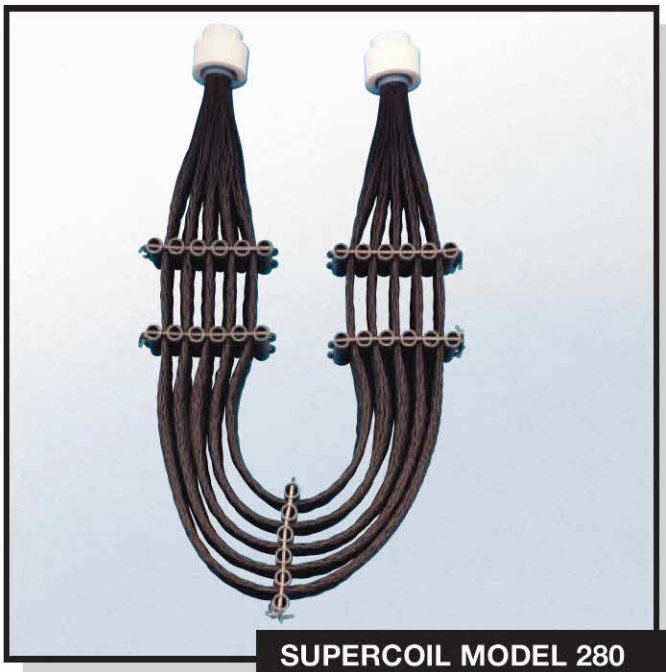
Supercoil Models 100, 168, 280 FEP and Q-Series

FEATURES

AMETEK Supercoil Heat Exchangers are high efficiency immersion coils designed for heating and cooling a wide range of metal finishing solutions. Applications include: electroplating, electroforming and electroless plating baths; acidic and alkaline solutions for etching, chemical milling, anodizing, cleaning, stripping, electropolishing and other similar operations. The well-known non-stick characteristics of fluoropolymer resins resist corrosion and fouling, and its high electrical resistance minimizes the effects of stray currents in electroplating tanks.

Supercoils are available in FEP as well as in proprietary Q-Series tubing formulations. Q-Series coils are made using a special fluorocarbon compound that significantly improves thermal efficiency and increases temperature and pressure capabilities. Q-Series Supercoils are ideal for most metal finishing operations, particularly those involving electroless nickel and copper plating.



SUPERCOIL MODEL 280

PRODUCT DESCRIPTION

Tube Outside Diameter	0.10 inch (2.54 mm)
Tube Wall Thickness	0.01 inch (.254 mm)
Average Heat Transfer Coefficent Q	80 to 120 BTU/Hr.-ft.^{2}-°F (454 to 682 watts/m^2-°K)
Average Heat Transfer Coefficient FEP	40 to 60 BTU/Hr.-ft.^{2}-°F (227 to 341 watts/m^2-°K)

HEAT TRANSFER AREA

100		168		280		
AREA		AREA		AREA		LENGTH*
ft^2	m^2	ft^2	m^2	ft^2	m^2	ft.
6.5	(0.6)	11.0	(1.0)	18.3	(1.7)	3
9.2	(0.9)	15.4	(1.4)	25.7	(2.4)	4
11.8	(1.1)	19.8	(1.8)	33.0	(3.1)	5
14.4	(1.3)	24.2	(2.2)	40.3	(3.7)	6
		28.6	(2.7)	47.6	(4.4)	7
		33.0	(3.1)	55.0	(5.1)	8
		37.4	(3.5)	62.3	(5.8)	9
		41.8	(3.9)	69.6	(6.5)	10
		46.2	(4.3)	77.0	(7.2)	11
		50.6	(4.7)	84.3	(7.8)	12
		55.0	(5.1)	91.6	(8.5)	13
		59.4	(5.5)	99.0	(9.2)	14
		63.8	(5.9)	106.3	(9.9)	15
		68.2	(6.3)	113.6	(10.6)	16

