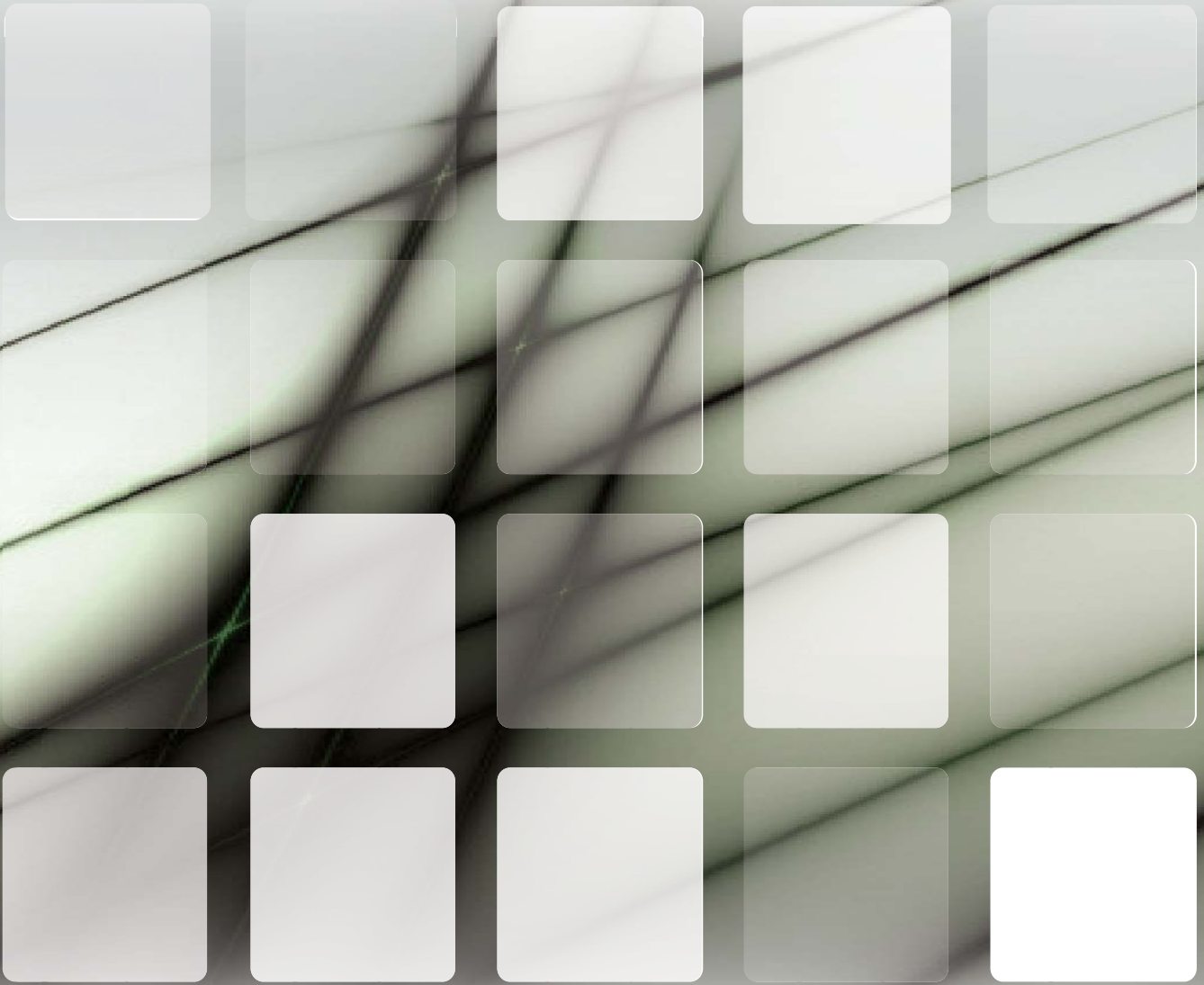


VEHP(HA) Series

High Static Pressure VRF

Technical Manual

220-240V/1/60Hz

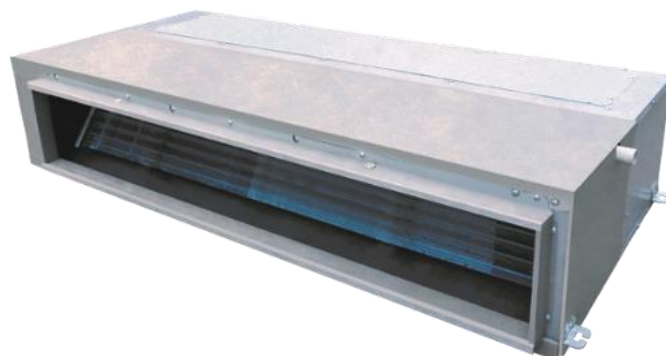


Content

1. External Appearance.....	
2. Specifications	
3. Dimensions	
4. Service Space	
5. Piping Diagram	
6. Wiring Diagram	
7. Capacity Table	
8. Electric Characteristics	
9. Operation sound levels	
10. Accessories	
11. Exploded view	

1. External appearance

- VEHP024Q2A-GCV071, VEHP027Q2A-GCV080, VEHP031Q2A-GCV090



- VEHP035Q2A-GCV100, VEHP040Q2A-GCV120, VEHP060Q2A-GCV160



- VEHP070Q2A-GCV200, VEHA085Q2A-GCV250, VEHA096Q2A-GCV280



2. Specifications

Model			VEHP024Q2A-GCV071	VEHP027Q2A-GCV080	VEHP031Q2A-GCV090
Power supply			220-240V/1PH/60Hz	220-240V/1PH/60Hz	220-240V/1PH/60Hz
Capacity	Cooling	kW	7.1	8	9
	Heating	kW	7.8	8.8	10.0
Power Input		kW	0.4	0.4	0.4
Fan motor	Model		YDK110-75F-4P2H105L-1 YSK120-150F-4P2H105-1	YDK110-75F-4P2H105L-1 YSK120-150F-4P2H105-1	YDK110-75F-4P2H105L-1 YSK120-150F-4P2H105-1
	Type		AC	AC	AC
	Brand		Kangbao	Kangbao	Kangbao
	Input	W	375	375	375
	Capacitor	μF	3+6	3+6	3+6
	Speed (Hi/Med/Low)	r/min	1380/1300/1200 1360/1290/1200	1380/1300/1200 1360/1290/1200	1380/1300/1200 1360/1290/1200
	ESP	Pa	150	150	150
Indoor coil	Number of rows		3	3	3
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and	mm	Ø7.94, Innergroove tube	Ø7.94, Innergroove tube	Ø7.94, Innergroove tube
Air flow (High speed)		m ³ /h	1500	1500	1500
Sound power level		dB(A)	40~42	40~42	40~42
Body	Dimension (W×H×D)	mm	1445×260×680	1445×260×680	1445×260×680
	Packing (W×H×D)	mm	1480×320×720	1480×320×720	1480×320×720
	Net/Gross weight	kg	46/50	46/50	46/50
Refrigerant type			R410A	R410A	R410A
Throttle type			EXV	EXV	EXV
Design pressure		MPa	3.8	3.8	3.8
Liquid pipe / Gas pipe		mm	Ø9.53/ Ø15.9	Ø9.53/ Ø15.9	Ø9.53/ Ø15.9
Connecting wire	Power wire	AWG	16	16	16
	Signal wire	AWG	22	22	22
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25
Controller	Standard		Wired controller	Wired controller	Wired controller
	Optional		Remote controller	Remote controller	Remote controller
Operation temp		°C	16~32	16~32	16~32

Notes:

- 1) Nominal cooling capacities are based on the following conditions.
 - Outdoor temperature: 35°C DB
 - Return air temperature: 27°C DB, 19°C WB
 - Equivalent piping length: 8m in horizontal
- 2) Nominal heating capacities are based on the following condition.
 - Outdoor temperature: 7°C DB, 6°C WB
 - Return air temperature: 20°C DB
 - Equivalent piping length: 8m in horizontal
- 3) Sound pressure level: Semi-anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.4 m.
- 4) The above data may be changed without notice for future improvement on quality and performance.

Model			VEHP035Q2A-GCV100	VEHP040Q2A-GCV120	VEHP060Q2A-GCV160
Power supply			220-240V/1PH/60Hz	220-240V/1PH/60Hz	220-240V/1PH/60Hz
Capacity	Cooling	kW	10	12	15
	Heating	kW	11.0	13.0	17.0
Power Input		kW	0.7	0.7	0.7
Fan motor	Model		YSK139-300F-4P2H95	YSK139-300F-4P2H95	YSK139-300F-4P2H95
	Type		AC	AC	AC
	Brand		Kangbao	Kangbao	Kangbao
	Input	W	750	750	750
	Capacitor	μF	15	15	15
	Speed (Hi/Med/Low)	r/min	1050/900/800	1050/900/800	1050/900/800
	ESP	Pa	150	150	150
Indoor coil	Number of rows		3	3	3
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and type	mm	Ø7.94, Innergroove tube	Ø7.94, Innergroove tube	Ø7.94, Innergroove tube
Air flow (High speed)		m ³ /h	2300	2300	2300
Sound power level		dB(A)	44~52	44~52	44~52
Body	Dimension (W×H×D)	mm	1190×370×620	1190×370×620	1190×370×620
	Packing (W×H×D)	mm	1480×320×720	1480×320×720	1480×320×720
	Net/Gross weight	kg	47/51	47/51	47/51
Refrigerant type			R410A	R410A	R410A
Throttle type			EXV	EXV	EXV
Design pressure		MPa	3.8	3.8	3.8
Liquid pipe / Gas pipe		mm	Ø9.53/ Ø15.9	Ø9.53/ Ø15.9	Ø9.53/ Ø15.9
Connecting wire	Power wire	AWG	16	16	16
	Signal wire	AWG	22	22	22
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25
Controller	Standard		Wired controller	Wired controller	Wired controller
	Optional		Remote controller	Remote controller	Remote controller
Operation temp		°C	16~32	16~32	16~32

Notes:

- 1) Nominal cooling capacities are based on the following conditions.
 - Outdoor temperature: 35°C DB
 - Return air temperature: 27°C DB, 19°C WB
 - Equivalent piping length: 8m in horizontal
- 2) Nominal heating capacities are based on the following condition.
 - Outdoor temperature: 7°C DB, 6°C WB
 - Return air temperature: 20°C DB
 - Equivalent piping length: 8m in horizontal
- 3) Sound pressure level: Semi-anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.4 m.
- 4) The above data may be changed without notice for future improvement on quality and performance.

