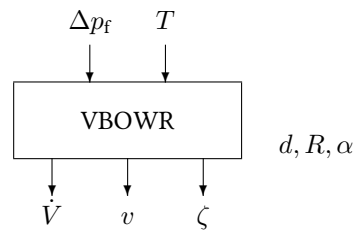


Block VBOWR

The VBOWR block calculates the Volume flow of a round bow due to friction of an incompressible one-phase turbulent tubular flow.



Name	VBOWR
Function	st0021
Inputs	2
Outputs	3
Parameters	3
Strings	0
Group	S

Inputs

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

Outputs

- 1 Volume flow $\dot{V}$ / m³ h⁻¹
- 2 Flow velocity v / m s⁻¹
- 3 Zeta value ζ

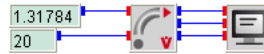
Parameters

- 1 Tube diameter d / m
- 2 Bow radius R / m
- 3 Angle α / °

Strings

None

vbowr.vseit



A round 90° bow with a tube diameter of 0.4 m and a bow radius of 1 m is simulated for a pressure drop of 1.31784 Pa and an air temperature of 20 °C as defined by two [CONST](#) blocks.

A [SCREEN](#) block displays the three outputs of the [VBOWR](#) block.

1800.00269 3.97888 0.14012