

Block QDTV

The QDTV block calculates the heat flux to or from an external wall surface due to free and forced convection of the ambient air.



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Function	bs0027
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Inputs

- 1 Surface temperature of the wall $T_w / ^\circ\text{C}$
- 2 Ambient temperature $T_a / ^\circ\text{C}$
- 3 Wind speed $v_w / \text{m s}^{-1}$
- 4 Relative wind direction $v_{\text{dir},r}$ (0° = normal, 90° = parallel)

Outputs

- 1 Convective heat flux from ambient air $\dot{q}_a$

Parameters

- 1 Model
 - 0 Constant value
 - 1 Third-power average between free and forced convection
- 2 Heat transfer coefficient value h_c (model 0 only)

Strings

None
