

Spindle Clamping Instructions

Air bearing spindles are manufactured with very fine bearing clearances, and serious damage can occur to the spindle if it is distorted during installation. The spindle body is suitable for location in a linear bearing sleeve or a clamp. Spindles must be rigidly mounted and free from distortion. To achieve this:

- The spindle body should be lightly clamped over the maximum possible length of its location diameter (refer to outline drawing).
- It is essential that the spindle body and housing bore are cleaned and lightly greased prior to assembly.
- Housings must be checked for roundness, size and straightness before clamping.

Where spindles are clamped on a parallel body location, there are two basic forms of clamping that can be used:

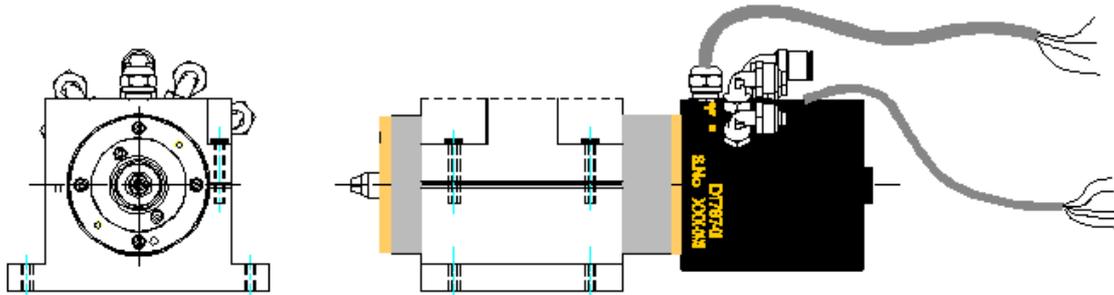


Figure 4, Slit clamping

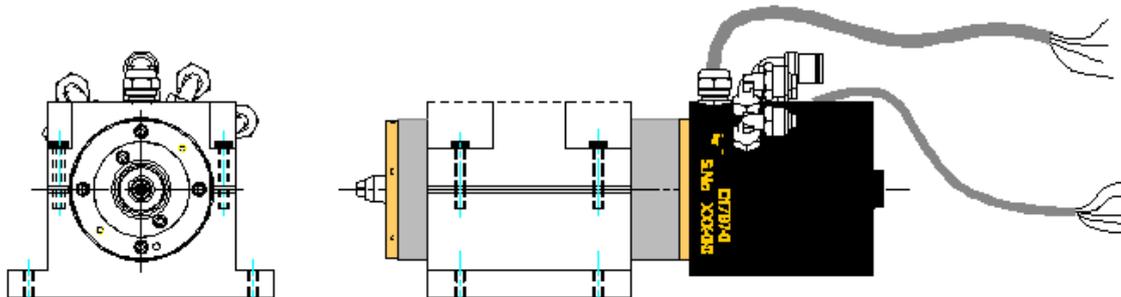


Figure 5, Saddle clamping

- **Slit clamping** is the more typical form, where the clamping takes place due to a minor deflection of the spindle housing. If this type of clamping is adopted, then it is recommended that a suitable piece of gauge plate is fitted accurately into the slot, and clamped down prior to finishing the bore of the housing. On completion of the housing bore, the gauge plate may be removed and ground down by 0.001 inches (0.0254mm) before replacement.
- A similar approach may be adopted if the **saddle clamp** is employed. Care should be taken to ensure that the clamping force is spread as uniformly as possible over a relatively large area.

Please note: Only light clamping is necessary. Maximum clamping force = 10ft/lbs (13Nm). Excessive force will damage the spindle.

For further information, contact Westwind Technical Support: email wwinfo@westwind-airbearings.com.