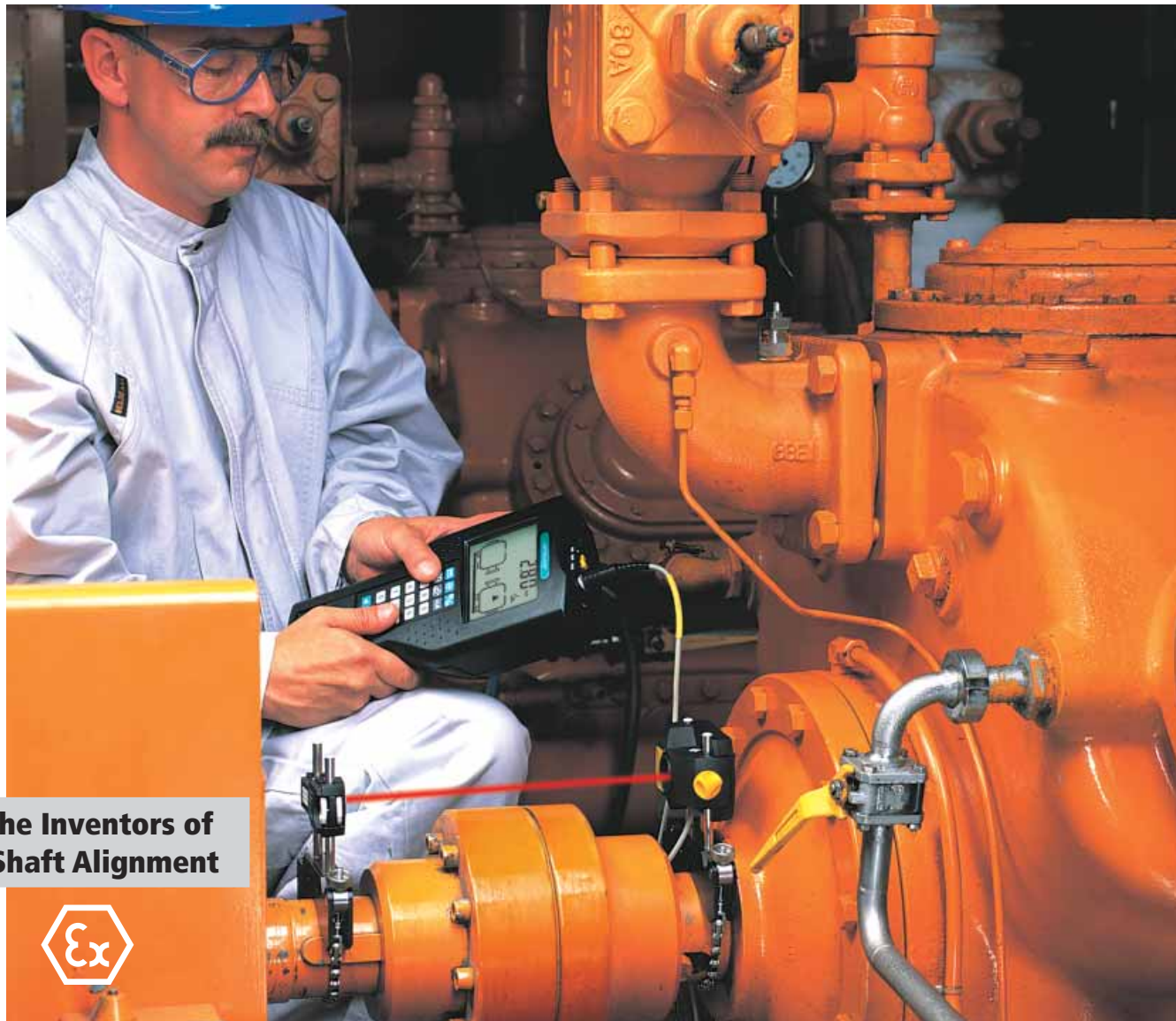
PRÜFTECHNIK

# OPTALIGN® PLUS *Series*

## Laser shaft alignment that meets your needs



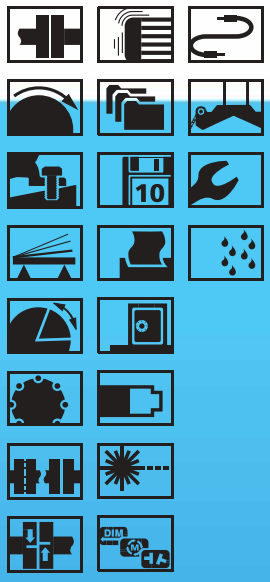
**From the Inventors of Laser Shaft Alignment**

