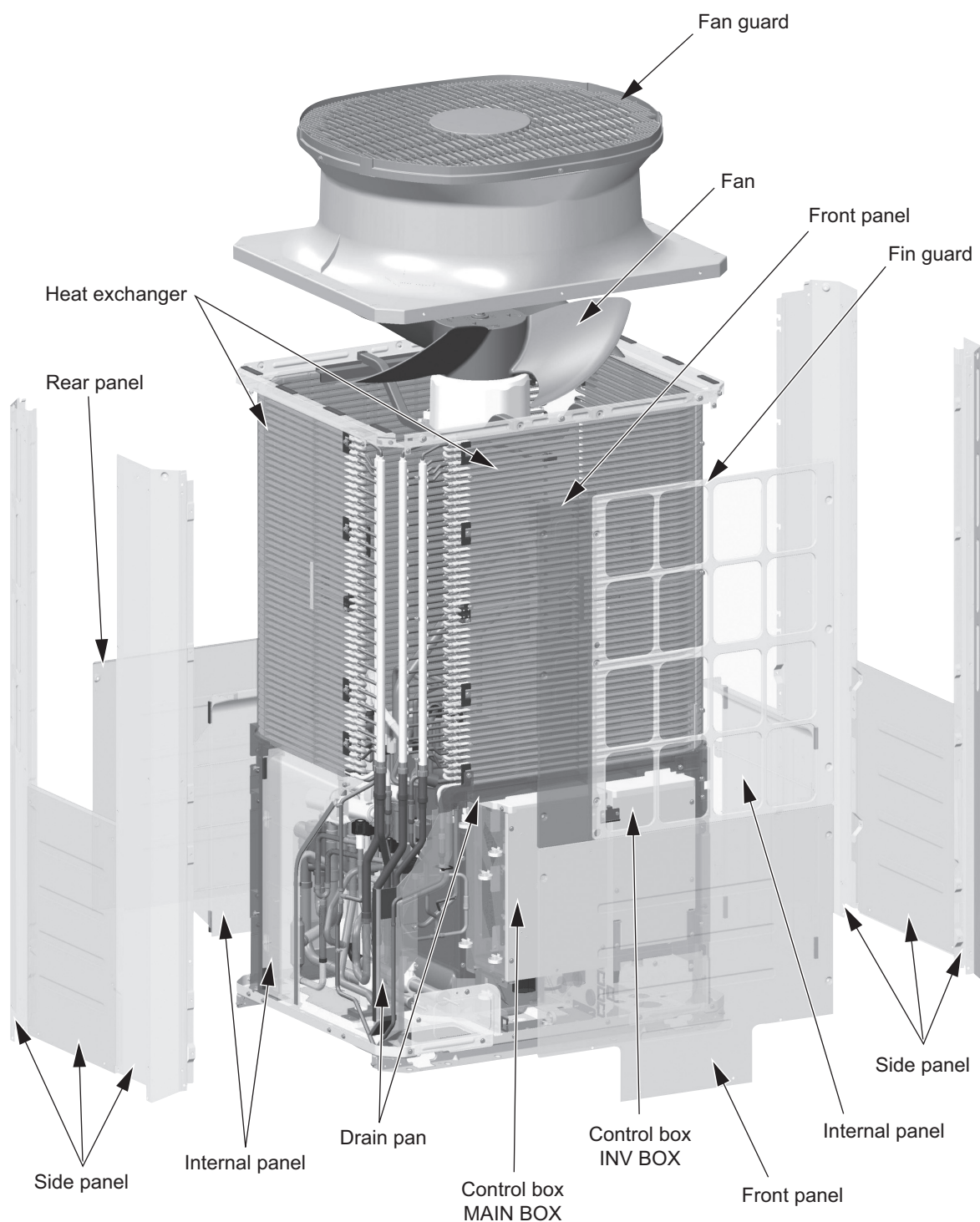


3-1 External Appearance and Refrigerant Circuit Components of Outdoor Unit

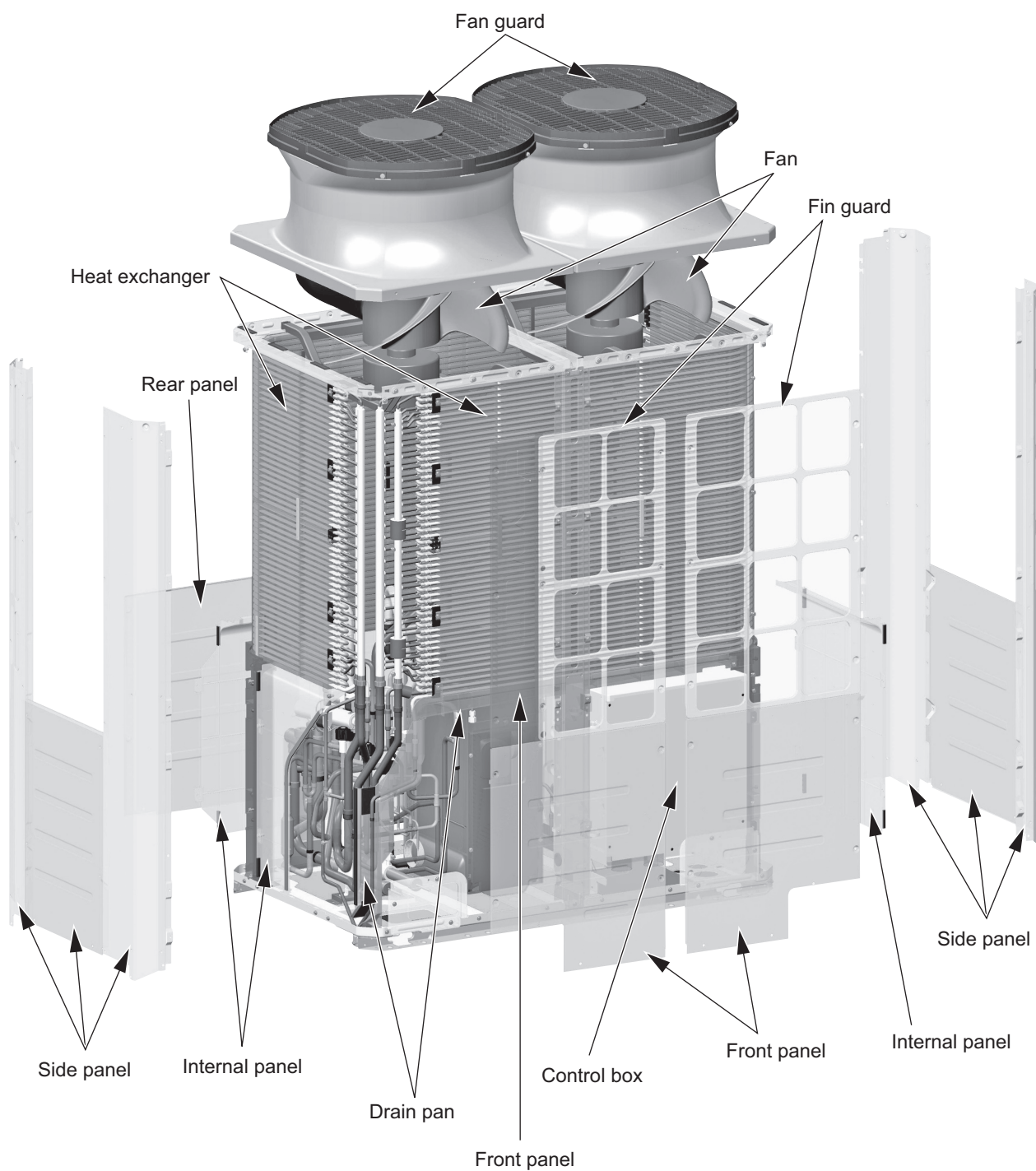
3-1-1 External Appearance of Outdoor Unit

