Briese Air®

Powered by Shitsudo

DX AIR HANDLING UNIT

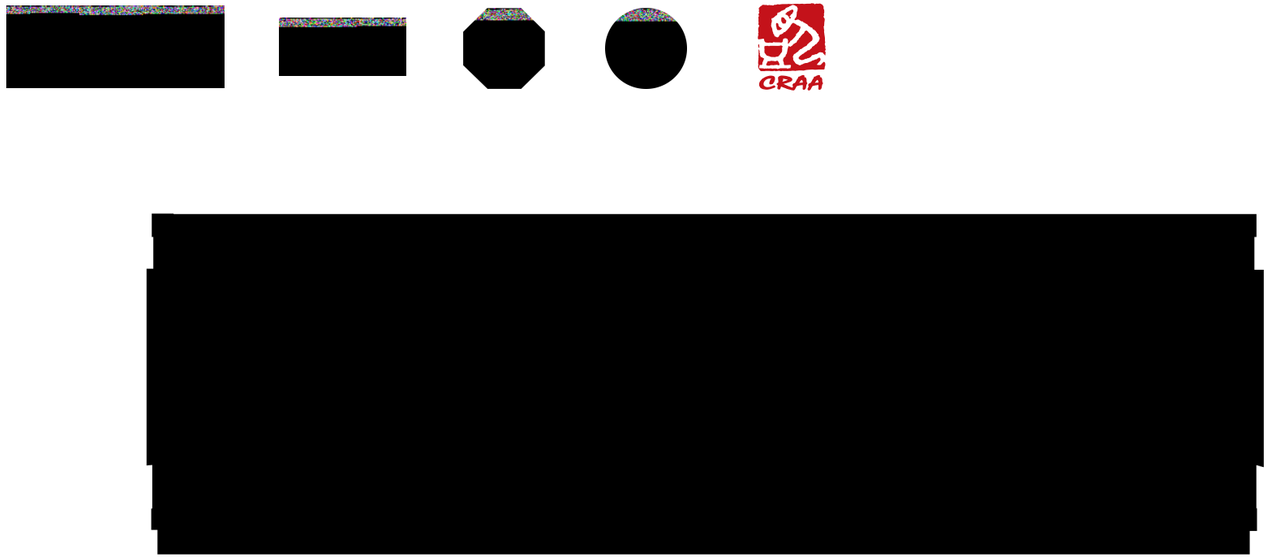


Genius of the air

BSAX/BSAV

Product Introduction

Briese Air's Direct Expansion Modular Air Handling Units integrate the best features of modular air handlers and refrigeration systems, specifically designed to achieve optimal temperature,humidity, cleanliness, and comfort in air-conditioned zones. They can widely cover the constant temperature and humidity or purification needs of partial fresh air, full return air, and full fresh air scenarios. Additionally,they are suitable for custom applications such as deep dehumidification with multiple cooling sources,heat recovery-based constant temperature and humidity, and rapid temperature adjustments.



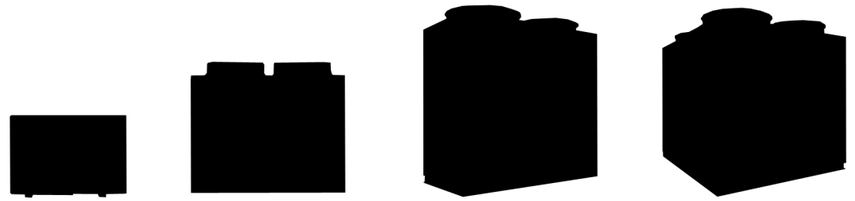
Briese Air Direct Expansion Indoor Unit

BAC BBC Series
The indoor unit is a modular air handling unit, capable of integrating various functional sections such as direct expansion, heating, humidification, and filtration. It offers two panel thickness options, 25mm and 50mm, to meet different requirements for airflow, static pressure, and the temperature and humidity conditions of the equipment room.

Briese Air Direct Expansion Outdoor Unit Series

01 Fixed Frequency Series

The fixed capacity operation mode offers adjustment settings and is available in both heat pump and cooling-only configurations. It enables functions such as temperature and humidity control for recirculated air, purification of recirculated air, and purification of fresh air.



BSAX0030 | BSAX0080/0100/0125/0150/0200/0250 | BSAX0600 | BSAX1100/1200

02 Variable Frequency Series

It features fresh air temperature and humidity control, variable air volume adjustment, year-round cooling, and low dew point dehumidification.



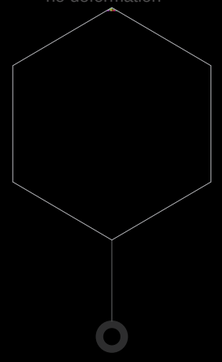
BSAV0060 | BSAV0080/0100/0120 | BSAV0160 | BSAV0200/0240/0260 | BSAV0280/0300/0320

DX Air Handling Unit

Briese series modular air handling units feature a patented enclosure design and outstanding detailed engineering. They excel in mechanical strength,air tightness, thermal insulation performance, and prevention of cold bridges,setting a benchmark in the industry. (Patent No. ZL 2014 2 0122442.9)
The enclosure performance complies with EN1886 standards and has obtained EUROVENT certification.

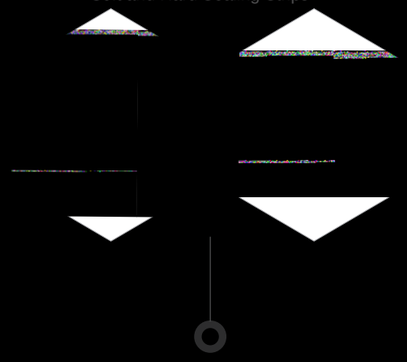
Sandwich Structure Insulation Panels

High-Density 50kg/m^3 Polyurethane
Lower Thermal Loss, High Strength with no deformation



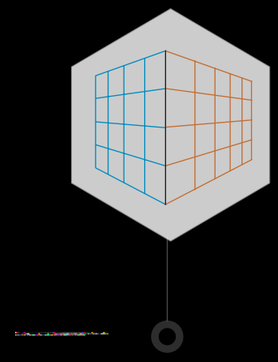
Self-Developed Enclosure Structure

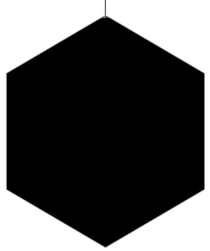
Interlocking Male-Female Module Labyrinth Seal, Aluminum-Plastic Composite Profiles with Co-Extruded Soft and Hard Sealing Strips



Micro-Modular Design

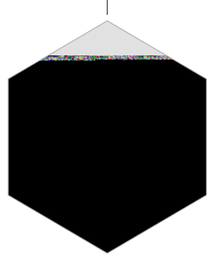
Achieves Full Coil Coverage Within Unit Cross-Section, Reduced Internal Resistance for Enhanced Energy Efficiency





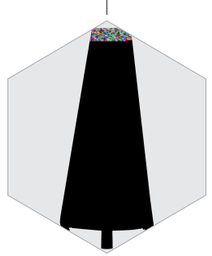
Smooth Interior, Clean and Hygienic

Seamless, Smooth Interior Panel Joints
No Dust Deposition in Corners



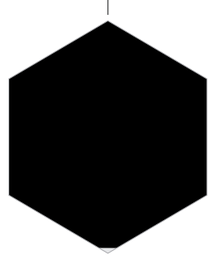
High-efficiency Heat Exchanger

Professional Selection Software, On-Demand Configuration, Optimal Flow Path Design, Ensuring Peak Performance



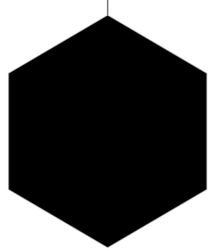
New Dual V-shaped Water Pan

Rapid Drainage, No Water Accumulation
Bacteria-Free



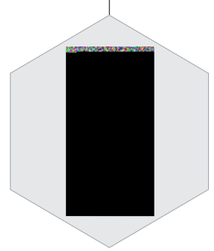
High-Integrity Enclosed Filter Mounting Frame

Airtightness Achieves Highest EN1886 Class
Delivers Filtered and Hygienic Air



High-Efficiency Energy-Saving Fan

High-Efficiency EC Fan, High Efficiency, More Energy Efficient, Dust-Free Without Snail Shell Fan and Belt



Aerospace Technology Maintenance Door

Full-Size Door for Convenient Large-Space Maintenance
Seamless Integral Foam Door Leaf for Excellent Airtightness
Handle Pressure Relief Design Ensures Operational Safety

The Powerful External Team Lineup



Energy Efficient and High Performance

- Multi-System/Variable Frequency Design Concept to Reduce Long-Term Partial Load Energy Consumption
- Variable Operating Condition Patented Automatic Control to Avoid Excessive Dehumidification "Cooling and Heating Offset"*
- Energy-Saving System Control Design, Achieving Over 20% Energy Savings in Air Conditioning Systems

Temperature and Humidity Control

- All-New Airflow or Low-Load Harsh Condition Interference-Resistant Precise Output
- Effectively Achieving Temperature and Humidity Accuracy of ±1°C, ±5%
- Stable Cooling Source for Low Ambient Temperature Operation, Capable of -10°C Cooling for Industrial Processes

Robust Performance

- Micro-HEX Microchannel All-Aluminum Integrated Driving Heat Dissipation Enhancement Technology*
- Wide Ambient Temperature Variable Frequency Operation: Cooling from -10°C to 56°C; Heating from -20°C to 25°C
- Installation with Large Capacity and Long Piping up to 100m

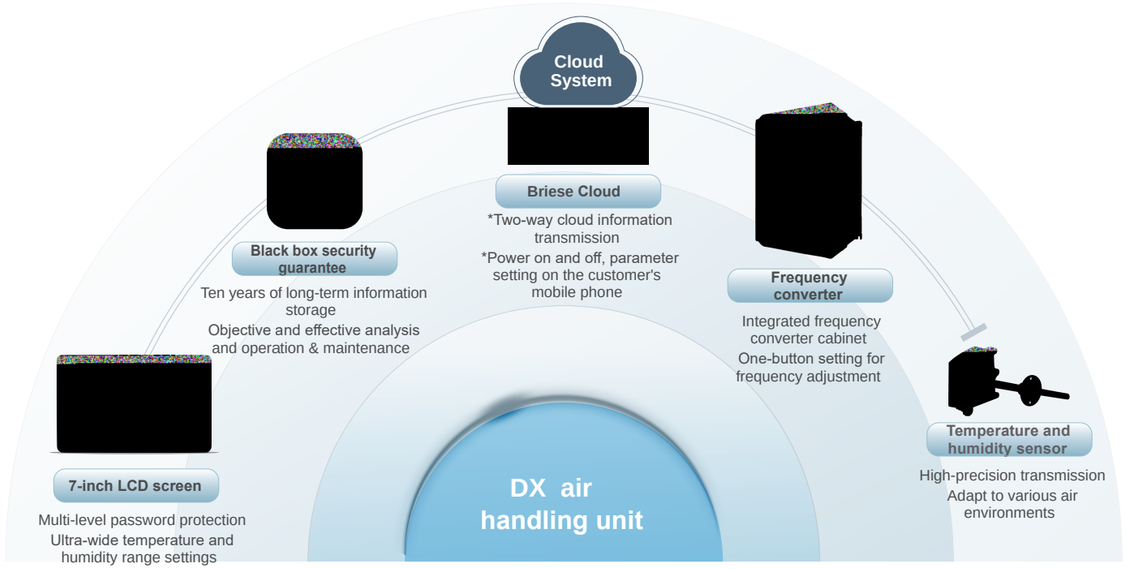
:

Adaptive Defrost

- Bottom single-phase valve for frost prevention heating without frosting, and uniform and rapid defrosting on top.
- Patented adaptive defrost control, multi-module rotation for balanced defrosting.
- Strong heating effect, defrosting time 3-5 minutes

* Some functions are optional. Consult your local Briese Air branches or offices for detailed configuration.

