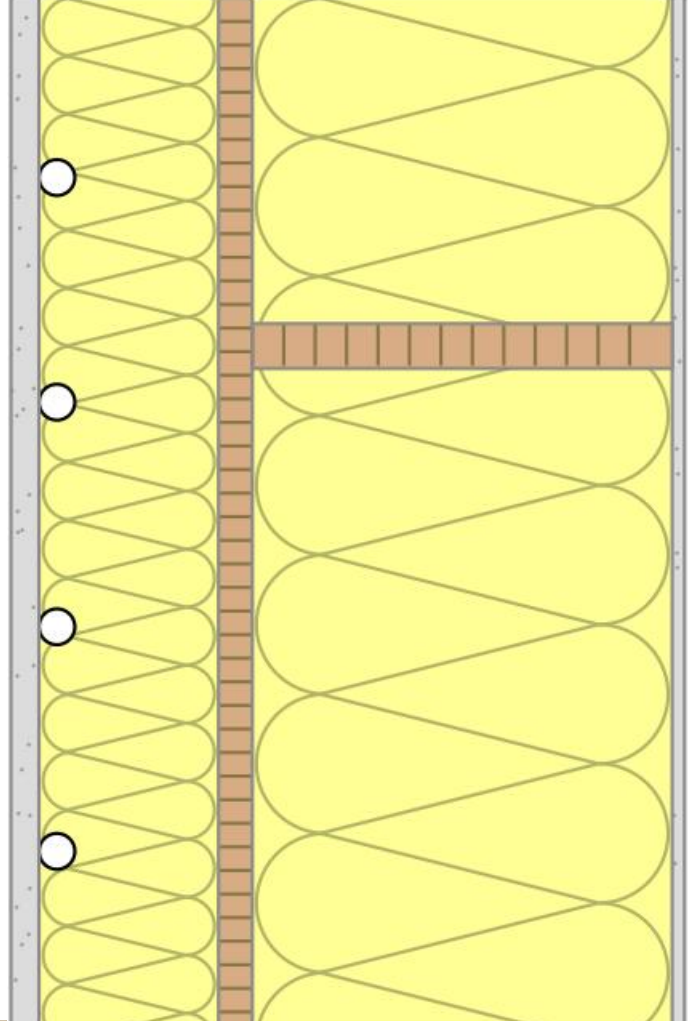
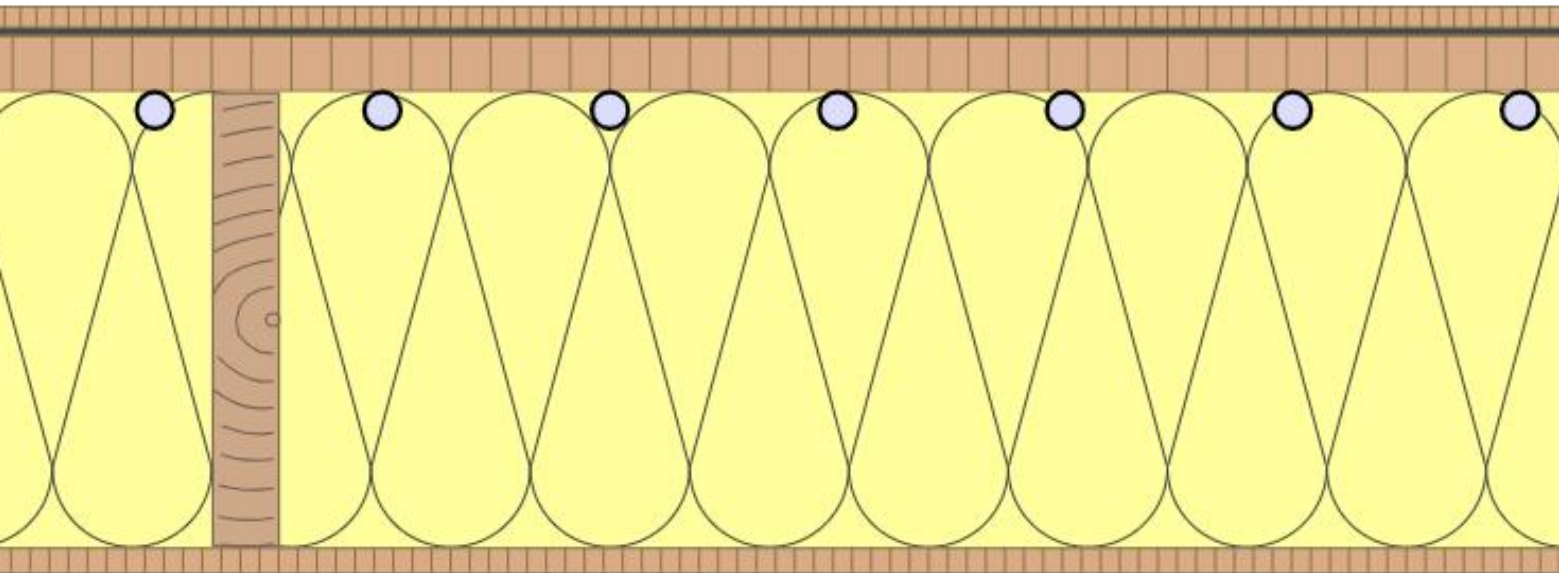