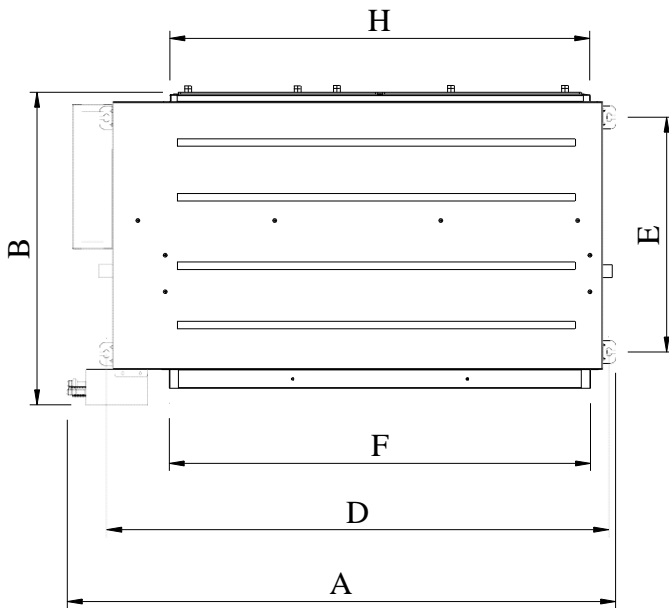
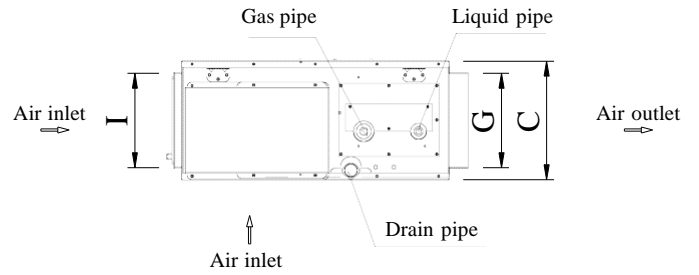
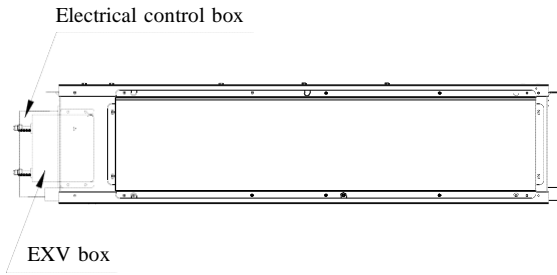
Model			VEHA070Q2A-GCV200	VEHA085Q2A-GCV250	VEHA096Q2A-GCV280
Power supply			220-240V/1PH/60Hz	220-240V/1PH/60Hz	220-240V/1PH/60Hz
Capacity	Cooling	kW	20	25	28
	Heating	kW	22.0	27.5	30.8
Power Input		kW	1.200	1.200	1.200
Fan motor	Model		YDK-300F-4P2 *2	YDK-300F-4P2 *2	YDK-300F-4P2 *2
	Type		AC	AC	AC
	Brand		Yongan	Yongan	Yongan
	Input	W	1500	1500	1500
	Capacitor	μF	15+15	15+15	15+15
	Speed (Hi/Med/Low)	r/min	(1030/900/800)*2	(1030/900/800)*2	(1030/900/800)*2
	ESP	Pa	150	150	150
Indoor coil	Number of rows		4	4	4
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and type	mm	Ø9.52, Innergroove tube	Ø9.52, Innergroove tube	Ø9.52, Innergroove tube
Air flow (High speed)		m³/h	4000	4200	4400
Sound power level		dB(A)	45~53	45~54	45~55
Body	Dimension (W×H×D)	mm	1465×448×811	1465×448×811	1465×448×811
	Packing (W×H×D)	mm	1510×490×870	1510×490×870	1510×490×870
	Net/Gross weight	kg	102/106	102/106	102/106
Refrigerant type			R410A	R410A	R410A
Throttle type			EXV	EXV	EXV
Design pressure		MPa	3.8	3.8	3.8
Liquid pipe / Gas pipe		mm	Ø22/Ø12.7	Ø22/Ø12.7	Ø22/Ø12.7
Connecting wire	Power wire	AWG	16	16	16
	Signal wire	AWG	22	22	22
Drainage water pipe (Outer diameter)		mm	Ø30	Ø30	Ø30
Controller	Standard		Wired controller	Wired controller	Wired controller
	Optional		Remote controller	Remote controller	Remote controller
Operation temp		°C	16~32	16~32	16~32

Notes:

- 1) Nominal cooling capacities are based on the following conditions.
 - Outdoor temperature: 35°C DB
 - Return air temperature: 27°C DB, 19°C WB
 - Equivalent piping length: 8m in horizontal
- 2) Nominal heating capacities are based on the following condition.
 - Outdoor temperature: 7°C DB, 6°C WB
 - Return air temperature: 20°C DB
 - Equivalent piping length: 8m in horizontal
- 3) Sound pressure level: Semi-anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.4 m.
- 4) The above data may be changed without notice for future improvement on quality and performance.

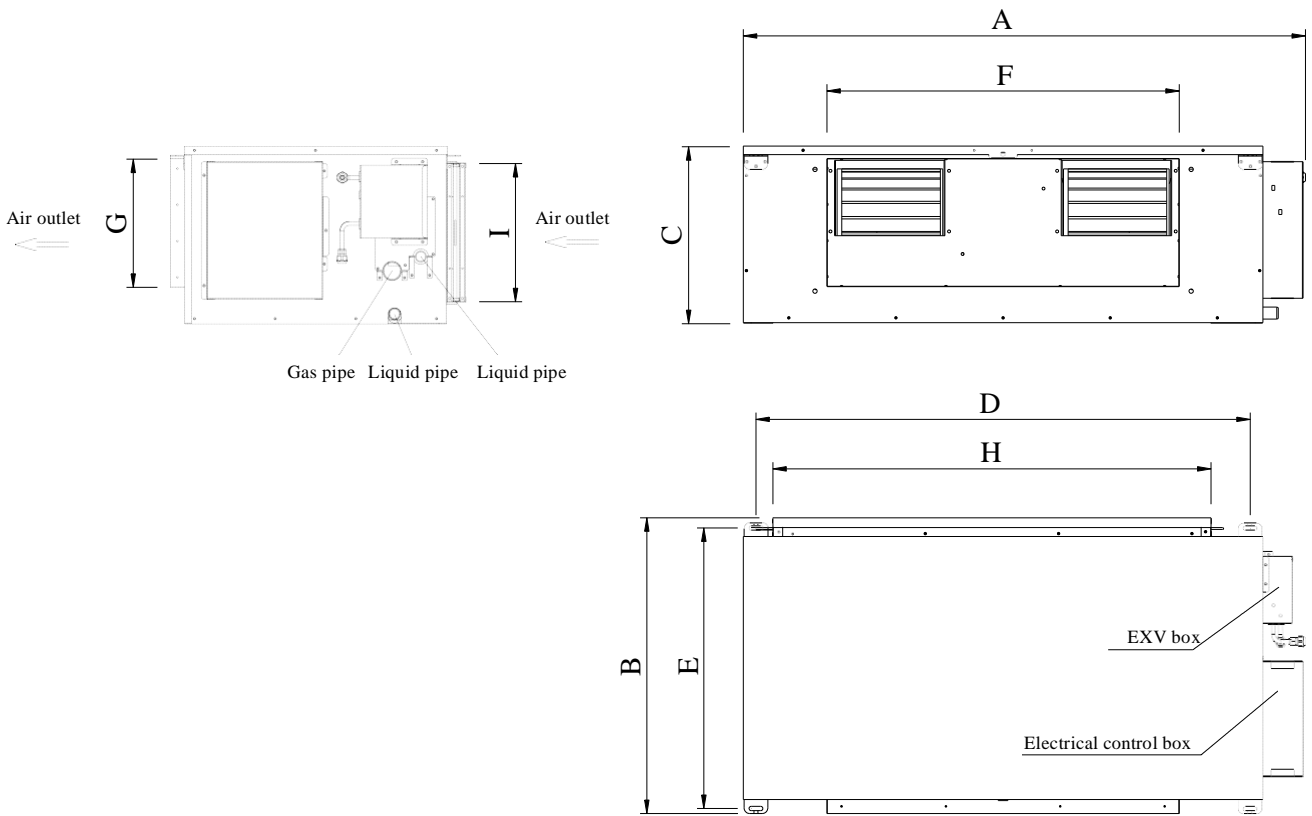
3. Dimensions

- VEHP024Q2A-GCV071, VEHP027Q2A-GCV080, VEHP031Q2A-GCV090



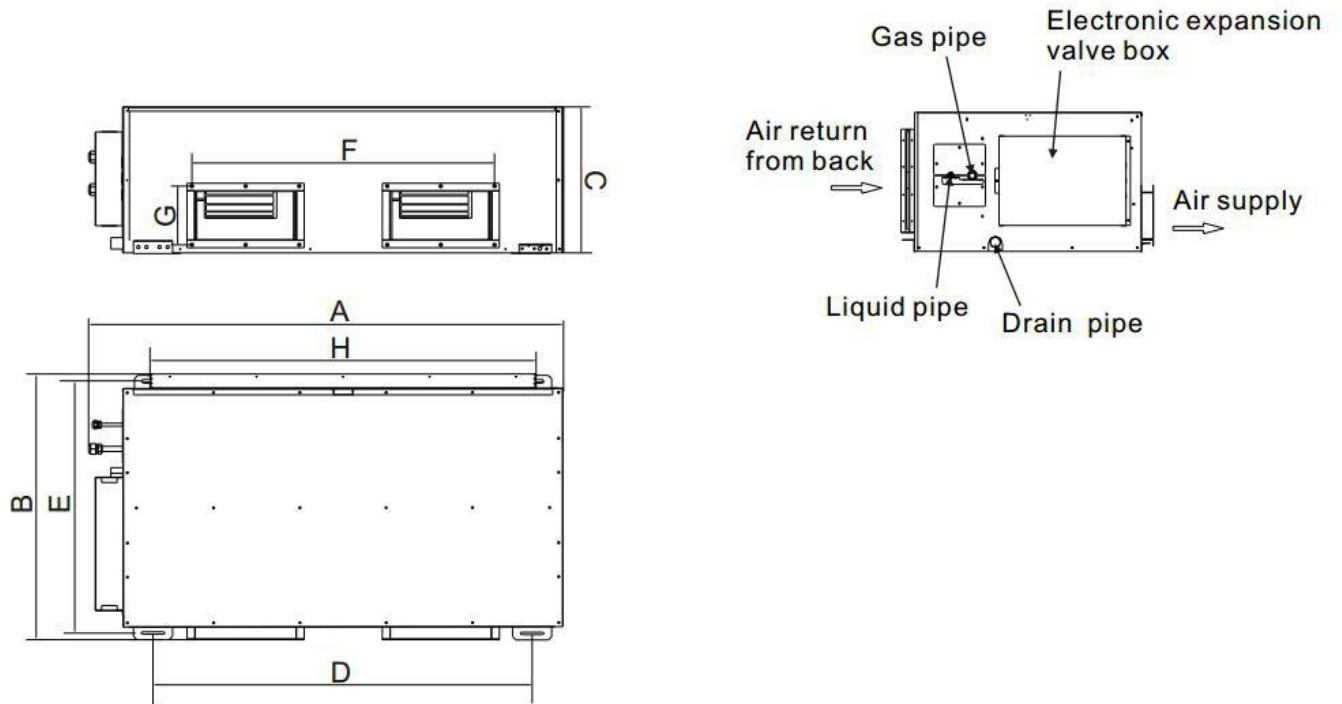
Mode	Body dimension(mm)			Installation dimension (mm)		Air outlet dimension (mm)		Air return dimension (mm)	
	A	B	C	D	E	F	G	H	I
VEHP024Q2A-GCV071	1445	680	260	1101	515	920	197	920	207
VEHP027Q2A-GCV080	1445	680	260	1101	515	920	197	920	207
VEHP031Q2A-GCV090	1445	680	260	1101	515	920	197	920	207

- VEHP035Q2A-GCV100, VEHP040Q2A-GCV120, VEHP060Q2A-GCV160



Mode	Body dimension(mm)			Installation dimension (mm)		Air outlet dimension (mm)		Air return dimension (mm)	
	A	B	C	D	E	F	G	H	I
VEHP035Q2A-GCV100	1190	620	370	1038	588	740	267	920	290
VEHP040Q2A-GCV120	1190	620	370	1038	588	740	267	920	290
VEHP060Q2A-GCV160	1190	620	370	1038	588	740	267	920	290

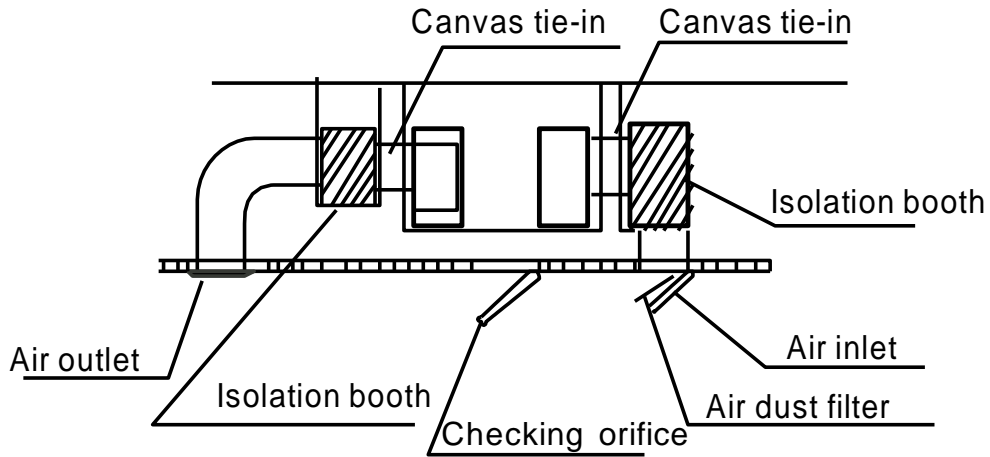
- VEHP070Q2A-GCV200, VEHA085Q2A-GCV250, VEHA096Q2A-GCV280



