## Make Air Treatment Healthier and More Energy-Efficient



#### HOLTOP

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#### MAKE AIR TREATMENT HEALTHIER AND MORE ENERGY-EFFICIENT

Everyone needs to breathe 25,000 times per day, fresh and clean air is essential.

The ultimate pursuit of details, strict requirements for quality.

Pragmatism, Responsibility, Collaboration, Innovation.

Holtop keeps working on providing you with fresh air, clean, intelligent control, comfortable, convenience - integrated clean air solutions. Holtop delivers fresh and clean air, just for you healthy breath!

#### **ABOUT HOLTOP**



Well-known domestic manufacturer of healthy, comfortable and energy-saving air handling unit.

Annual output of 200,000 units of fresh air, air conditioning and environmental protection equipment.

Won the title of "Zhongguancun and National High-tech Enterprises" and "Specialized, Special, New and Small Giant Enterprises" Accredited for participating in the compilation of many China national standards, with nearly 100 patent.

Obtained ISO9001, ISO14001, ISO45001 management system certification.

Set up sales and service agencies in major cities across the China, and won the five-star service certification.

Holtop products are available in over 100 countries and regions, delivering high-quality user experience to hundreds of millions of customers worldwide.





ISO Certifications

Dozens of National Patents Owner





World Leading Manufacturer

Zhongguancun & National Hightech Enterprise



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National Standards Participated



Equipment Supplier for Beijing Olympics and The Shanghai World Expo





Holtop acted against the Holtop fresh air ventilators epidemic by donating fresh and air handling units provide 24-hour service to air equipment together with Zhong Nanshan Foundation; the Olympic Winter Games. provided fresh air system for Wuhan Square Cabin Hospital. ..... 2020 2022 ..... 2019 2021 Holtop Self-developed DX Holtop Company and Holtop heat recovery purification Environmental Protection Company were both AHU went on sale. recognized as "Specialized and New Enterprise" and "Small Giant Enterprise".

#### CRAFTSMANSHIP

#### ANNUAL OUTPUT OF 200,000 SETS OF AIR HANDLING UNIT

Holtop Badaling manufacturing base is located in Yanqing Park, Zhongguancun.

Has international advanced production lines and modern intelligent manufacturing equipment.

Details determine quality, Holtop strive for perfection in every detail, and produce excellent products that meet the quality of Holtop.



Sheet metal workshop



Assembly line for standard ventilation unit



Assembly line of ceiling type air handling unit



Assembly area of combined air handling unit



Air conditioning Outdoor unit production line



National certified enthalpy laboratory



Manufacturing base assembly workshop

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# **Product Introduction**

Rooftop package units are installed on rooftops of buildings and are connected directly to the building's network of ducts. It is a self-contained system that integrates cooling, heating, ventilation, and fresh air, with indoor and outdoor components in a single unit to save space and improve energy efficiency.

#### Nomenclature Classification: AU - Single Air conditioning unit Type: R - Rooftop Air Discharge Direction: T – Top Discharge 8/H AU 250 R Η R F Т Capacity: 250 - Cooling capcity of 25RT Function: H – Heat Pump Type Power Supply: 8 - AC3 Φ 208-230V/60Hz, H - AC3 Φ 460V/60Hz Refrigerant: F - R410A Series: R - R Series



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- Wide Louvered Fin Heat Exchanger

- EC Fan Motor - Propeller Fan

- Heat Exchanger

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#### **Robust Structure Design**

The unit adopts a strong structural design with high- strength galvanized steel panels and an optional aluminum alloy frame. This ensures excellent resistance to deformation and damage from external forces, providing reliable stability even under extreme weather conditions such as strong winds and heavy snow.



#### Anti-corrosion Solution (Optional)

Tailored for challenging environments like coastal regions and sulphide contamination areas, our corrosionresistant solutions can be customized to effectively withstand high humidity and salt mist, ensuring long-term reliability.



Note: For detailed information, please contact Holtop technical engineers.

#### Wide Operation Range

The unit can operate effectively in a wide temperature range, from 5°C to 52°C in cooling mode and -10°C to 24°C in heating mode, meeting diverse climate demands.



# Reliable Operation

### **Optimized Enclosure Sealing**

Our rooftop units are engineered with advanced multi-layer sealing techniques, with optional double-layer paneling to provide robust protection against environmental intrusion. This design minimizes the ingress of dust, moisture, and other airborne particles, helping preserve internal components and aintain long-term system reliability.

Enhanced sealing also significantly reduces air leakage, improving thermal performance and contributing to greater energy efficiency.









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## PCB Refrigerant cooling Technology

Holtop rooftop units feature a refrigerant-cooled electrical control box, ensuring efficient heat dissipation in high-temperature environments. This design enhances system stability and maintains reliable performance under harsh outdoor conditions.



#### Backup&Alternative Compressor Operation

Holtop units support dual-compressor operation with intelligent backup and alternating control. If one compressor fails, the other maintains operation to ensure uninterrupted cooling or heating. Under normal conditions, the compressors alternate to balance load and extend service life.



