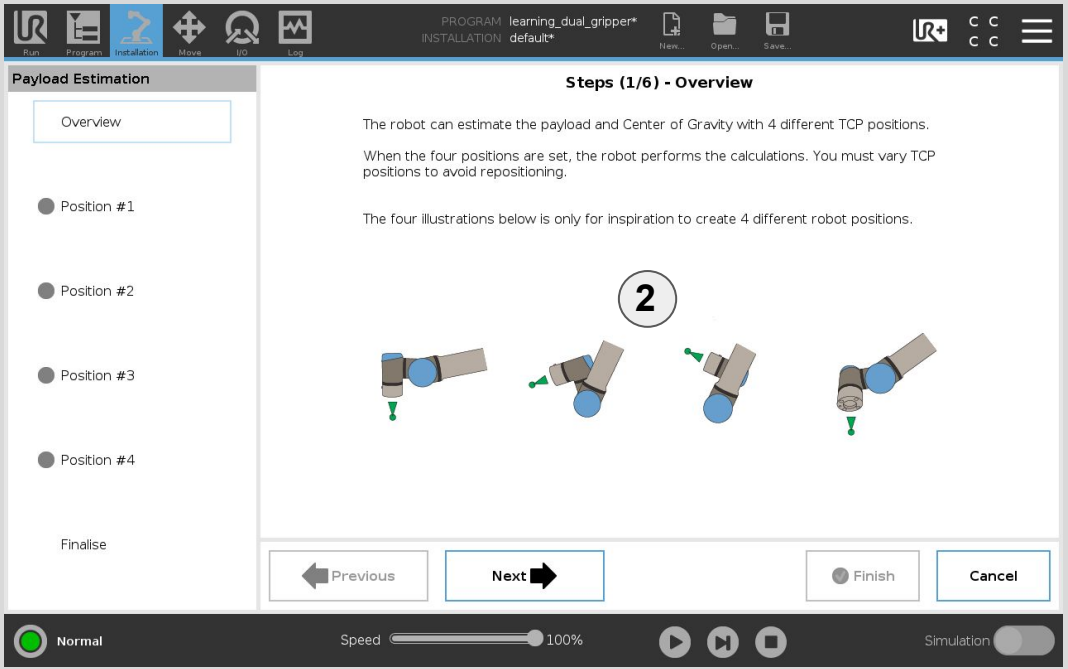
Setting the Payload



1 **Wizard**
Click on the **wizard** to set the **Payload** and **Center of Gravity**. A table with the specific values can also be used. This table can be found in the Instruction Manual.



2 **Set 4 different positions**
In order to setup the payload and center of gravity, 4 different positions need to be set. Follow the steps to complete the process.

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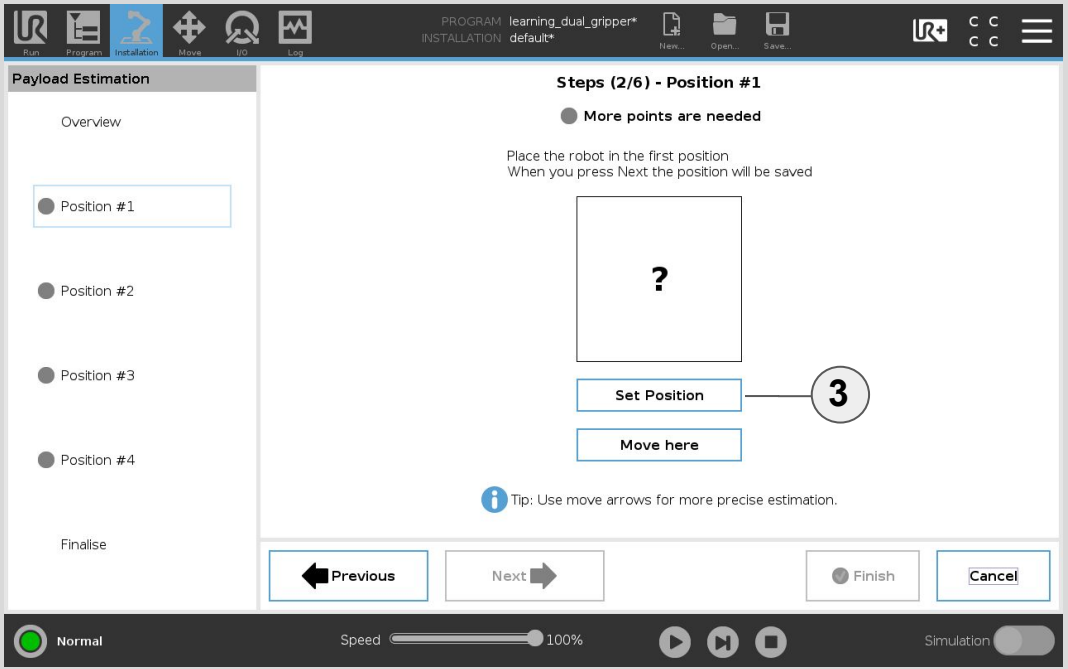

