Cheat Sheet

ZEISS

We make it visible.

First Qualification of a Stylus System

All steps listed below are completed from within **Probing System Qualification** window. From Start screen, select **Manage Stylus Systems**. From an open measurement plan, click **CMM** tab, then click **Stylus System** button.

Change to Master Probe

1. Click **CNC Stylus System Change** button.
2. Select probe holder for **MasterProbe** (holder turns green).
3. Click **Changer** dropdown menu and select **Load stylus system from holder.**
   a. Alternate: Right-click on green probe holder and select **Load stylus system from holder.**
   Caution: Machine will begin automatic stylus change.
4. After stylus system change has completed, click **OK** to close **CNC Stylus System Change** window.
5. Clean **MasterProbe.**

Position Reference Sphere

1. Place **Reference Sphere** on table.
2. Orient shaft of **Reference Sphere** along any 45° angle.
3. Secure clamping screw.
4. Clean **Reference Sphere.**

Define Reference Sphere Position

1. Click **Mode** dropdown and select **Geometry Re-qualification.**
2. Click **Ref. Sphere Position** button.
3. Verify orientation of **Reference Sphere** and click **OK.**
4. Verify **Probing Force/Behavior** and **Probing Dynamic** properties and click **OK**.
5. "Probe in direction of stylus shaft" dialog box opens.
6. Position **MasterProbe** over center of **Reference Sphere.**
7. Probe top of **Reference Sphere** with **MasterProbe.** Note: Qualification routine begins automatically.
8. When qualification is complete, verify **S** or **Sigma** value.
   a. If **Sigma** value is higher than normal, consider re-qualifying using "bending" qualification.
      i. **Tensor** for VAST-XT
      ii. **Passive Qualification** for VAST-XXT

Change to NEW Measuring Stylus System

1. Click **CNC Stylus System Change** button.
2. Select probe holder for **MasterProbe** (holder turns green).
3. Click **Changer** dropdown menu and select **Store stylus system in holder.**
   a. Alternate: Right-click on green probe holder and select **Store stylus system in holder.**
4. After **MasterProbe** has been stored, click **OK** to close **CNC Stylus System Change** window.

5. Rotate RDS back to A0° B0° (applies to RDS machines only)
   a. Click **Rotate stylus to new position** button, also known as **RC List** window.
   b. Under **New Angle Position**, edit A: field to 0.0
   c. Click **Rotates axis on machine** button at right.
      Caution: Sensor will rotate back to front position. Make sure path is clear.
   d. Click **OK** to close **RC List** window.
6. Click **Manual Stylus System Change** button.
7. Manually load new **Stylus System** into sensor.
8. Click **Pick Up Stylus System** button to open **Select Stylus System** window.
   a. If **Stylus System** was already created using another method,
      i. Click **Stylus System** dropdown menu and select **Stylus System** from list**.**
   b. If **Stylus System** has not been created, click **New** button to open **Create New Stylus System** window.
      i. Enter name of new **Stylus System**.
      ii. Enter name of new **Stylus**.
      iii. Click **OK** to close **Create New Stylus System** window.
9. Click **OK** to accept selection and close **Select Stylus System** window.
10. Click **Close** to close **Manual Stylus System Change** window.
11. Add additional **Stylus**, if applicable. (See Creating New Stylus Systems for more details)
12. Clean all **Stylus** on **Stylus System.**

Qualify Each Stylus

1. Click **Stylus Name / No.** dropdown and select **Stylus** to be qualified.
2. Click **Qualify Stylus** button.
   a. Only "bending" qualification can be executed on NEW stylus.
3. Verify **Probing Force/Behavior** and **Probing Dynamic** properties and click **OK**.
4. "Probe in direction of stylus shaft" dialog box opens.
5. Position **Stylus** with stylus shaft pointing at, and centered on **Reference Sphere**
6. Probe **Reference Sphere** with **Stylus.** Note: Qualification routine begins automatically.
7. When qualification is complete, verify **S** or **Sigma** value.
8. Repeat steps 1-7 for each **Stylus** on **Stylus System**.

Define Holder Location for Stylus System

1. Click **CNC Stylus System Change** button at top.
2. Select probe holder where **Stylus System** is to be placed (holder turns green).
3. Click **Changer** dropdown menu and select **Set stylus system to stylus system holder.**
4. Click dropdown menu, select **Stylus System** and click **OK.**
5. Verify **Stylus System** is at desired location.
6. Click **OK** to close **CNC Stylus System Change** window.