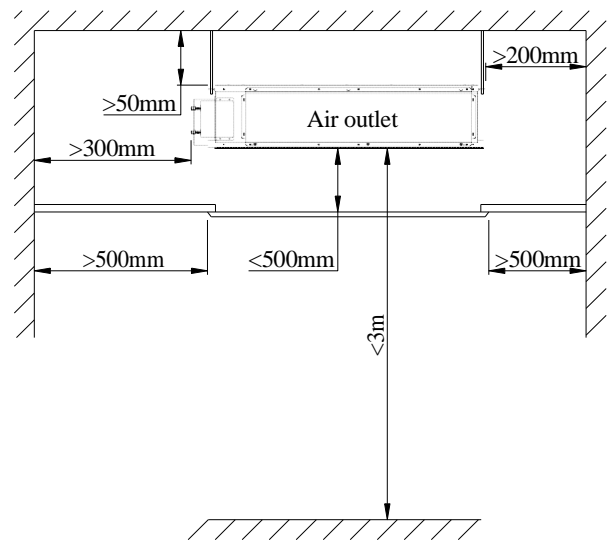
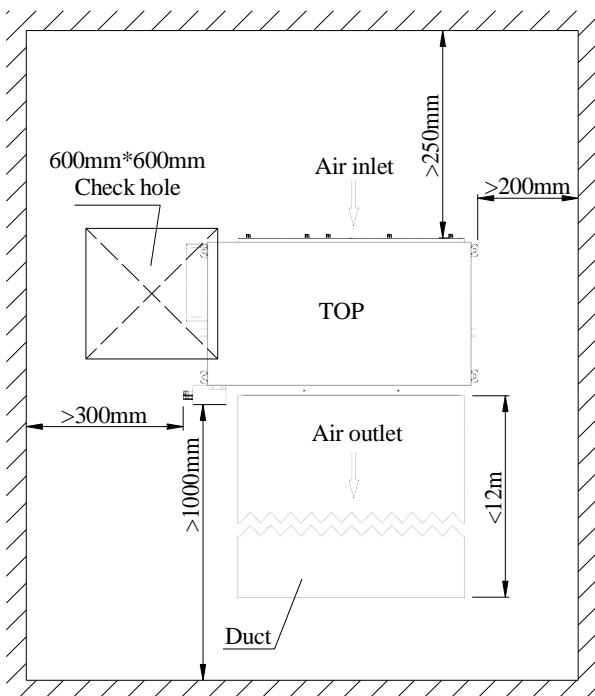
Mode	Body dimension(mm)			Installation dimension (mm)		Air outlet dimension (mm)		Air return dimension (mm)	
	A	B	C	D	E	F	G	H	I
VEHA070Q2A-GCV200	1465	811	448	1162	771	930	180	1174	272
VEHA085Q2A-GCV250	1465	811	448	1162	771	930	180	1174	272
VEHA096Q2A-GCV280	1465	811	448	1162	771	930	180	1174	272

4. Service space

- Ensure the needed spaces for installation and maintenance.
- The ceiling is horizontal and its structure can endure the weight of the indoor unit.
- The outlet and the inlet are not impeded, and the influence of external air is the least.
- The air flow can reach throughout the room.
- The connecting pipe and drainpipe could be extracted out easily.
- There is no direct radiation from heaters.
- Below is the recommended duct installation method:

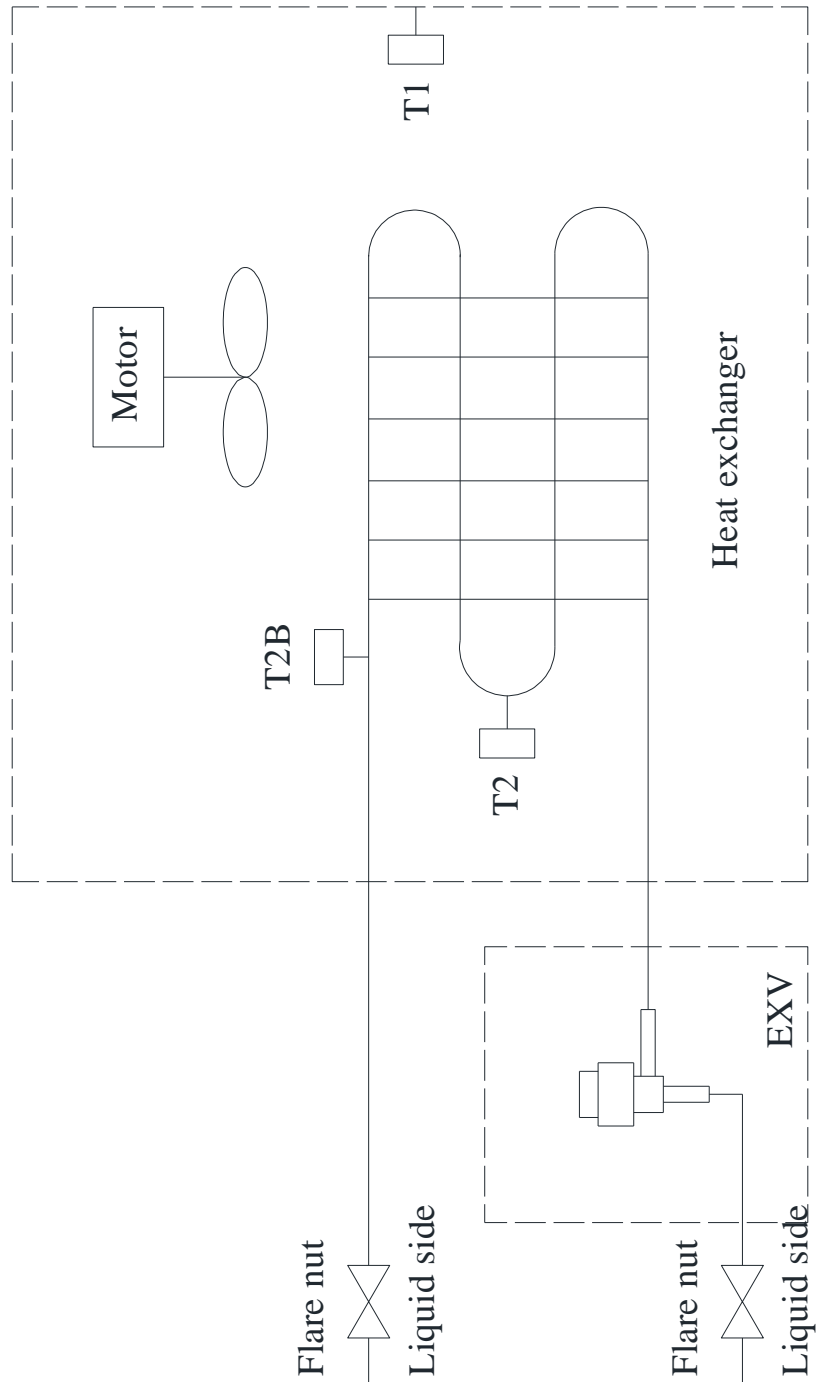


- Keep minimum 600*600 space for checking and maintenance:



5. Piping diagram

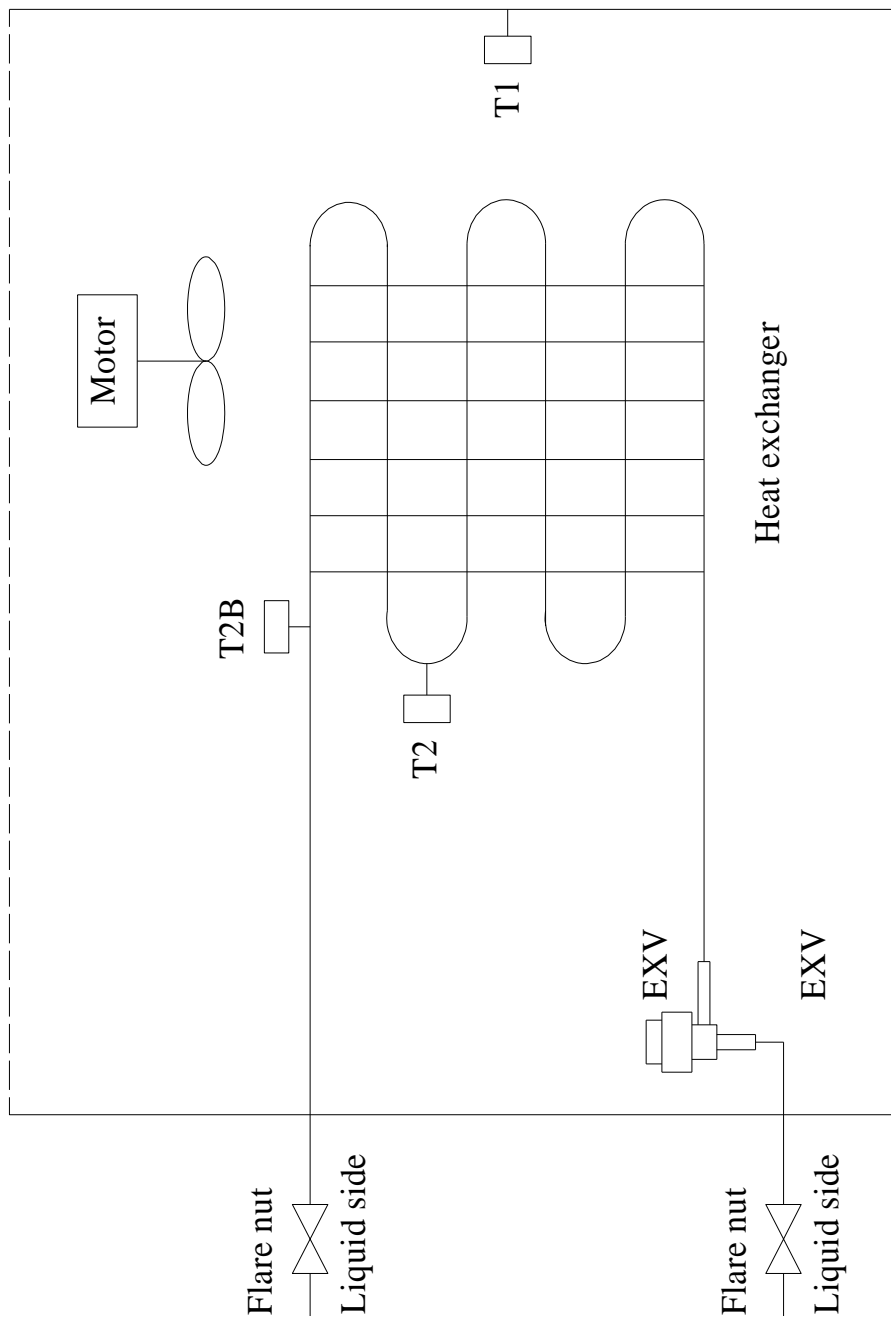
- VEHP024Q2A-GCV071, VEHP027Q2A-GCV080, VEHP031Q2A-GCV090, VEHP035Q2A-GCV100, VEHP040Q2A-GCV120, VEHP060Q2A-GCV160



Notes:

- 1) T1: Room temperature sensor
- 2) T2: Temperature sensor of middle heat exchanger
- 3) T2B: Temperature sensor of heat exchanger outlet
- 4) EXV: Electrical expansion valve

