Results for the Test Procedure

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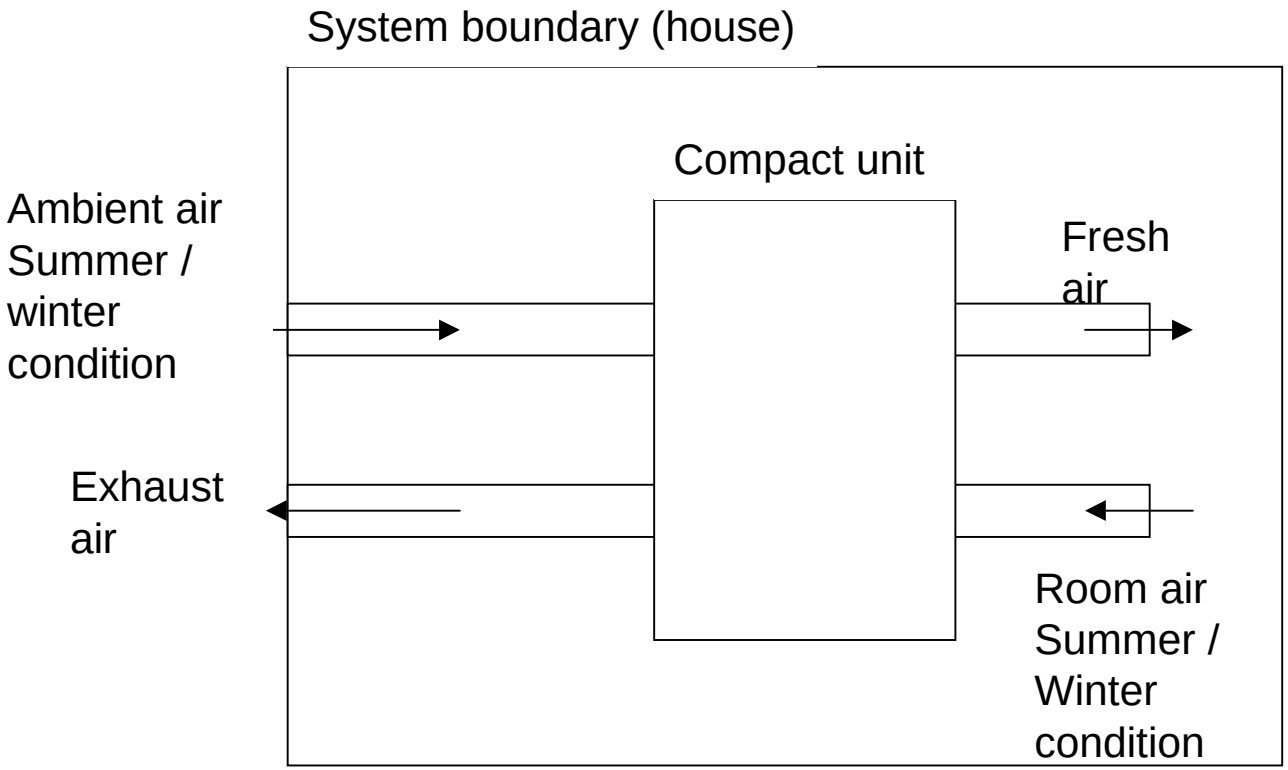
Evaluation of COP Heating

