

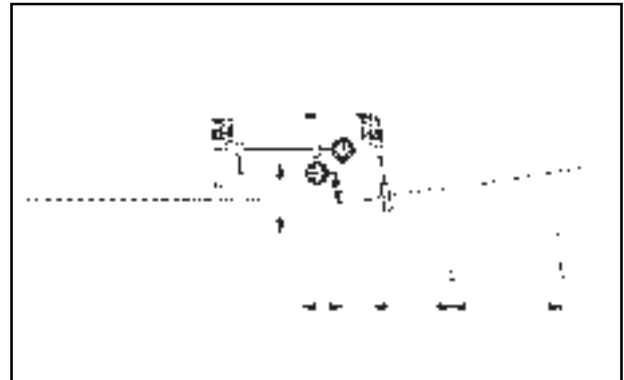
TechNote #25 ROTALIGN®

Converting between ROTALIGN® and dial indicator alignment readings

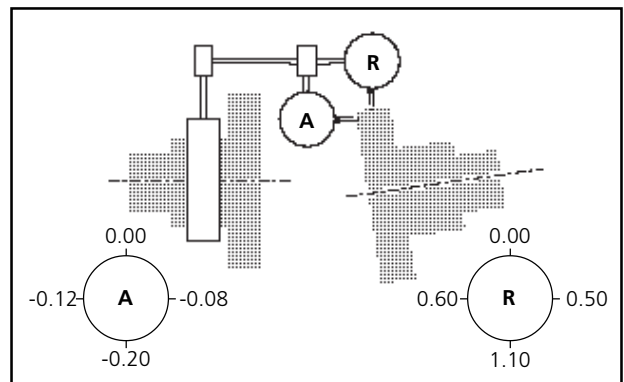
Introduction

Particularly when thermal growth must be compensated, alignment specifications are often given in terms of dial indicator readings at defined mounting locations on the shafts or couplings. ROTALIGN is capable of calculating the shaft alignment condition from dial gage values with any common mounting configuration. This makes a simple matter of comparing ROTALIGN results with dial indicator-based specifications or calculating the correct amounts of 'cold' misalignment to enter into ROTALIGN for compensation of thermal growth.

Conversely, the same function allows you to use dial indicator readings to calculate the foot corrections and check coupling tolerances.



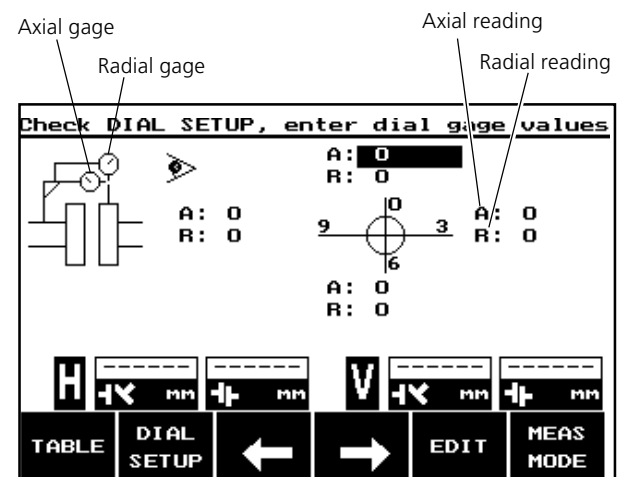
Alignment configuration with dial indicators and with ROTALIGN



Dial indicator mounting and axial/radial gage readings

Converting ROTALIGN results into dial gage readings

- 1) Enter machine dimensions and take ROTALIGN measurements as you would for any machine.
- 2) From the measurement screen, press the MEAS MODE softkey, then the DIAL GAUGE symbol softkey. By default, the axial/radial ('rim and face') dial gage configuration appears; to the right are the dial gage readings for both axial and radial gages.

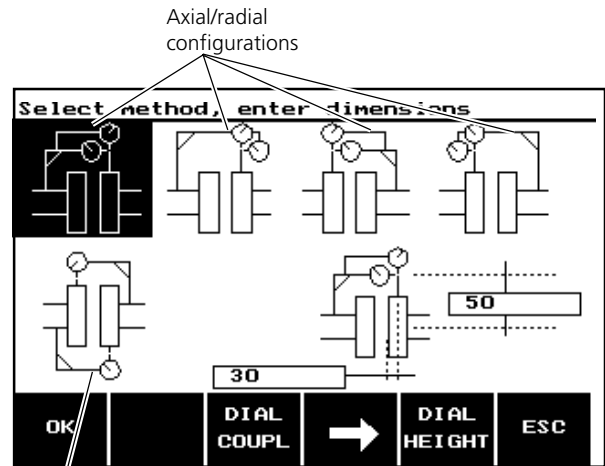


3) Press the DIAL SETUP softkey to enter the dial setup/dimensions screen. Use the arrow softkey to select, if necessary, the appropriate dial indicator configuration. Then enter the dimensions of the indicator mounting arrangement by pressing the corresponding softkeys:

DIAL COUPL = distance from tip of radial dial to the same 'coupling center' location you defined in the machine dimensions screen in step1.

DIAL HEIGHT = height of axial dial tip above shaft center


OR for "reverse dial indicator" configuration:
 LENGTH R1..R2 (distance between dial tips)



"Reverse dial indicator" configuration

4) Once the dial setup dimensions have been entered, equivalent dial gage readings are calculated based upon the alignment condition measured by ROTALIGN. Note that the 'eye' symbol (in the middle screen) indicates the direction of view for readings in the four clock positions. The 12:00 readings are always assumed to be zero.

Converting dial gage readings into ROTALIGN results

- 1) Enter machine dimensions as usual.
- 2) Select the DIAL GAGE option from the MEAS MODE screen. Enter the gauge configuration and dial dimensions as described in the previous section. Press OK to return to the main screen.
- 3) Enter the Axial and Radial clock readings, using the arrow key to navigate through the values. (The dial gage readings used in the example shown at right are illustrated on previous page.)
- 4) Press the  key to display the alignment condition based upon the dial gage readings and the machine dimensions entered.
- 5) The machines may now be aligned using the machine foot values shown in the results display. Note, however, that a laser-assisted MOVE cannot be performed without having taken actual laser measurements first.

