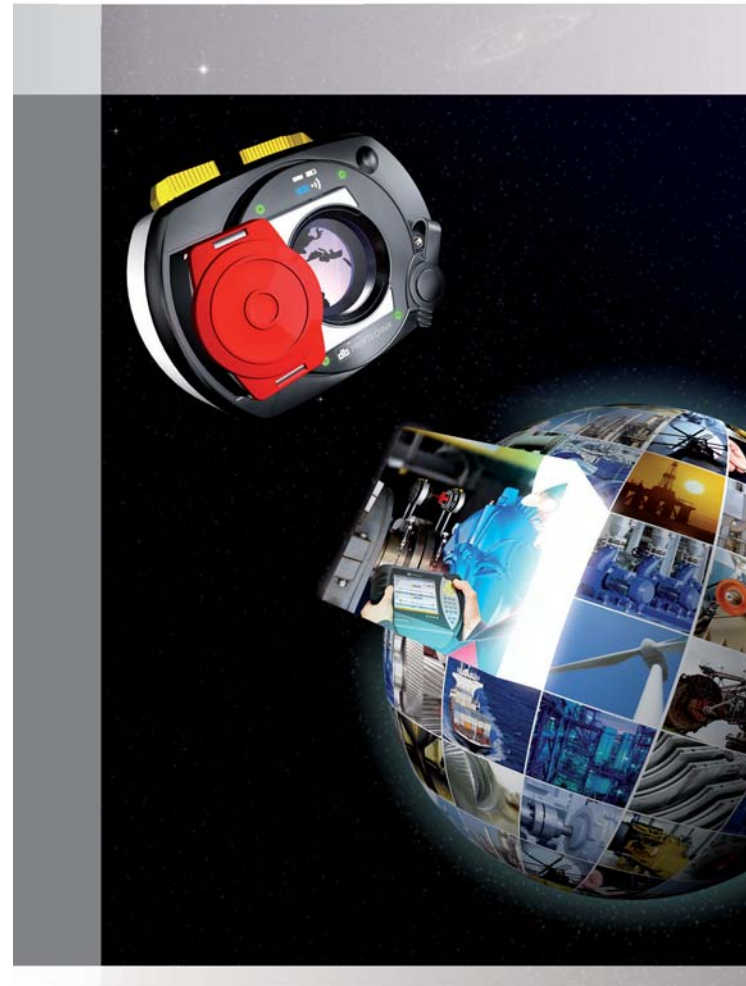


ROTALIGN® Ultra iS Shaft

Pocket guide



Safety notes

- ▶ ROTALIGN Ultra iS Shaft is to be used in industrial environments only for shaft alignment. Care must be taken to ensure that the instrument is not subjected to mechanical knocks. It must be operated only by properly trained personnel. No liability will be assumed when components or operating procedures as described in this guide are not used as indicated or are altered without permission of the manufacturer.

Laser safety



- ▶ Do not look directly into the laser beam at any time.
- ▶ Do not insert any optical devices into the beam path.
- ▶ The red LED on the front of the laser illuminates whenever the laser beam is emitted.

Notes regarding data storage

- ▶ As with any data processing software, data may be lost or altered under certain circumstances. PRÜFTECHNIK strongly recommends that you keep a backup or printed record of all important data.
- ▶ PRÜFTECHNIK assumes no liability for data lost or altered as a result of improper use, repairs, defects, battery replacement/ failures or any other cause.
- ▶ PRÜFTECHNIK assumes no responsibility, directly or indirectly, for financial losses or claims from third parties resulting from the use of this product and any of its functions, such as loss or alteration of stored data.

General information

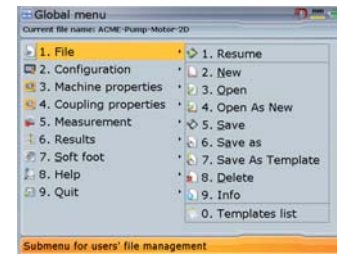
- ▶ Contents subject to change without further notice, particularly in the interest of further technical development.
- ▶ The calibration accuracy of both sensor and laser should be checked every two years as indicated by the coloured date wheel label located at the bottom of both sensor and laser housing.
- ▶ Certain ROTALIGN Ultra iS Shaft features may not be activated on your system. Please contact your local PRÜFTECHNIK sales representative for details on the upgrade options.

