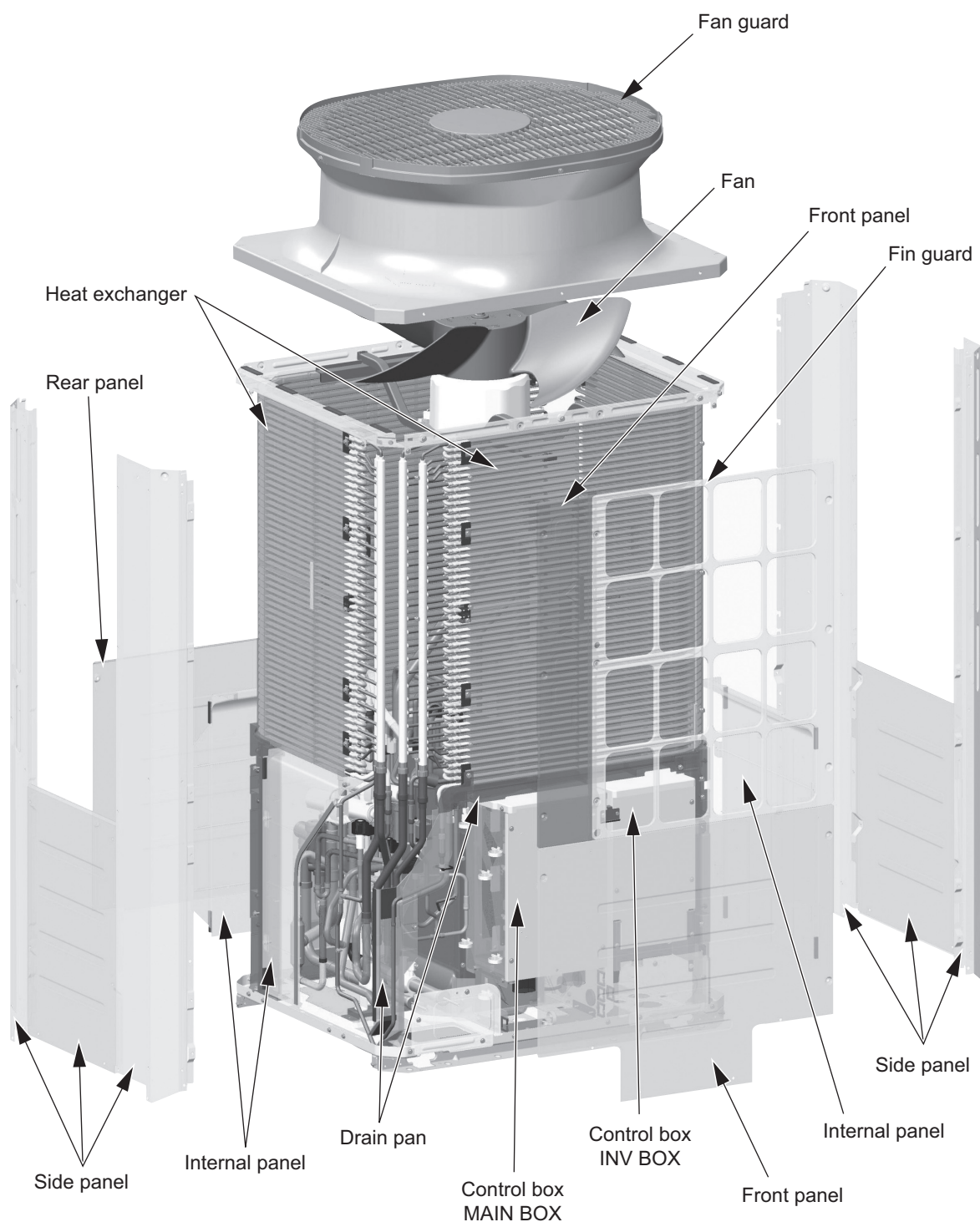


## 3-1 External Appearance and Refrigerant Circuit Components of Outdoor Unit

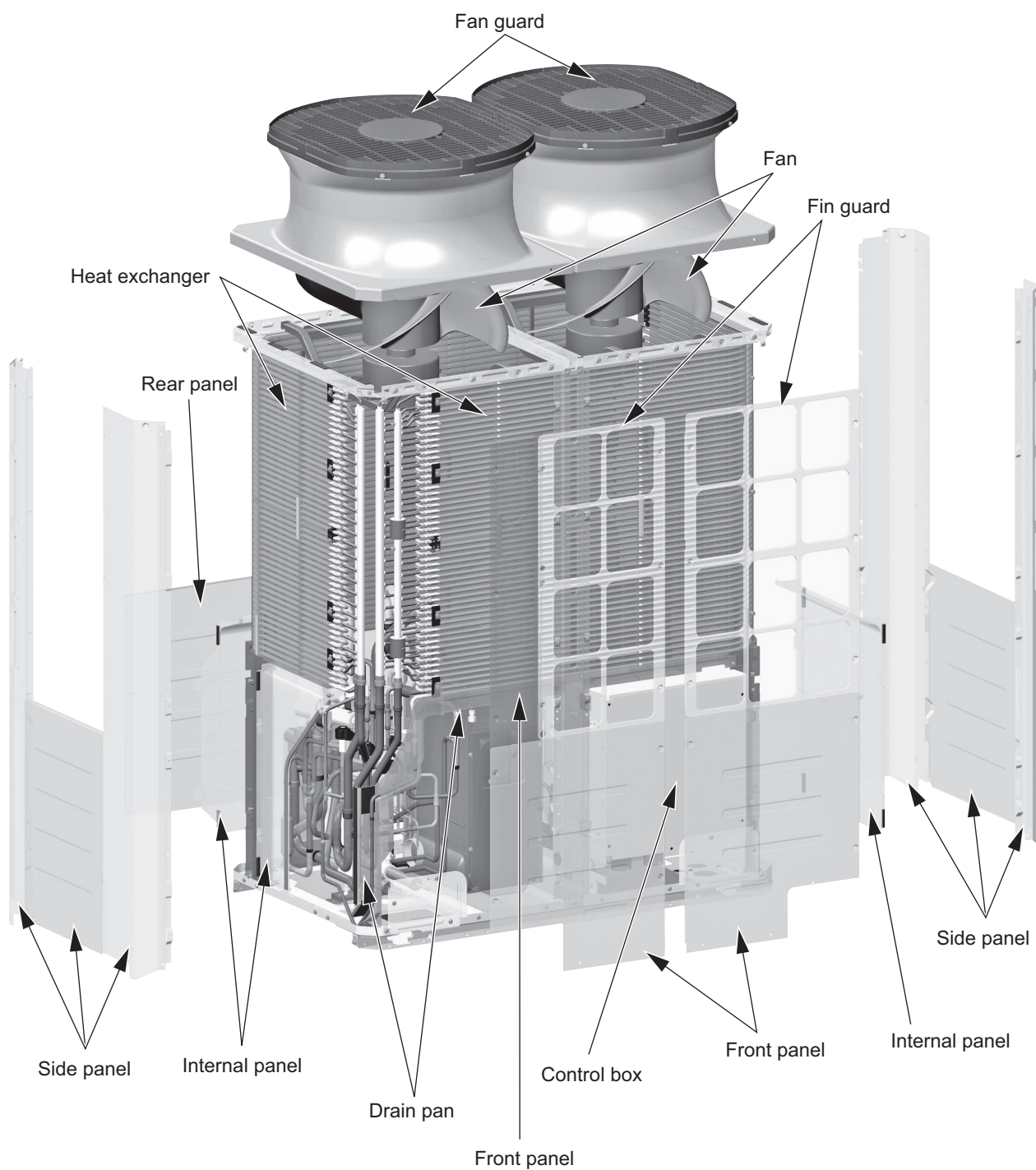
### 3-1-1 External Appearance of Outdoor Unit