3 **Set Position**
Set the all 4 positions by clicking on the **Set Position** button.

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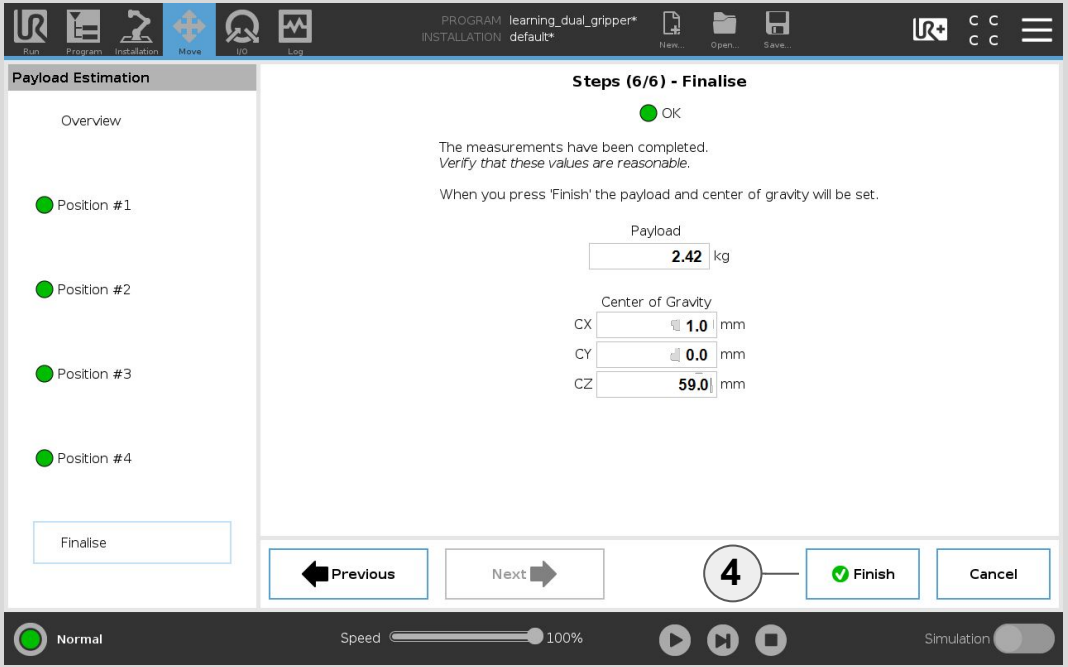

4 **Finish**
The Payload and the Center of Gravity is display. Click **Finish** to close the wizard.