Intelligent Self-control System



Industrial-grade air process control

Automatic adjustment in transition season, no "cold and hot offset" self-developed Patent control

Expert algorithm based on fuzzy control

Adaptive safe operation under all working conditions

Refrigeration ambient temperature: -10~48°C, heating ambient temperature: -15~25°C
*Variable frequency circulating air refrigeration ambient temperature: -10~56°C, heating ambient temperature: -20~25°C

Multiple safety protection functions
2000 hours long-term operation test escort

Multifunctional application integration platform

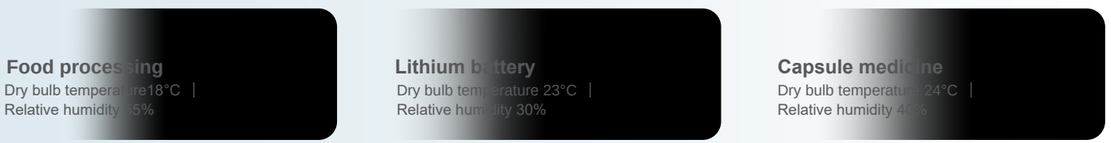
Prefabricated mainstream industry scene control functions, no need for secondary development

- Multiple interlocking
- Fan variable frequency adjustment
- Hot water/steam reheating
- Dual cooling self-control
- Ozone, ultraviolet disinfection
- Electronic purification

High-definition system integrated integrated screen

- Large-size LCD touch screen
- Modbus remote communication
- Multi-mode operation settings
- Local/remote multi-screen application

1 Low dew point dehumidification dedicated air conditioning system



Scene appeal

Low temperature/low humidity
Dew point temperature as low as 4°C

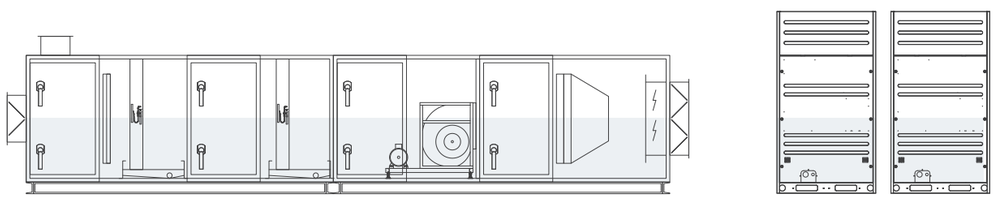
Long-term energy consumption control
Stable and reliable, high efficiency and energy saving

Fresh air demand
Adaptive capacity adjustment

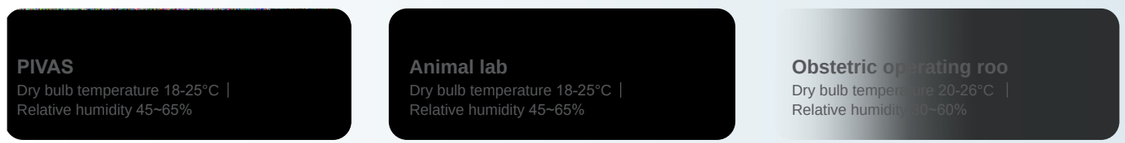
- **Stable cooling to above 4°C to ensure low temperature/low humidity production environment**
  The variable frequency unit's patented comprehensive trend judgment control technology for ambient temperature and humidity, and functional section temperature and humidity ensures no icing during low temperature operation
- **Replaces high energy consumption rotary dehumidification applications, saving up to 50% energy**
  Refrigerant dehumidification directly, no need to rely on rotary regeneration air heating
- **10%~100% fresh air ratio, compatible with one set of AHU**
  In case of large enthalpy difference, two-stage direct expansion section relay dehumidification is used, with automatic control (dual cold source front and rear stage can also be used)

A typical sample of Briese Air low-dew-point dehumidification

Typical AHU functional segment layout



All fresh air constant temperature and humidity dedicated air handling unit 2



Scene appeal

All fresh air operation
Adaptive capacity adjustment

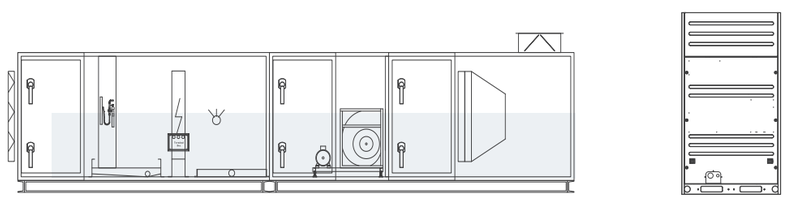
Temperature and humidity adjustment
Precise control of temperature and humidity

Energy-efficient
On-demand output to avoid excessive dehumidification

- **Effectively remove high humidity from the outside and strictly control temperature and humidity**
  Fully variable frequency new wind constant temperature and humidity air conditioning system, cooling and heating 10%~100% infinite adjustment
- **Capacity output is accurate, eliminating the waste of cold and hot offset**
  Patented dew point temperature + humidity judgment constant temperature and humidity control algorithm, Refrigerant temperature and flow high-precision control measures
- **Intelligent control system**
  Self-developed controller, patented constant temperature and humidity control, integrated multi-faceted control and multiple interlocking, multiple protection functions to ensure stable operation

A typical sample of Briese Air all fresh air constant temperature and humidity

Typical AHU functional segment layout



3 Energy-saving heat recovery dedicated air conditioning system

Hospital operating room

Archives

Biological laboratory

Scene appeal

High energy-saving requirements
Dehumidification and reheating "cold and hot offset" consumes a lot of energy

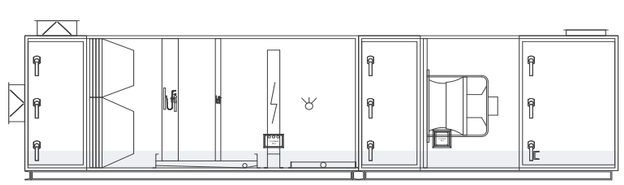
Control temperature and humidity simultaneously
Avoid excessive dehumidification

Stable and reliable
Guarantee normal process requirements

- **Energy saving up to 45%**
  Innovative condensing heat recovery technology provides free reheating and saves operating energy by more than 45%.
- **±1°C, ±5% constant temperature and humidity**
  Precise control of dew point temperature and reheat temperature
- **Strong efficiency in extreme weather**
  Equipped with jet enthalpy increase compressor, the efficiency in extreme weather is more than 10% higher than that of ordinary compressors

A typical sample of Briese Air heat recovery DX air conditioning unit

Typical AHU functional segment layout





Purification dedicated air conditioning system 4

Industrial plants

Warehousing and logistics

Large venues

Scene appeal

Personnel health needs
Remove viruses and bacteria to avoid cross contamination

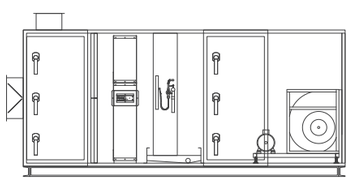
Diversified air supply needs
Duct air supply, grille air supply, Jet high-altitude air supply, etc.

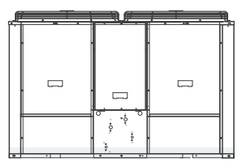
Flexible cold and heat source layout
Adapt to different pipeline lengths and height differences

- **Fresh air is introduced to remove bacteria and dust**
  Set up filters and sterilization functions to ensure ventilation and personnel health
- **Adjustable static pressure outside the machine**
  Adjustable static pressure outside the machine to achieve free air supply distance, suitable for commercial building decoration, factory post air supply and other applications
- **Built-in cold/heat source**
  Centralized cold source has cumbersome pipeline laying and distribution waste, suitable for decentralized installation or regional transformation

Typical model of Briese Air air-conditioning purification

Typical AHU functional segment layout





Profession

DESIGN AND SELECTION

Briese Air direct expansion air handling units can provide customized product services that fit the user's business format for various extreme industrial environments and comfortable living environments.
The full range of selection is carried out through self-developed software, which efficiently and accurately matches the unit capacity and outputs professional reports.

Direct expansion indoor unit naming

BAC	Indoor unit model: BAC-25mm BBC-50mm
12	Height modulus: 51mm per module, 12 represents an internal height of 612mm
13	Width modulus: 51mm per module, 13 represents an internal width of 663mm
D	Design serial number: fixed frequency F..., variable frequency D...
H	Structural form: H-horizontal, V-vertical, C-ceiling
V	Feature code: F-fixed frequency, V-variable frequency, C-variable frequency condensing heat recovery
R	Unit form: R-heat pump, C-single cooling
F	Working condition type: R-return air, F-fresh air
H	Use code: H-temperature and humidity type, X-single temperature control, S-deep dehumidification, U-open energy demand
S	control method: S-single chip, T-third-party PLC, N-no automatic control
0100	Total number of matching outdoor units: 0100-10HP

Direct expansion indoor unit naming

BSAV	Outdoor unit model: BSAX-air-cooled fixed-frequency outdoor unit BSAV-air-cooled variable-frequency outdoor unit
0100	Outdoor unit capacity: 0100-10HP
D	Design serial number: fixed-frequency D..., variable-frequency D..., variable-frequency condensing heat recovery C
R	Unit type: R-cooling and heating type, cooling-only type omitted
C	Sales area: C-domestic, E-export
X	Feature code: fixed-frequency unit omitted, X-standard variable-frequency direct expansion, R-variable-frequency condensing heat recovery

01 PRODUCT SERIES

Fixed frequency direct expansion series

Energy saving for users

- Energy saving and carbon reduction in heat pump operation
- Multi-level energy adjustment and energy-saving operation
- Multiple outdoor units take turns to defrost in winter

Professional extension

- 0°C stable ambient temperature for year-round refrigeration
- Reliable operation under variable working conditions
- Multiple systems for a good standby performance

Improve efficiency

- Built-in refrigerant, no need to fill
- Integrated control, no need for secondary development
- Automatic compressor balancing, long load life

Parameters

Technical Specifications of
Fixed Frequency DX Air Handling Unit

Parameters of fixed frequency DX units (return air purification & return air constant temperature and humidity)

Model	ODU model	BSAX	0030DRC	0030DRC*2	0080DRC	0100DRC	0125DRC	0150DRC	0200DRC	0250DRC
	IDU model	BAC/BBC	012014	012016	014022	014024	020019	020025	022028	023034
	Capacity	HP	3	6	8	10	12.5	15	20	25
Rated capacity[1]	Rated cooling capacity	kW	8.00	16.10	24.50	27.00	32.10	43.90	55.60	72.00
	Rated heating capacity	kW	8.00	16.00	25.00	26.50	34.10	44.00	60.00	68.00
ODU power	Rated cooling power[1]	kW	2.40	4.80	6.87	7.40	10.00	13.00	16.40	21.00
	Rated heating power[1]	kW	2.20	4.40	6.75	7.30	9.96	13.00	16.13	19.00
	Maximum operating power	kW	3.94	7.88	9.60	12.20	13.40	16.80	22.70	28.00
	Maximum operating current	A	17.90	35.80	18.10	23.00	23.20	31.50	43.30	52.50
	ODU power supply	-	220V 1N~ 50Hz		380V 3N~ 50Hz					
IDU	Nominal IDU air flow	m^3/h	1400	2400	5000	5500	6500	9000	11500	15000
	Maximum fresh air ratio	%	Fresh air ratio ≤30%							
	Cooling coil section length for reference	mm	500	500	600	600	600	600	600	600
	IDU power supply	-	380V 3N~ 50Hz							
	Condensate water pan pipe diameter	-	DN32							
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	Circulated air 0 to 46°C							
	Ambient temperature for heating	°C	Circulated air -10 to 25°C		Circulated air -15 to 25°C					
Operation accuracy	Temperature accuracy	°C	Constant temperature and humidity: Cooling-only: ±1°C; heat pump: ±2°C							
	Humidity accuracy	-	Constant temperature and humidity: Cooling-only: ±5%; heat pump: ±10%							
Compressor	Type	-	Rotor compressor						Scroll compressor	
	Quantity	-	1	1*2	2	2	2	2	2	2
ODU Fan motor	Number of fans	-	1	1*2	2	2	2	2	2	2
	Air discharge mode	-	Axial flow side air outlet		Axial flow upper air outlet					
	Maximum air flow	m^3/h	4000	4000*2	5500*2	5500*2	7520*2	7520*2	12900*2	12900*2
Single ODU Dimensions and weight	Width	mm	865	865	1403	1403	1403	1403	1808	1808
	Depth	mm	350	350	821	821	821	821	1090	1090
	Height	mm	700	700	1200	1200	1200	1200	1214	1214
	Net Weight	kg	56	56	200	200	240	240	400	400
Refrigerant	Type	-	R410A							
	ODU charge amount[2]	kg	2.1	2.1*2	3.2*2	3.4*2	3.6*2	4.35*2	5.8*2	7.2*2
Connecting pipe	Liquid pipe * number	mm	6.35	6.35*2	9.52*2	9.52*2	9.52*2	12.7*2	12.7*2	12.7*2
	Steam pipe * number	mm	15.88	15.88*2	15.88*2	15.88*2	15.88*2	19.05*2	22.23*2	25.4*2
	Limit length/height difference (m) of connecting pipe		15/10	15/10	35/20	35/20	35/20	35/20	40/20	40/20
	ODU connection mode[3]	-	Pipe socket						Welding	

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, outdoor dry-bulb temperature is 35/24°C, indoor dry-bulb temperature is 27/19°C;
Rated heating capacity is nominal air volume, outdoor dry-bulb temperature is 7/6°C, indoor dry-bulb temperature is 20/15°C;
Performance test piping condition is equivalent to 7.5m (horizontal) pipe length,
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant must be added according to the "Installation and Operation Manual",
3. The connecting pipe diameter of the internal and external units is based on the external unit diameter, and the internal unit is reduced in diameter,
4. For more air volume selection, please consult Briese Air local branch or office.

