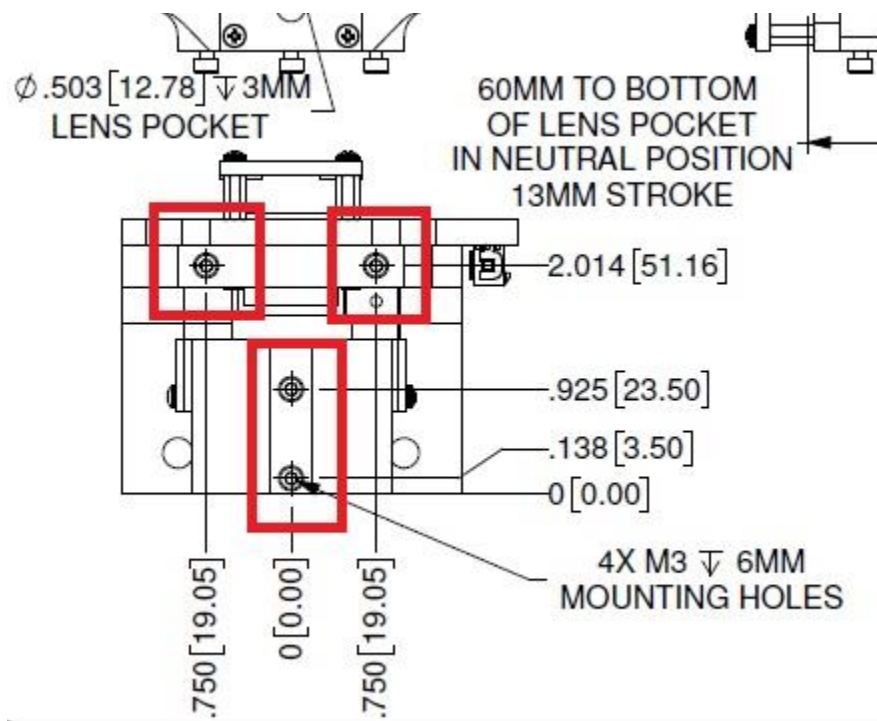


AN-0121-HD: Blink High Speed Focuser Startup Notes

Mounting:

Air Bearing focuser should be mounted using all four of the provided M3 threaded mounting points. Mounting by only the motor body, or only the position detector bracket may result in reduced performance. The high bandwidth system requires a solid coupling of the position scale and detectors. Refer to the complete outline drawing for information, the mounting points are noted in this section of the drawing...



Mounting surface should be reasonably flat ($.001''$ / " of surface area) to prevent distortion of the motor body or position detector bracket.

Air Supply:

The air bearing operates at an approximate 10 micron air gap, so reasonable precautions need to be taken to prevent foreign debris from entering the bearing surface. We recommend a commercially available filter that meets the following standard.

Cleanliness Standard: ISO86573-1:2010 Class 3 or better

Recommended Operating Pressure: 70 – 80 PSI

Approximate flow rate of assembly: <3.5 LPM

Note that some lens applications may benefit from an o ring or soft lens stop be used between the lens ring and optic to prevent high frequency rubbing or damage to the lens. Thor Labs has a line of ½” lens tube accessories available to suit almost any lens application.

Operation:

The air bearing ships with a nylon screw securing the voice coil in place against a rubber stop. This screw needs to be removed before operation, and should be re-installed any time the device is shipped.

The air bearing and amplifier power up as an absolute position device. With no command offset present, it will automatically center when power is applied. Using the scaling noted at the top of this document, command voltage applied to the amplifier will result in displacement of the voice coil.

Note that the presence of a RED indicator light on the amplifier may be the result of low air pressure. If your device shipped with a pressure switch option, it will keep the amplifier disabled until a suitable air pressure is observed. Normal operating condition of the amplifier is a single GREEN LED.

CAUTION: Attempting to operate the air bearing without a suitable air supply attached may damage the air bearing surfaces and result in degraded performance or a seized bearing assembly. Even if you did not purchase a pressure switch from us, it is recommended that the installation contain one to ensure that the air bearing is not operated in a dry pneumatic state.