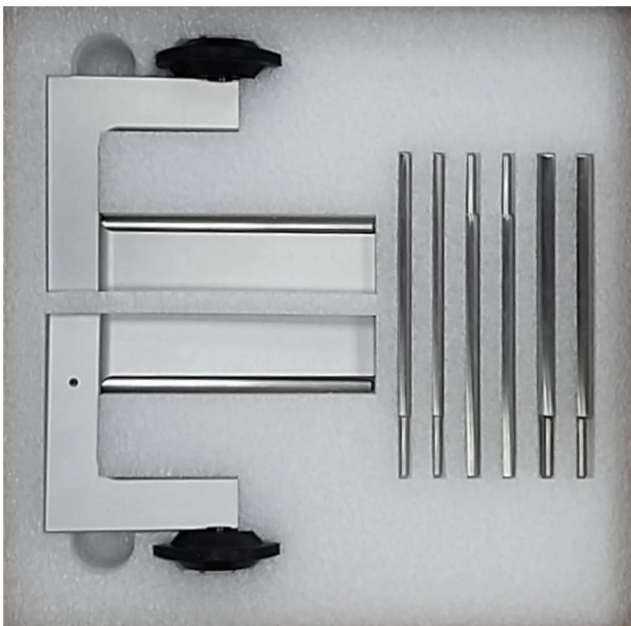# Setting Up T21 C-Clamps

This FAQ describes the procedure used in TestWise to set up the 2018 version of C-Clamps. C-Clamps may also be referred to as Band Clamps in some standards. Typical standards where T21 C-Clamps may be used are ASTM D4964 and EN 14704-1 Method B, plus many retailer test methods.

The specimens used with T21 C-Clamps are loops, made from strips of fabric. Extreme care should be taken to prepare the specimens to exactly the specified dimensions. Specimens should fit around the bars without tension or slackness.

The T21 Kit

The stock code of the T21 C-Clamps (2018 version) is 794-845.

It contains 2 C-Clamps and 4 sets of interchangeable bars. Each C-Clamp is identical and can be located as the top or bottom clamp. The C-Clamps can be fitted to Titan for right-handed or left-handed use.

The bar sets have the following diameters: 6.5 mm, 8 mm, 10 mm and 13 mm.

The bars are used in pairs and the different sizes are typically not mixed.

A 2 mm hex key is required to loosen and tighten the grub screw which allows the bars to be replaced.

Fixing the C-Clamps to Titan

First, ensure the Titan has been "Homed". This is essential when setting the Reference Position for new clamps and fixtures.
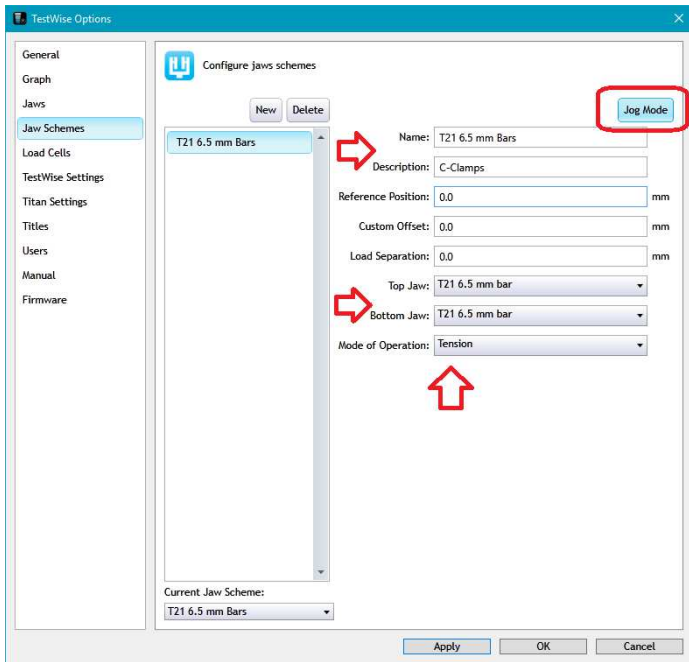
Connect one of the C-Clamps at the top (on the loadcell). Connect the other C-Clamp at the bottom. This picture shows the C-Clamps fitted so that the loop specimen is placed around the bars from the right-hand side.

Move the C-Clamps until they are approximately 100 mm apart. Then accurately measure and note the actual distance, this example shows 81.75 mm.

Setting Up the Jaw Schemes in TestWise

During this step, we will setup four (4) different Jaw Schemes, one (1) for each pair of bars.

The first part of this step will establish the Reference Position for the C-Clamps. The Reference Position for the four Jaw Schemes to be set up will be the same, that is, it is necessary to establish the Reference Position only once.