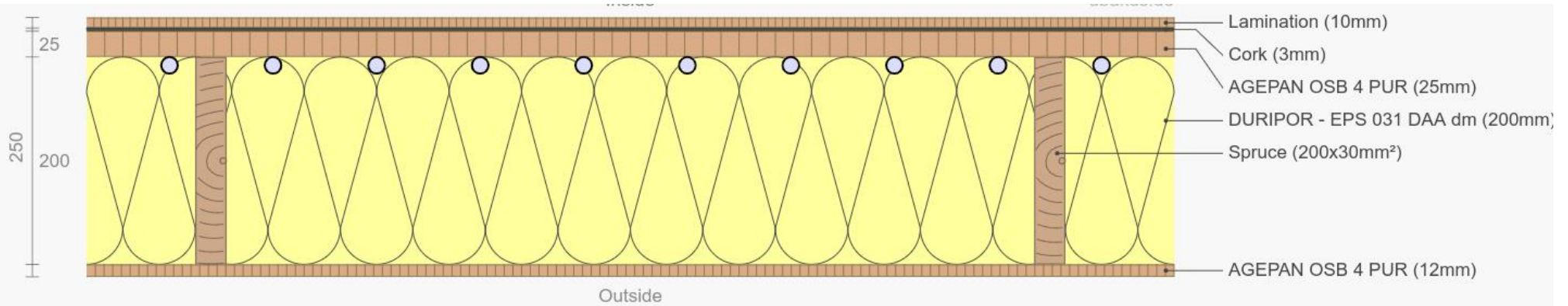


