

HONEYCOMB HEAT EXCHANGER

A compact, lightweight design for easy handling and installation. PFA tubes, in a honeycomb pattern, are fused to a PTFE sleeve using a proprietary Nippon Pillar process.

This creates a larger cooling/heating surface area in a smaller package.

Custom designs are available for special applications. See Nippon Pillar for details.

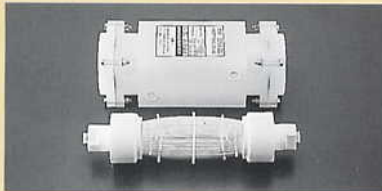
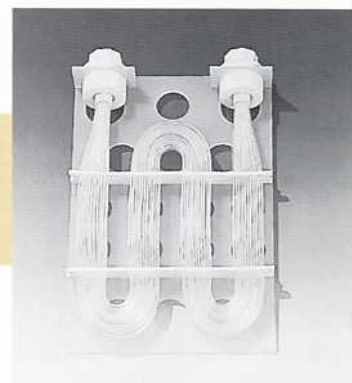
TYPE : **HEW**



TYPE : **HEM**



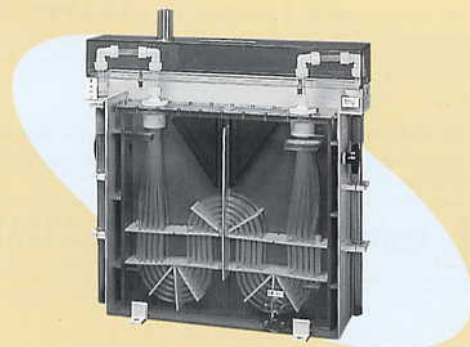
TYPE : **HEP**



Type HEST (Shell & tube)



Honeycomb tube end



Module type

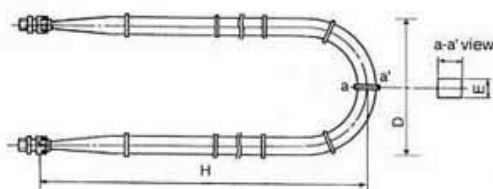
FEATURES

- All PTFE wetted parts. Can operate continuously in saturated vapor.
- PFA, with its low coefficient of friction, won't scale, plate, or stain.
- Efficiency stays high. Smooth wall tubing won't trap particulate.
- All PFA tubes are molded in a class 1000 Clean Room.
- Pressure rating at various temperature

kgf/cm ² (psi)	°C (°F)
5.0 (71.42)	0 (32)
5.0 (71.42)	60 (140)
3.4 (48.57)	100 (212)
2.2 (31.43)	130 (266)
1.0 (14.28)	160 (320)

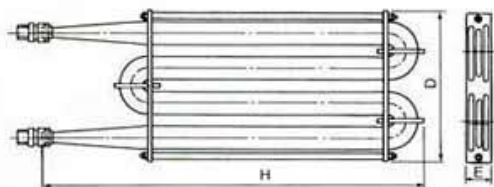
Thermal Heat Transfer Coefficiency 80–180Kcal/m²Hr°C
(317.4–714.2BTU/m²Hr°C)

HEM Module type



TYPE	HEAT TRASFER AREA (m ²)	EFFECTIVE LENGTH (mm)	WIDTH D (mm)	HIGHT H (mm)	THICKNESS E (mm)
HEM 37-04A	0.4	1340	200- 600	560	50
HEM 37-07A	0.7	2147	400- 800	900	
HEM 37-10A	1.0	2954	600-1000	1250	
HEM 91-10A	1.0	1368	200- 600	570	60
HEM 91-15A	1.5	1915	400- 800	790	
HEM 91-20A	2.0	2462	500- 900	1030	
HEM 91-25A	2.5	3009	600-1000	1280	
HEM 91-30A	3.0	3556	700-1100	1520	
HEM 91-35A	3.5	4103	800-1200	1770	
HEM 91-40A	4.0	4650	800-1200	2040	
HEM140-25A	2.5	2052	400- 800	860	70
HEM140-30A	3.0	2407	500- 900	1000	
HEM140-35A	3.5	2763	500- 900	1180	
HEM140-40A	4.0	3118	600-1000	1330	
HEM140-50A	5.0	3829	700-1100	1660	
HEM140-60A	6.0	4540	800-1200	1990	
HEM140-70A	7.0	5251	800-1200	2340	
HEM140-80A	8.0	5962	800-1200	2700	

