BLHVE PRO

VRF SYSTEM

8/10/12HP

14/16HP

18/20HP

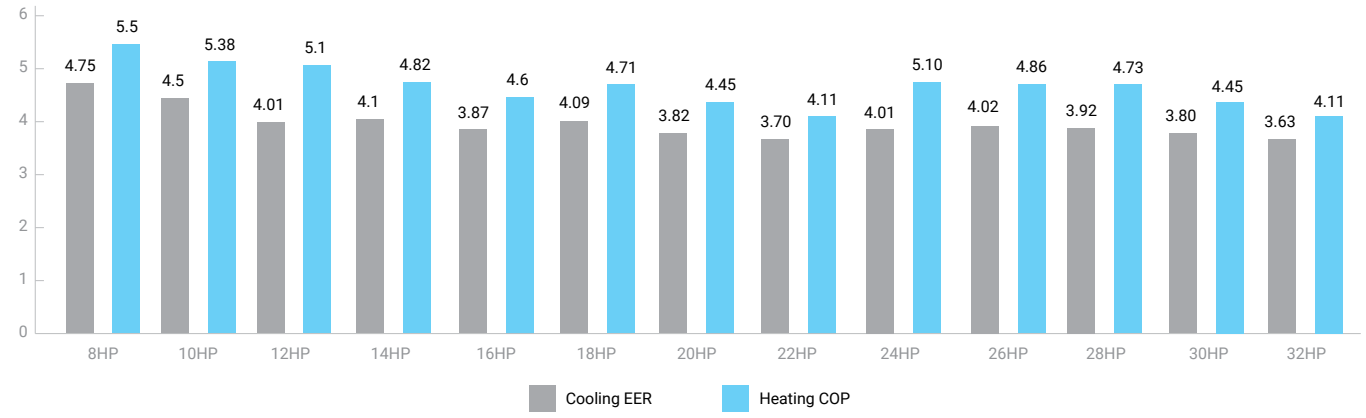
22HP

24HP

26/28/30/32HP

Capacity	8HP 25.2kW	10HP 28kW	12HP 33.5kW	14HP 40kW	16HP 45kW	18HP 50kW	20HP 56kW	22HP 61.5kW	24HP 67kW	26HP 73kW	28HP 78.5kW	30HP 85kW	32HP 90kW
Compressor	DC	DC	DC	DC	DC	DC	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC
Fan motor	DC	DC	DC	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC

EER&COP



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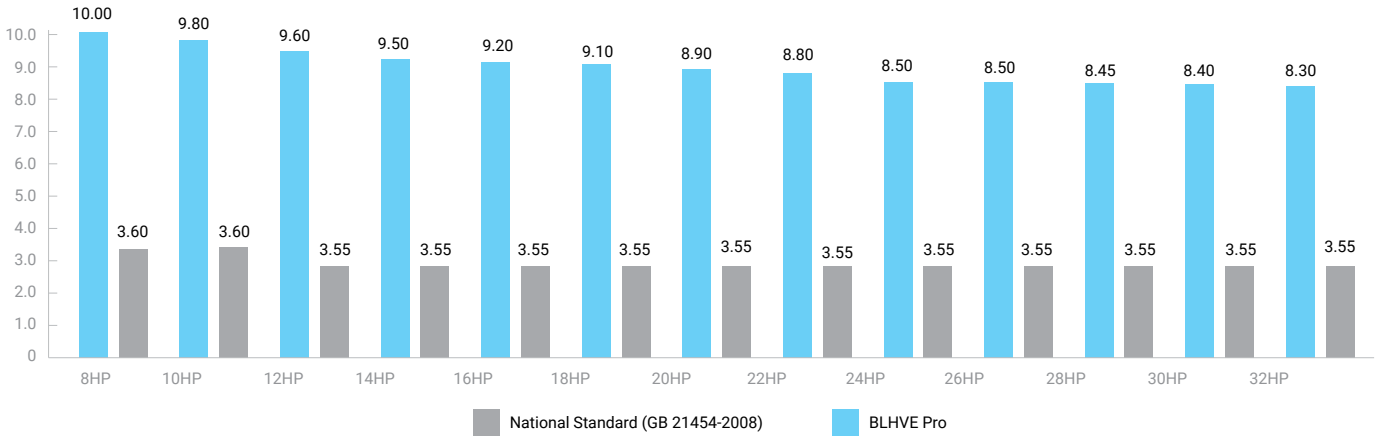


BLHVE PRO

VRF SYSTEM

COMBINATION TABLE

HP	Cooling Cap. [kW]	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP
8	25.2	•												
10	28		•											
12	33.5			•										
14	40				•									
16	45					•								
18	50						•							
20	56							•						
22	61.5								•					
24	67									•				
26	73										•			
28	78.5											•		
30	85												•	
32	90													•
34	95					•	•							
36	100						••							
38	106.5					•			•					
40	111.5						•		•					
42	117.5							•	•					
44	123								••					
46	128.5								•	•				
48	134									••				
50	140								•			•		
52	145.5									•		•		
54	152									•			•	
56	157									•				•
58	163										•			•
60	168.5											•		•
62	175												•	•
64	180													••
66	184.5								•••					
68	190								••	•				
70	195.5								•	••				
72	201.5								••			•		
74	207						•					••		
76	212.5									••		•		
78	218.5								•			••		
80	224									•		••		
82	230										•	••		
84	235.5											•••		
86	242											••	•	
88	247											••		•
90	253										•			••
92	258.5											•		••
94	265												•	••
96	270													•••

*Note: Max. 4 outdoor units can be freely combined to become a larger unit, the maximum capacity of single system is 96HP, when 4 outdoor units are combined, the single unit capacity can not exceed 24HP.

BLHVE PRO

VRF SYSTEM

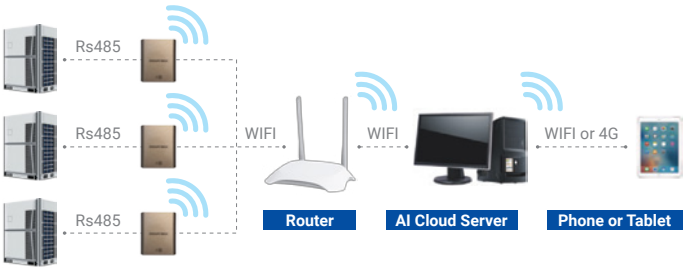
REFRIGERANT PIPING

The total pipe length	The longest pipe length	Height difference Outdoor unit above	Height difference Outdoor unit below	Height difference between indoor units	Length from first indoor distributor to last indoor unit	Communication wire length
1000 m	200 /240m	<100m	<110m	40m	90 m	can be up to 1000m

FEATURES

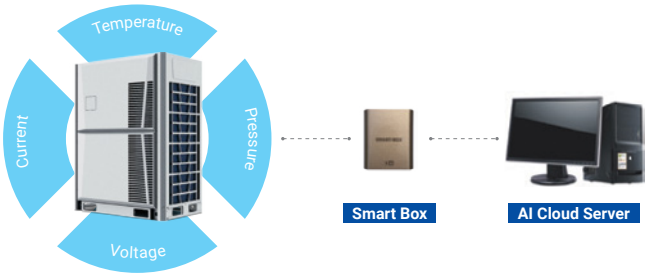
LONG DISTANCE REMOTE CONTROL

- Long distance remote control by phone or tablet.



