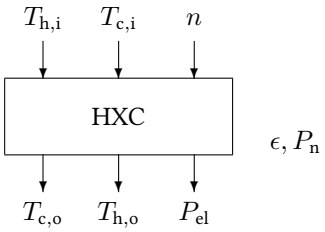
Block HXC

The HXC block simulates a heat exchanger with constant heat recovery efficiency.





Name	HXC
Function	st0005
Inputs	3
Outputs	3
Parameters	2
Strings	0
Group	S

Inputs

1	Temperature (hot) $T_{h,i}$ / °C
2	Temperature (cold) $T_{c,i}$ / °C
3	On-Off switch 0/1

Outputs

1	Temperature (cold) $T_{c,o}$ / °C
2	Temperature (hot) $T_{h,o}$ / °C
3	Electricity consumption P_{el} / W

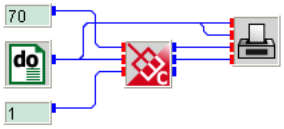
Parameters

1	Heat recovery efficiency ϵ
2	Nominal electricity consumption P_n / W

Strings

None

hxc.vseit



A heat exchanger with constant heat recovery efficiency of 80 % and a nominal electricity consumption of 50 W is simulated by a HXC block. The heat exchanger is switched on all the time and the hot side inlet temperature is set to 70 °C as defined by two CONST blocks.

A DO block varies the cold side inlet temperature between 0 and 50 °C in steps of 1 °C.

The cold side inlet temperature and the resulting outlet temperatures are displayed by a PLOT block.

