The role certification can play to improve the reliability of input data. Eurovent certification example.

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Eurovent Certita Certification

- In June 2013 CERTITA and EUROVENT CERTIFICATION Company, leading product certification companies in the fields of heating, ventilation, air-conditioning and refrigeration (HVAC-R), merged their activities within a new corporation named Eurovent Certita Certification SAS.

- The combined company becomes a major European Certification body, operating 35 certification programmes in residential domestic buildings or in industrial facilities.
## Reference Certification Marks

![Certification Marks](image)


## Certification programme of Eurovent Certita

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### Certification Programme

- **Pompes à chaleur (PAC)**
- **Groupes de production d'eau glacée (Chillers)**
- **Climatiseurs**
- **DRY (débit de réfrigérant variable)**
- **Unités de toiture Rooftop**

- **Echangeurs**
- **Métro-compresseurs**
- **Groupes de condensation**
- **Rétrofracteurs de lat**
- **Meubles frigorifiques de vente**
- **Tours de réfrigérateur**

- **Centrales de traitement d'air**
- **Centrales double flux résidentiel**
- **Echangeurs rotatifs et à plaques**
- **Filtres à air M5-F9**
- **Systèmes de ventilation hygroréglable**
- **Conduits de fumée**

- **Ventil convecteurs**
- **Poutres froides**
- **Radiateurs**
- **Solaire thermique**
- **Robinets thermostatiques**
- **Appareils de chauffage à combustibles liquides ou solides**
The Eurovent Certified Performance mark (ECP)

- Voluntary third party certification programmes
- Covers all HVAC&R fields: Heating, Ventilation, Air-conditioning and Refrigeration
- Mark recognised in all Europe and beyond
- Accreditation according to ISO 17065 by COFRAC (accreditation n°5-0517, international recognition EA/IAF)
- Continuous verification process:
  - Tests performed by independant and accredited laboratories
  - Factory audits
  - Check of selection tools

The Eurovent Certified Performance mark – Key figures

- 19 certification programmes in activity
- 269 certified manufacturers
- 320 certified tradenames
- +50 000 certified references
- +80 experts participating to our compliance committees
- 12 European independent laboratories
- 20 years of experience
Eurovent Certified Performance Certification Programmes

- Air-conditioners
- Fan coil units
- Filters
- Chilled Beams
- Refrigerated Display Cabinets
- Condensers
- Chillers & Heat-Pumps
- Dry-coolers
- Air Handling Units
- Rooftops
- Air to air heat exchangers
- Cooling towers
- Drift eliminators
- VRF

Partnerships with 12 Independent laboratories:

- CEIS Madrid Spain
- CETIAT Lyon France
- DMT Essen Germany
- HTA Luzern Switzerland
- IMQ Amaro Italy
- IMQ Milan Italy
- SP Boras Sweden
- TÜV-NORD Essen Germany
- TÜV-SÜD Munich Germany
- VTT Espoo Finland
- WSP Stuttgart Germany
- DTI Taastrup Denmark

A well recognized certification mark in Europe …

... and beyond
How does it work?

Declaration lists
- Product ranges (and models)
- Technical characteristics & Performances
- or Selection software

Selection
- Random selection of models
- No. of tests based on lifetime of models
- or Selection software

Performance data
- registered from Software outputs

Selection on-site & visit of the Production place

Delivery, verification of testing object

Testing in an independent laboratory

Comparison declared vs. measured data
- If necessary: correction of catalogues or software

File rejected

Review, Approval, certificate and Publication of data

www.eurovent-certification.com & www.certiflash.com

ECP website:
www.eurovent-certification.com

• A true European database
• of certified performances
• for HVAC&R components, products and systems.
- pop-up from search engines
- on manufacturer websites
- Mobile app

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European certified performances database:
Examples of uses

- Partnerships with software editors in France (Edibatec, Clé@ association):
  - Automatic transfers of the certified performances database for EPBD application in France (RT 2012)
  - Main products covered: heat-pumps, chillers, rooftops, air conditioners

- Upcoming in 2015:
  New partnerships with large institutional organisations in France in order to build **white certificate databases** based on the ECP database.
Ventilation and airtightness:
what do we do now?

Air Handling Units

Air to air heat exchangers
- Rotary
- Plates

Air Filters

Residential Air Handling Units


- Certified performances published on ECP website:
  - Casing Air Leakage
  - Thermal Transmittance
  - Thermal bridging factor
  - Filter by-pass leakage
  - Casing Strength
  - Acoustic insulation

- Certified performances available in certified selection software:
  - Airflow – pressure - power input
  - Sound Power Level
  - Cooling-heating coils capacity – water pressure drop
  - Heat recovery efficiency
### Residential Air Handling Units

- **Certified performances:**
  - **Leakage class**
  - **Aeraulic performances:**
    - Airflow/pressure curves
    - Maximum airflow [m³/h]
    - Electrical consumption [W]
    - Specific Electrical Consumption SPI [W/(m³/h)]
    - Temperature efficiency / COP
    - Performances at cold climate conditions
    - SEC (Specific Energy Consumption) in [kWh/(m².annum)]
    - A-weighted global sound power levels [dB(A)]

### Air to air heat exchangers

- **Certified performances published on ECP website and in certified selection software:**
  - Pressure drop
  - Temperature efficiency
  - Humidity efficiency

- **Leakage performances** to be certified from 1st of April 2015:
  - EATR (Exhaust Air Transfer Ratio)
  - OACF (Outdoor Air Correction Factor)
Air to air heat exchangers

Exhaust 12

OACF

Outdoor 21

EATR

Extract 11

Supply 22

Duct pressure difference 22-11 [Pa]

Outdoor air ventilation factor [\(\lambda\)]

Ventilation and airtightness: what we will do tomorrow?

Ventilation Ducts (CSTBat in 2015, ECP in 2016)

Hygienic Air Handling Units (2016)

Fans (2016)

Run around coils and Heat Pipes (2016)
Thank you for your attention

Any questions?