

## Technical Manual of Holtop Energy Recovery Ventilator

Models:  
XHBQ-D2THA to XHBQ-D13THA



### Attention

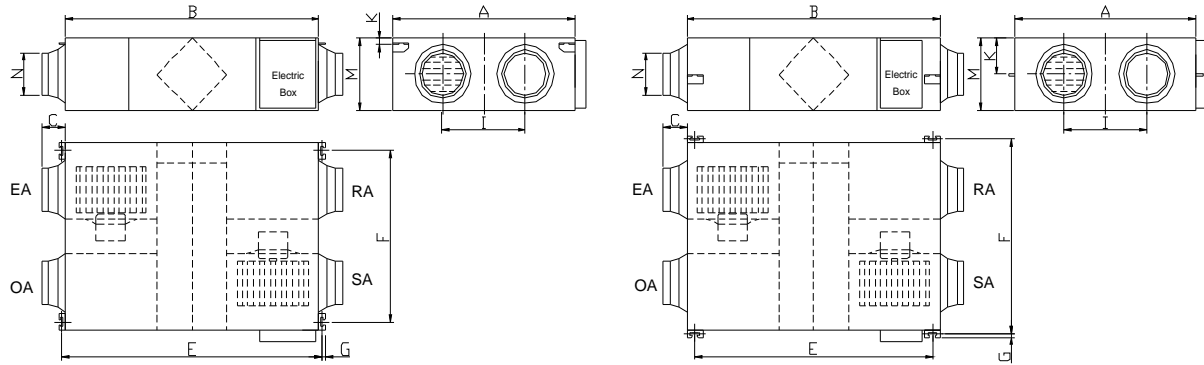
Please read this manual carefully before using the equipment  
Beijing Holtop Air Conditioning Co., Ltd.

# Specifications

Model			XHBQ-D2THA	XHBQ-D3THA	XHBQ-D4THA	XHBQ-D6THA	XHBQ-D8THA	XHBQ-D10THA	XHBQ-D13THA
Airflow	(m3/h)	L	150	250	350	500	700	900	1000
		M	200	300	400	600	800	1000	1300
		H	200	300	400	600	800	1000	1300
External pressure	(Pa)	L	60	75	80	89	92	80	75
		M	70	82	85	92	96	85	85
		H	75	85	88	97	100	86	90
Enthalpy Eff.(%)	Cooling	L	60	62	62	63	57	60	58
		M	55	57	57	59	55	58	56
		H	55	57	57	59	55	58	56
	Heating	L	63	65	65	67	63	64	62
		M	59	61	60	61	57	62	59
		H	59	61	60	61	57	62	59
Temp.Eff.	%	L	75	73	74	76	74	76	76
		M	70	68	69	70	68	70	70
		H	70	68	69	70	68	70	70
Noise	dB(A)	L	25	27	31	29	34	34	38
		M	30	34	37	35	39	38	41
		H	31.5	34.5	37.5	39	41	42	43
Voltage (V)			220	220	220	220	220	220	220
Current (A)			0.5	0.56	0.72	0.96	1.7	2.1	3.4
Input Power (W)			105	117	150	200	355	440	710
Net Weight (KG)			23	25	31	36	60	70	79

# Dimensioned Drawings

## XHBQ-D2THA to D13THA Models

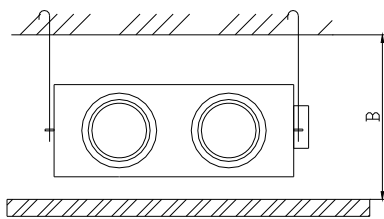
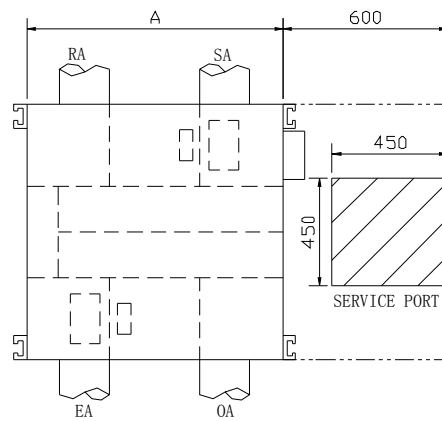
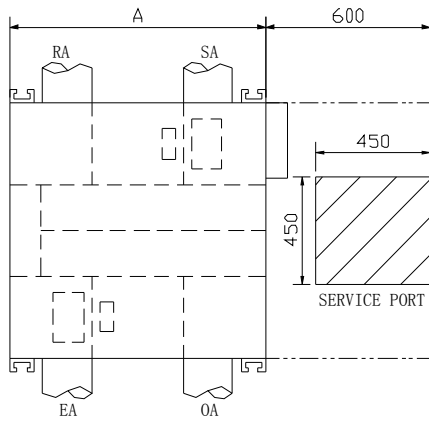