Floor heating and/or wall heating?



3.21 W/m²

20° C



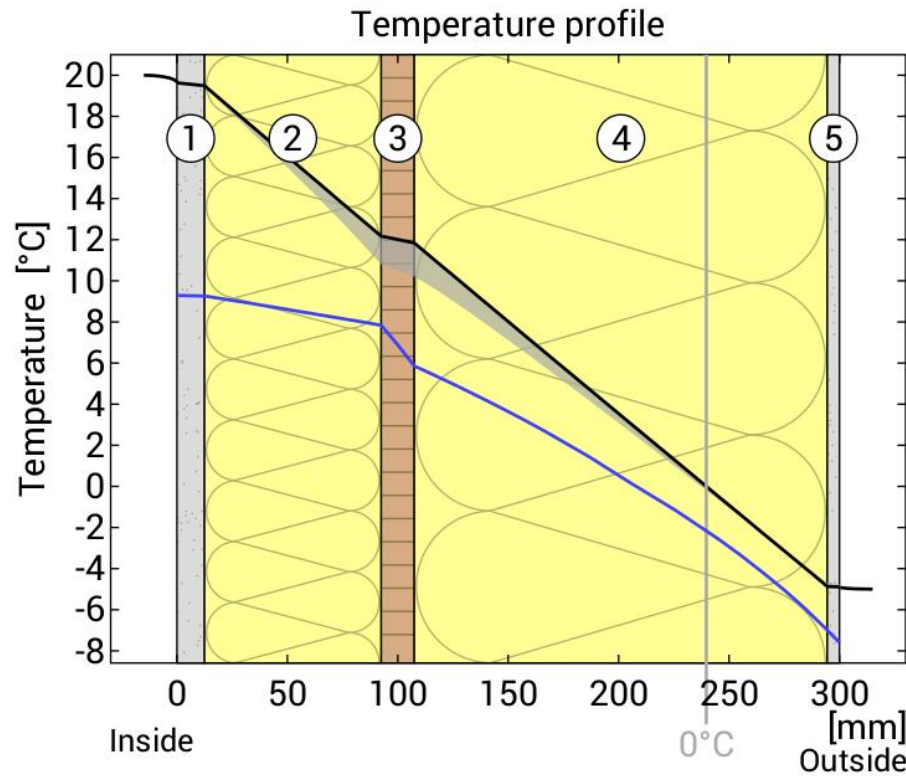
1.24 W/m²

15° C

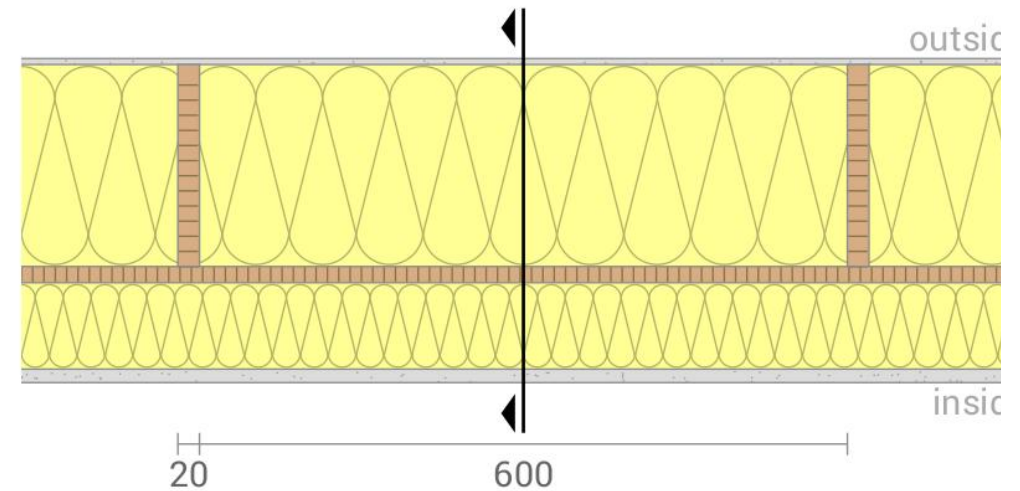
20° C

-5° C

Temperature profile



— Temperature
— Dew point



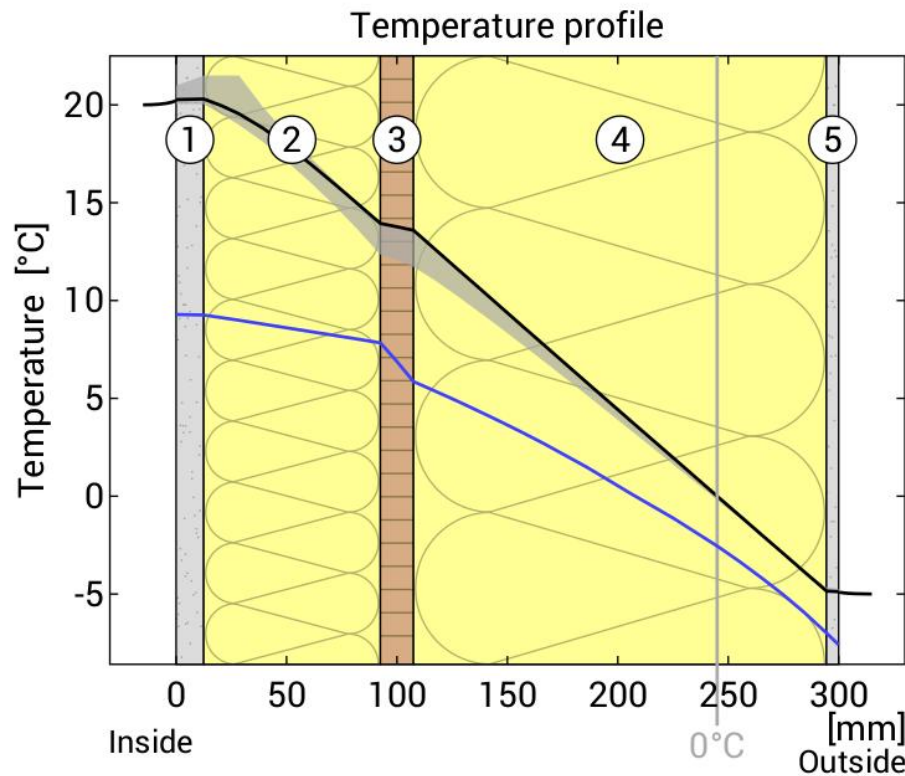
- ① Gypsum board (12,5 mm) ③ AGEPAN OSB 4 PUR (15 mm) ⑤ Silicone Resin Plaster (5,5 mm)
② DURIPOR - EPS 031 DAA dm (80 mm) ④ DURIPOR - EPS 031 DAA dm (187 mm)