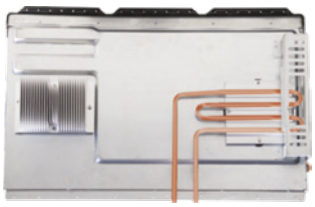
MALFUNCTION FORECASTING

- Thanks to the AI cloud server, malfunction can be forecasted when system running parameter is abnormal.
- Technician can be sent to site to check the system before it stops.



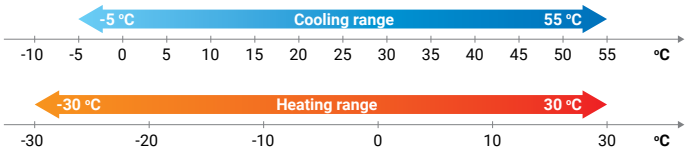
REFRIGERANT COOLING DESIGN

- We use refrigerant to cool down inverter modular board to keep it in a safe condition even when outdoor temperature is up to 55°C.



WIDE OUTDOOR OPERATION RANGE

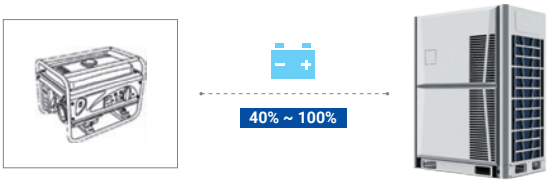
- Due to EVI technology, BLHVE PRO heating performance increased by 35% compare to conventional VRF system.
- Due to EVI technology, BLHVE PRO still has 85% of rated capacity even in -15°C.



*Based on GBLHVE internal test report

POWER SAVING MODE

- According to power usage, realize 7-level power limit setting.



REFRIGERANT STATUS DETECTION

- Built-in with smart refrigerant auto check function, which can give suggestion about refrigerant status.
- Different code means different refrigerant status:

13	Extremely insufficient
12	Insufficient
11	Slightly insufficient
0	Normal
1	Slightly excess
2	Overmuch

BLHVE PRO

VRF SYSTEM

MORE INDOOR UNITS

- Max. 100 Indoor units can be connect in ONE system.

ELECTRICAL LOCK FUNCTION (OPTIONAL)

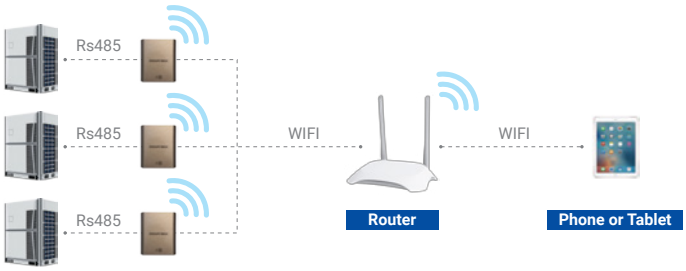
- In case of end user doesn't pay as contract, electrical lock function can be used to stop VRF system, and end user can not start the system without permission.
- System can be unlock with password by authorized technician.

WIRELESS COMMUNICATION (OPTIONAL)

- Wireless communication between indoor units.
- Wireless communication between indoor unit and outdoor unit.

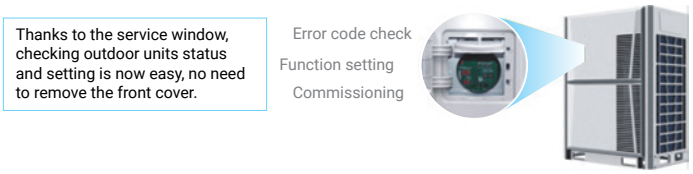
ONLINE DIAGNOSIS

- Technician can do the commissioning & diagnosis by phone or tablet online.



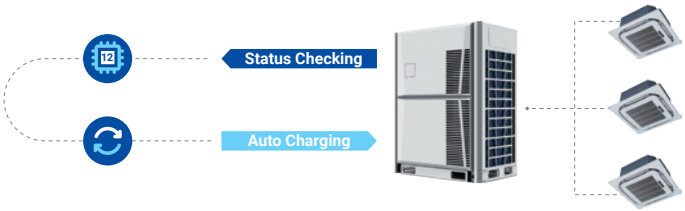
SERVICE WINDOW ON FRONT COVER

- Thanks to the service window, checking outdoor units status and setting is now easy, no need to remove the front cover.



AUTO CHARGING REFRIGERANT (OPTIONAL)

- BLHVE PRO can customize with auto refrigerant charging function, additional solenoid valve will be added in gas pipe, and outdoor unit will control the valve to charge refrigerant.



