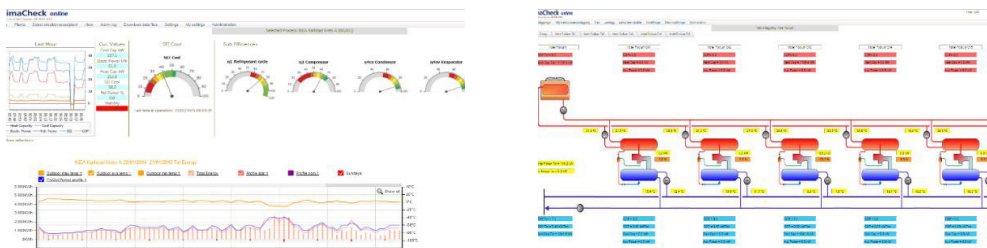# ClimaCheck
online services

Reduce energy cost and extend equipment life of Air Conditioning & Refrigeration equipment
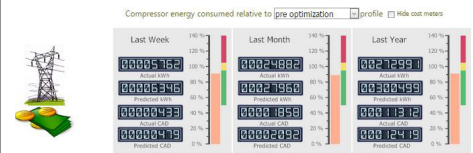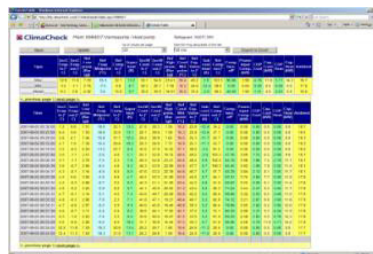

Provides owners with state of the art energy reporting and experts with hard facts on performance for plant optimisation, trouble-shooting and benchmarking.

Performance Dashboard and Energy Reporting

ClimaCheck offer state of the art visualisation of performance that give early warning if the energy consumption is increasing or validate if optimisation measures give desired savings. ClimaCheck will pinpoint any problems - System Efficiency Index (SEI) and Sub efficiencies high-light deviation from optimal performance and allow benchmarking.

User can allow access for manufacturers, performance inspectors and experts for plant optimisation and preventive measures regardless were on earth they are located. Follow energy statistics to compare and analyse consumption online in detail and have "indirect leak detection" 24/7 to reduce on site leak detection.
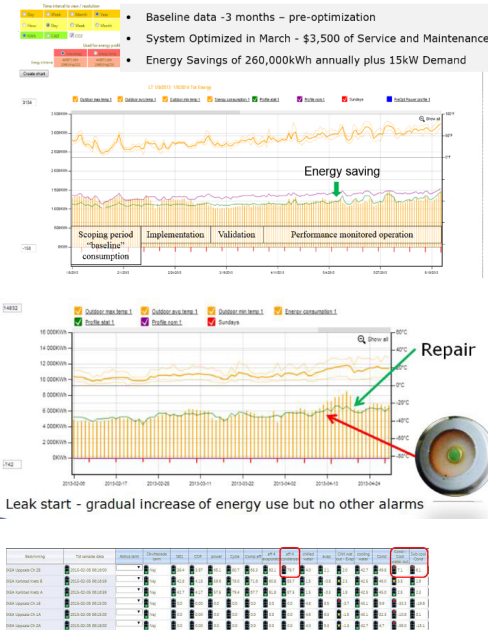

The following information and much more is available in real time on ClimaCheck online:
- COP – EER - kW/RT (Coefficient of Performance).
- SEI System efficiency index = total system efficiency
- Cooling and heating capacity as well as heat recovery capacity
- Flow on secondary media (water/air/brine)
- Compressor efficiency (inlet/outlet temperatures, power input)

ClimaCheck
online services

- **Condenser/Evaporator efficiency** (inlet/outlet temperatures temperature differences)
- **Total energy consumption** over time for the compressor(s)
- **Buildings energy signature for heating and/or cooling**
- **Control Functions** (at different loads without expensive travel/data collection)
- **Expansion Valve function** (superheat values)
- **Refrigerant charge/Leakage**
- **Alarms for Pressure, Temperature, Power, etc.**

Data can be sent to the cloud through integrated modem, LAN or WiFi.

- Baseline data -3 months – pre-optimization
- System Optimized in March - $3,500 of Service and Maintenance
- Energy Savings of 260,000kWh annually plus 15kW Demand

Leak start - gradual increase of energy use but no other alarms

Energy Statistics and Energy Signatures!

ClimaCheck *online* Services build energy signatures that allow owners to benchmark energy consumption of their plants. Technicians can trouble-shoot any deviation from expected or historical performance. To know the baseline is the first step in optimisation. ClimaCheck enable comparisons between sites or equipment configurations.

Alerts on SMS or E-mail

State of the art alerts are available through ClimaCheck *online.* They can be set up on all measured or calculated parameters and sent through SMS and/or E-mail to multiple users according to desired schedule. Complex alarm with several parameters can be used to ensure early warning without triggering unnecessary alarms. Early detection of leaks is possible to reduce emissions and onsite leak detection, high energy use and increased wear on compressors.

Auto-diagnostics

ClimaCheck offers auto-diagnostics features were a large number of plants can be compared in one view.

Interfaces – import of measurements and export of analysed data

Interface to third party systems can be done to use existing sensors and enhance BMS with ClimaCheck capability. ClimaCheck offer the *ClimaCheck online Gateway* and direct data exchange server to server capability. Please contact ClimaCheck to define requirements.

Complete System for LAN and GPRS Part No. 100 962 (EP Pro EM210)/100 961 (EP Pro EM24)	For DIN-Mounting Part no. No 100 902