(1) PURY-P200, P250, P300YNW  
PURY-EP200, EP250, EP300YNW

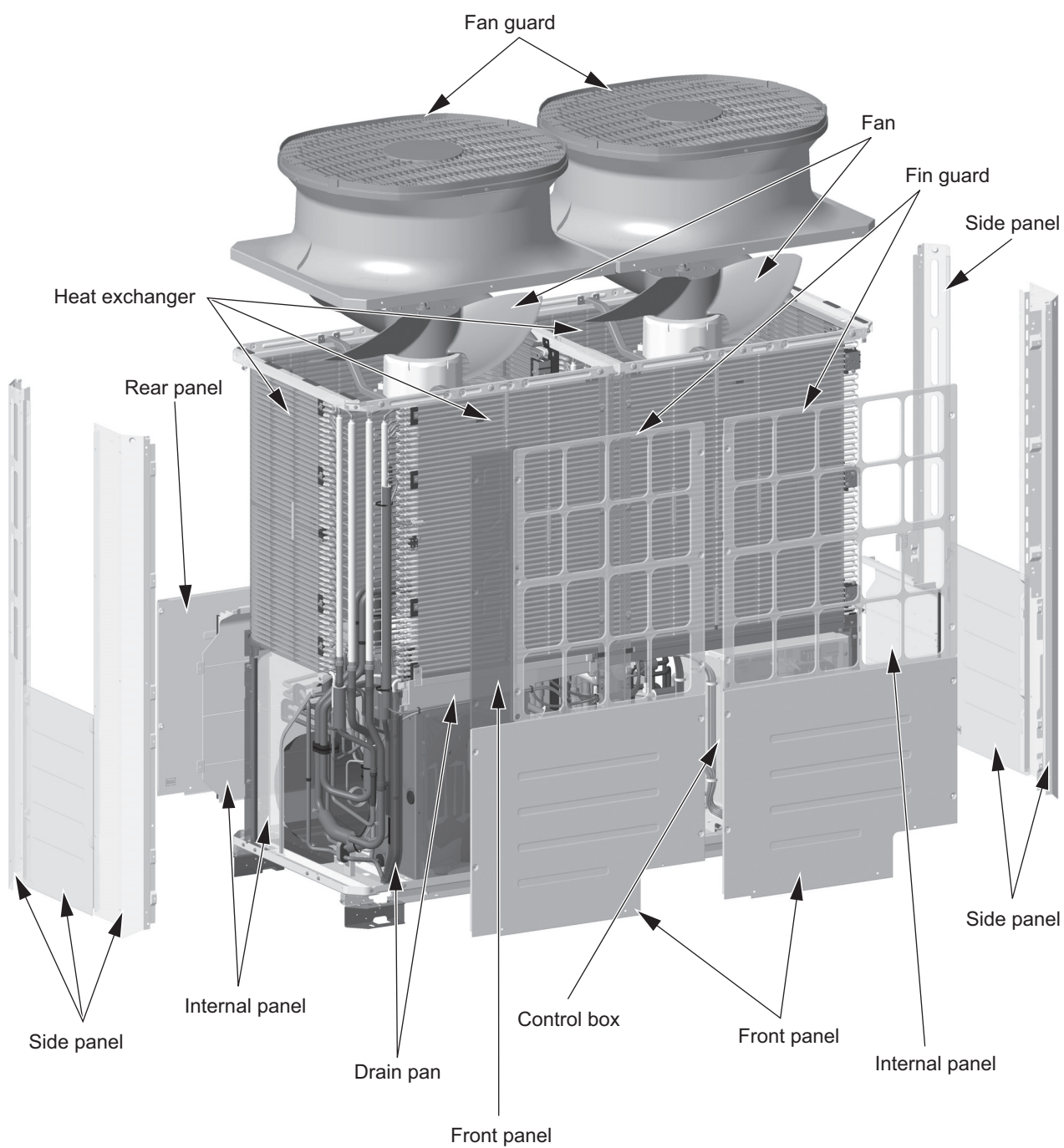


**(2) PURY-P350, P400, P450YNW  
PURY-EP350, EP400, EP450YNW**

**3 Major Components, Their Functions and Refrigerant Circuits**

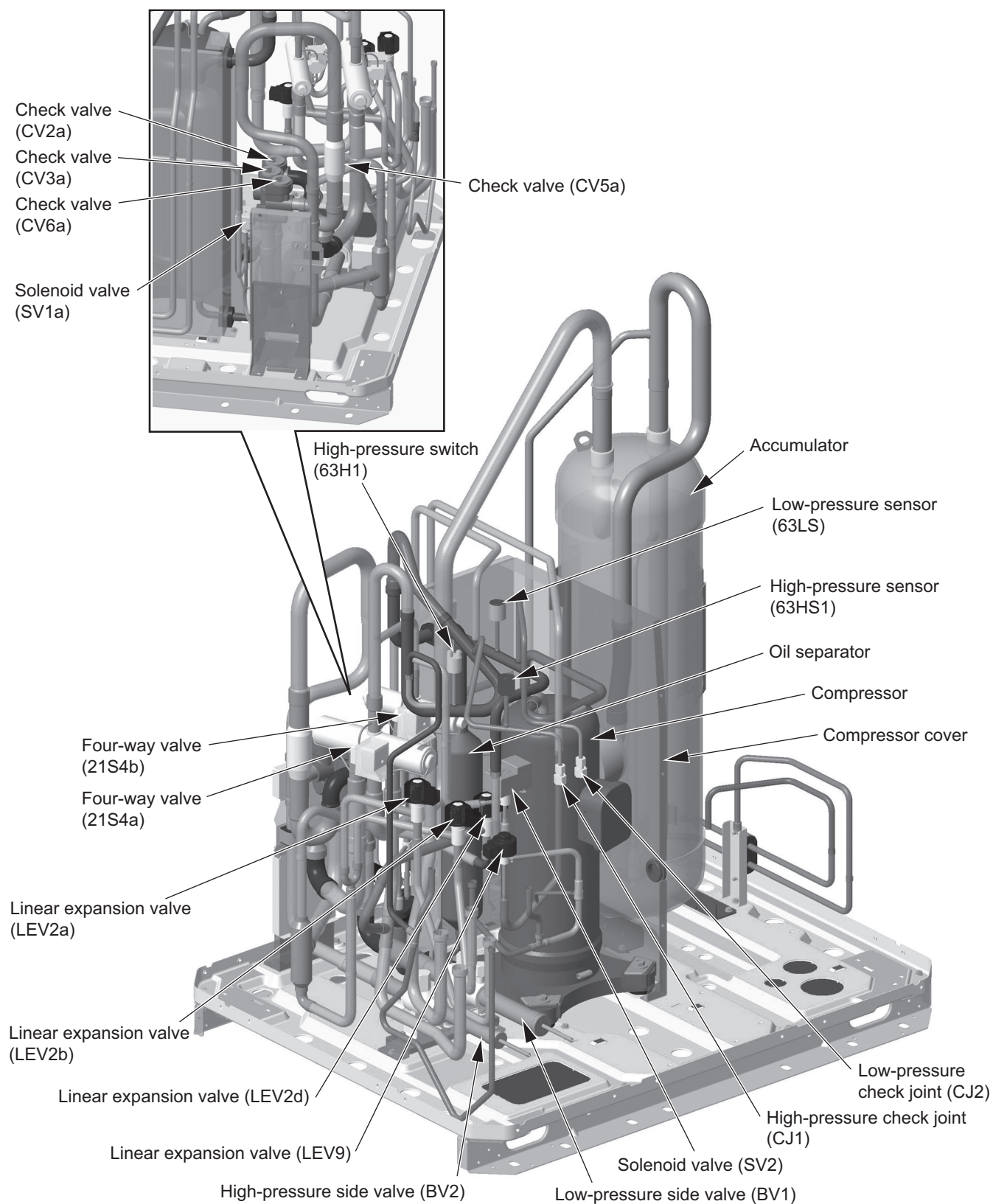


**(3) PURY-P500, P550YNW  
PURY-EP500, EP550YNW**

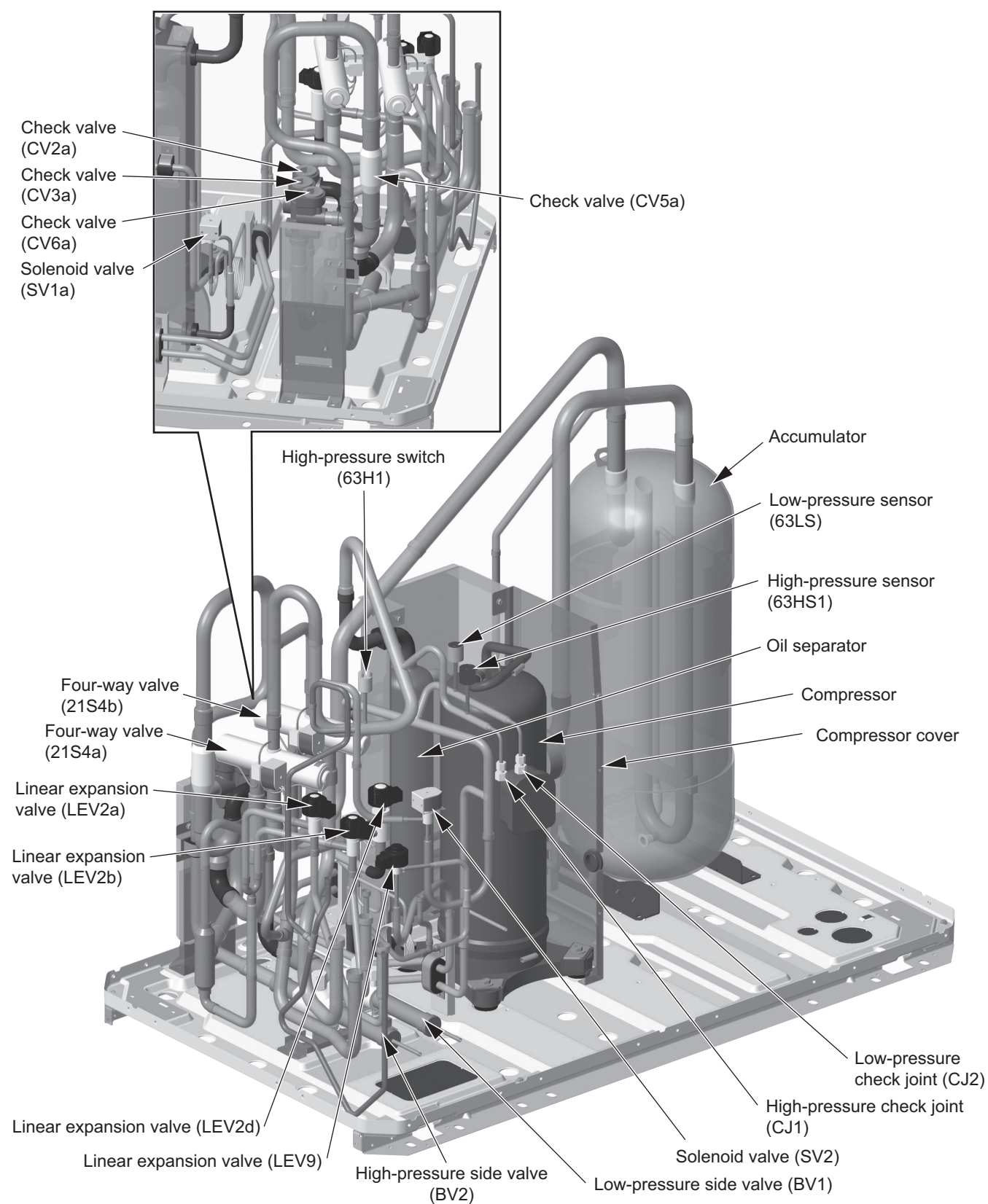


## 3-1-2 Outdoor Unit Refrigerant Circuits

### (1) PURY-P200, P250, P300YNW PURY-EP200, EP250, EP300YNW

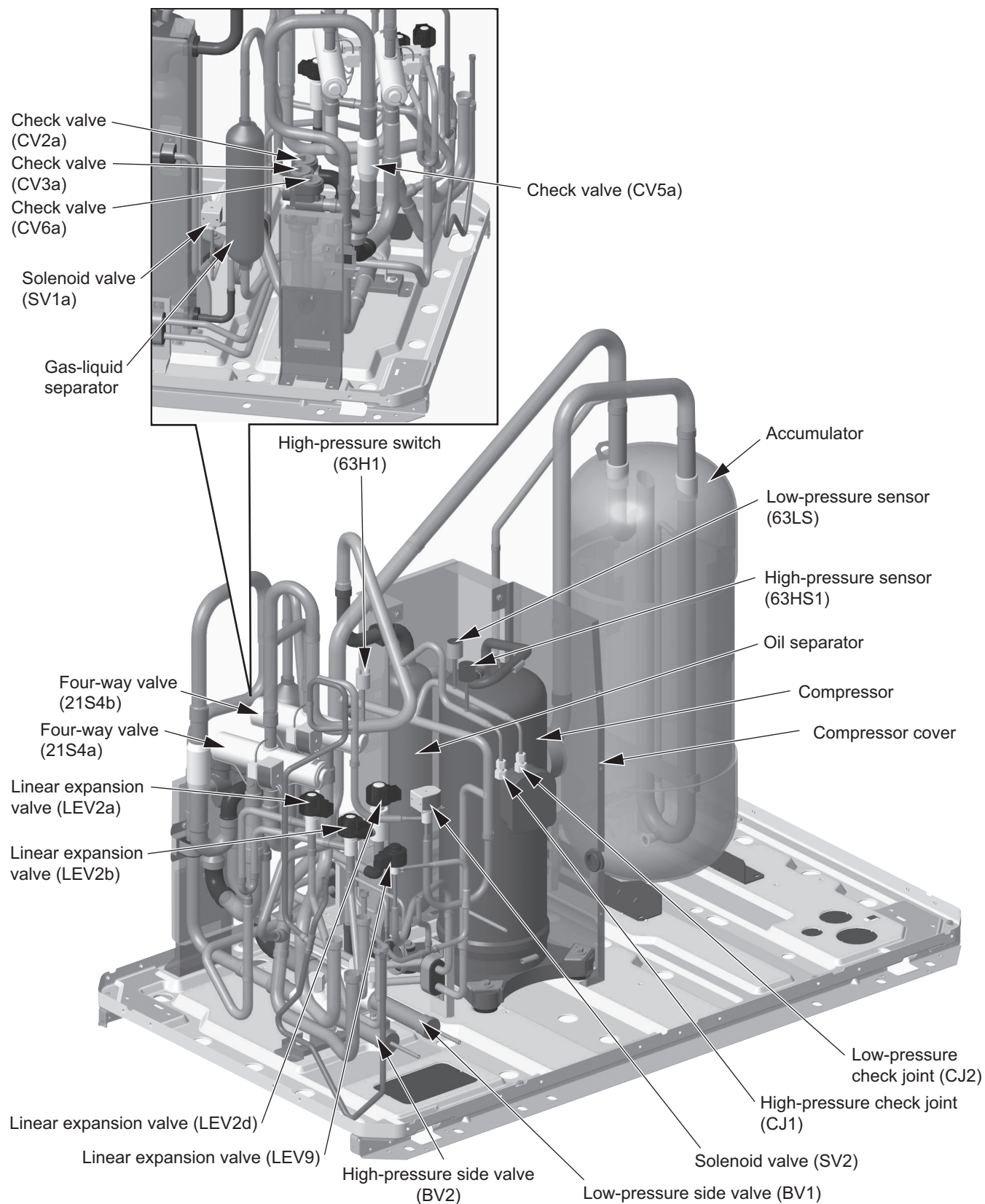


## (2) PURY-P350, P400, P450YNW PURY-EP350YNW

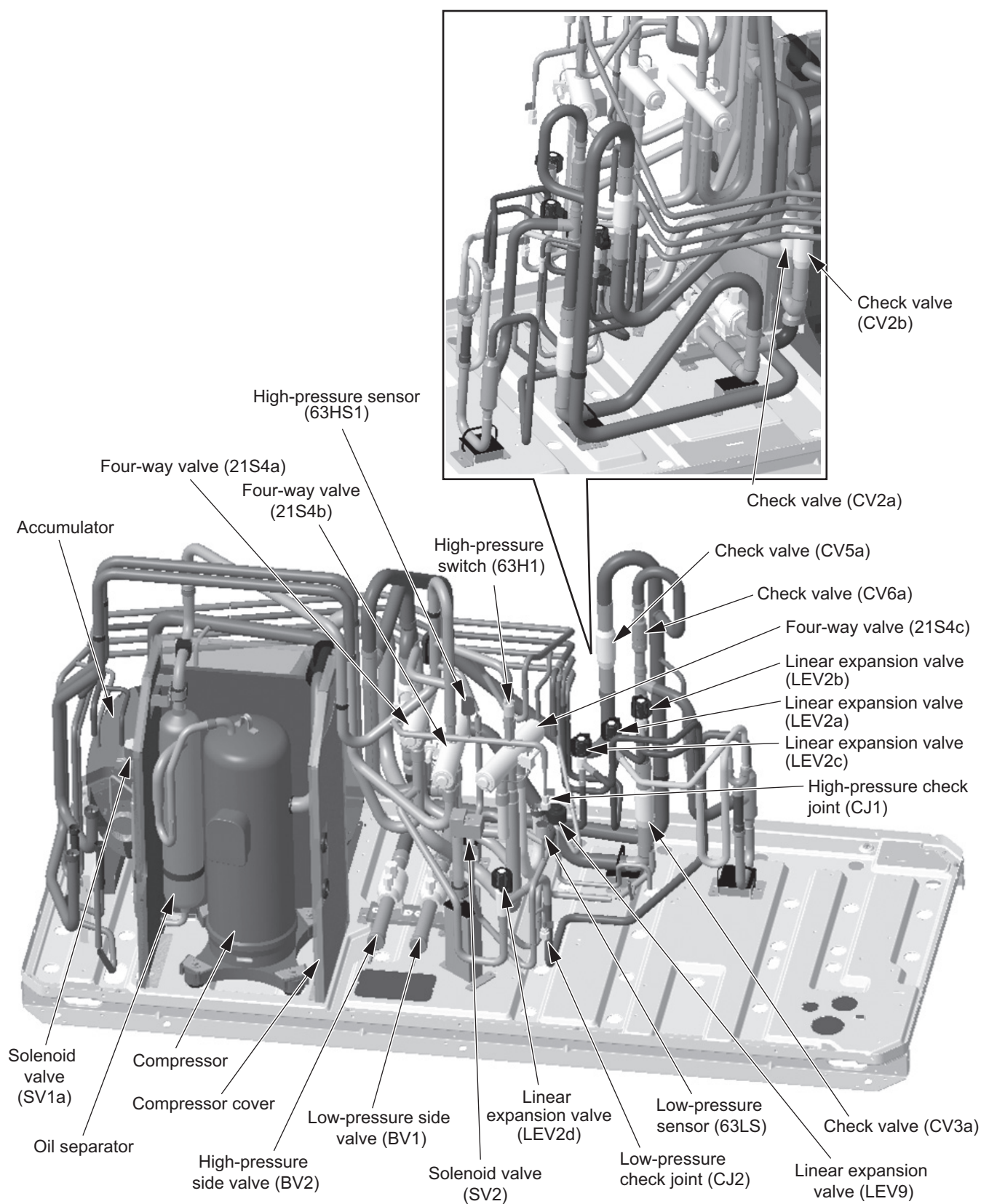


### (3) PURY-EP400, EP450YNW

## 3 Major Components, Their Functions and Refrigerant Circuits

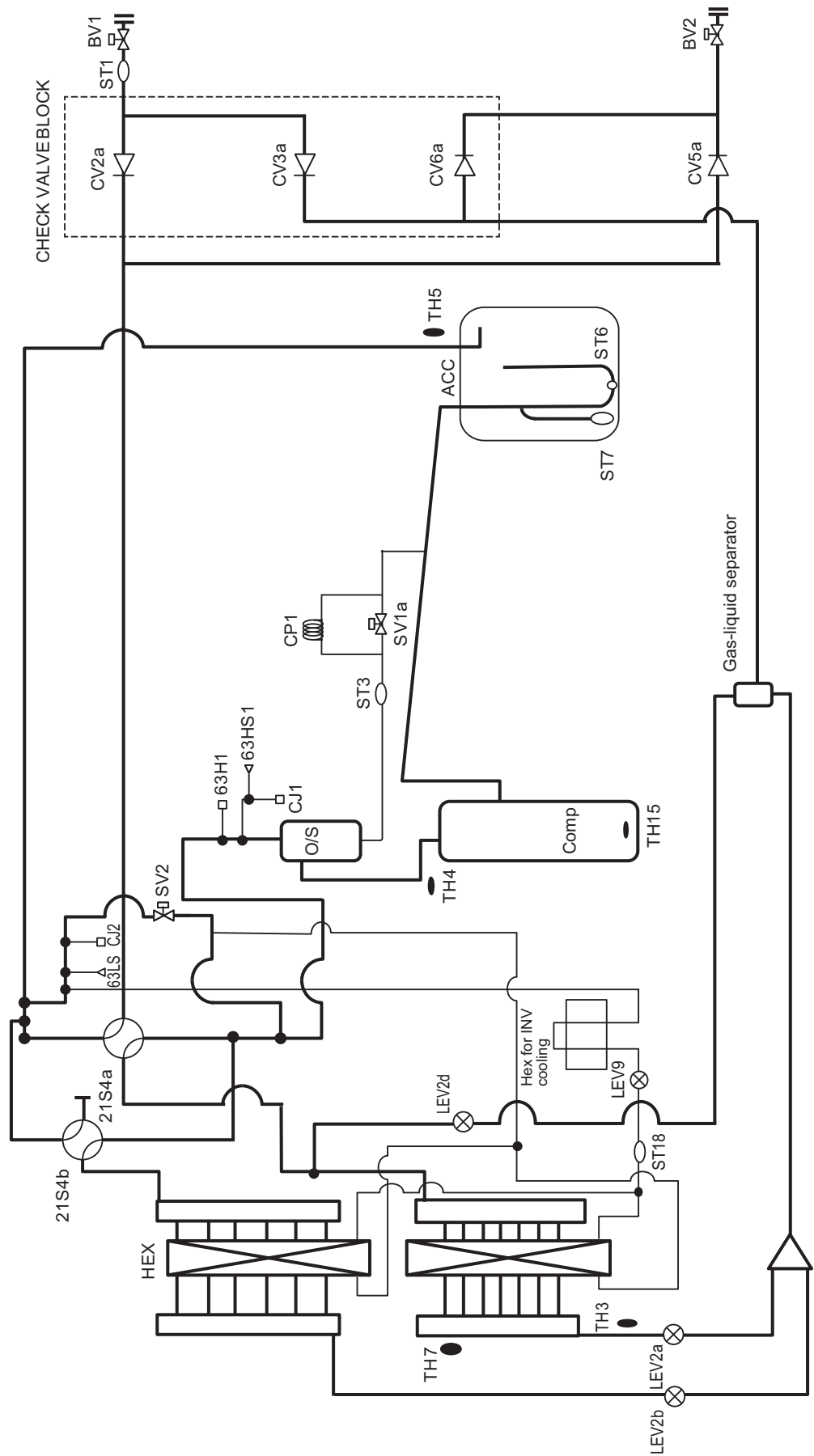


**(4) PURY-P500, P550YNW  
PURY-EP500, EP550YNW**

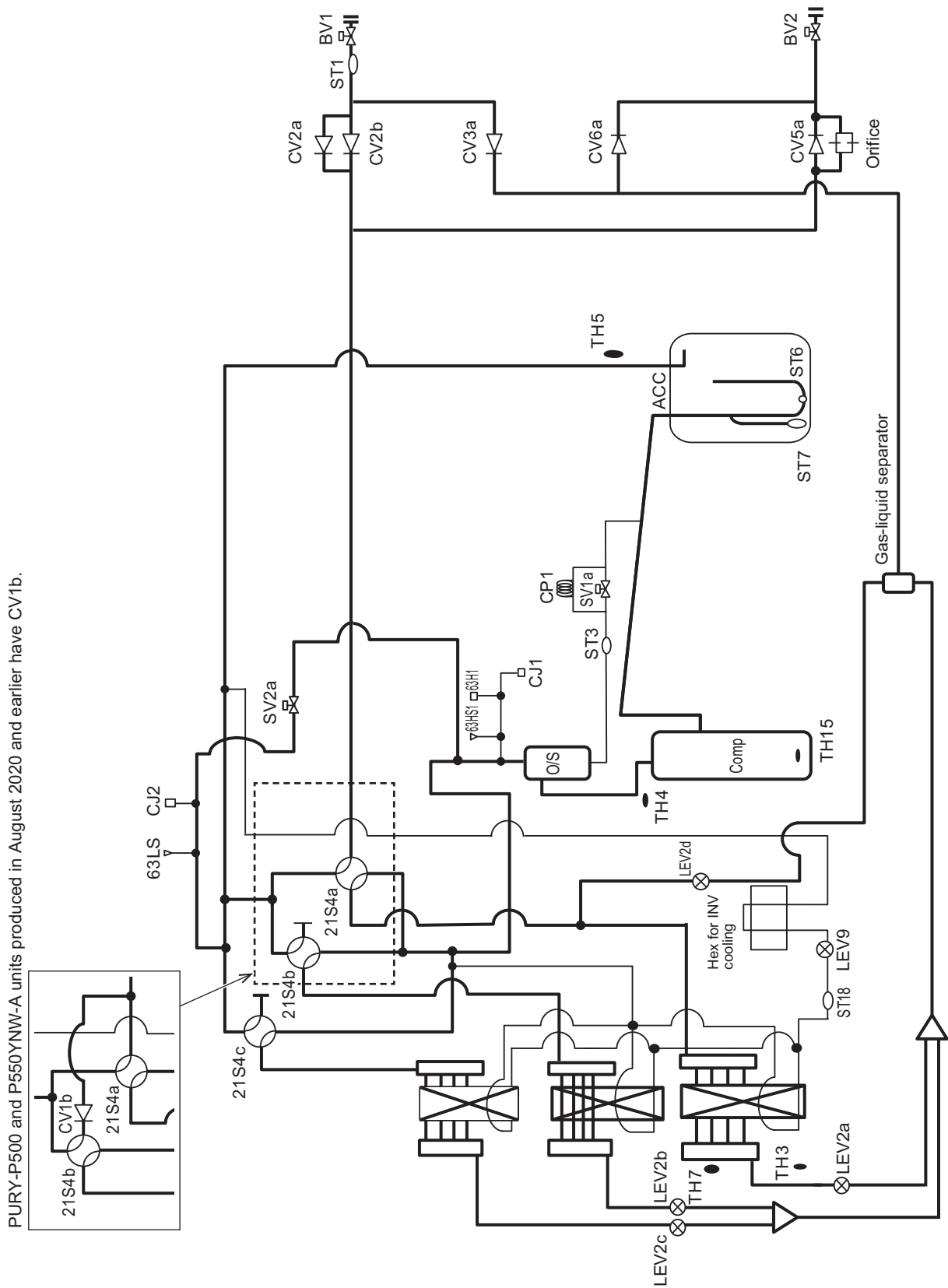


