



Internal Use Only

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***MULTI V* Hydro Kit (For High Temperature) SVC MANUAL(Exploded View)**

**MODEL : ARNH04GK3A2
ARNH08GK3A2**

CAUTION

Before Servicing the unit, read the safety precautions in General SVC manual.
Only for authorized service personnel.

1. Specification

Type				Hydro Kit (High Temp.)	Hydro Kit (High Temp.)	
Model		Unit		ARNH08GK3A2	ARNH04GK3A2	
Power Supply		V / Ø / Hz		220-240 / 1 / 50	220-240 / 1 / 50	
				220 / 1 / 60	220 / 1 / 60	
Capacity (Rated)	Cooling	kW		-	-	
		kcal/h		-	-	
		Btu/h		-	-	
	Heating	kW		25.0	13.8	
		kcal/h		21500	11870	
Btu/h		85300	47000			
Input (Rated)	Cooling	kW		-	-	
	Heating	kW		5	2.3	
Casing				Painted Steel Plate	Painted Steel Plate	
Dimensions	Body	W x H x D	mm	520 x 1,080 x 330	520 x 1,080 x 330	
			inch	20-15/32 x 42-17/32 x 13	20-15/32 x 42-17/32 x 13	
Net Weight	Body		kg (lbs)	94.0 (207.2)	88(194)	
Heat Exchanger	Refrigerant to Water	Type		Brazed Plate HEX	Brazed Plate HEX	
		Quantity		EA	1	1
		Number of Plate/Volume		EA	48	76
		Rated Water Flow		l/min	36	19.8
		Head Loss		kPa	20	20
	Refrigerant to efrigerant	Type		Brazed Plate HEX	Brazed Plate HEX	
		Quantity		EA	1	1
		Number of Plate		EA	60	50
		Type		Twin Rotary inverter	Twin Rotary inverter	
		Piston Displacement		cm³/rev	52.5	52.5
Number of Revolution		rev/min	3,600	3,600		
Motor Output x Number		W x No.	4,000 x 1	4,000 x 1		
Starting Method			Direct On Line	Direct On Line		
Oil Type			FVC68D(PVE)	FVC68D(PVE)		
Oil Charge		cc	1,300	1,300		
Temperature Control				Microprocessor, Thermostat for heating	Microprocessor, Thermostat for heating	
Sound Absorbing Thermal Insulation Material				Foamed polystrene	Foamed polystrene	
Safety Device				Fuse	Fuse	
Piping Connections	Water Side	Inlet	inch	Male PT 1	Male PT 1	
		Outlet	inch	Male PT 1	Male PT 1	
	Refrigerant Side	Liquid	mm(inch)	9.52(3/8)	9.52(3/8)	
		Gas	mm(inch)	19.05(3/4)	15.88(5/8)	
Drain Piping Connection			inch	Male PT 1	Male PT 1	
Sound	Cooling	dB(A)		-	-	
Press Level	Heating	dB(A)		43	43	
Power Supply Cable			No. x mm²	3C x CV4.0	3C x CV4.0	
Communication cable			No. x mm²	2C x CVV-SB 1.0~1.5	2C x CVV-SB 1.0~1.5	
Refrigerant	Refrigerant to Refrigerant	Refrigerant name		R410A	R410A	
		Control		Electronic Expansion Valve	Electronic Expansion Valve	
	Refrigerant to Water	Refrigerant name		R134a	R134a	
		Precharged Amount		kg (lbs)	3.0 (6.6)	2.3(5.04)
		Control		Electronic Expansion Valve	Electronic Expansion Valve	

Notes:

- Capacities are based on the following conditions:
 - Heating Temperature Indoor 20°C(68°F) DB / 15°C(59°F) WB
Outdoor 7°C(44.6°F) DB / 6°C(42.8°F) WB
Water Inlet 55°C(131°F) / Outlet 65°C(149°F)
 - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
 - Piping Length : Interconnected Pipe Length = 7.5m
- Wiring cable size must comply with the applicable local and national code.
- Due to our policy of innovation, some specifications may be changed without notification.
- Sound Level Values are measured at Anechoic chamber.
Therefore, these values can be increased (maximum 3dB(A)) owing to ambient conditions during operation.

