



Optical Gaging Products Inc.



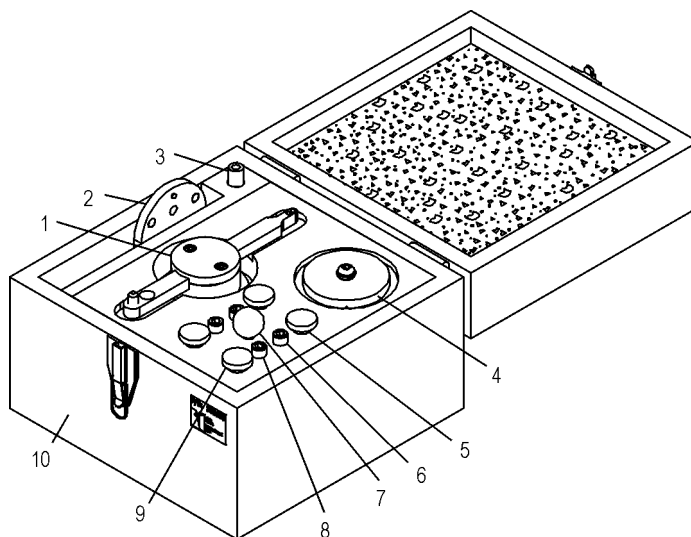
A Quality Vision International Company

Kinematic Mounting System Installation Guide

The innovative Kinematic Mounting System for touch probes and scanning probes has a three-point, magnetic mount that allows easy switching between change racks and calibration artifacts.

Kinematic Mounting Kit – P/N 300150 (for Scanning Probes) or P/N 300160 (for Touch Probes)

1. Calibration Artifact Holder
2. Base Plate
3. Calibration Sphere Riser
4. Change Rack Breakaway Plate
5. Metric Thumbscrew (Black) (Qty 2)
6. M6 x 16 Screw (Qty 2)
7. Certified Calibration Sphere
8. 1/4-20 x 5/8 Screw (Qty 2)
9. English Thumbscrew (Red) (Qty 2)
10. Wooden Storage Box



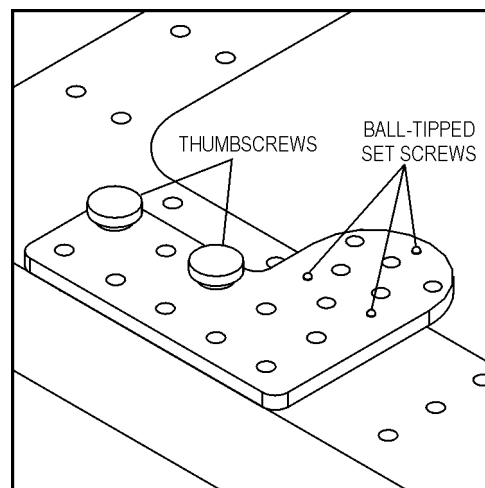
Mounting the Base Plate

Use the Metric or English thumbscrews (or socket-head screws) to secure the Base Plate to the stage, with the ball-tipped set screws toward the center of the stage as shown.

Mount the Base Plate anywhere on the stage and in any orientation as long as the Change Rack (if equipped) is accessible by the probe.

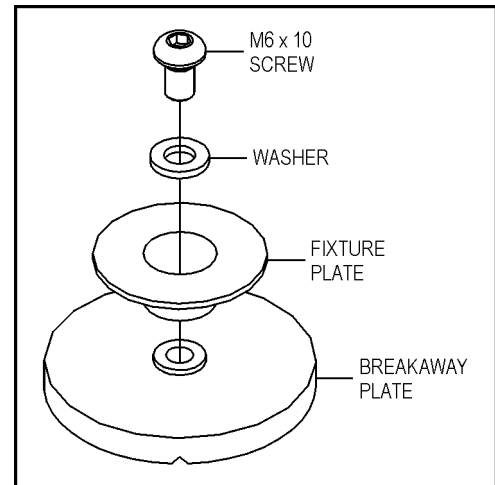
The Base Plate can be turned over to provide more mounting configurations.

