

Our Offer

- We test combistores for heat pump compatibility (measurement of stratification efficiency)
- We test complete heating systems for heat and power supply in single family homes with
 - Heat pumps (A/W, B/W, W/W)
 - Pellet boilers
 - Oil and gas boilers
 - Solar thermal collectors
 - Photovoltaics
 - Storage for heat and/or electricity

Contact

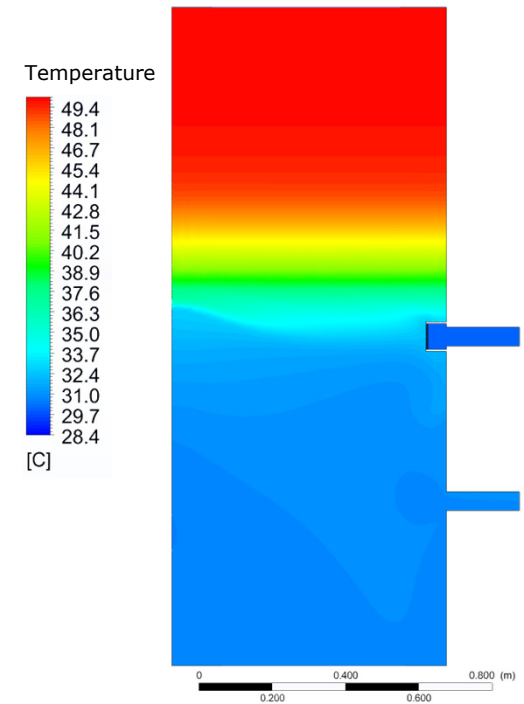
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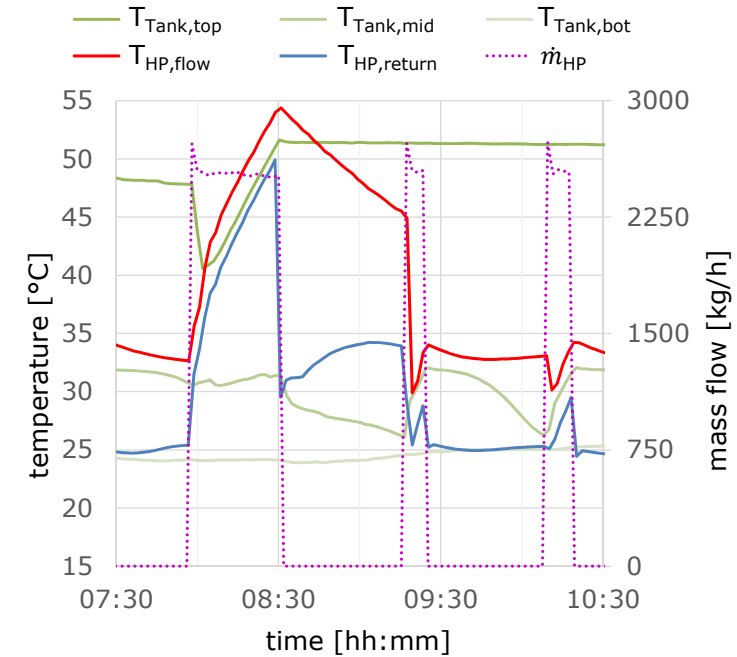
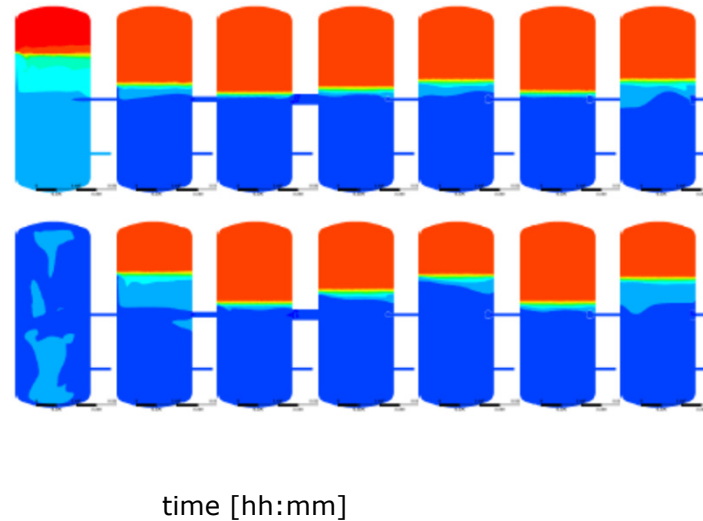
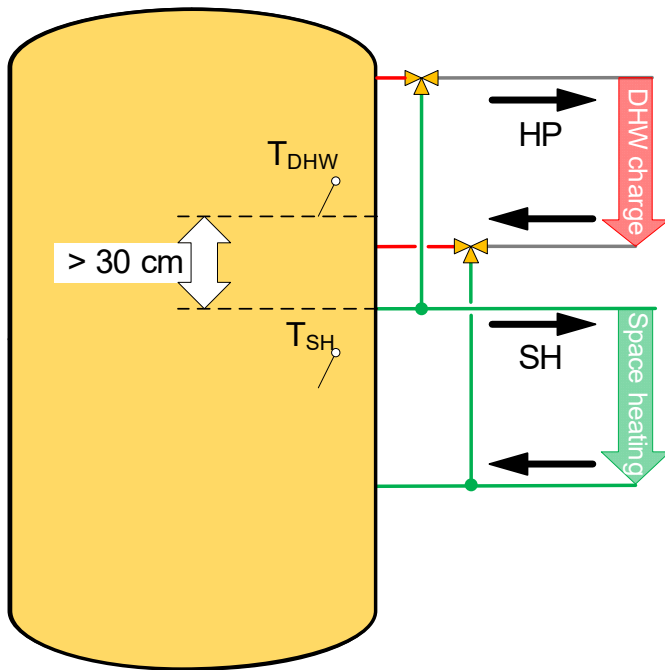
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Solar Combistores and Heat Pumps

- System integration
- System control
- Recommendations



Storage Tank Management

Recommendations:

- ✓ Position DHW-sensor $> 30\text{ cm}$ above the space heating zone
- ✓ Return pipe to storage for DHW charging above the space heating zone
- ✓ Time windows for DHW charging $< 2 \times 2\text{ h}$, optimal between 16:00 - 20:00, or at the beginning of the night tariff
- ✓ DHW-priority: Space heating pump off during charging of DHW

Storage Tank Stratification

The maximum mass flow rate that does not disturb stratification:

- ✓ Must be known for each connection
- ✓ Must be respected, i.e. not exceeded

Design criteria for entry geometries:

- ✓ Flow velocity $< 0.1\text{ m/s}$ at the outlet of the flow channel
- ✓ Entry length at least $6 \times$ hydraulic diameter after last deflection of flow or enlargement of cross section

Independent Tests

- Build trust
- Are invaluable for system optimisation
- Are available for storage tanks as well as entire systems
- Should be carried out in case of deviations from the presented recommendations or in case of the usage of special inlet designs which promote stratification