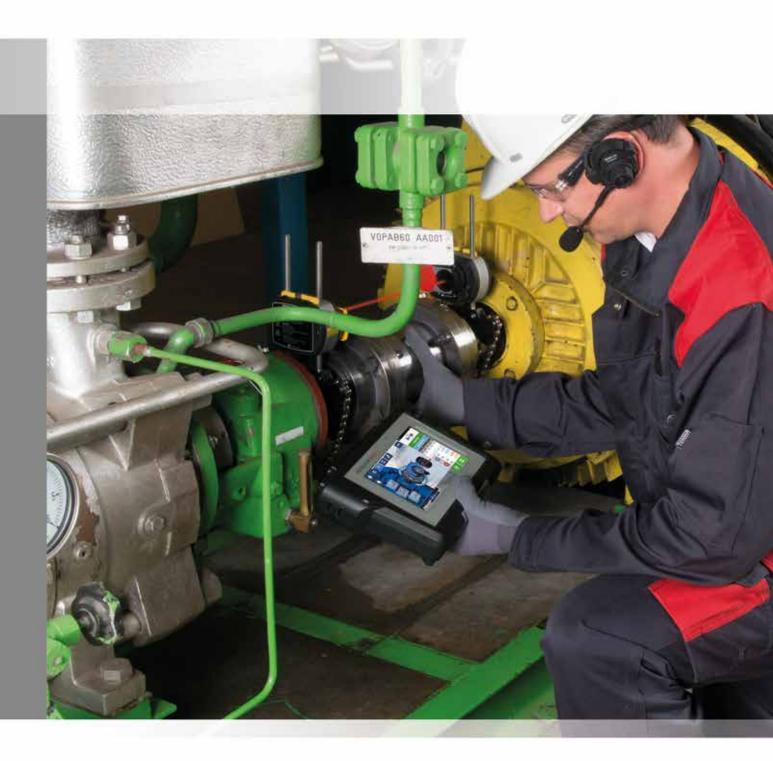
**Centerline, Inc.** 513 E. Wisconsin Avenue Appleton, WI 54911 Phone (920) 730-0615 Fax (920) 730-0622 E-mail <u>info@ctrline.net</u> Website <u>www.ctrline.net</u>



# **ROTALIGN®** touch Precision Meets Connectivity



## A new way to align

### Laser alignment tool for the smart factory

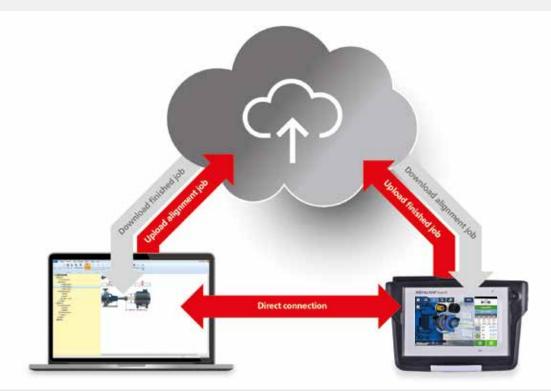
ROTALIGN<sup>®</sup> touch is the first cloud-enabled touchscreen laser shaft alignment system with integrated mobile connectivity.

With ROTALIGN<sup>®</sup> touch, alignment trend is fully integrated into your asset management and condition-based maintenance programs.

Maintenance and Reliability managers can remotely prepare alignment jobs in the alignment software and connect to the Cloud to transfer them to a ROTALIGN® touch device, anywhere in the world. Alignment technicians receive alignment jobs directly on their ROTALIGN® touch device. Once completed, the jobs can be uploaded wirelessly back to the Cloud. A direct connection from the ROTALIGN<sup>®</sup> touch to the alignment software is also possible.

Built-in RFID machine identification and asset-specific jobs make it possible to track the alignment condition of individual assets over time. The alignment trend provides meaningful information and can be used as a condition monitoring parameter to diagnose machine condition even more accurately.

With the onboard camera alignment reports can easily be supplemented with pictures for easier knowledge transfer.



### Real-time communication

#### Overview of the ROTALIGN® touch packages

Four different packages are available with various hardware configurations depending on your needs. All packages offer the same application level.



## Intelligent features for shaft alignment

100 % Precision – 0% Error – 50% Faster

#### sensALIGN® on-board intelligence



The unique intelliSWEEP<sup>®</sup> sensor technology enables continuous measurements and real-time quality for precise, accurate and repeatable results. The intelliSWEEP<sup>®</sup> HD measurement mode automatically detects and eliminates sources of measurement errors such as coupling play, rotational angle or environmental vibration.

As shaft rotates, hundreds of real measurement points are taken automatically. The results are far more accurate than those based on 3 measurement positions.



