

THE BLACK BOX OF ENERGY

BLACK BOX



BB VOYAGER

TROLLEY MOUNTED DETECTION SYSTEM OF CONTINUOUS ANALYSIS OF
ENERGY CONSUMPTION DATA, FOR PROFESSIONAL ENERGY DIAGNOSIS.
ANALYSIS OF EFFICIENCY, VIA WEB AND REAL TIME, OF THE HVAC SYSTEMS.

FROM BUILDINGS TO INDUSTRIES



BB VOYAGER IS THE MOBILE INNOVATIVE TOOL, UNIQUE IN THE EUROPEAN MARKET,
FOR ENERGY EFFICIENCY PROFESSIONALS:

ESCOs, ENERGY MANAGERS, ENGINEERS, ARCHITECTS, MAINTAINERS AND INSTALLERS

www.blackboxgreen.com



BLACK BOX

VOYAGER

The Black Box **Voyager** was designed to detect and analyze, online and real time, **the performance data of the energy (both electrical and thermal) uses, in order to carry out the Energy Diagnosis**. It is a suitable tool for all Companies and Professionals that work in the Energy Efficiency field, like: **Energy Service Companies, Energy Managers, Engineers and Designers, Architects, Facility Managers, Maintainers, Installers and all the Energivorous Final Users**. **BB Voyager** provides detailed analysis of the dynamics of operation of energy production utilities, meeting the Directive 2012/27/EU on Energy Efficiency, the Guide Lines by ENEA (Italian Energy National Agency) and the current European standards.

Black Box **VOYAGER** meets the Directive 2012/27/EU



BB Voyager

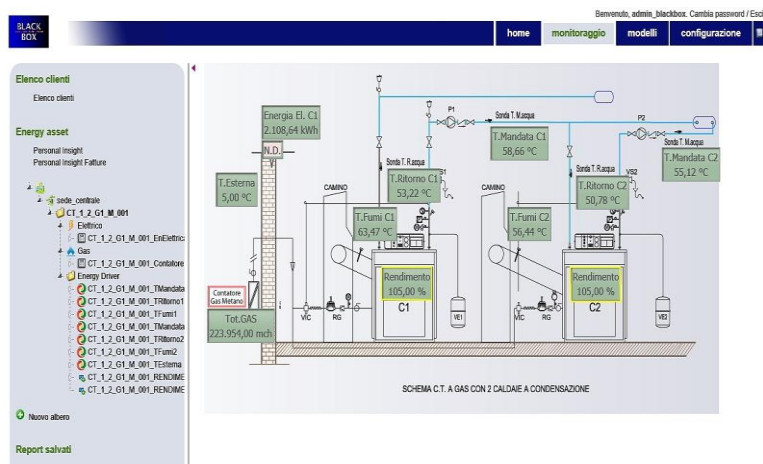
Is a very useful tool for all the Energy Efficiency Professionals, who want to take part **the Business of Building Renovation** that will deal with **millions of buildings in EU**, in the next few years.

With it, **you can get all the fundamental efficiency information and data for your Clients**, establishing professional relations at the highest level for the execution of Energy Diagnosis.

With it **you can carry out correct efficiency analysis** leaving estimates and approximate data, not precise not continuous and with high processing costs, **adopting only measured and reliable data**, as requested by the European standards.

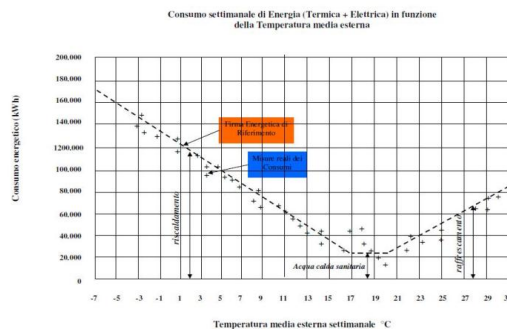
BB Voyager DASHBOARD:

EXAMPLE FOR THERMAL POWER PLANT WITH TWO BOILERS



BB VOYAGER

processes and produces, automatically, the ENERGY SIGNATURE OF THE BUILDING – PLANT SYSTEM (function linking outside temperature and energy requested to maintain the indoor design conditions)



ALL BLACK BOX SYSTEMS CAN BE RENTED FOR A PERIOD UP TO 60 MONTHS



CENTRO
EPSON METEO

CA
R R AICARR
Cultura e Tecnica per Energia Uomo e Ambiente

BB VOYAGER VERSIONS

BLACK BOX VOYAGER FOR THERMAL POWER PLANTS UP TO 3 BOILERS AND HVAC PLANTS



MAIN BB VOYAGER FEATURES :

The **BB Voyager** allows to monitor various users, for examples:

- **Thermal Power Plant**, up to 3 (three) Boilers
- **Cooling Power Plant**, up to 2 (two) air-cooled Chiller/Heat Pump
- **Cooling Power Plant**, up to 1 (one) water-cooled Chiller/H.P.
- **Air Treatment Unit**, up to 2 (two) fans

BB VOYAGER



The **BB Voyager** can access to **Economic Incentives** that may be available **in the EU countries**, dedicated to the **Energy Audits** and the **Deep Renovation of buildings** (see the incentives available in each EU country).

For example, in Italy are available the incentives of “**Conto Termico 2.0**”, in favor of both the **Private** sector and **Public Administration**.

BLACK BOX VOYAGER

WEATHER CLIMATE PREDICTIVE CONTROL



BLACK BOX Green and **Centro EPSON Meteo**, **one of the most prestigious Authorities of Weather and Climate Forecast, leader in Europe**, concluded a Technological Agreement for interactive weather forecast data exchange for the correct management of the HVAC plants, based on the “**Weather Climate Predictive Control**”, with the opportunity to **optimize the energy consumption** in all the seasons and to implement a correct process of **Energy Diagnosis**.

BLACK BOX VOYAGER, THE ADVANTAGES FOR THE PROFESSIONALS OF ENERGY EFFICIENCY:



- **Conformity to EN Norms**
- **Multi-Sites Remote Analysis**
- **Reduced Diagnosis Process costs**
- **Reduced Diagnosis time**
- **Business Instrument for the Professionals, generating opportunity of new services**
- **Demonstration of outstanding professionalism**
- **Real Time analysis**
- **Civil and Industrial SW Platform**
- **Automatic “Energy Signature “**
- **Improving of White Certificates production**

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BLACK BOX Systems are designed as **"INTEGRATOR"**, Analytic and Diagnostic systems for Power Plants with a **FLEXIBLE AND EXPANDABLE ARCHITECTURE** with **NO PROPRIETARY PROTOCOLS**.

They are **BUILT IN FIXED AND MOBILE VERSION**.

INTERFACING IS POSSIBLE WITH OTHER SW AND HW SYSTEMS already existing in the building.

IDENTIFYING INEFFICIENCY AND WASTE OF MONEY through specific Algorithms and Energy Models, in order to plan necessary **MAINTENANCE/REQUALIFICATION**.

Black Box Systems are provided with HW, SW on pre-wired L.V. switchboards and set of probes.

DIAGRAM EXAMPLES



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1° PLACE AT THE AWARD: "PLANT SYSTEMS TECHNOLOGICAL INNOVATION"
CASA CLIMA KLIMAHOUSE 2016

INCLUDED TRADEMARKS REFER TO TECHNOLOGIC AND SCIENTIFIC PARTNERSHIP



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