Parameters of fixed frequency DX units (return air purification & return air constant temperature and humidity)

Model	ODU model	BSAX	0150DRC*2	0200DRC*2	0250DRC*2	0200DRC*3	0250DRC*3	1100DRC	1200DRC
	IDU model	BAC/BBC	026035	030039	035044	035051	042054	047058	047063
	Capacity	HP	30	40	50	60	75	110	120
Rated capacity[1]	Rated cooling capacity	kW	87.80	111.20	144.00	166.80	216.00	270.00	310.00
	Rated heating capacity	kW	88.00	120.00	136.00	180.00	204.00	270.00	310.00
ODU power	Rated cooling power[1]	kW	26.00	32.80	42.00	49.20	63.00	84.00	92.40
	Rated heating power[1]	kW	26.00	32.30	38.00	48.40	57.00	89.30	88.30
	Maximum operating power	kW	33.60	45.40	56.00	68.10	84.00	117.60	129.36
	Maximum operating current	A	63.00	86.60	105.00	129.90	157.50	221.89	244.08
	ODU power supply	-	380V 3N~ 50Hz						
IDU	Nominal IDU air flow	m^3/h	18000	23000	30000	34500	45000	55000	63000
	Maximum fresh air ratio	%	Fresh air ratio ≤30%						
	Cooling coil section length for reference	mm	600	600	600	800	800	900	900
	IDU power supply	-	380V 3N~ 50Hz						
	Condensate water pan pipe diameter	-	DN32						
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	Circulated air 0 to 46°C					Circulated air -10 to 46°C	
	Ambient temperature for heating	°C	Circulated air -15 to 25°C					Circulated air -10 to 30°C	
Operation accuracy	Temperature accuracy	°C	Constant temperature and humidity: Cooling-only: ±1°C; heat pump: ±2°C						
	Humidity accuracy	-	Constant temperature and humidity: Cooling-only: ±5%; heat pump: ±10%						
Compressor	Type	-	Rotor compressor	Scroll compressor					
	Quantity	-	2*2	2*2	2*2	2*3	2*3	4	4
ODU Fan motor	Number of fans	-	2*2	2*2	2*2	2*3	2*3	4	4
	Air discharge mode	-	Axial flow upper air outlet						
	Maximum air flow	m^3/h	7520*4	12900*4	12900*4	12900*6	12900*6	28000*4	28000*4
Single ODU Dimensions and weight	Width	mm	1403	1808	1808	1808	1808	2200	2200
	Depth	mm	821	1090	1090	1090	1090	2400	2400
	Height	mm	1200	1214	1214	1214	1214	2235	2235
	Net Weight	kg	240	400	400	400	400	1570	1570
Refrigerant	Type	-	R410A						
	ODU charge amount[2]	kg	4.35*4	5.8*4	7.2*4	5.8*6	7.2*6	13.5*4	13.5*4
Connecting pipe	Liquid pipe * number	mm	12.7*4	12.7*4	12.7*4	12.7*6	12.7*6	19.05*4	19.05*4
	Steam pipe * number	mm	19.05*4	22.23*4	25.4*4	22.23*6	25.4*6	34.92*4	34.92*4
	Limit length/height difference (m) of connecting pipe		35/20	40/20	40/20	40/20	40/20	40/20	40/20
	ODU connection mode[3]	-	Pipe socket	Welding					

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, outdoor dry-bulb temperature is 35/24°C, indoor dry-bulb temperature is 27/19°C;
Rated heating capacity is nominal air volume, outdoor dry-bulb temperature is 7/6°C, indoor dry-bulb temperature is 20/15°C;
Performance test piping condition is equivalent to 7.5m (horizontal) pipe length,
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant must be added according to the "Installation and Operation Manual",
3. The connecting pipe diameter of the internal and external units is based on the external unit diameter, and the internal unit is reduced in diameter,
4. For more air volume selection, please consult Brise Air local branch or office.

Parameters of fixed frequency DX units (fresh air purification)

Model	ODU model	BSAX	0080DRC	0100DRC	0125DRC	0150DRC	0200DRC	0250DRC
	IDU model	BAC/BBC	012013	012013	012016	014017	014021	016024
	Capacity	HP	8	10	12.5	15	20	25
Rated capacity[1]	Rated cooling capacity	kW	24.50	27.00	32.00	41.00	55.00	72.00
	Rated heating capacity	kW	23.00	26.50	34.10	41.50	55.00	68.00
ODU power	Rated cooling power[1]	kW	6.87	7.40	10.00	13.00	16.40	21.00
	Rated heating power[1]	kW	6.75	7.30	9.96	13.00	16.13	19.00
	Maximum operating power	kW	9.60	12.20	13.40	16.80	22.70	28.00
	Maximum operating current	A	18.10	23.00	23.20	31.50	43.30	52.50
	ODU power supply	-	380V 3N~ 50Hz					
IDU	Nominal IDU air flow	m^3/h	1950	2200	2450	3150	4200	5550
	Cooling coil section length for reference	mm	600	600	700	700	800	800
	IDU power supply	-	380V 3N~ 50Hz					
	Condensate water pan pipe diameter	-	DN32					
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	16°C to 43°C					
	Ambient temperature for heating	°C	-15 to 15°C [5]					
Operation accuracy	Temperature accuracy	°C	Heat pump ±2°C					
	Humidity accuracy	-	Heat pump ±10%					
Compressor	Type	-	Rotor compressor				Scroll compressor	
	Quantity	-	2	2	2	2	2	2
ODU Fan motor	Number of fans	-	2	2	2	2	2	2
	Air discharge mode	-	Axial flow upper air outlet					
	Maximum air flow	m^3/h	5500*2	5500*2	7520*2	7520*2	12900*2	12900*2
Single ODU Dimensions and weight	Width	mm	1403	1403	1403	1403	1808	1808
	Depth	mm	821	821	821	821	1090	1090
	Height	mm	1200	1200	1200	1200	1214	1214
	Net Weight	kg	200	200	240	240	400	400
Refrigerant	Type	-	R410A					
	ODU charge amount[2]	kg	3.2*2	3.4*2	3.6*2	4.35*2	5.8*2	7.2*2
Connecting pipe	Liquid pipe * number	mm	9.52*2	9.52*2	9.52*2	12.7*2	12.7*2	12.7*2
	Steam pipe * number	mm	15.88*2	15.88*2	15.88*2	19.05*2	22.23*2	25.4*2
	Limit length/height difference (m) of connecting pipe		35/20	35/20	35/20	35/20	40/20	40/20
	ODU connection mode[3]	-	Pipe socket				Welding	

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, outdoor dry-bulb temperature is 35/28°C;
Rated heating capacity is nominal air volume, outdoor dry-bulb temperature is 7/6°C;
Performance test piping conditions are equivalent pipe length of 7.5m (horizontal),
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant must be added according to the "Installation and Operation Manual".
3. The connecting pipe diameter of the internal and external units is based on the external unit diameter, and the internal unit is reduced in diameter.
4. For more air volume selection, please consult Briese Air's local branch or office.
5. When the unit inlet air temperature is lower than 0°C, if the heat pump needs to be turned on, a preheating section needs to be configured to preheat to above 0°C.

Parameters of fixed frequency DX units (fresh air purification)

Model	ODU model	BSAX	0150DRC*2	0200DRC*2	0250DRC*2	0200DRC*3	0250DRC*3	0600DRC	1100DRC	1200DRC
	IDU model	BAC/BBC	020019	020025	022030	023031	026037	023031	032040	035044
	Capacity	HP	30	40	50	60	75	60	110	120
Rated capacity[1]	Rated cooling capacity	kW	82.00	110.00	144.00	165.00	216.00	165.00	290.00	332.00
	Rated heating capacity	kW	83.00	110.00	136.00	165.00	204.00	150.00	280.00	320.00
ODU power	Rated cooling power[1]	kW	26.00	32.80	42.00	49.20	63.00	53.20	89.30	98.30
	Rated heating power[1]	kW	26.00	32.30	38.00	48.40	57.00	49.60	80.30	88.30
	Maximum operating power	kW	33.60	45.40	56.00	68.10	84.00	74.48	112.42	123.62
	Maximum operating current	A	63.00	86.60	105.00	129.90	157.50	140.53	212.11	233.25
	ODU power supply	-	380V 3N~ 50Hz							
IDU	Nominal IDU air flow	m^3/h	6300	8400	11100	12600	16650	12600	22000	25500
	Cooling coil section length for reference	mm	800	800	800	800	800	800	800	800
	IDU power supply	-	380V 3N~ 50Hz							
	Condensate water pan pipe diameter	-	DN32							
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	16 to 43°C					16 to 46°C		
	Ambient temperature for heating	°C	-15 to 15°C [5]					-10 to 21°C [5]		
Operation accuracy	Temperature accuracy	°C	Heat pump ±2°C							
	Humidity accuracy	-	Heat pump ±10%							
Compressor	Type	-	Rotor compressor	Scroll compressor						
	Quantity	-	2*2	2*2	2*2	2*3	2*3	2	4	4
ODU Fan motor	Number of fans	-	2*2	2*2	2*2	2*3	2*3	2	4	4
	Air discharge mode	-	Axial flow upper air outlet							
	Maximum air flow	m^3/h	7520*4	12900*4	12900*4	12900*6	12900*6	28000*2	28000*4	28000*4
Single ODU Dimensions and weight	Width	mm	1403	1808	1808	1808	1808	2200	2200	2200
	Depth	mm	821	1090	1090	1090	1090	1100	2400	2400
	Height	mm	1200	1214	1214	1214	1214	2248	2235	2235
	Net Weight	kg	240	400	400	400	400	760	1570	1570
Refrigerant	Type	-	R410A							
	ODU charge amount[2]	kg	4.35*4	5.8*4	7.2*6	5.8*6	7.2*6	14*2	13.5*4	13.5*4
Connecting pipe	Liquid pipe * number	mm	12.7*4	12.7*4	12.7*4	12.7*6	12.7*6	19.05*2	19.05*4	19.05*4
	Steam pipe * number	mm	19.05*4	22.23*4	25.4*4	22.23*6	25.4*6	34.92*2	34.92*4	34.92*4
	Limit length/height difference (m) of connecting pipe		35/20	40/20	40/20	40/20	40/20	40/20	40/20	40/20
	ODU connection mode[3]	-	Pipe socket	Welding						

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, outdoor dry-bulb temperature is 35/28°C;
Rated heating capacity is nominal air volume, outdoor dry-bulb temperature is 7/6°C;
Performance test piping conditions are equivalent pipe length of 7.5m (horizontal),
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant must be added according to the "Installation and Operation Manual".
3. The connecting pipe diameter of the internal and external units is based on the external unit diameter, and the internal unit is reduced in diameter.
4. For more air volume selection, please consult Briese Air's local branch or office.
5. When the unit inlet air temperature is lower than 0°C, if the heat pump needs to be turned on, a preheating section needs to be configured to preheat to above 0°C.

Performance Deviation

Performance deviation of fixed frequency DX ODUs

The cooling and heating capacity of the direct expansion machine is closely related to the actual use of the system. When selecting the outdoor unit, be sure to refer to the following performance deviation table to check the performance.