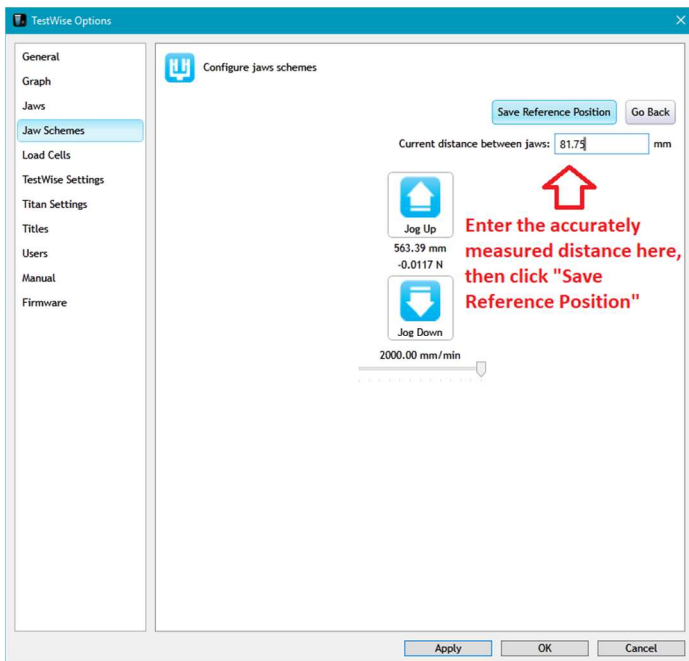Go to File > Options > Jaw Schemes

Click New

For the name type "T21 6.5 mm Bars"

For the description type "C-Clamps"

Then move down Top Jaw and Bottom Jaw, select T21 6.5 mm bar for both options.

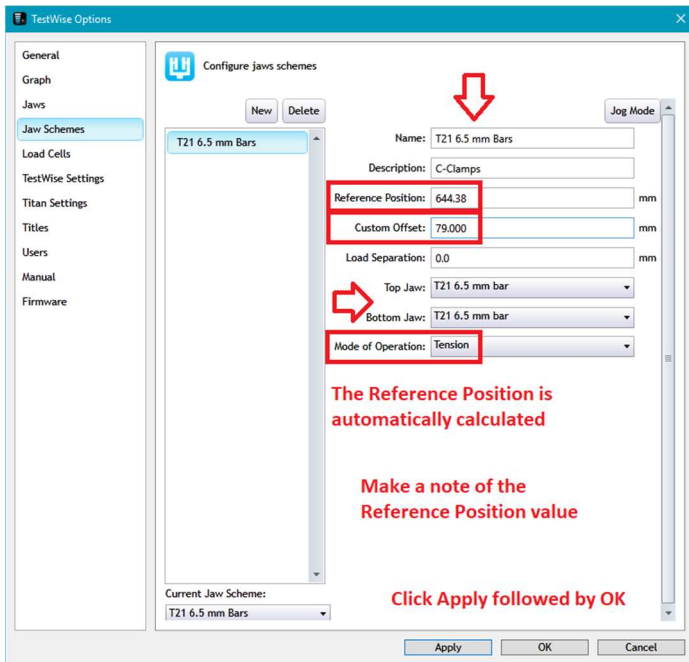Ensure the Mode of Operation is Tension.

Then click Jog Mode.

The display switches to this screen.

In the Current Distance Between Jaws field, enter the accurately measured distance between the jaws which was noted earlier, in this example 81.75 mm.

Click Save Reference Position and the display reverts to the above screen.

The Reference Position is calculated automatically and shown here, in this example it is 644.38 mm.

Make a note of your Reference Position.

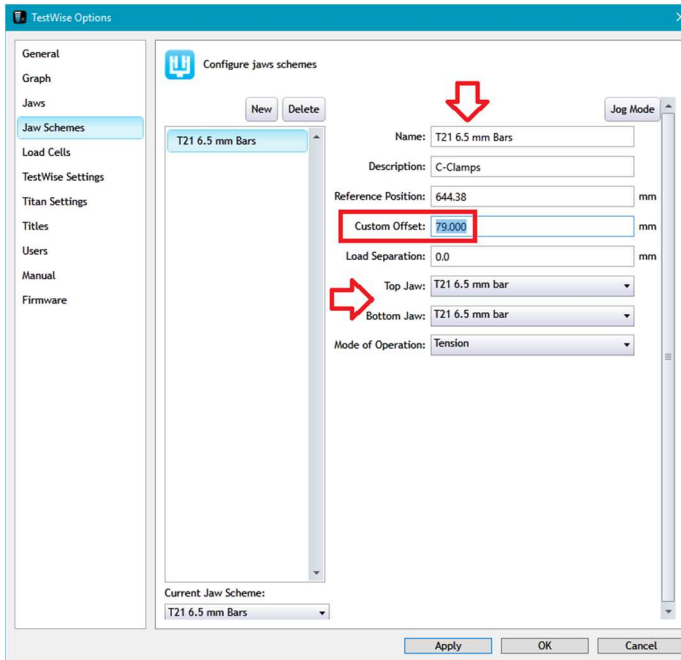For "T21 6.5 mm Bars", the Custom Offset value is ALWAYS 79.0 mm.