# Match your requirements
## with OPTALIGN® PLUS Series

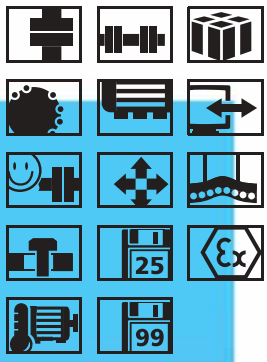
Precise shaft alignment pays. Well aligned couplings reduce bearing and seal damage, minimize energy loss, and reduce production downtime. OPTALIGN® PLUS Series offers both precision alignment and timesaving convenience of laser-based systems. It gives you the benefits of a dynamic laser shaft alignment system without stretching the budget.

**What is "Series"?**
OPTALIGN® PLUS Series is a concept that allows you to design your own device by acquiring the exact features you need. The default entry level has the features necessary for standard horizontal shaft alignment. As job demands grow, additional user benefits can be purchased, enhancing capabilities at any time.

**default features**




**increased benefits**




## What's in it for you?

- Configure system as you require
- Budget for only what you need
- Easy to upgrade with new features
- Based on the proven OPTALIGN® PLUS
- Intrinsically safe version available
- 20 years laser alignment expertise

# Alignment condition determined with only three keys


## 3. Results

The alignment condition is displayed with a smiley, foot correction values, coupling gap and offset.

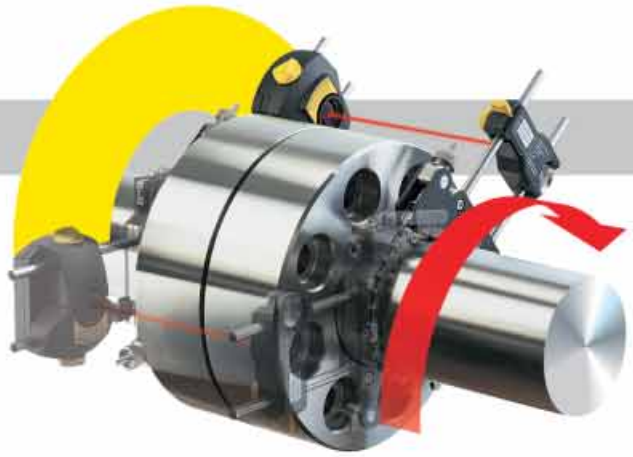
## 2. Measure

The auto start / stop capability allows continuous shaft rotation to start at any position – in any direction.

## 1. Dimensions

Enter machine dimensions as prompted on the display using the robust keyboard.


**A case full of confidence**
Like the components inside it, this lockable, purpose designed case is rugged and shock proof. Just the ideal case for industrial environments.

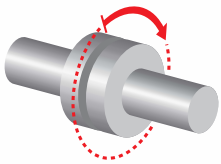


# Measurement flexibility

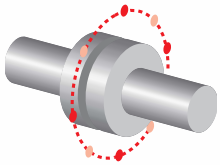
**Master alignment challenges**

OPTALIGN® PLUS Series uses the patented EZ-Sweep® which allows minimum and continuous shaft rotation, and eliminates coupling play effects. Measurement starts automatically as the shaft is rotated, eliminating any possibility of user error.

OPTALIGN® PLUS Series has the features required for standard alignment. These features translate into customer benefits by helping saving time and drastically reducing unplanned machinery breakdown.



**Continuous sweep mode**
This quick and straightforward measurement mode is ideal for standard machines and requires a shaft rotation of as little as 60°.



**Static mode**
This measurement mode is used for nonrotatable and uncoupled shafts. Measurement requires 3 or more of the 8 available measurement positions.