13 BASIC MODULES

MAXIMUM 96HP

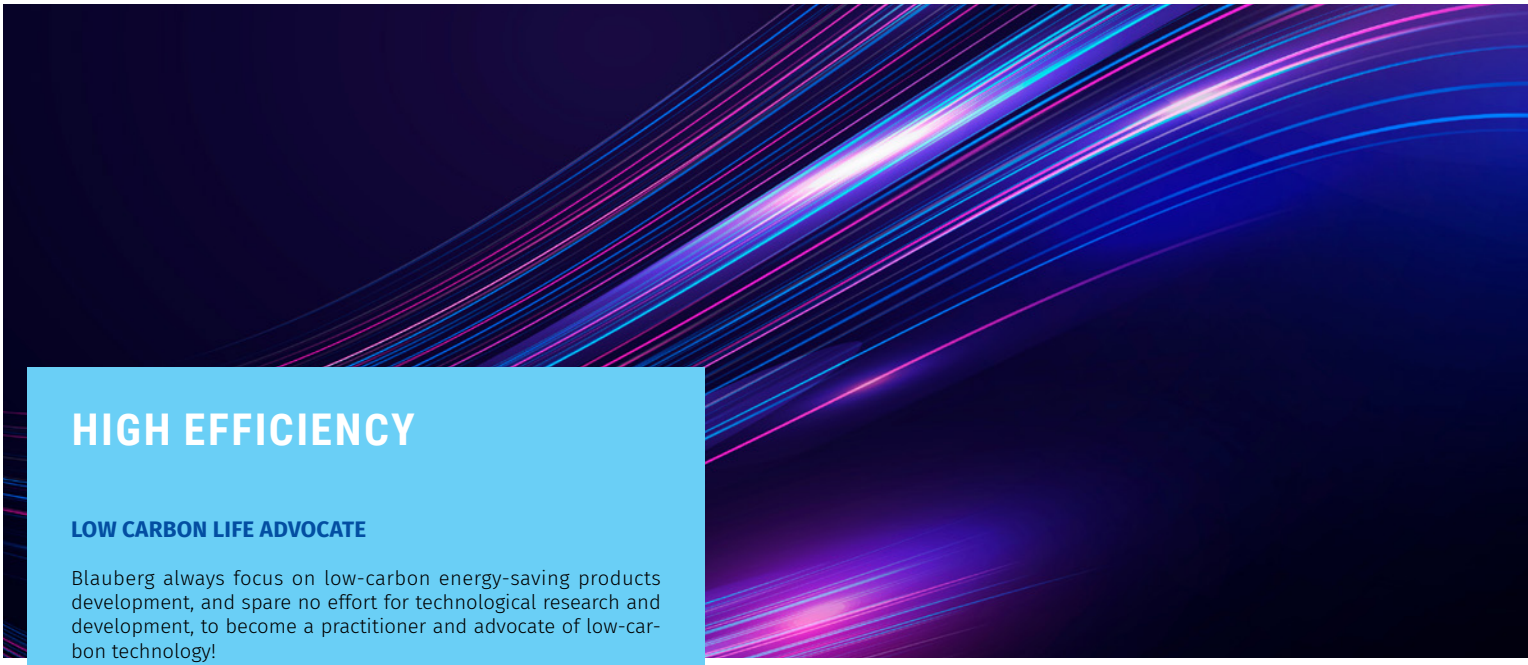
- Max. 3 outdoor units can be freely combined to become a larger unit. The maximum capacity of single system is 96HP.

*:when 4 outdoor units are combined, the single unit capacity can not exceed 24HP.

BLHVE PRO

VRF SYSTEM

ADVANTAGES



HIGH EFFICIENCY

LOW CARBON LIFE ADVOCATE

Blauberg always focus on low-carbon energy-saving products development, and spare no effort for technological research and development, to become a practitioner and advocate of low-carbon technology!

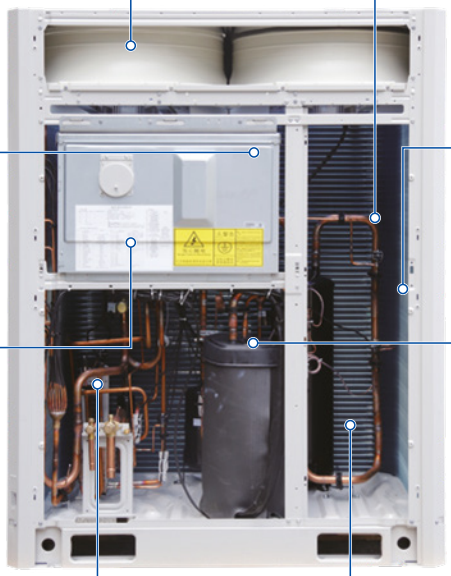
CORE TECHNOLOGIES MAKE HIGH EFFICIENCY

Brushless DC Motor
- High efficiency
- Low noise

180° Sine Wave Control
- High precision rotor speed control

Stepless Control
- On-demand output, high efficiency and energy saving

CCT Inner-grooved Tube
- Excellent heat-exchanging efficiency



2-in-1 Refrigerant Flow Path
- Increase the liquid refrigerant volume proportion

Cross Flow Fins
- Reduce wind resistance and improve heat exchange efficiency

DC Inverter Compressors
- High pressure type
- Asymmetric scroll design
- Neodymium permanent
- Magnet rotor

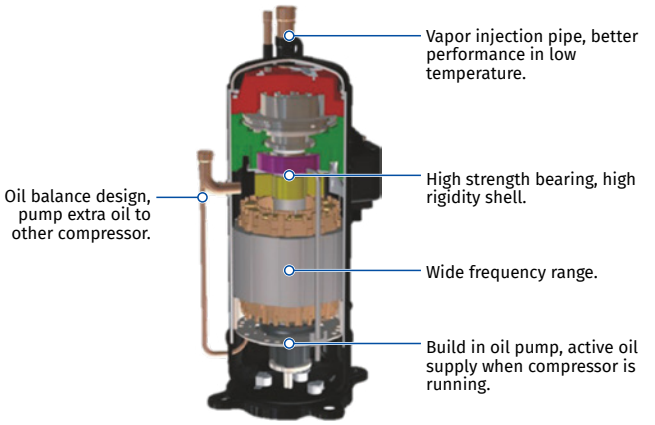
G Type Condenser
- Enlarge the heat exchange area, and the heat exchange effect is better

BLHVE PRO

VRF SYSTEM

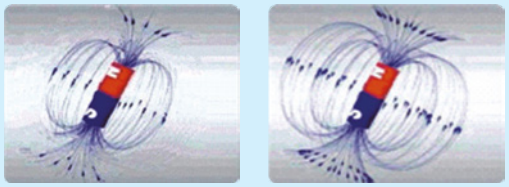
HIGH EFFICIENCY DC INVERTER COMPRESSOR

- From Hitachi, a well-known inverter compressor manufacturer.
- R410a ECO friendly refrigerant.
- Small torque fluctuation, low vibration and quiet operation.
- High efficiency due to its patent internal structure design.
- Internal oil circulation structure.
- High reliability.
- Wide rotation speed range.
- Neodymium permanent magnet rotor, has powerful magnetic force, large torque and high efficiency.
- Concentrated winding, improving low frequency effciency.
- High pressure chamber.
- Has small suction superheat and high refrigerant volume effciency.
- Has large refrigerant discharge buffer volume, low vibration and noise.



Neodymium permanent magnet rotor

Powerful magnetic force, large force moment and high efficiency



Ferrite magnet | Neodymium permanent magnet

Concentrated winding

Magnetic efficiency is 12% higher than distributed winding

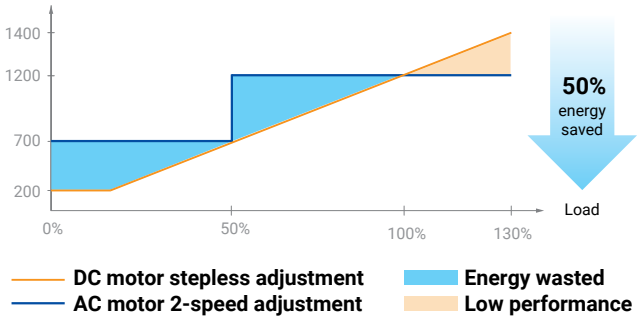
Concentrated winding | Distributed winding

HIGH EFFICIENCY DC MOTOR

- High efficiency DC fan motor is from well-known brand.
- Low noise and high efficiency because of high-density wire winding engineering.
- Brushless with built-in sensor.

