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NOMENCLATURE

| | |
|------------|---|
| \dot{m} | mass flow rate, kg/h |
| h | enthalpy of dry air and water vapor mixture, kJ/kg |
| c | specific heat, kJ/(kg K) |
| x | humidity ratio of the mixture, kgH ₂ O/kg dry air |
| r | latent heat of vaporization, kJ/kg |
| p | partial pressure of dry air, kPa |
| \dot{P} | nominal power of the fan, kJ/h |
| U | heat transfer coefficient of the wall elements of the environment, W/m ² K |
| A | area of the wall elements of the environment, m ² |
| ΔT | temperature difference between the conditioned environment and its surrounding, K |

Greek symbols

| | |
|----------|---------------------------------------|
| γ | control signal within the range [0÷1] |
|----------|---------------------------------------|

Subscripts

| | |
|-------|--|
| air | fluid (air) |
| in | initial state |
| out | final state |
| a | dry air |
| v | water vapor |
| pa | dry air at constant pressure |
| va | water at constant pressure |
| rated | nominal value |
| i | <i>i</i> -th wall element of the environment |