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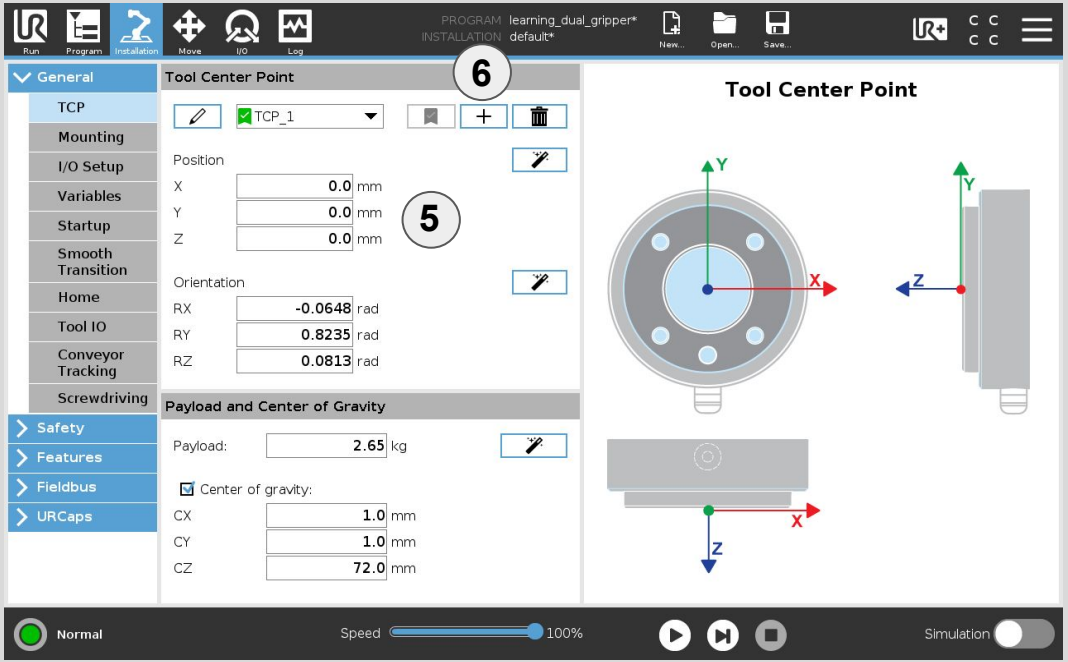
Setting the Tool Center Point (TCP)



5 **Position (X,Y,Z)**
Using the table at the end of each instruction manual, enter the Tool Center Point position for each axis or use the wizard with a fixed point to obtain an estimated position of the TCP.

6 **Adding a Tool Center Point**
On a Dual Gripper, a second Tool Center Point needs to be added using the **+** button. Step 5 needs to be done a second time to enter the three values of the second TCP.

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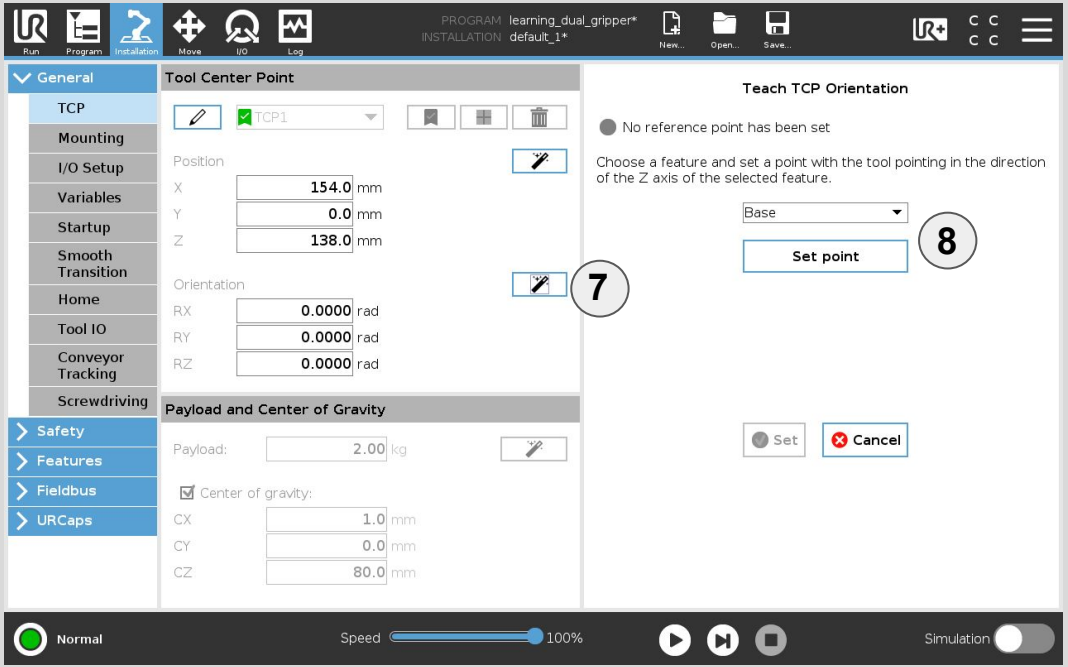
Setting the Tool Center Point Orientation