→ 2.98 W/m²

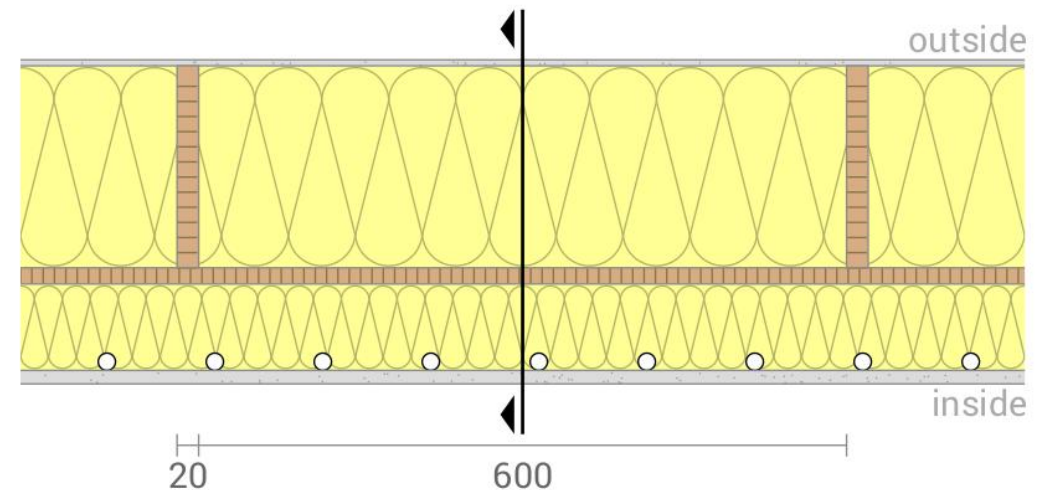
20° C

-5° C

Temperature profile



— Temperature
— Dew point



① Gypsum board (12,5 mm)

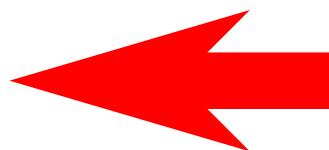
③ AGEPAN OSB 4 PUR (15 mm)

⑤ Silicone Resin Plaster (5,5 mm)

② DURIPOR - EPS 031 DAA dm (80 mm)

④ DURIPOR - EPS 031 DAA dm (187 mm)

