A comprehensive asset management tool for reciprocating and rotating plant machinery.

The RECIP-TRAP 9260 system includes a multi-channel analyzer and the RTwin 9.2 software suite. This allows you to collect and analyze technical and economic measure of performance and mechanical condition in order to make asset management decisions that will increase your profitability and mitigate risk.

RECIP-TRAP 9260

This portable, rugged, 4-channel device comes complete with the accessories, transducers, cables and software needed to analyze and evaluate the mechanical condition and performance of power cylinders, compressors, and auxiliary equipment. The RECIP-TRAP 9260 weighs just 7.3 lbs., is EMI/RFI resistant, and has been re-designed to include a sunlight visible VGA screen.

Through the use of accelerometers, ultrasonic sensors, the patented water-cooled Aqua-Probe, and an IR temperature wand; the RECIP-TRAP 9260 simultaneously measures, displays and stores data in real time. Once stored, the data can be viewed in whatever level of detail you need while still on the machine. Allowing you to verify data integrity and ensure all anomalous events have been captured.

RTwin 9.2

This system couples the durability, reliability and precision of the RECIP-TRAP 9260 analyzer with our RTwin 9.2 software suite, long recognized as the world’s leading reciprocating machinery diagnostic software.

RTwin 9.2 provides benchmarks for your operation and highlights areas for potential improvement through extensive data comparisons and statistical analysis such as:

- Cycle-to-cycle pressure variations
- Statistical analysis of ignition secondary and power cylinder peak firing pressure (ECR)
- Cylinder-to-cylinder variations in vibration and pressure
- Current-to-baseline comparisons of pressure, vibration, ultrasonic and spectra
- Theoretical-to-actual comparisons of compressor pressure vs. time and pressure volume
- Population based comparisons
- Spectrum analysis: snapshot explorer, fault-finder, cascade spectrum, and statistical process control (SPC)
KEY MEASURES

Phased static (DC) pressure: from a patented, watercooled AQUA-PROBE. Available in pressure standard ranges: –14.7 to +5000 psi (–1.0 to +345 bar) or –14.7 to +1250 psi (–1.0 to +86.2 bar); custom pressure ranges are also available.

Phased vibration: low (1 Hz to 8 kHz), standard (5.6 to 44 kHz), mid (180 Hz to 8 kHz) high (15.6 kHz to 44 kHz). Phased ultrasonics: 36 kHz to 44 kHz.

Infrared skin temperature: –20°F to 2400°F (–29°C to +1316°C).

Phased ignition primaries: primary AC (–10 to +10 V) or DC (–10 to +10 V) waveform analysis.

Phased ignition secondaries: ignition timing and level statistics (based on 100 cycles) and waveform analysis. Rod motion (optional): input from proximity probes (200 mV/mil) produces phased rod position waveforms.

Phased conventional vibration: displacement (0 to 100 mil), velocity (0 to 8.00 ips), and acceleration (0 to 50 g).

Conventional vibration: time- and frequency-based (3 Hz to 20 kHz) true peak, RMS, pseudo-peak, displacement, velocity and acceleration. Rolling element bearing defect energy acceleration (5 to 45 kHz).

Speed indicators: magnetic, hall effect, or optical speed sensors.

Position indicators/transmitter: once/degree shaft encoder or once/turn magnetic speed sensors for timing information. BETA-LINK wireless angular position transmitter and receiver system.

Process and gauge readings: in any engineering units. Analysts notes: up to 200 notes for recording observations during data collection.

SPECIFICATIONS

Length: 10.5 in. (267 mm)

Width: 9.25 in. (235 mm)

Height: 3.25 in. (83 mm) graphics display down; 9.5 in. (241 mm) graphics display up

Weight: 7.3 lbs (3.2 kg) without accessories

Operating temperature: 0°F to +120°F (–18°C to +49°C)

Housing: shock-resistant, light-weight, EMI/RFI resistant

Graphics screen: 256 color, high resolution, 800 x 600 VGA, sunlight viewable, EMI/RFI resistant

Front panel display: 80-character, backlit, EMI/RFI resistant

12 push buttons: power, start, menu, scale, zoom, testpoint, testpoint group, forward, backward, escape and two trap buttons.

Ports: 4 data input ports; 1 multi-purpose port accepts input from marker, charger, communication, and IR temperature; and 1 BNC–out port for output to timing light.

BETA-LINK receiver: receives marker signal from BETA-LINK transmitter.

Communication: up to 115k baud data transfer.

Marker Accessories: Once-per-degree shaft encoder kit, once-per-turn magnetic pickup, BETA-LINK transmitter, BETA-LINK charger, magnetic pickup cable, TM5D trigger module, timing light, 75-foot (23 m) marker cable.

Pressure Accessories: 2 ea. DC AQUA-PROBE pressure transducers and cables. 5 and 12 foot (1.5 and 3.6 m) quick-connect Fisher™ connectors. (CR Model comes with only 1 ea. DC AQUA-PROBE).

Vibration Accessories: standard accelerometer, 2 magnet mounts, probe tip, Channellock® pliers. Variable gain ultrasonic microphone. 5 and 8 foot (1.5 and 2.4 m) quick-connect Fisher™ connectors. Optional triaxial accelerometer cable allows 3 simultaneous vibration readings from a single input.

Ignition Accessories: Attenuator, ignition primary pickup cable, ignition secondary pickup cable.

IR Temperature Wand: records skin temperature in the range -20°F to +2400°F (–29°C to +1316°C).

Battery: Two Li-ion batteries and charging system. Also included: wrenches, carrying case, user manual. Single CPU RTwin software license.

MODELS AVAILABLE


RECIP-TRAP 9260/DR: for analysis of diesel engines, and rotating machines.

RECIP-TRAP 9260/CR does not come with Encoder Kit. May be purchased separately.