



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

Tower Puchstrasse

Location/Country

8010 Graz, Austria

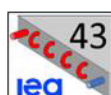
Submitting contact information

**Name, E-mail, Institution*

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Building information

Building type

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

Year of construction

*for renovation year of renovation

2022

Usage category

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

hotel

Total conditioned floor area [m²]

*total area conditioned with heat and/or cold

1.161 m²

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

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

Heating	20,5 kWh/m ² a	temperature	50/45 °C
Hot water	Klicken oder tippen Sie hier, um Text einzugeben.	temperature	Flow/Return
Cooling	Klicken oder tippen Sie hier, um Text einzugeben.	temperature	16/19 °C
Electricity	Klicken oder tippen Sie hier, um Text einzugeben.		

Energy supply systems

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

Heat:	5 water/water heat pumps (3 reversible) for heating and hot water
Cold:	3 reversible water/water heat pumps
Electricity:	grid, 360 kWp PV, 140 kWp hydro power

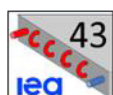
Installed energy storage systems

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

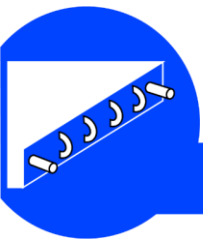
Heat:	1.000 liter buffer for heating, 4.000 liter buffer for hot water
Cold:	1.000 liter cold water buffer
Electricity:	Klicken oder tippen Sie hier, um Text einzugeben.

Other conditioning systems besides TABs [multiple choice]

- ☐ Radiators
☐ Conventional floor heating
☐ Other:
Klicken oder tippen Sie hier, um Text einzugeben.
- ☒ Ventilation
☐ Wall heating



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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]:

758 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

reinforced concrete and brick walls activated with pre fabricated facade modules

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