

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 Tinitial to Tfinal
- 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, _____ °C

Final tank temp, _____ °C

Cool down/heat up time _____ hours

2. Maintain Case

If this is a maintain case, please provide:

Temperature to maintain _____ °C

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

Volts _____ amps _____ OR, if you know the Kcal/hr,

_____ Kcal/hr

Other _____

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

Kg/hr metal dipping rate _____ kg/hr

Specific Heat of metal _____ Kcal/kg/°C

Temperature of metal going into tank _____ °C

Other _____

3. Tank fluid information

Fluid name _____

If H₂SO₄, please provide %H₂SO₄ _____%

Density _____ kg/dm³

Specific Heat _____ Kcal/kg/°C

Thermal conductivity _____ Kcal/hr/m/ °C

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 _____ Bar

If sulfuric acid, please provide %H₂SO₄ _____%

Temperature of cooling or heating fluid _____ °C

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

Available flow rate of cooling or heating medium _____ Liter/min

Density _____ kg/dm³

Specific Heat _____ Kcal/kg/°C

Thermal conductivity _____ Kcal/hr/m/ °C

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 _____ m

Width _____ m

Diameter _____ m (if cylindrical tank)

Height _____ m

Liquid Height _____ m

Tank volume _____ Liters

Is the tank open or closed? _____

Ambient temperature _____ °C

(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!