



CMap-Monitoring

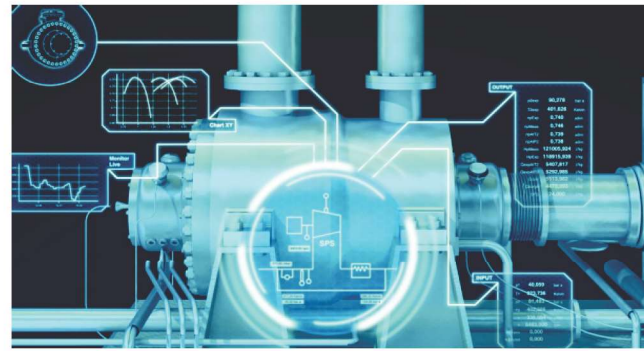
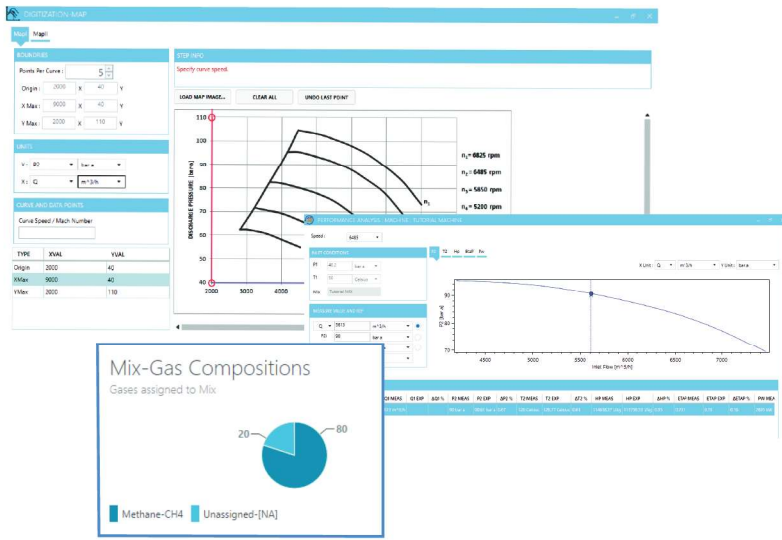
Continuous Performance Evaluation Software

Centrifugal Compressor Performance continuous monitoring and automated evaluation.

www.ipc-eng.com/monitoring-systems/

Continuous Performance Evaluation

IPC Monitoring Software provides continuous monitoring and evaluation of centrifugal compressor performance. Evaluation is based on the comparison of actual performance to expected ones, according to machine specifications or test data. Quantitative performance evaluation approach allows to implement predictive maintenance strategies for early detection of failures premonitory signals.



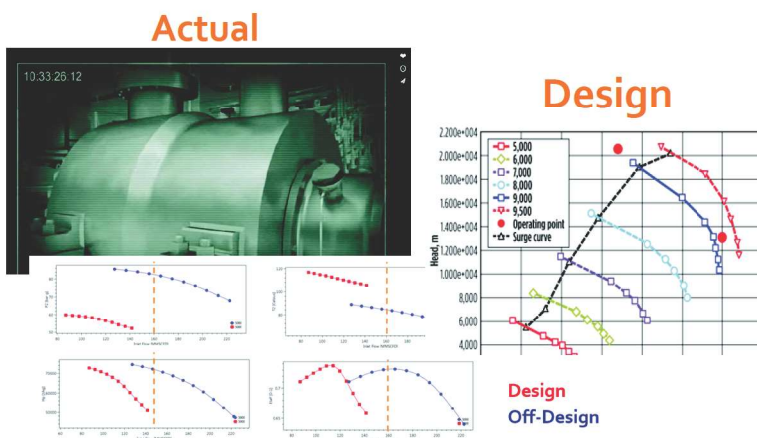
CMap Monitoring predicts compressor performance using CMap calculation capabilities.

CMap 2.0 Performance Evaluation Software

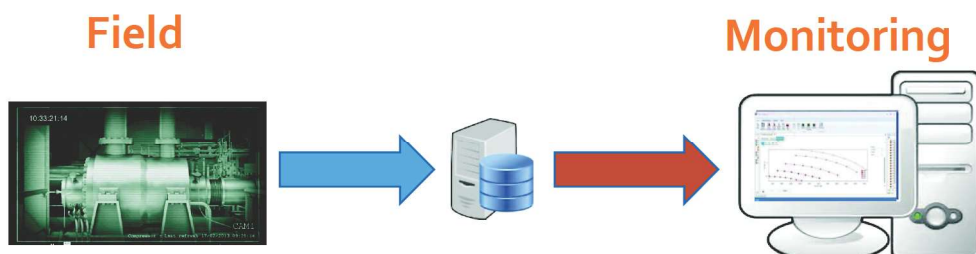
The basic concept in CMap-Monitoring is comparing machinery performance during real operations (actual vs expected performance), to some machine reference performance in an optimal health status, for example test performance or other type of reference/design data.