Model	A	B	C	E	F	G	I	K	M	N
XHBQ-D2THA	580	666	100	725	510	19	290	20	264	φ144
XHBQ-D3THA	599	744	100	675	657	19	315	111	270	Φ144
XHBQ-D4THA	804	744	100	675	862	19	480	111	270	Φ144
XHBQ-D6THA	904	824	107	754	960	19	500	111	270	φ194
XHBQ-D8THA	884	1116	85	1045	940	19	428	170	388	φ242
XHBQ-D10THA	1134	1116	85	1045	1190	19	678	170	388	φ242
XHBQ-D13THA	1134	1116	85	1045	1190	19	678	170	388	φ242

# Installation Considerations

## Installation Considerations

Protect the unit to avoid dust or other obstructions entering the unit and accessories during installation, or whilst in storage on site. Service ports should be installed to allow access for filter maintenance.

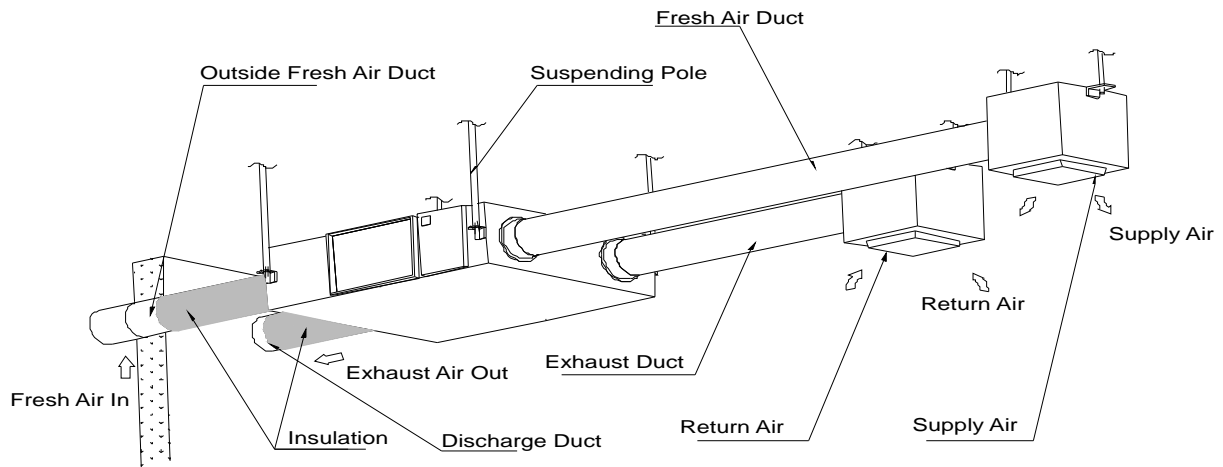


Model	A	Inner ceiling height B
XHBQ-D2THA	580	320

Model	A	Inner ceiling height B
XHBQ-D3THA	599	320
XHBQ-D4THA	804	320
XHBQ-D6THA	904	320
XHBQ-D8THA	884	450
XHBQ-D10THA	1134	450
XHBQ-D13THA	1134	450
XHBQ-D8TZA	834	450
XHBQ-D10TZA	1216	450

# Installation Considerations

## Installation Diagram

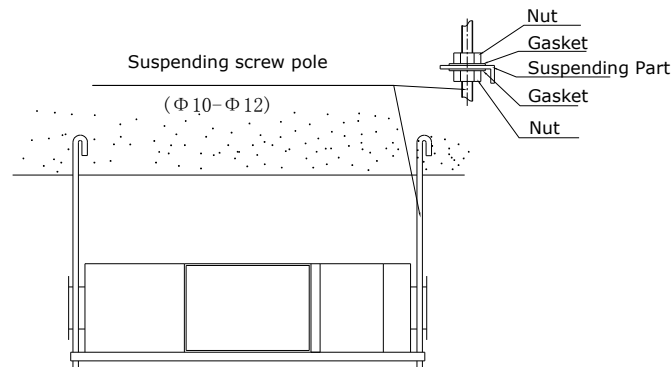


## Physical Installation

1. Installer to prepare suitable threaded hangers with adjustable nuts and gaskets.
2. Install as shown by the image above. Installation must be level and securely fastened.
3. Failure to observe proper fixing could result in injury, equipment damage and excessive vibration. Uneven installation will also effect damper operation.

