

A	B	C
1	L	1
2	k1	2.8
3	k2	0.18
4	k3	1.2
5	k4	12
6	T1	150
7	T2	20
8	R1	4.19
9	R2	4.35
10	R3	6
11	R4	6.13
12	d	48

ΔT

130

$$\frac{q}{l} = \frac{\frac{\Delta T}{l}}{\left(\frac{1}{2\pi}\right)\left[\frac{\ln\left(\frac{r_2}{r_1}\right)}{k_1} + \frac{\ln\left(\frac{r_3}{r_2}\right)}{k_2} + \frac{\ln\left(\frac{r_4}{r_3}\right)}{k_3} + \frac{\ln\left(\frac{d}{r_4} + \left(\frac{d}{r_4} - 1\right)^{-2}\right)}{k_4}\right]}$$

0.013384

(LN(B9/B8))/B2)

1.786576

((LN(B10/B9)))/B3)

0.017863

((LN(B11/B10)))/B4)

0.171728

((LN((B12/B11))+((B12/B11)-1)^(-2))/B5))

q	41.6	Btu/h IF
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