

APPLICATION NOTE

Eliminate the initial rough alignment procedure with SHAFTALIGN Touch

Enable your teams to achieve precision shaft alignment

One of the first goals for obtaining the most precise laser shaft alignment results is to calculate the rotational axis of your misalignment accurately. You do this by leveraging the most valid measurement points possible. The exactness of this initial data will ultimately determine the preciseness of your machine shaft alignment. Until recently, entry-level laser shaft alignment systems had limited capabilities and required users to perform an initial rough alignment. Additionally, only three measurement points could be taken.

Now, with the premium entry-level ShaftAlign Touch from Prüftechnik, you can eliminate initial rough alignments and measure up to five points to significantly increase measurement accuracy.

Comparison: Conventional systems vs. ShaftAlign Touch

Conventional entry-level systems

Typically, these laser shaft alignment systems can take a maximum of three measurement points and measure only circular formations. The technician does not use the system's sensor to gauge the initial measurement points because it is only an initial rough alignment. Only the system's laser is used as the visual indicator. If the laser does not hit the sensor detector surface, it means the measurement point is out of possible (or permissible) range.

As a result, the technician must start to manually move the machine or motor horizontally side to side and vertically by adding and removing shims as needed. Without sensor data, the technician must try to gauge when the measurement point is back within range visually. Also, the rough alignment procedure provides no information about the initial condition of the machinery misalignment status, which is useful during an actual alignment. Only after the manual rough alignment can the true alignment be performed using both the laser and sensor.



Single-laser ShaftAlign Touch

The ShaftAlign Touch comes with two powerful premium functions, not found in any other entry-level system: Active Clock and Freeze-Frame. Together, these features enable the user to take up to five measurement points for greater accuracy, to eliminate the need for an initial rough alignment when installing machinery, and to achieve the highest precision shaft alignment in the entry-level tool sector.

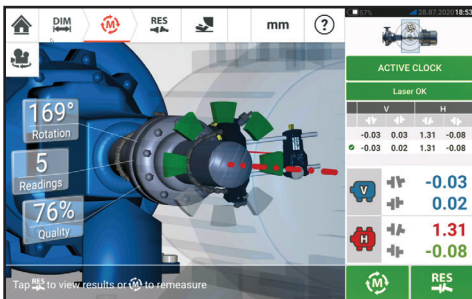
An adaptable tool

There are many reasons false data readings or inaccurate measurements occur during a laser shaft alignment. The ShaftAlign Touch adapts to all users, standard alignment issues, and essential auxiliary assets such as motors.

The user-friendly shaft alignment system provides a guided workflow that helps technicians avoid decisions that reduce the accuracy of the measurement. Highly accurate data makes it easier and quicker to align a motor or machine within tolerance.

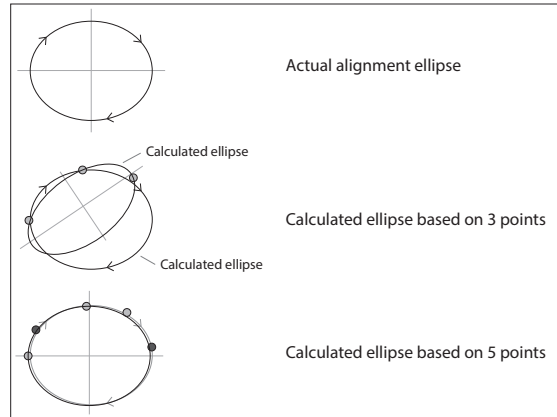
Additionally, the intuitive interface and 3D diagrams provide a clear understanding of when a successful quality measurement is achieved.

A quality rating is signified by yellow, green, or blue. If the technician cannot reach an acceptable quality measurement, the problem can be analyzed and solved remotely by sending the data to an expert for analysis, via Wi-Fi and the ARC 4.0 software.



Here's how.

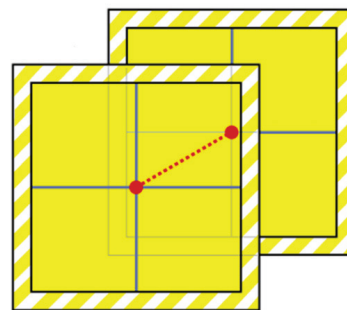
As with a conventional laser shaft alignment system, the user starts by taking three measurement points. But, with the ShaftAlign Touch Active Clock, the technician can take up to five points, enabling non-circular formations and ellipses measurements.



New Features

By taking more measurement points, the user obtains a greater angle of rotation and a superior alignment calculation for correcting the misalignment.

With Active Clock and the Freeze-Frame functions combined, the user can improve the quality of measurements by freezing a measurement point if it extends outside of the sensor range. The technician uses Freeze-Frame to move the position of the laser back within range without compromising alignment accuracy or additional measurements.



Freeze-Frame

Benefits at a glance

- **Active clock:** Allows up to 5 measurement points over 360° shaft rotation for unmatched measurement accuracy. It enables users to achieve the highest precision alignment of any entry-level system.
- **Freeze-Frame:** If an initial measurement is out of detector range, the user can freeze the measurement position and reposition it back into the detector range to continue with the measurements without jeopardizing additional measurements, subsequent moves, or alignment accuracy.
- **Touch interface:** This system comes with a user-friendly touch screen offering vivid 3D displays and images, along with a guided workflow for easy and error-free operation.
- **Cloud-based data sharing and trending:** If a technician hits a roadblock or cannot obtain acceptable machine measurement results and quality, it's easy to share the issue with an expert and resolve the problem remotely.
- **ARC 4.0 software:** This comes included with the ShaftAlign Touch package, so you can access, store, share, evaluate, and trend all alignment data remotely.
- **Wi-Fi cloud connectivity:** Enables the transferring of data to and from the ARC 4.0 software.

Summary

Any misaligned machine, whether it's big or small, costs money to fix. Precision alignment is one of the most cost-effective ways to increase asset life and availability and reduce power consumption.

The ShaftAlign Touch is the latest addition to the Prüftechnik lineup and comes with premium Adaptive Alignment features such as single-laser technology and Active Situational Intelligence (ASI). With the ShaftAlign Touch, technicians of all experience levels can align assets with precision and speed.



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