CERTIFICATE

Certified Passive House Component

Component-ID 1574ao00 valid until 31st December 2022

Passive House Institute
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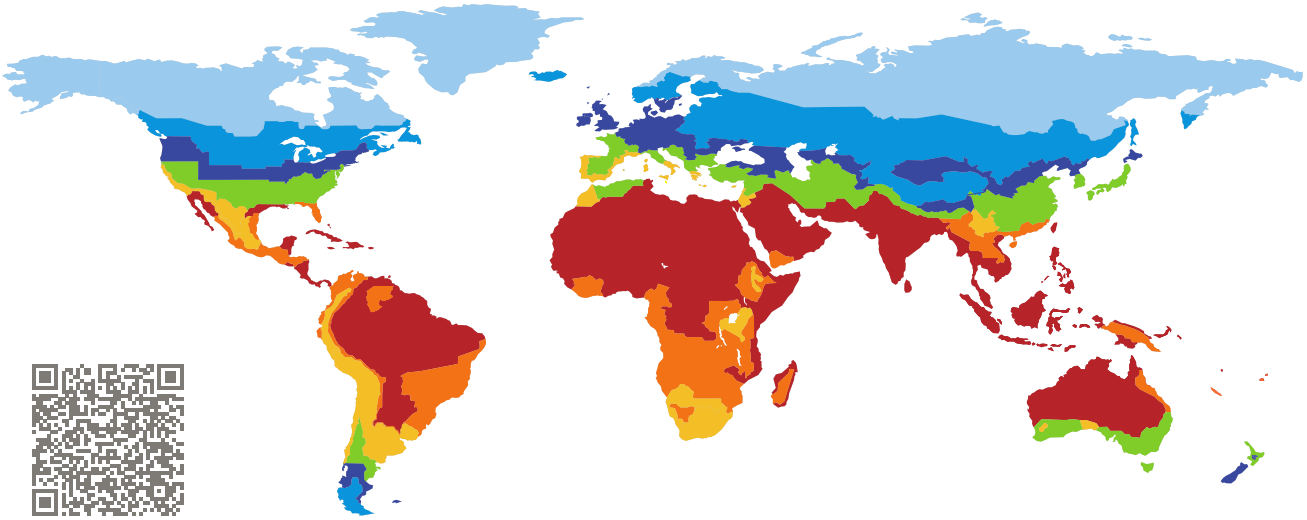

Category:	**Wall penetration sealing**
Manufacturer:	**Naber GmbH** **Germany**
Product name:	**Bixo**
Specification:	Exhaust air unit
Nominal size:	DN

Airflow range
Exhaust air: 0–410 m^3/h
Residual leakage
q_{l50} = 0.36 m^3/h (± 0.0081)
Pressure loss
Δp_{exh300} = 82 Pa

This certificate was awarded based on the product meeting the following main criteria

Residual leakage at 50 Pa	q_l	≤	1 m^3/h/Exterior wall air outlet
Pressure loss at 300 m^3/h	Δ_p	≤	100 Pa

all climate zones

CERTIFIED COMPONENT

Passive House Institute

Naber GmbH
Enschedestr. 24, 48529 Nordhorn, Germany
☎ None | ✉ None | None |

Residual leakage

The residual leakage is determined by measurement. At a differential pressure of ± 50 Pa, the leakage volume flow $q_{l_{50}}$ must not exceed a value of 1 m^3/h per external wall air outlet.

The specified certificate value refers to the measured leakage volume flow of the tested exterior wall air outlet at a differential pressure of ± 50 Pa. The leakage volume flow q_{l_8} at a differential pressure of ± 8 Pa is relevant for determine the energy balance of the building. If $q_{l_8} is \geq 0.3 m^3/h$, the additional heat loss due to infiltration must be taken into account in the building energy balance according to [Guideline].

Residual leakage
$q_{l_{50}}$ = 0.36 m^3/h (± 0.0081)
q_{l_8} = 0.09 m^3/h (± 0.0021)

Pressure loss

High pressure losses of the exhaust air duct reduce the achievable exhaust air volume flow and also increase the power consumption of the kitchen exhaust system. High-quality exhaust systems under typical conditions ensure good capture of kitchen fumes already with exhaust air volume flows of < 300 m^3/h. The exhaust air duct should therefore have only moderate pressure losses.

Recommendation: The pressure loss of the exterior wall outlet should not exceed **100 Pa** at an exhaust air volume flow of 300 m^3/h.

Pressure loss
Δp_{exh300} = 82 Pa

Thermal bridge coefficient

The punctual thermal bridge coefficient was determined for a reinforced concrete wall with a 25 cm thermal insulation system, suitable for cool moderate climate:

Thermal bridge coefficient
χ = 0.02 W/K

Standby

In case of electronically controlled dampers, the power consumption should not exceed a limit value of 1 W when closed.

The exterior wall air outlet tested here is controlled electronically. The standby consumption amounts 0.70 W.

List of references

[AWLD_2019] Requirements and test methods for energetic evaluation of exterior wall air outlets for the use in passive houses – draft, Passive House Institute, 2019

[Guideline] Kitchen exhaust systems for residential kitchens in passive houses: Guideline, Passive House Institute, April 2019