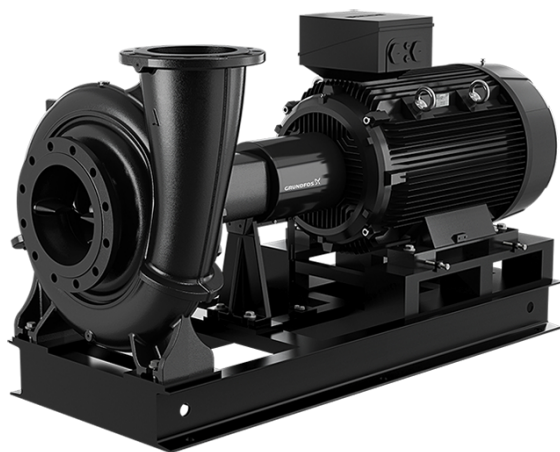


NK, NKE, NKG, NKGE and LS Laser alignment



Service instructions



Original service instructions

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1. General information



Read this document before you start service work on the product. Service work must comply with local regulations and accepted codes of good practice.

Observe the safety instructions in the installation and operating instructions for the product.

1.1 Hazard statements

The symbols and hazard statements below may appear in Grundfos installation and operating instructions, safety instructions and service instructions.

**DANGER**

Indicates a hazardous situation which, if not avoided, will result in death or serious personal injury.

**WARNING**

Indicates a hazardous situation which, if not avoided, could result in death or serious personal injury.

**CAUTION**

Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

The hazard statements are structured in the following way:

**SIGNAL WORD****Description of the hazard**

Consequence of ignoring the warning

- Action to avoid the hazard.

1.2 Notes

The symbols and notes below may appear in Grundfos installation and operating instructions, safety instructions and service instructions.



Observe these instructions for explosion-proof products.



A blue or grey circle with a white graphical symbol indicates that an action must be taken.



A red or grey circle with a diagonal bar, possibly with a black graphical symbol, indicates that an action must not be taken or must be stopped.



If these instructions are not observed, it may result in malfunction or damage to the equipment.



Tips and advice that make the work easier.

1.3 Target group

These service instructions are intended for professional installers, operators and service technicians of the product.

We recommend that service and maintenance be carried out by skilled persons with technical qualifications required by the specific legislation in force.

2. Disassembly

The laser tool used in this video is an Easy-Laser E710.



1. Use a tape to lock pump hub and spacer together. This prevents measuring failure during laser alignment.



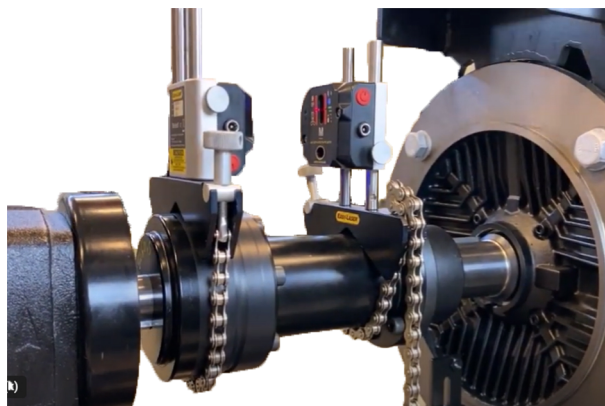
2. Determine where the detectors are to be mounted.



3. Turn on the detector units and display unit.



4. Adjust/align the detector units.



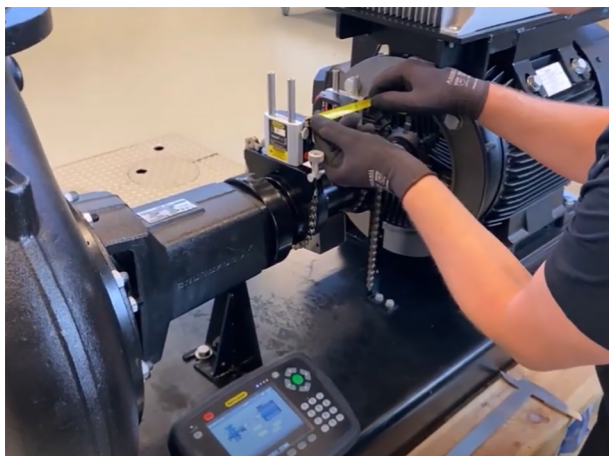
5. Install balancing weight to ensure stable readings in all positions.