## Loaded features

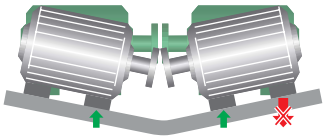
- Aligns horizontal machines
- Automatic continous sweep mode
- Measures soft foot and stores the results
- Horizontal & vertical 'Live Move' at any 45° position
- Overcomes shaft rotation restrictions
- Static measure mode
- For coupled and uncoupled shafts
- Unaffected by backlash
- Variable averaging and deviation band
- Measurement files are reusable and can be edited
- Save up to 10 measurement files
- Print reports directly or use the printing software
- Resume recalls the last file if it was not saved
- Main and reserve battery
- UniBeam® enables quick laser beam adjustment
- Simple 3-key operation
- Only one cable to connect! Eliminates tangling!
- Pre-assembled brackets for quick mounting
- Rugged and robust control unit resists shock
- Industrial-strength water-resistant housings

# Powerful capabilities

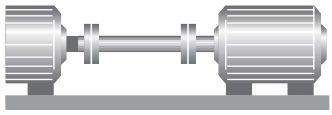
- Vertical machine alignment
- Multipoint mode for shafts on all bearings
- TolChek® determines alignment condition
- Static feet handles movement restrictions
- Ability to enter targets and thermal growth
- Ability to select spacer shaft improving accuracy
- Determine alignment condition of 6-foot machines
- InfiniRange® extends measurement range
- Save up to 25 measurement files
- Save up to 99 measurement files
- Acquire all the above features in one go
- OPTALIGN® PLUS Explorer for full editing capabilities
- Optional brackets for any application
- Intrinsically safe version for explosive environments

Make OPTALIGN® PLUS Series a most versatile laser shaft alignment system by configuring it with useful features that handle thermal growth, 6-feet machines and vertical machines among others.

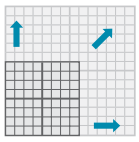
**Movement restrictions**
Problems arising from base-bound or bolt-bound feet are resolved by redefining fixed feet.



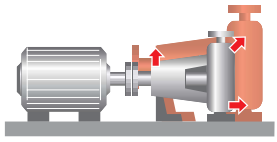
**Choose coupling type**
Accuracy of results is ensured as the type of coupling used is taken into account and the true offsets are calculated at the real coupling planes.



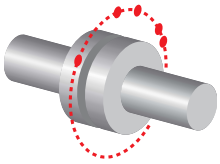
**InfiniRange®**
The detector measurement area is automatically extended to allow alignment of grossly misaligned machines and for long spans.



**Thermal growth**
Thermal growth at the feet and at the coupling can be input for both machines to take into account thermal and dynamic load growth.



**Multipoint mode**
For shafts that are mounted on all types of bearings. Measurement requires 3 points or more at any position over 60° rotation.

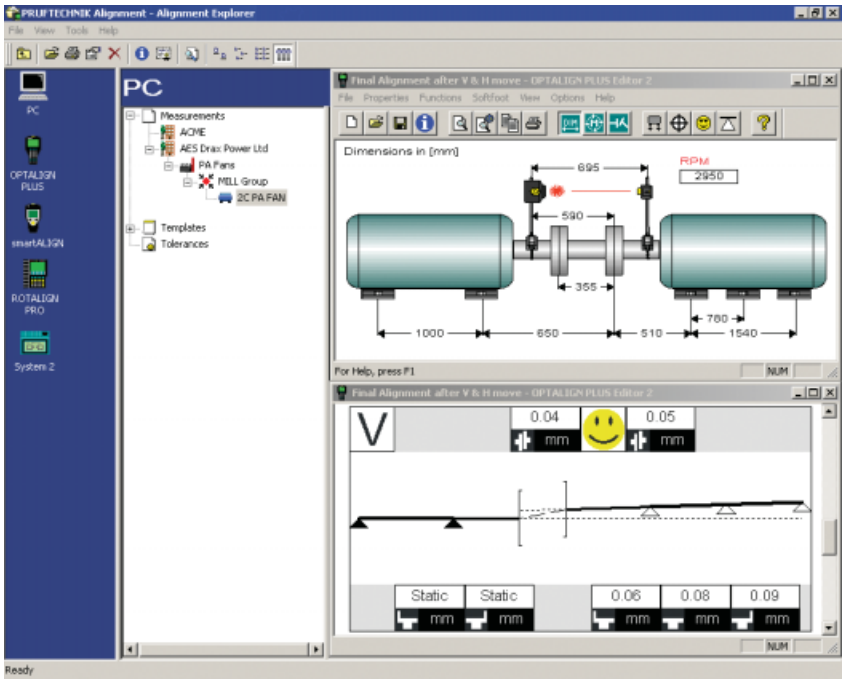


**A most versatile bracket**
The compact magnetic bracket ALI 2.112 SET mounts quickly and is straightforward to use. Its powerful magnets fit onto nearly any flat coupling surface enabling rigid mounting in a matter of seconds. It's ideal for machines with large coupling flanges.