For example: the actual working environment of the outdoor unit is 30°C, the air supply temperature of the indoor unit is 18°C, and the total length of the equivalent connecting pipe is 45m without height difference. Then the actual refrigeration performance correction coefficient of the outdoor unit = K1×K2×K3=1.08×1.12×0.92=1.11

1. Indoor and outdoor working conditions deviate from the refrigeration correction factor K1 | Air-cooled box-type constant temperature and humidity unit / Air-cooled purification air-conditioning unit

Correction factor / Indoor wet bulb Temperature °C / Outdoor dry bulb temperature (°C)	12	13	14	15	16	17	18	19	20	21	22
25	0.825	0.833	0.955	1.041	1.095	1.121	1.137	1.153	1.165	1.179	1.181
30	0.770	0.785	0.933	1.000	1.039	1.071	1.095	1.119	1.165	1.163	1.171
35	0.693	0.723	0.85	0.925	0.961	1.000	1.039	1.076	1.086	1.092	1.102
40	0.601	0.635	0.759	0.831	0.875	0.911	0.954	1.000	1.056	1.076	1.095
43	0.599	0.583	0.698	0.782	0.823	0.887	0.916	0.971	0.988	1.028	1.034

2. Heating capacity deviation correction factor K1' in indoor and outdoor working conditions | Air-cooled cabinet type thermostatic and humidistatic AHUs/Air-cooled purifying type air conditioning unit

Correction factor / Outdoor wet bulb Temperature °C / Indoor dry bulb temperature (°C)	14	12	10	8	6	4	2	0	-2	-4	-6	-8	-11	-13	-15
10	1.241	1.192	1.157	1.119	1.081	1.052	0.984	0.921	0.862	0.807	0.757	0.712	0.671	0.634	0.602
15	1.196	1.159	1.131	1.085	1.043	0.998	0.930	0.867	0.808	0.753	0.703	0.658	0.617	0.580	0.548
20	1.172	1.136	1.095	1.053	1.000	0.964	0.897	0.834	0.775	0.720	0.669	0.622	0.579	0.540	0.505
25	1.139	1.099	1.052	1.016	0.967	0.898	0.833	0.772	0.716	0.663	0.615	0.570	0.530	0.494	0.462

Note: 1. For the Fixed frequency unit, the main factors affecting the cooling operation are the indoor wet bulb temperature and outdoor dry bulb temperature while the main factors affecting the heating operation are the outdoor wet bulb temperature and indoor dry bulb temperature. Therefore, the indoor dry bulb temperature and other factors that have little impact are ignored in the above table.

3. IDU air flow deviation correction coefficient K2

IDU rated air flow (%)	80	90	100	110	120
Correction factor	0.91	0.96	1	1.02	1.04

4. Connecting pipe length correction factor K3

Correction factor K3		Equivalent total length of connecting pipe									
		5	10	15	20	25	30	35	40	45	50
Height difference between the ODU and IDU	0m	1.00	0.99	0.97	0.95	0.93	0.91	0.89	0.87	0.85	0.83
	5m	1.00	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82
	10m	-	0.97	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.81
	15m	-	-	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80
	20m	-	-	-	0.91	0.89	0.87	0.85	0.83	0.81	0.79
	25m	-	-	-	-	0.88	0.86	0.84	0.82	0.80	0.78

Notes: 1. The equivalent total length of the equivalent connecting pipe refers to the total length of the straight pipe of the pipeline (including horizontal and vertical connecting pipes), plus the sum of the equivalent lengths of elbows and oil storage bends;
2. Note that the maximum equivalent connecting pipe length and maximum height difference of different models are different, see "Product Parameters" for details.

02 PRODUCT SERIES

Variable frequency DX series

Higher energy-saving experience

- Full frequency conversion, first-level energy efficiency
- Intelligent energy adjustment, on-demand output
- Optional heat recovery, energy saving rate up to 70%

More professional scenarios

- Full-condition operation
- Low dew point air outlet, customized <5°C
- Fresh air, constant temperature and humidity

Simpler operation and maintenance

- Free installation of internal and external units
- Multi-mode one-button switching
- “Cloud” remote control

Parameters

Technical Specifications of Variable Frequency DX Air Handling Unit

Parameters of variable frequency DX units (return air purification & return air constant temperature and humidity)

Model	ODU model	BSAV-DRCX	0060	0080	0100	0060*2	0120	0080*2	0160	0100*2	0200	0120*2	0240	0260	0280
	IDU model	BAC/BBC	012017	016020	016022	020021	020021	020026	020026	022030	022030	023033	023033	026031	026033
	Capacity	HP	6	8	10	12	12	16	16	20	20	24	24	26	28
Rated capacity[1]	Rated cooling capacity	kW	15.00	24.50	28.00	30.00	33.50	49.00	45.00	56.00	56.00	67.00	67.50	73.50	75.50
	Rated heating capacity	kW	16.00	23.00	31.00	32.00	37.50	46.00	50.00	62.00	58.00	75.00	75.50	81.50	85.50
ODU power	Rated cooling power[1]	kW	5.10	6.63	7.47	10.20	8.70	13.26	12.30	14.94	15.70	17.40	18.20	19.40	20.35
	Rated heating power[1]	kW	4.90	6.88	7.30	9.80	8.40	13.76	12.00	14.60	14.40	16.80	18.10	19.20	20.18
	Maximum operating power	kW	7.00	10.80	13.50	14.00	16.50	21.60	22.00	27.00	26.00	33.00	30.00	31.80	32.00
	Maximum operating current	A	32.00	18.00	22.50	64.00	26.50	36.00	36.50	45.00	43.00	53.00	50.00	52.50	56.55
	ODU power supply	-	220V~50Hz	380V 3N~ 50Hz		220V~50Hz	380V 3N~ 50Hz								
IDU	Nominal IDU air flow	m^3/h	3000	5200	6000	7200	7200	9600	9600	12000	12000	14400	14400	15600	16800
	Maximum fresh air ratio	%	Fresh air ratio ≤50%												
	Cooling coil section length for reference	mm	500	600	600	600	600	600	600	600	600	600	600	600	600
	IDU power supply	-	380V 3N~ 50Hz												
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	Circulated air -10 to 56°C												
	Ambient temperature for heating	°C	Circulated air -20 to 25°C												
Operation accuracy	Temperature accuracy	°C	Constant temperature and humidity: Cooling-only: ±1°C; heat pump: ±2°C												
	Humidity accuracy	-	Constant temperature and humidity: Cooling-only: ±5%; heat pump: ±10%												
Compressor	Type	-	Rotor compressor								Scroll compressor	Rotor compressor			
	Quantity	-	1	1	1	1*2	1	1*2	1	1*2	1	1*2	2	2	2
ODU Fan motor	Number of fans	-	1	2	2	1*2	2	2*2	1	2*2	2	2*2	2	2	2
	Air discharge mode	-	Axial flow side air outlet						Axial flow upper air outlet	Axial flow side air outlet	Axial flow upper air outlet				
	Maximum air flow	m^3/h	5000	8000	8000	5000*2	11300	8000*2	13980	8000*2	25800	11300*2	25800	25800	27000
Single ODU Dimensions and weight	Width	mm	985	985	985	985	1100	985	1240	985	1500	1100	1500	1500	1900
	Depth	mm	466	466	466	466	450	466	860	466	860	450	860	860	860
	Height	mm	840	1264	1264	840	1550	1264	1690	1264	1690	1550	1690	1690	1690
	Net Weight	kg	84	125	125	84	212	125	277	125	320	212	325	330	420
Refrigerant	Type	-	R410A												
	ODU charge amount[2]	kg	3.5	5.5	7.5	3.5*2	8	5.5*2	13.5	7.5*2	16.5	8*2	16.5	16.5	17
Connecting pipe	Liquid pipe * number	mm	9.52	9.52	12.7	9.52*2	12.7	9.52*2	12.7	12.7*2	15.88	12.7*2	19.05	19.05	19.05
	Steam pipe * number	mm	15.88	19.05	22.23	15.88*2	25.4	19.05*2	28.58	22.23*2	28.58	25.4*2	31.75	31.75	31.75
	Limit length/height difference (m) of connecting pipe		30/20	50/20	50/20	30/20	100/50	50/20	100/50	50/20	100/50	100/50	100/50	100/50	100/50
	ODU connection mode[3]	-	Welding												
Condensate water	Water pan pipe diameter	-	DN32												

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, outdoor dry-bulb temperature is 35/24°C, indoor dry-bulb temperature is 27/19°C;
Rated heating capacity is nominal air volume, outdoor dry-bulb temperature is 7/6°C, indoor dry-bulb temperature is 20/15°C;
Performance test piping condition is equivalent to 7.5m (horizontal) pipe length;
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant must be added according to the "Installation and Operation Manual";
3. The connecting pipe diameter of the internal and external units is based on the external unit diameter. The internal unit can be reduced in diameter. When the pipe exceeds 50m, the pipe diameter shall be based on the operating instructions;
4. For more air volume selection, please consult the local branch or office of Brise Air;
5. If there is a need to change the maximum length of the pipe for 6HP-10HP, please communicate with the factory.

Parameters of variable frequency DX units (return air purification & return air constant temperature and humidity)

Model	ODU model	BSAV-DRCX	0300	0160*2	0320	0200*2	0240*2	0260*2	0280*2	0300*2	0320*2	0240*3	0260*3	0280*3
	IDU model	BAC/BBC	026035	026037	026037	030041	035042	037043	037046	038050	038050	042050	045051	047055
	Capacity	HP	30	32	32	40	48	52	56	60	64	72	78	84
Rated capacity[2]	Rated cooling capacity	kW	85.00	90.00	90.00	112.00	135.00	147.00	151.00	170.00	180.00	202.5	220.50	226.50
	Rated heating capacity	kW	95.00	100.00	100.00	116.00	151.00	163.00	171.00	190.00	200.00	226.5	244.50	256.50
ODU power	Rated cooling power[1]	kW	22.95	24.60	24.78	31.40	36.40	38.80	41.00	45.90	49.56	54.60	58.20	61.05
	Rated heating power[1]	kW	22.85	24.00	24.30	28.80	36.20	38.40	40.00	45.70	48.60	54.30	57.60	60.54
	Maximum operating power	kW	34.45	44.00	36.50	52.00	60.00	63.60	64.00	68.90	73.00	90.00	95.40	96.00
	Maximum operating current	A	61.45	73.00	63.50	86.00	100.00	105.00	113.10	122.90	127.00	150.00	157.50	169.65
	ODU power supply	-	380V 3N~ 50Hz											
IDU	Nominal IDU air flow	m^3/h	18000	19200	19200	24000	28800	31200	33600	36000	38400	43200	46800	50400
	Maximum fresh air ratio	%	Fresh air ratio ≤50%											
	Cooling coil section length for reference	mm	600	600	600	600	800	800	800	800	800	800	800	800
	IDU power supply	-	380V 3N~ 50Hz											
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	Circulated air -10 to 56°C											
	Ambient temperature for heating	°C	Circulated air -20 to 25°C											
Operation accuracy	Temperature accuracy	°C	Constant temperature and humidity: Cooling-only: ±1°C; heat pump: ±2°C											
	Humidity accuracy	-	Constant temperature and humidity: Cooling-only: ±5%; heat pump: ±10%											
Compressor	Type	-	Rotor compressor			Scroll compressor	Rotor compressor							
	Quantity	-	2	1*2	2	1*2	2*2	2*2	2*2	2*2	2*2	2*3	2*3	2*3
ODU Fan motor	Number of fans	-	2	1*2	2	2*2	2*2	2*2	2*2	2*2	2*2	2*3	2*3	2*3
	Air discharge mode	-	Axial flow upper air outlet											
	Maximum air flow	m^3/h	27000	13980*2	27000	25800*2	25800*2	25800*2	25800*2	27000*2	27000*2	25800*3	25800*3	27000*3
Single ODU Dimensions and weight	Width	mm	1900	1240	1900	1500	1500	1500	1900	1900	1900	1500	1500	1900
	Depth	mm	860	860	860	860	860	860	860	860	860	860	860	860
	Height	mm	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690
	Net Weight	kg	430	277	430	320	325	330	420	430	430	325	330	420
Refrigerant	Type	-	R410A											
	ODU charge amount[2]	kg	20	13.5*2	20	16.5*2	16.5*2	16.5*2	17*2	20*2	20*2	16.5*3	16.5*3	17*3
Connecting pipe	Liquid pipe * number	mm	19.05	12.7*2	19.05	15.88*2	19.05*2	19.05*2	19.05*2	19.05*2	19.05*2	19.05*3	19.05*3	19.05*3
	Steam pipe * number	mm	31.75	28.58*2	31.75	28.58*2	31.75*2	31.75*2	31.75*2	31.75*2	31.75*2	31.75*3	31.75*3	31.75*3
	Limit length/height difference (m) of connecting pipe		100/50											
	ODU connection mode[3]	-	Welding											
Condensate water	Water pan pipe diameter	-	DN32											

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, outdoor dry-bulb temperature is 35/24°C, indoor dry-bulb temperature is 27/19°C;
Rated heating capacity is nominal air volume, outdoor dry-bulb temperature is 7/6°C, indoor dry-bulb temperature is 20/15°C;
Performance test piping condition is equivalent to 7.5m (horizontal) pipe length;
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant must be added according to the "Installation and Operation Manual";
3. The connecting pipe diameter of the internal and external units is based on the external unit diameter. The internal unit can be reduced in diameter. When the pipe exceeds 50m, the pipe diameter shall be based on the operating instructions;
4. For more air volume selection, please consult the local branch or office of Briese Air;
5. If there is a need to change the maximum length of the pipe for 6HP-10HP, please communicate with the factory.