Conversion Formula

kcal/h= kW x 860
Btu/h = kW x 3412

2. List of Function

Category	Function	ARNH08GK3A2	ARNH04GK3A2
Installation	Drain pump	X	X
	E.S.P. control	X	X
	Electric heater	X	X
	High ceiling operation	X	X
	Auto Elevation Grille	X	X
Reliability	Hot start	X	X
	Self diagnosis	O	O
	Soft dry operation	X	X
Convenience	Auto changeover	X	X
	Auto cleaning	X	X
	Auto operation(artificial intelligence)	X	X
	Auto Restart	O	O
	Child lock	O	O
	Forced operation	X	X
	Group control	O	O
	Sleep mode	X	X
	Timer(on/off)	O	O
	Timer(weekly)	O	O
	Two thermistor control	X	X
Individual control	Standard Wired remote controller	O	O
	Deluxe wired remote controller	X	X
	Simple wired remote controller	X	X
	Simple Wired remote controller(for hotel use)	X	X
	Wireless remote controller	X	X
CAC network function	General central controller (Non LGAP)	X	X
	Network Solution(LGAP)	O	O
	Dry contact	PQDSA(1) / PQDSB(1)	PQDSA(1) / PQDSB(1)
	PDI(power distribution indicator)	X	X
Special function kit	PI 485(for Indoor Unit)	X	X
	Zone controller	X	X
	CTI(Communication transfer interface)	X	X
Others	Electronic thermostat	X	X
	Remote temperature sensor	PQRSTA0	PQRSTA0
Air to Water Heat Pump Functions	Telecom shelter controller	X	X
	Anti-condensation on floor(cooling)	X	X
	Water pump on / off Control	O	O
	Flow switch control	O	O
	Thermostat interface (230V AC)	O	O
	Thermostat interface (24V AC)	X	X
	Sanitary tank heating	O	O
	Solar-thermal interface with sanitary tank	X	X
	PHEX anti-freezing control	O	O
	Water pump forced operation	O	O
	Autosetting according to ambient temperature	O	O
	Silent operation	X	X
	Anti-overheating of water pipe	O	O
	Emergency operation	O	O