CMap-Monitoring stores in the computer memory the reference performance. These design /reference data are used as input to create the machine model for an accurate prediction of performance.

CMap-Monitoring is then able to continuously compare actual performance, obtained from measurements of operative parameters, to the expected performances, as calculated using the compressor model. The calculation method is ASME PTC10 compliant.

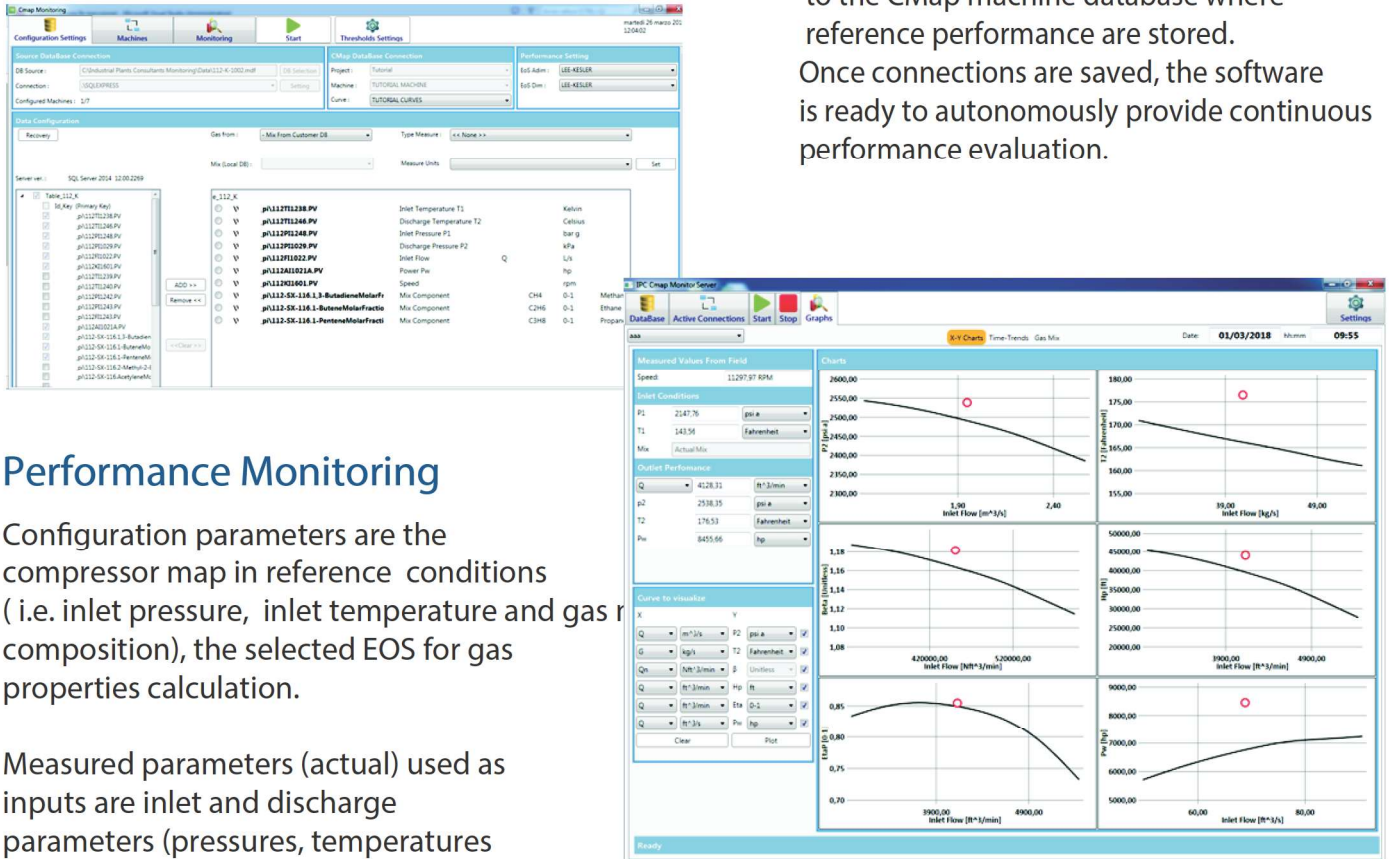


CMap Monitoring® retrieves data from customer Database (usually at DCS level), and runs automated calculations for performance prediction in operative conditions. Calculated expected performance are then compared to data readings from field.



