

ClimaCheck *concom*

ClimaCheck introduces a cost-effective communication module for condensing units and chillers to ensure **efficiency and reliability** in

convenience stores

gas stations

commercial kitchens



ClimaCheck concom is developed to bring data points and alarms available in standard controls to ClimaCheck online cloud based services. In one cost-effective solution ClimaCheck concom integrate:

- ▶ **Alerts/alarm handling** over text and E-mail to multiple recipients through built in modem.
- ▶ **ClimaCheck early warning** of deviation in performance often long before failures and energy bills increase – contractor can do all analyses from office and identify problem before going to site.
- ▶ **Temperature monitoring** and logging of cold rooms, display cases and rooms
- ▶ **Indirect leak detection** - reduce number of required leak detection visits
- ▶ **Energy monitoring** and reporting for owners.

The perfect solution to get full control and decrease service and energy cost for smaller systems with standard controllers that already have data points installed. If data points are missing these can be added directly to the communication module for plant optimisation, trouble-shooting and benchmarking.

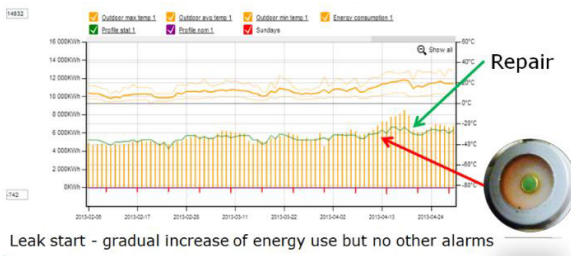


ClimaCheck Performance Dashboard and Energy Reporting

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.

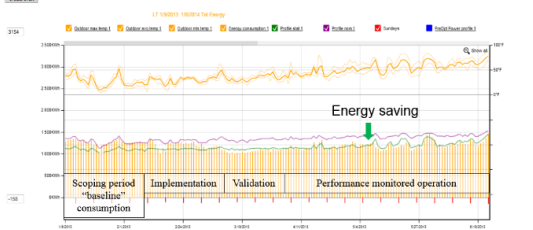
The following and more is available in real time on ClimaCheck online:

- ▶ COP/Energy Efficiency (Coefficient of Performance).
- ▶ Compressor and heat exchanger efficiency (inlet/outlet temperatures, power input)
- ▶ Total energy consumption and Buildings energy signature for heating/cooling
- ▶ Refrigerant charge/Leakage monitoring – indirect leak detection
- ▶ Alarms for Pressure, Temperature, Power, etc.



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

- 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



Alerts on SMS or E-mail

State of the art alerts are available through ClimaCheck on-line well proven features. Alerts are pre-set on measured and calculated parameters and sent through SMS and/or E-mail to users according to desired schedule. High level analytics allow early warning with a minimum of false alarm. Early detection of leaks is possible to reduce emissions and minimize number of leak detections required in EU. Early warning prevents high energy use and failures.

Energy reports and Energy Signatures!

ClimaCheck online services build an energy signature that allow owners to follow the energy consumption of their plants and system to automatically send alert if energy consumption increases. 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.

ClimaCheck concom technical features

ClimaCheck concom offer state of the art communication options to bring existing data to the "cloud" for high level analytics. The unit is pre-programmed to be "plug and play" and automatically downloads its configuration from Internet when connected. ClimaCheck concom read data from selected control units on Condensing units and chillers. Protocols are developed for i.e. Emerson. Data is sent to ClimaCheck online via integrated modem (LAN and WiFi modules are available).



ClimaCheck concom DIN-Mounting
Art. No. 100970
Communication module with integrated modem
for data communication.
CE approved.

Device Advantages

- Quad-band GSM.
- Graphical display with keypad.
- Digital and analog input/outputs.
- 4 x analog inputs 0..10V/0..20mA (12 bit precision)
- 4 x analog outputs with 0..10 volt /0..20 mA.
- 8 digital inputs, 8 high-power solid-state digital outputs.
- 1-Wire bus.
- MODBUS expandable I/O.
- SD-CARD with up to 32 GB.
- High-capacity battery.
- State of the art power-management
- Operating voltage is 8 to 36 VDC
- Encapsulation:
 - ▶ 9 Module M36 DIN-rail.
 - ▶ Approx. 430 gram without accessories.
 - ▶ W 157 x H 86 x D 58 mm. (without SMA and screw-terminals).