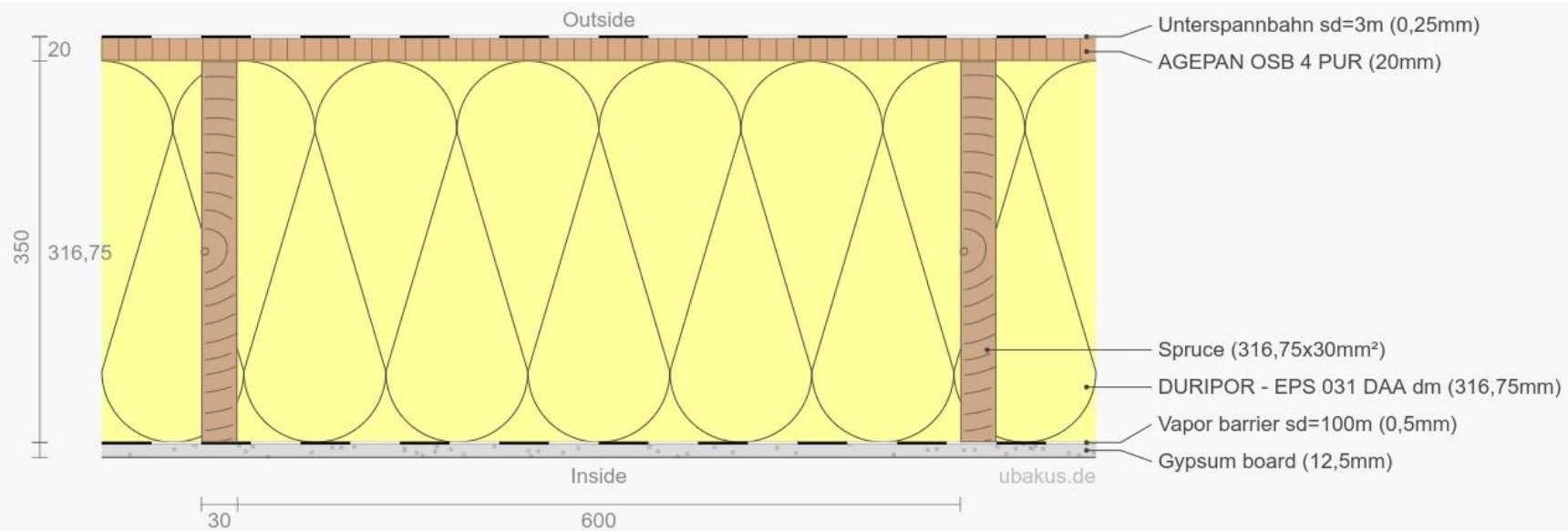
7.48 W/m²



3.36 W/m²

2.68 W/m²

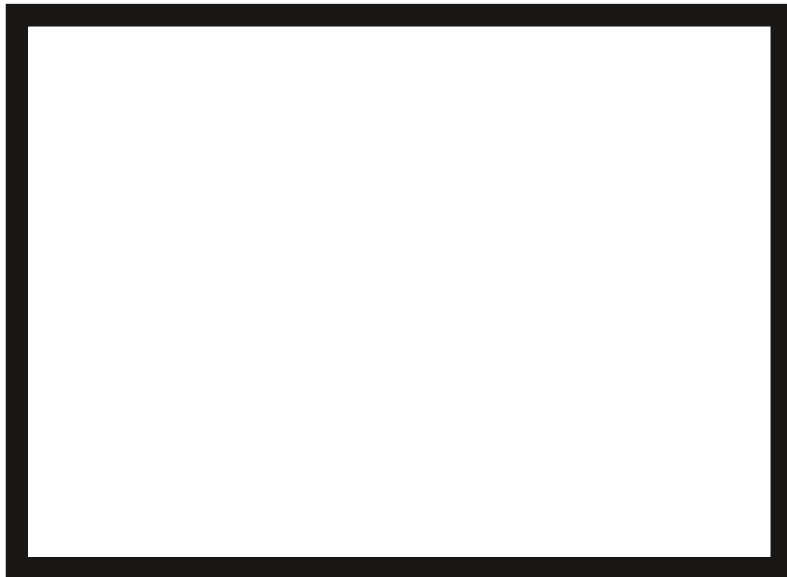
-5° C



20° C



3.1 m



7.6 m

10.4 m

148 W

120 m³/h air with 85 % heat recovery

211 W

79.04 m² ceiling

270 W

13.50 m² windows

237 W

70.50 m² wall heated

82 W

27.60 m² wall not heated

77 W

61.74 m² floor heated

14 W

17.30 m² floor not heated

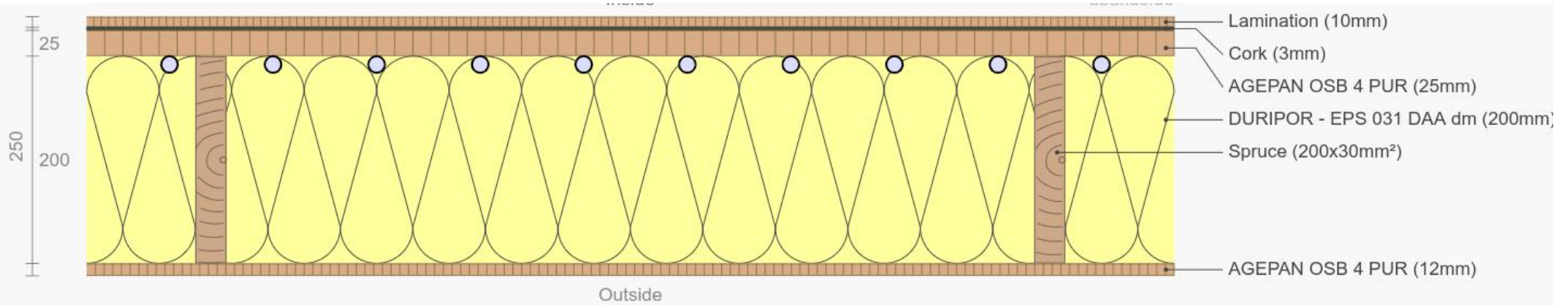
2° to 23°
1039 W heat
COP 5.64
184 W electricity
12 W air exch.

527 W

198 W

15.14 W/m²

20° C



2.66 W/m²

15° C

148 W