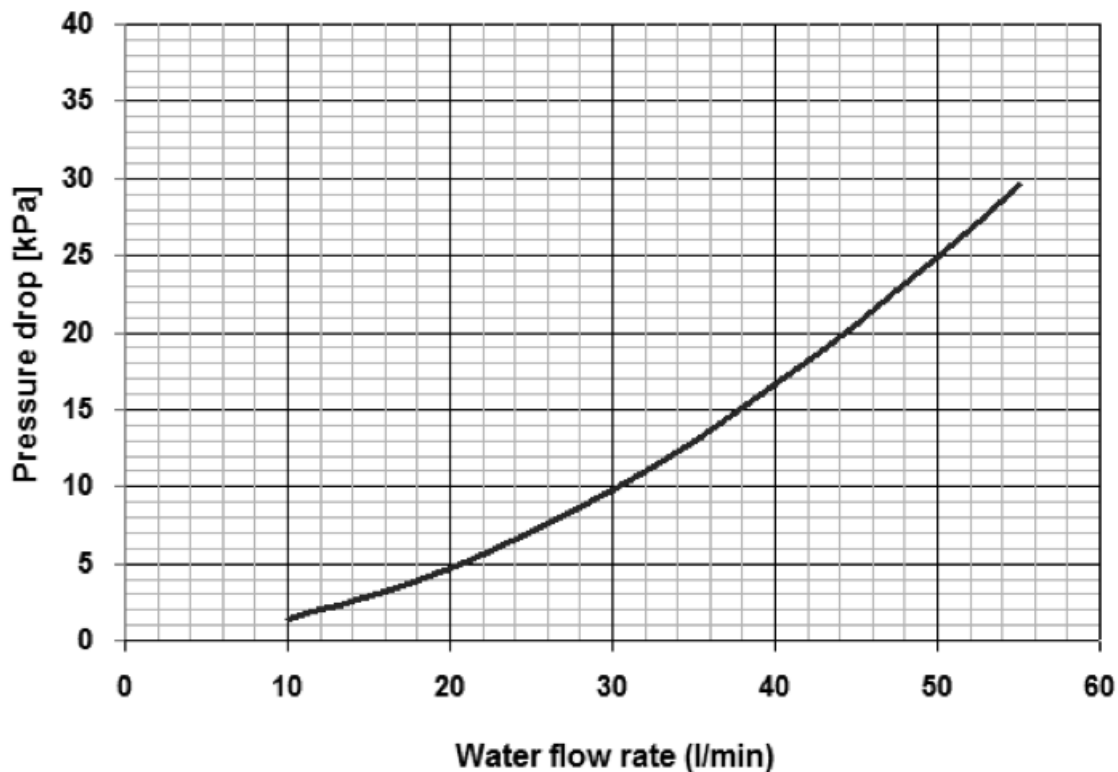
Notes

O : Applied, X : Not applied

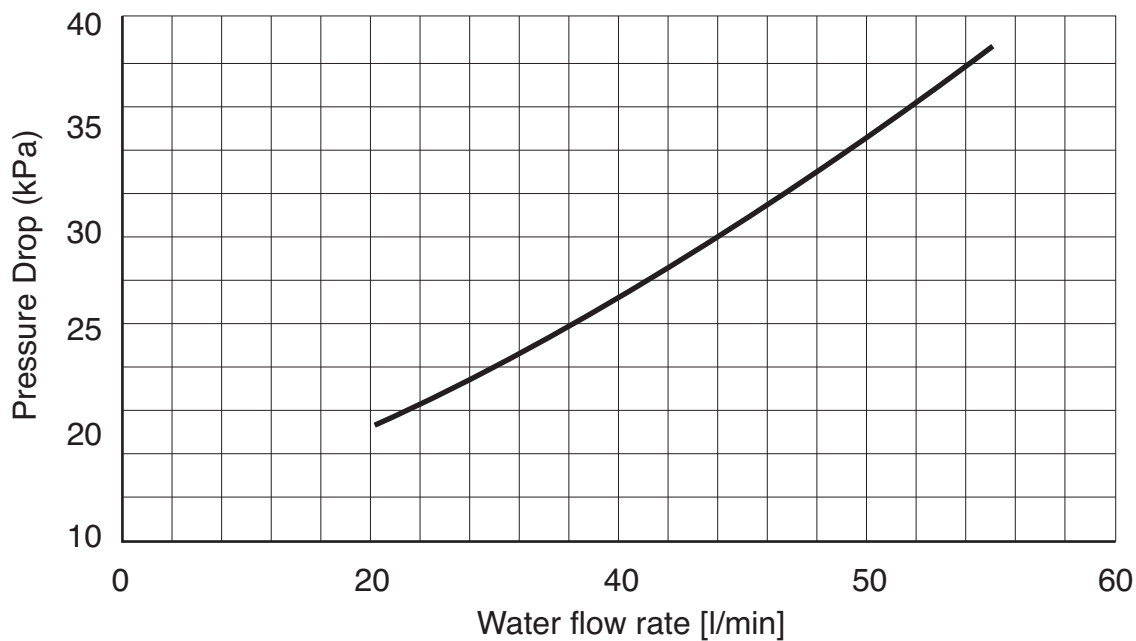
Accessory model name : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

