Today’s competitive environment calls for greater equipment reliability at lower operating costs. These needs require not only innovative, proven and practical solutions but also ones which can be quickly implemented to produce real cost savings.

Considering these difficult demands, it is easy to understand why vibration analysis is now becoming one of the preferred choice among all non-destructive methods implemented by building owners, managers and operating engineers.

This method provides the highest level of predictive service. It has been established that a vibration signature of a running equipment provides more detailed information on internal components condition than infrared or electrical non-destructive methods for instance.

**Benefits of Trane vibration analysis**

Every piece of HVAC equipment with rotating components has its own vibration signature. Any change in this signature can be used as an accurate means of identifying developing problems such as bearing wear, shaft imbalacing, and degrading screw compressor rotor tolerance. The monitoring and diagnostics system will reliably detect not only potential defects at the initial stage of their development but also identify the exact defect type and its severity. Vibration analysis can identify problems long before they become noticeable.

**Risk removal**

The Trane vibration analysis allows you to switch from ‘run to failure’ mode to a more predictive maintenance mode avoiding the high costs involved with emergency repairs and minimizing expenses associated with equipment downtime.

Increasing the operating reliability by improving the Mean Time Between Failure (MTBF) lowers your repair bills.

**A complete offer**

The Trane vibration analysis is part of Trane Care Services program. When associated with oil analysis and Compressor R’Newal, it provides a clear, complete and in-depth path allowing you to attain increased reliability and lower operating costs.
The Trane compressor R’newal program will restore your chiller’s performance and reliability to as new condition.

When is the vibration analysis required
- When an oil analysis reveals the presence of wear indicating the start of possible bearing or motor failure. The Trane oil analysis has the ability to identify the type of metallic particles in the oil which when combined with the vibration analysis will clearly point out the failing components.
- Vibration analysis should be performed on a regular basis to build a vibration trend of the equipment and avoid unplanned downtime and costs.

Vibration analysis by Trane
The vibration measurement and analysis techniques used by Trane can identify a wide range of developing faults such as shaft misalignment, bearing defects, imbalance, or motor electrical problems.

Measurement of the compressor overall vibration level only is not sufficient. A narrow band frequency analysis is needed to indicate the specific type of developing problem.

In order to be able to conduct this type of detailed analysis it is essential to know the compressor kinematics. That is the natural frequencies and speed of all the rotating parts of the compressor, only Trane has this information for its compressors.

Vibration analysis results
Like a doctor who takes care of his patient for an examination, our experts will look after your equipment. They know it perfectly and will deeply and carefully monitor every single essential part. Like stethoscopes, very sensitive sensors are installed in carefully selected places. The smallest deviation or any abnormal behaviour are detected and recorded. Like an electrocardiogram, vibration spectrum of your equipment illustrate its internal condition. These graphs are simply and clearly explained to you.

To help you further, we will provide you recommendations in terms of maintenance scheduling.

If the vibration analysis report indicates an imminent compressor fault, then we will advise you how to plan for a scheduled compressor renewal.
Trane Care Services

Trane Care offers an extensive array of upgrade products to answer our customers’ top business priorities. Because Trane service experts will analyze your objectives, you can trust they will make the best recommendations to meet your building needs.

With Trane Care, let us show you how to enhance your cooling and heating system to like-new performance. Trane Care reliability services reduce the risk of breakdowns, improve operation and extend equipment life.

Trane Care proposes cost effective ways to optimize the energy efficiency of your existing system and generate immediate savings.

Trane Care service experts can advise building owners and managers on how to manage complex issues such as building carbon footprint, occupational health, comfort, safety and compliance with national and local legislation.

Call on Trane

Call on Trane today and get the expertise of a global leader and its experienced service professionals and resources. With more than 120 locations in Europe, Middle East, Africa and India, Trane has one of the most extensive service networks in the industry.

Our local technicians have:
- Knowledge on the history of your equipment and controls
- In-depth expertise in servicing your equipment and controls
- Access to the latest technology and support

Call us, let’s talk.