** As measured at center line of coil*

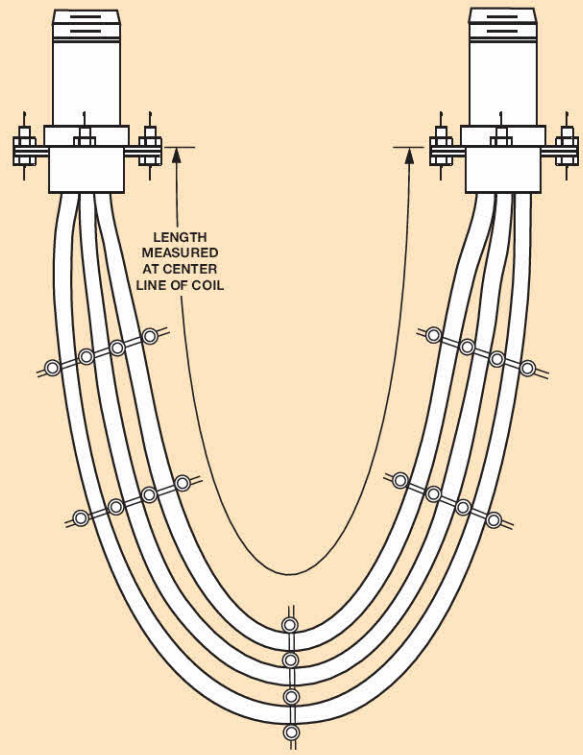
FEP Series coils are considered inert to corrosive chemicals. Contact an AMETEK representative for chemical resistance data on your specific application.
Q-Series heat exchangers are inert to most corrosive chemicals except for certain concentrated hot, oxidizing acids.

NOMENCLATURE

Q-M-280-N-S-M-4-8

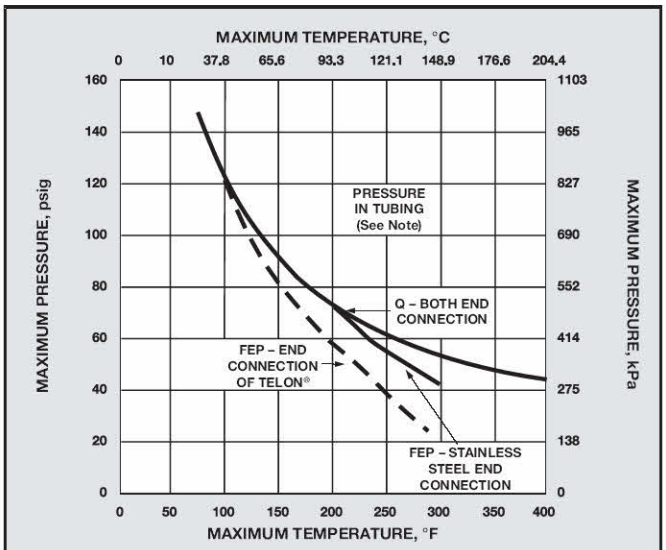
- **RESIN TYPE** (Blank) = FEP; Q = PFA/G
- **SUPERCOIL**
- **MODEL NUMBER** 100, 168, 280
- **SPACERS** N = Polypropylene; (Blank) = PVDC
- **END CONNECTIONS** S = Stainless Steel; T = PTFE
- **END THREADS** M = Metric; (Blank) = NPT
- **GENERATION**
- **LENGTH (ft.)**

MODEL 168 SUPERCOIL



Supercoil Model 168 with 3-bundles of braid; other designs include Model 100 with 2 bundles and Model 280 with 5 bundles. Models 100 and 168 use 1 inch NPT pipe threads. Model 280 uses 1-1/2 inch NPT pipe threads. Steel ends (shown above) are male pipe, PTFE ends (on reverse) are female threads. Metric equivalents are available.

OPERATING LIMITS



NOTE: Maximum steam pressure tubeside—50 psig (345 kPa)

Fluoropolymer resins are generally considered inert to most chemicals. Under certain conditions of pressure and temperature, or combinations of chemicals, fluoropolymer tubing should not be used. Please contact AMETEK for discussion of your specific process to be certain that our products are appropriate for your intended use.

Adequate ventilation should be used where fluoropolymers are heated during tube repairs. Flu-like symptoms may occur from exposure to vapors evolved from fluoropolymers at very high temperatures, up to 800°F or from smoking materials that contain particles of fluoropolymers. Symptoms pass within 48 hours and are the only adverse effects observed in humans to date. Unheated fluoropolymers are essentially inert and are nonirritating to the skin.