# Position Correction Setting

**■ Position correction**

This product measures items such as the step and width in the measuring area specified on the master profile.
Position correction allows the measuring area to trace workpiece (profile) misalignment and changes in the tilt.

* The profile position is not corrected, but the measuring area is traced.

**■ Measurement tips**

1. Consider where to set a correction standard on the master profile.
   A correction standard refers to an area that maintains the same shape and moves in the same way as workpiece misalignment.

2. Determine whether to perform X, Z, or θ correction based on the direction of workpiece misalignment and presence/absence of tilt changes.

* Refer to hints of "OUT setting" for how to set the correction standard area (= correction target).

* Feature correction is effective when the correction standard area can be specified at a point only instead of an area.

* Up to two areas can be set for correction standard (position correction 1, 2). A correction mode can be selected independently for each area.
  The standard to use for mask areas in the profile mask setting and measuring areas in the OUT setting can be selected for each area.

# Position Correction Setting

■ **Correction mode**

**<X correction> (1)**

Corrects the displaced amount of a correction standard edge position (X coordinate) between the measured profile and master profile.

**<X correction> (2)**

Corrects the displaced amount of a correction standard height position (Z coordinate) between the measured profile and master profile.

**<Feature correction> (3)**

Corrects the displaced amount of a correction standard point position (X, Z coordinates) between the measured profile and master profile.

**<θ correction> (4)**

There are two correction methods as follows:

[Horizontal standard]

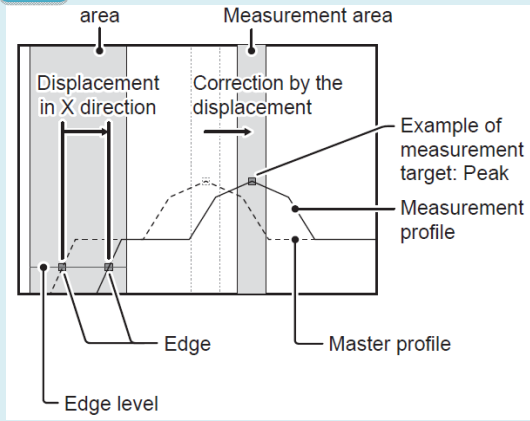
Rotates the angle between a proximate line of a measured profile in the correction area and a horizontal line to correct the measuring area.

[Master profile standard]

Rotates a tilted amount of a proximate line of a measured profile in the correction area based on the master profile to correct the measuring area.

In any case, the rotation correction center is the intersection coordinate of the vertical line passing through the correction area center (correction area 1 when two areas have been set) and the proximate line of the measured profile.

1

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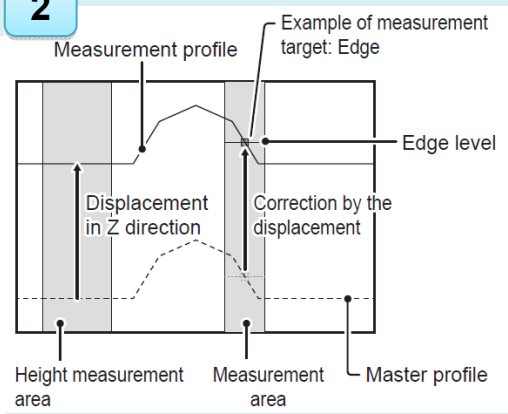


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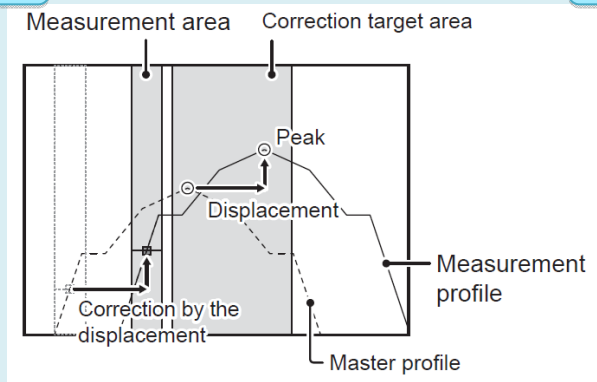


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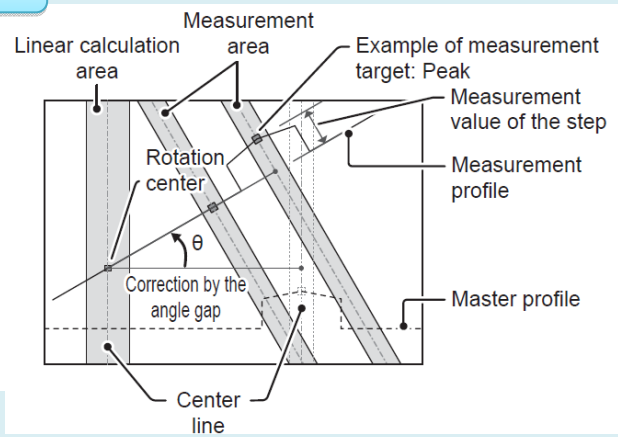


# Position Correction Setting

* Correction fails when an angle of θ correction exceeds the range of -45° to +45°.
* If a correction standard flat of a profile is out of the correction area before θ correction, X correction is required prior to θ correction. This is called "θ preliminary correction".

* In θ correction, Z correction is performed simultaneously using the same data in the θ correction area.

**<Combined correction>**

X correction, Y correction, feature correction, and θ correction (including θ preliminary correction) can be used in combination.

