

1 Product specifications

(1) Heating-only unit

Model name		PROHP-3A-H	PROHP-6A-H	PROHP-12A-H
Heating* ¹	Heating ability (kW)	11.5	22.3	43.5
	Power consumption (kW)	3.9	7.5	14.8
	Heating COP* ²	2.9	3.0	2.9
Refrigerant		R134a		
External dimensions (mm) (W×D×H)		750×700×1,535	1,300×700×1,900	1,600×700×1,900
Weight (kg)		250	550	600

(2) Cooling and heating unit

Model name		PROHP-3A-CH	PROHP-6A-CH	PROHP-12A-CH
Heating	Heating ability (kW)	11.5	22.3	43.5
	Power consumption (kW)	3.9	7.5	14.8
	Heating COP	2.9	3.0	2.9
Cooling* ³	Cooling ability (kW)	10.6	20.5	39.7
	Power consumption (kW)	2.1	4.0	7.9
	Cooling COP* ²	5.0	5.1	5.0
Simultaneous heating and cooling* ⁴	Cooling ability (kW)	7.7	15.0	29.1
	Heating ability (kW)	11.3	21.8	42.5
	Power consumption (kW)	3.7	7.1	14.0
	Total COP* ⁵	5.1	5.2	5.1
Refrigerant		R134a		
External dimensions (mm) (W×D×H)		750×700×1,535	1,300×700×1,900	1,600×700×1,900
Weight (kg)		300	600	700

*1 Under the following conditions: External dry-bulb temperature: 25°C; external wet bulb temperature: 21°C; cleaning liquid inlet temperature: 60°C; cleaning liquid outlet temperature: 65°C.

*2 Heating COP = Heating ability (kW) / Power consumption (kW); Cooling COP = Cooling ability (kW) / Power consumption (kW)

*3 Under the following conditions: External dry bulb temperature: 25°C; cold water inlet temperature: 20°C; cold water outlet temperature: 15°C

*4 Under the following conditions: Cold water inlet temperature: 20°C; cold water outlet temperature: 15°C; cleaning liquid inlet temperature: 60°C; cleaning liquid outlet temperature: 65°C

*5 Total COP = {Heating ability (kW) + Cooling ability (kW)} / Power consumption (kW)