Repeat Qualifications of a Stylus System

All steps listed below are completed from within **Probing System Qualification** window. From Start screen, select **Manage Stylus Systems**. From an open measurement plan, click **CMM** tab, then click **Stylus System** button.

Change to Master Probe

1. Click **CNC Stylus System Change** button.
2. Select probe holder for **MasterProbe** (holder turns green).
3. Click **Changer** dropdown menu and select **Load stylus system from holder.**
   a. Alternate: Right-click on green probe holder and select **Load stylus system from holder.**
   Caution: Machine will begin automatic stylus change.
4. After stylus system change has completed, click **OK** to close **CNC Stylus System Change** window.
5. Clean **MasterProbe.**

Position Reference Sphere

1. Place **Reference Sphere** on table.
2. Orient shaft of **Reference Sphere** along any 45° angle.
3. Secure clamping screw.
4. Clean **Reference Sphere.**

Define Reference Sphere Position

1. Click **Mode** dropdown and select **Geometry Re-qualification.**
2. Click **Ref. Sphere Position** button.
3. Verify orientation of **Reference Sphere** and click **OK.**
4. Verify **Probing Force/Behavior** and **Probing Dynamic** properties and click **OK**.
5. "Probe in direction of stylus shaft" dialog box opens.
6. Position **MasterProbe** over center of **Reference Sphere.**
7. Probe top of **Reference Sphere** with **MasterProbe.**   Note: Qualification routine begins automatically.
8. When qualification is complete, verify **S** or **Sigma** value.
   a. If **Sigma** value is higher than normal, consider re-qualifying using "bending" qualification.
      i. **Tensor** for VAST-XT
      ii. **Passive Qualification** for VAST-XXT

Change to Measuring Stylus System

1. Click **CNC Stylus System Change** button.
2. Select probe holder for **Stylus System** (holder turns green).
3. Click **Changer** dropdown menu and select **Load stylus system from holder.**
   a. Alternate: Right-click on green probe holder and select **Load stylus system from holder.**
   Caution: Machine will begin automatic stylus change.
4. After stylus system change has completed, click **OK** to close **CNC Stylus System Change** window.
5. Clean all **Stylus** on **Stylus System.**

Qualify Each Stylus on VAST-XT and (VAST-XXT Calypso v5.6 and earlier)

1. Click **Stylus Name / No.** dropdown and select **Stylus** to be qualified.
2. Click **Mode** dropdown and select **Geometry Re-qualification.**
3. Click **Qualify Stylus** button.
4. Click **OK** to **Overwrite Styli Data**.
5. Verify **Probing Force/Behavior** and **Probing Dynamic** properties and click **OK**.
6. "Probe in direction of stylus shaft" dialog box opens.
7. Position **Stylus** with stylus shaft pointing at, and centered on **Reference Sphere.**
8. Probe **Reference Sphere** with **Stylus.**   Note: Qualification routine begins automatically.
   a. If **Sigma** value is higher than normal, consider re-qualifying using "bending" qualification.
      i. **Tensor** for VAST-XT
      ii. **Passive Qualification** for VAST-XXT
9. Repeat steps 1-8 for each **Stylus** on **Stylus System**.

Qualify Each Stylus on VAST-XXT (Calypso v2014 aka 5.8 and later)

1. Click **Stylus Name / No.** dropdown and select **Stylus** to be qualified.
2. Click **Mode** dropdown and select **Geometry Re-qualification.**
3. Click **Qualify Stylus** button.
4. Click **OK** to **Overwrite Styli Data**.
5. Verify **Probing Force/Behavior** and **Probing Dynamic** properties and click **OK**.
6. "Automatic Qualification" dialog box opens.
7. Position **Stylus** with clear access to **Reference Sphere.**
   a. Stylus will move directly from current location to position when normally probed manually.
8. Click **OK** to begin automatic qualification routine.
9. When qualification is complete, verify **S** or **Sigma** value.
   a. If **Sigma** value is higher than normal, consider re-qualifying using **Passive Qualification**.
10. Repeat steps 1-9 for each **Stylus** on **Stylus System**.