- VEHA070Q2A-GCV200, VEHA085Q2A-GCV250, VEHA096Q2A-GCV280



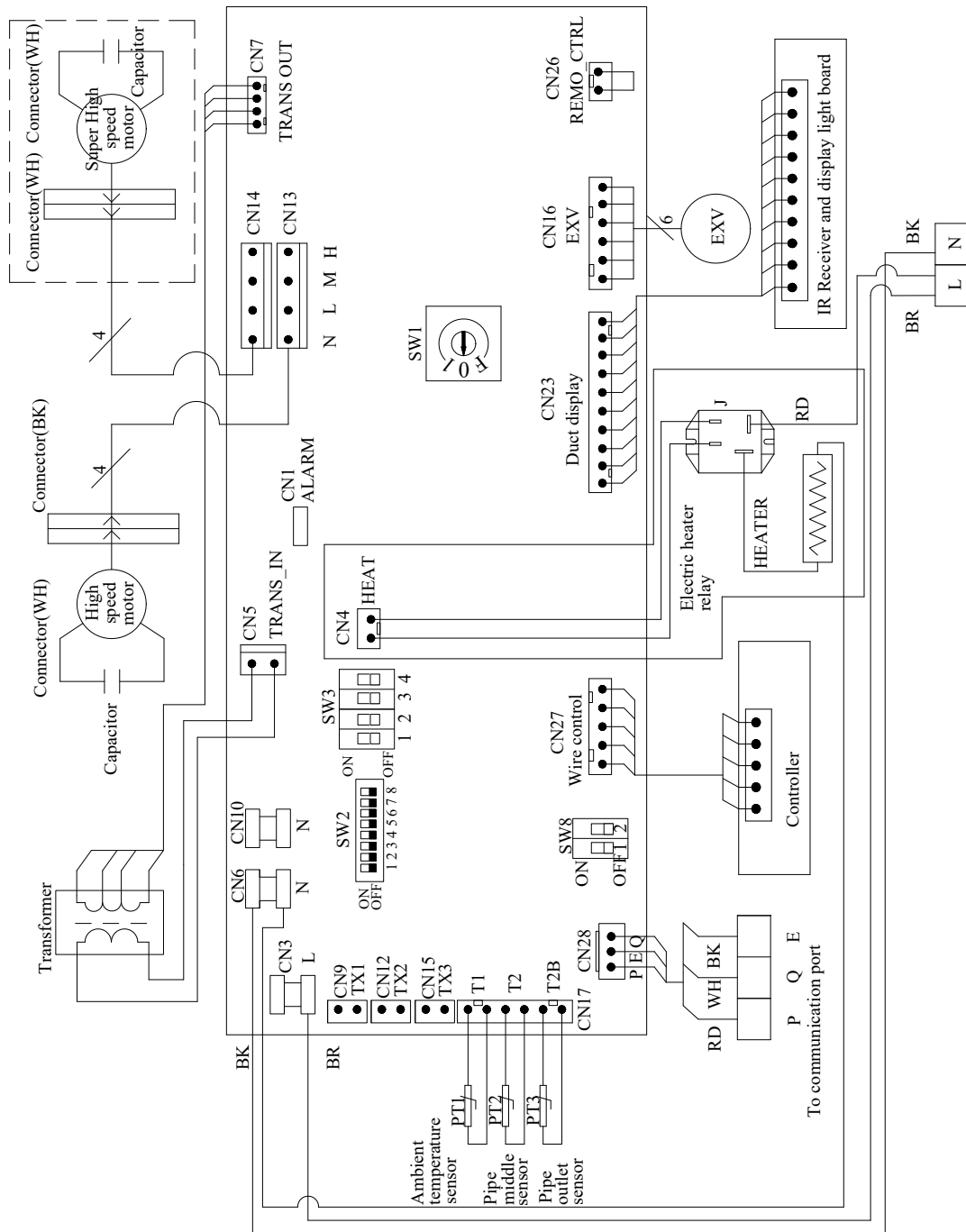
Notes:

- 1) T1: Room temperature sensor
- 2) T2: Temperature sensor of middle heat exchanger
- 3) T2B: Temperature sensor of heat exchanger outlet
- 4) EXV: Electrical expansion valve

6. Wiring diagram

7.1 Wiring diagram

- VEHP024Q2A-GCV071, VEHP027Q2A-GCV080, VEHP031Q2A-GCV090



Notes:

1) Color code:

RD: Red; OR: Orange; BK: Black; BR: Brown; WH: White

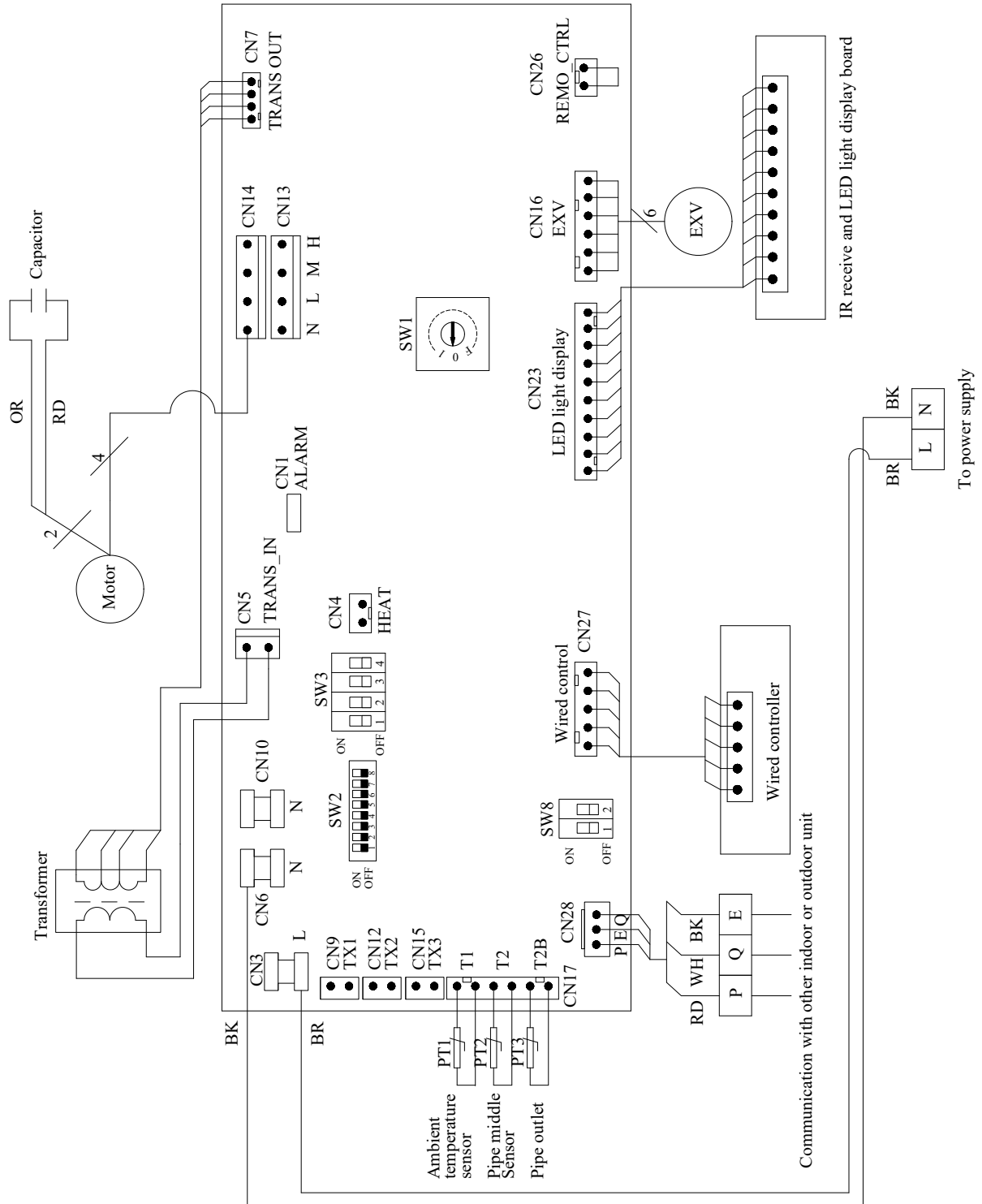
2) T1: Room temperature sensor

3) T2: Temperature sensor of middle heat exchanger

4) T2B: Temperature sensor of heat exchanger outlet

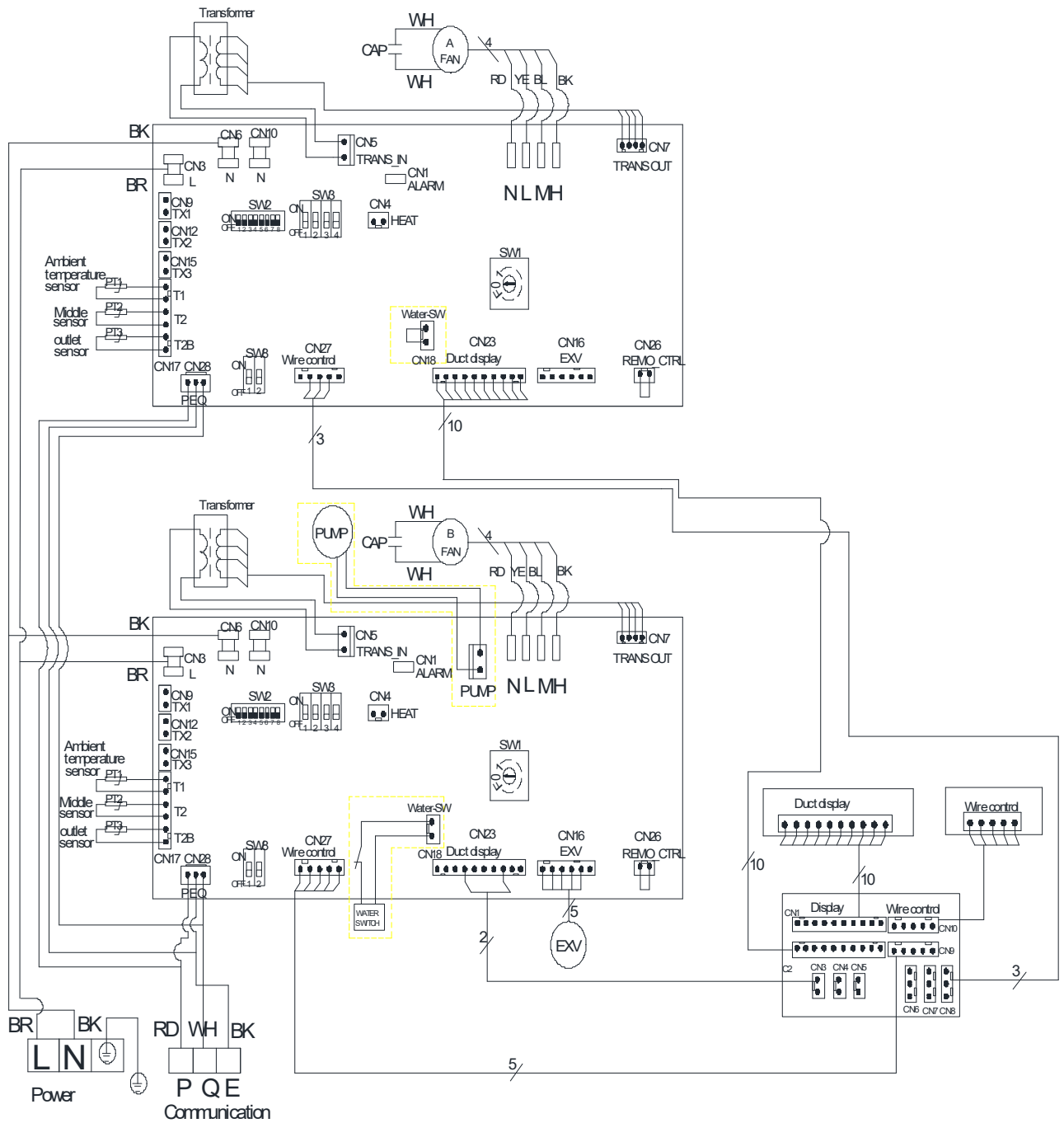
5) EXV: Electrical expansion valve

6) Electrical heater is optional, please contact to Chigo's technician for the detail.



Notes:

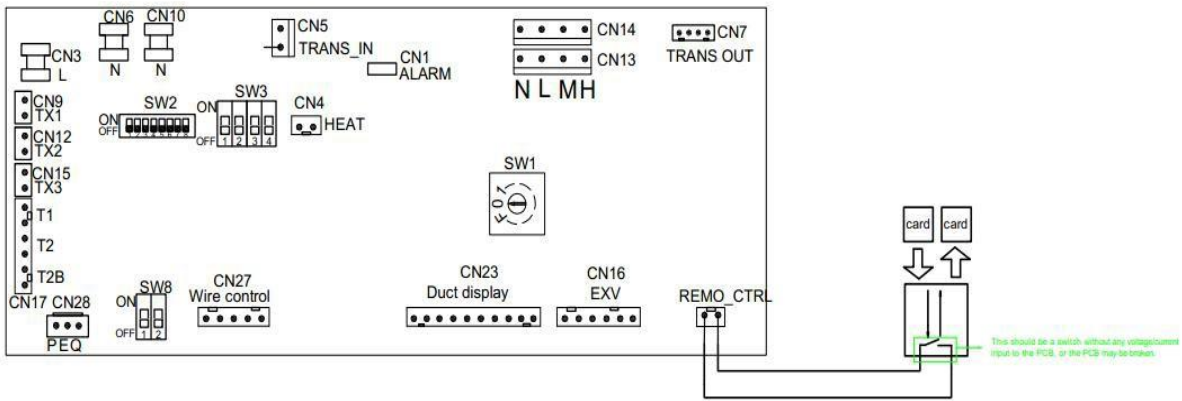
- 1) Color code:
RD: Red; OR: Orange; BK: Black; BR: Brown; WH: White
- 2) T1: Room temperature sensor
- 3) T2: Temperature sensor of middle heat exchanger
- 4) T2B: Temperature sensor of heat exchanger outlet
- 5) EXV: Electrical expansion valve
- 6) Electrical heater is optional, please contact to Chigo's technician for the detail.