2 External appearance of developed heat pump

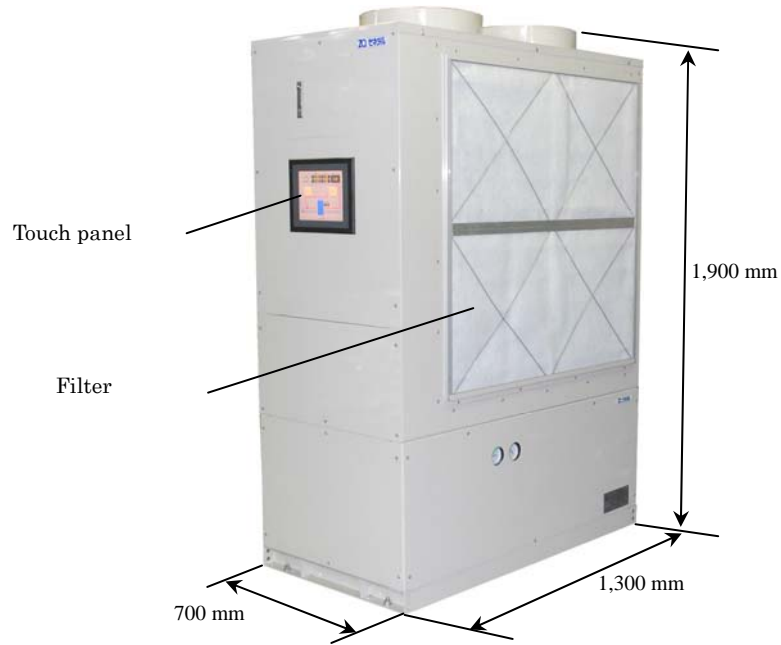
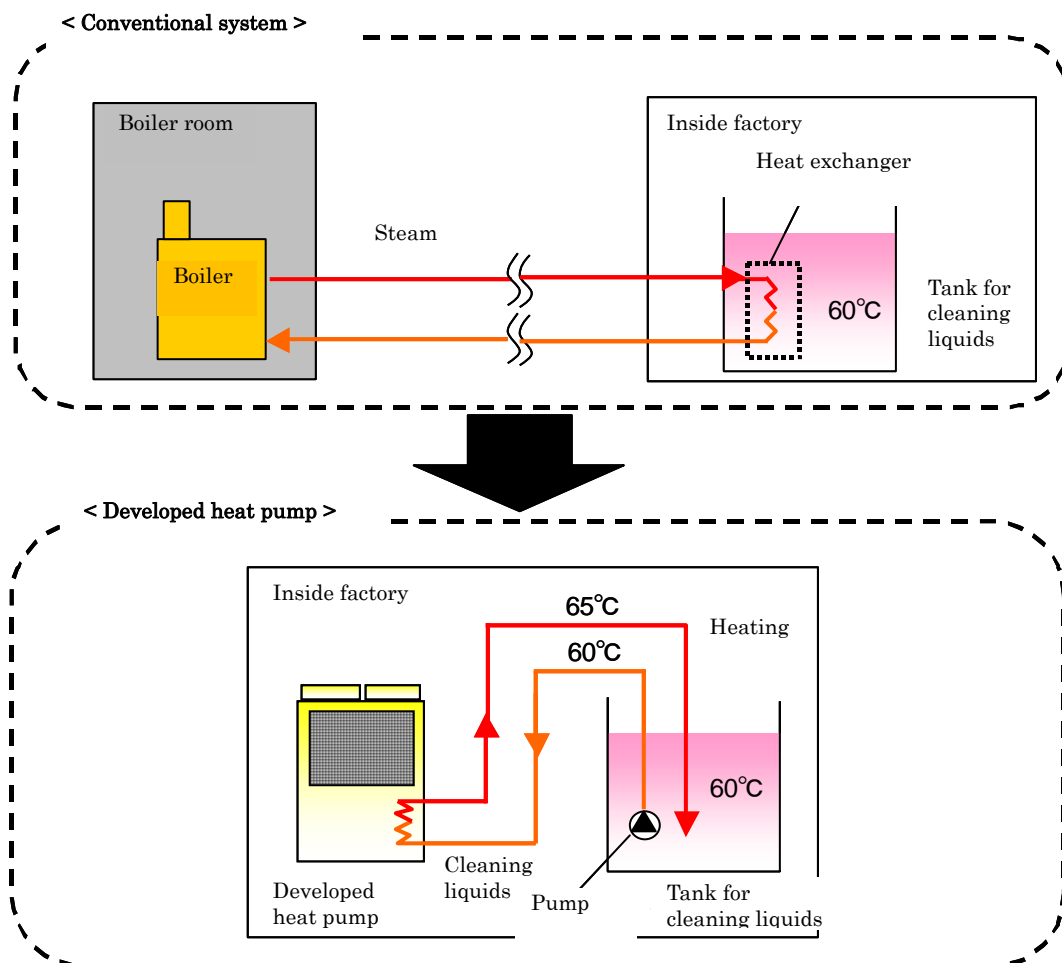


Figure 1 External appearance of developed heat pump (PROHP-6A-CH)

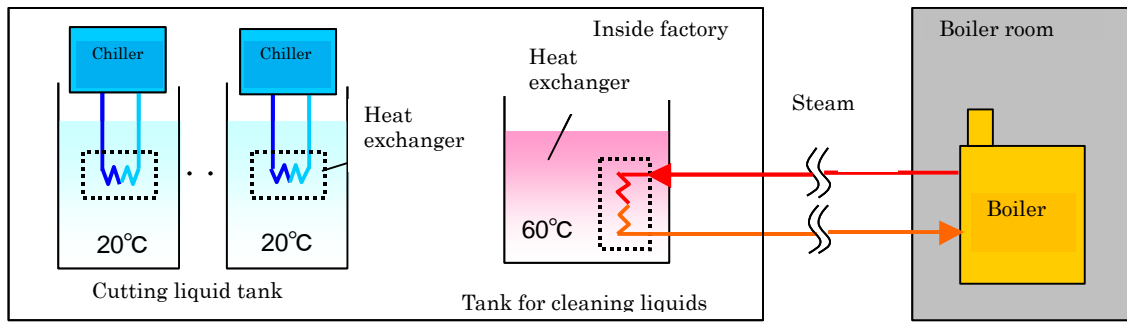
3 Examples of introduction of new heat pump