7 **Orientation of TCP1**
Orient the gripper corresponding to your first TCP so it will be oriented upward. Click on the **wizard** to define the TCP orientation.

8 **Set Point**
Using the wizard, teach the TCP Orientation relatively to the robot base.

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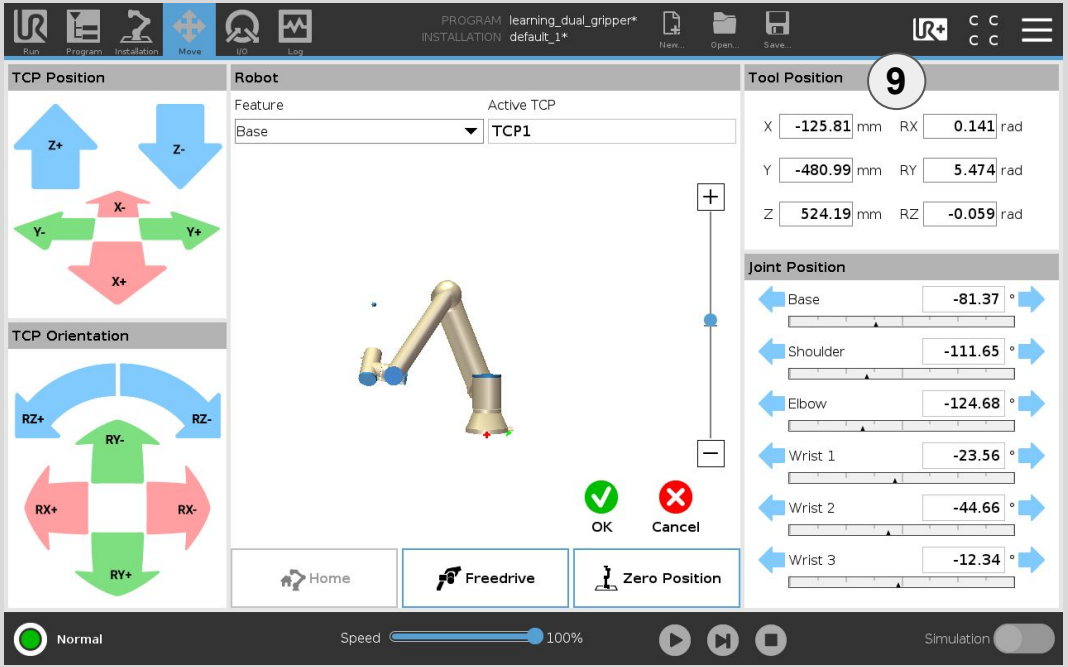
Setting the Tool Center Point Orientation



