

CERTIFICATE

Certified Passive House Component

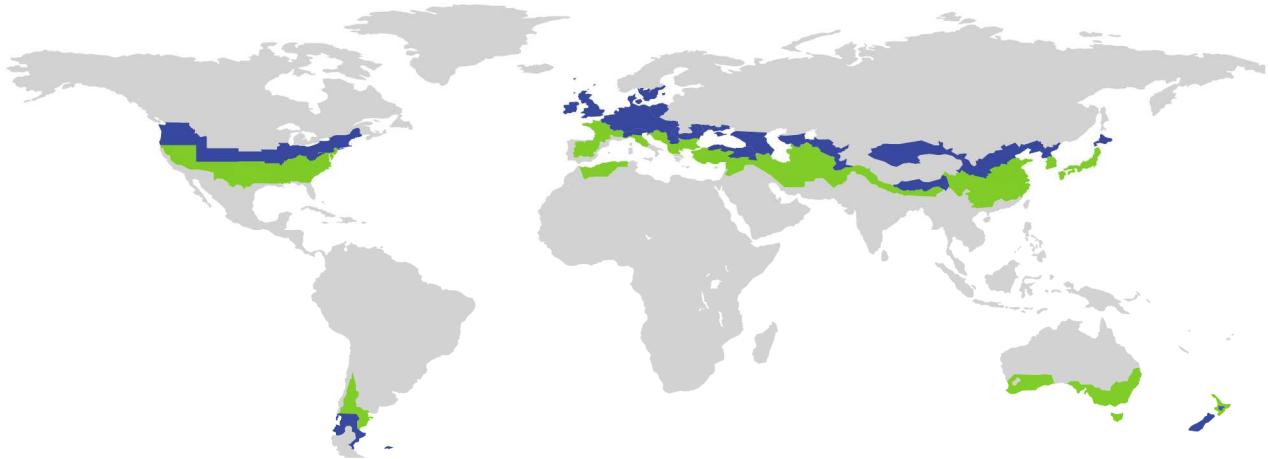
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Passive House Institute

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Category **Construction system | Timber frame construction**
Manufacturer **Cygnum Timber Frame Ltd.**
Cork
IRELAND
Product name **Cygnum Passive 350**

This certificate for the cool, temperate climate zone was awarded based on the following criteria

Hygiene criterion

The minimum temperature factor of the interior surfaces is

$$f_{Rsi=0,25m^2K/W} \geq 0.70$$

Comfort criterion

The U-value of the installed windows is

$$U_{w,i} \leq 0.85 \text{ W}/(\text{m}^2\text{K})$$

Efficiency criteria

Heat transfer coefficient of building envelope

$$U \cdot f_{PHI} \leq 0.15 \text{ W}/(\text{m}^2\text{K})$$

Temperaturfactor of opaque junctions

$$f_{Rsi=0,25m^2K/W} \geq 0.86$$

Thermal bridge free design for key connection details

$$\Psi \leq 0.01 \text{ W}/(\text{m}^2\text{K})$$

An airtightness concept for all components and connection details was provided.



cool, temperate climate

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Determined values

Thermal heat transfer coefficient

	Dimension [m]	U-Wert [W/(m²K)]
EW01 - External Wall	0.36	0.128
FR01 - Flat Roof	0.54	0.148
MR01 - Monopitched Roof	0.31	0.135
FS01 - Floor Slab	0.35	0.145
BC01 - Basement Ceiling	0.38	0.141

Thermal bridge coefficient opaque envelop

	fRsi [-]	Ψ [W/(mK)]
RORI01 - Roof Ridge	0.91	-0.027
ROEA01 - Roof Eaves	0.97	-0.028
BCEW01 - Basement Ceiling External Wall	0.89	-0.006
FSIW01 - Floor Slab Internal Wall	0.98	0.010
FSIW02 - Floor Slab Internal Wall	0.96	0.005
BCIW01 - Basement Ceiling Internal Wall	0.96	0.006
EWEC01 - External Wall Outer Corner	0.92	-0.049
EWIC01 - External Wall Inner Corner	0.98	0.025
EWIW01 - External Wall Internal Wall	0.96	0.007
EWCE01 - External Wall internal CEiling	0.94	0.014
ROEA01 - Roof Eaves	0.94	-0.014
CCEA01 - Collarbeam Ceiling Eaves	0.94	-0.009
ROVE01 - Roof Verge	0.91	-0.055
CCIW01 - Collarbeam Ceiling Interior Wall	0.96	0.000
ROIW01 - Roof Internal Wall	0.96	0.000
MRVE01 - Monopitched Roov Verge	0.91	-0.035
MRRI01 - Monopitched Roof Ridge	0.90	-0.056
MRCB01 - Monopitched Roof Collar beam	0.95	-0.033
MRIW01 - Monopitched Roof Interior Wall	0.96	0.000