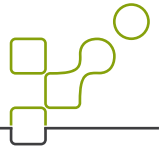# More Than Just Bean Counting!

Energy Monitoring, Energy Management & Energy Efficiency Evaluation

é.VISOR

Your Advantages

Reducing energy costs
... by constant monitoring and evaluation of energy efficiency

Quick error detection
... by the use of ratios

Increase in efficiency
... by easy calculation of efficiency measures

Increase in transparency
... by clear display of all energy-relevant data in one system

Evaluation of energy efficiency
... by consideration of influencing variables

Early warning system
... by notification with an e-mail within a narrow time frame
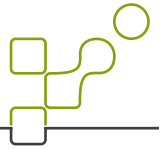
Identification of saving potentials
... by various possibilities of analysis

Documentation of the energy managment
... by reports and documentation of energy–relevant processes
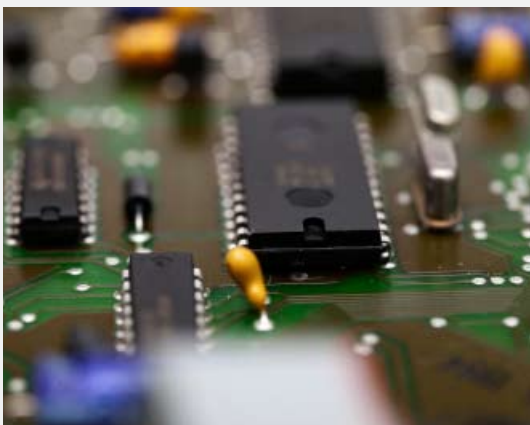
Reduction of time exposure
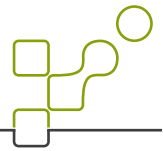... by automatized data acquisition and evaluation

Usage of existing systems
... by vendor independence and use of various interfaces

Ideal adaption according to your needs
... by modular structure and free configuration

Evaluation of Energy Efficiency

From data acquisition...

The exclusive acquisition and display of the energy demand over time will usually not be very helpful.

A statement about the energy efficiency of the respective machine or plant is not possible. For this purpose, marginal conditions of the particular instant of time need to be validated and accounted.

However, such a regular validation is time-consuming and costly.

... to freely configurable key figures...

The usage of key figures allows for a first statement about the energy efficiency of a plant. These can, for instance, be the specific energy demand or the level of efficiency.

However, key figures are also influenced by other values: the level of efficiency of a refrigerating machine depends on the ambient temperature, the return temperature and the load.

As a consequence, key figures are not constant over time and thus only partly sufficient for evaluation.
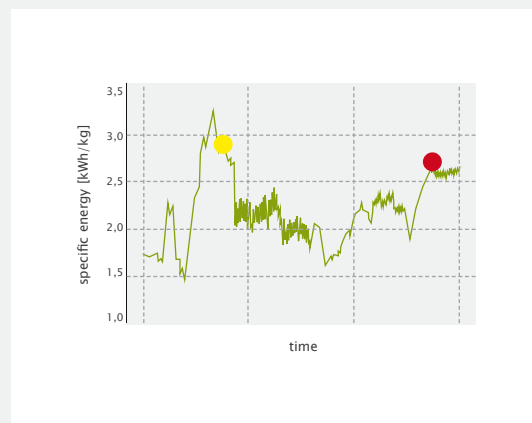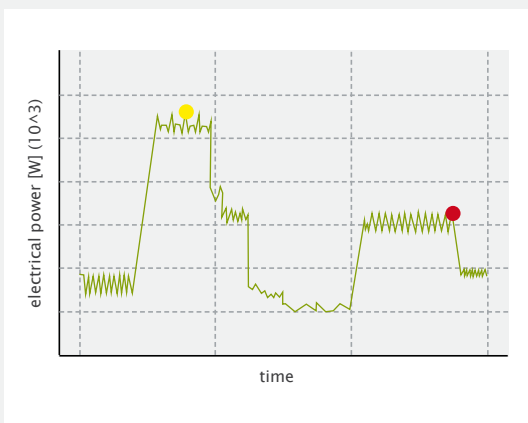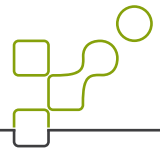
... for the evaluation of ratios...

The display of key figures, dependent on their influencing variables, shows the operational status of the respective plant.