120 m³/h air with 85 % heat recovery

211 W

79.04 m² ceiling

270 W

13.50 m² windows

292 W

98.10 m² wall not heated

164 W

61.74 m² floor heated

14 W

17.30 m² floor not heated

2° to 32
1099 W heat
COP 4.07
270 W electricity
12 W air exch.

935 W

148 W

120 m³/h air with 85 % heat recovery

211 W

79.04 m² ceiling

270 W

13.50 m² windows

247 W

70.50 m² wall heated

82 W

27.60 m² wall not heated

62 W

17.30 m² floor not heated

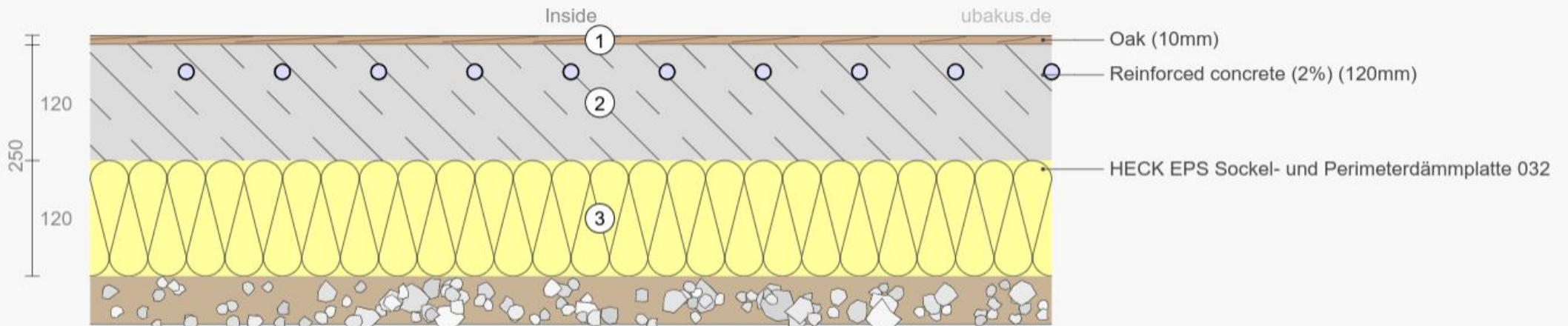
2° to 24.5°
1020 W heat
COP 5.29
193 W electricity
12 W air exch.

