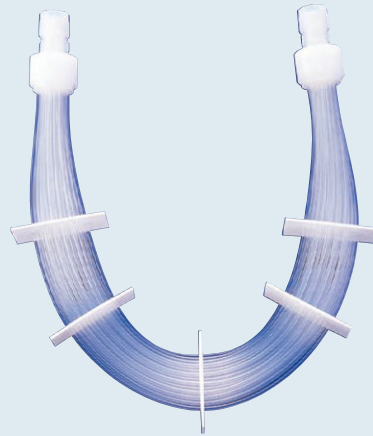


# PILAFLO<sup>TM</sup> HEMTM series, HEMTW series Multitube Heat Exchanger

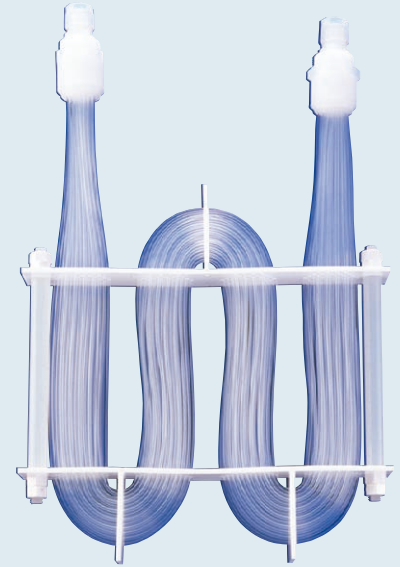


## Providing high thermal efficiency and contributing to cleanliness



Module type

Model: HEMTM



W type

Model: HEMTW



### ■ Features

#### Excellent chemical resistance and non-adhesiveness

This product consists of fluorocarbon polymers and is therefore long-lasting and resistant to most liquid chemicals. It also features superior non-adhesiveness, which means that almost no staining or scaling occurs on this product and high thermal efficiency can be maintained. Moreover, cleaning is easy.

#### No dissolution occurs and high cleanliness can be maintained

The connector is all made of fluorocarbon polymers by means of fusion bonding. The seal part uses no O-rings. With no impurities caused by O-rings, this product is best suited for the manufacturing of high-purity products such as printed circuit boards and semiconductors.

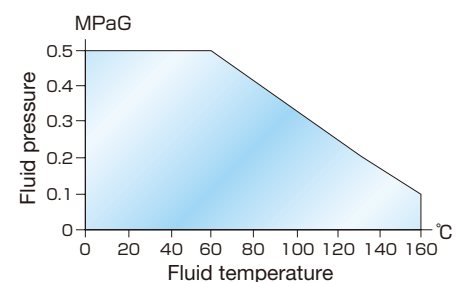


Enlarged view of the connector

#### Specifications

- ▶ Maximum operating temperature: 160°C
- ▶ Maximum operating pressure: 0.5 MPaG
- ▶ Overall heat transfer coefficient: 300 to 750 kJ/m<sup>2</sup>hr°C
- ▶ Heat exchanger connector: Super 300 Type PILLAR Fitting<sup>TM</sup>

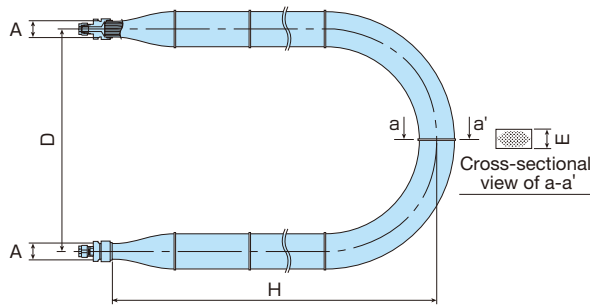
#### ■ Operating range



# Multitube Heat Exchanger

## Module type

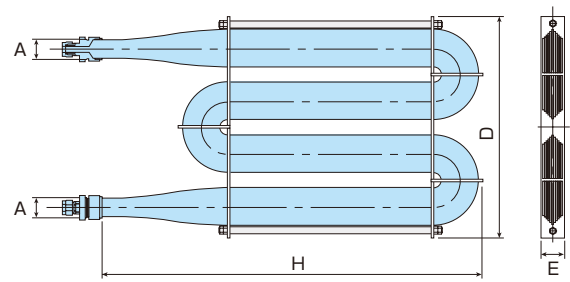
Model: HEMTM



Multiple tubes are divided into blocks by using spacers to prevent tube overlap wherever possible and improve thermal efficiency.

## W type

Model: HEMTW



A tube is bent to form a W shape to secure a large heat transfer area even in a narrow space. This is suitable for places with limited installation space.

