

CHEMICAL PRODUCTS DIVISION / FPP

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Re: Immersion Coil Sizing Telephone +1-302-456-4444
Request Form

Thank you for your inquiry regarding AMETEK's Fluoropolymer heat exchangers. Please complete the Immersion Coil Data Collection form below.

Information required to size an **Immersion Coil**:

What is the objective?

- 1) Cool down or heat up the tank from $T_{initial}$ to T_{final}
- 2) Maintain the tank at a specified temperature against a continuous heat loss or gain.
- 3) Or both, first cool down (or heat up), then maintain.

1. Heat up or Cool down case

If this is a cool down or heat up case, please provide:

Initial tank temp, _____degF

Final tank temp, _____degF

Cool down/heat up time _____hours

2. Maintain Case

If this is a maintain case, please provide:

Temperature to maintain _____degF

Heat input to maintain against (ie. Electric heat input)

Volts _____ amps _____ OR,

if you know the BTU/hr, _____BTU/hr

Other _____

Heat losses to maintain against (ie. Metal dipping and pickling applications)

Lb/hr metal dipping rate _____lb/hr

Specific Heat of metal _____BTU/lb/degF (i.e. 0.11 for steel)

Temperature of metal going into tank _____degF

Other _____

3. Tank fluid information

Fluid name _____

If H₂SO₄, please provide %H₂SO₄ _____%

Density _____ lb/cf

Specific Heat _____ BTU/lb/degF

Thermal conductivity _____ BTU/hr/ft/degF

Viscosity at T_{initial} _____ cp

Viscosity at T_{final} _____ cp

If tank fluid is water or sulfuric acid, the above properties can be left blank.

4. Tube fluid information:

Fluid name _____

If steam, please provide pressure _____ psig

If sulfuric acid, please provide %H₂SO₄ _____%

Temperature of cooling or heating fluid _____ degF

If liquid, acceptable temperature rise or drop of cooling or heating medium
_____ degF

Available flow rate of cooling or heating medium _____ gpm

Density _____ lb/cf

Specific Heat _____ BTU/lb/degF

Thermal conductivity _____ BTU/hr/ft/degF

Viscosity at T_{initial} _____ cp

Viscosity at T_{final} _____ cp

If tube fluid is steam, water or sulfuric acid, the above properties can be left blank.

5. Tank information

Length _____ ft

Width _____ ft

Diameter _____ ft (if cylindrical tank)

Height _____ ft

Liquid Height _____ ft

Tank volume _____ gallons

Is the tank open or closed? _____

Ambient temperature _____ degF

(tank dimensions and ambient temperature are necessary if you would like surfaces losses accounted for in your sizing.)

**Please fax or email completed form to Frank Vito at
302-456-4431 or Frank.Vito@ametek.com.**

Thank you for your inquiry!