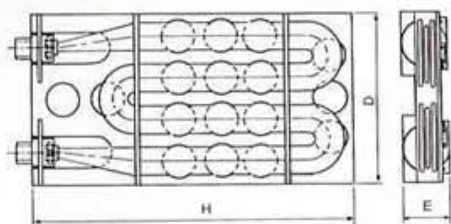
HEW W type



TYPE	HEAT TRASFER (m ²)	EFFECTIVE LENGTH (mm)	WIDTH D (mm)	HIGHT H (mm)	THICKNESS E (mm)
HEW 91-15A	1.5	1915	570	620	60
HEW 91-20A	2.0	2462		760	
HEW 91-25A	2.5	3009		890	
HEW 91-30A	3.0	3556		1030	
HEW 91-35A	3.5	4103		1170	
HEW 91-40A	4.0	4650		1300	
HEW140-25A	2.5	2052	650	660	70
HEW140-30A	3.0	2407		750	
HEW140-35A	3.5	2763		840	
HEW140-40A	4.0	3118		930	
HEW140-50A	5.0	3829		1100	
HEW140-60A	6.0	4540		1280	
HEW140-70A	7.0	5251		1460	
HEW140-80A	8.0	5962		1640	

○Larger heat transfer area in compact size.

HEP Panel mount type

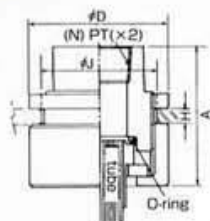


TYPE	HEAT TRASFER (m ²)	EFFECTIVE LENGTH (mm)	WIDTH D (mm)	HIGHT H (mm)	THICKNESS E (mm)
HEP37-04AP	0.4	1340	340	465	65
HEP37-07AP	0.7	2147		670	
HEP37-10AP	1.0	2954		870	

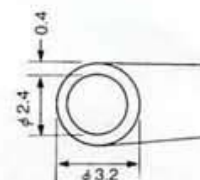
○Folding tubes installed on polypropylene panel with end connectors.

End Connectors

PFA tube dimension (mm)



TYPE	NUMBER OR TUBE	CONNECTION SIZE (PT/NPT)	LENGTH A	DIA. #D	THICKNESS H	DIAMETER #J
CN 37-F 8A	37	1"	72	65	7	56
CN 91-F 8A	91	1"	77	90	7	76
CN 91-F12A	91	1-1/2"	77	90	7	76
CN140-F 8A	140	1"	77	90	7	76
CN140-F12A	140	1-1/2"	77	90	7	76



Note : PTFE connector is limited to be used in lower than 2kgf/cm²G (28.57psi) or 132°C (295°F) of saturated vapor pressure.

How to order

HE M 91-15 S P
 ① ② ③ ④ ⑤ ⑥

- ① Heat exchanger
- ② M : Module type, W : W type, P : Panel mount type, ST : shell & tube
- ③ Number of tubes ④ Heat transfer area (ex. 04 : 0.4m²-80 : 8.0m²)
- ⑤ End connector material : S-SUS316, T-Titanium, A-PTFE
- ⑥ Panel material : P-Polypropylene (for HEP type only)



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* Specifications and dimensions are subject to change without prior notice
 * The data on this catalogue are solely for your reference and are not to be construed as constituting a warranty.

	CAUTION	• Read through and follow the instructions on the manual before installation and operation for your safety.
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