As shafts are rotated, measurement quality is cleary displayed – a green or blue sector indicates good measurement data.

#### Key shaft features at a glance:

- Multi-coupling Shaft measurement up to 6 couplings simultaneously
- Multi-coupling Live-Move in both Horizontal and Vertical directions simultaneously
- Intelligent measurement modes including uncoupled intelliPASS and intelliPOINT
- Real time Intelligent measurement quality
- Cardan shaft alignment with cardan in place
- Vertical machine alignment with vertiSWEEP continuous measurement mode
- Softfoot diagnostics
- Horizontal and Vertical move simulator
- Measurement table including different alignment jobs
- Machine train with real 3D machines
- Customized tolerances (even asymetrical)
- Multi-coupling Live Trend application

Use the Live Trend monitoring function to analyze thermal or process-related machine positional changes during runup and coast-down phases, while recording machine vibration at the same time.

The latest package of ROTALIGN® touch now features Multi-Coupling measurement (including Multi-Coupling livemove) and Multi-Coupling Live Trend. According to user specific aggregate requirements up to six coupling shafts can be simultaneously aligned in real-time.

This can reduce the alignment-time up to 50 percent and more!





# Tablet-like usability

## Unparalleled user experience

#### Capacitive touchscreen

Glove-enabled capacitive touchscreen for longer life and a tablet-like user experience.

#### Interactive 3D machine view

Interactive 3D machine graphics throughout the alignment procedure for optimum visual guidance.

#### Speech recognition

Voice control frees up both your hands when the alignment job gets hands-on. The functionality may even be operated with Bluetooth<sup>®</sup> headsets in noisy machine halls.

#### RFID on board

Save, retrieve and track the alignment condition of individual assets over time, and easily identify the asset to be measured, without risk of error. ROTALIG

easurement may

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#### **One-Key alignment**

Perform standard alignment from start to finish by pressing only one key.

#### Durability

Tough industrial housing (IP65) and shockproof glass screen (above industry standard).





ROTALIGN <sup>®</sup> touch computer						
CPU	Processor: 1.0 GHz quad core ARM®Cortex-A9 Memory: 2 GB RAM, 1 GB Internal Flash, 32 GB SD-Card Memory					
Display	Technology: Projective capacitive multi-touch screen Type: Transmissive (sunlight-readable) backlit TFT color graphic display Optically bonded, protective industrial display, integrated light sensor for automated adjustment of the brightness to the display Resolution: 800 x 480 Pixel Dimensions: 178 mm (7") diagonal					
LED indicators	3 LEDs for battery status, 1 LED for WiFi communication					
Power supply	Operating time: 12 hours typical use (based upon an operating cycle of 25% measurement, 25% computation, 50% 'sleep' mode) Battery: Lithium-ion rechargeable battery 3.6 V / 80 Wh AC adapter/charger: 12 V / 36 W; standard barrel connector (5.5 x 2.1 x 11 mm)					
External interface	USB host for memory stick USB slave for PC communication, charging (5 V DC / 1.5 A) RS-232 (serial) for sensor, RS-485 (serial) for sensor I-Data for sensor Integrated Bluetooth® wireless communication (covers direct line of sight distances of up to 30 m / 100 ft depending on the prevailing envir-onmental conditions) Integrated Wireless LAN IEEE 802.11 b/g/n up to 72.2 Mbps (depending on configuration) Integrated RFID with read and write capabilities (depending on con-figuration)					
Environmental protection	IP 65 (dustproof and water jets resistant) – as defined in regulation DIN EN 60529 (VDE 0470-1), shockproof Relative humidity: 10% to 90%					
Drop test	1 m (3 1/4 ft)					
Temperature range	Operation: 0°C to 40°C (32°F to 104°F) Charging: 0°C to 40°C (32°F to 104°F) Storage: -10°C to 50°C (14°F to 122°F)					
Dimensions	Approx. 273 x 181 x 56 mm (10 3/4" x 7 1/8" x 2 3/16")					
Weight	Approx. 1.88 kg (4.1 lbs)					
Camera	5 MP built-in (depending on configuration) LEDs: Risk Group 1 according to IEC 62471:2006					
CE conformity	Refer to the CE compliance certificate in www.pruftechnik.com					
Carrying case	Standard: HPX <sup>®</sup> Harz, drop tested (2 m / 6 1/2 ft.) Dimensions: Approx. 551 x 358 x 226 mm (21 11/16" x 14 3/32" x 8 29/32") Weight: Including all standard parts - Approx. 11 kg (24.3 lb)					
FCC compliance	Requirements fulfilled (refer to the provided document 'Safety and gen-eral information')					