Compressor Backup Operation



**Compressor Alternative Operation** 

#### **Voltage Fluctuation Protection**

To ensure stable operation under low voltage limit, the inverter compressor reduces frequency and adjusts the DC voltage. When the voltage exceeds the high limit, it disconnects the relay to protect the DC capacitor from overvoltage damage. Additionally, the inverter supports a wider voltage range than constant-speed models, enhancing system adaptability and reliability.





#### High EER and COP

Powered by advanced inverter technology, Holtop rooftop units deliver outstanding energy performance, achieving EER values up to 12.2 and COP up to 3.7.



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# High Efficiency



#### Efficient Heating & Cooling in One Unit

Holtop inverter rooftop units provide both cooling and heating with high efficiency, thanks to the integrated heat pump system. This eliminates the need for additional electric heating equipment, reducing upfront investment while maximizing year-round energy savings.



## **High-efficiency Heat Exchanger**

The low-pressure-loss louvered fins, coated with hydrophilic aluminum foil, are perfectly combined with internally threaded tubes, greatly increasing the surface area and heat transfer efficiency of heat exchanger



#### **DC Inverter Rotary Compressor**

A high-efficiency DC inverter dual rotary compressor is adopted. It is featured with unique dualpressure chamber design and symmetrical location, which can effectively reduce the vibration and noise while improving the compressor performance especially under low-frequency operation.



High-efficiency motor Optimize the motor design to improve compressor performance

- 2 Optimized rotor design Lower the center of gravity of the compressor to reduce the noise and vibration.
- 3 Flat mechanism design Improve the volumetric efficiency and the total performance.
- 4 Screw interactive fastening Improve fastening effect and reduce deformation of the core.

#### **EC Fan Motor**

Holtop rooftop units are equipped with EC fan motors, which reduce energy consumption by up to 40% compared to conventional AC motors.

- High intelligence, high energy-saving, high efficiency, long lifespan, low vibration, low noise, and constant operation without interruption.
- Built-in circuits enable stepless speed regulation, with a wide speed range and strong overload protection capability.
- Brushless DC motor requires no maintenance with operating life of over 80,000 hours.



The EC fan motors can maintain over 85% high efficiency even at low speeds, 20% to 30% higher than traditional AC fan motors.

High Energy Efficiency



#### **DC Inverter Technology**

DC inverter technology automatically adjusts compressor speed based on real-time load demand, enabling precise temperature control and high energy efficiency. When the load is low, the compressor slows down to save energy, when demand increases, it speeds up to maintain optimal comfort.



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#### Low Energy Consumption

Input Power 3050W



EC fan motors have lower energy loss, saving 52% in operating costs compared to AC Fan motors



Note: The dual fan is designed for 20, 25, and 30 RT units.



#### Vertical Airflow OLTO

HI



**Adjustable Duct Connection** 

#### **Adaptive External Static Pressure**

Duct length impacts airflow resistance, requiring different static pressure settings. Holtop rooftop units support adjustable external static pressure, allowing flexible adaptation to various installation conditions and improving overall system efficiency.



# **Convenient Maintenance**

The access panel facilitate regular inspection and maintenance. The washable filters help maintain the efficient operation and air quality of the unit while saving maintenance costs.





Easy Maintenance with Enhanced Structure

Sliding Type Filter

# Easy Installation & Maintenance

## Space-saving & Streamlined Installations

Holtop rooftop units feature a compact, all-in-one design that integrates all components into a single unitsaving valuable indoor and outdoor space. With no need for additional equipment like cooling towers or water pumps, installation is faster, simpler, and more cost-effective.



Note: Based on 7.5RT.





3 Way Fork Lift Holes

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The unit offers both horizontal and bottom air supply options to suit various installation environments.

Horizontal Airflow





Washable Filter

#### **Centralized Control**

Centralized Control is to control multiple units simultaneously, making it ideal for unified control in large-scale



New

Holtop rooftop units can be seamlessly integrated with BMS gateways supporting protocols like Modbus and BACnet, enabling centralized monitoring and intelligent control of HVAC operations.



# Individual Control The Holtop individual controller features an intuitive interface equipped

with touch buttons, offering an user-friendly experience for easy control.

- Filter blocakge detection and alerts, preventing air pollution caused by ineffective filtration.
- Automatically adjusts cooling and heating modes based on indoor temperature and humidity, making it ideal for transitional seasons.
- Compatible with third-party 24V controllers, providing flexible integration options.

HOLTO



Smart

Control











## **Customized Solution**



Heat Recovery Fresh Air Unit





Note: For detailed information, please contact Holtop technical engineers.