Number of tubes	Product No.	Tube connection diameter		Mounting panel size		Heat transfer area m <sup>2</sup>	Effective length mm	Mounting width D mm	Height H mm	Thickness E mm
		mm	mm	Hole diameter A mm	Maximum thickness mm					
37	HEMTM 37-04A-P12	12×10		41	10	0.4	1340	200-600	556	50
	HEMTM 37-04A-PW4	12.7×9.5								
	HEMTM 37-07A-P12	12×10								
	HEMTM 37-07A-PW4	12.7×9.5								
	HEMTM 37-10A-P12	12×10								
	HEMTM 37-10A-PW4	12.7×9.5								
91	HEMTM 91-10A-P19	19×15.8 (Note)	56	10	1.0	1368	200-600	570	60	
	HEMTM 91-10A-PW6				1.5	1915	400-800	787		
	HEMTM 91-15A-P19				2.0	2462	500-900	1032		
	HEMTM 91-15A-PW6				2.5	3009	600-1000	1277		
	HEMTM 91-20A-P19				3.0	3556	700-1100	1522		
	HEMTM 91-20A-PW6				3.5	4103	800-1200	1767		
	HEMTM 91-25A-P19				4.0	4650	800-1200	2040		
	HEMTM 91-25A-PW6									
	HEMTM 91-30A-P19									
	HEMTM 91-30A-PW6									
	HEMTM 91-35A-P19									
	HEMTM 91-35A-PW6									
169	HEMTM 169-25A-P25	25×22	59	10	2.5	1700	400-800	679	70	
	HEMTM 169-25A-PW8	25.4×22.2			3.0	1994	500-900	797		
	HEMTM 169-30A-P25	25×22			3.5	2289	500-900	945		
	HEMTM 169-30A-PW8	25.4×22.2			4.0	2583	600-1000	1063		
	HEMTM 169-35A-P25	25×22			5.0	3172	700-1100	1329		
	HEMTM 169-35A-PW8	25.4×22.2			6.0	3761	800-1200	1595		
	HEMTM 169-40A-P25	25×22			7.0	4350	800-1200	1890		
	HEMTM 169-40A-PW8	25.4×22.2			8.0	4939	800-1200	2184		
	HEMTM 169-50A-P25	25×22								
	HEMTM 169-50A-PW8	25.4×22.2								
	HEMTM 169-60A-P25	25×22								
	HEMTM 169-60A-PW8	25.4×22.2								
	HEMTM 169-70A-P25	25×22								
	HEMTM 169-70A-PW8	25.4×22.2								
	HEMTM 169-80A-P25	25×22								
	HEMTM 169-80A-PW8	25.4×22.2								

Product No.	Tube connection diameter		Mounting panel size		Heat transfer area m <sup>2</sup>	Effective length mm	Mounting width D mm	Height H mm	Thickness E mm
	mm	mm	Hole diameter A mm	Maximum thickness mm					
HEMTW 37-04A-P12	12×10		41	10	0.4	1375	340	580	50
HEMTW 37-04A-PW4	12.7×9.5								
HEMTW 37-07A-P12	12×10								
HEMTW 37-07A-PW4	12.7×9.5								
HEMTW 37-10A-P12	12×10								
HEMTW 37-10A-PW4	12.7×9.5								

Product No.	Tube connection diameter		Mounting panel size		Heat transfer area m <sup>2</sup>	Effective length mm	Mounting width D mm	Height H mm	Thickness E mm
	mm	mm	Hole diameter A mm	Maximum thickness mm					
HEMTW 91-15A-P19	19×15.8 (Note)	56	10	570	1.5	1915	618	755	60
HEMTW 91-15A-PW6					2.0	2462			
HEMTW 91-20A-P19					2.5	3009			
HEMTW 91-20A-PW6					3.0	3556			
HEMTW 91-25A-P19					3.5	4103			
HEMTW 91-25A-PW6					4.0	4650			
HEMTW 91-30A-P19									
HEMTW 91-30A-PW6									
HEMTW 91-35A-P19									
HEMTW 91-35A-PW6									
HEMTW 91-40A-P19									
HEMTW 91-40A-PW6									

Product No.	Tube connection diameter		Mounting panel size		Heat transfer area m <sup>2</sup>	Effective length mm	Mounting width D mm	Height H mm	Thickness E mm
	mm	mm	Hole diameter A mm	Maximum thickness mm					
HEMTW 169-25A-P25	25×22	59	10	650	2.5	1700	533	607	70
HEMTW 169-25A-PW8	25.4×22.2				3.0	1994			
HEMTW 169-30A-P25	25×22				3.5	2289			
HEMTW 169-30A-PW8	25.4×22.2				4.0	2583			
HEMTW 169-35A-P25	25×22				5.0	3172			
HEMTW 169-35A-PW8	25.4×22.2				6.0	3761			
HEMTW 169-40A-P25	25×22				7.0	4350			
HEMTW 169-40A-PW8	25.4×22.2				8.0	4939			
HEMTW 169-50A-P25	25×22								
HEMTW 169-50A-PW8	25.4×22.2								
HEMTW 169-60A-P25	25×22								
HEMTW 169-60A-PW8	25.4×22.2								
HEMTW 169-70A-P25	25×22								
HEMTW 169-70A-PW8	25.4×22.2								
HEMTW 169-80A-P25	25×22								
HEMTW 169-80A-PW8	25.4×22.2								

Note: HEMT\* 91-\*\*\*A-P19 = HEMT\* 91-\*\*\*A-PW6

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**Safety precaution**

● When using this product, please use correctly and pay sufficient attention to safety.