#### sensALIGN<sup>®</sup> sensor

CPU	Type: ARM Cortex <sup>™</sup> M3 Memory: 2 GB Flash Memory
LED indicators	4 LEDs for laser adjustment 1 LED for Bluetooth® communication 1 LED for battery status
Power supply	Operating time: 12 hours continuous use Battery: Lithium Polymer rechargeable battery 3.7 V / 1.6 Ah 6 Wh
Environmental protection	IP 65 (dustproof and water jets resistant) – as defined in regulation DIN EN 60529 (VDE 0470-1), shockproof Relative humidity: 10% to 90%
Ambient light protection	Optical and active electronic digital compensation
Temperature range	Operation: -10°C to 50°C (14°F to 122°F) Charging: 0°C to 40°C (32°F to 104°F) Storage: -20°C to 60°C (-4°F to 140°F)
Dimensions	Approx. 103 x 84 x 60 mm (4 1/16" x 3 5/16" x 2 3/8")
Weight	Approx. 310 g (10.9 oz)
Measurement range	Unlimited, dynamically extendible (US. Patent 6,040,903)
Measurement resolution	1 µm
Measurement error	< 1.0%
Inclinometer resolution	0.1°
Inclinometer error	± 0.25% full scale
Vibration measurement	mm/s, RMS, 10Hz to 1kHz, 0 mm/s – 5000/f • mm/s <sup>2</sup> (f in Hertz [1/s])
External interface	Integrated Bluetooth®Class 1 wireless communication, RS232, RS485, I-Data
CE conformity	Refer to the CE compliance certificate in www.pruftechnik.com

## sensALIGN<sup>®</sup> laser

Туре	Semiconductor laser				
LED indicators	1 LED for laser transmission 1 LED for battery status				
Power supply	Operating time: 70 hours continuous use (Li-polymer battery) Battery: Lithium Polymer rechargeable battery 3.7 V / 1.6 Ah 6 Wh AC adapter/charger: 5 V / 3 A				
Environmental protection	IP 65 (dustproof and water jets resistant) – as defined in regulation DIN EN 60529 (VDE 0470-1), shockproof Relative humidity: 10% to 90%				
Temperature range	Operation: -10°C to 50°C (14°F to 122°F) Charging: 0°C to 40°C (32°F to 104°F) Storage: -20°C to 60°C (-4°F to 140°F)				
Dimensions	Approx. 103 x 84 x 60 mm (4 1/16" x 3 5/16" x 2 3/8")				
Weight	Approx. 330 g [11.6 oz]				
Beam power	< 1mW				
Beam divergence	0.3 mrad				
Inclinometer resolution	0.1°				
Inclinometer error	± 0.25% full scale				
CE conformity	Refer to the CE compliance certificate in www.pruftechnik.com				

## PRUFTECHNIK

### Proven technology for all industries

With our products, processes and services for alignment applications, condition monitoring and availability optimization, we help ensure that your machines run smoothly and generate an output of consistently high quality. This also

includes systems for automatic process control and quality assurance that are integrated directly in your production process.

#### **PRUFTECHNIK** delivers maintenance solutions worldwide



Laser measurement systems and services for optimum alignment of machines and systems.



Vibration measurement systems for machine condition monitoring - including services such as machinery fault diagnosis.



Systems and services for quality assurance and process control in production.



We offer professional services anywhere in the world to support our customers

with alignment and condi-

tion monitoring.

# www.pruftechnik.com

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## **POSI LOCK ALIGNMENT ACCESSORIES**

Demo video can be found here: <u>http://www.ctrline.net/demo-videos.html</u>

**SIDE ALIGN TOOL KITS** 

All-in-one, go-anywhere portable jack bolt sets. Aligning rotating machinery is not just about precision measuring, but also precision adjustments. Use the smooth power of an eccentric socket to turn rotary motion into controlled linear movement. By rotating the eccentric socket, linear movement is transferred to the motor foot, creating a precise movement to the desired alignment position. Available in standard or metric sizes for machines 2 to 300HP. Kits include carrying case. Individual components also available.









#### Part Number: AT-1104 \$ 800.00 Kit includes the following actuator socket sizes: (for in between sizes, use the next size up) Size Tool Range

9/16" 13/16 to 1-5/8 in.

3/4" 7/8 to 2 in.

15/16" 7/8 to 2-5/8 in.

7/8 to 2-5/8 in.

