



## SKF Copperhead takes the “crash” out of crushers

### Benefits

- Early warning system protects critical equipment
- Avoids costly unplanned downtime
- Reduces maintenance costs
- Integrates easily into new or existing automation systems
- Simple one-sensor, one transmitter system
- Rugged construction, easy installation

### Typical applications

- Impactors
- Crushers
- Fans
- Pumps
- Motors
- Grinding mills
- Hoists

Anywhere vibration causes machinery problems

### SKF Copperhead fault detection kits warn of problems, offer uptime solutions

- Can you tell when your horizontal impactor rotor has excessive wear?
- Can you tell when rotor unbalance is causing bearing damage?
- Do you know if/when a blow bar is loose enough to fly off?
- Do you know how much unplanned downtime costs in lost productivity and damage to shafts, bearings, and rotors?

These questions point up common problems plaguing the mining and aggregate industry. You can live with these problems and their effect on your bottom line – or you can do something about them.

### SKF Copperhead fault detection kit is a proven solution for crushers

SKF Copperhead kits, available from your SKF Authorized Distributor, offer an easily installed and cost-effective means for monitoring critical equipment. The easy-to-use system helps avoid unplanned downtime and unnecessary costly repairs.

The SKF Copperhead kit (CPHD 1C/10) consists of a CMPT 2310 vibration sensor and CMPT CTU transmitter. This simple system provides an output signal proportional to the machinery vibration for monitoring by the automation system (PLC/DCS).

### Simple operation

The rugged, low profile CMPT 2310 sensor mounts to the crusher body. The CMPT CTU transmitter digitally evaluates overall machinery vibration and provides a processed analog signal to your automation system.



For the horizontal impactor, the transmitter CTU is user-set to evaluate the ISO Velocity. The CMPT CTU can make other types of vibration analysis and can work with temperature sensors as well. An alarm/display module (CMPT DCL) is available for stand-alone monitoring.



## Increase the return on your maintenance investment with SKF

The whole idea behind the SKF 360° Solution programme is to help you get more out of your plant machinery and equipment investment.

This means lowering your maintenance costs, or raising your productivity, or both! Here's an example of the SKF 360° Solution at work in the mining, mineral processing and cement industry.

### Big savings and peace of mind

A major aggregates producer "can't count" the number of times the SKF Copperhead fault detection kit saved their horizontal shaft impactors from failure.

Using a **CPHD 1C/10** kit, the overall vibration of the crusher was continuously evaluated and the output signal from the transmitter increased when a fault occurred. Then, through their plant automation system, they received an alert, warning them to take corrective action before the condition became catastrophic.

With this early warning system in place, plant personnel were able to take corrective actions to avoid the costly effects of bearings spinning in their housings, broken and thrown blow bars, and bent shafts. The Return On Investment (ROI) was dramatic and the peace of mind for plant management was priceless.

**CPHD 1C/10 Kits** can also evaluate vibration in other equipment such as conveyors, fans, pumps and motors.



### Return On Investment (ROI) figures\*

Savings per machine by avoiding downtime .....	€ 4 000
SKF Copperhead CPHD 1C/10 (one per machine) investment .....	-€ 800
<b>Total savings</b> .....	<b>€ 3 200</b>
<b>Total ROI</b> .....	<b>400 %</b>

\* All figures are rounded off and based on customer estimates of labour and production costs.

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