

Annular Conductive Heat Transfer Coefficient @model

Mathematical model of [Heat Transfer Coefficient](#) through the [annulus](#) gap between concentric [pipes](#) filled with [solid body](#):

$$(1) \quad U = \frac{\lambda}{r_{in} \cdot \ln(r_{out}/r_{in})}$$

where

λ	thermal conductivity of the solid body
r_{out}	inner radius of outer pipe
r_{in}	outer radius of inner pipe

For the thin walls $h \ll r_{in}$ the [\(1\)](#) equation simplifies to:

$$(2) \quad U = \frac{\lambda}{h}$$

where

$h = r_{out} - r_{in}$	wall thickness
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See also

[Physics](#) / [Thermodynamics](#) / [Heat Transfer](#) / [Heat Transfer Coefficient \(HTC\)](#) / [Heat Transfer Coefficient \(HTC\) @model](#)

[[Thermal conductivity](#)] [[Nusselt number \(Nu\)](#)]