9 Tool Position
Enter the Tool Position section to set the values of RX, RY and RZ.

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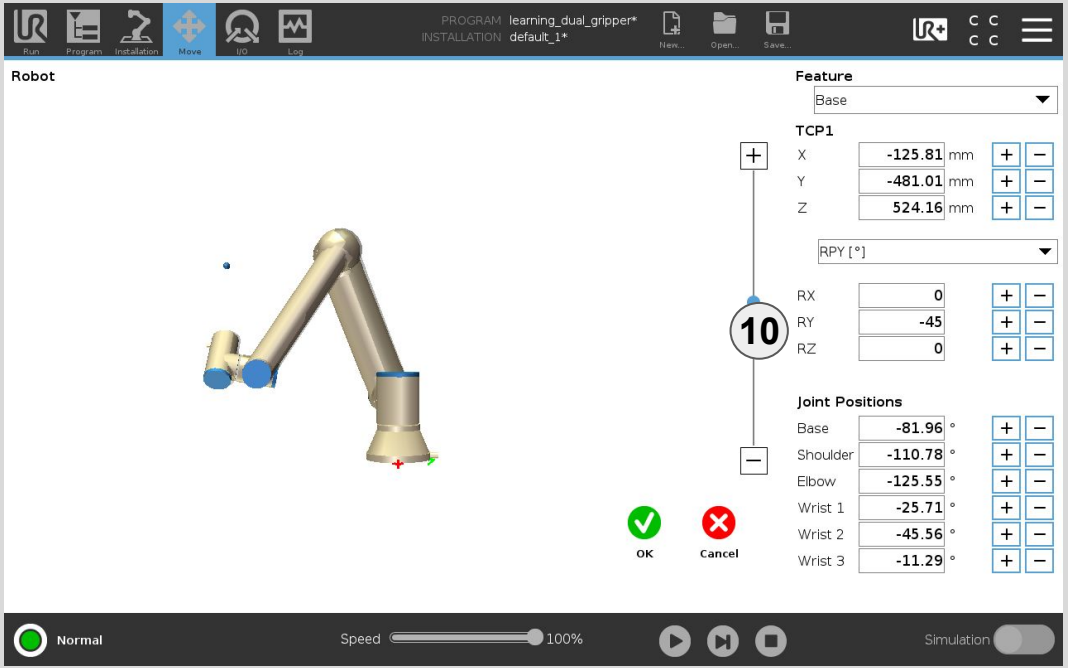
Setting the Tool Center Point Orientation



10 Tool Position

Set the values of RX, RY and RZ with the following values: RX = 0, RY = +/- 45 and RZ = 0. Those values are for RPY(°)

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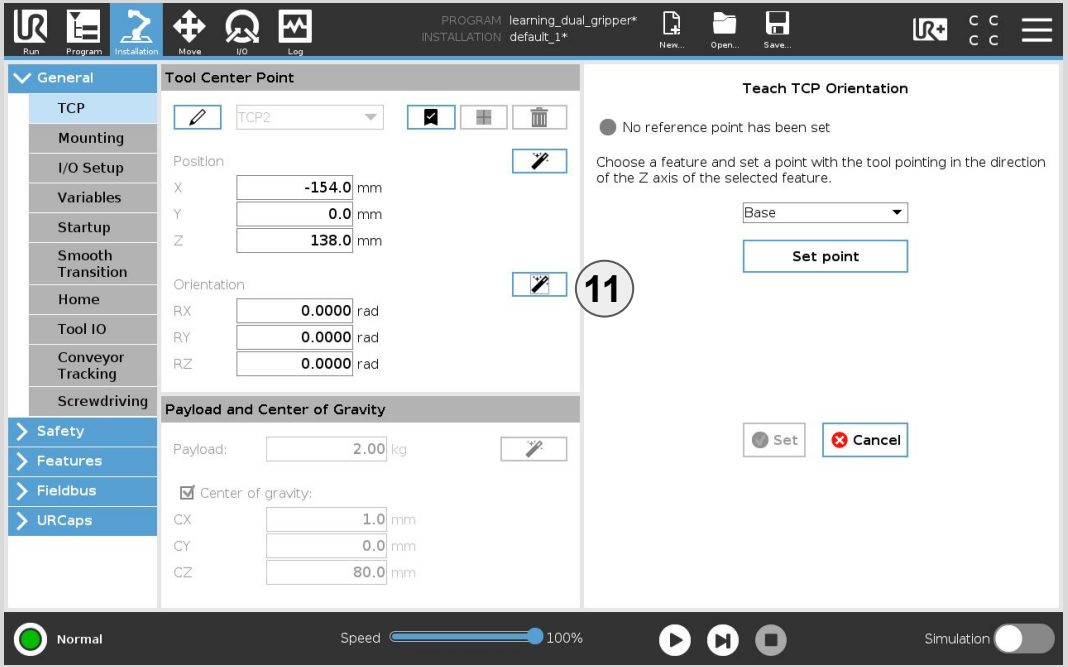