Taking the refrigerating machine as an example, the usage of ratios and characteristics shows, which levels of efficiency according to the respective return temperature are reached.
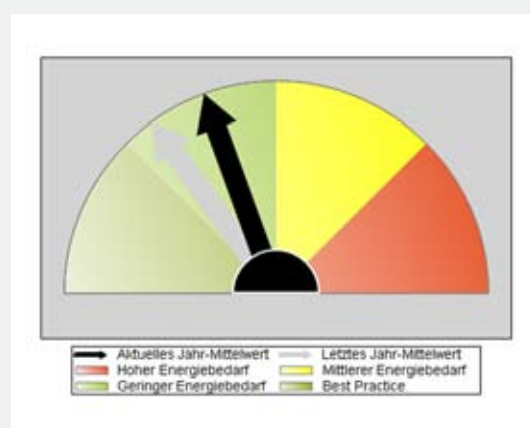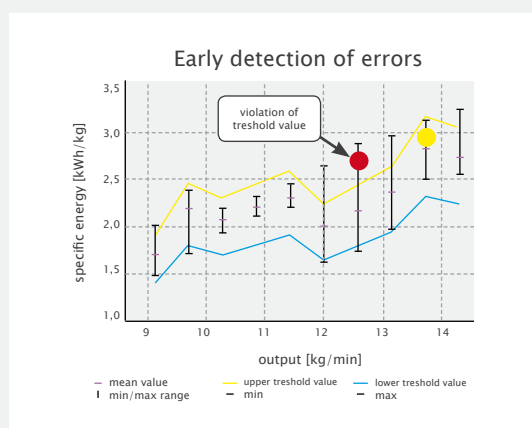
In correspondence to limiting curves, the system offers an automatized notification of errors.
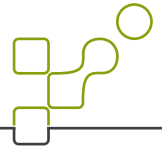
... and simple visualization.

The conflation of several ratios into one indicator enables an energy efficiency evaluation of individual plants or whole sectors.

A clear display in the form of tachometers or traffic lights creates a quick overview of the energetic situation.

By the comparison with value(s) of the previous period or other sectors, you can easily identify saving potentials.

Early detection of errors

violation of treshold value

— mean value
I min/max range
— upper treshold value
— min
— lower treshold value
— max

Aktuelles Jahr-Mittelwert   Letztes Jahr-Mittelwert
Hoher Energiebedarf   Mittlerer Energiebedarf
Geringer Energiebedarf   Best Practice

System Construction

Base structure

é.VISOR's system structure can be individually adjusted according to the respective needs. Configuration, evaluation and analysis take place decentralized and are available at every computer.

Interfaces

Data acquisition is made, independet of the vendor, via sensors.The data is passed on via a bus system to the server of *é.VISOR*. In addition, data of existing systems can be easily incorporated.

Your own server

In the case of extensive solutions, the installation of an é.VISOR server takes place directly at and within your company. This enables the utmost performance of the system.

é.VISOR as service

Additionally, it is possible to use *é.VISOR* as a service. Your data is then passed on to an external server. Via internet, you can access the data and evaluation at all times.
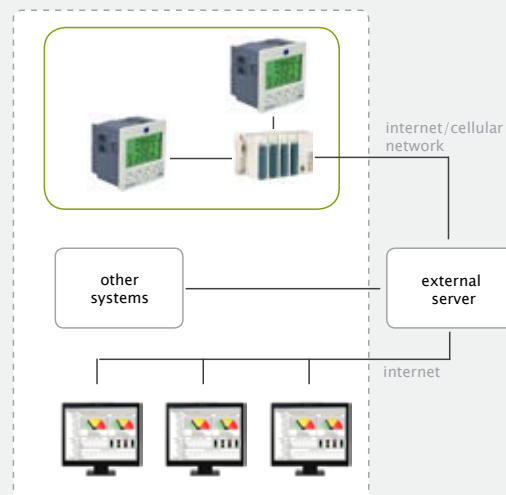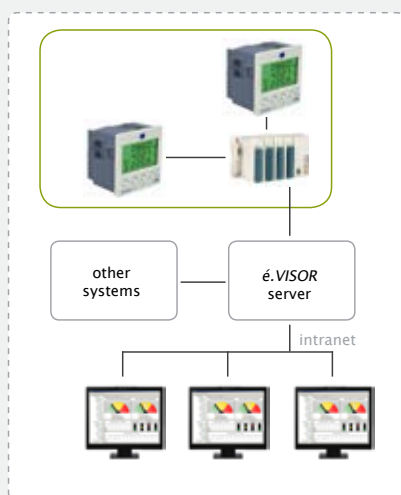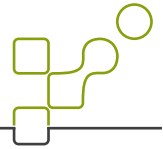
System Characteristics
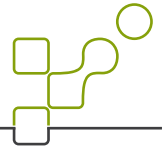
- Display and acquisiton of energy and production values

- Source-related cost allocation

- Early detection of manufacturing errors and wear of machines

- Freely configurable key figures

- Deposition of energy-relevant documents

- Comparison between different plants (Benchmark)

- Comparison between different periods of times (pre ⇔ post comparison)

- Creation of site maps

- Automatized drawing up of reports

- Evidence of savings

- Management of saving potentials

Structure of the System

Point of view

é.VISOR blends in with the existing structure of your company. It allows for user-specific point of views of the energy efficiency of your company. According to the user, various and customized point of views of the energy data is possible.
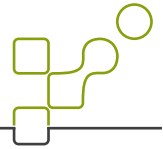
Additionally, customized site maps and reports can be configured. The possibility to drag and drop important representations into the area of favorites helps you to stay on top of things.

Modular structure

A variety of interfaces allows for an easy integration of several, and also already existing sensors. Other systems of the company, e. g. industrial data acquisition and building managment systems, can be easily incorporated as well. Both is clearly and simply accomplished via a computer.

The modular structure permits you a selection of functions specifically important for your company, and thus increases energy efficiency.

