



## 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

MAM R&D Center

### Location/Country

Grosshöflein, Austria

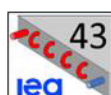
### Submitting contact information

*\*Name, E-mail, Institution*

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AEE INTEC



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## Building information

### Building type

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

### Year of construction

\*for renovation year of renovation

2021

### Usage category

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

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### Total conditioned floor area [m<sup>2</sup>]

\*total area conditioned with heat and/or cold

3.688 m<sup>2</sup>

### Total energy consumption [kWh/m<sup>2</sup>a] and supply temperatures [°C]

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

|                    |                                                   |                    |             |
|--------------------|---------------------------------------------------|--------------------|-------------|
| <b>Heating</b>     | Klicken oder tippen Sie hier, um Text einzugeben. | <b>temperature</b> | 35/30 °C    |
| <b>Hot water</b>   | Klicken oder tippen Sie hier, um Text einzugeben. | <b>temperature</b> | Flow/Return |
| <b>Cooling</b>     | Klicken oder tippen Sie hier, um Text einzugeben. | <b>temperature</b> | 16/20 °C    |
| <b>Electricity</b> | 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

|                     |                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Heat:</b>        | 138 kW brine/water heat pump                                                                              |
| <b>Cold:</b>        | 132 kW brine/water heat pump, passive cooling with geothermal probes<br>chiller for process refrigeration |
| <b>Electricity:</b> | grid                                                                                                      |

### Installed energy storage systems

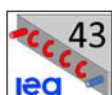
\* please list all energy storage options besides activated building mass, including their capacities (e.g. hot water buffer, battery etc.)

|                     |                                                                         |
|---------------------|-------------------------------------------------------------------------|
| <b>Heat:</b>        | 2.000 liter high temperature buffer, 2.000 liter low temperature buffer |
| <b>Cold:</b>        | 2 x 2.000 liter cold water buffer, 1 x 6.000 liter cold water buffer    |
| <b>Electricity:</b> | Klicken oder tippen Sie hier, um Text einzugeben.                       |

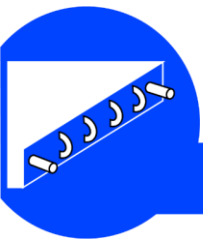
### Other conditioning systems besides TABs [multiple choice]

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

Klicken oder tippen Sie hier, um Text einzugeben.



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## Dimension of total installed thermal activated building mass [ $\text{m}^2/\text{m}^3$ ]

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

**Area [ $\text{m}^2$ ]:**

2.600  $\text{m}^2$

**Volume [ $\text{m}^3$ ]:**

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