(1) PURY-M200, M250, M300YNW-A1
PURY-EM200, EM250, EM300YNW-A1

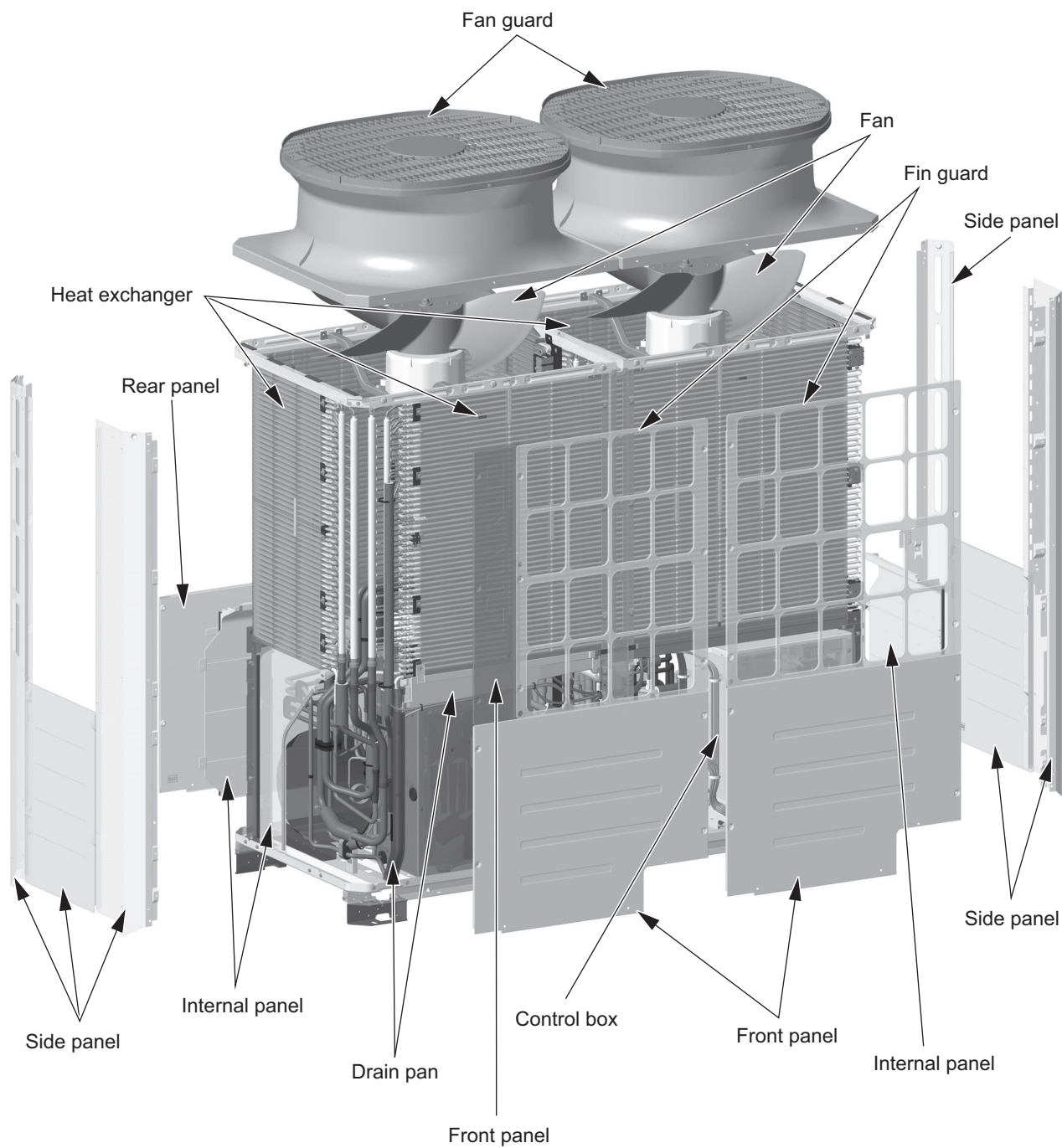


**(2) PURY-M350, M400, M450YNW-A1
PURY-EM350, EM400, EM450YNW-A1**