Parameters of variable frequency DX units (return air purification & return air constant temperature and humidity)

Model	ODU model	BSAV-DRCX	0300*3	0320*3	0260*4	0280*4	0300*4	0320*4	0240*6	0260*6	0280*6	0300*6	0320*6
	IDU model	BAC/BBC	050056	050056	052057	052062	057060	057064	057072	062070	067072	067086	067086
	Capacity	HP	90	96	104	112	120	128	144	156	168	180	192
Rated capacity[1]	Rated cooling capacity	kW	255.00	270.00	294.00	302.00	340.00	360.00	405.00	441.00	453.00	510.00	540.00
	Rated heating capacity	kW	285.00	300.00	326.00	342.00	380.00	400.00	453.00	489.00	513.00	570.00	600.00
ODU power	Rated cooling power[1]	kW	68.85	74.00	78.00	81.00	92.00	99.12	109.20	116.40	122.10	137.70	148.68
	Rated heating power[1]	kW	68.55	72.90	77.00	80.72	91.40	97.20	108.60	115.20	121.08	137.10	145.80
	Maximum operating power	kW	103.35	109.50	127.20	128.00	137.80	146.00	180.00	190.80	192.00	206.70	219.00
	Maximum operating current	A	184.35	190.50	210.00	226.20	245.80	254.00	300.00	315.00	339.30	368.70	381.00
	ODU power supply	-	380V 3N~ 50Hz										
IDU	Nominal IDU air flow	m^3/h	54000	57600	62400	67200	72000	76800	86400	93600	100800	108000	115200
	Maximum fresh air ratio	%	Fresh air ratio ≤50%										
	Cooling coil section length for reference	mm	800	800	900	900	900	900	900	900	900	900	900
	IDU power supply	-	380V 3N~ 50Hz										
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	Circulated air -10 to 56°C										
	Ambient temperature for heating	°C	Circulated air -20 to 25°C										
Operation accuracy	Temperature accuracy	°C	Constant temperature and humidity: Cooling-only: ±1°C; heat pump: ±2°C										
	Humidity accuracy	-	Constant temperature and humidity: Cooling-only: ±5%; heat pump: ±10%										
Compressor	Type	-	Rotor compressor										
	Quantity	-	2*3	2*3	2*4	2*4	2*4	2*4	2*6	2*6	2*6	2*6	2*6
ODU Fan motor	Number of fans	-	2*3	2*3	2*4	2*4	2*4	2*4	2*6	2*6	2*6	2*6	2*6
	Air discharge mode	-	Axial flow upper air outlet										
	Maximum air flow	m^3/h	27000*3	27000*3	25800*4	27000*4	27000*4	27000*4	25800*6	25800*6	27000*6	27000*6	27000*6
Single ODU Dimensions and weight	Width	mm	1900	1900	1500	1900	1900	1900	1500	1500	1900	1900	1900
	Depth	mm	860	860	860	860	860	860	860	860	860	860	860
	Height	mm	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690
	Net Weight	kg	430	430	330	420	430	430	325	330	420	430	430
Refrigerant	Type	-	R410A										
	ODU charge amount[2]	kg	20*3	20*3	16.5*4	17*4	20*4	20*4	16.5*6	16.5*6	17*6	20*6	20*6
Connecting pipe	Liquid pipe * number	mm	19.05*3	19.05*3	19.05*4	19.05*4	19.05*4	19.05*4	19.05*6	19.05*6	19.05*6	19.05*6	19.05*6
	Steam pipe * number	mm	31.75*3	31.75*3	31.75*4	31.75*4	31.75*4	31.75*4	31.75*6	31.75*6	31.75*6	31.75*6	31.75*6
	Limit length/height difference (m) of connecting pipe		100/50										
	ODU connection mode[3]	-	Welding										
Condensate water	Water pan pipe diameter	-	DN32										

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, outdoor dry-bulb temperature is 35/24°C, indoor dry-bulb temperature is 27/19°C;
Rated heating capacity is nominal air volume, outdoor dry-bulb temperature is 7/6°C, indoor dry-bulb temperature is 20/15°C;
Performance test piping condition is equivalent to 7.5m (horizontal) pipe length;
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant must be added according to the "Installation and Operation Manual";
3. The connecting pipe diameter of the internal and external units is based on the external unit diameter. The internal unit can be reduced in diameter. When the pipe exceeds 50m, the pipe diameter shall be based on the operating instructions;
4. For more air volume selection, please consult the local branch or office of Brise Air;
5. If there is a need to change the maximum length of the pipe for 6HP-10HP, please communicate with the factory.

Parameters of variable frequency DX units (fresh air purification & fresh air constant temperature and humidity)

Model	ODU model	BSAV-DRCX	0060	0080	0100	0060*2	0120	0080*2	0160	0100*2	0200	0120*2	0240	0260	0280
	IDU model	BAC/BBC	012013	010013	010015	012014	012014	012018	012018	014017	014017	014020	014020	016019	016020
	Capacity	HP	6	8	10	12	12	16	16	20	20	24	24	26	28
Rated capacity[1]	Rated cooling capacity	kW	15.00	24.50	28.00	30.00	32.00	49.00	45.00	56.00	56.00	64.00	67.50	73.50	78.50
	Rated heating capacity	kW	16.00	21.50	26.00	32.00	30.00	43.00	43.00	52.00	52.00	60.00	61.50	66.50	75.00
ODU power	Rated cooling power[1]	kW	5.10	6.63	7.47	10.20	8.70	13.26	12.30	14.94	15.70	17.40	18.20	19.40	20.35
	Rated heating power[1]	kW	4.90	6.88	7.30	9.80	8.40	13.76	12.00	14.60	14.40	16.80	18.10	19.20	20.18
	Maximum operating power	kW	7.00	10.80	13.50	14.00	16.50	21.60	22.00	27.00	26.00	33.00	30.00	31.80	32.00
	Maximum operating current	A	32.00	18.00	22.50	64.00	26.50	36.00	36.50	45.00	43.00	53.00	50.00	52.50	56.55
	ODU power supply	-	220V~ 50Hz	380V 3N~ 50Hz		220V~ 50Hz	380V 3N~ 50Hz								
IDU	Nominal IDU air flow	m^3/h	1300	1600	1800	2150	2150	2900	2900	3600	3600	4350	4350	4750	5050
	Cooling coil section length for reference	mm	600	600	600	600	600	600	600	600	600	600	600	600	600
	IDU power supply	-	380V 3N~ 50Hz												
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	Fresh air 13 to 48°C												
	Ambient temperature for heating	°C	Fresh air -15 to 25°C												
Operation accuracy	Temperature accuracy	°C	Constant temperature and humidity: Cooling-only: ±1°C; heat pump: ±2°C												
	Humidity accuracy	-	Constant temperature and humidity: Cooling-only: ±5%; heat pump: ±10%												
Compressor	Type	-	Rotor compressor								Scroll compressor	Rotor compressor			
	Quantity	-	1	1	1	1*2	1	1*2	1	1*2	1	1*2	2	2	2
ODU Fan motor	Number of fans	-	1	2	2	1*2	2	2*2	1	2*2	2	2*2	2	2	2
	Air discharge mode	-	Axial flow side air outlet						Axial flow upper air outlet	Axial flow side air outlet	Axial flow upper air outlet				
	Maximum air flow	m^3/h	5000	8000	8000	5000*2	11300	8000*2	13980	8000*2	25800	11300*2	25800	25800	27000
Single ODU Dimensions and weight	Width	mm	985	985	985	985	1100	985	1240	985	1500	1100	1500	1500	1900
	Depth	mm	466	466	466	466	450	466	860	466	860	450	860	860	860
	Height	mm	840	1264	1264	840	1550	1264	1690	1264	1690	1550	1690	1690	1690
	Net Weight	kg	84	125	125	84	212	125	277	125	320	212	325	330	420
Refrigerant	Type	-	R410A												
	ODU charge amount[2]	kg	3.5	5.5	7.5	3.5*2	8	5.5*2	13.5	7.5*2	16.5	8*2	16.5	16.5	17
Connecting pipe	Liquid pipe * number	mm	9.52	9.52	12.7	9.52*2	12.7	9.52*2	12.7	12.7*2	15.88	12.7*2	19.05	19.05	19.05
	Steam pipe * number	mm	15.88	19.05	22.23	15.88*2	25.4	19.05*2	28.58	22.23*2	28.58	25.4*2	31.75	31.75	31.75
	Limit length/height difference (m) of connecting pipe		30/20	50/20		30/20	100/50	50/20	100/50	50/20	100/50	100/50	100/50	100/50	100/50
	ODU connection mode[3]	-	Welding												
Condensate water	Water pan pipe diameter	-	DN32												

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, indoor and outdoor dry-bulb temperature is 35/28°C;
Rated heating capacity is nominal air volume, indoor and outdoor dry-bulb temperature is 7/6°C;
Performance test piping condition is equivalent to 7.5m (horizontal) pipe length.
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant needs to be added according to the "Installation and Operation Manual";
3. The diameter of the connecting pipe between the internal and external units is the diameter of the external unit, and the internal unit can be reduced in diameter;
4. For more air volume selection, please consult Briese Air local branch and office;
5. When the unit inlet temperature is lower than 0°C, if the heat pump needs to be turned on, a preheating section needs to be configured to preheat to above 5°C;
6. If there is a need to change the maximum length of the connecting pipe for 6HP-10HP, please communicate with the factory.

Parameters of variable frequency DX units (fresh air purification & fresh air constant temperature and humidity)

Model	ODU model	BSAV-DRCX	0300	0160*2	0320	0200*2	0240*2	0260*2	0280*2	0300*2	0320*2	0240*3	0260*3	0280*3
	IDU model	BAC/BBC	016022	016024	016024	020022	020026	020028	020032	022028	022030	023033	026031	026033
	Capacity	HP	30	32	32	40	48	52	56	60	64	72	78	84
Rated capacity[1]	Rated cooling capacity	kW	85.00	90.00	90.00	112.00	135.00	147.00	157.00	170.00	180.00	202.50	220.50	235.50
	Rated heating capacity	kW	79.50	86.00	85.00	104.00	123.00	133.00	150.00	159.00	170.00	184.50	199.50	225.00
ODU power	Rated cooling power[1]	kW	22.95	24.60	24.78	31.40	36.40	38.80	40.70	45.90	49.56	54.60	58.20	61.05
	Rated heating power[1]	kW	22.85	24.00	24.30	28.80	36.20	38.40	40.36	45.70	48.60	54.30	57.60	60.54
	Maximum operating power	kW	34.45	44.00	36.50	52.00	60.00	63.60	64.00	68.90	73.00	90.00	95.40	96.00
	Maximum operating current	A	61.45	73.00	63.50	86.00	100.00	105.00	113.10	122.90	127.00	150.00	157.50	169.65
	ODU power supply	-	380V 3N~ 50Hz											
IDU	Nominal IDU air flow	m^3/h	5500	5800	5800	7200	8700	9500	10100	11000	11600	13050	14250	15150
	Cooling coil section length for reference	mm	600	600	600	600	800	800	800	800	800	800	800	800
	IDU power supply	-	380V 3N~ 50Hz											
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	Fresh air 13 to 48°C											
	Ambient temperature for heating	°C	Fresh air -15 to 25°C											
Operation accuracy	Temperature accuracy	°C	Constant temperature and humidity: Cooling-only: ±1°C; heat pump: ±2°C											
	Humidity accuracy	-	Constant temperature and humidity: Cooling-only: ±5%; heat pump: ±10%											
Compressor	Type	-	Rotor compressor			Scroll compressor	Rotor compressor							
	Quantity	-	2	1*2	2	1*2	2*2	2*2	2*2	2*2	2*2	2*3	2*3	2*3
ODU Fan motor	Number of fans	-	2	1*2	2	2*2	2*2	2*2	2*2	2*2	2*2	2*3	2*3	2*3
	Air discharge mode	-	Axial flow upper air outlet											
	Maximum air flow	m^3/h	27000	13980*2	27000	25800*2	25800*2	25800*2	27000*2	27000*2	27000*2	25800*3	25800*3	27000*3
Single ODU Dimensions and weight	Width	mm	1900	1240	1900	1500	1500	1500	1900	1900	1900	1500	1500	1900
	Depth	mm	860	860	860	860	860	860	860	860	860	860	860	860
	Height	mm	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690
	Net Weight	kg	430	277	430	320	325	330	420	430	430	325	330	420
Refrigerant	Type	-	R410A											
	ODU charge amount[2]	kg	20	13.5*2	20	16.5*2	16.5*2	16.5*2	17*2	20*2	20*2	16.5*3	16.5*3	17*3
Connecting pipe	Liquid pipe * number	mm	19.05	12.7*2	19.05	15.88*2	19.05*2	19.05*2	19.05*2	19.05*2	19.05*2	19.05*3	19.05*3	19.05*3
	Steam pipe * number	mm	31.75	28.58*2	31.75	28.58*2	31.75*2	31.75*2	31.75*2	31.75*2	31.75*2	31.75*3	31.75*3	31.75*3
	Limit length/height difference (m) of connecting pipe		100/50											
	ODU connection mode[3]	-	Welding											
Condensate water	Water pan pipe diameter	-	DN32											

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, indoor and outdoor dry-bulb temperature is 35/28°C;
Rated heating capacity is nominal air volume, indoor and outdoor dry-bulb temperature is 7/6°C;
Performance test piping condition is equivalent to 7.5m (horizontal) pipe length.
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant needs to be added according to the "Installation and Operation Manual";
3. The diameter of the connecting pipe between the internal and external units is the diameter of the external unit, and the internal unit can be reduced in diameter;
4. For more air volume selection, please consult Briese Air local branch and office;
5. When the unit inlet temperature is lower than 0°C, if the heat pump needs to be turned on, a preheating section needs to be configured to preheat to above 5°C;
6. If there is a need to change the maximum length of the connecting pipe for 6HP-10HP, please communicate with the factory.

