

IMMERSION COILS

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

Niche Supercoil Heat Exchangers are high efficiency immersion coils designed for heating and cooling a wide range of metal finishing solutions. Applications include: electro-plating, 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 and PFA 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 (right)
and Ultrahigh Purity (UHP)
Model 168 (below)

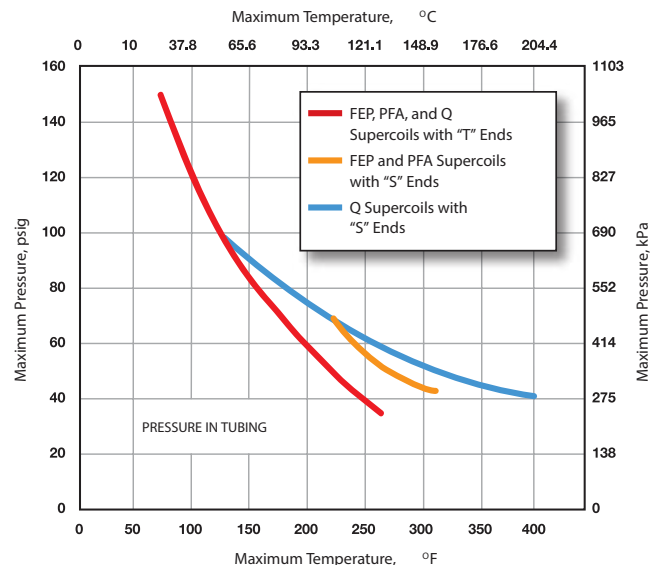
Specifications

Description	Spec
Tube Outside Diameter	0.10 inch (2.54 mm)
Tube Wall Thickness	0.01 inch (0.254 mm)
Average Heat Transfer Coefficient 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)

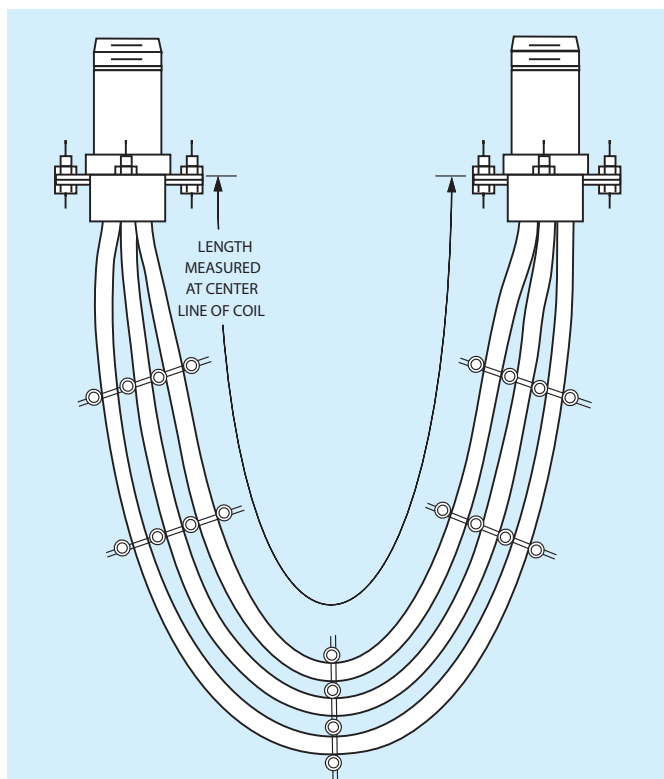
Model Number

EXAMPLE: Q M 280 N S M 4 8		
Q	RESIN TYPE	P = PFA
		Q = PFA/Graphite
		(blank) = FEP
M	SUPERCOIL	
280	MODEL NUMBER	100
		168
		280
N	SPACERS	N = Polypropylene
		(blank) = CPVC
S	END CONNECTIONS	S = Stainless Steel
		T = PTFE
		W = Welded
M	END THREADS	M = Metric
		(blank) = NPT
4	GENERATION	
8	NOMINAL LENGTH (ft.)	

Operation Limits



Dimensions - 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 and welded ends (shown above) are male pipe, PTFE ends (on reverse) are female threads. Metric equivalents are available.

Special hardware designed for electroless nickel plating "N" coils available.

Guards are available for supercoils.

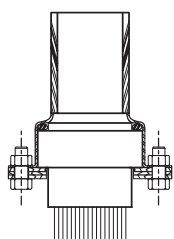
Contact your Niche sales representative for additional details about the items above or any other custom requirements.

Heat Transfer Area

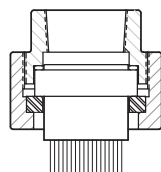
MODEL 100		MODEL 168		MODEL 280		NOMINAL LENGTH*
AREA		AREA		AREA		
ft ²	m ²	ft ²	m ²	ft ²	m ²	feet
6.5	0.6	11.0	1.0	18.3	1.7	3
9.2	0.9	15.4	1.4	25.6	2.4	4
11.8	1.1	19.8	1.8	33.0	3.1	5
14.4	1.3	24.2	2.2	40.3	3.7	6
		28.6	2.7	47.6	4.4	7
		33.0	3.1	54.9	5.1	8
		37.4	3.5	62.3	5.8	9
		41.8	3.9	69.6	6.5	10
		46.2	4.3	76.9	7.1	11
		50.6	4.7	84.3	7.8	12
		54.9	5.1	91.6	8.5	13
		59.3	5.5	98.9	9.2	14
		63.7	5.9	106.2	9.9	15
		68.1	6.3	113.6	10.5	16

* As measured at center line of coil

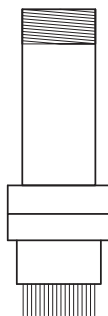
Connection Options



Stainless Steel End Cap



PTFE End Cap



Welded End Cap

Niche FLUOROPOLYMER PRODUCTS

42 MOUNTAIN AVENUE
NESQUEHONING, PENNSYLVANIA, 18240-2201 U.S.A.
TEL: +1 570-645-6917 • 800-441-7777 (U.S. and Canada only)
FAX: +1 570-645-6950
www.nichefpp.com
E-mail: info@nichefpp.com

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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 Niche 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 occur from exposure to vapors evolved from fluoropolymers at very high temperatures, up to 800F or from smoking materials that contain particles of fluoropolymers. Symptoms pass within 48 hours and are only adverse effects observed in humans to date. Unheated fluoropolymers are essentially inert and are nonirritating to the skin.

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