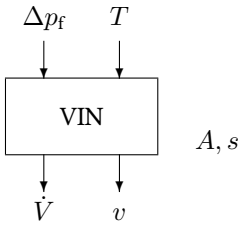
Block VIN

The VIN block calculates the volume flow from free space into a channel or tube.





Name	VIN
Function	st0019
Inputs	2
Outputs	2
Parameters	2
Strings	0
Group	S

Inputs

1 Pressure drop Δp_f / Pa
2 Air temperature T / °C

Outputs

1 Volume flow $\dot{V}$ / $m^3\,h^{-1}$
2 Flow velocity v / $m\,s^{-1}$

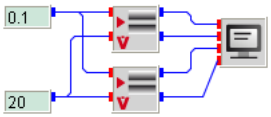
Parameters

1 Channel area A / m^2
2 Edge sharpness s
- 0 Sharp edge
- 1 Broken edge
- 2 Round edge
- 3 Smooth, round edge

Strings

None

vin.vseit



Two different channel inlets with an area of 1 m^2 each, the upper one with a sharp edge, the lower one with a broken edge are simulated for a pressure drop of 0.1 Pa and an air temperature of 20 °C, as defined by two CONST blocks.

The resulting volue flows and flow velocities are displayed by a SCREEN block.

```
2496.5774       0.69349372       4453.3076       1.2370299
```