

AM1 adjustment module



The AM1 adjustment module has been designed for use with the PH6M and MIH manual probe heads and the PH10T/M motorised probe heads. It provides quick and accurate angular alignment of the probe head with the CMM's axes and/or the autochange rack.

In addition, the quick release mechanism allows the head to be removed for storage and subsequently replaced without re-alignment. Built in overtravel protection decreases the risk of head damage.

Specification

Size	60 mm x 15.5 mm (2.36 in x 0.61 in) nominal
Adjustment	$\pm 2^\circ$ in pitch and roll* (recommended) $\pm 1.5^\circ$ in yaw
Overtravel	$\pm 3.5^\circ$ in pitch and roll
Mounting	Mounts to quill using shank Alternatively direct to quill using OEM adaptor
Weight	150 g (5.29 oz)

* Up to $\pm 5.5^\circ$ in pitch and roll is possible but this is at the expense of overtravel.

Installation

Follow these instructions carefully:

1 Preparation

Remove the safety screws (refer to figures 1 and 4). Release the lock screw in the front and the AM1. Unscrew and retract ONE yaw adjusting screw. Rotate mounting plate through 60° and remove.

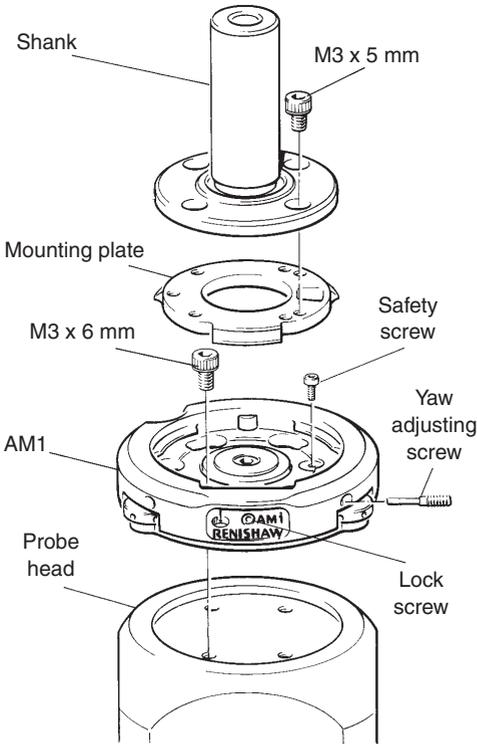


Figure 1 - AM1 installation

2 Locate AM1

Locate AM1 body to probe head and secure with M3 x 6 mm screws. Use three screws for PH10M and PH10T. See figure 2 for top views of probe heads and screw locations.

3 Refitting the mounting plate

Refit mounting plate to AM1 and locate by rotating through 60°. Screw yaw adjusting screw against lug.

NOTE: If shank / mounting plate assembly is to be permanently attached to the head, the safety screw should be replaced before assembling the shank on the mounting plate. Alternatively, if quick release is required, the screw should be left out.

4 Secure shank

Secure shank to mounting plate with four M3 x 5 mm screws provided. Do not use longer screws.

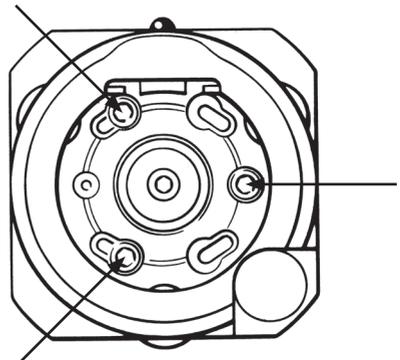


Figure 2 - PH10M and PH10T
(three mounting screws)

5 Roll adjustment

Rotate the roll adjustment capstans equally and in opposite directions (i.e. one capstan clockwise and the other anti-clockwise). Refer to figures 4 and 5.

6 Pitch adjustment

Rotate the pitch adjustment capstan to increase or decrease pitch. Refer to figures 4 and 5.

7 Yaw adjustment

Release the lock screw. Rotate the yaw adjusting screws equally in opposite directions to provide required yaw. Tighten the screws against each other without applying excessive torque. Tighten the lock screw. Refer to figures 4 and 5.

8 Quick release of AM1 from shank

NOTE: If repeatability of position is required on re-attachment, DO NOT alter the centre screw. This repeatability of position is sufficient for alignment with the autochange rack, but probes must be redatumed for measurement.

Rotate AM1 until free and remove.

9 Re-attachment

Locate AM1 against the shank and rotate until engaged. Tighten the yaw adjustment screw. Tighten the lock screw.

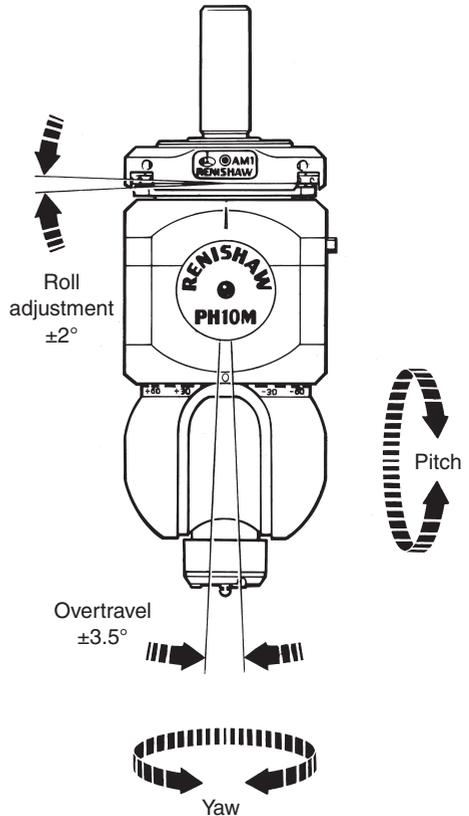


Figure 5 - Pitch, roll and yaw

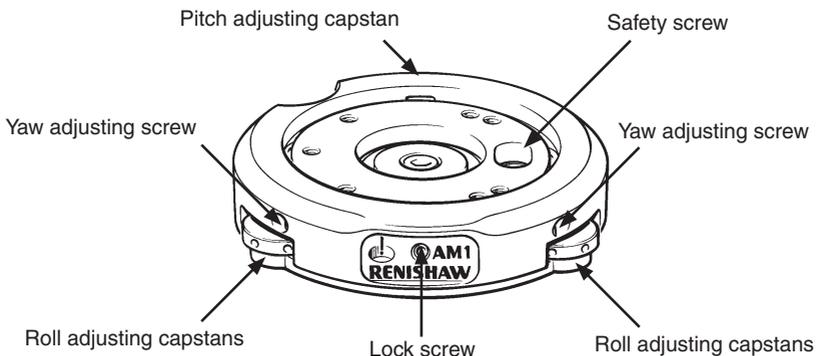


Figure 4 - Angular adjustment (adjust the AM1 in the order given above)

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