

LINEAR MOTION

Primary Features:

- ◆ UHV compatibility
- ◆ Strokes from 25 mm up to 400mm
- ◆ Mounting flange : 16CF to 200CF
- ◆ Manual or motorized motions
- ◆ Millimetric or micrometric accuracy
- ◆ Large range of components
- ◆ High precision
- ◆ Robustness and reliability



The manipulation instruments for linear motion have been designed to ensure the movements of components and samples under Vacuum and UHV (10^{-12} mbar) with great precision.

They are developed by Vinci Technologies - Meca 2000 to ensure very high robustness and reliability.

The materials used to manufacture these devices have been chosen to minimize the rates of degassing and withstand bakeout temperatures of 250 °C.

Moreover, their manufacture is subject to strict controls for full compatibility with UHV environments.

Meca 2000 range includes :

Direct translation feedthroughs : PTD series

Screw type translation feedthroughs : PTV series

Linear translation feedthroughs : RLTM, MTZ and MZ series

XYZ stages : MTE, MT3 and MTS3 series



PTD models :

PTD feedthroughs permits a translation movement on a sliding axis, by means of a button. The stroke is obtained by extension and compression of a bellows which guarantees sealing. A locking screw maintains the axis in all positions.



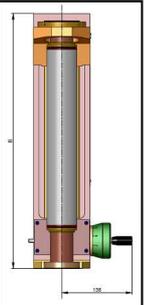
PTV models :

PTV feedthroughs use the same principle as the PTD feedthroughs. In addition, the translation motion commanded by the metric screws allows for movements with the precision of a tenth of a millimetre.



RLTM models :

RLTM models are equipped with 40CF or 63CF flange. These so-called universal flanges have twice as many tapped holes which allow mounting in multiple positions. Limit switches are installed along a calibrated axis in order to limit the movements with great precision.

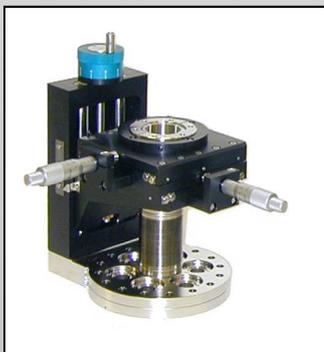


MTZ models :

This high precision model is equipped with a travelling 63CF flange with tapped bolt holes which allow the mounting of various accessories with diameters of less than 71 mm. A graduation on the control handle and on the linear driving mechanism secures an easy positioning and reading.

MZ models :

This model is equipped with a travelling 40CF flange. It has been designed for long strokes from 200 mm to 400 mm. A longer stroke is possible upon request. A graduation on the linear driving mechanism secures an easy positioning and reading.



3-Axis stages models :

The 3-axis stages from Vinci Technologies – Meca 2000 are principally used to position sample holders in UHV systems with very high accuracy. They are essential to any manipulation of samples in analysis or thin film deposition system. To meet demanding user requirements, great care is taken in the design and manufacturing. Sealing is ensured by edge welded bellows which, by deformation, allow the motion of the upper flange in three orthogonal axes X, Y and Z. X and Y movements are operated through millimetric or micrometric screws which drive different tables on guiding rails to ensure a smooth and vibrationless movement.

Z movement is achieved by rotary knob that acts on a driving screw to generate a linear movement of the table along a precise and accurate guiding rail. All these movements can be motorized and controlled remotely.