23 Click **YES** to confirm.

24 Define the clearance planes for the sphere.

25 Start the CNC run.

You can either select all features and set the current selection as measurement scope, or you create features by, for example, specifying tolerances for the angles of the perpendicular.

After the CNC run, the RT axis is qualified and saved on the computer (not in the measurement plan). This RT axis can now be used for workpiece measurements.

Qualifying the rotary table axis using the 2-sphere method

In the 2-sphere method, the rotary table axis is qualified using two spheres (e.g. reference spheres) of exact shape at different measurement heights. Both spheres are measured in a number of rotary table positions (usually 6).
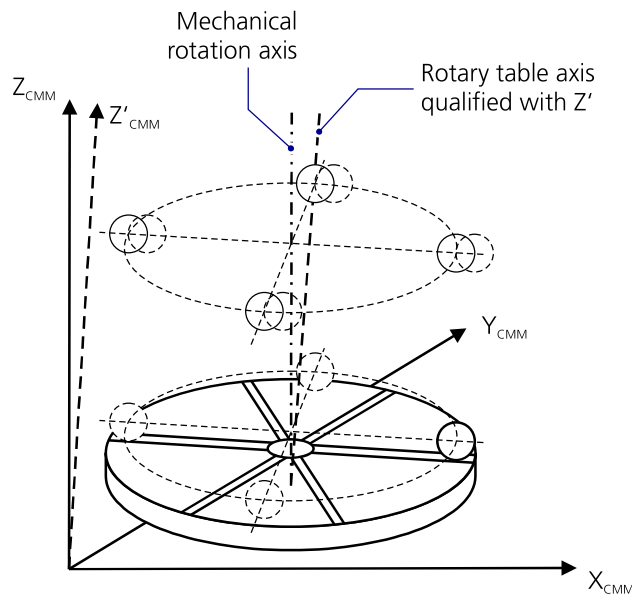

1 Secure the reference spheres onto the rotary table top at different heights, as far to the outside as possible.

The different heights should approximately represent the size of the workpiece to be measured.

2 Use the master stylus or another qualified stylus.

3 Open a new measurement plan.

4 Select **Resources → RT Functions → Prepare RT** or click the **Rotary Table** icon in the measurement plan area on the **Measurement Plan** tab.
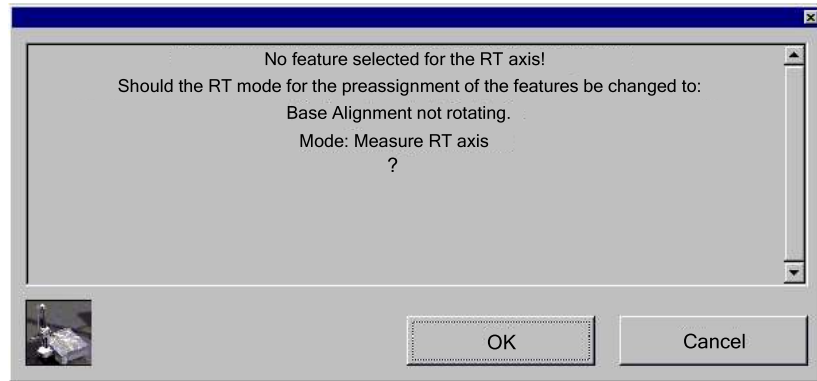
The **Rotary Table** window appears on the screen.
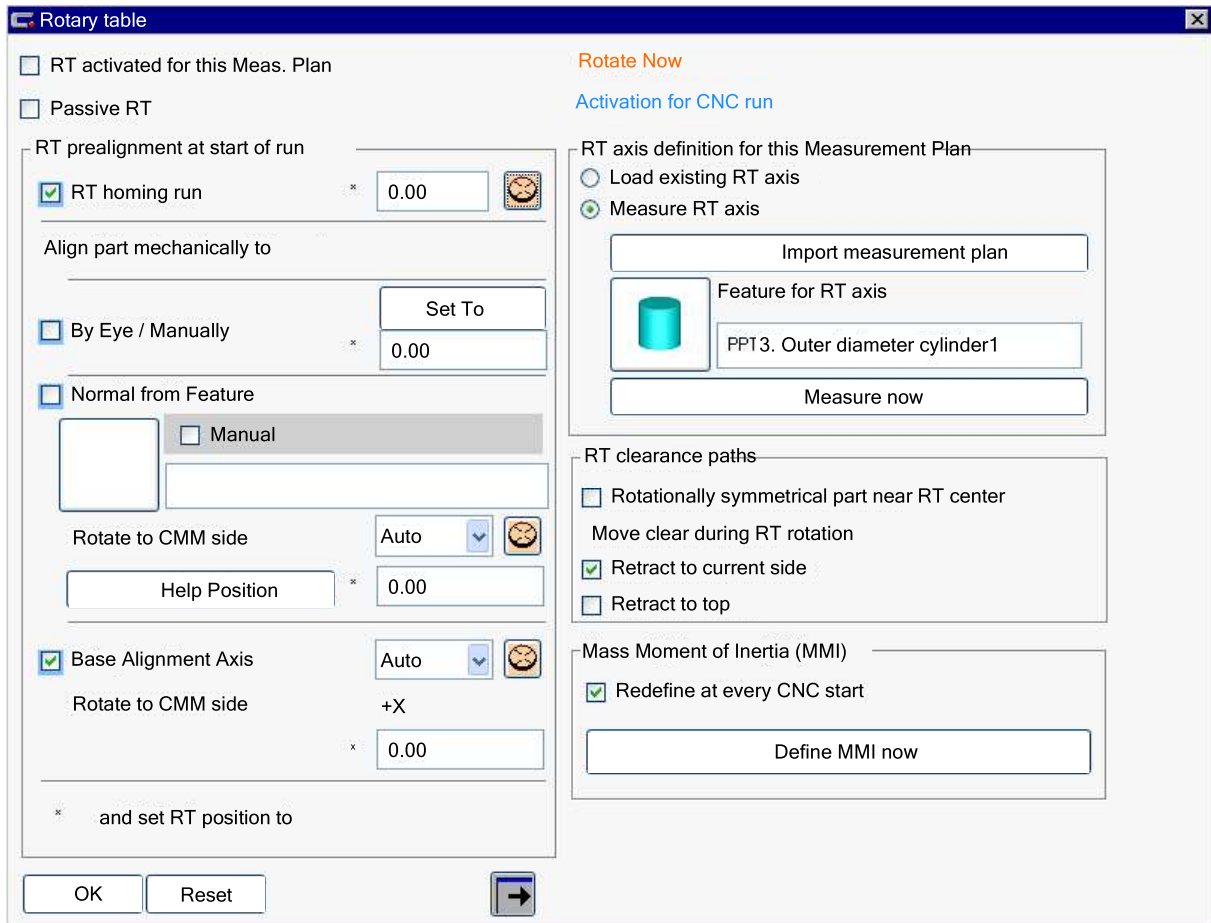
5   Tick the **RT activated for this Meas. Plan** check box.

