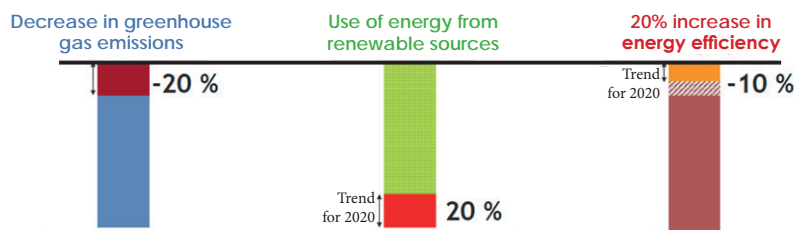


ErP READY: Rooftop ranges

At the root of ErP READY: Directive 2009/125/EC

When they adopted the KYOTO protocol, the Member States of the European Union (EU) voted a set of measures known as the “energy-climate package”, aiming at:

- ✓ reducing greenhouse gas emissions by 20%;
- ✓ reducing energy consumption by 20%;
- ✓ increasing the proportion of renewable energies to 20% of the final energy consumption.



Directive 2009/125/EC on the ecodesign of ErPs (Energy related Products) has been adopted to achieve these objectives.

This directive applies to all products using energy or having an impact on energy consumption. It includes a “bunch of regulations” that sets performance requirements for each type of product:

- Regulation (EU) 1253/2014 on ventilation units:**
- 1 January 2016
 - 1 January 2018
- Regulation (EU) 813/2013 on space heaters and combination heaters:**
- 26 September 2015
 - 26 September 2017

- Regulation (EU) 2016/2281 on cooling products, high temperature process chillers and fan coil units:**
- 1 January 2018
 - 1 January 2021



Air to Air rooftops:

that is, for ETT ranges:

- ULTIMA (Ulti+ / EX / DX / CC+ / DESHU)
- EFFICIENCE



Information relative to CC+ units and other warm air heaters:

Nitrogen emissions, expressed in nitrogen dioxide, by warm air heaters (including rooftop-integrated devices) shall never exceed the following values:

- 26 sept. 2018
100 mg/kWh PCS
- 26 sept. 2021
70 mg/kWh PCS



Rooftops failing to comply with Regulation (EU) 2281/2016 are no longer marketed in Europe.

Nota: Both **new** and **renovation** markets are impacted by the ErP Ready regulation.

To the exclusion of:

- Rooftops used for industrial process related applications
- Retrofit (Regulation (EU) 2281/2016 only applies to new units)

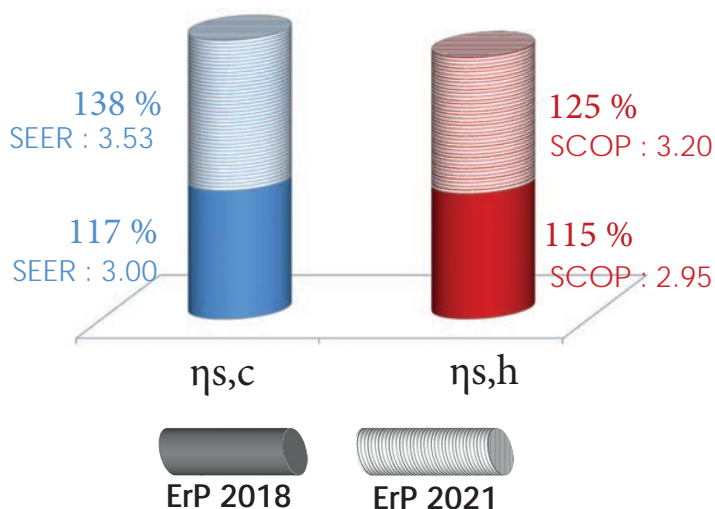
Regulatory requirements from 1st of January 2018

The European Parliament **compels** rooftop manufacturers to comply with Regulation (EU) 2281/2016 on ErPs, in order to give the users the possibility to evaluate their energy consumption.

This regulation defines the EcoDesign minimum requirements and sets a new rating method for rooftop energy efficiency: the **seasonal efficiency**.

This new measure gives **a more realistic indication of the energy efficiency** and environmental impact of any heating or cooling system.

Seasonal efficiency to be reached according to ErP 2018 and ErP 2021.



SCOP

Seasonal Coefficient of Performance

SCOP corresponds to the ratio between the annual demand in heating for the reference climate and the annual electricity consumption for heating.

$$\eta_{s,h} = \frac{\text{SCOP} - 3\%}{2.5}$$

SEER

Seasonal Energy Efficiency Ratio

SEER corresponds to the ratio between the annual demand in cooling for the reference climate and the annual electricity consumption for cooling.

$$\eta_{s,c} = \frac{\text{SEER} - 3\%}{2.5}$$

2.5: Conversion coefficient to the primary energy
3 %: Control-related factor

A summary sheet stating **rated capacity & seasonal efficiency** is available on request.