3 Major Components, Their Functions and Refrigerant Circuits

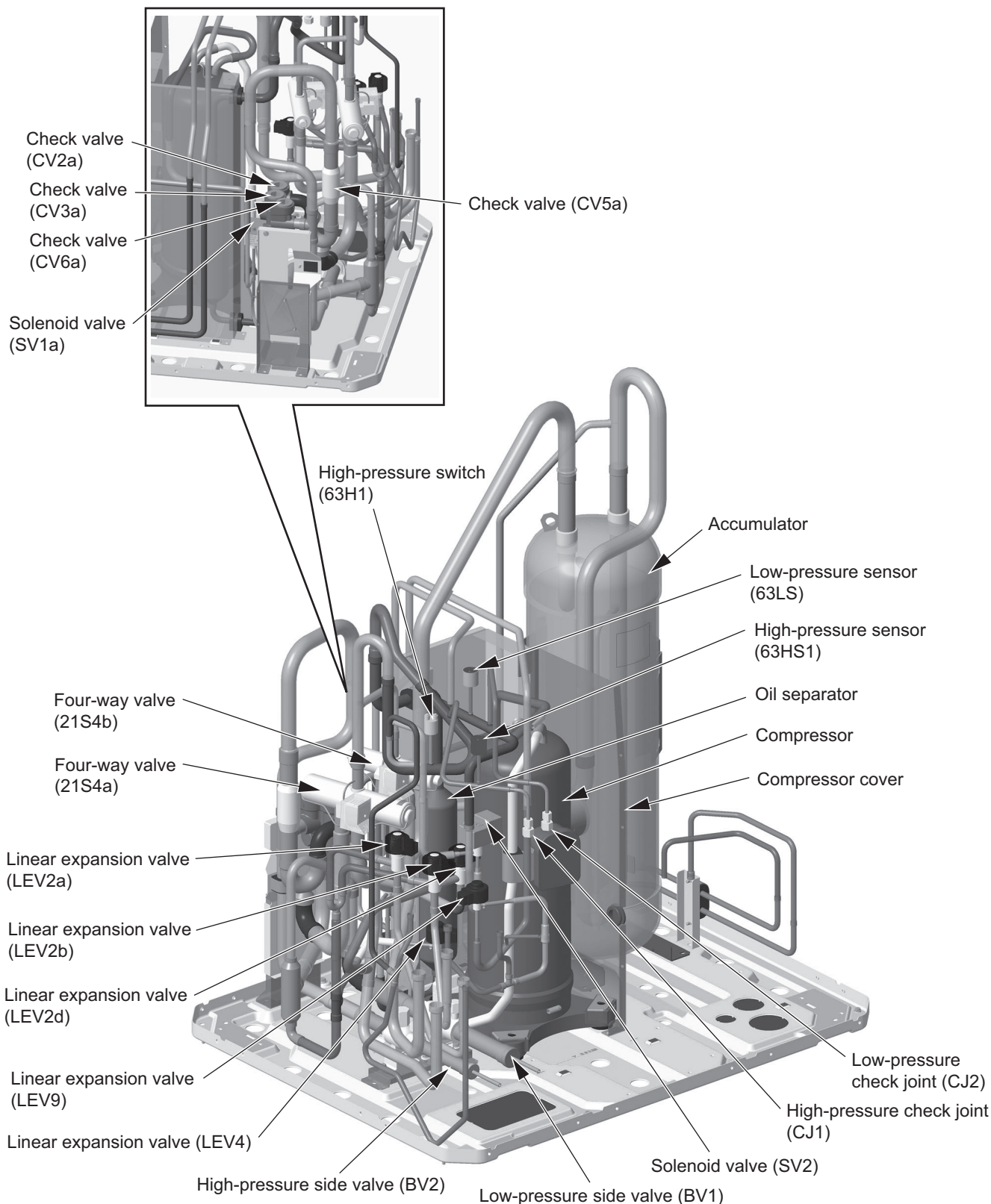


(3) PURY-M500YNW-A1
PURY-EM500YNW-A1

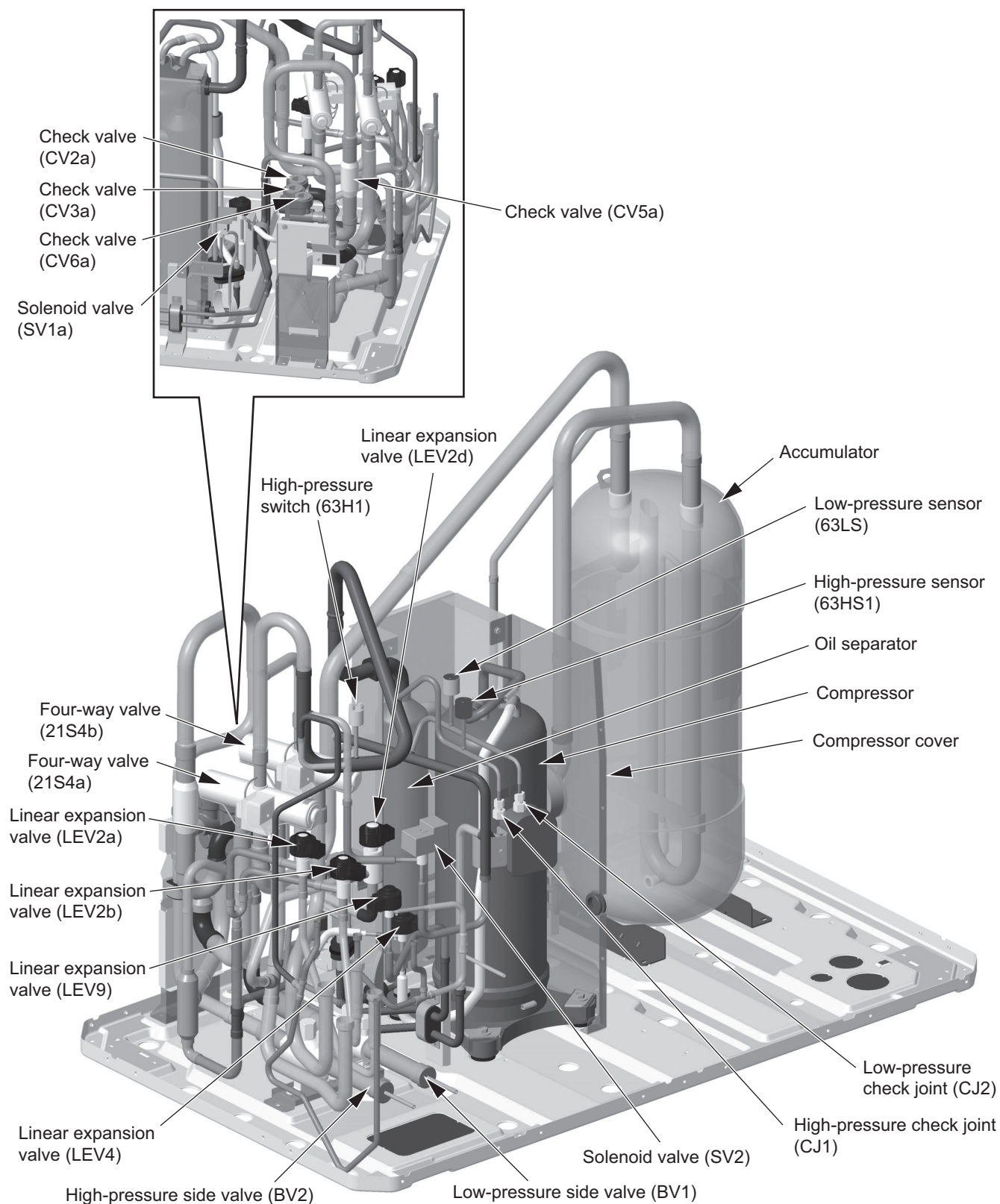


3-1-2 Outdoor Unit Refrigerant Circuits