# 3-2 Outdoor Unit Refrigerant Circuit Diagrams

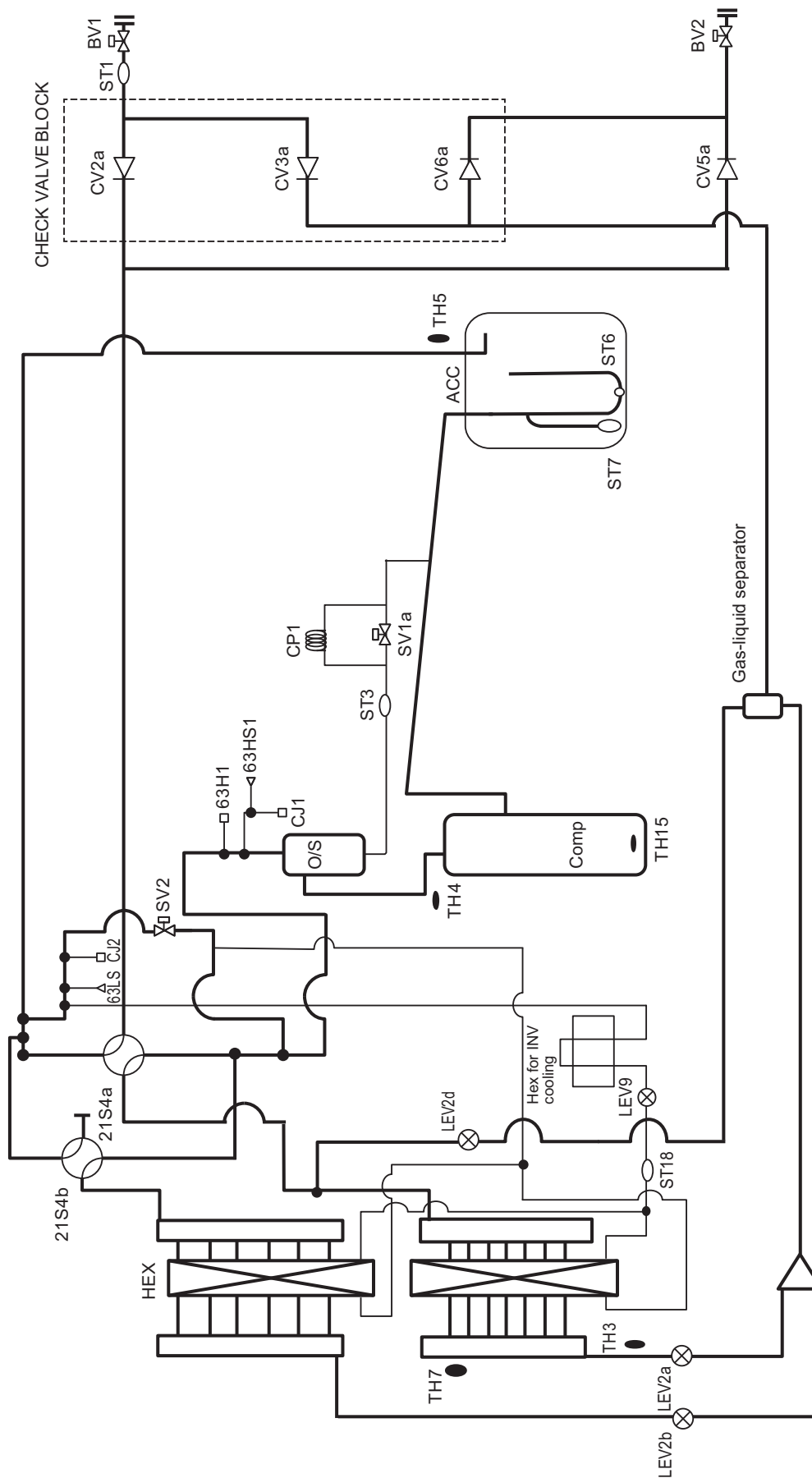
## (1) PURY-P200 - P450YNW



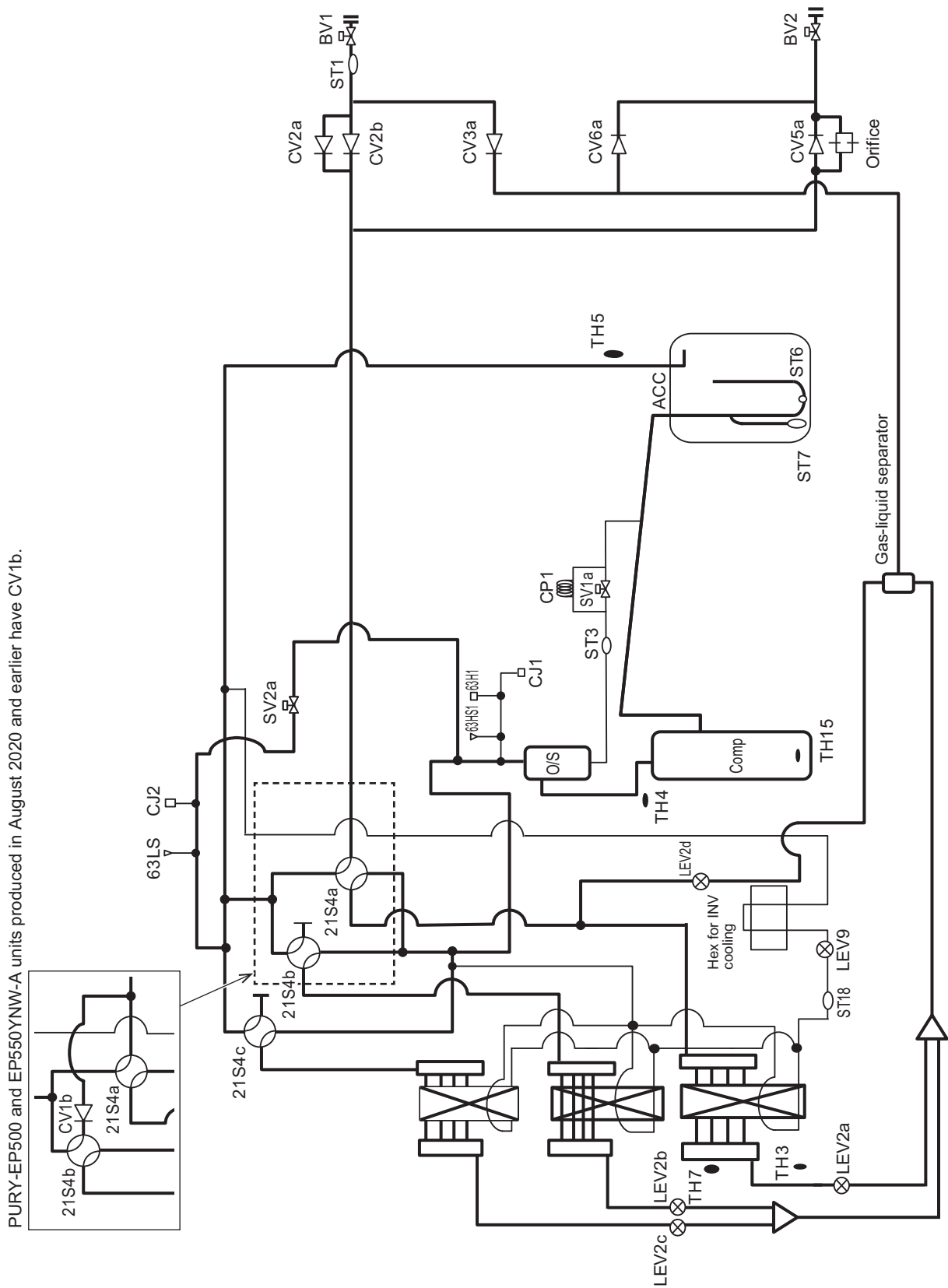
(2) PURY-P500, P550YNW



### (3) PURY-EP200 - EP450YNW



(4) PURY-EP500, EP550YNW

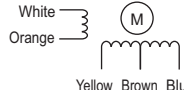


### 3-3 Functions of the Major Components of Outdoor Unit

Part name	Symbols (functions)	Notes	Usage	Specifications	Check method
Com-pressor	MC1 (Comp1)		Adjusts the amount of circulating refrigerant by adjusting the operating frequency based on the operating pressure data	(E)P200 models (A1/A2/TR(2)/RU2 only) Low-pressure shell scroll compressor wirewound resistance 20°C [68°F]: 0.20Ω (E)P200 -(E)P250 models ((E)P200: A only) Low-pressure shell scroll compressor wirewound resistance 20°C [68°F]: 0.325Ω (E)P300 - (E)P350 models Low-pressure shell scroll compressor wirewound resistance 20°C [68°F]: 0.192Ω (E)P400 - (E)P450 models Low-pressure shell scroll compressor wirewound resistance 20°C [68°F]: 0.192Ω (E)P500 - (E)P550 models Low-pressure shell scroll compressor wirewound resistance 20°C [68°F]: 0.219Ω	
High pressure sensor	63HS1		1) Detects high pressure 2) Regulates frequency and provides high-pressure protection	<p>Pressure 0~4.15 MPa [601psi] Vout 0.5~3.5V 0.071V/0.098 MPa [14psi] Pressure [MPa] =1.38 x Vout [V]-0.69 Pressure [psi] =(1.38 x Vout [V] - 0.69) x 145 1 GND (Black) 2 Vout (White) 3 Vcc (DC5V) (Red)</p>	
Low pressure sensor	63LS		1) Detects low pressure 2) Provides low-pressure protection	<p>Pressure 0~1.7 MPa [247psi] Vout 0.5~3.5V 0.173V/0.098 MPa [14psi] Pressure [MPa] =0.566 x Vout [V] - 0.283 Pressure [psi] =(0.566 x Vout [V] - 0.283) x 145 1 GND (Black) 2 Vout (White) 3 Vcc (DC5V) (Red)</p>	
Pressure switch	63H1		1) Detects high pressure 2) Provides high-pressure protection	4.15MPa[601psi] OFF setting	

Part name	Symbols (functions)	Notes	Usage	Specifications	Check method
Thermistor	TH4 (Discharge temperature)		1) Detects discharge air temperature 2) Provides high-pressure protection	Degrees Celsius $R_{120} = 7.465k\Omega$ $R_{25/120} = 4057$ $R_t = 7.465 \exp\{4057(\frac{1}{273+t} - \frac{1}{393})\}$	Resistance check
			0°C[32°F] : 698 kΩ 10°C[50°F] : 413 kΩ 20°C[68°F] : 250 kΩ 30°C[86°F] : 160 kΩ 40°C[104°F] : 104 kΩ 50°C[122°F] : 70 kΩ 60°C[140°F] : 48 kΩ 70°C[158°F] : 34 kΩ 80°C[176°F] : 24 kΩ 90°C[194°F] : 17.5 kΩ 100°C[212°F] : 13.0 kΩ 110°C[230°F] : 9.8 kΩ		
Thermistor	TH3 (Pipe temperature)		Controls defrosting during heating operation	Degrees Celsius $R_0 = 15k\Omega$ $R_{0/80} = 3460$ $R_t = 15 \exp\{3460(\frac{1}{273+t} - \frac{1}{273})\}$	Resistance check