3. Water Pressure Drop

ARNH04GK3A2



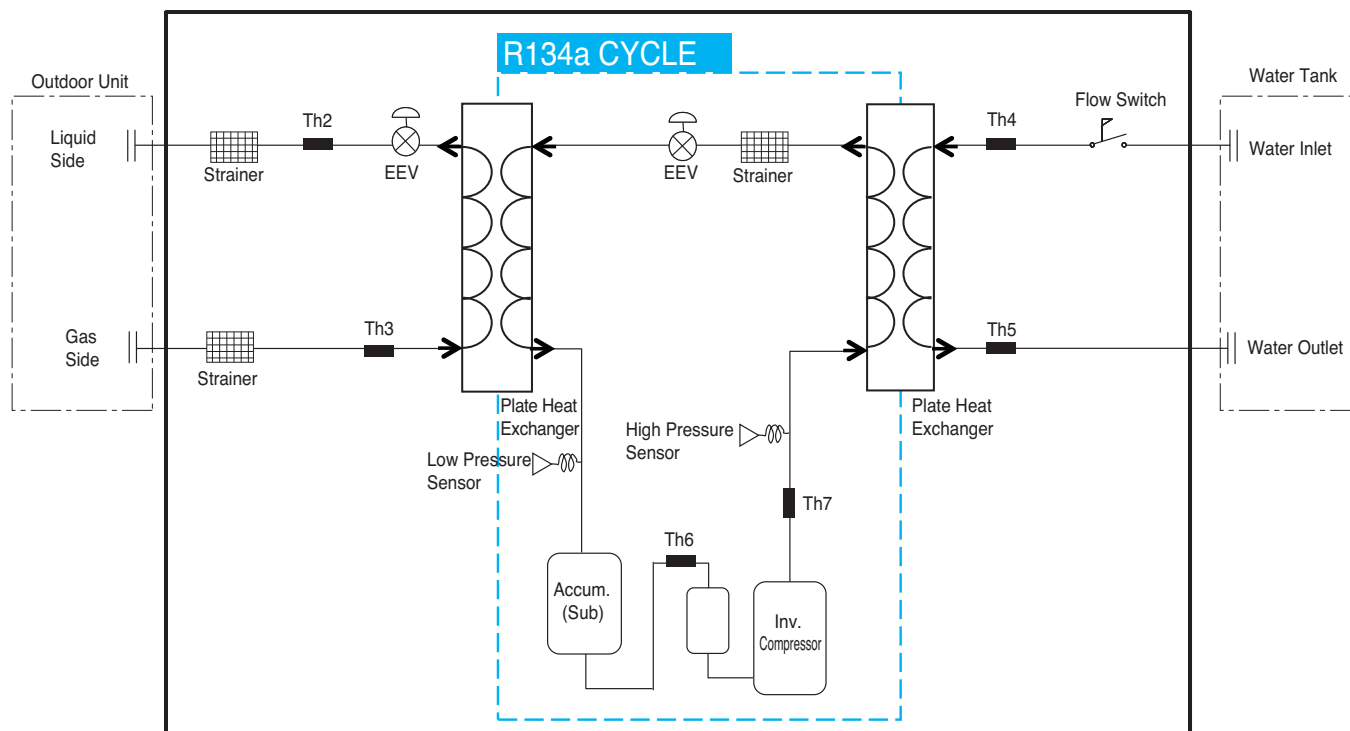
ARNH08GK3A2



4. Cycle Diagram

As is Hydro Kit (For High Temperature), there are three different fluids cycling inside the system : one is R134a refrigerant, the other R410A refrigerant, another is water. These cycles are shown below.