[Instances where X -> Z correction is effective] (1)

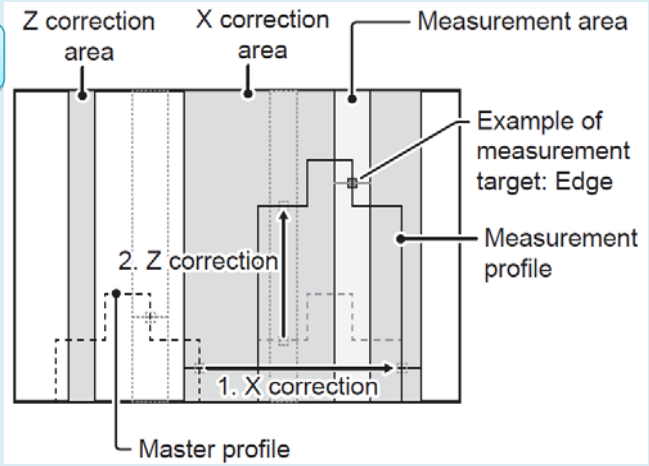
When the standard edge for X correction in a profile is within the X correction area even when misaligned, but the standard flat for Z correction in the profile may be outside the Z correction area.

[Instances where Z -> X correction is effective] (2)

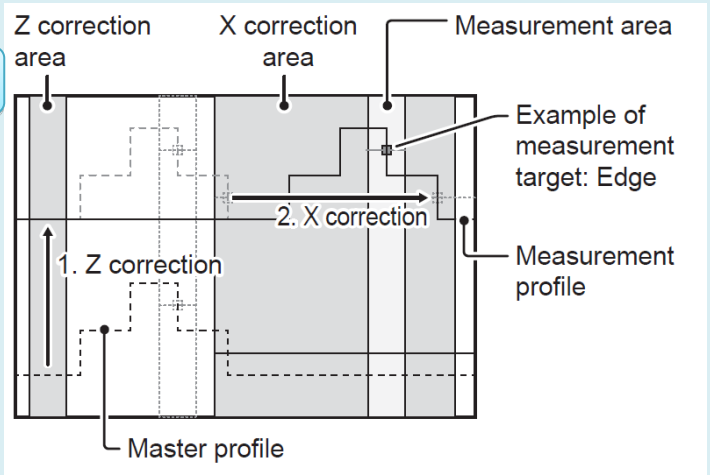
When the standard flat for Z correction in a profile is within the Z correction area even when misaligned, but the standard edge for X correction in the profile may be outside the X correction area.

θ correction is performed prior to X/Z correction when used in combination.

1




2



# Position Correction Setting

## ■ Position correction in dual head mode (3)

3

Use for correcting changes in the tilt when measuring one workpiece by using 2 heads facing each other.

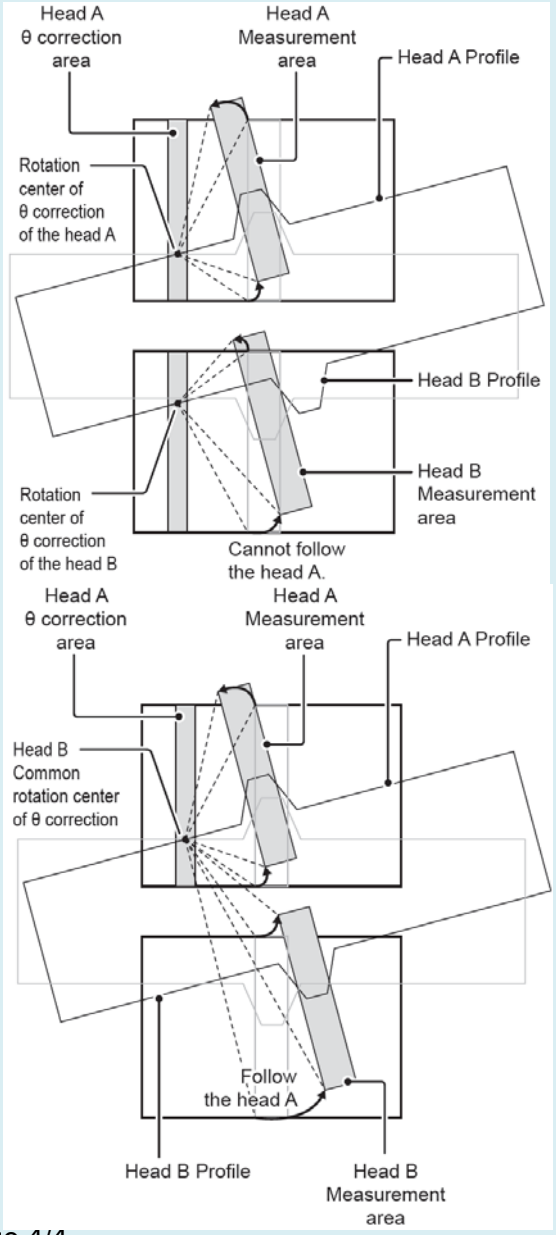
In θ correction, it is important that head A/B have a rotation center on the same coordinate in actual space.
By entering an accurate position relation of head A/B, the dual head mode rotates both heads around the same coordinate in actual space to correct the measuring area.

## ■ Position correction failure

When position correction fails, all OUT measurement values using that position correction become "ALARM" (= measurement value alarm status).

There are two conditions to fail position correction.
- When no correction target is detected in the correction area.
- When an angle of θ correction exceeds the range of -45° to +45°.

* If position correction has been set for a profile mask, that mask is ignored (masking will not be performed.)




**<When dual head mode is OFF>**
Even if head A/B have the same θ correction setting, the measuring area of head B does not trace that of head A because the profile rotation center of head B is misaligned from that of the target.

**When dual head mode is ON**
By setting the θ correction area for head A, the measuring area of head B is also corrected to trace that of head A.