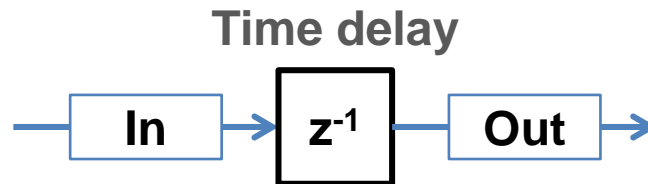


Time delay

General description



This unit copies the complete information of the input stream *In* at any given timepoint t to the output stream *Out* at the timepoint $t + \Delta t$, delaying the signal by a constant delay factor Δt , defined by the user. For stability reasons, a first order delay has been added to the constant time delay Δt as follows:

$$\frac{d\dot{m}_{out}(t)}{dt} = \dot{m}_{in}(t - \Delta t) - \dot{m}_{out}(t), \text{ with } \dot{m}_{out}(t) = 0 \text{ for } t < \Delta t$$

Unit parameters

Name	Symbol	Description	Units	Boundaries
Time delay	Δt	Unit time delay	[s]	$0 \leq \text{Time delay} \leq 1\text{e}+6$

Application example

- *Example Flowsheets/Units/Time Delay.dlfw*
- *Example Flowsheets/Processes/Comminution Process.dlfw*