BUILDING COMMON GROUND

MAX FRANK®

Certificate

Egcobox®

Certified Passive House Component

ID: 2152bc03 | 01.2024

Issued by: Passive House Institute, Dr. Wolfgang Feist, Darmstadt

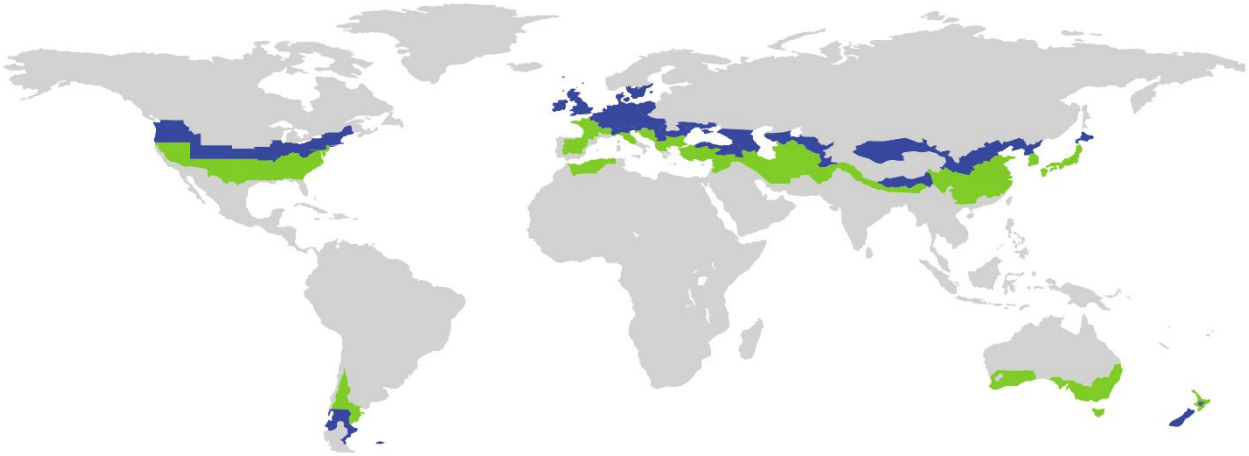
MAX FRANK Group
Max Frank GmbH & Co. KG | Mitterweg 1 | 94339 Leiblfing | Germany | info@maxfrank.com
605PZ17/01 – INT/GB – 01/24

CERTIFICATE

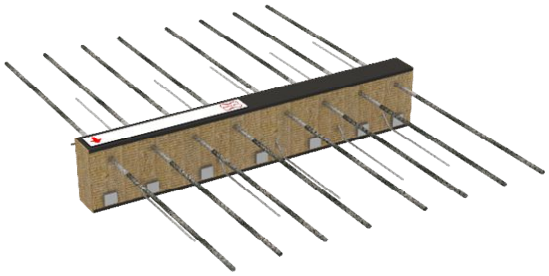
Certified Passive House Component

ID: 2152bc03 valid until 31. December2024

Passive House Institute
Dr. Wolfgang Feist
64342 Darmstadt
GERMANY



Category	**Balcony connection**
Type	**Cantilevered**
Manufacturer	**Max Frank GmbH & Co.KG** **94339 Leiblfing** **GERMANY**
Product name	**Egcobox**



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

Hygiene and comfort criterion

The minimum temperature factor of the internal surfaces is

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

$f_{Rsi=0,13m^2K/W} \geq$ **0.85**

Energy criterion

The linear thermal bridge loss coefficient is

Ψ ≤ **0.25** W/(mK)

Efficiency criterion

The heat losses depending on the possible load bearing do not exceed

Eff.t. ≤ **10.00** /(kNmK)

cool temperate climate

CERTIFIED COMPONENT

Passive House Institute

Max Frank GmbH & Co.KG
Mitterweg 1 94339 Leiblfing GERMANY
+49 9427 189-0 | www.maxfrank.com

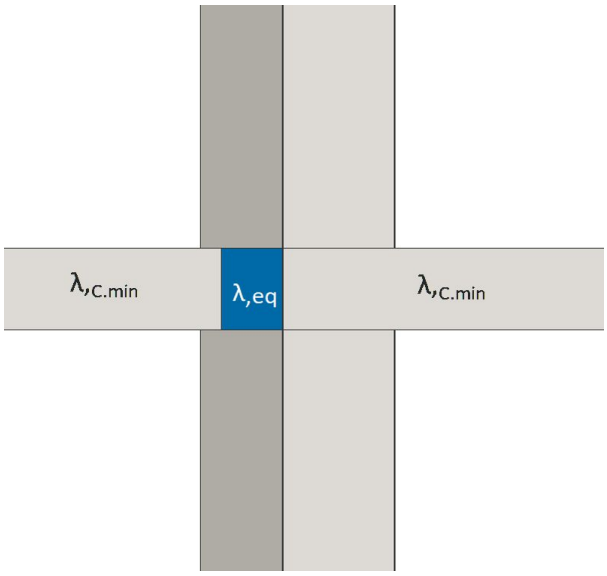
Determined values

Product	h [mm]	d [mm]	λ,C.min [W/(mK)]	λ,eq [W/(mK)]	ψ,WB [W/(mK)]	mRd,y [kNm/m]	fRsi [-]	Eff.t. [W/(kNmK)]	Efficiency - class
MXL35-VS-C35-H160-REI120-SW	160	120	3.0	0.141	0.1457	-24.8	0.95	5.9	phB
MXL35-VS-C35-H180-REI120-SW	180	120	3.0	0.129	0.14874	-30.7	0.94	4.8	phB
MXL35-VS-C35-H200-REI120-SW*	200	120	3.0	0.118	0.14937	-36.6	0.94	4.1	phB
MXL35-VS-C35-H220-REI120-SW	220	120	2.6	0.111	0.15081	-42.5	0.94	3.5	phB
MXL35-VS-C35-H250-REI120-SW	250	120	2.6	0.105	0.15944	-51.3	0.94	3.1	phB
MXL50-V1-C35-H160-REI120-SW	160	120	3.0	0.170	0.17131	-31.6	0.96	5.4	phB
MXL50-V1-C35-H180-REI120-SW	180	120	3.0	0.155	0.17494	-39.2	0.93	4.5	phB
MXL50-V1-C35-H200-REI120-SW*	200	120	3.0	0.141	0.17536	-46.7	0.93	3.8	phB
MXL50-V1-C35-H220-REI120-SW	220	120	2.6	0.131	0.17529	-56.1	0.93	3.1	phB
MXL50-V1-C35-H250-REI120-SW	250	120	2.6	0.120	0.18044	-65.5	0.93	2.8	phA

* validated through 3D-FEM-Simulation

$\lambda_{,C.min}$ = Min. conductivity reinf. Concrete
$\lambda_{,eq}$ = Equivalent conductivity balcony connection
$\Psi_{,WB}$ = Linear thermal bridge coefficient
f_{Rsi} = Temperature-factor
Eff.t. = Efficiency-value
$m_{Rd,y}$ = Design resistance

Using the equivalent thermal conductivity λeq, linear thermal bridge loss coefficients can be determined for other connection situations using 2D FEM simulations. The minimum thermal conductivity of the reinforced concrete λC.min of the balcony is to be used for the cantilever slab and the false ceiling. The rectangular replacement geometry of the balcony connection element has the dimensions of height h and width d, as well as the thermal conductivity λeq.



Notice

The thermal bridge loss coefficients can be interpolated approximately linearly. Calculations and boundary conditions according to the criteria and algorithms “Certified Passive House Component – Balcony Connection, Version 2.1"