	TH7 (Outdoor temperature)		1) Detects outdoor air temperature 2) Controls fan operation	0°C[32°F] :15 kΩ 10°C[50°F] :9.7 kΩ 20°C[68°F] :6.4 kΩ 25°C[77°F] :5.3 kΩ 30°C[86°F] :4.3 kΩ 40°C[104°F] :3.1 kΩ	
	TH5 (Pipe temperature)		Fan operated on the 63LS and TH5 values.		
	TH15 (Compressor shell bottom temperature)		Detects compressor shell bottom temperature		
	THHS Inverter heat sink temperature		Inverter overheating protection	Degrees Celsius $R_{50} = 17k\Omega$ $R_{25/120} = 4016$ $R_t = 17 \exp\{4016(\frac{1}{273+t} - \frac{1}{323})\}$	
	THL DCL temperature		DCL overheat protection	Degrees Celsius $R_{100} = 3.3k\Omega$ $R_{0/100} = 3970$ $R_t = 3.3 \exp\{3970(\frac{1}{273+t} - \frac{1}{373})\}$	
Solenoid valve	SV1a Discharge-suction bypass		1) High/low pressure bypass at start-up and stopping, and capacity control during low-load operation 2) High-pressure-rise prevention	AC220 - 240V Open while being powered/ closed while not being powered	Continuity check with a tester