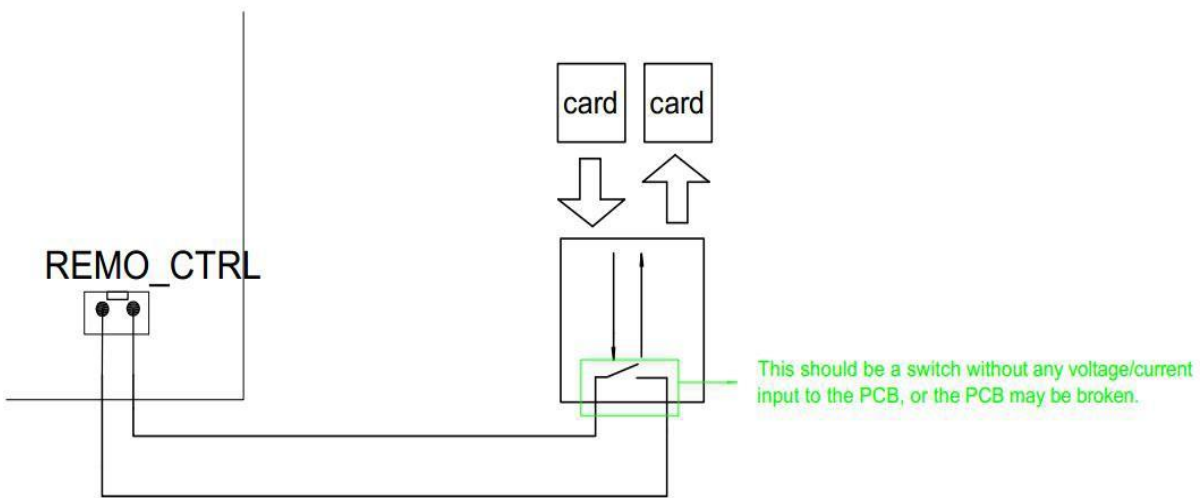
Notes:

- 1) Color code:
RD: Red; OR: Orange; BK: Black; BR: Brown; WH: White
- 2) T1: Room temperature sensor
- 3) T2: Temperature sensor of middle heat exchanger
- 4) T2B: Temperature sensor of heat exchanger outlet
- 5) EXV: Electrical expansion valve
- 6) Electrical heater is optional, please contact to Chigo's technician for the detail.

OMEGA VRF indoor unit connect with card key



Connect the remote control terminal on the indoor PCB to the hotel card module.

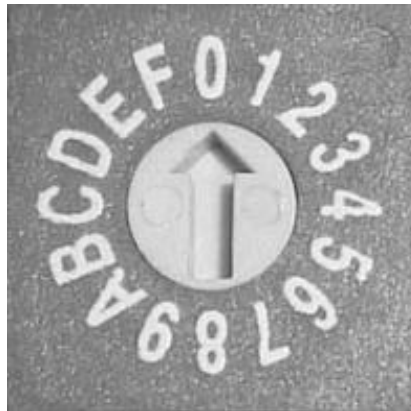


NOTE: The terminal in the hotel card module must be a switch without any voltage/current input to the PCB, otherwise the PCB will be broken.

7.2 Dial switches

7.2.1 SW1: Capacity switch.

Different number in the switch indicates different capacity. It is set in factory; leave it as default setting.





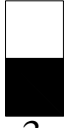





HP	0.8	1	1.2	1.7	2	2.5
Capacity (kW)	1.8/2.2	2.5/2.6/2.8	3.2/3.5/3.6	4.1/4.5/4.6	5.1/5.6	6.0/6.6/7.1
Code	0	1	2	3	4	5











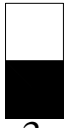
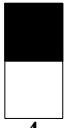


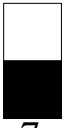







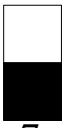



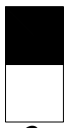





HP	3	3.2	4	5	6
Capacity (kW)	8.0	8.8/9.0	10.0/11.0/11.2	12.0/12.5/14.0	15.0/16.0
Code	6	7	8	9	9

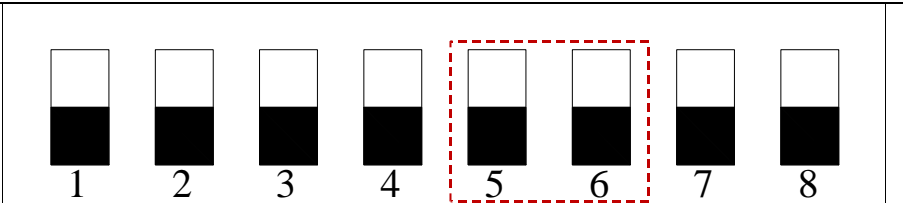
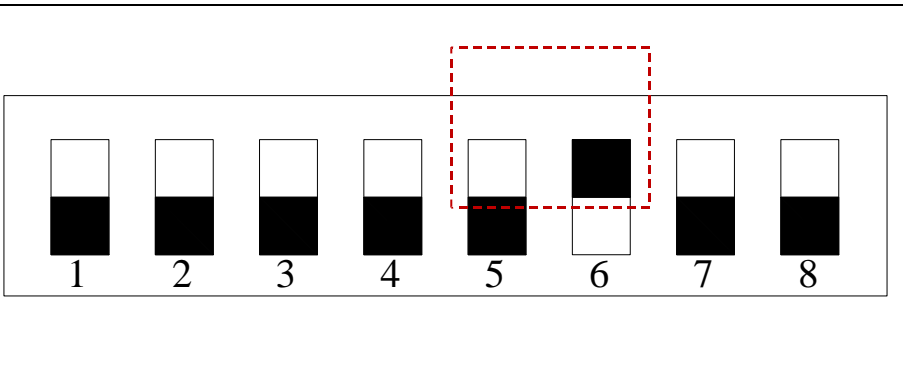
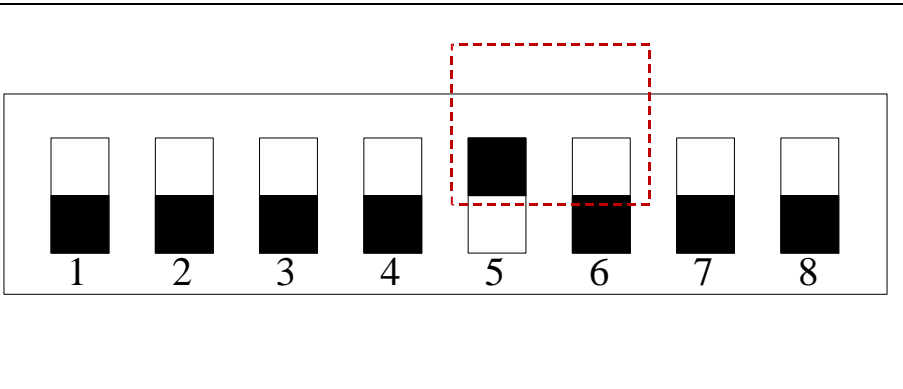
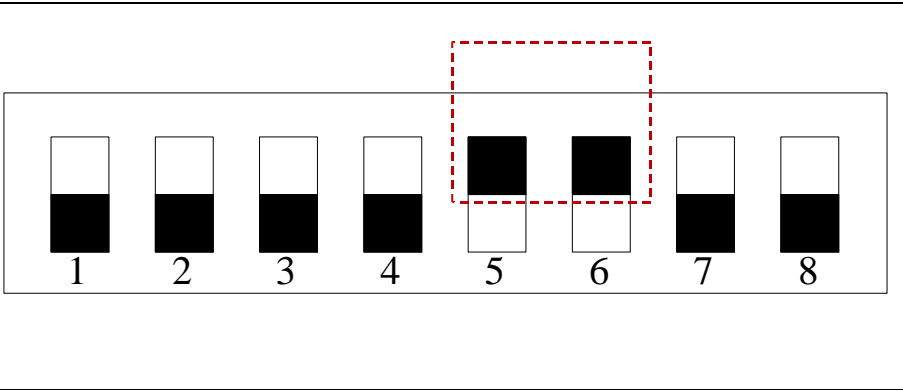
7.2.2 SW3

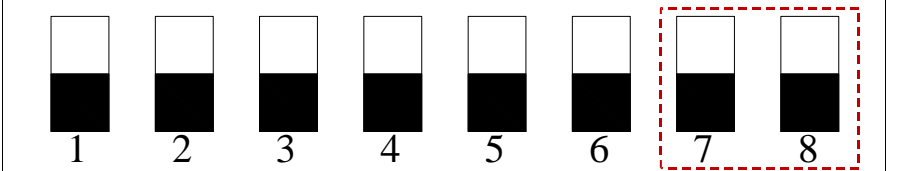
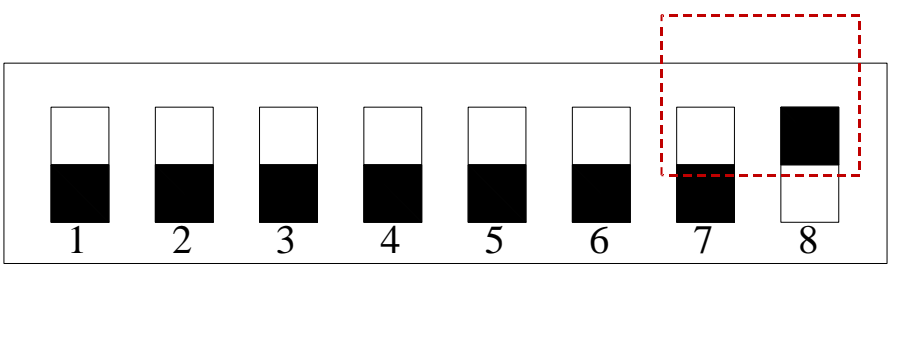
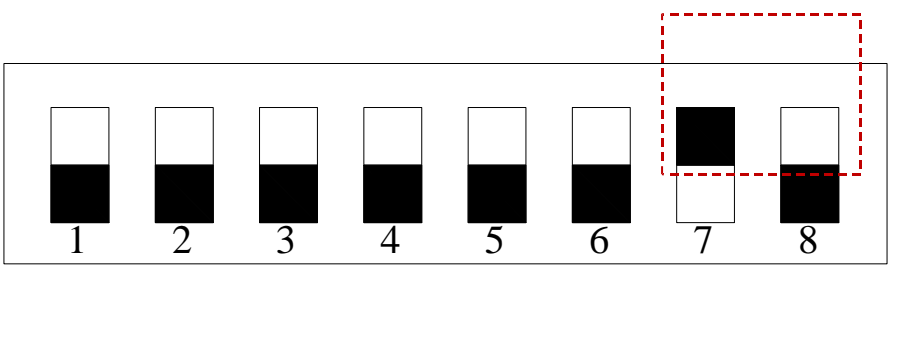
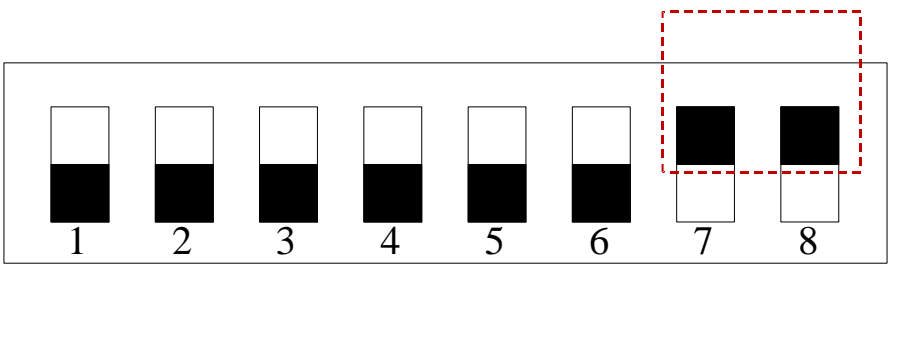
Name	Switch number 1 of SW3	Switch number 4 of SW3	Switch number 2,3 of SW3
Function	Auto-restart when power failure switch. ON/OFF status, operation mode, fan speed, temperature, swing, remote control locked will be recovered.	Indoor unit address elimination	Reserved
Setting	<p>Dial up to disable Auto-restart function</p>	<p>Dial up to erase indoor unit's address.</p>	<p>Default setting</p>
	<p>Dial down to enable Auto-restart function (Default setting)</p>	<p>Default setting</p>	