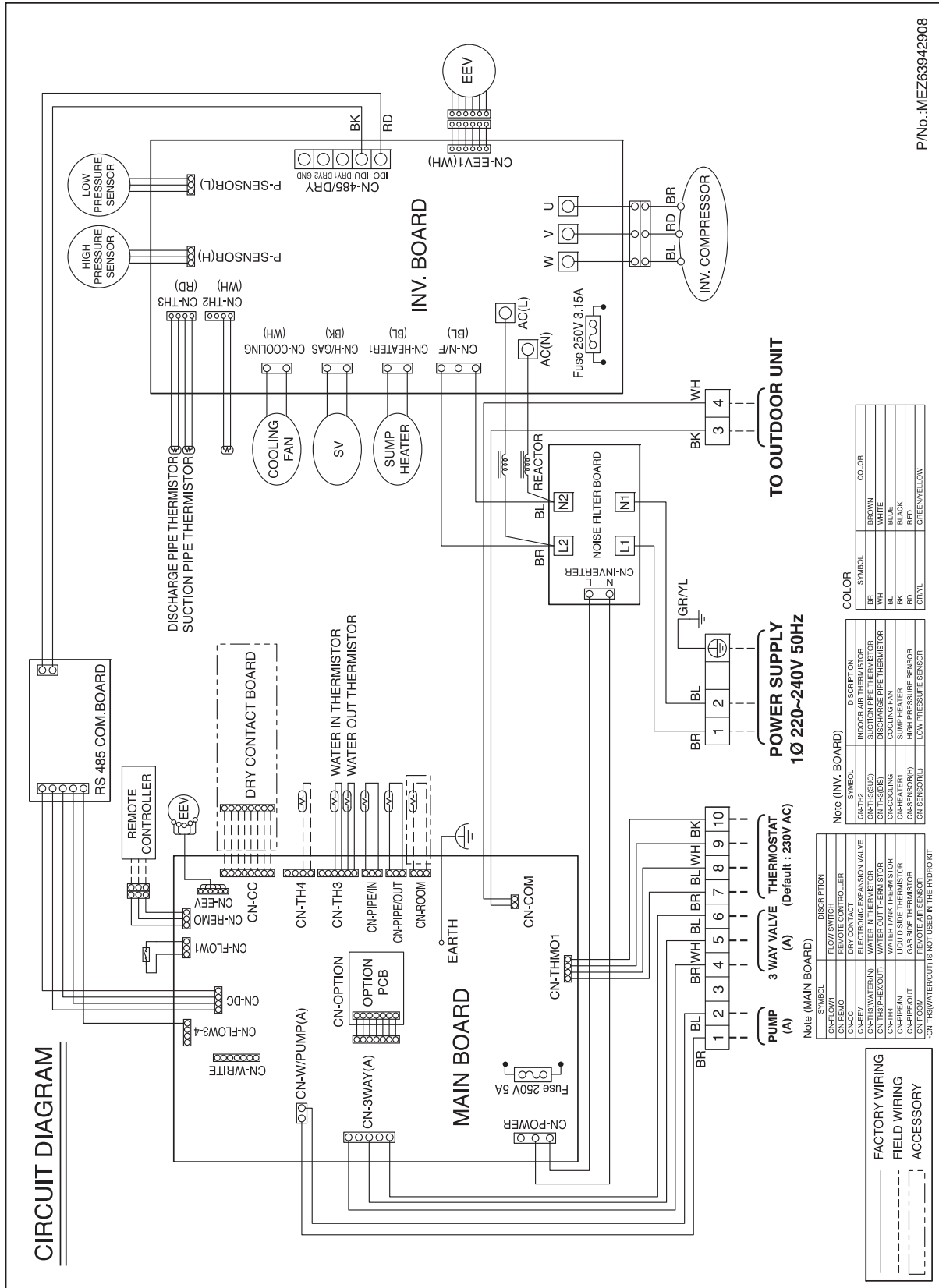
Hydro Kit (For High Temperature)



Symbol	Description	PCB Connector	Remarks
Th1	Air Temperature Sensor	CN-ROOM (Main PCB)	*Optional accessory (being sold separately) *Not shown in diagram
Th2	Liquid Side Temperature Sensor	CN-PIPE/IN (Main PCB)	
Th3	Gas Side Temperature Sensor	CN-PIPE/OUT (Main PCB)	
Th4	Water Inlet Temperature Sensor	CN-TH3 (Main PCB)	*Th4 and Th5 are connected to 4 pin type connector CN-TH3(Black)
Th5	Water Outlet Temperature Sensor		
Th6	Suction Pipe Temperature Sensor	CN-TH3 (Inverter PCB)	* Th6 and Th7 are connected to 4 pin type connector CN-TH3(Red)
Th7	Discharge Pipe Temperature Sensor		
Th8	Inside Air Temperature Sensor	CN-TH2 (Inverter PCB)	*Not shown in diagram