1-1/8"



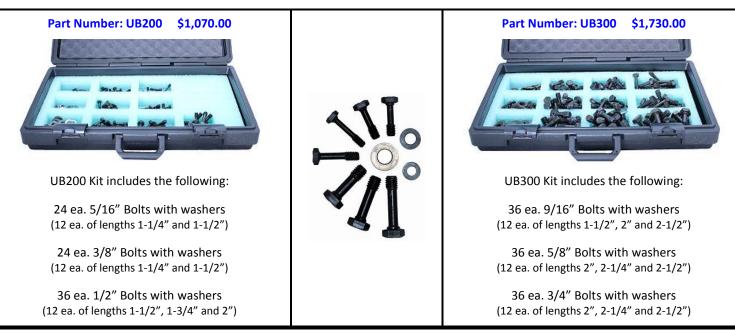
#### Part Number: AT-1108 \$ 1,360.00

Same as AT-1104 plus the following
additional actuator socket sizes:
(for in between sizes, use the next size up)

<u>Size</u>	<u>Tool Range</u>			
1-5/16"	1-1/2 to 4-1/2 in.			
1-1/2"	1-1/2 to 4-1/2 in.			
1-11/16"	1-7/8 to 6-1/8 in.			
1-7/8"	1-7/8 to 6-1/8 in.			

#### **UNDERCUT BOLT KITS**

Posi Lock's undercut bolt sets virtually eliminate the problem of 'bolt-binding'. This innovative precision undercut bolt and washer system helps you achieve and maintain perfect alignment faster and easier than ever before. The sets feature hardened, grade-8 bolts with maximum clearance and through-hardened, plated washers. Kits include carrying case. Individual components also available.









# LAWTON<sup>®</sup> PRECUT STAINLESS STEEL 304 SHIMS





	SIZE A	SIZE B	SIZE C	SIZE D	SIZE G	SIZE H			
Shim and Slot size	2" x 2" x 5/8"	3" x 3" x 13/16"	4" x 4" x 1-1/4"	6" x 5" x 1-5/8"	7" x 7" x 1-3/4"	8" x 8" x 2-1/4"			
Approx. H.P. Range	0.25 to 15	10 to 60	50 to 200	150 to 1000	Over 1000				
Kits include the following	Kits include the following thicknesses: 0.001", 0.002", 0.003", 0.004", 0.005", 0.010", 0.015", 0.020", 0.025", 0.050", 0.075", 0.100", 0.120"								
LIGHTWEIGHT KITS	\$ 175.00	\$ 225.00	\$ 310.00	\$ 480.00	NA				
LIGHTWEIGHT KITS	INCLUDE 13 DIFF	ERENT THICKNES	SES WITH 10 SHI	MS PER THICKNES	SS IN METAL CAR	RYING CASE			
Shipping Weight	7 lbs.	14 lbs.	22 lbs.	40 lbs.	NA				
STANDARD KITS	\$ 350.00	\$ 450.00	\$ 620.00	\$ 960.00	\$ 1,150.00	\$ 1,370.00			
STANDARD KITS A-D INCLUDE 13 DIFFERENT THICKNESSES WITH 20 SHIMS PER THICKNESS IN METAL CARRYING CASE STANDARD KITS G-H INCLUDE 13 DIFFERENT THICKNESSES WITH 12 SHIMS PER THICKNESS IN METAL CARRYING CASE									
Shipping Weight	14 lbs.	26 lbs.	43 lbs.	79 lbs.	77 lbs.	95 lbs.			
THICKNESS	INDIVIDUA	INDIVIDUAL SHIM PACKAGES OF 20 PER THICKNESS 12 PER THICKNI		HICKNESS					
0.001" \$	22.00	27.00	36.00	48.00	44.00	48.00			
0.002" \$	22.00	27.00	36.00	48.00	44.00	48.00			
0.003" \$	22.00	27.00	36.00	48.00	44.00	48.00			
0.004" \$	22.00	27.00	36.00	48.00	44.00	48.00			
0.005" \$	22.00	27.00	36.00	48.00	44.00	48.00			
0.010" \$	22.00	27.00	36.00	48.00	86.00	97.00			
0.015" \$	22.00	27.00	36.00	48.00	91.00	99.00			
0.020" \$	26.00	30.00	39.00	55.00	95.00	103.00			
0.025" \$	26.00	30.00	39.00	55.00	98.00	110.00			
0.050" \$	30.00	36.00	50.00	76.00	102.00	121.00			
0.075" \$	33.00	48.00	66.00	120.00	130.00	170.00			
0.100" _\$	39.00	58.00	87.00	150.00	155.00	208.00			
0.120" \$	45.00	67.00	98.00	179.00	179.00	227.00			
REPLACEMENT CASE	53.00	57.00	60.00	64.00	74.00	78.00			

Prices are subject to change without notice. Prices: F.O.B. Rocklin, CA

Available only to shipping destinations within the state of WI or U.P. of MI. Minimum billing: \$100.00

#### **EFFECTIVE JUNE 2019**