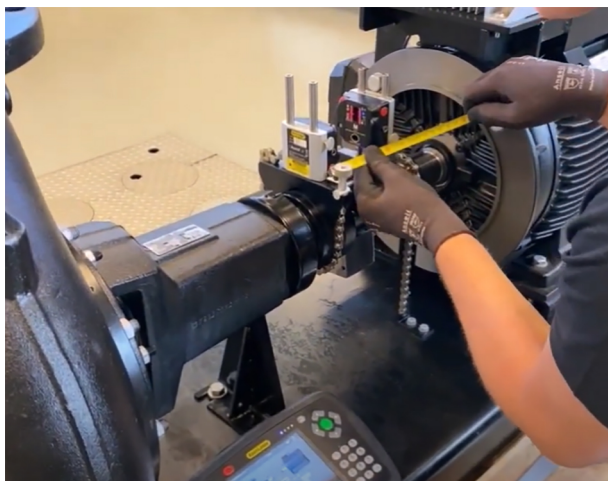
6. Follow sequences on display to setup laser alignment.



7. Enter distance between detector units.



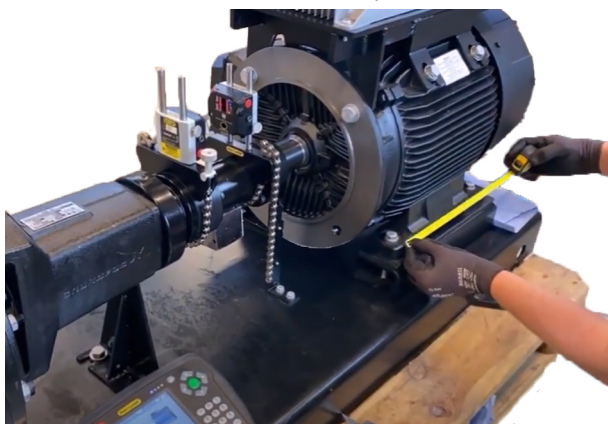
8. Enter distance between detector unit (pump hub) and center of coupling.



9. Enter distance between detector unit (motor hub) and motor feet, pair one.



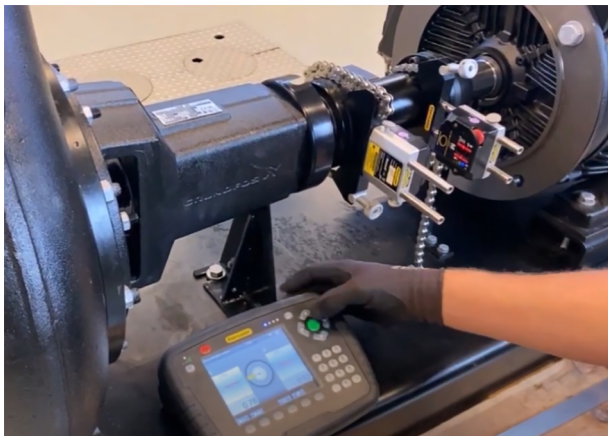
10. Enter distance between motor feet pair one and two.



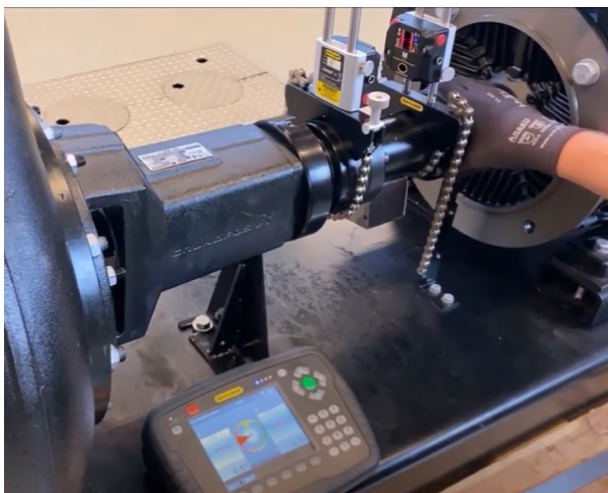
11. Measure alignment using the 9-12-3 o'clock method and adjust 3 o'clock position by following the display.



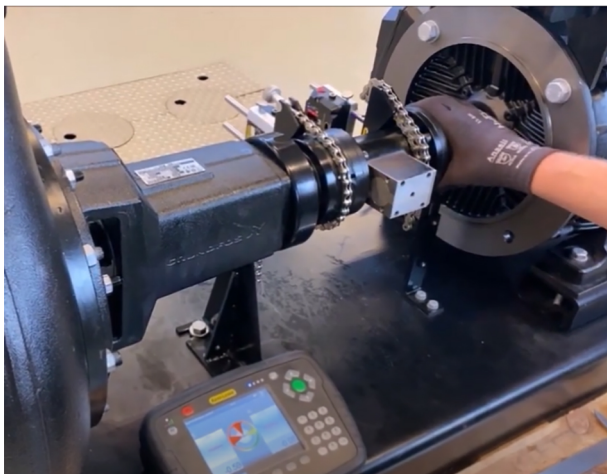
12. Make 3 o'clock reading.