STEPLESS CONTROL

- DC fan motor can be stepless contolled by outdoor PCB according to system's operating pressure. And it is able to reducethe energy onsumption and maintain the system in the best performance.



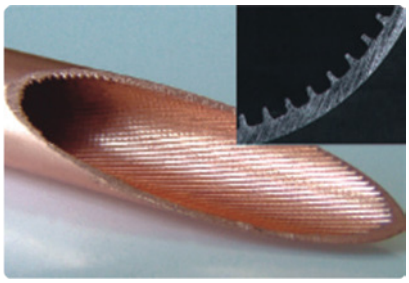
180° SINE WAVEFORM CONTROL

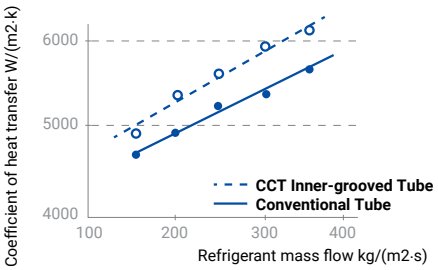
- The perfect combination of 180° Sine waveform rotor frequency drive control technology and excellent IPM inverters, reduces the reactive loss of motor-driven, increases motor efficiency by 12%.

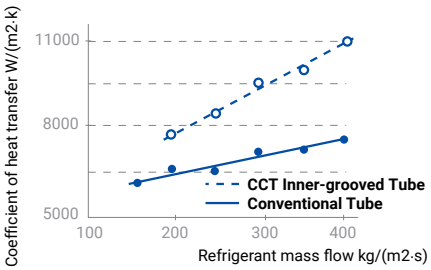
BLHVE PRO

CCT INNER-GROOVED TUBE

- CCT (Continuous Cooling Transformation)inner-grooved copper tube has high thermometic conductivity. This inner-grooved fins break the refrigerant flow boundary layer to enhance refrigerant disturbance to increase heat-exchanging efficiency.

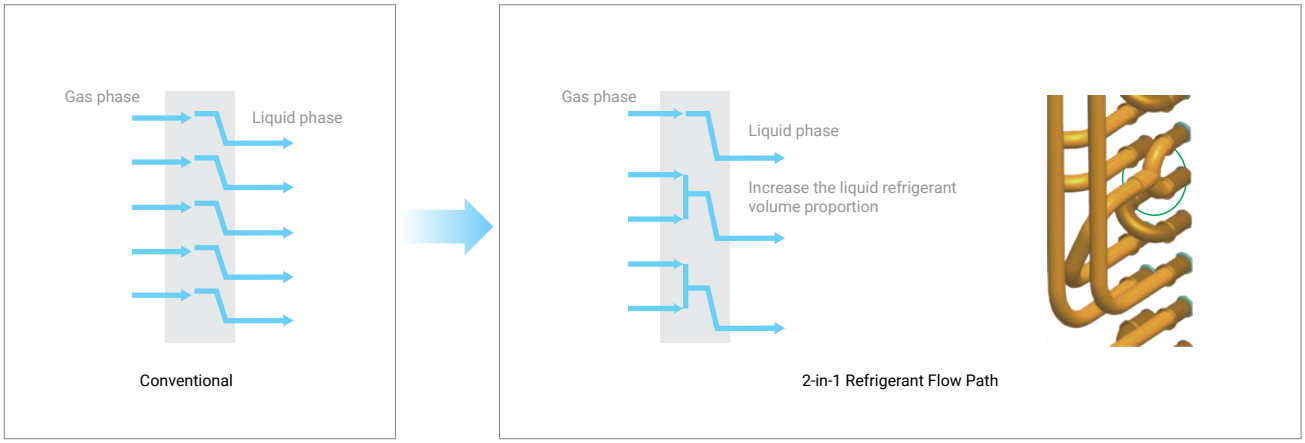


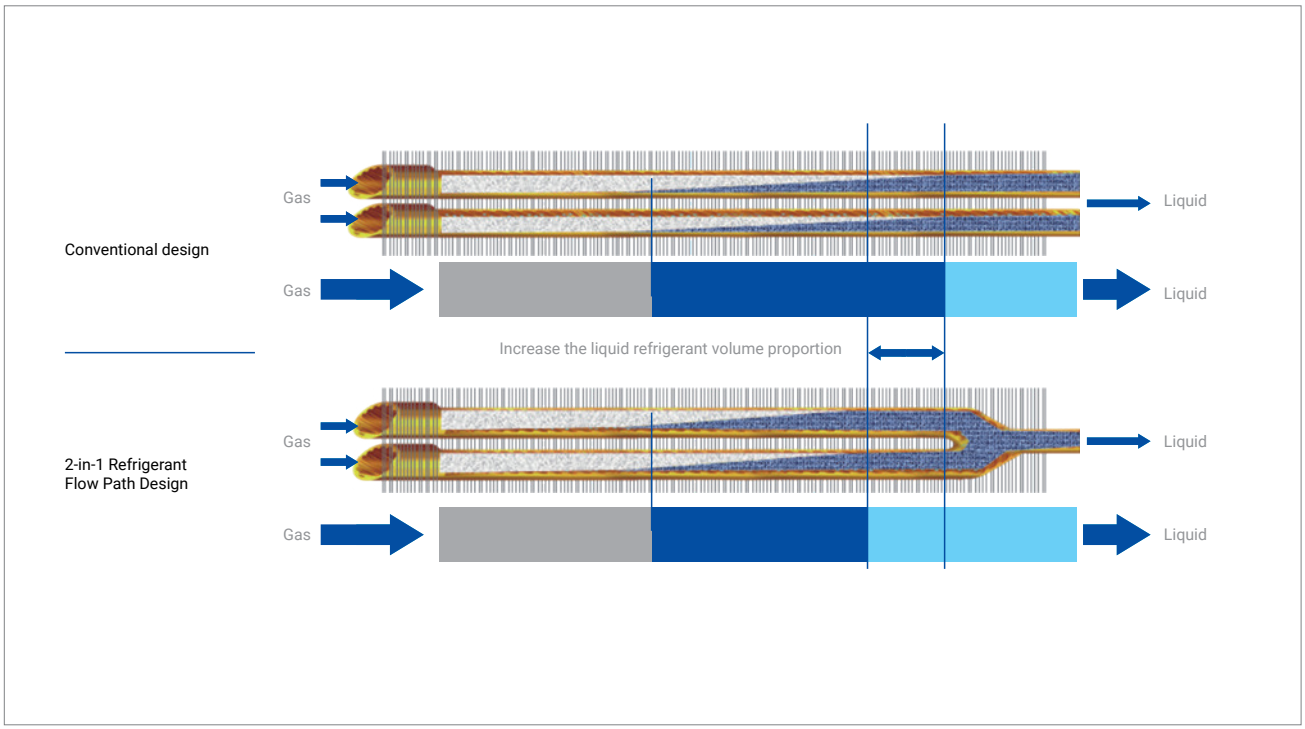




2-IN-1 REFRIGERANT FLOW PATH DESIGN

- CCT (Continuous Cooling Transformation)inner-grooved copper tube has high thermometic conductivity. This inner-grooved fins break the refrigerant flow boundary layer to enhance refrigerant disturbance to increase heat-exchanging efficiency.