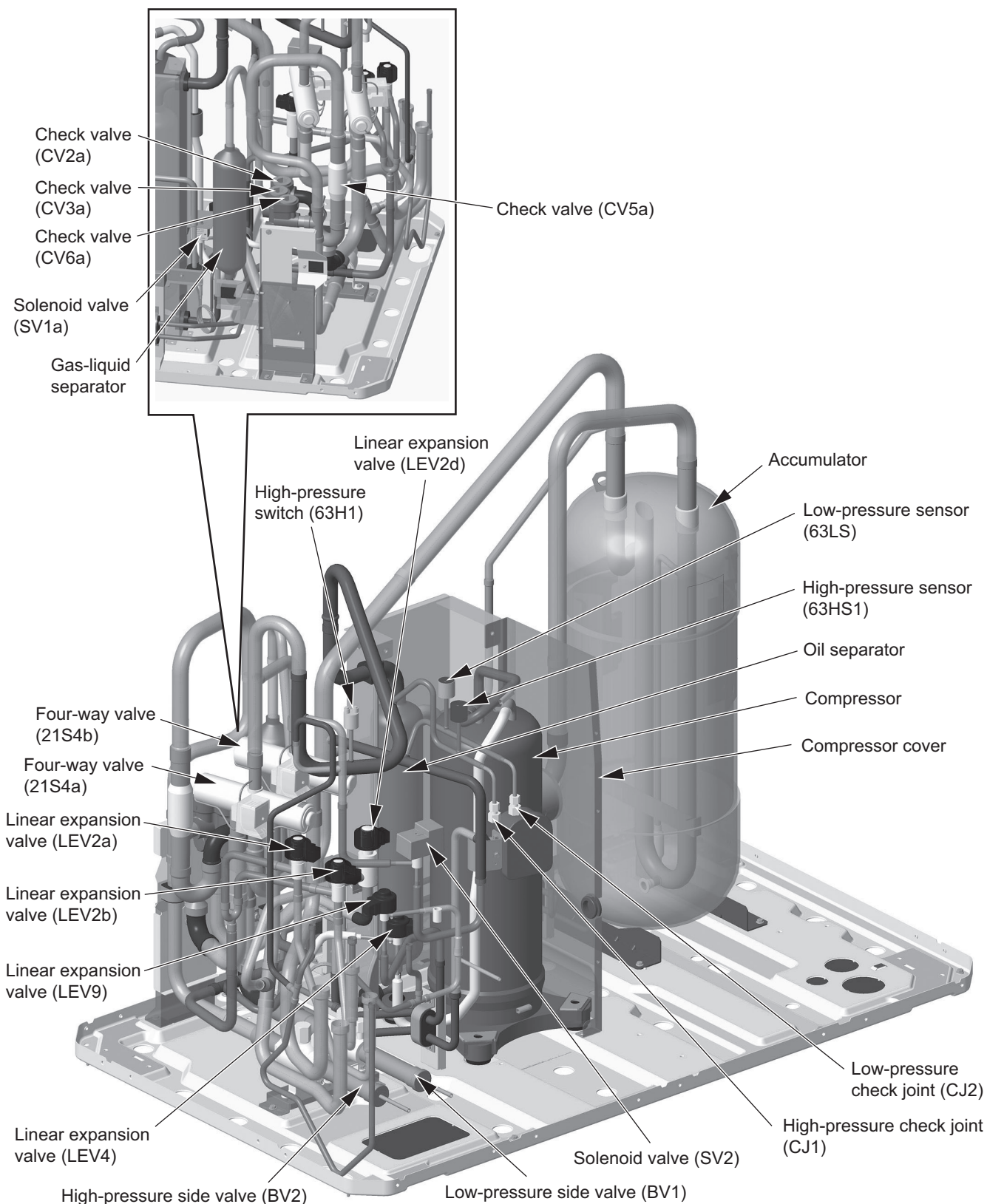
(1) PURY-M200, M250, M300YNW-A1 PURY-EM200, EM250, EM300YNW-A1



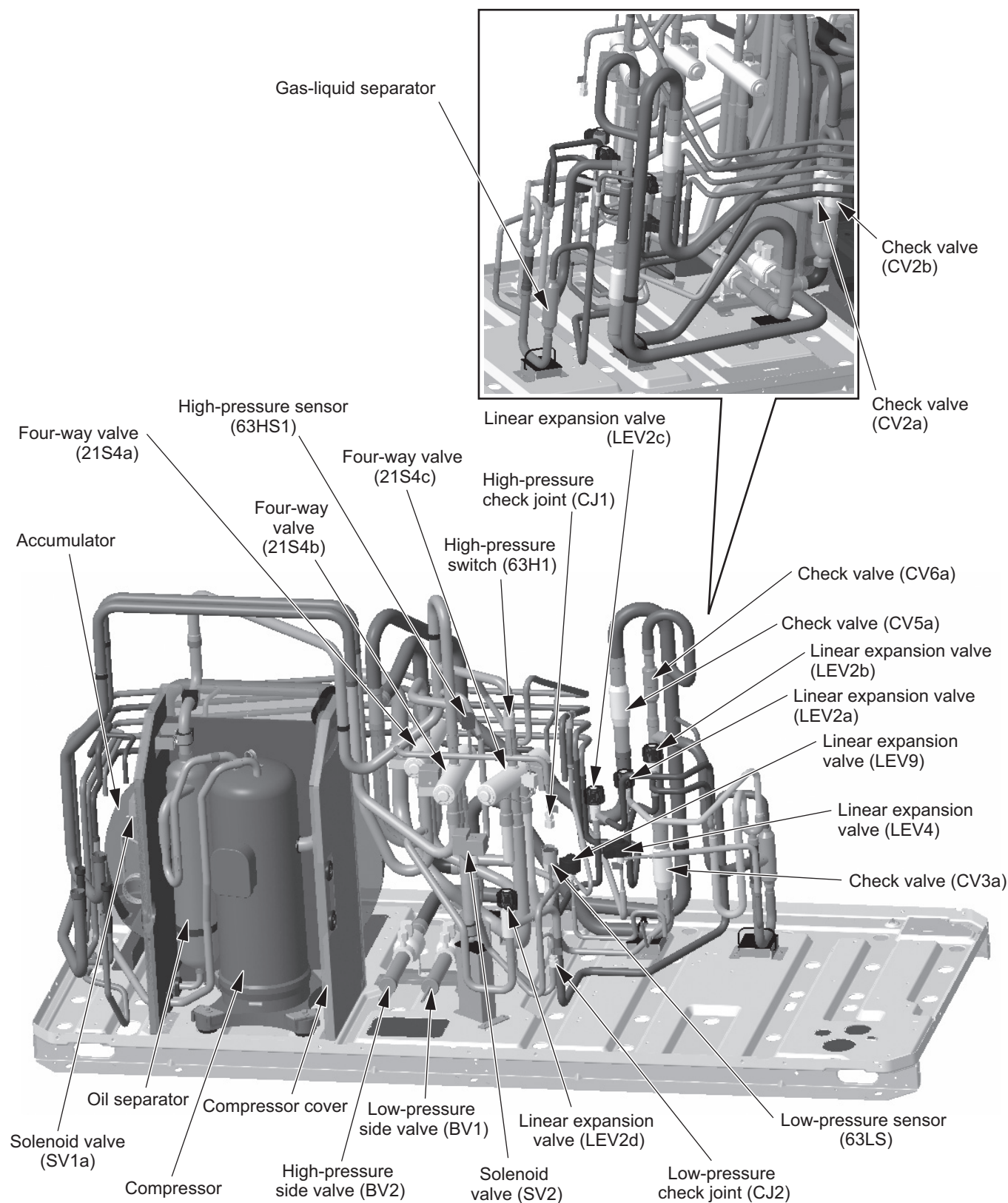
**(2) PURY-M350, M400, M450YNW-A1
PURY-EM350YNW-A1**