1. Unscrew the three ball-tipped set screws and install them on the opposite side of the plate – apply a small amount of LOCTITE to the screw threads and make sure that only the ball-tip extends beyond the top surface of the plate.
2. Set one of the Breakaway Plates on the Base Plate, aligning the grooves in the bottom of the Breakaway Plate to the corresponding ball-tipped set screws in the Base Plate.
3. Tighten each set screw until you encounter resistance.
4. Try moving the Breakaway Plate on the three-point mount.
5. Repeat Steps 3 and 4 until the Breakaway Plate does not move.

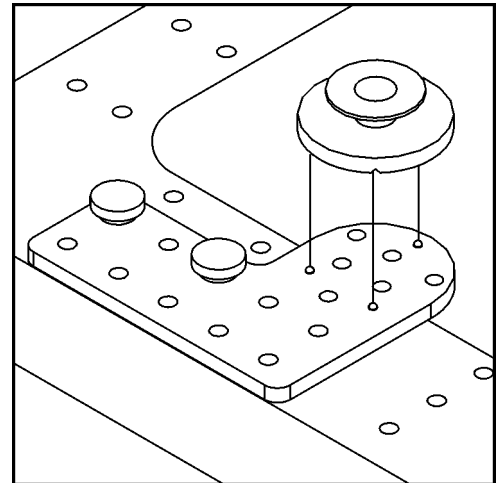


Mounting the Change Rack (If Equipped)

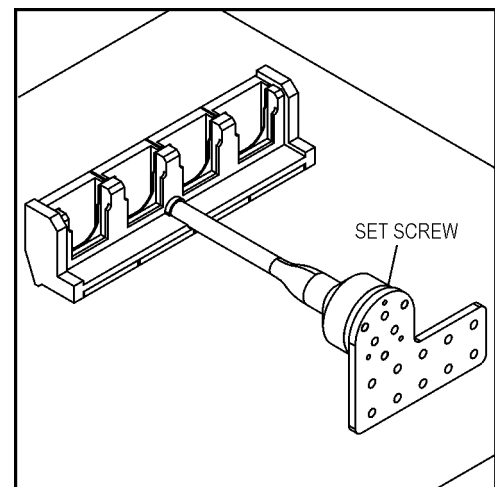
1. Remove the M6 x 10 screw and washer from the Change Rack Breakaway Plate.
2. Install the Renishaw® Fixture Plate (supplied with the Change Rack) on the Change Rack Breakaway Plate as shown.
 - Place the tapered edge on the Breakaway Plate and place the washer removed in Step 1 in the recessed side of the Fixture Plate.
 - Secure the Fixture Plate to the Breakaway Plate with the M6 x 10 screw.



3. Align the grooves in the bottom of the Change Rack Breakaway Plate to the corresponding ball-tipped set screws in the Base Plate and mount the Breakaway Plate on the Base Plate.

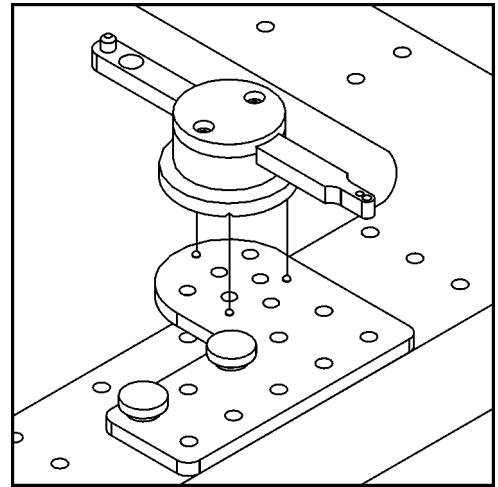


4. Place the Change Rack over the Fixture Plate and **loosely** secure the Change Rack to the Fixture Plate by tightening the set screw in the base of the Change Rack.
5. Remove the Base Plate (and attached Change Rack) from the stage and set the back edge of the Change Rack on a flat surface as shown to square the Change Rack to the Base Plate.
6. Tighten the set screw in the base of the Change Rack to secure the Change Rack to the Fixture Plate.
7. Mount the Base Plate on the stage.
8. Verify that the probe can access all of the ports in the Change Rack. If necessary, relocate the Base Plate.