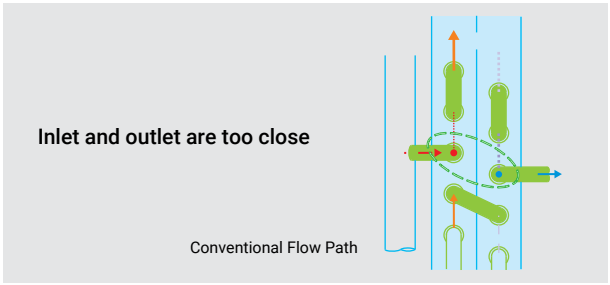


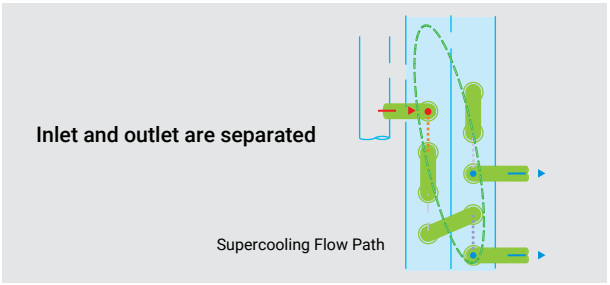
BLHVE PRO

VRF SYSTEM

SUPERCOOLING FLOW PATH DESIGN

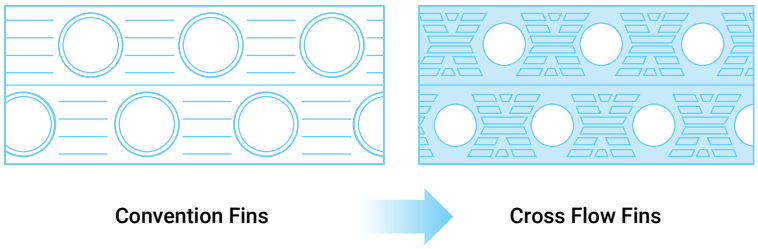
- Supercooling flow path design, separates the refrigerant inlet and outlet, increase the supercooling degree, reduce the effect of high temperature inlet gas refrigerant to low temperature outlet liquid refrigerant, therefore,the system efficiency will be greatly increased.

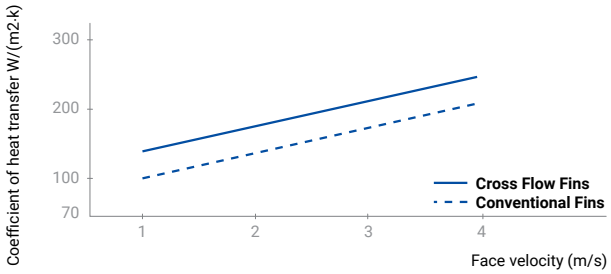




CROSS FLOW FINS

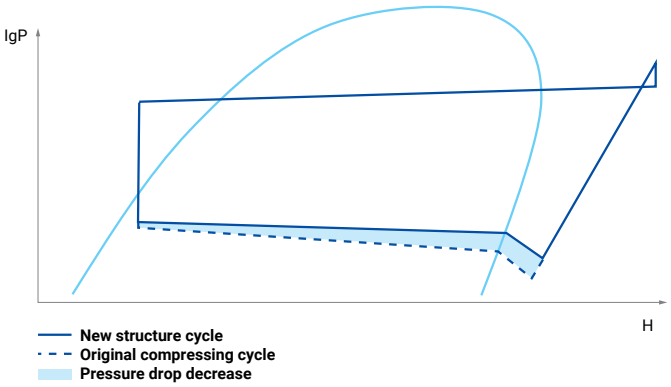
- Have low air resistance and great heat transfer coefficient.
- Frosting improved, frost on the heat-exchanger will be well-distributed, easyfor defrosting.





LOW RESISTANCE INTERNAL PIPING

- Thanks to the optimization pipeline design, 5% pressure drop are reduced.
- EER and COP increase, because of evaporating temperature increase and compressor work decrease.



THE PHE ECONOMIZER

- PHE Economizer technology provide an additional sub cooling.
- Improved heat exchanger+PHE economizer+Optimized control logic.
- Heating performance highly increased.

BLHVE PRO

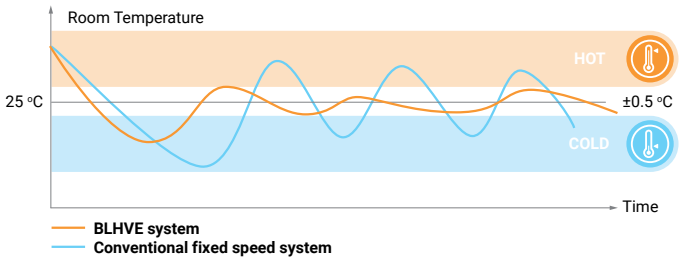
BENEFITS FOR USERS

LIVABLE ENVIRONMENT CREATOR

Blauberg focuses on starting point of CAC system: create a friendly, comfortable and pleasant living environment as always. DC inverter VRF system's comfort technologies include quick cooling and heating, precise temperature control, low noise, use environmental friendly refrigerant and so on, we strive to create livable environment for users.

OUTSTANDING COMFORT ABILITY

- BLHVE system has excellent cooling&heating performance thanks to the high efficiency DC fan motor, DC compressor and optimized refrigerant flow control logic.
- Precisely room temperature control by adopting 2000 pulse EXV. Indoor temperature fluctuations can be maintained within 0.5 °C, providing outstanding comfort ability.

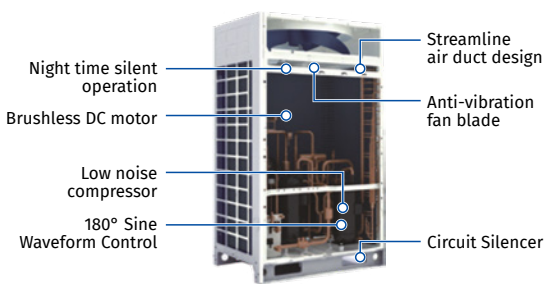


WIDE OPERATION RANGE

- BLHVE PRO has a wide ambient temperature operation range, cooling at -5 – 55 °C, and heating at -30 – 30 °C.

