

**SHELL AND TUBE HEAT EXCHANGERS**

**Shell & Tube Heat Exchangers 30-Series Large Capacity  
Model 900 (14 inch shell)**

- High flow capacity
- Low pressure drop
- Unmatched corrosion resistance
- FEP and PFA series tubing

Niche 900 Series Heat Exchangers have twice the capacity of our previous shell-and-tube units and feature the unmatched, corrosion-resistant qualities of fluoropolymer resins. Manufactured for over fifty years, Niche Fluoropolymer Heat Exchangers using honeycomb tubing construction are inert to virtually all types of chemicals.

**Specifications**

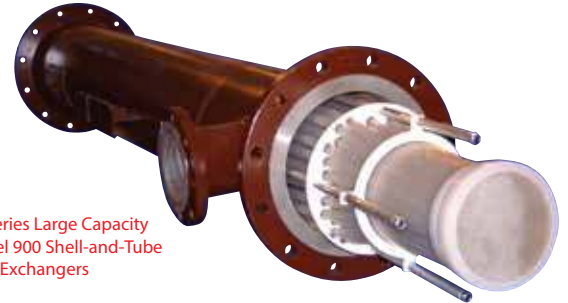
Model Number	900
Tube Outside Diameter	.250" (6.35mm)
Tube Wall Thickness	.025" (.635mm)
Typical Heat Transfer Coefficient (U) FEP & PFA	30-60 BTU/Hr.-ft. <sup>2</sup> -°F (171-341 watts/m <sup>2</sup> -°K)
Shell Diameter	14" (305 mm)
Shell Construction †	Carbon Steel, unlined or lined with Fluoropolymer
Nominal Lengths	102-1400 ft. (9.5-130.1 m)
Area for Heat Transfer	4.4-33.4 ft. <sup>2</sup> (.4-3.1 m <sup>2</sup> )
Bundle Configuration	Cross Flow Baffle*

**Model Number**

EXAMPLE: P 900 CT 30 8 V E		
Q	TUBING	P = PFA (blank) = FEP
900	MODEL NUMBER	
CT	SHELL †	CT = Carbon Steel ST = Stainless steel shell† LT = Fluoropolymer lined†
M	END CONNECTIONS	B = None (bundle only)
		M = Metric (blank) = ANSI
30	GENERATION	
8	NOMINAL LENGTH (ft.)	
V	O-RING SEAL MATERIAL	V = VITON®
		E = Ethylene propylene
		T = Fluoropolymer encapsulated VITON®
		K = KALREZ®
E	ENVELOPE GASKET MATERIAL	V = VITON®
		E = Ethylene propylene

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\* Special order bundle configuration.

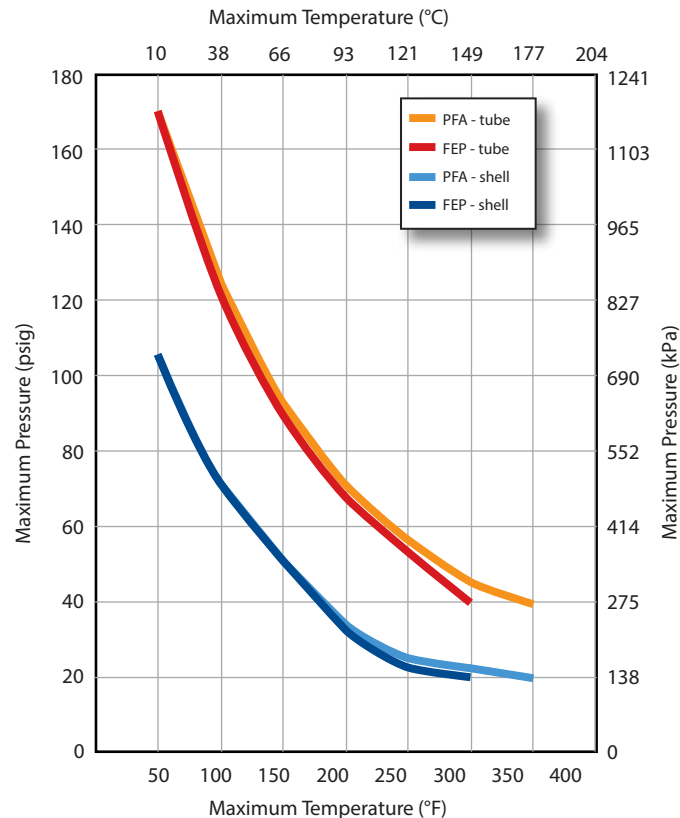
† Typical shell construction. Special material such as PP, CPVC, stainless steel or other metal alloys, are available by special order. Custom configurations also available.