Check the remaining details are set as shown here, then click Apply followed by OK.
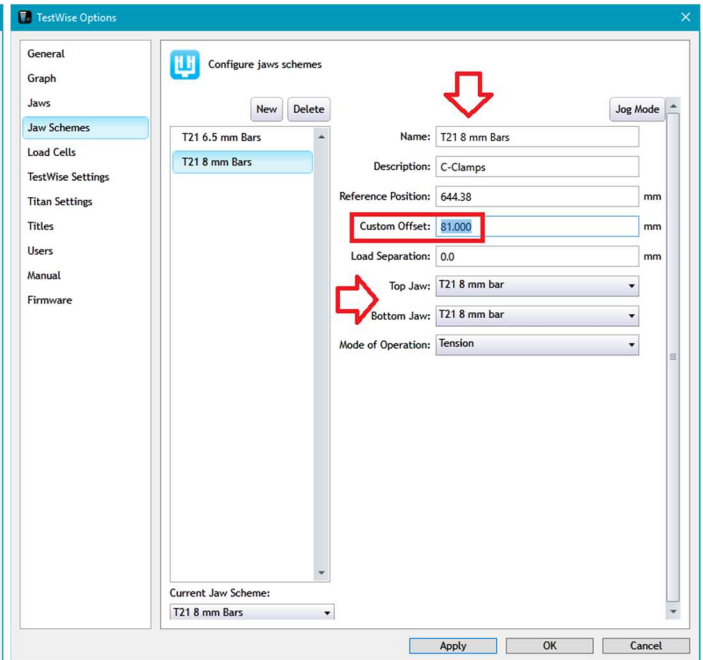
The first of four Jaw Schemes is now setup.

For the remaining Jaws Schemes, 8 mm, 10 mm and 13 bars, enter the details as shown on the next page.

It is not necessary to determine the Reference Position again, use the value which was noted earlier.
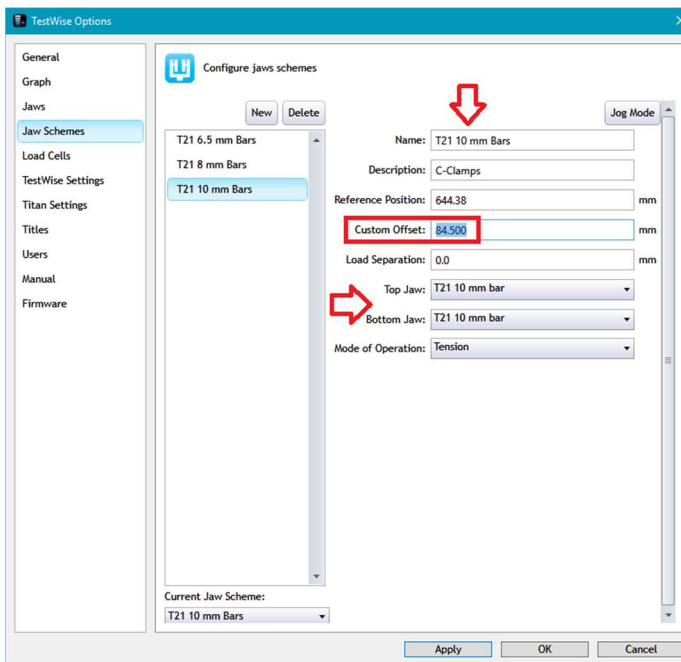
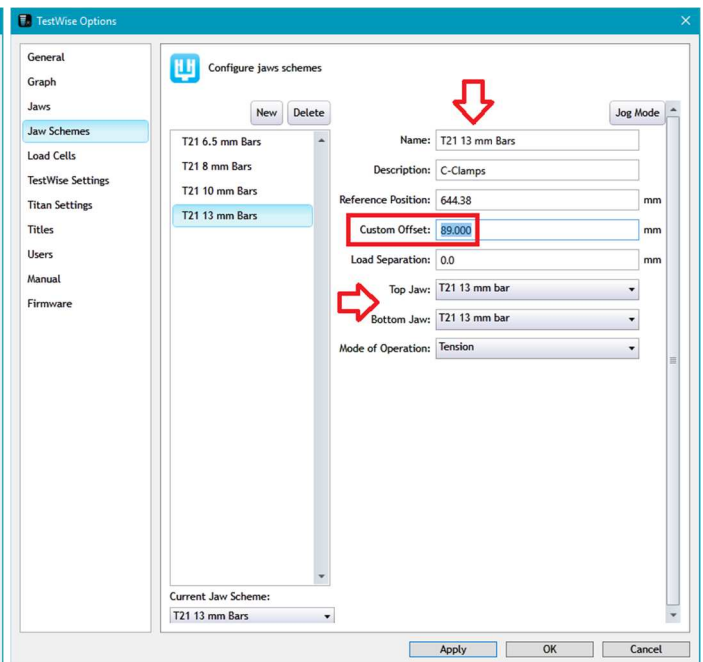The setup of T21 C-Clamps is then complete.

For "T21 6.5 mm Bars", the Custom Offset value is ALWAYS 79 mm

For "T21 8 mm Bars", the Custom Offset value is ALWAYS 81 mm

For "T21 10 mm Bars", the Custom Offset value is ALWAYS 84.5 mm

For "T21 13 mm Bars", the Custom Offset value is ALWAYS 89 mm

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