



Demo Factsheet for IEA ES Task 43

“Storage for renewables and flexibility through standardized use of building mass”, Subtask D



Picture of Demo building

Building Name

BOKU Türkenwirtgebäude

Location/Country

Vienna, Austria

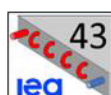
Submitting contact information

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Building type

- ☒ **New construction**
- ☐ **Renovation/retrofit**
- ☐ **Prototype/Test building**

Year of construction

*for renovation year of renovation

2018

Usage category

*e.g. residential, office, tertiary etc.
education, university

Total conditioned floor area [m²]

*total area conditioned with heat and/or cold

4.845 m²

Total energy consumption [kWh/m²a] and supply temperatures [°C]

*Electricity refers to the energy supply systems. If possible, exclude household electricity.

Heating	41,3 kWh/m ² a	temperature	30/26,5 °C
Hot water	included in heating	temperature	Flow/Return
Cooling	31,7 kWh/m ² a	temperature	18/20,5 °C
Electricity	27 kWh/m ² a		

Energy supply systems

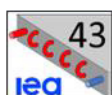
*please list all supply systems (e.g. heat pumps, boilers, the electricity grid), including power ratings for locally deployed technologies

Heat:	116 kW district heating 70 kW brine/water heat pump 35 kW solar thermal collectors waste heat from cooling
Cold:	162 kW chiller 56 kW brine/water heat pump passive cooling with geothermal probes
Electricity:	grid 45 kWp PV on flat roof 8 kWp PV as pergola on roof garden

Installed energy storage systems

* please list all energy storage options besides activated building mass, including their capacities (e.g. hot water buffer, battery etc.)

Heat:	4.000 liter hot water buffer
Cold:	2 x 2.000 liter cold water buffer
Electricity:	Klicken oder tippen Sie hier, um Text einzugeben.



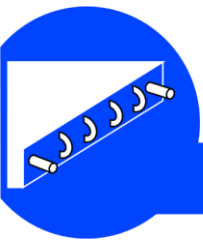
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Other conditioning systems besides TABs [multiple choice]

- | | |
|--|--|
| ☐ Radiators | ☒ Ventilation |
| ☒ Conventional floor heating | ☒ Wall heating |
| ☐ Other: | |

Klicken oder tippen Sie hier, um Text einzugeben.



Dimension of total installed thermal activated building mass [m^2/m^3]

*use one or both of the metrics depending on which information is available

Area [m^2]:

1.198 m^2

Volume [m^3]:

Klicken oder tippen Sie hier, um Text einzugeben.

Location of thermal activated building mass integration

- ☐ Floor
- ☐ Wall
- ☒ Ceiling
- ☐ Other:

Klicken oder tippen Sie hier, um Text einzugeben.

Material(s) used

concrete (30 cm thick slab)

Functional role of thermal activated building mass [multiple choice]

- ☒ Heating
- ☒ Cooling
- ☐ Energy storage

Is the thermal activated building mass used for flexibility services?

- ☒ No. Because of:
 - ☐ No need for additional storage
 - ☒ Lack of awareness or lack of information on the topic
 - ☐ Lack of social acceptance
 - ☐ Technical feasibility
 - ☒ Financial feasibility
 - ☐ Other reasons

- ☐ Yes. Please describe the use case below:

Klicken oder tippen Sie hier, um Text einzugeben.

Optional additional information

*e.g. further details about the building and its function, feedback from users, residents or owners, project homepage, studies or other information that is not covered by the factsheet