7 IMPROVEMENTS TO REDUCE NOISE

- Maximum 10 dB(A) of operating sound decrease.



SNOW-PROOF FUNCTION

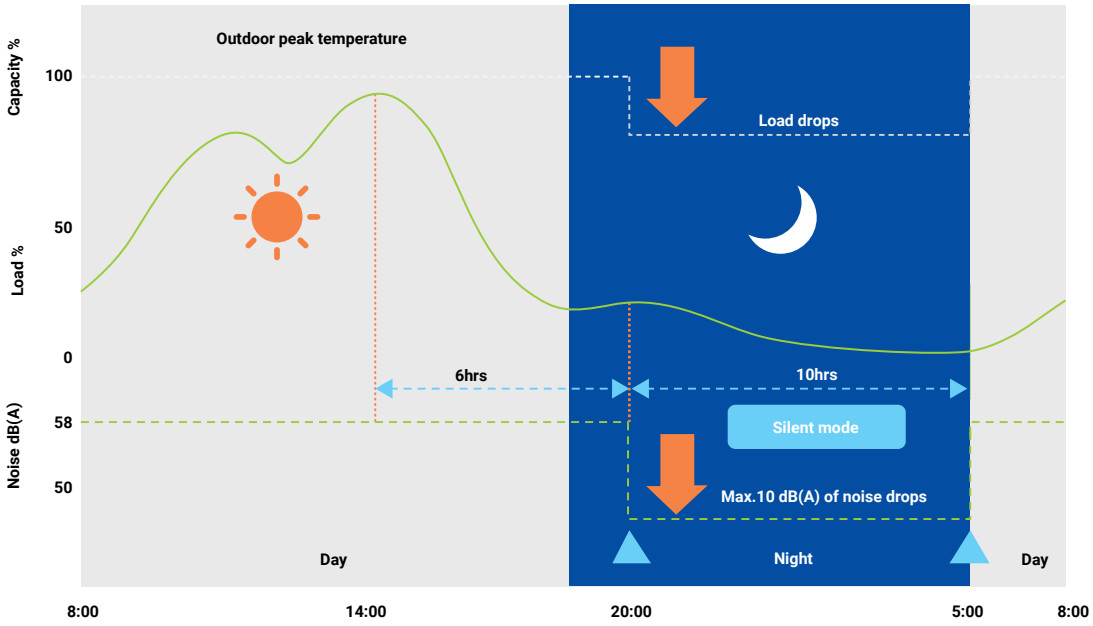
- In the cold weather, outdoor fan will start to run for a while at intervals to prevent the snow to accumulate on fan blade, because accumulated snow will freeze and block fan blade rotating, even worse it will damage the motor.

BLHVE PRO

VRF SYSTEM

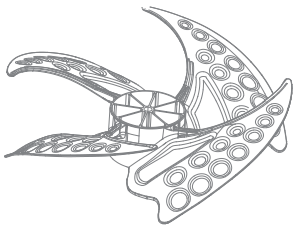
SILENT MODE, NIGHT TIME NOISE CONTROL

- Compressor and fan motor rotating speed can be reduced to lower the noise at night.
- Maximum 10 dB(A) decrease.



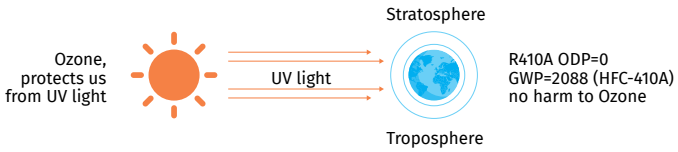
LOW NOISE FAN BLADE

- Fan blade with 7 noise reduction design, effectively reduce the noise while operation.
  - Front edge curve design
  - Thickened front edge design
  - Outer edge turn over design
  - Bionic fan blade design
  - Concave fan blade design
  - Anti-resonance design
  - Tail edge cut design



ENVIRONMENT FRIENDLY

- Refrigerant R410A(HFC), low carbon footprint, no harm to Ozone.



3-STAGE BACKUP FUNCTION

Module backup function.
When some modules are failure, the others can keep running by simply settings.

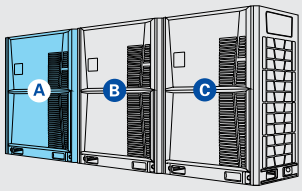
Compressor backup function
When one compressor is failure, the other one can keep running by simply settings.

Fan motor backup function.
When one fan motor is failure, the other one can keep running by simply settings.

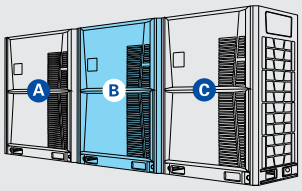
BLHVE PRO

ALL OUTDOOR UNITS CYCLE OPERATION

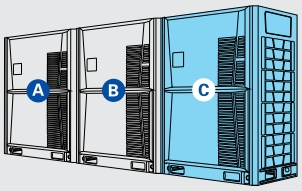
- In one combination system, any outdoor unit can run as master unit.
- Cycle operation equalizes the running time of the outdoor units, greatly extending the lifespan of outdoor units in one system.



1st Cycle:
Start order: A-B-C



2nd Cycle:
Start order:B-C-A



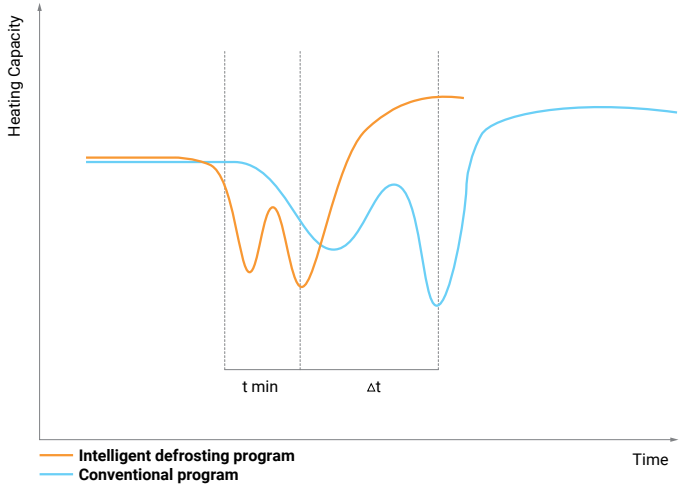
3rd Cycle
Start order:C-A-B

INTELLIGENT DEFROSTING PROGRAM. 5 SPECIAL DEFROSTING MECHANISMS

- The dedicated temperature sensor monitors the temperature of the condenser coil of the outdoor unit in real time, intelligently selects the defrost mechanism and judges the timing of defrost, effectively prolongs the normal heating time, improves comfort, and achieves energy-saving effects.
  - Normal temperature and low humidity defrosting mechanism.
  - Normal temperature and high humidity defrosting mechanism.
  - Low temperature and low humidity defrosting mechanism.
  - Low temperature and high humidity defrosting mechanism.
  - Ultra-low temperature environment defrosting mechanism.