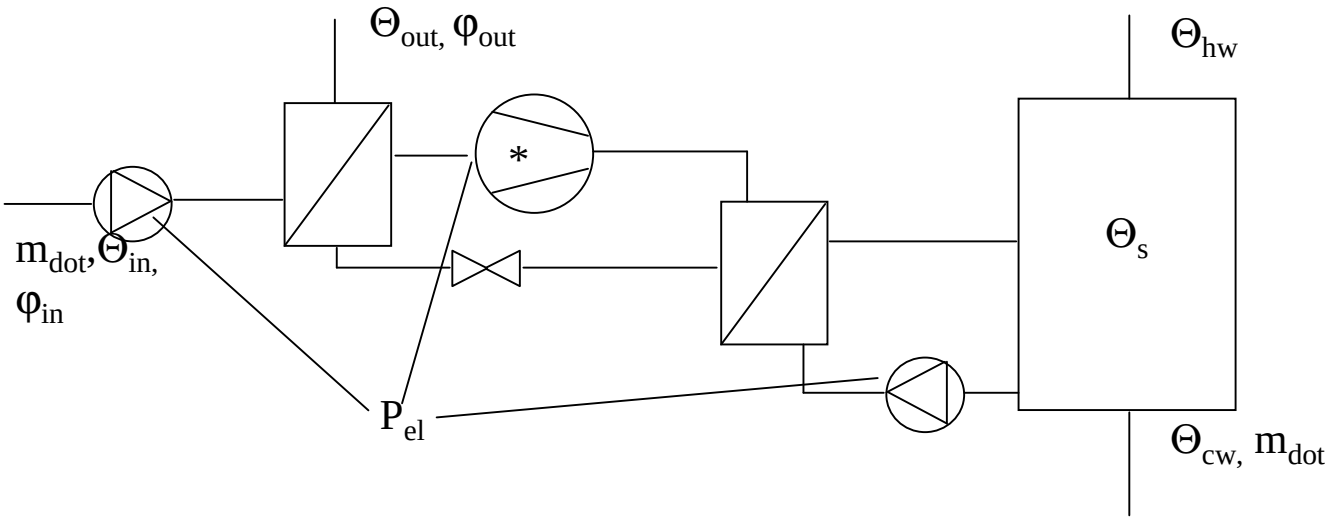


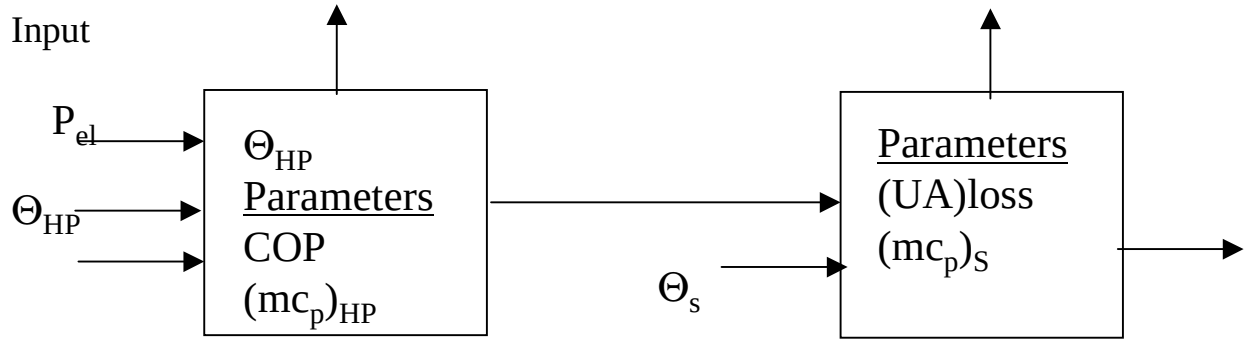
$$COP(heating\_season) = \frac{H_{amb} - H_{exhaust} + E_{el}}{E_{el}}$$

results:
COP HP between 2.1 an 2.3, with system boundary at “fresh air to room”.
COP HP between 2.4 and 2.5 with system boundary “exhaust air”.

COP Heat recovery 92 % with system boundary “fresh air”.
COP Heat recovery 84 % with system boundary “exhaust air”

Dynamic Test for DHW





Dynamic Test for DHW

- Parameter of the storage (similar to EN 12 977-3)

- Parameter of the heat pump:

A) heating-up power => Determination of the COP
Basis: cold storage
- Starting with cold storage ($\Theta s < 20℃$) and heating up to Θs
- Determination of storage energy (calculation)

B) Reheating power => Determination of the thermal capacity of the heat pump
To cover storage losses
Basis: hot storage, cold HP

C) Heating up of the storage after extraction of domestic hot water
=> check of identified parameters by reproducing the storage temperature
Basis: hot storage, cold HP
Extraction of domestic hot water, until compressor is switched on