UK Building Regulations 2010 Edition
Part L2 2010

Tas UK Building Regulations Studio

Start a new UK Regulations Project...

Open an existing UK Regulations Project...
Part L2 2010

Geometry model with full solar analysis

Use REVIT 3D geometry data using *smart gbXML import*
Part L2 2010

Fast and detailed daylight simulation

Comprehensive daylight harvesting control logic
Part L2 2010

Analysis zones with occupation schedules and construction details complete the building model.

The building model is driven by hourly weather data from CIBSE.
Component based plant analysis with control logic detail

Components are able to accept manufacturers’ Part load performance data
Trox performance data

VAV FCU ec motor fan curve and SFP with contact factor for variable air flow rates
Control Sequence for VAV FCU

- **100% Water**
- **0% Water**
- **Heating Valve**
- **Cooling Valve**
- **Fan Output**
- **Return Air Temperature**
- **Setpoints Heating/Cooling DegC**
  - 19, 20, 21, 22, 23, 24
- **Proportional Band DegC**
  - 22.0 + / - 2
- **Main Setpoint DegC**
System schematic for ec motor VAV CFU
CO2 emissions for AC CAV FCU

BRUKL Output Document
Compliance with England and Wales Building Regulations Part L 2010

Example Project
As designed

Date: Mon Oct 04 16:17:03 2010

Administrative information

Building Details
Address: x, x, x

Certification tool
Calculation engine: TAS
Calculation engine version: "v0.2.0"
Interface to calculation engine: TAS
Interface to calculation engine version: "v0.2.0"
BRUKL compliance check version: v4.0.0

Owner Details
Name: x
Telephone number: x
Address: x, x, x

Certifier details
Name: x
Telephone number: x
Address: x, x, x

Criterion 1: Predicted CO2 emission from proposed building does not exceed the target

The building does not comply with England and Wales Building Regulations Part L 2010

<table>
<thead>
<tr>
<th></th>
<th>Criterion</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>1.1</td>
<td>CO2 emission rate from notional building, kgCO2/m²·annum</td>
<td>27</td>
</tr>
<tr>
<td>1.2</td>
<td>Target CO2 Emission Rate (TER), kgCO2/m²·annum</td>
<td>27</td>
</tr>
<tr>
<td>1.3</td>
<td>Building CO2 Emission Rate (BER), kgCO2/m²·annum</td>
<td>29.1</td>
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<tr>
<td>1.4</td>
<td>Are emissions from building less than or equal to the target?</td>
<td>BER &gt; TER</td>
</tr>
<tr>
<td>1.5</td>
<td>Are all details the same as used in BER calculations?</td>
<td>Separate submission</td>
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CO2 emissions for ec VAV FCU

**BRUKL Output Document**
Compliance with England and Wales Building Regulations Part L 2010

**Example Project**
As designed

**Date:** Mon Oct 04 16:24:41 2010

**Administrative information**

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<td>Address: x, x, x</td>
<td>Name: x</td>
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<td>Telephone number: x</td>
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**Certification tool**

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**Criterion 1: Predicted CO2 emission from proposed building does not exceed the target**

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<td>Are emissions from building less than or equal to the target? BER &lt;= TER</td>
</tr>
<tr>
<td>1.5</td>
<td>Are as built details the same as used in BER calculations? Separate submission</td>
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</table>

**PASS**
CO2 emissions for chilled beam

BRUKL Output Document
Compliance with England and Wales Building Regulations Part L 2010

Project name
Example Project
As designed

Date: Mon Oct 04 16:18:43 2010

Administrative information

Building Details
Address: x, x, x

Certification tool
Calculation engine: TAS
Calculation engine version: "v0.2.0"
Interface to calculation engine: TAS
Interface to calculation engine version: v0.2.0
BRUKL compliance check version: v4.0.0

Owner Details
Name: x
Telephone number: x
Address: x, x, x

Certifier details
Name: x
Telephone number: x
Address: x, x, x

Criterion 1: Predicted CO2 emission from proposed building does not exceed the target

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PASS
CO2 emissions for ec VAV fancoils are 11.5% lower than AC CAV fancoils.

2010 Notional target

AC VAV fancoils

ec VAV fancoils

active chilled beams

2010 compliance kg CO2/m²/annum

kg CO2/m²/annum

0 5 10 15 20 25 30 35
Manufacturers’ performance data

Innovative equipment part load performance and control logic not modelled by SBEM
ASHRAE 90.1 Studio

Start a new 90.1 project...

Open a 90.1 project...
Automatic baseline systems and building generation
Extensive reporting tools...
The way to cost effective compliance-modelling real performance data and control logic