11 **Orientation of TCP2**
Use the **Wizard** to teach the second TCP orientation.

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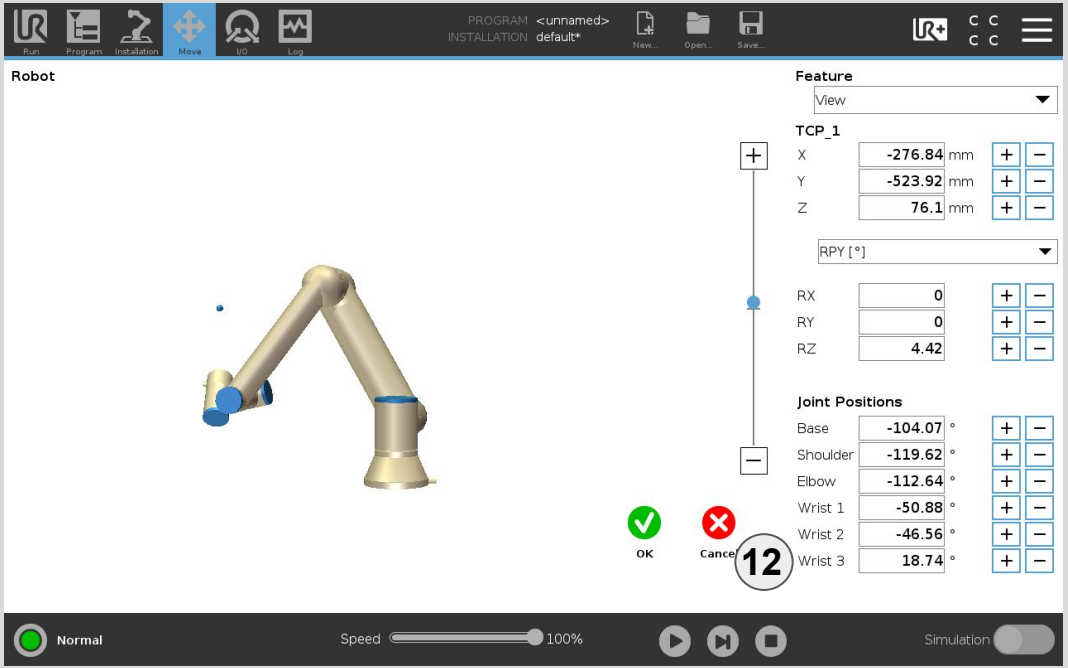
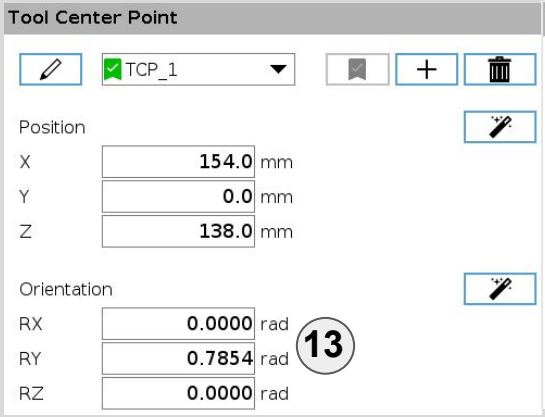
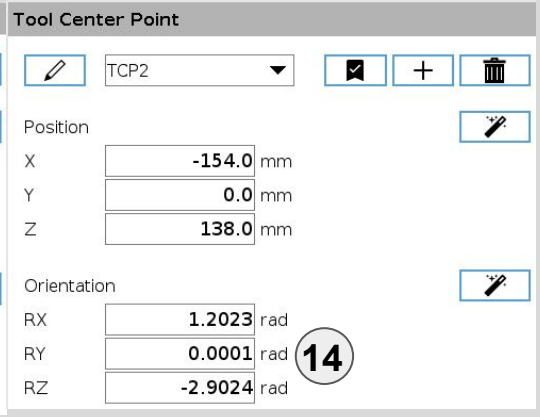