Application
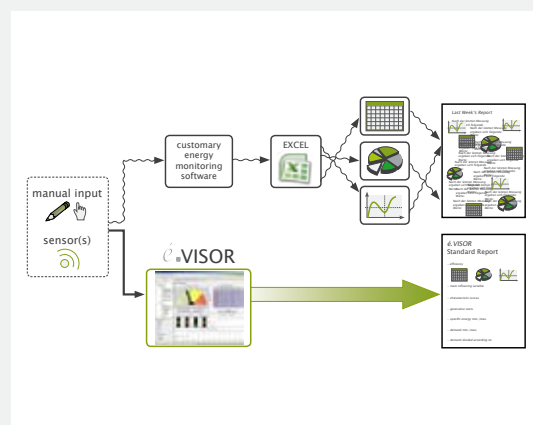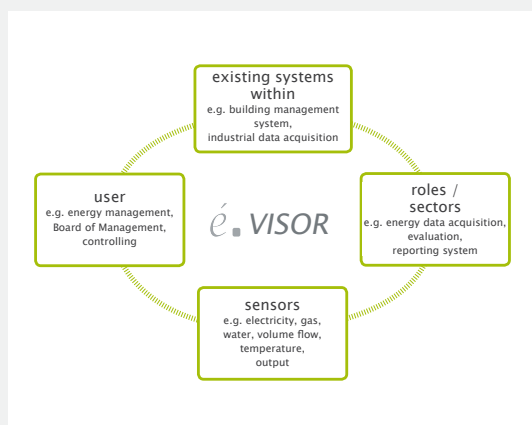
Identification of potentials

In an exemplary and graphic display of the relational characteristic curve, the level of efficiency of a refrigerating machine relating to the return temperature is depicted. Given a dropping return temperature, it can be seen that it decreases as well.

Increase in efficiency

By means of displaying the frequency of the operating points, it can be seen that the plant does not operate at the optimal operating point. By an optimization of the plant, the level of efficiency can be doubled for about 80 % of the time.

Site maps

The breakdown of the current situation into individually configurable site maps, so-called cockpits, allows for a quick overview. Via a drag and drop, the cockpit can be easily and individually arranged and changed.

Indicators of efficiency

In doing so, it is important to note that not absolute values are displayed via the tachometer, but that an evaluation of the plant via the indicators of efficiency takes place. This allows for a detection of short-term errors and potentials.
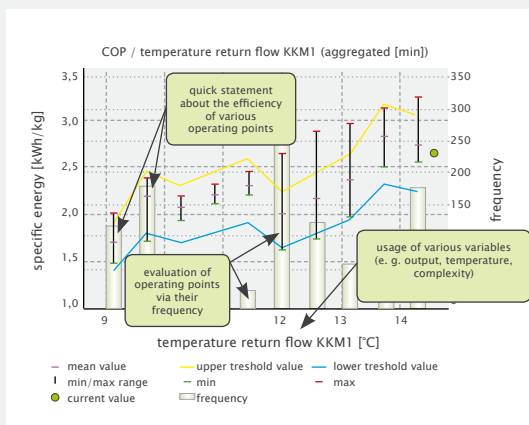
Energy Management as Assistance

Energy management

Energy management systems will take on greater significance (according to DIN EN 16001 resp. DIN ISO 50001.) This calls for convincing key figures and holistic indicators of energy efficiency of a machine, a sector or a whole plant.

For this purpose, energy data acquisition as well as energy efficiency evaluation is essential.

Reports

In addition, *é.VISOR* can be used for the notification of relevant people with regular and customized reports. The system then sends an e-mail according to the settings of time intervals of the individual user.

In terms of energy management systems, the reports can be used for audits and documentation. On the back of this, all saving potentials are recorded in *é.VISOR.*

Our Services
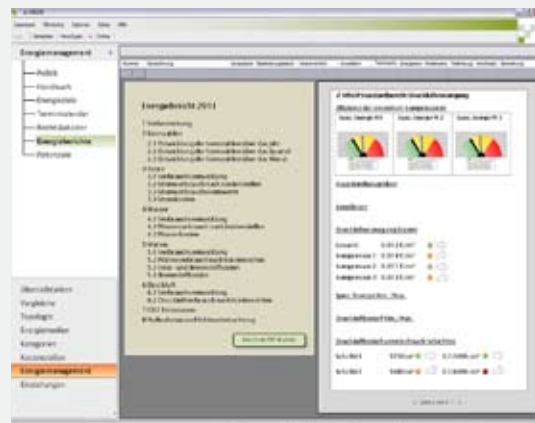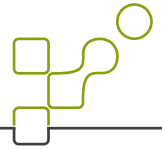
- Customized conception and determination of measuring points

- Selection of the required sensors and measuring instruments

- Installation and configuration of the software

- Assistance with the determination of key figures and ratios

- Training for employees

- Continuous company and external monitoring

- Assistance with the implementation of energy management systems

- Assistance with audits and the definition of individual goals

- Execution of energy efficiency analyses

- Services of planning for the execution of measures

Fresh Thinking for Production and Energy

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