



# SKF Basic Condition Monitoring Package

CMPK 200 <sup>plus</sup>/CMPK 210 <sup>plus</sup>



- *Check bearing and machine condition quickly and easily.*
- *Reduce unexpected downtime.*

**An essential collection of monitoring tools that no industrial manufacturing plant should be without. Makes condition monitoring a simple task for maintenance, operations, reliability and vibration analysis departments.**

## A Powerful Combination for Detection of Machine and Bearing Defects

### Multi-Parameter Condition Monitoring:

- *Vibration Pen<sup>plus</sup> CMVP 40/CMVP 50*
- *MicroTemp – Noncontact Thermometer CMSS 2020*
- *Inspector 400 Ultrasonic Probe CMIN 400*

### CMPK 200<sup>plus</sup> Package (Metric) includes:

- CMVP 50 (mm/s, RMS – Metric) Vibration Pen<sup>plus</sup> with Carrying Case
- CMSS 2020 MicroTemp – Noncontact Thermometer
- CMIN 400 Inspector 400 Ultrasonic Probe with Headphones
- Batteries included
- VibCard
- Belt Holder for the Vibration Pen<sup>plus</sup>
- Comprehensive Quick Start Instruction Card
- Rugged Carrying Case

### CMPK 210<sup>plus</sup> Package (English) includes:

- CMVP 40 (in/s, eq. peak – English) Vibration Pen<sup>plus</sup> with Carrying Case
- CMSS 2020 MicroTemp – Noncontact Thermometer
- CMIN 400 Inspector 400 Ultrasonic Probe with Headphones
- Batteries included
- VibCard
- Belt Holder for the Vibration Pen<sup>plus</sup>
- Comprehensive Quick Start Instruction Card
- Rugged Carrying Case



**Vibration Pen<sup>plus</sup>**  
 CMVP 40 (in/s) eq. Peak /  
 CMVP 50 (mm/s) RMS

- ***So light and compact it fits in your shirt pocket***
- ***Easy to operate***
- ***Measures according to ISO 10816 standards***

A Multi-Parameter approach to condition monitoring provides two different methods for monitoring machinery condition.

This allows for early detection of specific machinery problems and provides more ways to measure changes in machinery condition.

The Vibration Pen<sup>plus</sup> is a Multi-Parameter vibration monitoring tool capable of measuring overall vibration (caused by rotational and structural problems like imbalance, misalignment, looseness, etc.), and capable of acceleration enveloping measurements that measure vibration in higher frequencies (vibration caused by rolling element bearing or gearmesh problems).

When performing measurements, the Vibration Pen<sup>plus</sup> tool's sensor input signal is processed to produce both measurements for each machinery POINT, Overall Vibration and Acceleration Enveloping.

The Vibration Pen<sup>plus</sup> tool's LCD simultaneously displays both measurement values. Depending on the type and location of the machinery component being measured, either or both readings provide useful fault detection data.

The Vibration Pen<sup>plus</sup> multi-parameter approach makes it the most powerful hand-held condition monitoring tool available.

For additional information on the Vibration Pen<sup>plus</sup> order document CM2081 from your SKF representative.



**Inspector 400  
Ultrasonic Probe**  
CMIN 400

- **Detect Pressure and Vacuum Leaks ... Including Compressed Air**
- **Check Steam Traps and Valves Quickly and Accurately**
- **Detect Arcing, Tracking and Corona in Electric Apparatus**
- **Test Bearings, Pumps, Motors, Compressors, etc.**

The Inspector 400 Ultrasonic Probe senses high frequency sounds produced by operating equipment, leaks and electrical discharges. It electronically translates these signals by a heterodyning process, making them audible, so that a user can hear these sounds through a headset and see them as intensity increments on a meter.

The Inspector 400 can **complement your condition monitoring program** by providing you with the following capabilities:

**Pressure / Vacuum Leaks** – As any gas (air, oxygen, nitrogen etc.) passes through a leak orifice, it generates a turbulent flow with detectable high frequency components.

**Valve** – Valve activity such as leakage or blockage can be accurately checked while the valve is on line.

**Valve Stems** – Valve stems may be quickly tested for leaks to atmosphere.

**Steam Trap Inspection** – Major steam trap manufacturers have recommended ultra sound inspection of steam traps as one of the most reliable methods available.

**Electrical Inspection** – Arcing and corona discharge emit ultrasounds at the site of emission.

**General Mechanical Inspection** – The Inspector 400 Ultrasonic Probe can detect the early stage of a machine's mechanical malfunction.

**Heat Exchangers, Boilers and Condensers** – Fittings, valves, flanges are all easily scanned for leakage. The high frequency, short wave nature of ultrasound allows operators to pinpoint the location of a leak in high noise environments.

For additional information on the Inspector 400 Ultrasonic Probe order document CM2250 from your SKF representative.



**MicroTemp –  
Noncontact  
Thermometer**  
CMSS 2020

- **Laser Sighted**
- **Fast and Easy to Use**
- **Compact, Rugged Size**

The SKF MicroTemp CMSS 2020 Noncontact Thermometer lets you take the surface temperature of any object quickly and easily. Just aim, pull the trigger, and read the temperature on the

display. You can safely measure surface temperatures of hot, hazardous, or hard-to-reach objects without contact.

Its compact size makes it handy for use in the Electrical/Industrial, Automotive/Diesel, Food Safety and various other industries.

## Technical Data

**Recommended Target Ranges:** The unit's distance-to-target spot size ratio is 6:1. For best results, make sure the target is larger than the unit's spot size.

**Temperature Range:** 0 to +500°F (-18°C to +260°C).

**Ambient Operating Range:** +32°F to +120°F (0 to +50°C).

**Accuracy: For targets at:** +30°F to +500°F (-1°C to +260°C) ± 2% of reading or ± 3.5°F (± 2°C) whichever is greater; 0 to +30°F (-18°C to -1°C) ± 5°F (± 3°C)

**Weight:** 0.5 lb (227g)

**Dimensions:** 6.0" x 4.0" x 1.5" (152mm x 101mm x 38mm)

**Power:** 9V Alkaline or NiCad battery

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## SKF Reliability Systems

5271 Viewridge Court • San Diego, California 92123 USA  
Telephone: +1 858-496-3400 • FAX: +1 858-496-3531

**Web Site:** [www.skf.com/reliability](http://www.skf.com/reliability)

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