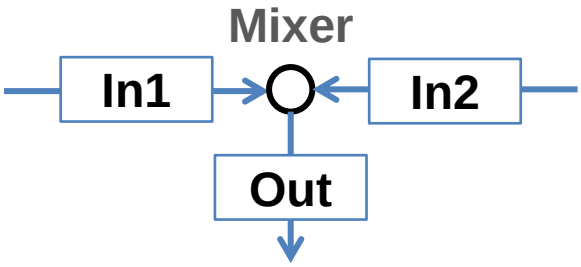
Mixer

General description



Mixes two input material streams *In1* and *In2* into one output stream *Out*. The output stream will be defined for all time points, for which the streams *In1* **and** *In2* are defined. Mixing of more streams can be implemented by connecting of several mixers sequentially.

The parameters of output stream are calculated as:

$$\dot{m}_{out} = \dot{m}_{in1} + \dot{m}_{in2}$$

$$\dot{H}_{out} = \dot{H}_{in1} + \dot{H}_{in2}$$

$$T_{out} = f(h_{out}) = f\left(\frac{\dot{H}_{out}}{\dot{m}_{out}}\right)$$

$$P_{out} = min(P_{in1}, P_{in2})$$

- $\dot{m}$ is a mass flow
- $\dot{H}$ is an enthalpy flow
- h is a specific enthalpy
- T is a temperature
- P is a pressure

All secondary attributes of output stream, such as phase fractions, compounds fractions and multidimensional distributions are calculating depending on mass fractions of input streams.

Application examples

- *Example Flowsheets/Units/Mixer.dlfw*
- *Example Flowsheets/Processes/Agglomeration Process.dlfw*
- *Example Flowsheets/Processes/Comminution Process.dlfw*
- *Example Flowsheets/Processes/Granulation Process.dlfw*
- *Example Flowsheets/Processes/Sieve-Mill Process.dlfw*