

# Made-to-Order Product

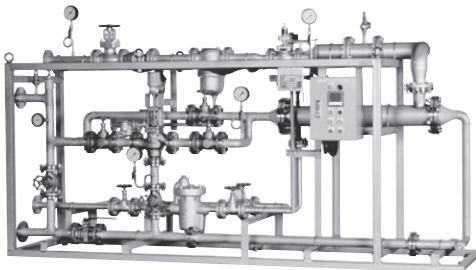
## HN-300M

HN-300M series is custom made product. We manufacture appropriate product for customer's usage with proposal.

Handwashing, shower    Floor cleaning    Appliance cleaning    Equipment cleaning



Production Process    SIP (Sterilize in Place)    CIP (Cleaning in Place)



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Hot Water Navigator

### Adoption of digital three-way valve control system

High-accuracy temperature control can be made due to PID control based on feed-forward control.

### Easy change by digital temperature setting

Since it is possible to change set temperature easily, the changing the temperature for all application had been efficiency.

### High-temperature/High flow rate type

It can be used in wide range of usage such as from washing at 50-60 degrees C, handwashing, shower to sterilization at 80-90 degrees C.

### Stainless steel shell & tube

Due to adoption of colgate tube, heat transfer area is large and heat exchange capability is excellent.

### Maximum and minimum temperature alarm can be set (Warning Buzzer, Emergency shut down of steam supply, emergency shut down of line pump.)

It is possible to customize control panel. Since external input/output is possible, warning buzzer, emergency shutdown of steam supply, and line pump shutdown can be set according to request.

### Fluid temperature customize

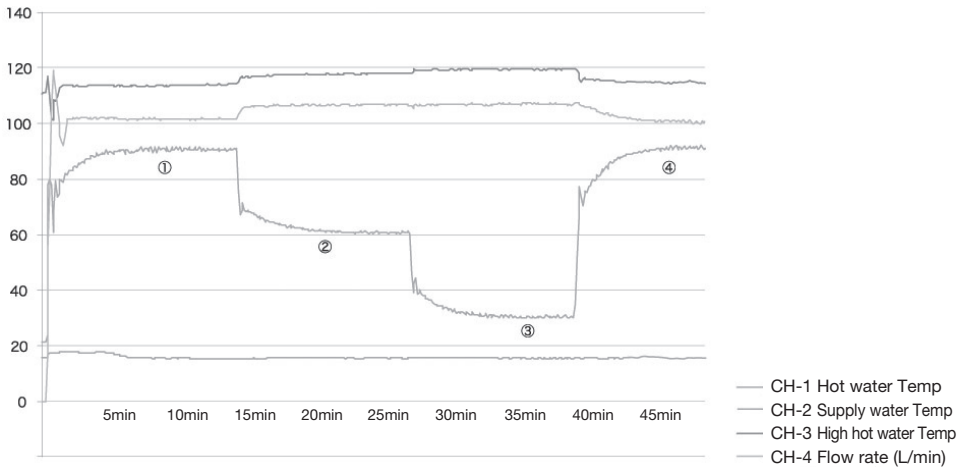
Regarding fluid temperature customize, we can make customization according to customers usage condition and situation.

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Model		HN-300M
Fluid	Heating	Steam
	Heated	Water
Steam supply pressure		0.6-1.0 MPa
Steam pressure inside unit		0.6-1.0 MPa
Water supply pressure		0.2-0.7 MPa
Temperature adjustment range		30-93 degrees C
Minimum temperature difference		15 degrees C
Maximum water supply pressure loss		0.07 MPa
Material	Three way valve body	Stainless steel
	Shell	Stainless steel
	Tube	Stainless steel (SUS316L)

Water supply temperature (°C)	Preset temperature (°C)	Flow rate (L/min) * Steam pressure (0.15 MPa)	
		Standard heat exchanger	Large heat exchanger
15	70	245	355
	80	200	300
	90	180	260
20	70	225	370
	80	215	310
	90	183	265

**HN-300M Hot Water Navigator Temperature Regulation Test Data**



Setting condition

Supply water: 18 degrees C Setting of hot water temperature: ①90 degrees C, ②60 degrees C, ③30 degrees C, ④90 degrees C  
 High hot water temperature: 120 degrees C Setting of hot water flow rate: At the stage of ①, fixing 100 L/min by manual valve  
 Setting ①: Hot water temperature is set to 90 degrees C, keeping hot water flow rate 100 L/min for 10 minutes (temperature rises to 90 degrees C within 4 minutes, regulated within ±1.5 degrees C.  
 Setting ②: Hot water temperature is set to 60 degrees C, keeping hot water flow rate 100 L/min for 10 minutes (temperature rises to 60 degrees C within 5 minutes, regulated within ±1.5 degrees C.  
 Setting ③: Hot water temperature is set to 30 degrees C, keeping hot water flow rate 100 L/min for 10 minutes (temperature rises to 30 degrees C within 5 minutes, regulated within ±1.5 degrees C.  
 Setting ④: Hot water temperature is set to 90 degrees C, keeping hot water flow rate 100 L/min for 10 minutes (temperature rises to 90 degrees C within 5 minutes, regulated within ±1.5 degrees C.