

### Data Required for Selection of a Heat Exchanger

ASME: yes/no

TEMA class: C / B / R / Not Required

Applicable codes: \_\_\_\_\_ (CRN / ABS / PED and etc)

Date: \_\_\_\_\_

Type: \_\_\_\_\_

(Straight tube/Fixed and etc)

		Hot side	Cold side
		Tube/shell	Tube/shell
1	Inlet pressure (psig)		
2	Fluid Circulated (eg. Water, steam, oil ISO VG 68)		
3	Flow rate (GPM or lb/hr)		
4	Temperature in/out (°F)	/	/
5	Heat load (Btu/hr)		
6	Allowable pressure drop (psi)		
7	Fouling factor		
<b>Fluid Physical Properties: (only required for unusual fluids)</b>			
8	Specific Gravity		
9	Specific Heat (BTU/lb-°F)		
10	Viscosity (cP)	@ °F	@ °F
11	Thermal Conductivity (BTU/hr-°F-ft <sup>2</sup> /ft)		

### MATERIALS OF CONSTRUCTION REQUIRED

Shell:	
Baffles:	
Tubes:	
Tubesheets:	
Bonnets/Channels:	
Gaskets:	Compressed Fiber (standard)
Plate & Frame:	304 / 316 / Titanium
Brazed plate	Copper / Nickel

### SELECTION RESTRICTIONS (Optional)

Min. Tube Diameter: 1/4, 3/8, 1/2, 5/8, 3/4, 1"

No. of Tubeside Passes: \_\_\_\_\_

Must Bundle be Removable: \_\_\_\_\_

Are Lo-Fin Tubes Allowable: \_\_\_\_\_

Max. Overall Length: \_\_\_\_\_ ft.

Are Flanged Conns Req'd: \_\_\_\_\_

Are U-tubes Allowed: \_\_\_\_\_

Special Requirements/Notes:

**Friendly note:  $Q_{hot}$  must equal  $Q_{cold}$**

$$Q_{hot} = \dot{m}_{hot} \times C_{p_{hot}} \times \Delta T_{hot}$$

$$Q_{cold} = \dot{m}_{cold} \times C_{p_{cold}} \times \Delta T_{cold}$$

where  $\dot{m}$  is mass flow rate;  $C_p$  is specific heat; and  $\Delta T$  is temperature difference