Context and global menu

The context menu consists of items related to the current screen and is accessed by pressing **Menu**. The global menu contains all items related to the handling of the system, and is accessed by pressing **Menu** twice. It can also be accessed by selecting 'Menu' from any context menu.

Saving files using the global menu

Measurement files can be saved at any time and from any screen using the global menu. When the global menu appears, use the navigation keys to highlight 'File' / 'Save as'.



If any global menu item is grayed out, then it is not available in the particular version. In this case, a licenced application level upgrade is recommended.

Press **Enter** and use the navigation keys to select the location to save the file. Press **Enter** to confirm location and proceed to edit file name using the data entry keys.

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Know the ROTALIGN® Ultra iS computer

The main operating keys are the oval-shaped function and data entry keys, 4-way navigation keys, the On/Off/Enter key, the up key, the clear key and the menu key.



Alignment condition LEDs
ROTALIGN Ultra iS computer ALI 4.202

Know sensALIGN™ sensor and laser

sensALIGN sensor and laser have a very similar physical appearance and are differentiated by the colour of the respective sliding dust cap – red for sensor and yellow for laser. Both units are turned on by pressing and holding the 'On/Off push button' briefly.



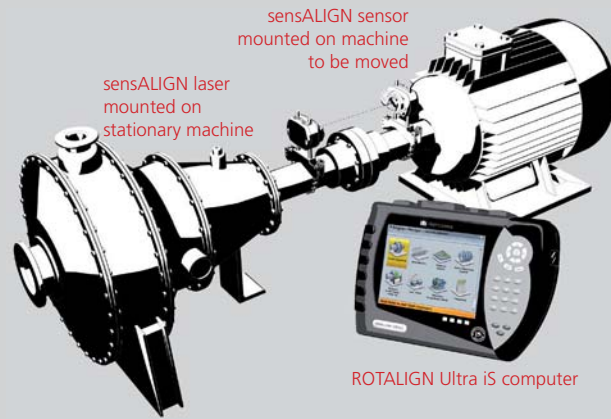
sensALIGN sensor ALI 4.900
Sliding dust cap

Attached rechargeable battery

sensALIGN laser ALI 4.910

Mount components and switch on computer

sensALIGN sensor and laser are mounted by sliding the components onto the support posts then fixing them by locking the clamping levers.



Press **Enter** to switch on ROTALIGN Ultra iS computer. The program manager screen appears. Using the navigation keys, highlight the shaft alignment application and access it by pressing **Enter**.

Enter dimensions



Use the navigation keys to highlight respective dimension boxes. Use the data entry keys to directly enter the dimension. Confirm entry by pressing either **Enter** or **L**. The highlight moves to the next empty box.



Dimensions to be entered include:

- ▶ RPM
- ▶ Coupling diameter
- ▶ Sensor-to-coupling center

- ▶ Coupling center-to-front foot (right machine)
- ▶ Front foot-to-back foot (right machine)

The dimension screen can always be accessed by pressing **DIM**.

Measure



Switch both sensALIGN sensor and laser on. Slide the laser dust cap to open the laser aperture then adjust the laser beam onto the red sensor dust cap center by repositioning the components vertically and horizontally. Now slide the sensor dust cap to open the sensor aperture. Use the two yellow position thumbwheels to adjust the laser beam. The laser beam is centered when all four laser adjustment LEDs blink green every two seconds.

Press **M** to proceed with measurement. The blue ROTALIGN Ultra LED lights up. If using Continuous Sweep mode, measurement is automatically initiated when the shafts are rotated [if that is the preference setting under measurement options]. Minimum rotation of at least 60° is required. During measurement, live coupling results are displayed.

Press **Enter** to finish measurement.