	SV2		Prevention of low-pressure drop High-pressure-rise prevention Refrigerant equalization control	AC220 - 240V Open while being powered/ closed while not being powered	

[3-3 Functions of the Major Components of Outdoor Unit ]

Part name	Symbols (functions)	Notes	Usage	Specifications	Check method
LEV	LEV2a, 2b, 2c	LEV2c is on the (E)P500 and (E)P550 models only.	(During cooling) Heat exchanger capacity control (During heating) Refrigerant equalization control	DC12V Opening of stepping motor driving valve 0-3000 pulses (LEV2a, 2b, 2c) 0-3000 pulses (LEV2d, (E)P200-300) 0-6000 pulses (LEV2d, (E)P350-550)	Continuity Test with a Tester. Continuity between white and orange. Continuity between yellow, brown, and blue 
	LEV2d		Heat exchanger capacity control		
	LEV9 (Refrigerant flow adjustment)		Adjusts the flow of refrigerant bypassed from the pipe for cooling the control board when the control board temperature rises ♦High-pressure-rise prevention	DC12V Opening of a valve driven by a stepping motor 0-480 pulses	Same as indoor LEV The resistance value differs from that of the indoor LEV. Refer to the following page(s). [8-8 Troubleshooting LEV Problems]
4-way valve	21S4a, b		Changeover between heating and cooling	AC220 - 240V Dead: cooling cycle Live: heating cycle	Continuity check with a tester
	21S4c	(E)P500, (E)P550 models only			
Fan motor	FAN motor 1,2	FAN motor 2 is only on the (E)P350 - (E)P550 models.	Regulates the heat exchanger capacity by adjusting the operating frequency and operating the propeller fan based on the operating pressure.	(E)P200 - (E)P300, (E)P500 - (E)P550 AC380 - 460V, 920W (E)P350 - (E)P450 AC380 - 460V, 460W	