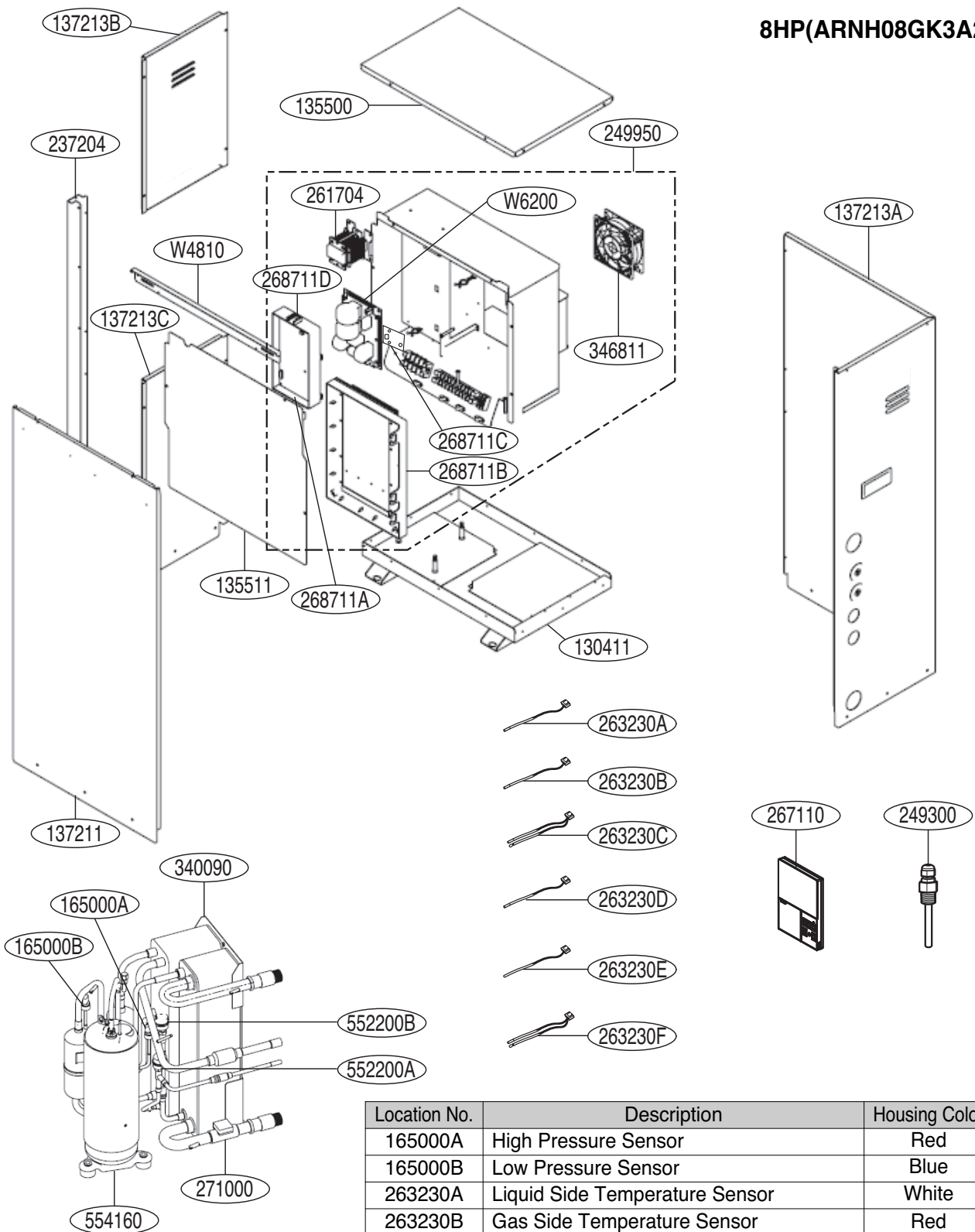
5. Wiring Diagram

ARNH04GK3A2(4HP)



