

APPLICATION NOTE

SHAFTALIGN® Touch delivers superior vertical shaft alignment

Achieve the most accurate measurement calculation and highest precision vertical shaft alignment using an entry-level system.

The ShaftAlign Touch alignment system from Prüftechnik takes the pain out of correcting vertical shaft misalignments for motor pump couplings by increasing the maximum number of measurement points to eight. Conventional systems can take only three measurement points, at most.

The additional points for the ShaftAlign Touch enable a full 360-degree rotation for calculating the axis of a misalignment. With highly accurate data, a technician can limit corrections to one, saving frustration, time, and money.



Vertical shaft alignment challenges

Vertical shaft misalignment happens for several reasons. Primarily, it occurs because the motor pump machinery wasn't accurately aligned when installed. The residual effects of parallel and angular misalignment often cause excessive vibration. If not corrected, these issues can ultimately require you to realign, overhaul, or replace the machinery.

Conducting vertical shaft alignments can be physically challenging, as access to the coupling is often restrictive. Because of this, maintenance teams sometimes choose to live with the consequences, such as always needing to replace seals, bearings, and couplings. Eventually, the cost of spare parts, repairs, and production downtime exceeds the expense of aligning the machine properly.

Quick and easy steps to vertical alignment

Once the sensor and reflector are attached to the machine shaft, the technician marks a starting place and, from there, begins to rotate the shaft manually. When determining the extent of vertical misalignment, the device's built-in software guides the user through the process.

With ShaftAlign Touch, a maintenance technician can take eight measurement points at 45-degree increments until the shaft completes a full rotation and returns to its original position. More measurement points mean truer mathematical calculations, which enable the user to attain precision alignment quickly with only one correction.





Because vertical motor pumps don't have feet, the angular and parallel adjustment of the motor shaft is made at the motor flange. The angular correction is performed by shimming each bolt position, and the parallel misalignment achieved with jacking screws. Depending on the measurement results, the laser alignment system accurately calculates the required shim thickness and jacking screw adjustments.

Precisely aligned shafts save energy and extend the life of rotating machinery. ShaftAlign Touch comes with exclusive Adaptive Alignment features such as single-laser technology and Active Situational Intelligence (ASI). With ShaftAlign Touch, technicians of all experience levels can align assets with precision and speed.

ShaftAlign Touch takeaways

- Captures up to eight measurement points
- Enables a superior precision vertical shaft alignment
- The touchscreen color indicator (red, yellow, green) shows when the user obtains a good quality measurement
- Individually calculates the shim thickness needed for an angular correction and the amount of parallel adjustment required at the jacking screw; both done at the flange
- Adapts to larger machines with more than eight bolts
- Adapts to both circular and rectangular flange configurations



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