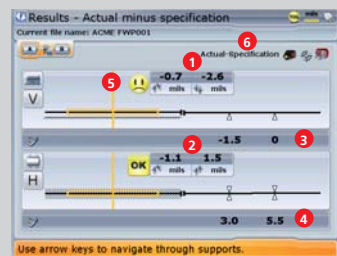


If the on-board sensALIGN sensor intelligent features are not available, a licenced application level upgrade is recommended.

Results



Press **RES** to view alignment results.



- 1 Vertical coupling results
- 2 Horizontal coupling results
- 3 Vertical feet position
- 4 Horizontal feet position
- 5 Alignment condition tolerance symbol
- 6 Selected target view

Coupling results are given in form of gap and offset [dependent on coupling type and display format chosen]. Gap is positive when open at top or side away from viewer.

The results show the feet position relative to the stationary machine centerline. Positive values indicate that right machine is upwards or away from viewer. Negative values indicate that right machine is downwards or towards the viewer. The alignment condition is indicated by both the tolerance symbol and the corresponding lit LED.

- 😊 ▶ With blue LED lit - values within excellent tolerances
- OK ▶ With green LED lit - values in acceptable tolerances
- 😞 ▶ With red LED lit - values out of tolerance

Move

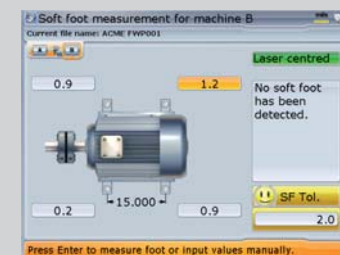
Live Move can be performed, with sensALIGN laser and sensor at any position, in both horizontal and vertical directions. From the results screen press **Menu** then select 'Move' from the context menu. If laser beam is centered Live Move starts automatically. If not centered, use the XY view to position the laser dots into the squares, then press **L**.

Loosen base bolts and move machine following the vertical and horizontal alignment values in real-time on the display.

Tighten anchor bolts and check alignment by taking another set of measurements [by pressing **M**] and viewing results [by pressing **RES**]. If within tolerance, then machines are aligned.

Soft foot

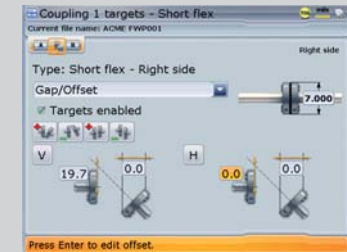
Soft foot can be checked at any time from the context menu which is accessed by pressing **Menu**. Use the navigation keys to select **SF**. Press **Enter** to start the soft foot mode. The system prompts the selection of the moveable machine. If laser is centered, press **Enter** and proceed to measure soft foot. If the beam is however, not centered, press **Menu** and use the 'XY view' to center the laser beam. After centering the beam, press **L** to return to the soft foot screen, and press **Enter** to proceed with measurement. Press **Enter** to measure foot where



the rectangular highlight box appears. Loosen the anchor bolt and wait until the readings stabilize then press **Enter**. Tighten the foot bolt. Use the navigation keys to select the next machine foot, and repeat the above procedure for all feet.

Targets

From the "Set-up" screen, use the navigation keys to highlight the machine train coupling. Press **Enter** to access "Coupling type" screen. Use the navigation keys to highlight the 'Targets enabled' check box. Press **Enter** to confirm selection. This opens the "Coupling targets" screen. Cycle through the coupling target boxes using the navigation keys. Enter target values using the data entry keys and confirm each entered value by pressing **Enter**. When done, press **L** to exit.



Thermal growth

While in the "Set-up" screen, use the navigation keys to highlight the machine that requires thermal growth compensation. Press **Enter** to access the "Machine type" screen. Press **Menu** then use **Δ**/**∇** to highlight the context menu item 'Thermal growth'. Press **Enter** to confirm selection. This opens the "Machine thermal growth" screen. Cycle through the foot position boxes using the navigation keys, entering values using the data entry keys and confirming values by pressing either **Enter** or **L**.

