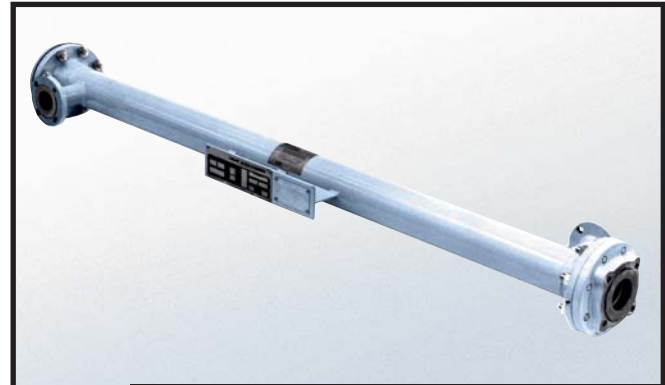


# Shell-and-Tube Heat Exchanger 30-Series Mid-Size (4 inch shell)

## FEATURES

- High thermal efficiency
- Corrosion-resistant construction
- Unique seal system
- FEP or Q-Series tubing
- Variety of shell materials



**SHELL-AND-TUBE MODEL 105CT-30**

## DESCRIPTION

AMETEK 30-Series Shell-and-Tube Heat Exchangers are single pass, typically counter current flow designs incorporating flexible fluoropolymer tube bundles joined together to form integral honeycomb tube sheets. Units are available with FEP or Q-Series tubing, both with fluoropolymer-lined heads. The tube bundle is easily removable for maintenance. Carbon steel shells are most commonly used; a wide variety of other materials are available on request. Metal heat exchanger shells are ASME coded and equipped with TEMA/ANSI end nozzle connections. Contact AMETEK for discussion of your specific needs.

## HEAT TRANSFER AREA

NOMINAL LENGTH (ft.)	105		220		440	
	FT <sup>2</sup>	M <sup>2</sup>	FT <sup>2</sup>	M <sup>2</sup>	FT <sup>2</sup>	M <sup>2</sup>
3	19.4	1.8	30.2	2.8	43.0	4.0
4.5	29.0	2.7	45.3	4.2	64.8	6.0
6	38.7	3.6	60.5	5.6	86.4	8.0
8	51.6	4.8	80.6	7.5	115.2	10.7
11	71.0	6.6	110.8	10.3	158.3	14.7

## PRODUCT DESCRIPTION

Model Number	105	220	440
Tube Outside Diameter	0.250 in. (6.35 mm)	0.175 in. (4.45 mm)	0.125 in. (3.18 mm)
Tube Wall Thickness	0.025 in. (0.635 mm)	0.017 in. (0.445 mm)	0.012 in. (0.318 mm)
Shell Diameter	4.0 in. (101.6 mm)		
Typical Heat Transfer Coefficient (U) FEP	25-60 BTU/Hr.-ft. <sup>2</sup> -°F (141-341 watts/m <sup>2</sup> -°K)		
Typical Heat Transfer Coefficient (U) Q	35-100 BTU/Hr.-ft. <sup>2</sup> -°F (199-567 watts/m <sup>2</sup> -°K)		

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.

(Example)  
**NOMENCLATURE**  
**Q 105 CT B 30-8-VE**

**TUBING**  
 Q = PFA/Graphite  
 (Blank) = FEP

**MODEL NUMBER**

**SHELL**  
 CT = carbon steel  
 shell

**END CONNECTIONS**  
 B = none (bundle only)  
 (Blank) = ANSI

**GENERATION**

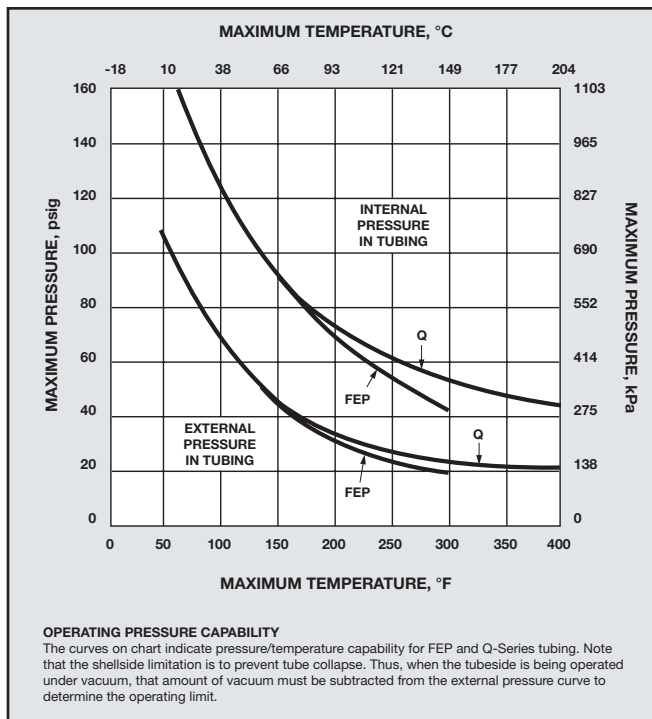
**NOMINAL LENGTH (ft.)**

**ENVELOPE GASKET MATERIAL**  
 V = VITON®  
 E = Ethylene propylene

**O-RING SEAL MATERIAL**  
 V = VITON®  
 E = Ethylene propylene  
 T = Fluoropolymer encapsulated VITON®  
 K = KALREZ®

VITON® and KALREZ® are registered trademarks of the DuPont Company

## OPERATING LIMITS



## MODEL 105CT-30

NOMINAL LENGTH	A OVERALL LENGTH		B NOZZLE TO NOZZLE LENGTH		UNIT WEIGHT				
	FT	IN	MM	IN	MM	EMPTY		WATER FILLED	
						LB	KG	LB	KG
3		48.0	1219.2	33.0	838.2	145	65.7	160	72.5
4.5		66.0	1676.4	51.0	1295.4	167	75.7	182	82.5
6		84.0	2133.6	69.0	1752.6	190	86.1	210	95.2
8		108.0	2743.2	93.0	2362.2	220	99.7	250	113.3
11		144.0	3657.6	129.0	3276.7	265	120.1	305	138.3

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.

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### CHEMICAL PRODUCTS

455 CORPORATE BOULEVARD, NEWARK, DELAWARE 19702 U.S.A.

TEL: (302) 995-0400 • (800) 441-7777 • FAX: (302) 456-4444 • www.ametekhaveg.com • E-mail: info.haveg@ametek.com

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