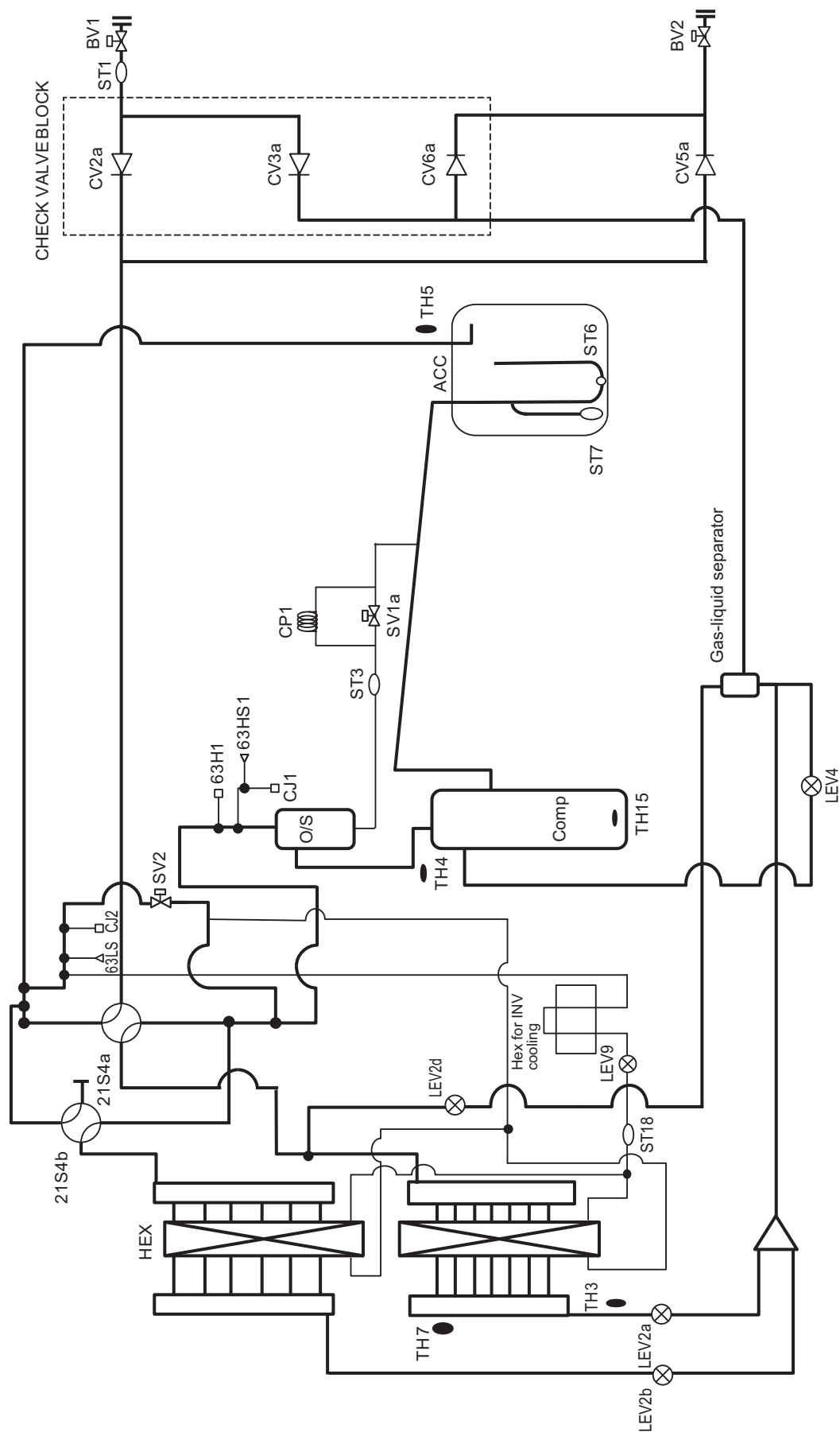
(3) PURY-EM400, EM450YNW-A1



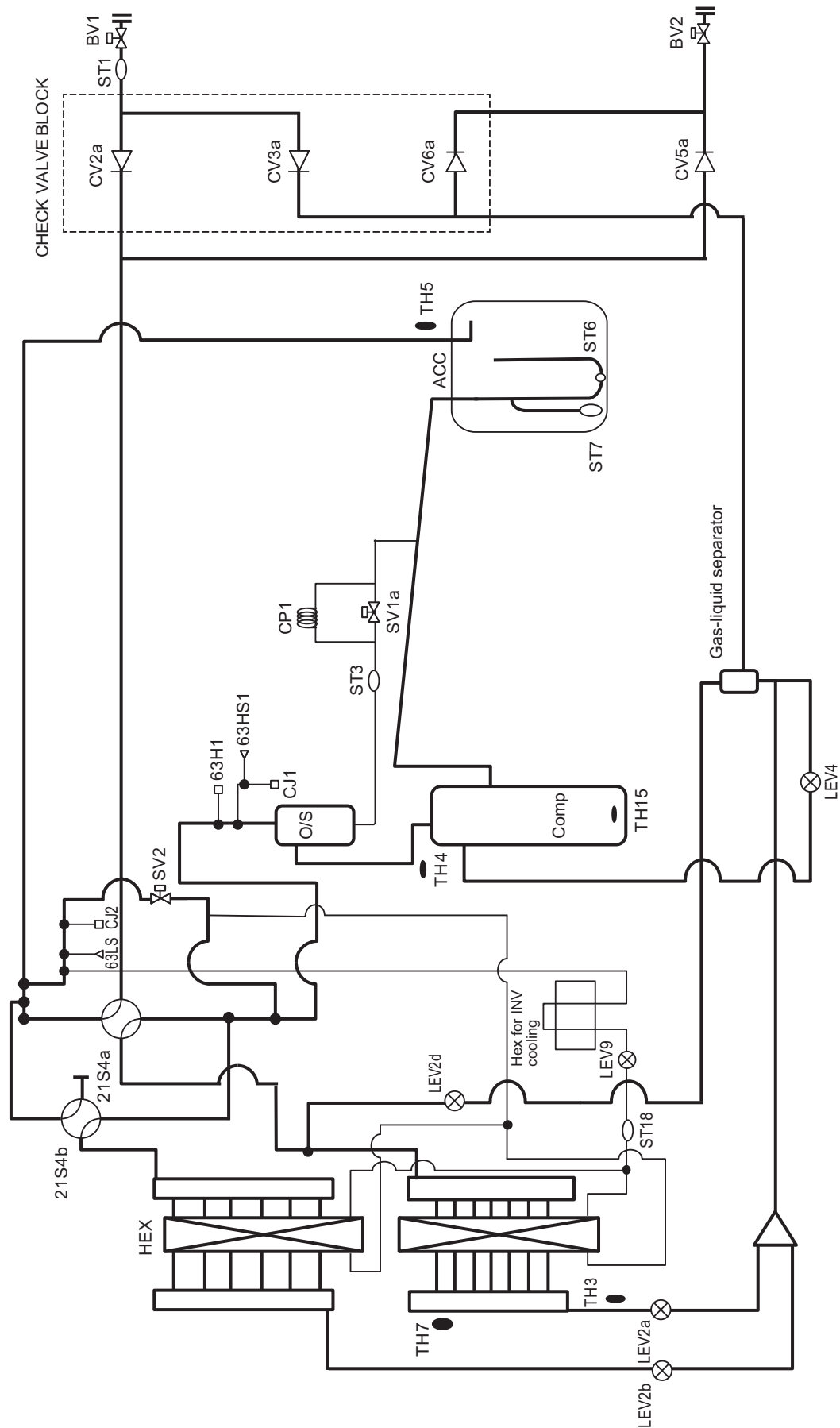
**(4) PURY-M500YNW-A1
PURY-EM500YNW-A1**