Defrost Curve

- Program starts only when unit needs to. Whereas conventional unit's defrosting timing & duration is fixed, causing fluctuations in temperature and personal comfort. Conventional unit's defrosting timing & duration is fixed.
- Intelligent defrosting program starts according to heat exchanging efficiency & capacity change due to the frost. Less temperature fluctuations, people feel morecomfortable.



REMOTE ON/OFF CONTROL FUNCTION

- Indoor units standard build in with ON/OFF control port.
- It can be used for hotel card control and also can be used for long distance remote ON/OFF control. And no need additional hotel VRF indoor unit control module.
- When contactor is open (card pulled out), indoor unit will be off can not be controlled, current running parameters will be saved in indoor PCB.
- When contactor is close (card insert), indoor unit will recover previous running state.

IDU AND ODU POSITIONING FUNCTION

- Turn on the positioning function through the controller, and all the IDU and ODU of the same system will beep through the built-in buzzer. This is convenient for quick positioning during system commissioning, troubleshooting and after sales maintenance.

BLHVE PRO

VRF SYSTEM

BENEFITS FOR INSTALLERS

OPTIMIZATION FOR DESIGNER AND INSTALLER

BLHVE DC inverter VRF system is designed with flexible modular combination concept. We keep optimizing the module size, reduce equipment in the occupied area to meet the demand of designers and installers. Some unique technologies are used to reduce the workload of our installers, making installation much simpler and easier.

ADJUSTABLE OUTDOOR FAN STATIC PRESSURE

- Thanks to DC fan motor, the external static pressure of outdoor fan is adjustable.
- Outdoor units can be installed in the service floor or facility room.
- Maximum ESP 80 Pa.

TOUCH SCREEN WIRED CONTROLLER

- Air filter cleaning reminding function.
- Touch screen with black back-ground and blue light
- Ultra thin body and stylish design meet high-end environments.
- On/off, temperature setting, fan speed setting, mode setting, timer and check function.

ADDRESSING METHODS

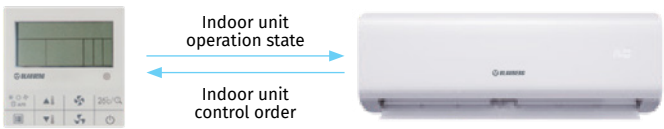
- 2 addressing methods:
  - Automatically addressing: system will distribute address to indoor unit automatically.
  - Manually setting by wired controller or wireless remote controller.
- Addressing method can be selected easily by adjusting the switch on outdoor PCB.

AUTOMATIC ADDRESSING

- Automatic addressing will reduce artificial faults by 35% and 5% manual works.
  - 54% system failure were caused by communication faults.
  - 65% communication faults were caused by address problems.
  - Most of the address problems were: address setting forgotten wrong settings, address repeat.

NEW WIRED CONTROLLER

- Bidirectional communication. Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller by adjusting the switch on outdoor PCB.
- Compact design.
- Timer function.
- User can check the error code and inquiry unit status very easy, safe and convenient.



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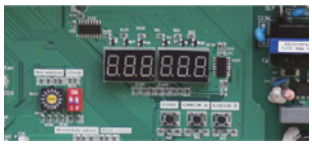
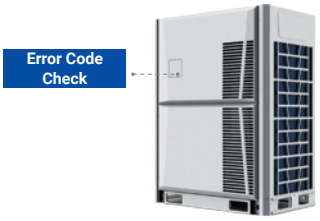
DIGITAL DISPLAY ON THE PCB

- Digital display on the PCB, it can show system's operation status and error codes.
- Record error code list at main PCB chip, easy for service people to check.



SERVICE WINDOW

- Thanks to the service window, checking outdoor unit's status and setting is now easy, no need to remove the electric control box cover.



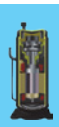
MODE RESTRICTION

- 6 kinds of mode restriction.
  - Auto priority(Default Setting).
  - Cooling(or heating)priority mode.
  - Cooling only(or heating only)mode.
  - VIP unit priority+AUTO priority mode.
- Mode restriction function can be selected on the outdoor PCB.

Auto priority (Default Setting) | Heating priority | Cooling priority | Heating only | Cooling only | VIP unit priority +AUTO priority

5-STAGE OIL CONTROL

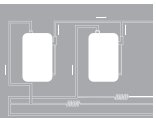
1st stage — Compressor internal oil separation — Oil separator



2nd stage — Oil return from the oil even pipe — Oil level control

3rd stage — Oil return from the system oil separator — Oil separator

4th stage — Oil balance between compressors — Oil balance pipe



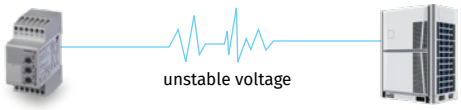
5th stage — Oil return by system oil return program — Intellingent oil return program

HUMANIZED INTERNAL STRUCTURE

- All key components are designed to close to outside, it is convenient for repair and replacement.
- Thanks to the new balance technology, gas balance pipe does no longer exist, brazing points and leaking risk are decreased.

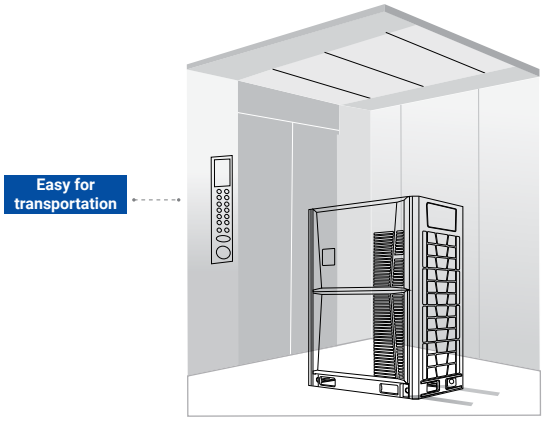
3-PHASE POWER PROTECTOR(OPTIONAL)

- Protect the outdoor unit from instable voltage.



EASY INSTALLATION

- Easy for the outdoor unit to transport to roof floor by elevator due to its compact size.



360° PIPE CONNECTION

- The outlet pipe of the outdoor unit can be extended to all directions through the bottom space;
- No outlet pipe on the front can improve the aesthetics of installation.

