

→ Parallel flow

a	b
300°F → Hot fluid	→ 200°F
100°F → Cold fluid	→ 150°F
$\Delta T_a = 200^\circ\text{F}$	$\Delta T_b = 50^\circ\text{F}$

$$\Delta T_{LM} = \frac{\Delta T_a - \Delta T_b}{\ln\left(\frac{\Delta T_a}{\Delta T_b}\right)} = \frac{200 - 50}{\ln\left(\frac{200}{50}\right)} = 108,2^\circ\text{F}$$

→ Counter flow

a	b
300°F → Hot fluid	→ 200°F
150°F ← Cold fluid	← 100°F
$\Delta T_a = 150^\circ\text{F}$	$\Delta T_b = 100^\circ\text{F}$

$$\Delta T_{LM} = \frac{\Delta T_a - \Delta T_b}{\ln\left(\frac{\Delta T_a}{\Delta T_b}\right)} = \frac{150 - 100}{\ln\left(\frac{150}{100}\right)} = 123,315^\circ\text{F}$$

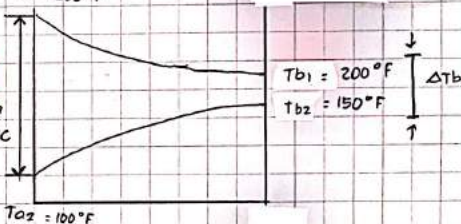
Dik. (T_{a1}) = 300°F

(T_{b1}) = 200°F

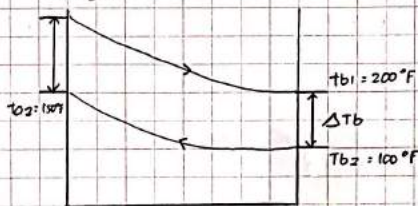
(T_{a2}) = 100°F

(T_{b2}) = 150°F

$T_{a1} = 300^\circ\text{F}$



$T_{a1} = 300^\circ\text{F}$



Maka yang digunakan adalah counter flow karena memiliki nilai ΔT_{LM} lebih besar sehingga perpindahan panas lebih besar