**It turns when shafts can't**
When one or both shafts cannot be rotated for measurement, the sliding magnetic bracket ALI 2.230 comes to the rescue. It glides around the outside of the coupling or shaft end from one measurement position to the next, providing an elegantly simple solution.

# PC software for advance job setup, archival, reporting

- Supports two-way communication between device and a PC
- Set up alignment jobs in advance
- View alignment results
- Optimise alignment corrections
- Copy measurement files into an archive
- Print out customised alignment reports with company logo
- Long names in a tree structure for company, plant, section and machine
- Drag and drop files to other documents, e.g. eMail, MS Word
- Measurement reports in HTML format can be sent using email and opened using any browser




## OPTALIGN® PLUS Series technical data

**Transducer**

| | |
|---|---|
| Measurement principle | Coaxial, reflected laser beam |
| Environmental protection | IP 67 (submersible, dustproof) |
| Ambient light protection | yes |
| Temperature storage | -20°C to 80°C / -4°F to 176°F |
| operating | 0°C to 55°C / 32°F to 131°F |
| Dimensions | approx. 107 x 70 x 49 mm<br>4 1/4" x 2 3/4" x 2" |
| Weight: | only about 177g / 6½ oz. |

Laser

| | |
|---|---|
| Laser | Ga-Al-As semiconductor laser |
| Wavelength (typical) | 675 nm (red, visible) |
| Safety class | Class 2; FDA 21CFR 1000 and 1040 |
| Beam power | < 1 mW |
| Safety precautions | Do not look into laser beam |

Detector

| | |
|---|---|
| Measurement area | unlimited, dynamically extendible (U.S. Patent 6,040,903 ) |
| Resolution | 1 µm |
| Accuracy (av.) | ≥ 98% |

Inclinometer

| | |
|---|---|
| Measurement range | 0° to 360° |
| Resolution | ≤1° |

**Reflector**

| | |
|---|---|
| Type | 90° roof prism |
| Accuracy (av.) | ≥ 99% |
| Environmental protection | IP 67 (submersible, dustproof) |
| Temperature: | |
| storage | -20°C to 80°C / -4°F to 176°F |
| operating | -20°C to 60°C / -4°F to 140°F |
| Dimensions: | approx. 100 x 41 x 35 mm<br>4" x 1 5/8" x 1 3/8" |
| Weight: | approx. 65g / 2½ oz. |

**Control Unit**

| | |
|---|---|
| Display | fixed-segment LCD display |
| Display dimensions | approx. 94 x 73 mm / 3 3/4" x 2 7/8" |
| Keyboard | robust, flat, greaseproof keyboard |
| Environmental protection | IP 65 (water spray resistant, dustproof - except for sealed battery compartment); fully electrically insulated |
| Operating temp. | 0°C to 55°C / 32°F to 131°F |
| Main power supply | 6 x 1.5V IEC LR6 ("AA") batteries (even rechargables) |
| Backup power supply | 1 x 9V IEC 6LR61 battery |
| Battery life (alkaline) | 25 hours on main batteries plus 3 hours on reserve battery |
| Interfaces | 1 x sensor; 1 x printer/PC (serial) |
| Dimensions | approx. 145 x 290 x 67 mm<br>5 3/4" x 11 1/2" x 2 3/4" |
| Weight w/o batteries | approx. 1.1 kg / 2.4 lb. |

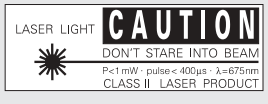
**Carrying case**

| | |
|---|---|
| Standard | ABS, drop tested (2 m / 6 1/2ft.) |
| Case dimensions | approx. 470 x 400 x 195 mm<br>18 1/2" x 15 3/4" x 7 3/4" |
| Weight, including all standard parts | only about 6.8 kg / 15.2 lb. |

**Options**

| | |
|---|---|
| Intrinsic safety | EEx ib IIC T4 |
| Certificate number | TÜV 01 ATEX 1730 |

Ex II 2 G




TÜV MANAGEMENT SERVICE ISO 9001

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