Connection to Customer Database for operative parameter readings

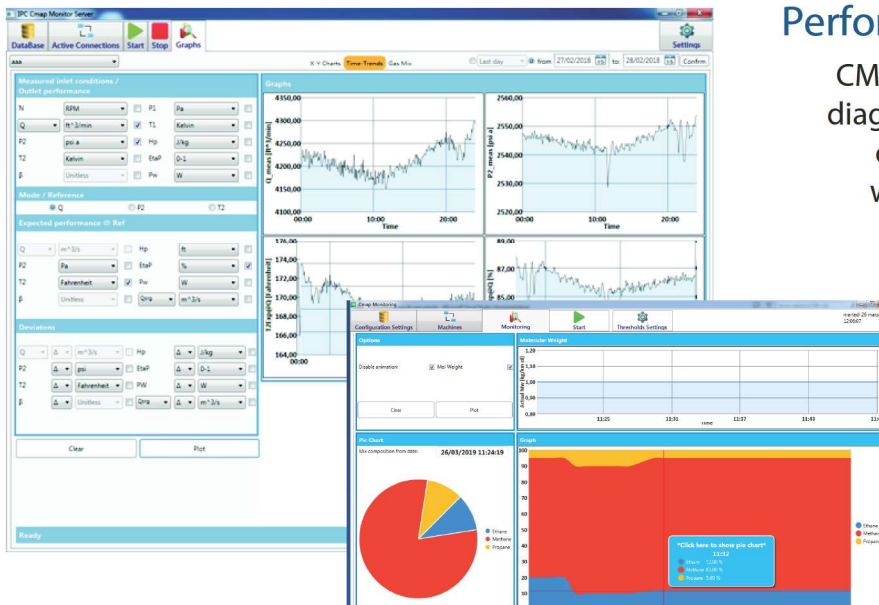
CMap-Monitoring graphical interface allows to retrieve all necessary field parameters and set up a connection with the source database in a very quick and intuitive way. Compressor configuration is provided through a link to the CMap machine database where reference performance are stored. Once connections are saved, the software is ready to autonomously provide continuous performance evaluation.



Performance Monitoring

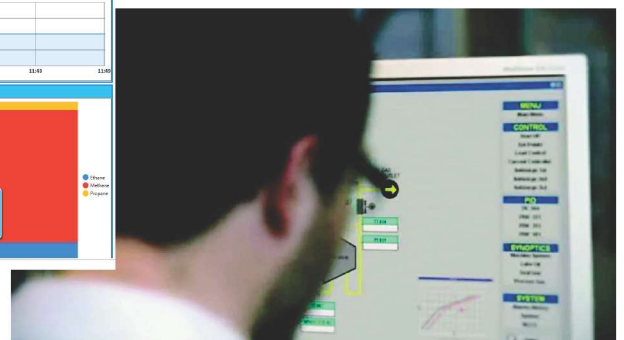
Configuration parameters are the compressor map in reference conditions (i.e. inlet pressure, inlet temperature and gas composition), the selected EOS for gas properties calculation.

Measured parameters (actual) used as inputs are inlet and discharge parameters (pressures, temperatures and flow), running speed and gas mix composition. As output the software will provide expected performance (pressures, temperatures, Head, efficiency etc), XY graphs of compressor performance curve at the actual speed and inlet conditions, time trends for all performance parameters, time trends for all the performance deviations.



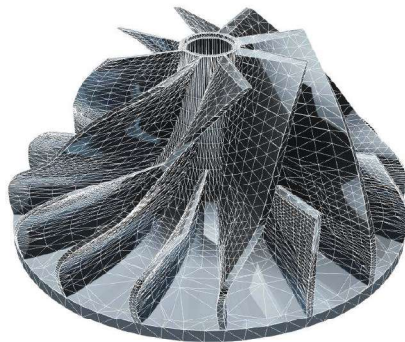
Performance Deviations

CMap-Monitoring allows to obtain useful diagnostic indications on the health of the compressor in a simple and immediate way. This capability may result useful in supporting decisions and planning of maintenance and activities.





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CMap-Monitoring

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