Parameters of variable frequency DX units (fresh air purification & fresh air constant temperature and humidity)

Model	ODU model	BSAV-DRCX	0300*3	0320*3	0260*4	0280*4	0300*4	0320*4	0240*6	0260*6	0280*6	0300*6	0320*6
	IDU model	BAC/BBC	026034	026037	028038	030039	030041	030044	032043	035044	037046	038050	042047
	Capacity	HP	90	96	104	112	120	128	144	156	168	180	192
Rated capacity[1]	Rated cooling capacity	kW	255.00	270.00	294.00	314.00	340.00	360.00	405.00	441.00	471.00	510.00	540.00
	Rated heating capacity	kW	238.50	255.00	266.00	300.00	318.00	340.00	369.00	399.00	450.00	477.00	510.00
ODU power	Rated cooling power[1]	kW	68.85	74.34	77.60	81.40	91.80	99.12	109.20	116.40	122.10	137.70	148.68
	Rated heating power[1]	kW	68.55	72.90	76.80	80.72	91.40	97.20	108.60	115.20	121.08	137.10	145.80
	Maximum operating power	kW	103.35	109.50	127.20	128.00	137.80	146.00	180.00	190.80	192.00	206.70	219.00
	Maximum operating current	A	184.35	190.50	210.00	226.20	245.80	254.00	300.00	315.00	339.30	368.70	381.00
	ODU power supply	-	380V 3N~ 50Hz										
IDU	Nominal IDU air flow	m^3/h	16500	17400	19000	20200	22000	23200	26100	28500	30300	33000	34800
	Cooling coil section length for reference	mm	800	800	900	900	900	900	900	900	900	900	900
	IDU power supply	-	380V 3N~ 50Hz										
Ambient temperature range for unit operation	Ambient temperature for cooling	°C	Fresh air 13 to 48°C										
	Ambient temperature for heating	°C	Fresh air -15 to 25°C										
Operation accuracy	Temperature accuracy	°C	Constant temperature and humidity: Cooling-only: ±1°C; heat pump: ±2°C										
	Humidity accuracy	-	Constant temperature and humidity: Cooling-only: ±5%; heat pump: ±10%										
Compressor	Type	-	Rotor compressor										
	Quantity	-	2*3	2*3	2*4	2*4	2*4	2*4	2*6	2*6	2*6	2*6	2*6
ODU Fan motor	Number of fans	-	2*3	2*3	2*4	2*4	2*4	2*4	2*6	2*6	2*6	2*6	2*6
	Air discharge mode	-	Axial flow upper air outlet										
	Maximum air flow	m^3/h	27000*3	27000*3	25800*4	27000*4	27000*4	27000*4	25800*6	25800*6	27000*6	27000*6	27000*6
Single ODU Dimensions and weight	Width	mm	1900	1900	1500	1900	1900	1900	1500	1500	1900	1900	1900
	Depth	mm	860	860	860	860	860	860	860	860	860	860	860
	Height	mm	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690
	Net Weight	kg	430	430	330	420	430	430	325	330	420	320	430
Refrigerant	Type	-	R410A										
	ODU charge amount[2]	kg	20*3	20*3	16.5*4	17*4	20*4	20*4	16.5*6	16.5*6	17*6	20*6	20*6
Connecting pipe	Liquid pipe * number	mm	19.05*3	19.05*3	19.05*4	19.05*4	19.05*4	19.05*4	19.05*6	19.05*6	19.05*6	19.05*6	19.05*6
	Steam pipe * number	mm	31.75*3	31.75*3	31.75*4	31.75*4	31.75*4	31.75*4	31.75*6	31.75*6	31.75*6	31.75*6	31.75*6
	Limit length/height difference (m) of connecting pipe		100/50										
	ODU connection mode[3]	-	Welding										
Condensate water	Water pan pipe diameter	-	DN32										

Note: 1. Rated capacity and rated power are measured under the following conditions:
Rated cooling capacity is nominal air volume, indoor and outdoor dry-bulb temperature is 35/28°C;
Rated heating capacity is nominal air volume, indoor and outdoor dry-bulb temperature is 7/6°C;
Performance test piping condition is equivalent to 7.5m (horizontal) pipe length.
2. The unit has been filled with refrigerant according to the nameplate refrigerant amount before leaving the factory. If the equivalent pipe length exceeds 7.5m, refrigerant needs to be added according to the "Installation and Operation Manual";
3. The diameter of the connecting pipe between the internal and external units is the diameter of the external unit, and the internal unit can be reduced in diameter;
4. For more air volume selection, please consult Briese Air local branch and office;
5. When the unit inlet temperature is lower than 0°C, if the heat pump needs to be turned on, a preheating section needs to be configured to preheat to above 5°C;
6. If there is a need to change the maximum length of the connecting pipe for 6HP-10HP, please communicate with the factory.

Parameters of variable frequency split-type deep dehumidification performance

Horse power				6		8		10		12		16		20
Model	ODU model * quantity		BSAV	0060*1		0080*1		0100*1		0120*1		0160*1		0200*1
	IDU cabinet specifications		BAC/BBC	012017	016020	016020	016024	016024	020024	020024	020028	020028	022030	022030
Rated cooling capacity			kW	15	15	24.5	24.5	28	28	32	32	45	45	56
Rated air flow			m³/h	3000	5000	5000	6500	6500	8500	8500	10300	10300	13000	13000
Air flow range			m³/h	1600-3300	2500-5500	2500-5500	3250-7300	3250-7300	3900-9200	3900-9200	5000-11000	5000-11000	6000-13500	6000-13500
Number of optional rows of water coil			ROW	6–8										
Deep dehumidification module IDU	Air inlet dew point temperature range		°C	13–18										
	Water coil + fluorine coil section length		mm	900										
	Coil resistance		Pa	150										
	Power supply		-	380V 3N~ 50Hz										
ODU	Compressor type			DC inverter compressor										
	Throttle component			EXV										
	Dimensions (Single ODU)	Length	mm	985	985	985	985	985	985	1100	1100	1240	1240	1500
		Width	mm	466	466	466	466	466	466	450	450	860	860	860
		Height	mm	840	840	1264	1264	1264	1264	1550	1550	1690	1690	1690
	Weight (single ODU)		kg	84	84	125	125	125	125	212	212	277	277	320
	Power supply		-	220V~ 50Hz		380V 3N~ 50Hz								
	Power input (Single ODU)	Rated Power (W)	kW	5.10	5.10	6.63	6.63	7.47	7.47	8.7	8.7	12.3	12.3	15.7
		Maximum power	kW	7	7	10.8	10.8	13.5	13.5	16.5	16.5	22	22	26
	Input current (Single ODU)	Rated current	A	28.6	28.6	11.24	11.24	12.33	12.33	14.3	14.3	21.3	21.3	26.1
		Maximum current	A	32	32	18	18	22.5	22.5	26.5	26.5	36.5	36.5	43
Refrigerant	Model			R410a										
	Charge amount		kg	3.5	3.5	5.5	5.5	7.5	7.5	8.5	8.5	13.5	13.5	16.5
Connection pipe	Connection mode			Welding										
	Dimensions of ODU connecting pipe	Liquid pipe	φmm	9.52	9.52	9.52	9.52	12.7	12.7	12.7	12.7	12.7	12.7	15.88
		Gas pipe	φmm	15.88	15.88	19.05	19.05	22.33	22.23	25.4	25.4	28.58	28.58	28.58
Water pipe diameter of condensate water pan				DN32										

Notes: 1. Piping conditions for unit performance test: equivalent refrigerant length 7.5m (horizontal);
2. Ambient temperature range for cooling operation of fresh air unit: 13~48°C;
3. For wiring specifications of the external unit, please refer to the sample "Electrical Parameter Table". Be sure to refer to the maximum power and maximum current when distributing power;
4. The diameter of the refrigerant pipe between the internal and external units is consistent with the diameter of the refrigerant pipe of the external unit.

Parameters of variable frequency split-type deep dehumidification performance

Horse power				24	26	32	32	32		40	48		60	80
Model	ODU model * quantity		BSAV	0120*2	0260*1	0320*1	0320*1	0160*2		0200*2	0160*3		0200*3	0200*4
	IDU cabinet specifications		BAC/BBC	026035	026035	026035	026040	026035	026040	026040	030046	037043	037043	042049
Rated cooling capacity			kW	64	73.5	90	90	90	90	112	135	135	168	224
Rated air flow			m³/h	18000	18000	18000	21000	18000	21000	21000	25000	31000	31000	38000
Air flow range			m³/h	9000–19500	9000–19500	9000–19500	10500–22500	9000–19500	10500–22500	10500–22500	12500–26500	16500–34000	16500–34000	16500–42000
Number of optional rows of water coil			ROW	6–8										
Deep dehumidification module IDU	Air inlet dew point temperature range		°C	13–18										
	Water coil + fluorine coil section length		mm	900							1000			
	Coil resistance		Pa	150										
	Power supply		-	380V 3N~ 50Hz										
ODU	Compressor type			DC inverter compressor										
	Throttle component			EXV										
	Dimensions (Single ODU)	Length	mm	1100	1500	1900	1900	1240	1240	1500	1240	1240	1500	1500
		Width	mm	450	860	860	860	860	860	860	860	860	860	860
		Height	mm	1550	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690
	Weight (single ODU)		kg	212	330	430	430	277	277	320	277	277	320	320
	Power supply		-	380V 3N~ 50Hz										
	Power input (Single ODU)	Rated Power (W)	kW	8.7	19.4	24.78	24.78	12.3	12.3	15.7	12.3	12.3	15.7	15.7
		Maximum power	kW	16.5	31.8	36.5	36.5	22	22	26	22	22	26	26
	Input current (Single ODU)	Rated current	A	14.3	44.5	54.5	54.5	21.3	21.3	26.1	21.3	21.3	26.1	26.1
		Maximum current	A	26.5	52.5	63.5	63.5	36.5	36.5	43	36.5	36.5	43	43
Refrigerant	Model			R410a										
	Charge amount		kg	8.5*2	16.5	20	20	13.5*2	13.5*2	16.5*2	13.5*3	13.5*3	16.5*3	16.5*4
Connection pipe	Connection mode			Welding										
	Dimensions	Liquid pipe	φmm	12.7*2	19.05	19.05	19.05	12.7*2	12.7*2	15.88*2	12.7*3	12.7*3	15.88*3	15.88*4
		Gas pipe	φmm	25.4*2	31.75	31.75	31.75	28.58*2	28.58*2	28.58*2	28.58*3	28.58*3	28.58*3	28.58*4
Water pipe diameter of condensate water pan				DN32										

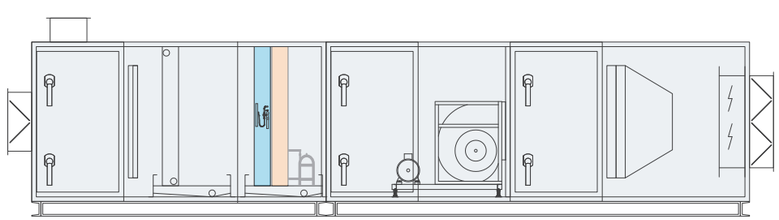
Notes: 1. Piping conditions for unit performance test: equivalent refrigerant length 7.5m (horizontal);
2. Ambient temperature range for cooling operation of fresh air unit: 13~48°C;
3. For wiring specifications of the external unit, please refer to the sample "Electrical Parameter Table". Be sure to refer to the maximum power and maximum current when distributing power;
4. The diameter of the refrigerant pipe between the internal and external units is consistent with the diameter of the refrigerant pipe of the external unit.