(1) For heating only



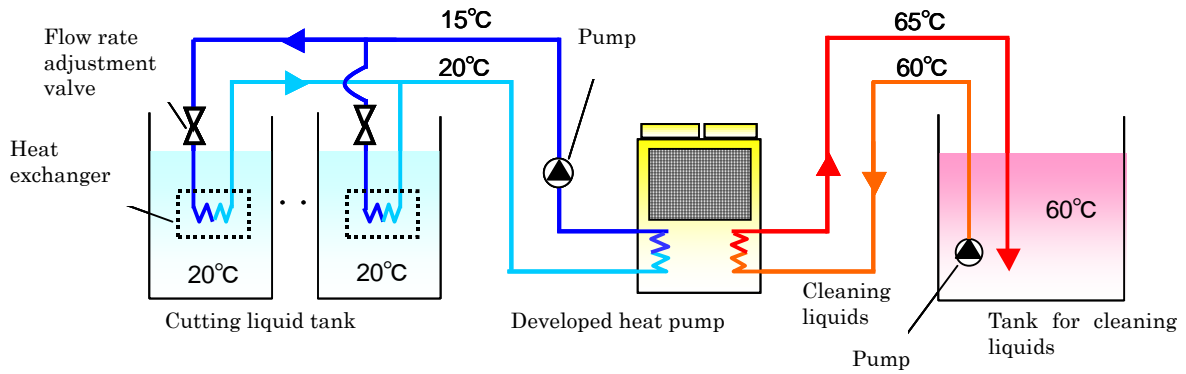
(2) For cooling and heating

< Conventional system >

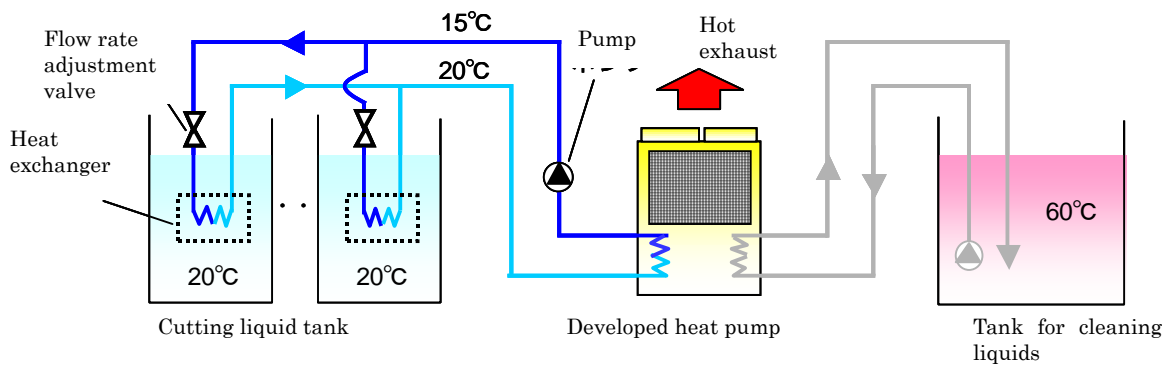


< Developed heat pump >

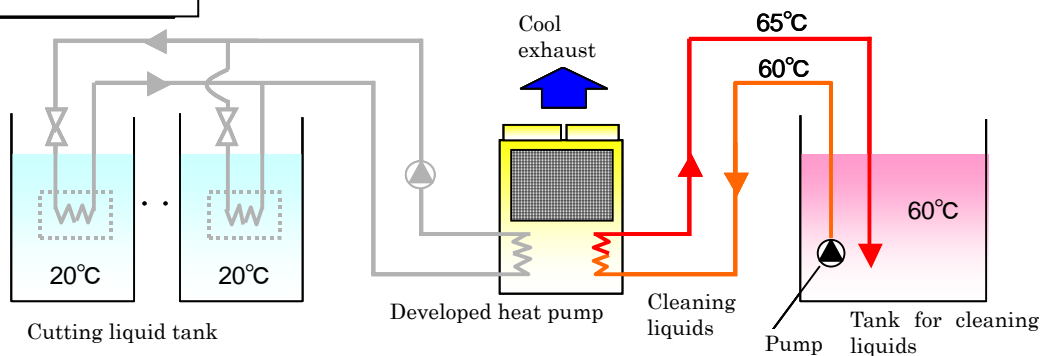
Simultaneous cooling and heating mode



Cooling mode



Heating mode



The operating mode is switched depending on whether or not there is a cooling load or a heating load.