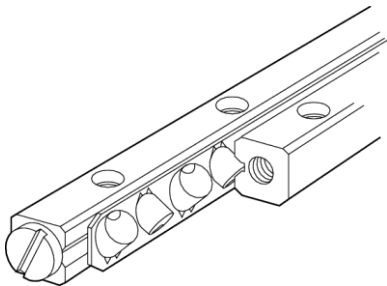


Probe Stations

If you are using a Standard XYZ Manipulator as a “probe station”, rather than as a “conventional” Z manipulator with XY, where the translator lays “on its back” so to speak we introduce a line of “probe station translators” that feature crossed roller ways (instead of “plain” bearings) on the Z axis as well as XY, which greatly reduces deflection. The planned design features resolution of .002mm in the X,Y and Z direction. It would however be limited to 50mm total Z travel .

Most commonly these translators are used in a vertical orientation with the “back” of the unit being the structure or “backbone” as we call it that supports/drives the XY mechanism and traveling flange. When used as a probe station, they are oriented horizontally and mount on the “backbone” - may also be orientated vertically -.

Our “standard” design uses cylindrical “guide rods” and Teflon-lined sleeves for the Z motion. The XY travel mechanism is supported by “crossed roller ways”



Picture from <https://assets.newport.com/>

These are rolling element bearings riding on hardened ways. We do not use them for the Z axis on our standard units because they don't “package” well for long strokes.

Probe Stations features a smaller overall “footprint”, incorporates the crossed roller ways rather than sleeve bearings, has integral provisions for “tabletop” mounting and perhaps equally important, it is less expensive.