Notes for reverse installation of the unit

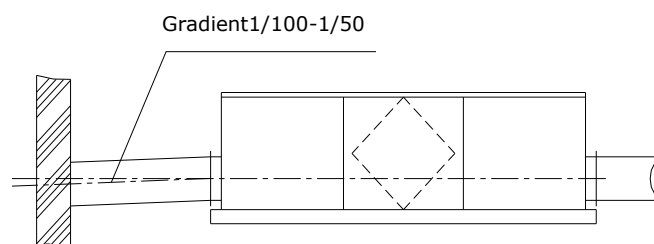
4. Reverse labeling shows the unit is upside down.



## Ducting

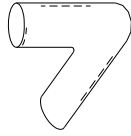
1. Connection of unit vents and ducts should be taped or sealed to prevent air leakage, and should comply to relevant guidelines and regulations.
2. The two outdoor vents should face downward toward the outside to prevent any rain water ingress. (angle 1/100 1/50).
3. Insulation must be with the two ducts outside to prevent condensation.

Material: glass cotton, Thickness: 25mm

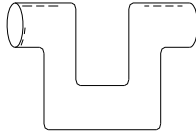


# Installation Considerations

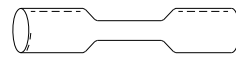
1. Be sure the ceiling height is no less than the Figures in above table B column.
2. Unit must not be installed close to boiler flues.
3. Following phenomenon should be avoided in the ducting installation.



Severe bends



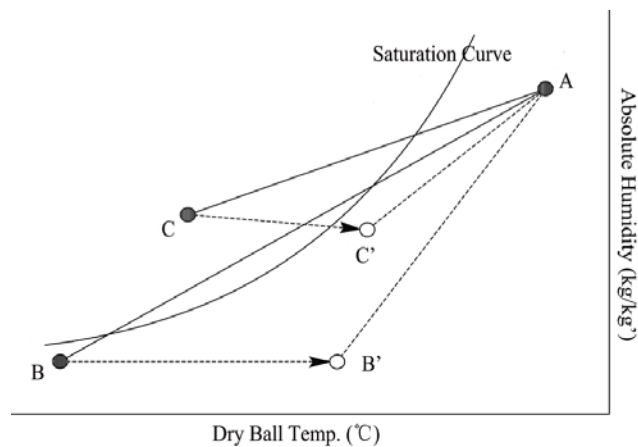
Multiple direction changes



Multiple reducers/ crimped duct

4. Excessive use of flex-duct and long flex-duct runs should be avoided.
5. Fire dampers must be fitted as per national and local fire regulations.
6. Unit must not be exposed to ambient temperature above 40°C and should not face an open fire.
7. Take action to avoid dew and frost.

As shown by drawing below, unit will produce dew or frost when saturation curve is formed from A to C. Use pre-heater to ensure conditions are kept to right of the curve (B to B' , to move C to C') to prevent condensation or frost formation.



8. To avoid the outdoor exhaust air cycling back to indoor, the distance between the two vents installed on the outside wall should be over 1000mm.
9. If heater is equipped to the unit, operation of heater should be synchronous with the unit, so that the heater starts to work only when unit starts.
10. Duct muffler may be considered if user wants indoor noise to be minimized.

# Electrical Installation

## Warning

Power must be isolated during installation and before maintenance to avoid injury by electric shock. The specifications of cables must strictly match the requirements, otherwise it may cause performance failure and danger of electric shock or fire.

Power supply is AC220V/50HZ/1 Phase. Open the cover of electrical box, connect the 2 wires (L/N/) to the terminals and connect the cable of the control panel to the board according to the wiring diagram, and join the control panel to the cable.