13. Adjust 12 o'clock position by following the display. Make 12 o'clock reading.



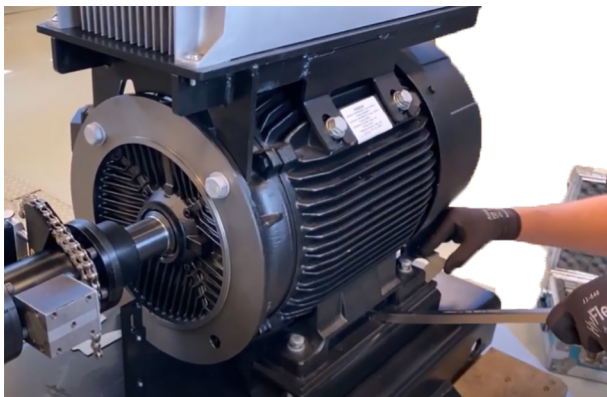
14. Adjust 9 o'clock position by following the display. Make 9 o'clock reading which ends the alignment measurement.



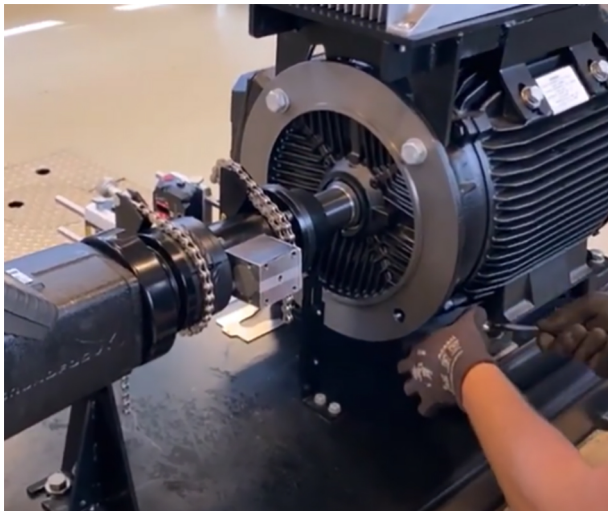
15. The alignment result and adjust view is displayed.



16. Adjust the shims at one side at a time to avoid the motor from moving sideways.



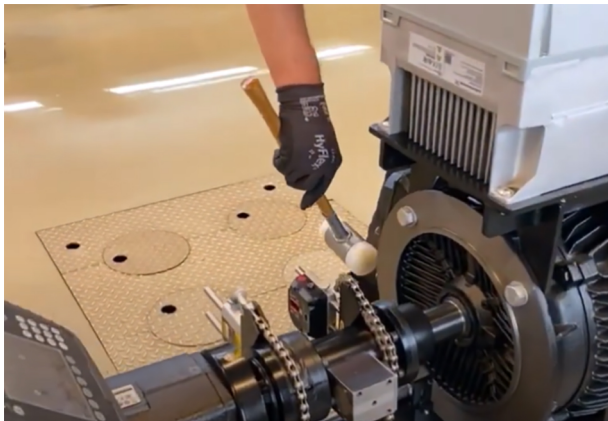
17. Hand tighten motor feet screws.



18. Adjust the shims at the other side.



19. Loosen all motor feet screws to adjust sideways.



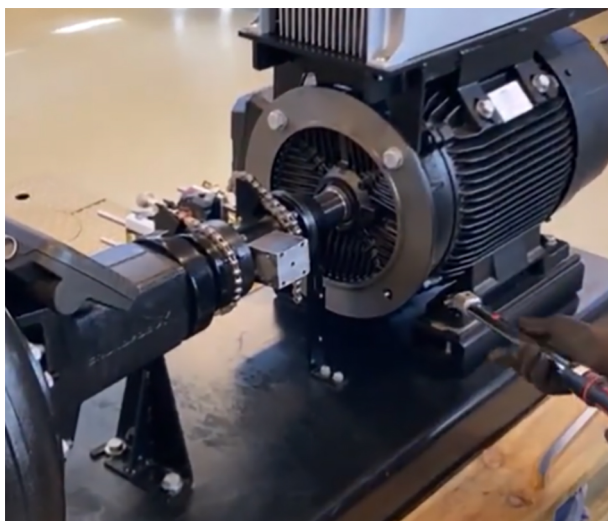
20. Adjustments can be followed live on the display.



21. Tighten the motor feet screws.



Use torque to secure even tightening of motor feet.



22. Repeat measuring cycle (follow from step 12).



23. The alignment result and adjust view is displayed



Values within tolerance of 0.1 mm are acceptable.



24. A second and final adjustment may be needed (follow from step 12 to step 22).



Print measuring result and attach to the laser alignment report.



25. Remove the tape and check that the coupling parts move freely.



3. Reference information

3.1 Related documents

You can find further product information on grundfos.com about:

- NK, NKE, NKG, NKGE



- LS



3.2 Service videos

You can find video instructions for the service NK, NKE, NKG, NKGE and LS pumps by exploring the following QR codes/links:

Video	QR code
How to use laser alignment tool on a Grundfos NK, NKE, NKG, NKGE and LS single stage pump	

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