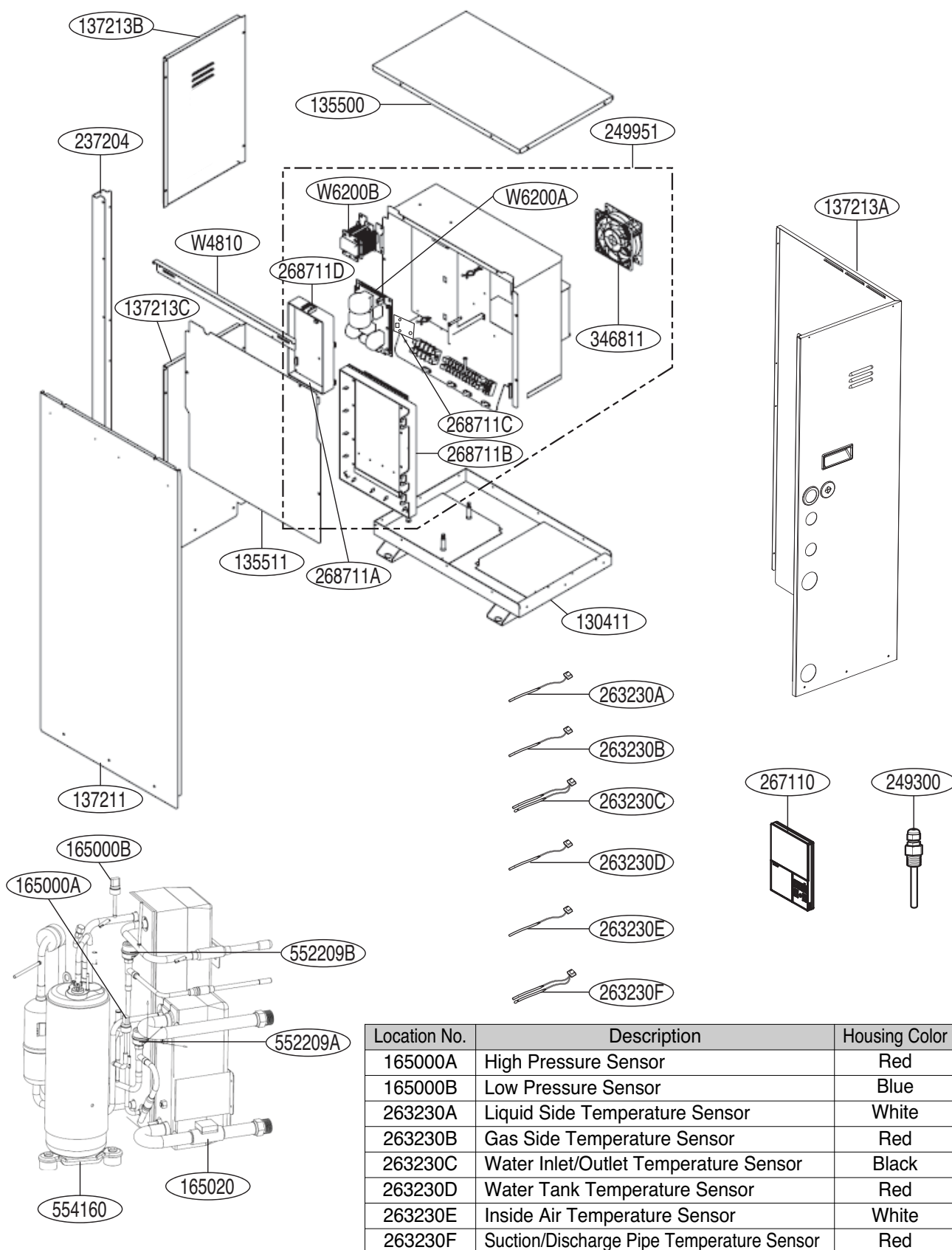
6. Exploded View

8HP(ARNH08GK3A2)



Location No.	Description	Housing Color
165000A	High Pressure Sensor	Red
165000B	Low Pressure Sensor	Blue
263230A	Liquid Side Temperature Sensor	White
263230B	Gas Side Temperature Sensor	Red
263230C	Water Inlet/Outlet Temperature Sensor	Black
263230D	Water Tank Temperature Sensor	Red
263230E	Inside Air Temperature Sensor	White
263230F	Suction/Discharge Pipe Temperature Sensor	Red

4HP(ARNH04GK3A2)



Location No.	Description	Housing Color
165000A	High Pressure Sensor	Red
165000B	Low Pressure Sensor	Blue
263230A	Liquid Side Temperature Sensor	White
263230B	Gas Side Temperature Sensor	Red
263230C	Water Inlet/Outlet Temperature Sensor	Black
263230D	Water Tank Temperature Sensor	Red
263230E	Inside Air Temperature Sensor	White
263230F	Suction/Discharge Pipe Temperature Sensor	Red



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