Performance Deviation

Double cold source integrated deep dehumidification performance verification table

In places where temperature and humidity control is required, such as clean operating rooms in hospitals, it is usually necessary to concentrate and deeply dehumidify the fresh air to bear the indoor humidity load. The water meter cooling plus fluorine meter cooling solution is adopted, and cold water is used to flexibly adjust the stable air outlet temperature. The refrigerant in the rear stage directly evaporates to ensure deep dehumidification, reducing the requirements for the quality of the cold source in the front stage.

Conventional function section arrangement



Specifications of Deep Dehumidification Fresh Air Handling Unit (Integral)

Model		BAC / BBC	02026	020030	022032	026034
Air flow		m^3/h	6500	8000	10000	12500
Air flow range		m^3/h	Standard air flow * 60%≤Air flow≤Standard air flow * 110%			
Number of optional rows of water coil			6 to 8 rows			
Deep dehumidification module	Compressor HP	-	4Hp	5Hp	6Hp	8Hp
	Cooling capacity of the evaporator	kW	12	14.5	18.5	23.2
	Heating capacity of the condenser	kW	15.2	18.2	22.7	28.7
	Dew-point temperature range of the air inlet machine of the evaporator	°C	12°C to 18°C			
	Compressor type	-	Hermetic scroll compressor			
	Rated power input of the compressor	kW	2.70	3.5	3.7	4.2
	Rated current of the compressor	A	4.9	6.6	7.1	8.1
	Refrigerant	Model	R410A			
		Charge amount	2.6	2.8	3.2	3.8
	Module section length	mm	1200			
Fan form		-	Belt-driven low noise centrifugal type			
Power supply of the unit		-	380V 3N~ 50Hz			
Water pipe diameter of condensate water pan			DN32			

Note: 1. The cooling capacity of the integrated deep dehumidification module is measured under the conditions of evaporator inlet dry-bulb temperature of 14/13.5°C and nominal air volume;
The cooling capacity of the split deep dehumidification module is measured under the conditions of evaporator inlet dry-bulb temperature of 16/15.5°C and nominal air volume;
2. The integrated deep dehumidification module has been filled with refrigerant before leaving the factory, and the outdoor unit of the split deep dehumidification module has been filled with refrigerant, and the internal unit is kept pressurized with nitrogen;
3. The compressor of the integrated deep dehumidification module is placed in the air conditioning box, without outdoor unit;
4. Specifications are subject to change due to product improvement without further notice, please refer to the unit nameplate.

Performance Deviation

Variable frequency DX outdoor unit performance verification table

The cooling and heating capacity of the direct expansion machine is closely related to the actual use of the system. When selecting the outdoor unit, be sure to refer to the following performance deviation table to check the performance.
For example: the actual working environment of the outdoor unit is 30°C, the air supply temperature of the indoor unit is 18°C, and the total length of the equivalent connecting pipe is 45m without height difference.
Then the actual refrigeration performance correction coefficient of the outdoor unit = K1×K2×K3×K4=1.08×1.12×0.92×1=1.11

1. Ambient temperature and outlet air temperature deviation correction factors K1 and K2

ODU ambient temperature (°C)	26	28	30	35	38	40	43	48
Cooling capacity correction factor K1	1.13	1.1	1.08	1	0.96	0.94	0.89	0.85

ODU ambient temperature (°C)	-20	-15	-7	0	7	15	25
Heating capacity correction factor K1'	0.56	0.75	0.81	0.9	1	1.1	1.2

Air outlet temperature of IDU evaporator (°C)	4	5	6	7	8	9	10	11	12
Cooling capacity correction factor K2	0.74	0.77	0.80	0.83	0.86	0.89	0.93	0.97	1.00

2. Connecting pipe length correction factor K3

When the connecting pipe between IDU and ODU is too long, or the height difference is too large, the ODU capacity should be corrected according to the correction factor K3 in the following table

Correction factor		Equivalent total length (m)														
		5m	10m	15m	20m	25m	30m	35m	40m	45m	50m	60m	70m	80m	90m	100m
Height difference between the ODU and IDU	0m	1.000	0.990	0.980	0.970	0.960	0.950	0.940	0.930	0.920	0.910	0.900	0.890	0.880	0.870	0.860
	10m		0.970	0.960	0.950	0.940	0.930	0.920	0.910	0.900	0.890	0.875	0.870	0.866	0.862	0.858
	20m				0.930	0.920	0.910	0.900	0.890	0.880	0.870	0.867	0.864	0.861	0.858	0.856
	30m						0.900	0.883	0.877	0.871	0.865	0.862	0.860	0.858	0.856	0.854
	40m								0.870	0.865	0.860	0.858	0.856	0.854	0.853	0.852
	50m										0.855	0.854	0.853	0.852	0.851	0.850

Note: 1. The equivalent total length of the equivalent connecting pipe refers to the total length of the straight pipe of the pipeline (including horizontal and vertical connecting pipes), plus the sum of the equivalent lengths of elbows and oil storage bends;
2. Note that the maximum equivalent connecting pipe length and maximum height difference of different models are different, see "Product Parameters" for details.

3. High altitude correction factor K4

The variable frequency DX unit can be used in high altitude areas. When the altitude is higher than 2000 meters, correct it according to the following table

Altitude (m)	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
Cooling attenuation factor K4	0.9	0.89	0.88	0.87	0.86	0.85	0.84	0.82	0.8	0.78	0.76
Cooling attenuation factor K4'	0.9	0.89	0.88	0.87	0.85	0.83	0.81	0.79	0.77	0.75	0.72

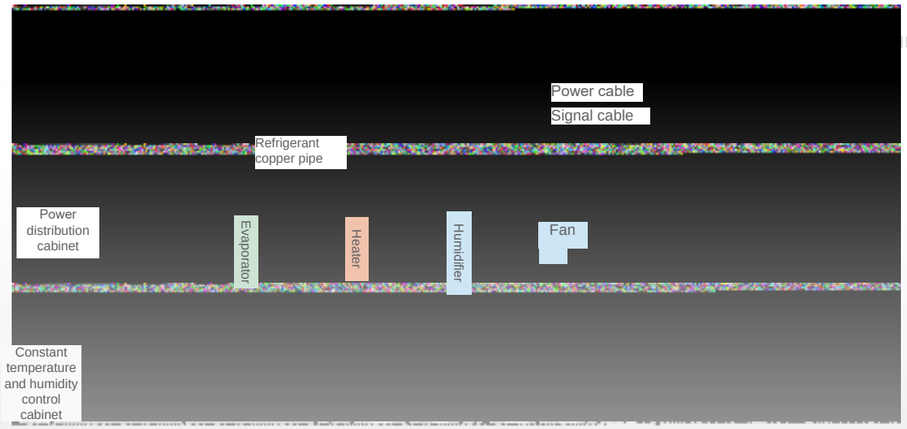
Note: When the altitude exceeds 3000 meters, the electrical components of the internal machine need to be adjusted. Please consult the local branch or office of Brise Air

BCARE

Briese Air service with a strong service management team composed of professional technical engineers, providing professional services

To customers quickly and effectively. Briese Air has developed digital services to bring customers into the cloud era, and to oversee the operation and maintenance of products with services such as data monitoring, fault prediction and resolution, customized maintenance and remote hosting.

Electrical wiring diagram (taking the constant temperature and humidity system as an example)

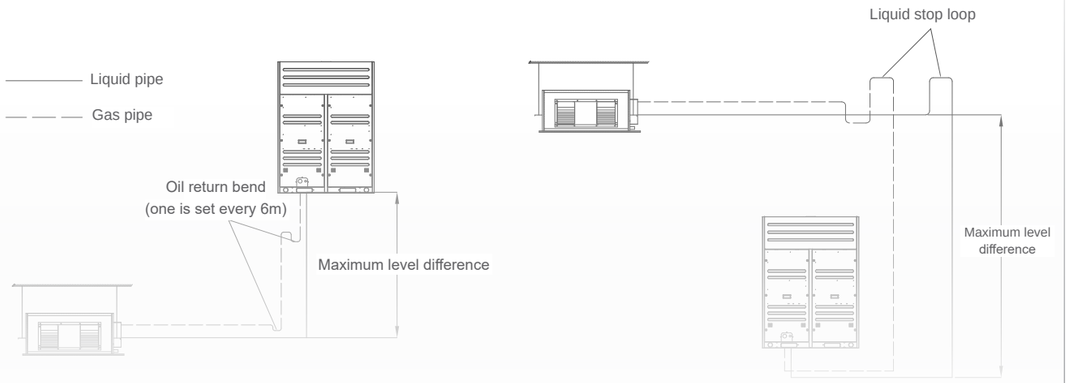


SN	Name
1	ODU power supply
2	IDU power supply
3	Electric heater power supply
4	Humidifier power supply
5	Motor power supply
6	Communication
7	Differential pressure and other protection
8	Air outlet temperature
9	Indoor temperature and humidity

Notes: 1. This diagram is intended to guide on-site wiring in the case of one ODU;
2. Power distribution cabinet, power for on-site wiring and signal cable are not provided with the unit.

Schematic diagram of internal and external unit installation

Depending on the installation position of the indoor unit and outdoor unit, an oil return bend must be installed on the gas pipe (outdoor unit on top) or a liquid check ring must be installed on the gas-liquid pipe (outdoor unit on the bottom). Please refer to the installation and operation manual for details.



Installation requirements of IDU-ODU connecting pipe

It is recommended that the installation distance between the indoor and outdoor units should not be too long to avoid affecting the cooling/heating capacity. If the indoor and outdoor units are installed at a long distance/high height due to space limitations, the total length of the equivalent connecting pipe 3, the height difference between the indoor and outdoor units, and the total number of intermediate elbows of each model should not exceed the range in the table below.

Note that when using long connecting pipes for some models, the connecting pipe diameter needs to be enlarged according to the table below and the corresponding mass of refrigerant needs to be added.

ODU model	Limit length/height difference (m) of connecting pipe (m)	Dimensions of IDU-ODU connecting pipe (mm)		Added quantity of refrigerant (kg/m) when pipe length > 7.5 m
		Liquid pipe	Gas pipe	
BSAX0030DRC	15m/10m	6.35	15.88	0.02
BSAX0080DRC	35m/20m	9.52*2	15.88*2	0.03*2
BSAX0100DRC	35m/20m	9.52*2	15.88*2	0.03*2
BSAX0125DRC	35m/20m	9.52*2	15.88*2	0.03*2
BSAX0150DRC	35m/20m	12.7*2	19.05*2	0.055*2
BSAX0200DRC	40m/20m	12.7*2	22.23*2	0.055*2
BSAX0250DRC	40m/20m	12.7*2	25.4*2	0.055*2
BSAX0600DRC	40m/20m	19.05*2	34.92*2	0.275*2
BSAX1100/1200DRC	40m/20m	19.05*4	34.92*4	0.275*4
BSAV0060DRCX	30m/20m	9.52	15.88	0.057
BSAV0080DRCX	50m/20m	9.52	19.05	0.057
BSAV0100DRCX	50m/20m	12.7	22.23	0.11
BSAV0120DRCX	≤50m/50m	12.7	25.4	0.11
	50–90m/50m	12.7	28.58	0.11
	100m/50m	15.88	28.58	0.17
BSAV0160DRCX	≤50m/50m	12.7	28.58	0.11
	50–90m/50m	12.7	31.75	0.11
	100m/50m	15.88	31.75	0.17
BSAV0200DRCX	≤50m/50m	15.88	28.58	0.17
	50–90m/50m	15.88	31.75	0.17
	100m/50m	19.05	31.75	0.26
BSAV0240/0260/0280DRCX	≤50m/50m	19.05	31.75	0.26
	50–90m/50m	19.05	31.75	0.26
	100m/50m	22.23	34.92	0.36
BSAV0300/0320DRCX	≤50m/50m	19.05	31.75	0.26
	50–90m/50m	19.05	31.75	0.26
	100m/50m	22.23	34.92	0.36