12 **Set the values**
Modify the value of the wrist 3 by adding or removing 180° to the value. In this example, the new value will be 198.74°.

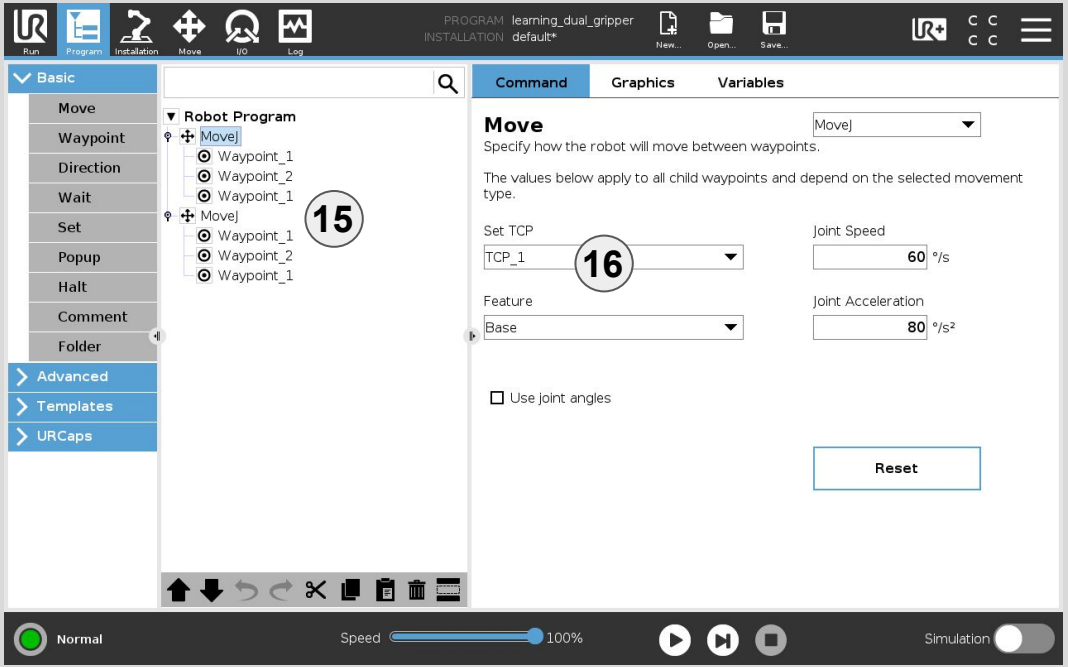




13 **Example of Orientation Values for TCP1**

14 **Example of Orientation Values for TCP2**

Programming Dual Pick



15 First Move J
Set the TCP of the first move J with the TCP_1. Add 3 waypoints (Approach, Pick, Retract).
The waypoints Approach and Retract should be linked together since they will be the same position.

16 Second Move J
Set the TCP of the second move J with the TCP_2 and use the exact same waypoints of the first move J

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