



# The EXAKT Software Snapshot

## PURPOSE OF SOFTWARE

### EXAKT - What is it ...?

A decision support tool for predicting reliability and optimizing condition based maintenance.

### EXAKT - What can it do ...?

Predict equipment failure. Estimate remaining useful life of equipment. Define the mix of preventive replacement & run to failure in order to:

- Optimize costs
- Optimize reliability
- Achieve the optimum risk/cost/reliability balance

## The EXAKT BENEFITS

- **Production Reliability** – is improved and operating costs reduced by predicting failures before they occur.
- **Zero Equipment Downtime** – before the end of the production run providing operations with a high level of confidence.
- **Accurate Maintenance Scheduling** – by predicting remaining useful life.
- **Eliminate Analysis of low-impact data** – by directly relating condition variables to failure modes with statistical confidence levels.
- **Reduction of maintenance costs** – by optimizing the frequency of preventive replacements.
- **Effective equipment & component replacement planning** – through accurate prediction of remaining useful life.
- **Accurate failure prediction** – for complex equipment, by operating at the component level.
- **Consistent & accurate prediction model** – for each piece of equipment.
- **Focused on key operating and condition variables** – reducing data collection and analysis costs.
- **Ongoing system maintenance minimized** – as a self-checking analyser ensures the on-going accuracy of statistical formulas.
- **Results at a glance** – through easy to read graphs requiring minimal training.



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The EXAKT DETAILS

### SAMPLE EXAKT RESULTS

- Maintenance cost reductions of 10 to 49% per failure mode
- 84 to 100% reduction in failures
- Consistently statistically significant confidence levels

### EXAKT BASIC INPUT DATA

- Equipment and component parameters.
- Event data from the work order (data relating to events that affect the equipment, such as failures, suspensions, frequency, working age).
- Condition data – vibration, oil sampling, temperature etc...
- Failure modes.
- Preventive and failure replacement costs.

### EXAKT SAMPLE OUTPUT DATA

- Optimum % balance of preventive replacement and run to failure maintenance.
- Cost impact related to current practice.
- Statistical validity of alternative models.
- Remaining useful life.
- Expected time between replacements
- Traffic light graph with a current status trend line – the equation of the variables is monitored by EXAKT, with “Replace/Don't Replace” conclusion in the red zone indicating the need to replace immediately.

### INDUSTRIES SERVED

- Any industry where asset replacement cost or equipment failures are a significant part of their operations
- Any heavy industry such as mines, steel, metals processing, chemicals, oil and gas, petrochemical, pulp and paper, large transportation (aircraft to truck and bus)
- Discrete manufacturing facilities – automotive, electrical, components, furniture, tires, plastics
- Process manufacturing – pharmaceuticals, food and beverages
- Municipal, state/provincial and federal departments, military, customs, airports
- Telecom, gas, electrical, water distribution companies
- Success Stories in Urea and Chemicals (compressors and pumps), Mining (haul trucks and shovels), Defence – (frigate diesel engines), and others