7.2.3 SW2, only available in heating mode.

Name	Switch number 1,2 of SW2									
Function	Reserved									
Setting										Default setting

Name	Switch number 3,4 of SW2									
Function	<ul style="list-style-type: none"> ● Heating temperature compensation value selection. When temperature difference between setting temperature and room temperature is higher than the setting value, indoor fan motor turns off. ● DO NOT change the default setting without professional guidance. 									
Setting	ON									6 °C Default setting
	OFF									
	ON									2 °C
	OFF									
	ON									4 °C
	OFF									
	ON									8 °C
	OFF									

Name	Switch number 5,6 of SW2		
Function	<ul style="list-style-type: none"> ● Temperature selection of turning off fan motor in anti-cold-wind-blow mode. When indoor heat exchanger temperature is lower than the setting value, indoor fan motor turns off. ● DO NOT change the default setting without professional guidance. 		
Setting	ON OF		15 °C Default setting
	ON OF F		20 °C
	ON OF F		24 °C
ON OF F		26 °C	

Name	Switch number 7,8 of SW2		
Function	<ul style="list-style-type: none"> Indoor fan motor stopping gap selection in heating mode. When room temperature gets to (set point + temperature value in Switch number 3,4 of SW2), at this moment indoor unit capacity requirement is 0, indoor fan motor turns off for 4 minutes (this stopping duration time can be changed by below setting). After that indoor fan will run in low speed for 1 minute (this timing is fixed), if indoor unit capacity requirement is still 0, then indoor fan motor keeps off for 4 minutes, and then cycles. DO NOT change the default setting without professional guidance. 		
Setting	ON OF		4 minutes Default setting
	ON OFF		8 minutes
	ON OFF		12 minutes
	ON OF F		16 minutes

SW8, reserved, leave it as default setting (both switches dial down).

8.2 Heating

TC: Total Capacity WB: Wet-bulb Temperature DB: Dry-bulb Temperature

Capacity (kW)	Outdoor temperature (°C)		Indoor temperature (°C)					
			16	18	20	21	22	24
			TC	TC	TC	TC	TC	TC
	WB	DB	kW	kW	kW	kW	kW	kW
7.1	-20	-19.8	4.48	4.48	4.48	4.48	4.48	4.48
	-19	-18.8	4.80	4.80	4.80	4.80	4.80	4.80
	-17	-16.7	5.04	5.04	5.04	5.04	5.04	5.04
	-15	-14.7	5.20	5.20	5.20	5.20	5.20	5.20
	-13	-12.6	5.36	5.36	5.36	5.36	5.36	5.36
	-11	-10.5	5.60	5.60	5.60	5.60	5.60	5.60
	-10	-9.5	5.84	5.84	5.84	5.84	5.84	5.84
	-9.1	-8.5	6.00	6.00	6.00	6.00	6.00	6.00
	-7.6	-7	6.08	6.08	6.08	6.08	6.08	6.08
	-5.6	-5	6.32	6.32	6.32	6.32	6.32	6.32
	-3.7	-3	6.64	6.64	6.64	6.64	6.64	6.64
	-0.7	0	7.12	7.12	7.12	7.12	7.12	6.72
	2.2	3	7.52	7.52	7.52	7.52	7.36	6.72
	4.1	5	7.76	7.76	7.76	7.76	7.36	6.72
	6	7	8.00	8.00	7.80	7.76	7.36	6.72
	7.9	9	8.24	8.24	7.80	7.76	7.36	6.72
	9.8	11	8.48	8.48	7.80	7.76	7.36	6.72
11.8	13	8.80	8.64	7.80	7.76	7.36	6.72	
13.7	15	9.04	8.64	7.80	7.76	7.36	6.72	
8	-20	-19.8	5.04	5.04	5.04	5.04	5.04	5.04
	-19	-18.8	5.40	5.40	5.40	5.40	5.40	5.40
	-17	-16.7	5.67	5.67	5.67	5.67	5.67	5.67
	-15	-14.7	5.85	5.85	5.85	5.85	5.85	5.85
	-13	-12.6	6.03	6.03	6.03	6.03	6.03	6.03
	-11	-10.5	6.30	6.30	6.30	6.30	6.30	6.30
	-10	-9.5	6.57	6.57	6.57	6.57	6.57	6.57
	-9.1	-8.5	6.75	6.75	6.75	6.75	6.75	6.75
	-7.6	-7	6.84	6.84	6.84	6.84	6.84	6.84
	-5.6	-5	7.11	7.11	7.11	7.11	7.11	7.11
	-3.7	-3	7.47	7.47	7.47	7.47	7.47	7.47
	-0.7	0	8.01	8.01	8.01	8.01	8.01	7.56
	2.2	3	8.46	8.46	8.46	8.46	8.28	7.56
	4.1	5	8.73	8.73	8.73	8.73	8.28	7.56
	6	7	9.00	9.00	8.80	8.73	8.28	7.56
	7.9	9	9.27	9.27	8.80	8.73	8.28	7.56
	9.8	11	9.54	9.54	8.80	8.73	8.28	7.56
11.8	13	9.90	9.72	8.80	8.73	8.28	7.56	
13.7	15	10.17	9.72	8.80	8.73	8.28	7.56	
9	-20	-19.8	5.60	5.04	5.60	5.60	5.60	5.60
	-19	-18.8	6.00	5.40	6.00	6.00	6.00	6.00
	-17	-16.7	6.30	6.30	6.30	6.30	6.30	6.30
	-15	-14.7	6.50	6.50	6.50	6.50	6.50	6.50
	-13	-12.6	6.70	6.70	6.70	6.70	6.70	6.70
	-11	-10.5	7.00	7.00	7.00	7.00	7.00	7.00
	-10	-9.5	7.30	7.30	7.30	7.30	7.30	7.30
	-9.1	-8.5	7.50	7.50	7.50	7.50	7.50	7.50
	-7.6	-7	7.60	7.60	7.60	7.60	7.60	7.60
	-5.6	-5	7.90	7.90	7.90	7.90	7.90	7.90
	-3.7	-3	8.30	8.30	8.30	8.30	8.30	8.30
	-0.7	0	8.90	8.90	8.90	8.90	8.90	8.40
	2.2	3	9.40	9.40	9.40	9.40	9.20	8.40
	4.1	5	9.70	9.70	9.70	9.70	9.20	8.40
	6	7	10.00	10.00	10.00	9.70	9.20	8.40
	7.9	9	10.30	10.30	10.00	9.70	9.20	8.40
	9.8	11	10.60	10.60	10.00	9.70	9.20	8.40
11.8	13	11.00	10.80	10.00	9.70	9.20	8.40	
13.7	15	11.30	10.80	10.00	9.70	9.20	8.40	

TC: Total Capacity WB: Wet-bulb Temperature DB: Dry-bulb Temperature

Capacity (kW)	Outdoor temperature (°C)		Indoor temperature (°C)					
			16	18	20	21	22	24
	WB	DB	TC kW	TC kW	TC kW	TC kW	TC kW	TC kW
10	-20	-19.8	6.25	6.25	6.25	6.25	6.25	6.25
	-19	-18.8	6.70	6.70	6.70	6.70	6.70	6.70
	-17	-16.7	7.04	7.04	7.04	7.04	7.04	7.04
	-15	-14.7	7.26	7.26	7.26	7.26	7.26	7.26
	-13	-12.6	7.48	7.48	7.48	7.48	7.48	7.48
	-11	-10.5	7.81	7.81	7.81	7.81	7.81	7.81
	-10	-9.5	8.15	8.15	8.15	8.15	8.15	8.15
	-9.1	-8.5	8.38	8.38	8.38	8.38	8.38	8.38
	-7.6	-7	8.48	8.48	8.48	8.48	8.48	8.48
	-5.6	-5	8.82	8.82	8.82	8.82	8.82	8.82
	-3.7	-3	9.27	9.27	9.27	9.27	9.27	9.27
	-0.7	0	9.94	9.94	9.94	9.94	9.94	9.38
	2.2	3	10.49	10.49	10.49	10.49	10.27	9.38
	4.1	5	10.83	10.83	10.83	10.83	10.27	9.38
	6	7	11.00	11.00	11.00	10.83	10.27	9.38
	7.9	9	11.50	11.50	11.00	10.83	10.27	9.38
9.8	11	11.83	11.83	11.00	10.83	10.27	9.38	
11.8	13	12.28	12.05	11.00	10.83	10.27	9.38	
13.7	15	12.62	12.05	11.00	10.83	10.27	9.38	
12	-20	-19.8	7.50	7.50	7.50	7.50	7.50	7.50
	-19	-18.8	8.04	8.04	8.04	8.04	8.04	8.04
	-17	-16.7	8.44	8.44	8.44	8.44	8.44	8.44
	-15	-14.7	8.71	8.71	8.71	8.71	8.71	8.71
	-13	-12.6	8.98	8.98	8.98	8.98	8.98	8.98
	-11	-10.5	9.38	9.38	9.38	9.38	9.38	9.38
	-10	-9.5	9.78	9.78	9.78	9.78	9.78	9.78
	-9.1	-8.5	10.05	10.05	10.05	10.05	10.05	10.05
	-7.6	-7	10.18	10.18	10.18	10.18	10.18	10.18
	-5.6	-5	10.59	10.59	10.59	10.59	10.59	10.59
	-3.7	-3	11.12	11.12	11.12	11.12	11.12	11.12
	-0.7	0	11.93	11.93	11.93	11.93	11.93	11.25
	2.2	3	12.59	12.59	12.59	12.59	12.32	11.25
	4.1	5	13.00	13.00	13.00	13.00	12.32	11.25
	6	7	13.39	13.39	13.00	13.00	12.32	11.25
	7.9	9	13.80	13.80	13.00	13.00	12.32	11.25
9.8	11	14.20	14.20	13.00	13.00	12.32	11.25	
11.8	13	14.73	14.46	13.00	13.00	12.32	11.25	
13.7	15	15.14	14.46	13.00	13.00	12.32	11.25	
15	-20	-19.8	9.20	9.20	9.20	9.20	9.20	9.20
	-19	-18.8	9.90	9.90	9.90	9.90	9.90	9.90
	-17	-16.7	10.40	10.40	10.40	10.40	10.40	10.40
	-15	-14.7	10.70	10.70	10.70	10.70	10.70	10.70
	-13	-12.6	11.40	11.40	11.40	11.40	11.40	11.40
	-11	-10.5	11.60	11.70	11.70	11.70	11.70	11.70
	-10	-9.5	12.00	12.00	12.00	12.00	12.00	12.00
	-9.1	-8.5	12.40	12.40	12.40	12.40	12.40	12.40
	-7.6	-7	12.50	12.50	12.50	12.50	12.50	12.50
	-5.6	-5	13.00	13.00	13.00	13.00	13.00	13.00
	-3.7	-3	13.70	13.70	13.70	13.70	13.70	13.70
	-0.7	0	14.70	14.70	14.70	14.70	14.70	13.90
	2.2	3	15.50	15.50	15.50	15.50	15.20	13.90
	4.1	5	17.00	17.00	17.00	16.50	15.20	13.90
	6	7	17.50	17.50	17.00	16.50	15.20	13.90
	7.9	9	18.00	18.00	17.00	16.50	15.20	13.90
9.8	11	18.50	18.50	17.00	16.50	15.20	13.90	
11.8	13	19.20	18.80	17.00	16.50	15.20	13.90	
13.7	15	19.60	18.80	17.00	16.50	15.20	13.90	