Model	Spec. of power supply cable	Spec. of normal controller cable
XHBQ-D2THA	2x1.5mm <sup>2</sup>	2x0.5~1mm <sup>2</sup>
XHBQ-D3THA		
XHBQ-D4THA		
XHBQ-D6THA		
XHBQ-D8THA, XHBQ-D8TZA		
XHBQ-D10THA, XHBQ-D10TZA		
XHBQD13THA		

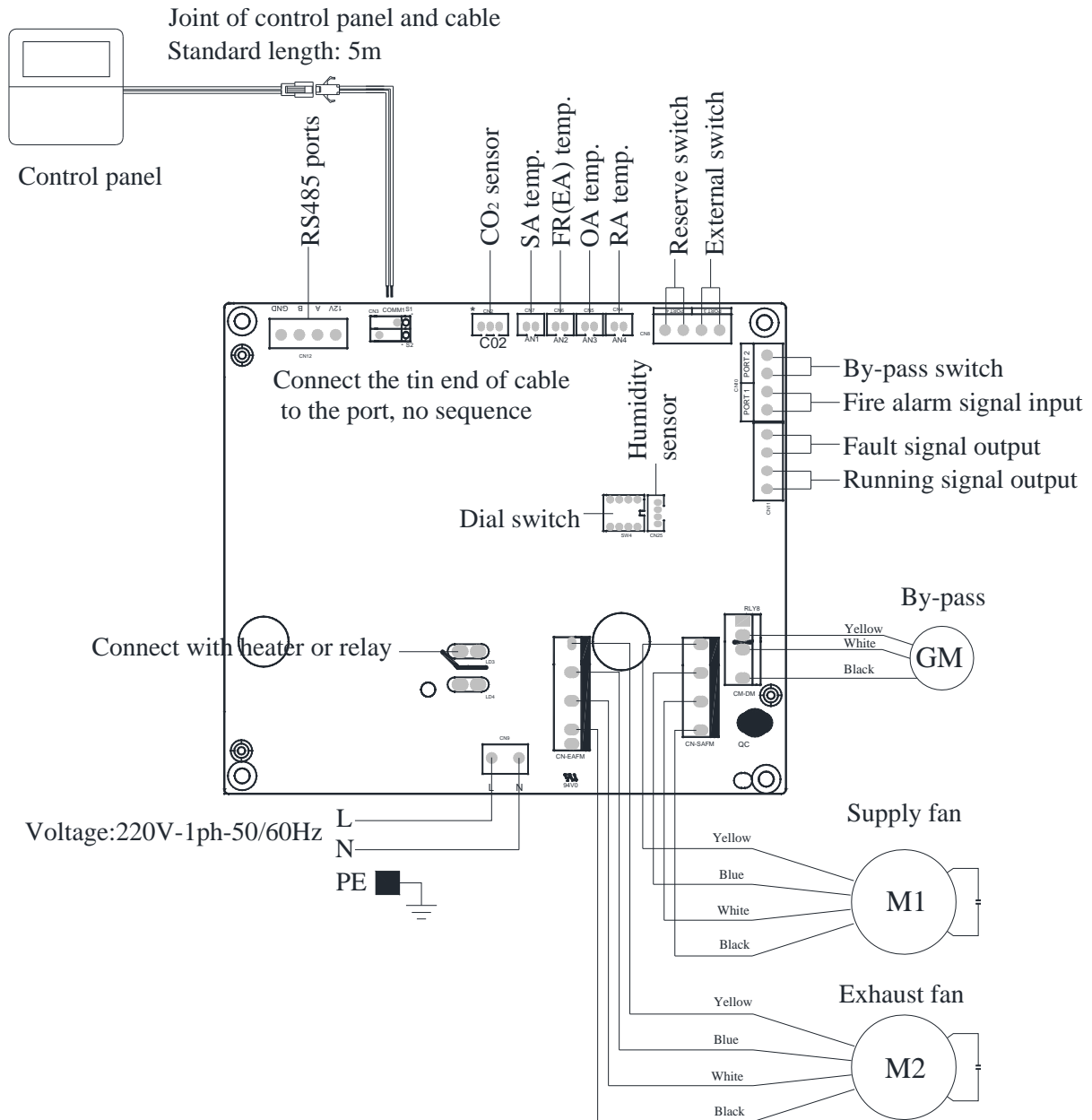
## Warning

We do not accept any liability for any problems caused by the user's self and non-authorized re-engineering to the electrical and control systems.

Model	Capacitor		Power Supply	Control Panel Model
XHBQ-D2THA, XHBQ-D3THA	1.5μF	450V AC	220V/1Ph/50Hz	HDK-10 series
XHBQ-D4THA	3μF	450V AC		
XHBQ-D6THA	3.5μF	450V AC		
XHBQ-D8THA	8μF	450V AC		
XHBQ-D10THA	10μF	450V AC		
XHBQ-D13THA	7μF	450V AC		
XHBQ-D8TZA	8μF	450V AC		
XHBQ-D10TZA	10μF	450V AC		

# Wiring Diagrams

## XHBQ-D2THA to D13THA







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