Equivalent lengths of elbow and oil trap

Outer diameter of connection pipe (mm)	φ9.52 (3/8")	φ12.7 (1/2")	φ15.88 (5/8")	φ22.23 (7/8")	φ28.6 (1-1/8")	φ34.9 (1-3/8")	φ38.1 (1-1/2")
Elbow (m)	0.2	0.25	0.3	0.4	0.5	0.55	0.55
Oil trap (m)	1.4	1.8	2	2.8	3.7	4.1	4.1

Electrical parameters of ODU (single-module and multi-module single unit)

ODU model	Power supply		Recommended ODU power cord			Communication line
	Type	Voltage range	Cross section (mm^2)	Pieces	Length (m)	Cross section (mm^2)
BSAX0030DRC	220V~ 50Hz	242/198V	2.5	3	≤15	2.5 (6 pcs.)
BSAX0080DRC	380V 3N~ 50Hz	418/342V	6	5		1.5mm^2 polyethylene shielded twisted pair
BSAX0100DRC			6			
BSAX0125DRC			6			
BSAX0150DRC			10			
BSAX0200DRC			10			
BSAX0250DRC			10			
BSAV0060DRCX	220V~ 50Hz	242/198V	6	3	≤20	0.75-1.25mm^2 polyethylene shielded twisted pair
			10		20–50	
BSAV0080DRCX	380V 3N~ 50Hz	418/342V	4	5	≤20	
			6		20–50	
BSAV0100DRCX			4		≤20	
			6		20–50	
BSAV0120DRCX			6		≤20	
			10		20–50	
BSAV0160DRCX			6		≤20	
			10		20–50	
BSAV0200DRCX			10		≤20	
			16		20–50	
BSAV0240/0260/0280DRCX			16		≤20	
			16		20–50	
BSAV0300/0320DRCX			16		≤20	
			25		20–50	

Model	ODU BSAX	0600			1100			1200		
Power supply		380V 3N~ 50Hz								
Power cord	Type	ODU						ODU		
		Live wire	Neutral line	GND	Live wire	Neutral line	GND	Live wire	Neutral line	GND
	Sectional area mm2	70	35	35	120	70	70	150	95	95
	Pieces	3	1	1	3	1	1	3	1	1
Unit connecting wire	Sectional area mm2	1.5 (shielded cable)						1.5 (shielded cable)		
	Pieces	2			2			2		

Note: 1. The recommended power cord specifications are based on the copper core cable specifications selected for fixed installation of single-core PVC insulated cables laid in the air and the ambient temperature of 40°C. If the on-site installation conditions change, please refer to the power cord specifications provided by the wire manufacturer and consider compatibility as appropriate.

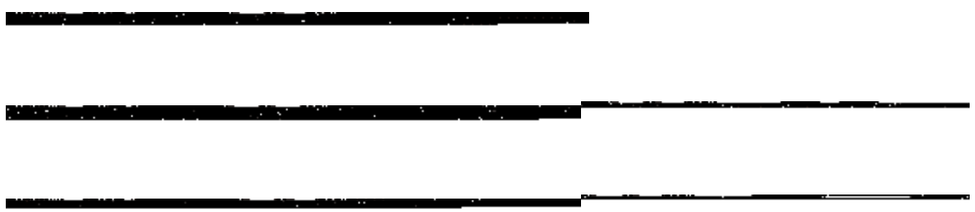
2. If the power cord length exceeds the recommended range, the cross-section of the power cord must be appropriately increased to avoid accidents caused by overload.

Unit Dimensions

Dimensions

External dimensions of fixed frequency DX ODUs

BSAX0030

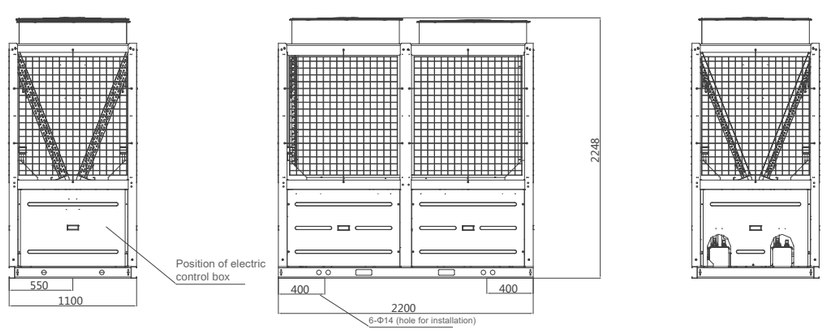


BSAX0080 BSAX0100 BSAX0125 BSAX0150 BSAX0200 BSAX0250



Model	A	B	C	E	Connection mode
BSAX0080DRC	1403	821	1200	790	Pipe socket
BSAX0100DRC	1403	821	1200	790	
BSAX0125DRC	1403	821	1200	790	
BSAX0150DRC	1403	821	1200	790	
BSAX0200DR C	1808	1090	1214	1050	Welding
BSAX0250DRC	1808	1090	1214	1050	

BSAX0600

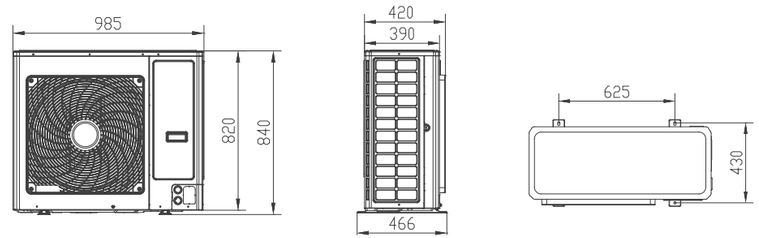


BSAX1100 BSAX1200

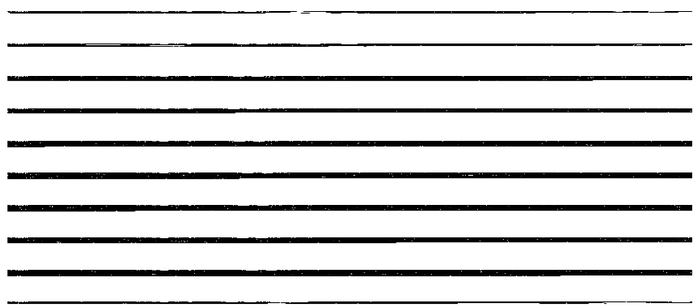


Variable frequency DX ODUs

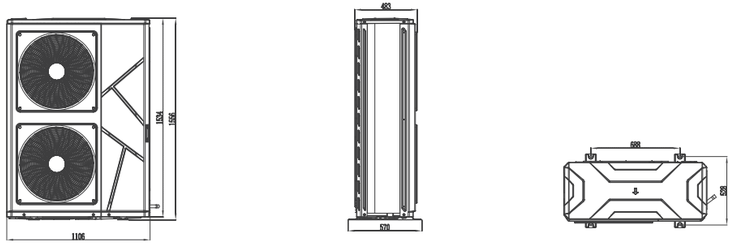
BSAV0060



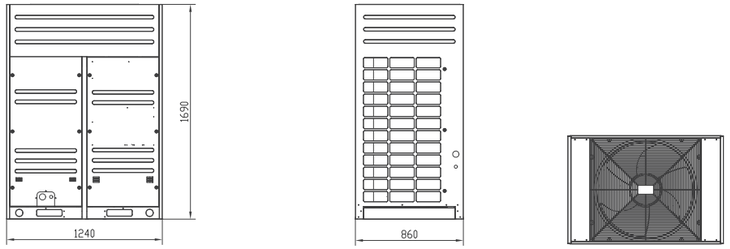
BSAV0080 BSAV0100



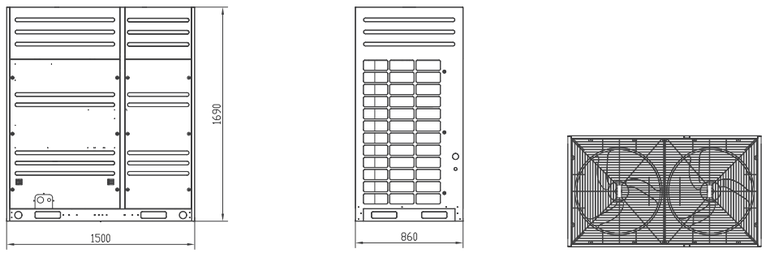
BSAV0120



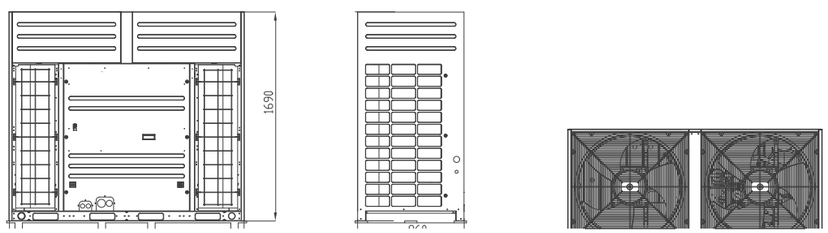
BSAV0160



BSAV0200 BSAV0240 BSAV0260



BSAV0280 BSAV0300 BSAV0320



Warranty

DX air handling unit (ODU)

Monthly inspection	1. Check whether the unit generates any alarm
	2. Check for any abnormal compressor or fan noise
	3. Check for odors inside the startup cabinet and control cabinet
	4. Check whether the temperature sensor and temperature probe are securely fixed
	5. Check for any appearance damage of the unit and whether heat exchanger or discharge fan is blocked
	6. Check for leakage in the refrigerant loop (whether there is any greasy dirt or sound of leak)
	7. Check whether the control cabinet is securely wired, whether wiring terminals are clean, whether the unit leaks, and whether contactor works properly

Notes: 1. Monthly inspections are to be performed and recorded by the user.
2. The replacement of consumable parts and materials is determined by the service life or operation duration of the unit. For units that operate all year around and those for the purpose of process, the operation duration should prevail; for units under normal operation and those for comfort, the service life should prevail.
3. It is recommended that the unit should be fully maintained every three years or every 3,000 hours of machine operation. For clean units with purification requirements, shorten the maintenance time interval according to the user's cleaning requirements.
For units with severe environmental conditions, they should be maintained monthly according to the inspection conditions.

DX air handling unit (IDU)

Check Item			Monthly	Quarterly	Year	Concerns
Air-side cabinet	Air inlet section	Check whether the filter is dirty and clogged.	★	★	★	The final pressure drop of the unit reaches the requirements. (For the alarm values, see the technical manual.)
	Coil Section	Cooling coil	☆	☆	★	Check whether the surface is full of dust, oil stain, impurities, etc.
		Fluorine coil	☆	☆	☆	
		Steam coil	☆	☆	★	Check whether the steam gauge pressure of the gas supply pressure is between 0.2 MPa and 0.4 MPa. Check whether the steam trap is dirty and clogged.
		Condensate water pan and drainage pipe	☆	☆	☆	Check whether they are dirtied and clogged. Check whether water drainage is smooth.
	Humidification section	Electrode humidifier	★	★	★	Clean the humidifying barrel per 200 hours. Replace the electrode every 2000 hours.
		Dry steam humidifier	☆	☆	☆	
	Fan section	Measure the belt tension.	☆	☆	☆	Check for cracks.
		Inspection of fan and motor bearing	★	★	★	Normally, the lubricating grease should be replaced after the fan has operated for 1,500 hours. If the fan operates continuously for 24 hours, replace the lubricating grease every 500 to 700 hours of operation.
Electrical control and electrical	Electrical control cabinet	Fuse	☆	☆	☆	Break
		Contactor	☆	☆	☆	Serious contact electrocorrosion or noise during running.
		Sensor	☆	☆	☆	Measured value still varies from the actual value even after calibration.
		High pressure switch	☆	☆	☆	Controller false alarm.
		Check whether the wiring point is loose.	★	★	★	The contactor gets loose or can flexibly rotate when turning the connecting cable.
		Checking power supply	★	★	★	Rated voltage ±10%, phase-to-phase unbalance < 2%.
		Checking phase	☆	☆	☆	No phase loss or reverse phase

Notes:
① ★-----Items that must be maintained or replaced. ☆----- Determine the items to be maintained according to actual conditions.
② Daily and monthly inspections should be performed and recorded by the user.
③ The replacement of consumable parts and materials is determined by the service life or operation duration of the unit. For units that operate all year around and those for the purpose of process, the operation duration should prevail; for units under normal operation and those for comfort, the service life should prevail.
④ It is recommended that the unit should be fully maintained every one year or every 1000 hours of machine operation. For clean units with purification requirements, shorten the maintenance time interval according to the user's cleaning requirements. For units with severe environmental conditions, they should be maintained monthly according to the inspection conditions.

BriseAir®

Powered by Shitsudo

Genius of the air