TC: Total Capacity WB: Wet-bulb Temperature DB: Dry-bulb Temperature

Capacity (kW)	Outdoor temperature (°C)		Indoor temperature (°C)					
			16	18	20	21	22	24
	WB	DB	TC	TC	TC	TC	TC	TC
20	-20	-19.8	12.60	12.60	12.60	12.60	12.60	12.60
	-19	-18.8	13.50	13.50	13.50	13.50	13.50	13.50
	-17	-16.7	14.20	14.20	14.20	14.20	14.20	14.20
	-15	-14.7	14.60	14.60	14.60	14.60	14.60	14.60
	-13	-12.6	15.50	15.50	15.50	15.50	15.50	15.50
	-11	-10.5	15.80	16.00	16.00	16.00	16.00	16.00
	-10	-9.5	16.40	16.40	16.40	16.40	16.40	16.40
	-9.1	-8.5	16.90	16.90	16.90	16.90	16.90	16.90
	-7.6	-7	17.10	17.10	17.10	17.10	17.10	17.10
	-5.6	-5	17.80	17.80	17.80	17.80	17.80	17.80
	-3.7	-3	18.70	18.70	18.70	18.70	18.70	18.70
	-0.7	0	20.00	20.00	20.00	20.00	20.00	18.90
	2.2	3	21.20	21.20	21.20	21.20	20.70	18.90
	4.1	5	21.80	21.80	21.80	21.80	20.70	18.90
	6	7	22.50	22.50	22.00	21.80	20.70	18.90
	25	-20	-19.8	14.56	14.56	14.56	14.56	14.56
-19		-18.8	15.60	15.60	15.60	15.60	15.60	15.60
-17		-16.7	16.38	16.38	16.38	16.38	16.38	16.38
-15		-14.7	16.90	16.90	16.90	16.90	16.90	16.90
-13		-12.6	17.94	17.94	17.94	17.94	17.94	17.94
-11		-10.5	18.20	18.46	18.46	18.46	18.46	18.46
-10		-9.5	18.98	18.98	18.98	18.98	18.98	18.98
-9.1		-8.5	19.50	19.50	19.50	19.50	19.50	19.50
-7.6		-7	19.76	19.76	19.76	19.76	19.76	19.76
-5.6		-5	20.54	20.54	20.54	20.54	20.54	20.54
-3.7		-3	21.58	21.58	21.58	21.58	21.58	21.58
-0.7		0	23.14	23.14	23.14	23.14	23.14	21.84
2.2		3	24.44	24.44	24.44	24.44	23.92	21.84
4.1		5	25.22	25.22	25.22	25.22	23.92	21.84
6		7	27.50	27.50	27.50	25.22	23.92	21.84
28		-20	-19.8	17.60	17.60	17.60	17.60	17.60
	-19	-18.8	18.90	18.90	18.90	18.90	18.90	18.90
	-17	-16.7	19.80	19.80	19.80	19.80	19.80	19.80
	-15	-14.7	20.50	20.50	20.50	20.50	20.50	20.50
	-13	-12.6	21.70	21.70	21.70	21.70	21.70	21.70
	-11	-10.5	22.10	22.40	22.40	22.40	22.40	22.40
	-10	-9.5	23.00	23.00	23.00	23.00	23.00	23.00
	-9.1	-8.5	23.60	23.60	23.60	23.60	23.60	23.60
	-7.6	-7	23.90	23.90	23.90	23.90	23.90	23.90
	-5.6	-5	24.90	24.90	24.90	24.90	24.90	24.90
	-3.7	-3	26.10	26.10	26.10	26.10	26.10	26.10
	-0.7	0	28.00	28.00	28.00	28.00	28.00	26.50
	2.2	3	29.60	29.60	29.60	29.60	29.00	26.50
	4.1	5	30.20	30.20	30.20	30.20	29.00	26.50
	6	7	30.80	30.80	30.80	30.20	29.00	26.50
	7.9	9	31.40	31.40	30.80	30.20	29.00	26.50
9.8	11	32.40	32.40	30.80	30.20	29.00	26.50	
11.8	13	33.70	33.00	30.80	30.20	29.00	26.50	

8. Electrical characteristics

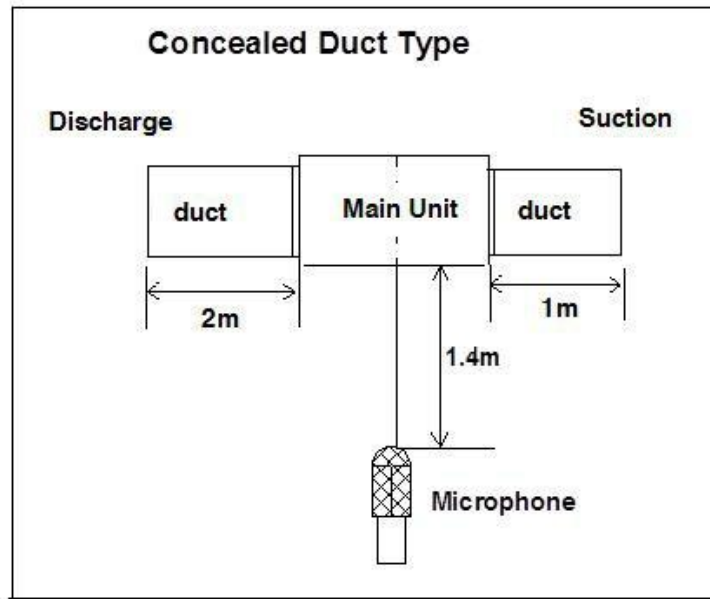
Model	Indoor unit				MFC	Power cable			Signal cable
	Hz	Voltage	Minimum	Maximum		L ≤ 20m	L ≤ 50m	Grounded	
VEHP024Q2A-GCV071	60Hz	220-240V	198	264	15	2*2.5mm ²	2*4.0mm ²	2.5mm ²	2*0.75 mm ²
VEHP027Q2A-GCV080	60Hz	220-240V	198	264	15	2*2.5mm ²	2*4.0mm ²	2.5mm ²	2*0.75 mm ²
VEHP031Q2A-GCV090	60Hz	220-240V	198	264	15	2*2.5mm ²	2*4.0mm ²	2.5mm ²	2*0.75 mm ²
VEHP035Q2A-GCV100	60Hz	220-240V	198	264	15	2*2.5mm ²	2*4.0mm ²	2.5mm ²	2*0.75 mm ²
VEHP040Q2A-GCV120	60Hz	220-240V	198	264	15	2*2.5mm ²	2*4.0mm ²	2.5mm ²	2*0.75 mm ²
VEHP060Q2A-GCV160	60Hz	220-240V	198	264	15	2*2.5mm ²	2*4.0mm ²	2.5mm ²	2*0.75 mm ²
VEHA070Q2A-GCV200	60Hz	220-240V	198	264	20	2*4.0mm ²	2*6.0mm ²	4.0mm ²	2*0.75 mm ²
VEHA085Q2A-GCV250	60Hz	220-240V	198	264	20	2*4.0mm ²	2*6.0mm ²	4.0mm ²	2*0.75 mm ²
VEHA096Q2A-GCV280	60Hz	220-240V	198	264	20	2*4.0mm ²	2*6.0mm ²	4.0mm ²	2*0.75 mm ²

Notes:

- 1) *Minimum: Permitted minimum operating voltage, lower than this value may damage the system*
- 2) *Maximum: Permitted maximum operating voltage, higher than this value may damage the system*
- 3) *MC: Minimum Current (A)*
- 4) *MFC: Maximum Fuse Current (A)*
- 5) *Output: Fan motor rated power Output (W)*
- 6) *FLC: Full Load Current (A)*

9. Sound levels

10.1 Test condition



Notes:

Semi-anechoic chamber conversion value, measured at a point 1m in front of the unit at a height of 1.4m

10.2 Test data (Sound pressure level)








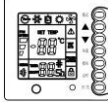
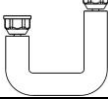
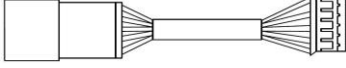
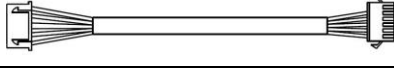

Model	Sound pressure level (dB(A))		
	High speed	Medium speed	Low speed
VEHP024Q2A-GCV071	42	41	40
VEHP027Q2A-GCV080	42	41	40
VEHP031Q2A-GCV090	42	41	40
VEHP035Q2A-GCV100	52	48	44
VEHP040Q2A-GCV120	52	48	44
VEHP060Q2A-GCV160	52	48	44
VEHA070Q2A-GCV200	53	49	45
VEHA085Q2A-GCV250	54	49	45
VEHA096Q2A-GCV280	54	49	45

Notes:

During actual operation, these values are normally somewhat higher as a result of ambient conditions.

10. Accessories

11.1 Standard accessories.

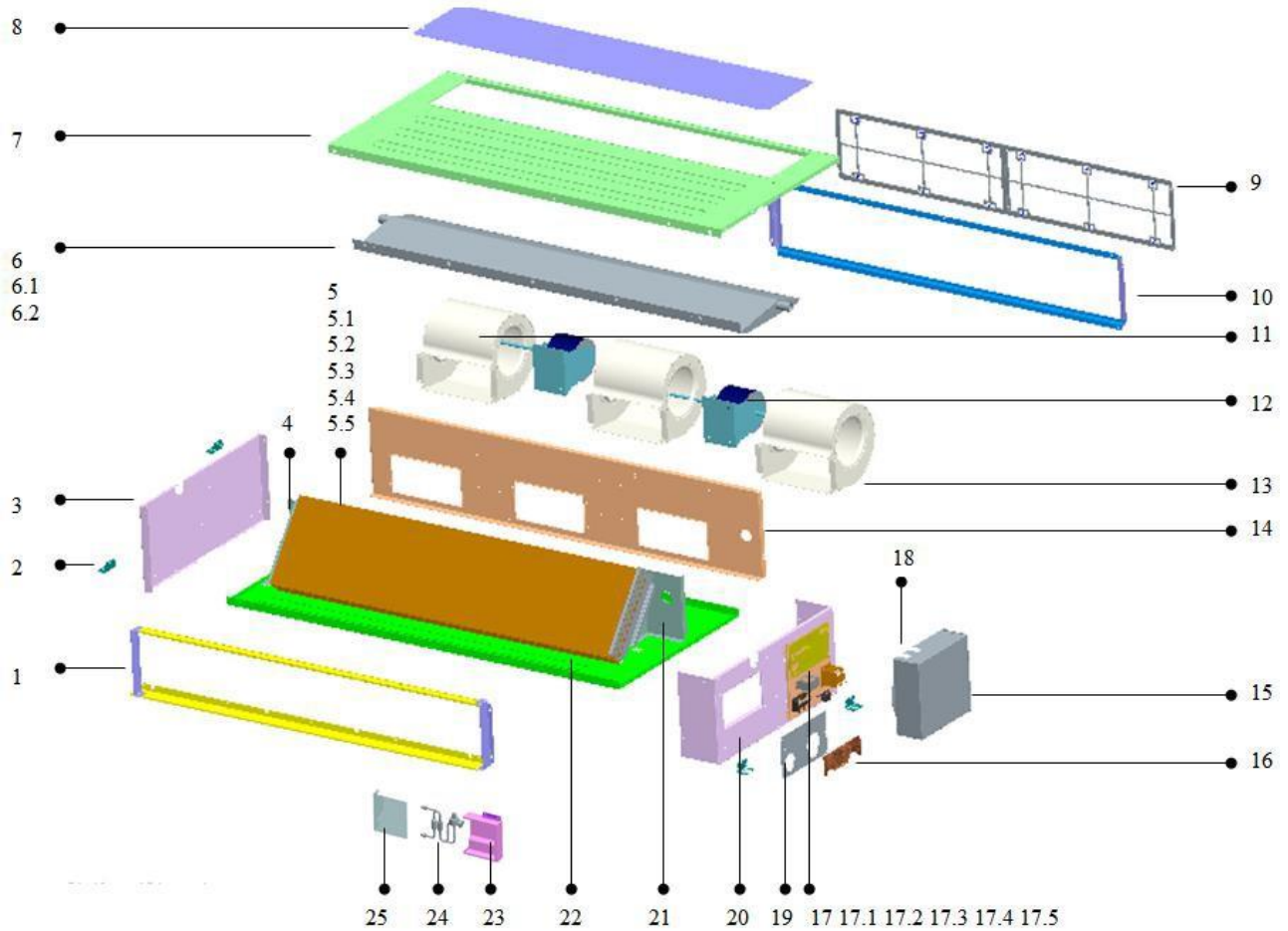
Item	Quantity	Shape	Usage
Installation manual for indoor unit	1	/	Must deliver to customer
Insulation sheath	2		Thermal insulation for the jointing part of piping
Strapping tapes	6		Bind up the wires and pipes
Round shape insulation termination points	6		For wiring
U shape insulation termination points	3		For wiring
Connection pipe	2		Connect the 2 gas pipe outlets and 2 liquid pipe outlets, only for 20kW,25kW, 28kW ducted unit
Remote controller	1		For controlling indoor unit, only for 20kW,25kW, 28kW ducted unit
Batteries	2		Power to remote controller
Wired controller	1		For controlling indoor unit, only for the ducted unit of 16kW and below
EXV connection pipe	1		Connecting with EXV box and indoor unit liquid pipe
Wired controller connection wire group	1		For connecting wired controller to indoor PCB
Wired controller connection wire group	1		For connecting wired controller to indoor PCB
Bag	3		For bagging accessories