\* Please understand that this catalog may change without prior notice.  
\* The values shown on this catalog are reference values, not guaranteed values.

## Making it possible to adjust liquid chemical temperature easily in narrow tubing



### ■ Features

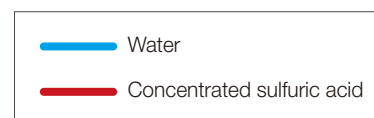
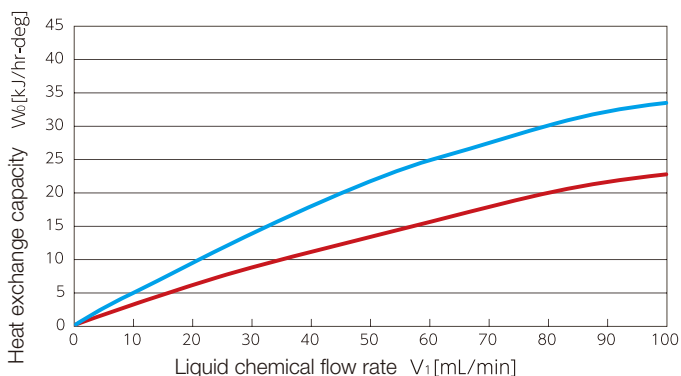
#### ■ Contributing to space saving

This product is compactly designed by combining a fitting and coil tube. It can be incorporated into tubing.

#### ■ All made of fluorocarbon polymers

We have achieved a non-metal and clean design by employing a structure that uses no metal parts or O-rings. This product can be used for heat exchange of corrosive fluids and in corrosive atmospheres.

### ■ Heat exchange capacity



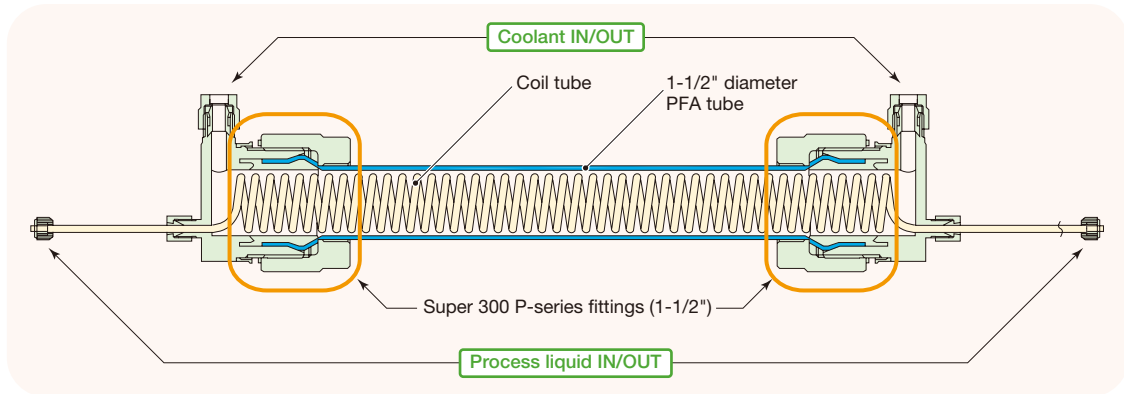
The figure on the left shows an example of heat exchange capacity of low-viscosity liquid chemical (water) and high-viscosity liquid chemical (concentrated sulfuric acid).

#### Specifications

- ▶ Effective heat transfer area: 0.05 m<sup>2</sup>
- ▶ Maximum liquid chemical flow rate: 100 mL/min
- ▶ Maximum liquid chemical temperature before cooling: 200°C
- ▶ Heat exchanger connector: Super 300 Type PILLAR Fitting<sup>TM</sup>

# Tube Device Type Heat Exchanger

## Cross-sectional structural drawing



Heat exchanger model			HEN-050-P10
Heat exchanger connection diameter	mm	Coolant IN/OUT	φ 10
Heat exchanger connection diameter	mm	Process liquid IN/OUT	φ 4
Heat exchanger connectors (coolant intake, liquid chemical intake)			Super 300 Type PILLAR Fitting
Effective heat transfer area			m <sup>2</sup> 0.05
Maximum liquid chemical flow rate			mL/min 100
Maximum liquid chemical temperature before cooling			°C 200
External dimensions			mm 608.4 <sup>L</sup> × 73 <sup>W</sup> × 87 <sup>H</sup>

Note: The cross-sectional view and model shown above are just an example. We can design this product according to your operating conditions. Please contact us for more information.

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