30-Series Large Capacity  
Model 900 Shell-and-Tube  
Heat Exchangers

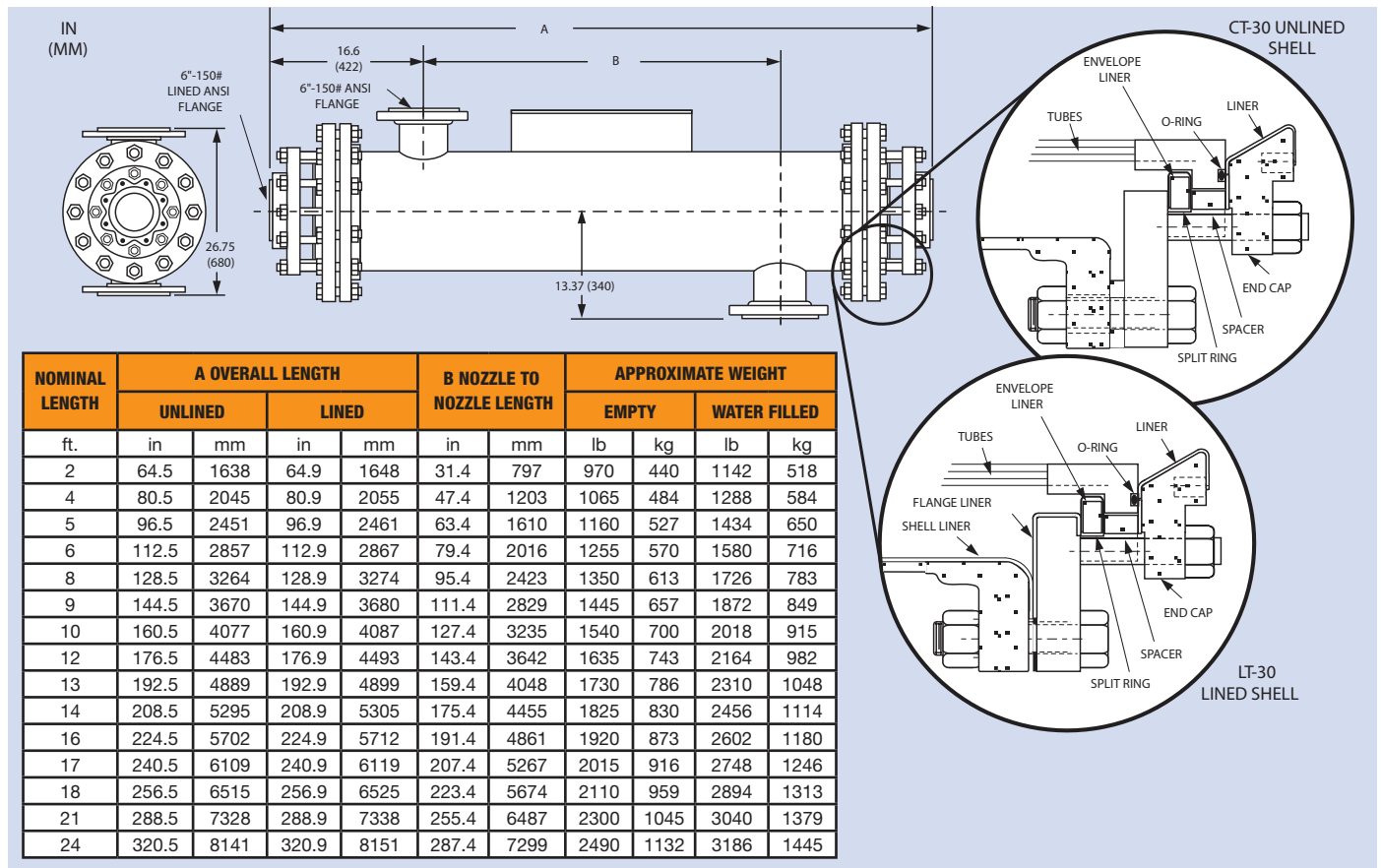
Model 900 Heat Exchangers still incorporate this proven technology and are available with carbon steel (CT) shell designs, as well as with other construction materials including fluoropolymer-lined carbon steel, and stainless steel (SS). Niche 900 CT Series Heat Exchangers are ASME coded and the end fittings conform to TEMA and ANSI standards.

**Operation Limits**



NOTE: The curves on the chart are for the fluoropolymer bundles only.

## Dimensions - Model 900



## Heat Transfer Area

NOMINAL LENGTH (t)	MODEL 900	
	FT <sup>2</sup>	M <sup>2</sup>
2	102	9.5
4	183	17
5	264	24.5
6	345	32
8	425	39.5
9	508	47.2
10	589	54.7
12	670	62.2
13	750	69.7
14	831	77.2
16	914	84.9
17	995	92.9
18	1075	99.9
21	1237	114.9
24	1400	130.1

FEP and PFA Series coils are considered inert to corrosive chemicals. Contact an Niche 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.

**Niche**  
FLUOROPOLYMER PRODUCTS

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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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