BLHVE PRO

VRF SYSTEM

TECHNICAL DATA

Model Name			BLHVE-S252-O/3R1A	BLHVE-S280-O/3R1A	BLHVE-S335-O/3R1A	BLHVE-S400-O/3R1A	BLHVE-S450-O/3R1A	BLHVE-S500-O/3R1A
Power Supply			380~415V/3N/ 50&60Hz	380~415V/3N/ 50&60Hz	380~415V/3N/ 50&60Hz	380~415V/3N/ 50&60Hz	380~415V/3N/ 50&60Hz	380~415V/3N/ 50&60Hz
Cooling	Capacity	HP	8HP	10HP	12HP	14HP	16HP	18HP
		kW	25.2	28.0	33.5	40.0	45.0	50.0
		Btu/h	86000	95500	114000	136500	153500	170600
		RT	7.2	8.0	9.5	11.4	12.8	14.2
	Rated current	A	9.04	11.30	14.51	18.10	21.60	23.29
	Power input	kW	5.31	6.22	8.35	9.76	11.63	12.22
	EER	W/W	4.75	4.50	4.01	4.10	3.87	4.09
Heating	Capacity	kW	27.4	31.5	37.5	45.0	50.0	56.0
		Btu/h	93500	107500	128000	153500	170600	191000
		RT	7.8	9.0	10.7	12.8	14.2	16.0
	Rated current	A	8.93	11.25	14.34	18.00	20.25	22.61
	Power input	kW	4.98	5.86	7.35	9.34	10.87	11.89
	COP	W/W	5.50	5.38	5.10	4.82	4.60	4.71
Max. input consumption		kW	13.4	14.3	14.8	18.3	18.8	22.0
Max. Current		A	23.1	24.7	25.5	30.8	31.7	37.4
Capacity adjustment range			50%~130%					
Compressor	Quantity		1					
	Type		Scroll Compressor					
	Brand		HITACHI					
Refrigerant	Type		R410a					
	Volume	Kg	9	9	11	14	14	15
	Throttle type		EXV					
Dimension (WxHxD)	Net	mm	990x1740x840	990x1740x840	990x1740x840	1340x1740x840	1340x1740x840	1340x1740x840
	Packing	mm	1060x1900x910	1060x1900x910	1060x1900x910	1410x1900x910	1410x1900x910	1410x1900x910
Weight	Net	Kg	228	228	230	275	275	285
	Gross	Kg	240	240	242	293	293	303
Outdoor sound level		dB(A)	58	58	60	60	61	62
Max. operating range		Mpa	4.5	4.5	4.5	4.5	4.5	4.5
Pipe size	Liquid pipe	mm	Ø 12.7	Ø 12.7	Ø 12.7	Ø 15.88	Ø 15.88	Ø 15.88
	Gas pipe	mm	Ø 22.2	Ø 22.2	Ø 22.2	Ø 28.6	Ø 28.6	Ø 28.6
Max. pipe length	Total pipe length	m	1000					
	ODU to farthest IDU (Acual length)	m	200					
	ODU to farthest IDU (Equivalent length)	m	240					
	1st IDU distributor to farthest IDU	m	40/90					
Max. vertical length	Between ODU & IDU (ODU above IDU)	m	100					
	Between ODU & IDU (ODU below IDU)	m	110					
	Between IDUs	m	40					
	Between ODUs	m	0					
Cooling	Outdoor side	°C	-5~55					
	Indoor side	°C	16~32					
Heating	Outdoor side	°C	-30~30					
	Indoor side	°C	16~32					

1 Cooling operating temperature range is from -5 to 55 (It can be customized down to -10). Heating operating temperature range from -30 to 30.
2 The cooling conditions: indoor side 27 (80.6) DB, 19 (60)WB outdoor side 35 (95) DB.
3 The heating conditions: indoor side 20 (68) DB, 15 (44.6)WB outdoor side 7 (42.8) DB.
4 Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
5 The above data may be changed without notice for future improvement on quality and performance.

BLHVE PRO

VRF SYSTEM

Model Name			BLHVE-S560-O/3R1A	BLHVE-S615-O/3R1A	BLHVE-S670-O/3R1A	BLHVE-S730-O/3R1A	BLHVE-S785-O/3R1A	BLHVE-S850-O/3R1A	BLHVE-S900-O/3R1A
Power Supply			380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz
Cooling	Capacity	HP	20HP	22HP	24HP	26HP	28HP	30H	32HP
		kW	56.0	61.5	67.0	73.0	78.5	85.0	90.0
		Btu/h	191000	209800	228600	249100	267800	290000	307100
		RT	16.0	17.5	19.1	20.8	22.3	24.2	25.6
	Rated current	A	26.10	29.06	29.09	32.59	36.13	40.36	44.73
	Power input	kW	14.66	16.62	16.71	18.18	20.03	22.37	24.79
	EER	W/W	3.82	3.70	4.01	4.02	3.92	3.80	3.63
Heating	Capacity	kW	63.0	69.0	75.0	81.5	87.5	95.0	100.0
		Btu/h	214900	235400	255900	278100	298600	324100	341200
		RT	18.0	19.7	21.3	23.2	24.86	27.0	28.4
	Rated current	A	25.70	28.40	28.65	30.28	33.38	38.52	43.9
	Power input	kW	14.16	16.80	14.72	16.78	18.50	21.35	24.33
	COP	W/W	4.45	4.11	5.10	4.86	4.73	4.45	4.11
Max. input consumption		kW	24.4	25.0	26.2	30.7	30.7	35.8	37.7
Max. Current		A	41.1	42.1	43.2	50.8	51.8	60.4	63.6
Capacity adjustment range			50%~130%						
Compressor	Quantity		1	2					
	Type		Scroll Compressor						
	Brand		HITACHI						
Refrigerant	Type		R410a						
	Volume	Kg	16	16	16	20	20	23	23
	Throttle type		EXV						
Dimension (WxHxD)	Net	mm	1340x1740x840	1340x1740x840	1990x1740x840	1990x1740x840	1990x1740x840	1990x1740x840	1990x1740x840
	Packing	mm	1410x1900x910	1410x1900x910	2060x1900x910	2060x1900x910	2060x1900x910	2060x1900x910	2060x1900x910
Weight	Net	Kg	290	297	388	433	433	480	480
	Gross	Kg	308	315	406	452	452	498	498
Outdoor sound level		dB(A)	63	63	62	63	63	64	64
Max. operating range		Mpa	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Pipe size	Liquid pipe	mm	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88
	Gas pipe	mm	Ø 28.6	Ø 28.6	Ø 28.6	Ø 35.0	Ø 35.0	Ø 35.0	Ø 35.0
Max. pipe length	Total pipe length	m	1000						
	ODU to farthest IDU (Acual length)	m	200						
	ODU to farthest IDU (Equivalent length)	m	240						
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	Between ODUs	m	0						
Cooling	Outdoor side	℃	-5~55						
	Indoor side	℃	16~32						
Heating	Outdoor side	℃	-30~30						
	Indoor side	℃	16~32						