11.2 Local buy accessories.

Item	Specification		
	7.1kW~8.0kW	9.0kW~15.0kW	20.0kW~28.0kW
Liquid side copper pipe	Ø9.53mm*0.75mm		Ø12.7mm*0.75mm
Gas side copper pipe	Ø15.9mm*1.0mm	Ø19.1mm*1.0mm	Ø22.2mm*1.0mm
Drainage pipe	PVC		
Pipe insulation	Thickness ≥ 10mm		
Power cables	2*2.5 mm ² (When total cable length is ≤20m) 2*4.0 mm ² (When total cable length is ≤50m)		
Grounded cable	2.5 mm ²		
Signal cables	2*0.75 mm ² (AVP, RVP, RVVP)		

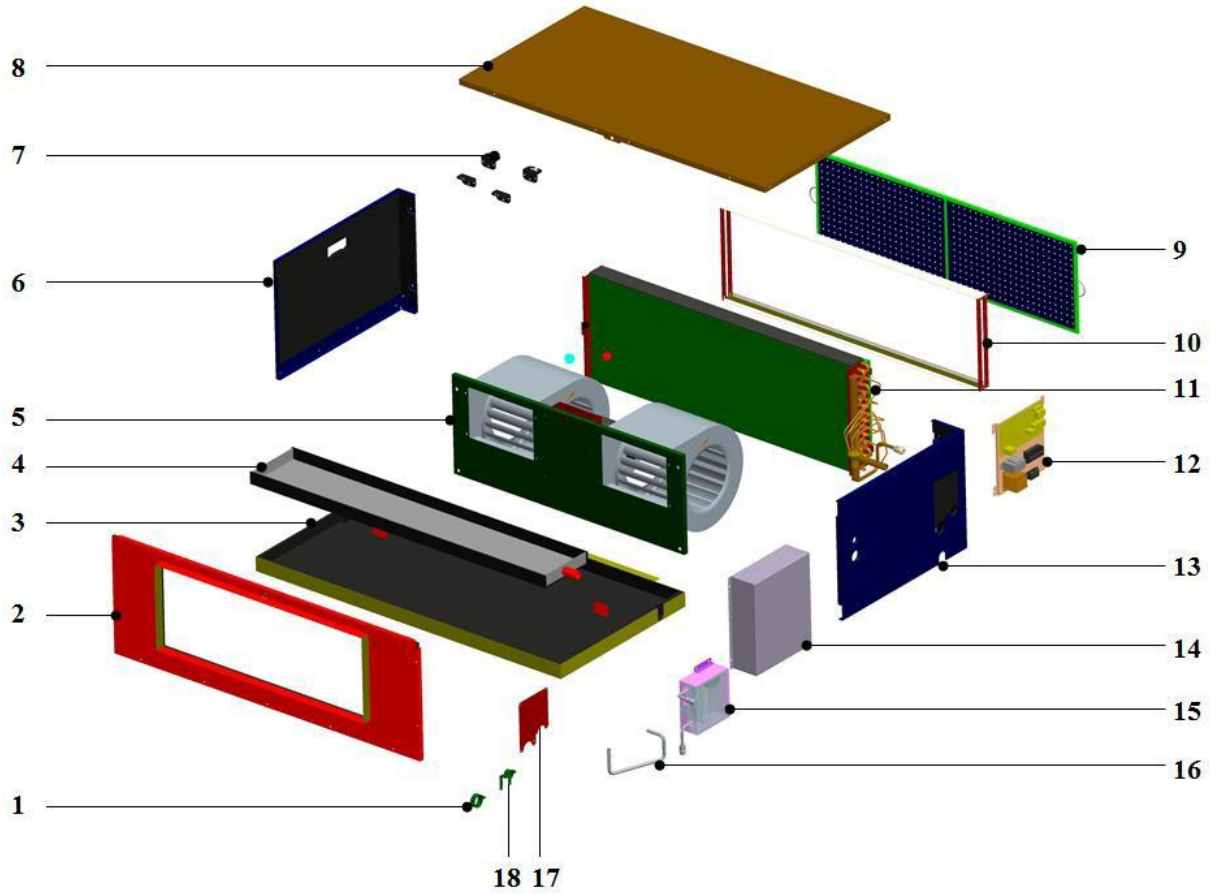
11. Exploded view

- VEHP024Q2A-GCV071, VEHP027Q2A-GCV080, VEHP031Q2A-GCV090



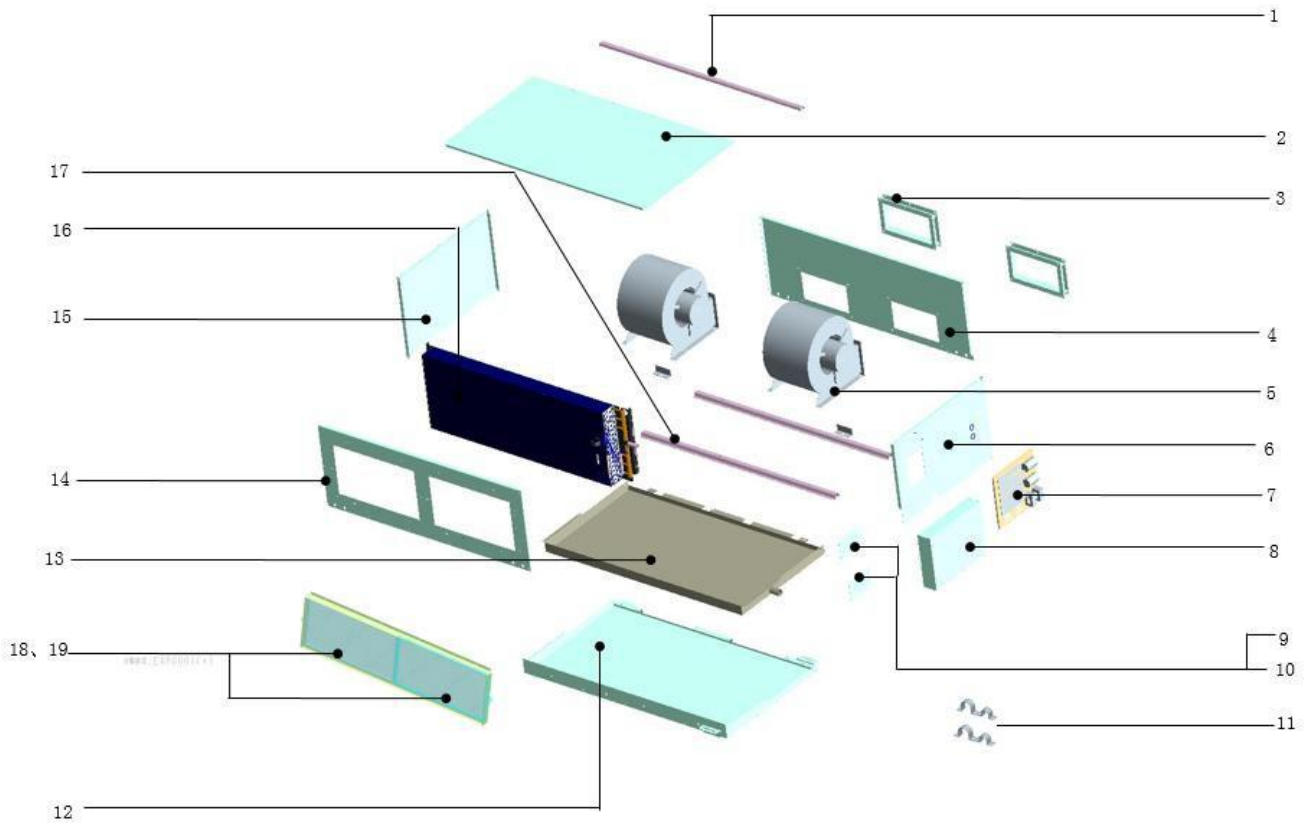
No.	Part name	Quantity	No.	Part name	Quantity
1	Air outlet assy	1	13	Right scroll case	2
2	Hanger	4	14	Fixing board assy for fan	1
3	Left side board	1	15	E- parts box cover	1
4	Left connecting panel for evaporator	1	16	Small cover	1
5	Evaporator components	1	17	Electronic control components	1
5.1	Transition	6	17.1	Electronic control board of indoor unit	1
5.2	Current dividing assy	1	17.2	Temp sensor	1
5.3	Collecting pipe assy	1	17.3	Transformer	1
5.4	Evaporator assy	1	17.4	Terminal	1
5.5	Installation tube for probe	1	17.5	Groove clamp 7	2
6	Water pan assy	1	18	E- parts box base	1
6.1	Discharge pipe assy	2	19	Big cover	1
6.2	Rubber cover for water outlet joint	2	20	Right side board	1
7	Lower panel	1	21	Right connecting panel for evaporator	1
8	Air return baffle	1	22	Upper panel	1
9	Air filter	2	23	Welding assy for large expansion valve	1
10	Air return assy	1	24	EXV box welding assy	1
11	Left scroll case	1	25	Large expansion valve cover	1
12	Indoor motor	2			

- VEHP03502A-GCV100. VEHP04002A-GCV120. VEHP06002A-GCV160



No.	Part name	Quantity	No.	Part name	Quantity
1	Pipe clamp1	1	11.1	Evaporator	1
1a	Pipe clamp2	1	11.2	Current dividing assy	1
2	Front panel assy	2	11.3	Air inlet header pipe assembly of evaporator	1
2.1	Front panel	1	12	E-parts assy	1
3	Chassis assy	1	12.1	Electric box panel	1
3.1	Chassis	1	12.2	Indoor E-parts box	1
4	Water pan welding assy	1	12.3	Temperature sensors	1
4.1	Water pan welding assy	1	12.4	Capacitor	1
4.2	Water outlet rubber cover	1	12.5	Compressor capacitor	1
5	Indoor E-parts box	1	12.6	Transformer	1
5.1	Fixing panel for fan	1	12.7	Terminal	1
5.2	Motor	1	13	Right side board assy	1
5.3	Left scroll case	1	13.1	Right side board	1
5.4	Right scroll case	1	14	Electric box cover	1
6	Left side board assy	1	15	Welding assy for expansion valve	1
6.1	Left side board	1	15.1	Welding assy for expansion valve	1
6.2	Handle	1	15.2	Expansion valve cover	1
7	Hanger	4	15.3	EXV box welding assy	1
8	Top Cover assembly	1	16	pipe connection assy	1
8.1	Upper cover	1	17	Cover for chassis assy	1
9	Filter	2	17.1	Cover for chassis	1
10	Retune air welding assy	1	18	Lower Pipe clamp1	1
11	Evaporator assy	1	18a	Upper Pipe clamp1	1

- VEHA070Q2A-GCV200, VEHA085Q2A-GCV250, VEHA096Q2A-GCV280



No.	Part name	Quantity	No.	Part name	Quantity
1	Reinforcing plate	1	10	Lid	1
2	Top cover plate attached to the cotton component	1	11	Pipe clamps	1
2.1	Top cover plate	1	11.1	Pipe clamps 1	1
3	Flange affixed cotton parts	2	12	Chassis paste cotton parts	1
3.1	Flange welded components	2	13	The water tray Sticker cotton parts	1
3.1.1	Air out board	1	14	Air return panel assy	1
4	Motor bracket assembly	1	14.1	Air return panel	1
4.1	Indoor motor	2	15	Right panel affixed cotton parts	1
4.2	The fan assembly	2	15.1	Right side board	1
5	Motor bracket assembly	1	16	Evaporator parts	1
5.1	Indoor motor	2	16.1	Evaporator assy	1
5.2	The fan assembly	2	16.2	High-pressure hose assemblies	1
6	Left panel affixed cotton parts	1	16.3	Low-pressure pipe assembly	1
6.1	Left side board	1	17	Motor bracket assembly	2
7	Electronic control components	1	18	Return air component	1
8	E- parts box cover	1	19	Filter assembly	2
9	Lid welded assemblies	1			



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