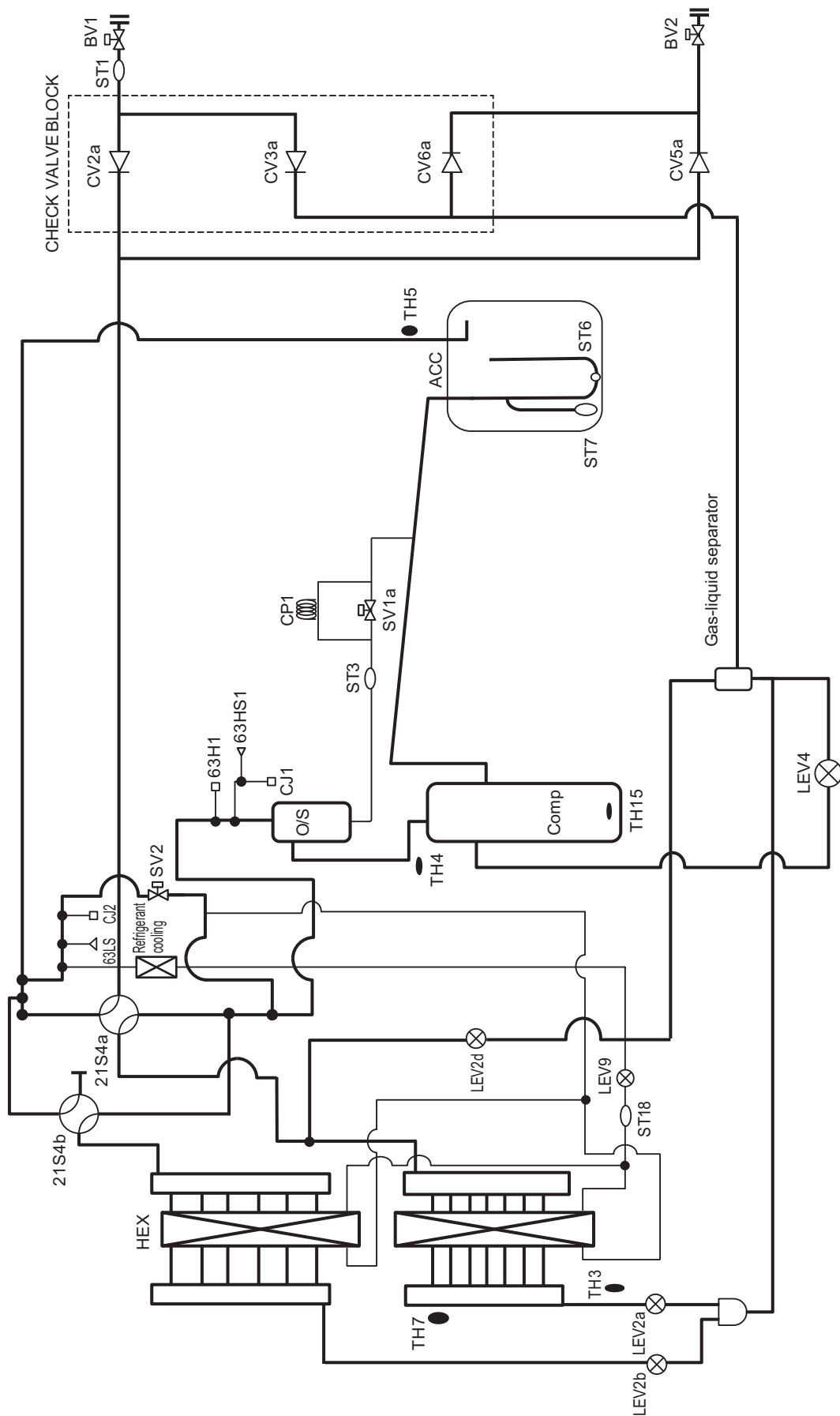
(1) PURY-M200 - M300YNW-A1



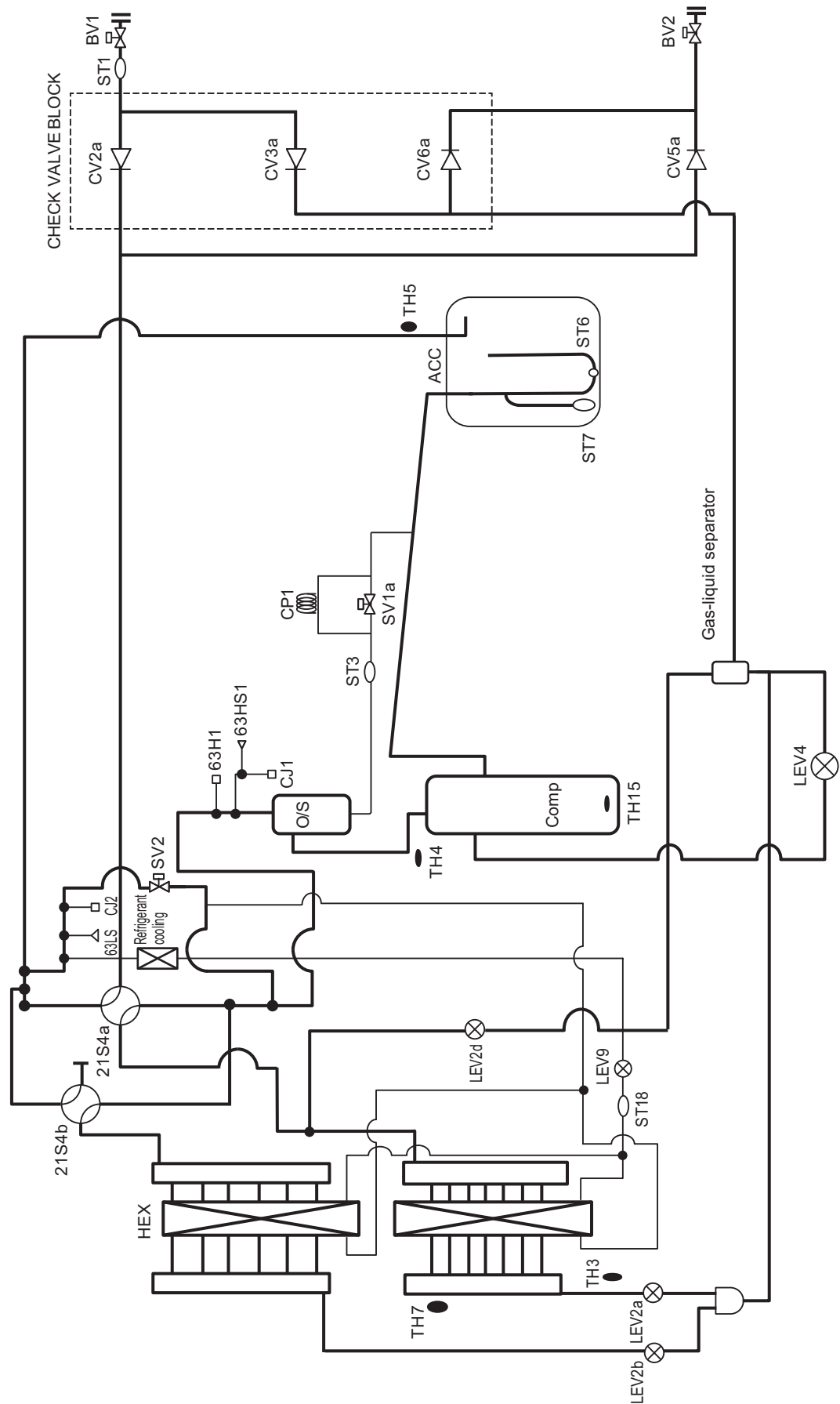
(2) PURY-EM200 - EM300YNW-A1



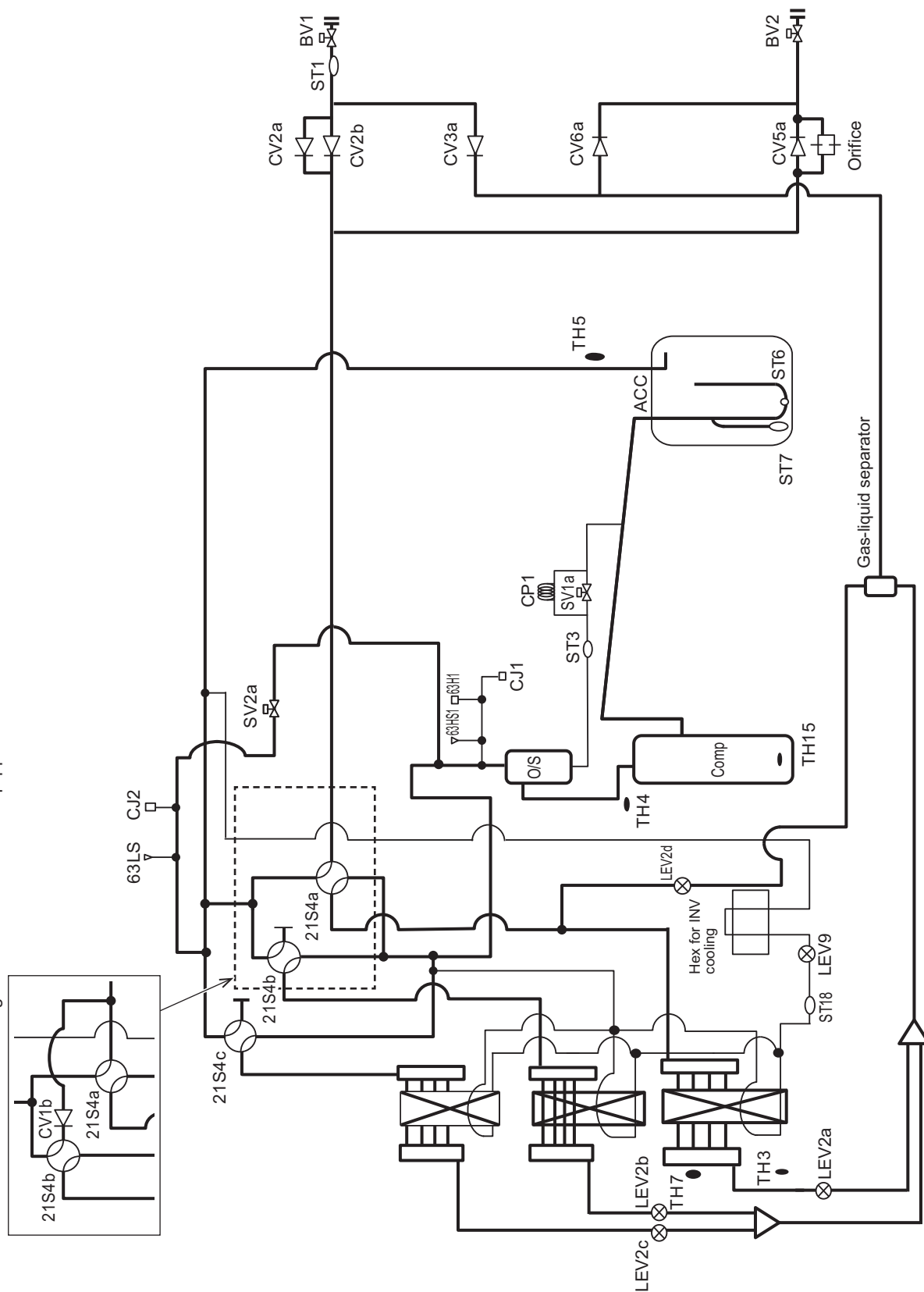
(3) PURY-M350 - M450YNW-A1



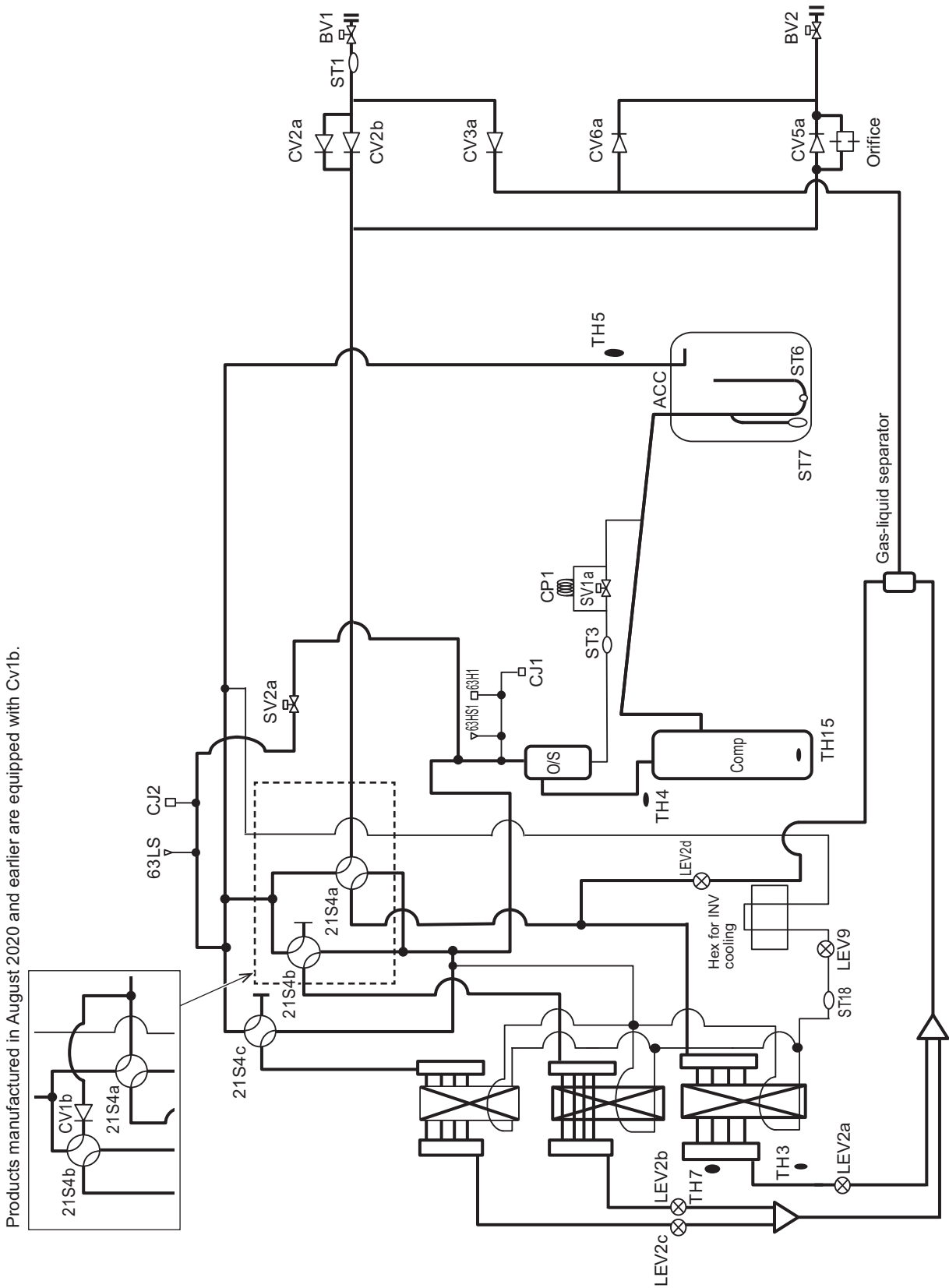
(4) PURY-EM350 - EM450YNW-A1



Products manufactured in August 2020 and earlier are equipped with Cv1b.

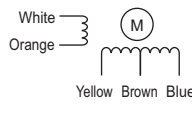


(6) PURY-EM500YNW-A1



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)M200 - (E)M350 models Low-pressure shell scroll compressor wirewound resistance 20°C [68°F] : 0.192Ω (E)M400 - (E)M500 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	
Thermistor	TH4 (Discharge temperature)		1) Detects discharge air temperature 2) Provides high-pressure protection	<p>Degrees Celsius</p> $R_{120} = 7.465k\Omega$ $R_{25/120} = 4057$ $R_t = 7.465 \exp \left\{ 4057 \left(\frac{1}{273+t} - \frac{1}{393} \right) \right\}$	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		

Part name	Symbols (functions)	Notes	Usage	Specifications	Check method
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 $R_{50} = 17k\Omega$ $R_{25/120} = 4016$ $R_t = 17 \exp\{4016 (\frac{1}{273+t} - \frac{1}{323})\}$ 0°C[32°F] :161 kΩ 10°C[50°F] :97 kΩ 20°C[68°F] :60 kΩ 25°C[77°F] :48 kΩ 30°C[86°F] :39 kΩ 40°C[104°F] :25 kΩ	
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 Refrigerant equalization control	AC220 - 240V Open while being powered/ closed while not being powered	
LEV	LEV2a, 2b, 2c	LEV2c is only on the (E)M500 models.	(During cooling) Heat exchanger capacity control (During heating) Refrigerant equalization control	DC12V Opening of stepping motor driving valve 0-3000 pulses (LEV2a, 2b) 0-3000 pulses (LEV2d, (E)M200-300) 0-6000 pulses (LEV2d, (E)M350-500)	Continuity Test with a Tester. Continuity between white and orange. Continuity between yellow, brown, and blue 
	LEV2d		Heat exchanger capacity control		
	LEV4		Injection amount control	DC12V	
	LEV9		Refrigerant cooling control	Opening of stepping motor driving valve 0-480 pulses (direct driven type)	
4-way valve	21S4a, b		Changeover between heating and cooling	AC220 - 240V	Continuity check with a tester
	21S4c	(E)M500 models only		Dead: cooling cycle Live: heating cycle	
Fan motor	FAN motor 1, 2	FAN motor 2 is only on the (E)M350 - (E)M500 models.	Regulates the heat exchanger capacity by adjusting the operating frequency and operating the propeller fan based on the operating pressure.	(E)M200 - (E)M300, (E)M500 AC380 - 460V, 920W (E)M350 - (E)M450 AC380 - 460V, 460W	