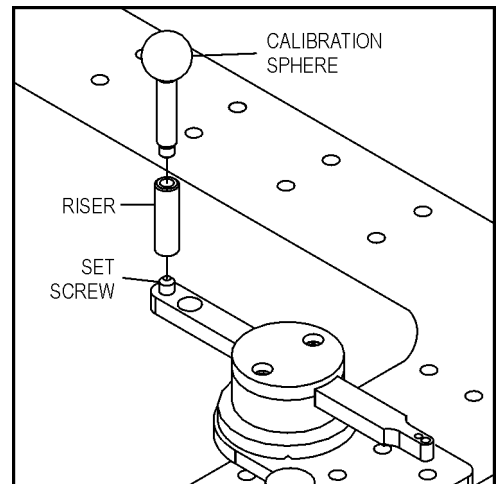


Mounting the Calibration Artifact

1. Align the grooves in the bottom of the Calibration Artifact Breakaway Plate to the corresponding ball-tipped set screws in the Base Plate and mount the Calibration Artifact Holder on the Base Plate.

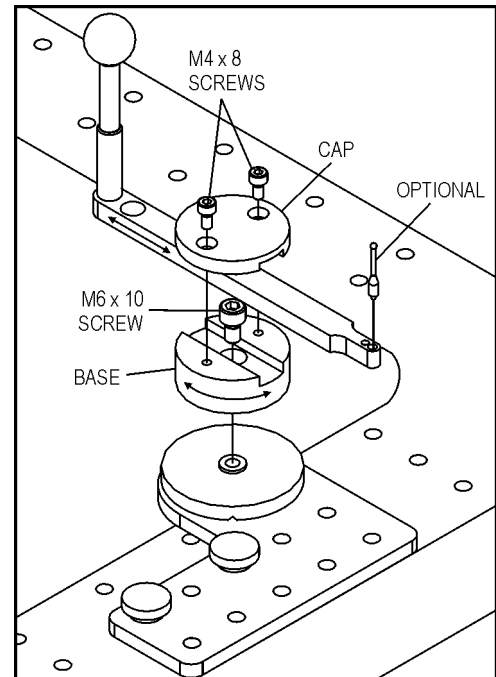


2. [OPTIONAL] Screw the Calibration Sphere Riser onto the set screw already installed in the Calibration Artifact Holder.
3. Screw the Calibration Sphere into the Calibration Sphere Riser (if used). If the riser is not used, remove the set screw from the Calibration Artifact Holder and screw the Calibration Sphere directly into the Calibration Artifact Holder.
4. Verify that the Calibration Sphere is accessible by the optics and probe. If necessary, perform the procedure on the next page to change the orientation of the Calibration Artifact Holder.



Changing the Orientation of the Calibration Artifact Holder

1. Use a 3 mm Allen wrench to remove the two M4 x 8 screws that secure the Cap to the Base.
2. Remove the Cap and Calibration Artifact Holder and set both aside.
3. Use a 5 mm Allen wrench to loosen the M6 x 10 screw that secures the Base to the Breakaway Plate.
4. Rotate the Base to the desired orientation – the slot must be at a 45° angle or approximately parallel to the machine X or Y axis.
5. Re-tighten the M6 x 10 screw.
6. Place the Calibration Artifact Holder on the Base and re-install the Cap.



With the calibration artifact mounted, perform the probe calibrations described in your user documentation. Then mount the change rack and perform the change rack calibration. Assuming the base plate remains in the same location, you can remove and replace the change rack and calibration artifact holder as needed without having to perform the manual probe-to-optics calibration or re-calibrate the change rack.