Certificate

Certified Passive House component
for cool-temperate climate, valid until 31.12.2022

Passive House Institute
64283 Darmstadt
GERMANY

Category: **Facade anchor**
Manufacturer: **Hilti Deutschland AG**
86916 Kaufering
GERMANY
Product name: **FOX - VTR**

The following criteria were used in awarding this certificate:

Efficiency Criterion

In a typical application*, the construction fulfills the requirements of

$Eff._{fa}$ ≤ 0.200 W/(kNK)

Comfort Criterion

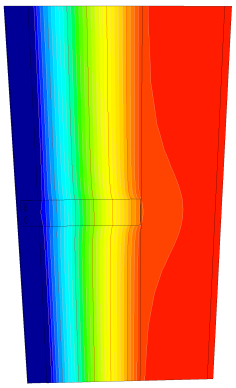
The inner surface must be warm enough to prevent mold as well as uncomfortable down-drafts and radiation losses.

$\theta_{i,min}$ ≥ 17°C

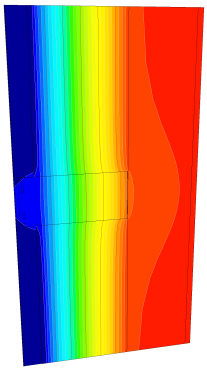
Thermal data of the certified component

	Thermal bridge coefficient χ [W/K]	Minimum interior surface temperature $\theta_{i,min}$ [°C]
Sliding point	0.0099	19.20
Sliding point & M-SP	0.0089	19.22
Fixed point	0.0189	19.09
Fixed point & M-FP	0.0172	19.11

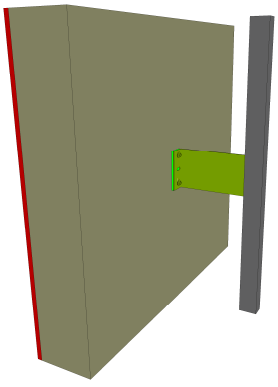
* The criterion has been validated with a representative facade of a school building
** M-SP and M-FP with 6 mm PVC-thermal-seperator



Isothermal map of the sliding point



Isothermal map of the fixed point



Representation

cool, temperate climate

phC

CERTIFIED COMPONENT
Passive House Institute

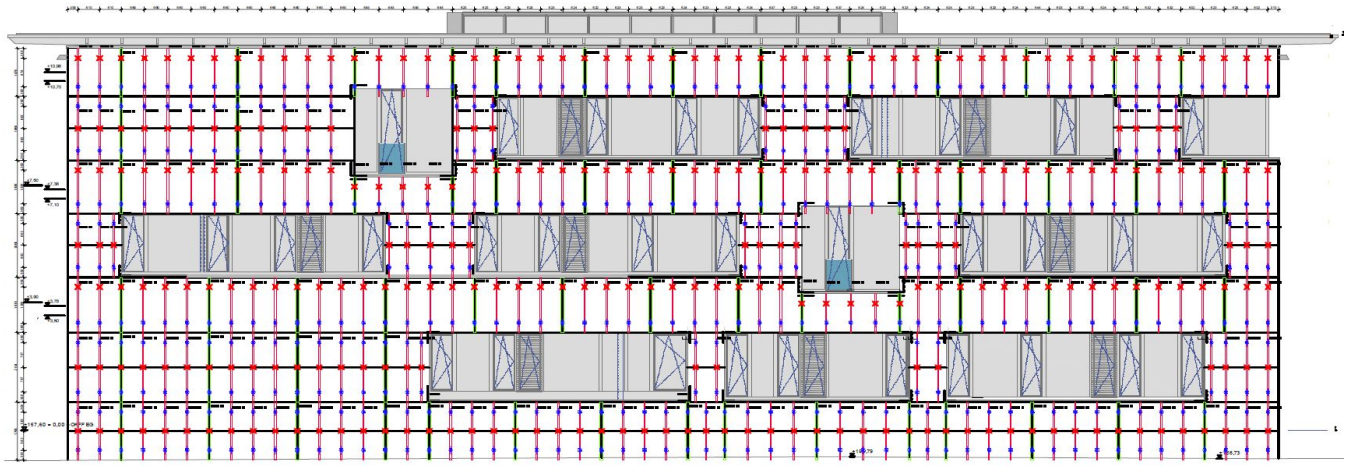
Data sheet HILTI Deutschland AG, FOX - VTR

Manufacturer HILTI Deutschland AG
Hiltistraße 2, 86916 Kaufering
www.hilti.de

Criteria validated based on reference facade	Δ_U [W/m²K]	
	FOX VTR	with isolator
LC I	**0.021**	**0.019**
LC II	**0.026**	**0.024**
LC III	**0.033**	**0.030**

In order to validate the suitability, the manufacturer provides a statical calculation and an associated installation plan for the reference facade.

Load class / Facade weight		Thermal bridge coefficients [W/K]	
LC	[kN/m²]	X_{FP}	X_{SP}
III	0.20	0.0172	0.0089
Efficiency	ΔU	Quantity / m²	
[W/(kNK)]	[W/m²K]	FP	SP
0.1484	0.0297	1.00	1.40



Installation-plan reference facade of the certified component

Load-class (LC)	Facade cladding	Facade weight [kN/m²]	Efficiency criterion fulfilled?
I	ACM	0.10	yes
II	HPL	0.15	yes
III	Fibre-cement-plates	0.20	yes
IV	Fibre-cement-plates	0.25	not evaluated
V	Glassfacade	0.30	not evaluated
VI	Marble	0.60	not evaluated

The classification criteria and the load class allocation can be found in the current criteria "Zertifizierte Passivhaus Komponente – Fassadenanker, Version 2.0, 08.05.2017".