773 W



41.82 W/m²

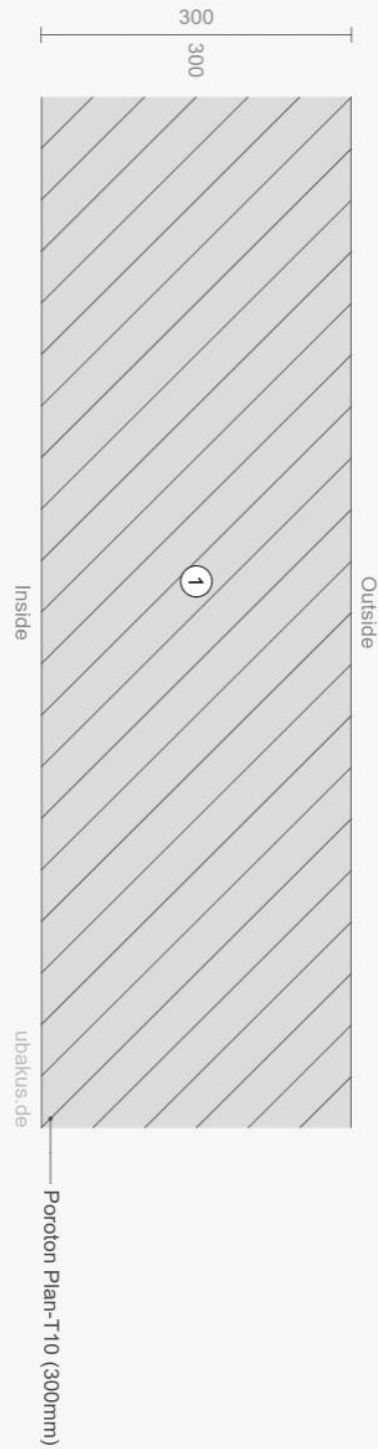
20° C



5.96 W/m²

5° C

20° C



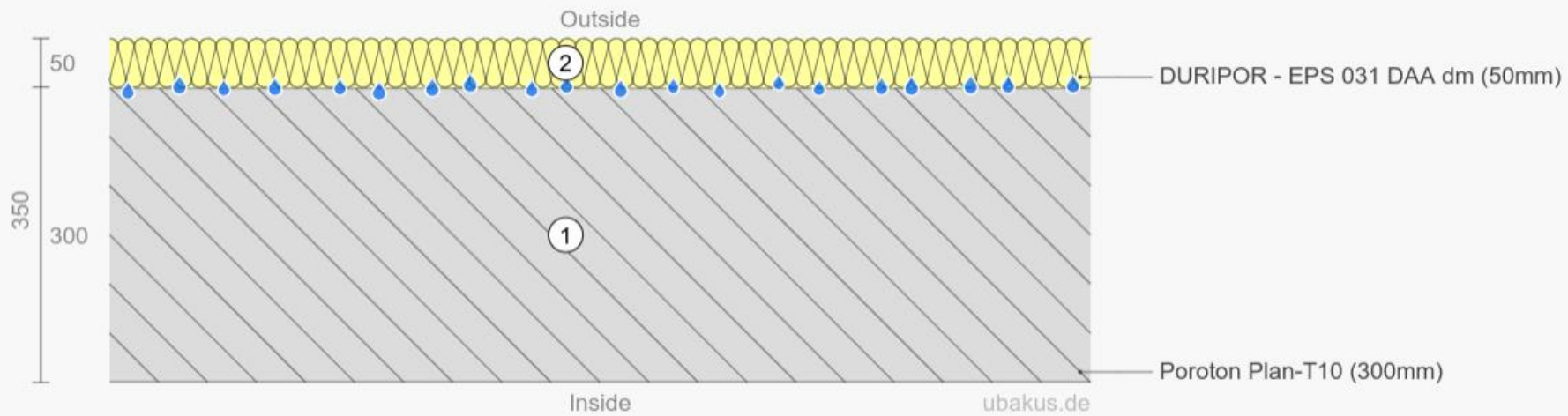
-5° C

➔ 7.88 W/m²

5.25 W/m²



-5° C



20° C

1:5 different scale

990 W

120 m³/h air

415 W

79.04 m² ceiling

338 W

13.50 m² window

773 W

98.10 m² wall

368 W

61.74 m² floor heated

66 W

17.30 m² floor not heated

-5° to 28°
2950 W heat
COP 3.65
808 W electricity

2582 W

2950 W heat “quite a good house in many countries”.

**1099 W Heat
Heat insulation
Heat recovery
from exhaust air**

-5° C

**1039 W heat
Optimization of
heat output with
wall heating**

20° C

Ventilation system with heat recovery and

moisture recovery from exhaust air



COP 3.65

**“in many countries quite a good house”
with an air source heat pump.**

-5° C

COP 4.07

**a low-temperature heat storage tank enables
heat harvesting during the warmest hours
of the day**

20° C

COP 5.64

**additional wall heating to the floor heating enables
a significantly lower flow temperature**



**808 W electricity “in many countries quite a good house”
with an air source heat pump.**

282 W electricity

-5° C

**196 W
electricity**

20° C



**Disruption
at houses**

Floor heating and/or wall heating?

