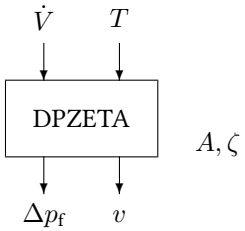
Block DPZETA

The DPZETA block calculates the pressure drop for a given zeta value.





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Function	st0019
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Inputs

1 Volume flow $\dot{V}$ / $\mathrm{m^3\,h^{-1}}$
2 Air temperature T / °C

Outputs

1 Pressure drop Δp_f / Pa
2 Flow velocity v / $\mathrm{m\,s^{-1}}$

Parameters

1 Channel area A / $\mathrm{m^2}$
2 Zeta value ζ

Strings

None

Description

For a given ζ value the pressure drop is given by

$$\Delta p_f = \zeta \frac{\rho_{air}}{2v^2}$$

where v is the flow velocity.

dpzeta.vseit



The DPZETA block calculates the pressure drop for a channel with an area of 1 m^2 and a zeta value of 0.3. The volume flow is set to 10 000 m^3/h for air at a temperature of 20 °C as set by two CONST blocks.

The SCREEN block displays the pressure drop in Pa and the flow velocity in m/s..

```
1.3751915       2.7777777
```