6   Click **RT home position** to move the rotary table to its home position.

7   Select **Measure RT axis**.

This specifies that the RT axis is qualified with this measurement plan.

8   Click **OK** to close the screen.

You receive the following message:

9 Click **OK** to confirm.

10 Measure the two spheres manually with 6 points each.

Note: Make sure that the **BA not rotating with RT** menu item is enabled in the definition template of the spheres under **Nominal Definition**.

11 Use the spheres to form a base alignment.

In doing so, place the zero point in the upper sphere; use the lower sphere for the planar rotation.

12 Open the definition template for the upper sphere and use **Nominal Definition → Pattern → Rotational Pattern** to place a loop over the sphere.

13 Enter "0/0/0" at **Center**.

The coordinates of the sphere are required here. As this sphere sets the base alignment, the coordinates are 0/0/0.

14 Under **Angular Pitch**, enter the desired value (e.g. "60°") and under **Real number** the matching number of sphere measurements (e.g. "6").

15 Select **Rotate rotary table as well** and confirm with **OK**.

16 Repeat step 12 for the lower sphere. However, 0/0/0 must not be set under **Center**, rather the actual coordinates of the spheres in the base alignment.

17 In the toolbox or via **Measure**, select a cone.

18 Under **Nominal Definition**, select **Recall**.

19 Select all spheres in the loops.

20 Select **Resources → RT Functions → Prepare RT** or click **Rotary Table** in the list of prerequisites.

The **Rotary Table** window appears on the screen.

21 Click the square **Feature for RT axis** button and select the cone in the list.

22 Click **OK** to confirm your input.

A message is displayed.

23 Click **YES** to confirm.

**24** Define the clearance planes for the upper sphere.

25 Start the CNC run.

You can either select all the features and set the current selection as the measurement scope, or you create features by, for example, specifying tolerances for the angles of the cone.

After the CNC run, the RT axis is qualified and saved on the computer (not in the measurement plan). This RT axis can now be used for work-piece measurements.

Qualifying the rotary table axis using the measurement cylinder method

In the measurement cylinder method, the rotary table axis is qualified using a measurement cylinder with an exact shape in two rotary table positions.
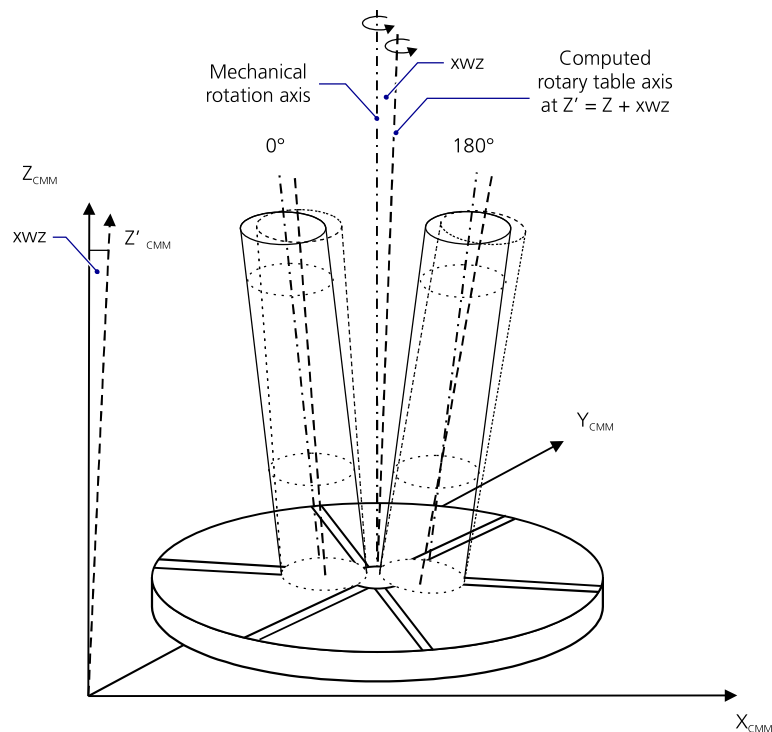
1 Secure the measurement cylinder onto the rotary table top using, for example, 3-jaw clamps).