

**LUDECA, INC.**  
1425 NW 88th Ave.  
Miami, Florida 33172

Phone: (305) 591-8935  
Fax: (305) 591-1537



## Vertical Wall-Mounted MTBM's with Feet (Vertical Shaft Orientation)

For Firmware ver. 1.15

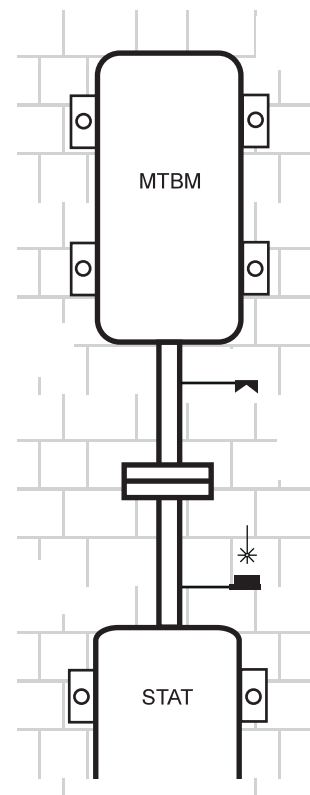
### Introduction

This Tech Note describes how to align machines that are foot-mounted, whose feet are installed against a vertical wall rather than horizontally on a base. This requires the use of the Static measure mode. (For vertical *flange*-mounted machines please consult the OPTALIGN® PLUS Operating Manual). This Tech Note covers only the vertical shaft orientation but is also applicable to wall-mounted horizontal shaft orientations. (However, for wall-mounted machines with shafts running horizontally where it is desired to use the Sweep or Multipoint measure modes, please see Tech Notes 2 or 3.) The Overview below is a general description of the procedure; For more detail, please see Procedure on the following page.

### Overview


If your machines are normal four-footed machines but mounted vertically against a wall, the OPTALIGN PLUS's electronic inclinometer is disabled since it is gravity operated. Thus you must first select the "static mode" measurement mode and take your readings by specifying the rotational position manually. This also applies if your machines are mounted against the wall in a horizontal orientation (left or right) and you do not wish to enable the inclinometer. The point of view for the purpose of establishing clock positions is looking along the shafts *from* the Machine To Be Moved (MTBM) *towards* the Stationary Machine (STAT), as usual. Looking at the laser transducer, 12 o'clock is the direction away from the feet (the

wall). To take readings you simply orient the laser and prism in one of the 4 cardinal clock positions and enter the number for that position. The intermediate positions are only available from the second reading onward. Be careful to maintain control of your machine when loosening the anchor bolts, and make sure you observe the proper axial gap clearances for the coupling during the alignment process. The Move Function can be used normally. The inclinometer is disabled if results were obtained with Static mode, so simply position the laser at 1:30 o'clock, and press ENT after Move.



Vertical Orientation








## Procedure

- 1) Mount Laser on the shaft of the Stationary (STAT) Machine.
- 2) Mount Prism on shaft or solid coupling hub of the Machine To Be Moved (MTBM).
- 3) Connect the Control Unit to the Laser and turn it on.
- 4) Key in and enter Dimensions as follows:
  - Laser to Prism.
  - Laser to Coupling Center.
  - Laser to Front Foot of the MTBM (*see tip*).
  - Front to Back Foot of the MTBM.
  - Coupling Diameter (1"). (Or simply press **ENT** if it appears by default.)
  - RPM of the coupling.
- 5) Press .
- 6) Rotate the shafts to position the Laser and Prism at any one of the four cardinal clock positions (12, 3, 6, or 9 o'clock). Clock positions are established by looking along the shafts *from* the MTBM *towards* the STAT, as usual (12 o'clock is the direction away from the feet (away from the wall)).
- 7) Center the beam by adjusting the prism until coordinates are close to 0 0. Press **ENT**.
- 8) Take your first reading by keying in your clock position. Simply key in 0 for 12 o'clock, 3 for 3 o'clock, etc. It is not necessary to press **ENT**. This automatically selects the Static Measure mode.

**Step 4 Tip:** Use the ALL 5.106 Beam Deflector to assist in taking this dimension. The laser is turned on automatically at this step.

**Note:** The order of dimension entry depends on the results default setting you have selected with function F 74.

**Note:** You must be positioned in one the four cardinal clock positions for the first reading. Subsequent readings may be taken at any standard 45° measuring position.

- 9) Rotate the shafts to any other measuring position (in 45° increments) and key in that position using the decimal key. (For example the 45° position clockwise from 12 o'clock is the 1:30 o'clock position. Key it in as     .) Take readings over at least 3 positions (90°). You may repeat readings at any given position any time.
- 10) Press . Depending on which default option you have configured your PLUS to, either foot corrections or alignment conditions at the coupling will appear first. Looking at the laser transducer, 12 o'clock is the direction away from the feet (the wall).
- 11) Loosen the anchor bolts (be very careful to maintain control of your machine!) and shim as indicated. When finished shimming, tighten the anchor bolts. Now press  and repeat steps 6 through 10.
- 12) To move the MTBM sideways, press the  key. 45° will be displayed. Now:
  - a) Turn to 1:30 o'clock and press **ENT**.
  - b) Adjust Prism until coordinates are close to 0 0.
  - c) Press **ENT** again.
  - d) Loosen anchor bolts and move feet of the MTBM in the directions indicated. When finished, tighten the anchor bolts and repeat steps 5 through 10. 