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## Tray Alignment

Tray alignment is required to compensate for small deviations in positioning of the gripper which may occur after disassembling the module for repair.

The tray alignment procedure uses several tray positions as reference points. Because the tray is a rectangle, a two-point alignment is sufficient to corrects all other vial positions within the tray. On completion of the procedure, the corrected gripper positions are stored in the instrument firmware.

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### NOTE

The alignment procedure requires an 1100 Control Module G1323B with firmware revision B.02.02 or higher. The screen with the alignment dialog box can be found under the menus **Views/System/Tests/Autosampler**. The alignment procedure must be done with the standard 100-position vial tray installed.

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### WARNING

**The alignment procedure has to be performed in the correct order and without skipping parts, to ensure a proper working Autosampler.**

### User Interface

In the Control Module the “Align Tray” function is located in the Control display of the autosampler.

Additional information can be found in the on-line information systems.

The correct procedure for the Control Module are:

- 1 Set alignment to factory default:
  - Go to **Align/Tray** and press button **Default**.
  - Go to **Align/Transport** and press button **Default**.
  - Wait while the Autosampler performs a reset and go back to

### Tray Alignment

#### **Align/Transport.**

- 2** Put capped vials into positions #15 and #95 of the 100-vial tray.
- 3** Move the gripper arm to position of vial #15. Use the **Enter** key to hit **Goto Vial**.
- 4** Use the **Arm down** key(F2) to move the fingers as close as possible to the top of the vial, without the gripper fingers touching the vial.
- 5** Use the Up and Down arrow keys for Theta correction (rotational movement).
- 6** Use the Left and Right arrow keys for X-position correction (horizontal movement).
- 7** Open the gripper (F4) and move it further down for about 5 mm in such a way that vial cap and rubber of gripper fingers have the same height.
- 8** Visually re evaluate if the vial is in the center of the gripper fingers and correct X- and Theta position accordingly.
- 9** Press the **Enter** key to hit **Next Vial**; enter vial #95 and press **Goto Vial**.
- 10** Repeat steps 4 to 8 to align the gripper at position #95.
- 11** Press button Average (F8) to balance the alignment.
- 12** Press button Done (F6) to store the alignment permanently in non-volatile memory and to reset the module.
- 13** To check the result go back to the alignment dialog box, move to vial position #15 and #95 to see if the alignment is acceptable.

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**NOTE**

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To leave the alignment screen without changes use the **Esc** key.

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**NOTE**

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The result can be a compromise e.g. if the X position at #15 and #95 are off to the same side, then it is OK. However, if at both positions the correction still should be in one direction or, if the failure in one position is larger than the other, you must restart the alignment procedure with step 3. The same goes for the Theta correction.

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