The 360° Solution

E-mail this PDF

SKF® alignment solutions save money, cut downtime

Benefits

- Versatile tools for widespread use throughout your facility
- Inexpensive means of avoiding unplanned downtime
- Extends bearing and shaft service life to provide greater return on your investment in equipment
- Enhances the efficiency of your maintenance personnel

Typical applications

Shafts, pulleys and other rotating components on a variety of machinery and equipment used in many industries

SKF® shaft and belt alignment tools increase productivity and avoid premature machine failure

As much as 36% of premature bearing failures and associated downtime are the result of misalignment. SKF® laser-guided tools accurately and efficiently align belts and shafts to prevent machine breakdowns

SKF Shaft Alignment Tool: TMEA 2

Shaft alignment is quick and easy with a high degree of accuracy.

3-step process: measuring, aligning and documenting

Easy to attach: measuring units are attached to the shafts using magnetic brackets or chains

Accurate: each unit emits a precise laser line, projected on the detector of the other unit

Eliminates rechecking: display unit simultaneously provides clear, real-time coupling and feet values during the alignment process

Operator-friendly: Display unit can be held in one hand, freeing the operator to perform alignment

SKF Belt Alignment Tool: TMEB 2

Identifies belt misalignments using a laser line, allowing the operator to make adjustments quickly and easily.

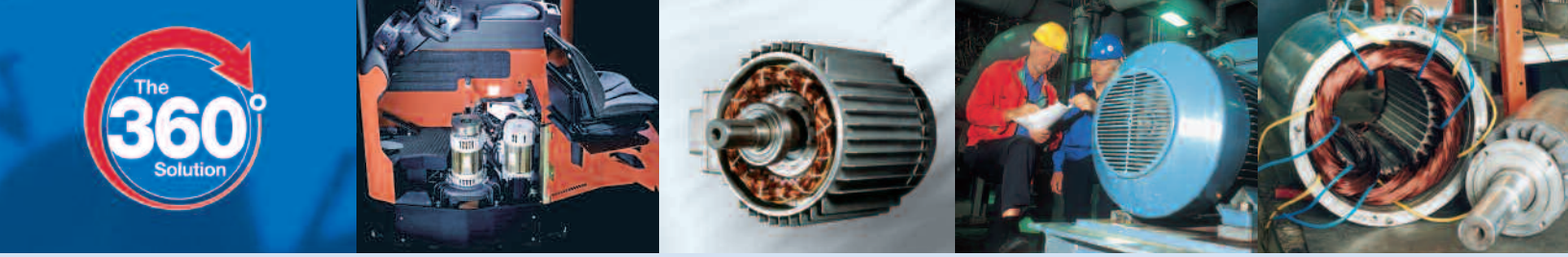
Simple to attach: comprised of just two components—a laser emitting unit and receiver

Accurate: uses V-guides and powerful magnets to align the grooves of the pulley, allowing alignment of pulleys of unequal width or with dissimilar faces

Easy detection: 3-D target area on receiver identifies the nature of misalignment—horizontal, vertical, parallel or a combination

For more information on our solutions for electric motors, contact your authorized SKF representative or visit us at www.skfusa.com

SKF



SKF puts more ROI in your MRO.

Following is an excerpt from an unsolicited testimonial written by a Training Manager at a very large SKF food customer. He thought so highly of the SKF® alignment product, he took it upon himself to help each maintenance area in his plant justify buying its own SKF laser alignment tool. Below are his comments on testing the effect of misalignment on energy consumption:

Will the unit pay for itself in 90 days? What are the estimated yearly cost savings?

To answer these questions I met with an experienced engineer from our Technical Services. I also set up three pumping systems to test the amperage increase on motors for different amounts of misalignment. The results I came up with are:

Laser Align = 0% misalignment;

Straight-edge and thickness gauge if done correctly = 5%.

Straight-edge and eyeball = 10%-20%;

"Stick the pump/motor back in place **like it was before** I fixed it" = ?%

I realize these numbers do not mean much without dollars per year connected to them, so here is an example to look at:

According to our Utility & Energy Waste Management Manual, a 25 hp motor (the average size in this plant) properly aligned costs $9,263.40 to operate per year at $.06/kwh. A 5% increase amp draw costs $463.17 per year; 10% costs $926.34; 20% costs $1,852.68.

This doesn't sound like much but let's look at the big picture. We have 3 maintenance areas, plus a pump shop and the electric shop which all install or adjust the alignment on motors and pumps. If each maintenance area only aligned one motor/pump per day, it adds up quickly. It gets really expensive when the motor is only straight-edged or eyeball-aligned. Lets look at the money lost for energy (below).

I think this answers the above questions. The bottom line is: for a $5,000 investment (for each area) and a little training, we can save a lot of money by doing laser alignment instead of "that's good enough to work."

(Right)

Savings per year by avoiding misalignment

In US dollars. Assuming 365 days/year operation (1 motor/day in each maintenance area)

	$463.17/mtr/yr 5% misalign	$926.34/mtr/yr 10% misalign	$1,852.68/mtr/yr 20% misalign
Areas 1,2 & 3	$507,171.15	$1,014,342.30	$2,028,684.60
Pump Shop	$169,057.05	$338,114.10	$676,228.20
Elec. Shop	$169,057.05	$338,114.10	$676,228.20
Savings	**$845,285.25**	**$1,690,570.50**	**$3,381,141.00**

SKF 360 Solution ROI calculations are from the SKF Documented Solutions Program. Ask your SKF Authorized Distributor for more details.

Publication 170-300B (1M/AN 5/2006) Version 5/2006 Printed in U.S.A.