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# Energy Performance Classification Tool (EPC)

Significant energy efficiency assessment of building automation and control systems in existing or planned buildings

The Energy Performance Classification Tool (EPC) is based on EN 15232, which covers the impact of building automation, controls and building management on the energy performance of buildings.

**Configuration based on standard**  
Using the EPC Tool, you can straightforwardly apply the European Standard EN 15232 "Energy performance of buildings – Impact of Building Automation, Controls and Building Management" to your projects.

The respective plant functions are assigned to the efficiency classes A through D. The resulting efficiency class of the building automation and control system (BACS) is obtained by selecting the required functions. Using factors, it is then possible to assess the impact of the selected functions on the following building types:

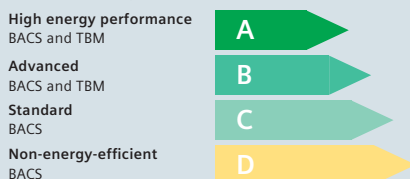
- Offices
- Lecture halls
- Schools
- Hospitals
- Hotels
- Restaurants
- Wholesalers and retail buildings
- Residential buildings

**Extensive choice of control functions**

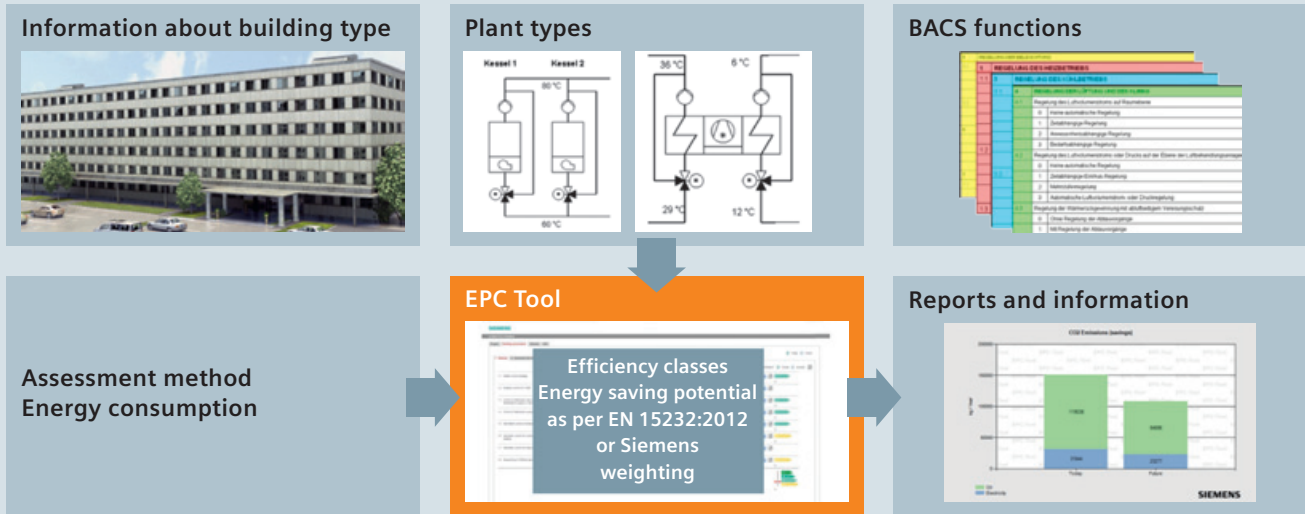
To make an assessment, functions for the control of the following plant types are provided:

- Heating
- Domestic hot water supply
- Cooling
- Ventilation and air conditioning
- Lighting
- Blinds
- Building management

**BACS efficiency classes – EN 15232**



BACS Building Automation and Control System  
TBM Technical Building Management System



The workflow used with the EPC Tool is a simple step-by-step method.

### Scope of functions of the EPC Tool

The tool assesses the energy performance of the building automation and control system used, based on the HVAC plants to be controlled. To make the assessment, the required selection includes building type, plant types and type of building automation. The efficiency class of the existing building automation and control system is defined and energy, cost and CO<sub>2</sub> reductions resulting from the planned improvements are calculated. In addition, the payback period and the cash value/capitalized value of the investment are calculated.

### Information about the project

In addition to information about the project and the customer, options are available for making object-related alignments such as building type and assessment method.

### Information about building automation

To define the required control functions, a control system type for the present and the future state is selected for every plant. The tool also supports the user with an extensive choice of auxiliary functions, allowing straightforward configurations.

### Results

In addition to the overall assessment, the final overview shows the individual types of control systems with their performance factors and the saving potential.

The detailed energy savings offered by the tool allow selection of the different energy sources which, together with energy usage, are linked to the respective price and the CO<sub>2</sub> emissions per unit. The total savings are shown in easy to understand graphs.

The financial calculations deliver – with variable parameters – the payback period and the cash value/capitalized value of the investment made in the optimization of the building automation and control system.

The EPC Tool also provides comprehensive information relating to EN 15232 and is supplied with an integrated operating instruction. The tool also enables a customer-specific preparation of data.

### Highlights

- Significant assessment of energy performance of building automation and control systems
- Based on energy performance standard EN 15232
- Assessment of energy saving potential of present and optimized building automation
- Calculation of payback period for the investment needed to improve building automation
- Tool can be used offline or online
- Free choice between assessment method from Siemens and European Standard EN 15232