## **Specifications**

208-230V

Ton			7.5	10	
Model			AURT-75H8FR	AURT-100H8FR	
Power Supply					
Cooling	Capacity	kW	26.4	34.3	
		kcal/h	22,680	29,490	
		Btu/h	90,000	117,000	
	Power Input	kW	7.37	10.35	
	EER	Btu/h.W	12.2	11.3	
	IEER	Btu/h.W	20	19	
Heating	Capacity	kW	26.4	34.3	
		kcal/h	22,680	29,490	
		Btu/h	90,000	117,000	
	Power Input	kW	7.13	9.8	
	COP	w/w	3.7	3.5	
Indoor Coil	Fin Type	-			
	Tube Size	mm(inch)	9.52 (3/8)	9.52 (3/8)	
	(Rows× Columns× Fins per inch) × No.	-	(4× 22× 16) × 2	(4× 22× 16) × 2	
	Туре	-			
	Diameter	mm(inch)	400 (16)	450 (18)	
	Motor Output	W	1100	1100	
Indoor Fan	Air Flow Rate	m³/min	85	113	
		ft³/min	3,000	4,000	
	Drive Type	-			
	Туре	-			
Compressor	Output Volume	СС	54.8	63.9	
	Oil Type	-			
	Oil Charge	ml	1800	2000	
	Fin Type	-			
Outdoor Coil	Tube Size	mm(inch)	7 (9/32)	7 (9/32)	
	(Rows× Columns×	-	(3× 52× 14) × 1	(3× 52× 14) × 1	
	Туре	-		1	
	Diameter	mm(inch)	680 (26 - 25/32)	680 (26 - 25/32)	
		m³/mirk No.	105 × 1	105 × 1	
Outdoor Fan	Air Flow Rate	ft³/mir× No.	3,700 × 1	3,700 × 1	
	Drive Type	-		1	
	Discharge Direction	-			
Drainage Con	nection	-	External thread NPT 3/4"	External thread NPT 3/4	
Refrigerant	Туре	-			
	Precharged Amount	kg	9	9	
	0	mm	1,130 × 1,242 × 2,250	1,130 × 1,242 × 2,250	
Dimension(W× H× D)		inch	44-1/2 × 48-29/32 × 88-19/3	44-1/2 × 48-29/32 × 88-19/32	
Net Weight		kg(lbs)	440 (970)	440 (970)	
Sound Pressure Level		dB(A)	80	80	
Operation Range	Cooling Mode	°C (°F) DB	5 ~ 52 (41 ~ 125.6)	5 ~ 52 (41 ~ 125.6)	
	HeatingMode	°C (°F) WB	-10~ 24 (14 ~ 75.2)	-10~ 24 (14 ~ 75.2)	
		- ( - )	· · · · · · · · · · · · · · · · · · ·		

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AURT-150H8FR AURT-200H8FR AURT-250H8FR AURT-300HHFR AC3Ø208-230V/60Hz 70.3 80.9 105 51 60 480 69 600 43 850 90,300 174,000 240,000 276,000 358,000 15.26 21.3 26 34 11.3 10.6 11.4 9.9 18.5 19 18.3 17.1 51 70.3 80.9 109.6 43.850 60 480 69 600 94 200 174,000 240,000 276,000 373,900 14.86 20.8 25 33 3.43 3.38 3.24 3.02 Louvered Fin 9.52 (3/8) 9.52 (3/8) 9.52 (3/8) 9.52 (3/8) (4× 22× 16) × 2 (4× 44× 16) × 2 (4× 44× 16) × 2 (5× 44× 16) × 2 EC Fan Motor 560(22) 560(22) 560(22)× 2 560(22)× 2 2420 3841 3841 × 2 3841 × 2 170 227 261 261 6,000 8,000 9,200 9,200 DC DC Inverter 54.8 63.9 84.8 84.8 FVC68 1800 2000 2000 2000 Wide Louvered Fin(Black) 7 (9/32) 7 (9/32) 7 (9/32) 7 (9/32) (3× 52× 14) × 1 (3× 52× 14) × 2 (3× 52× 14) × 2 (4× 52× 14) × 2 Propeller fan 680 (26 - 25/32) 680 (26 - 25/32) 680 (26 - 25/32) 644 105 × 2 105 × 4 105 × 4 105 × 4 3.700 × 2 3700×4 3.700 × 4 3.700 × 4 DC Inverter Horizontal External thread NPT 1" External thread NPT 1" External thread NPT 1" External thread NPT 1" R410A 5.2 q q 10 2,230 × 1,242 × 2,400 2,230 × 1,242 × 3,520 2,230 × 1,242 × 3,520 2,230 × 1,242 × 3,520 87-25/32 × 48-29/32 87 - 25/32 × 48 - 29/32 87 - 25/32 × 48 - 29/32 87 - 25/32 × 48 - 29/32 × 94-1/2 × 138 - 19/32 × 138 - 19/32 × 138 - 19/32 705 (1,554) 915 (2,017) 915 (2,017) 915 (2,017) 80 77 77 78 5 ~ 52 (41 ~ 125.6) 5 ~ 52 (41 ~ 125.6) 5 ~ 52 (41 ~ 125.6) 5 ~ 52 (41 ~ 125.6)

-10~ 24 (14 ~ 75.2)

-10~ 24 (14 ~ 75.2)

Inverter Rooftop Package Unit 19

-10~ 24 (14 ~ 75.2)

-10~ 24 (14 ~ 75.2)

# Specifications

#### 460V

Ton		20	25	30		
Model		AURT-200HHFR	AURT-250HHFR	AURT-300HHFR		
Power Supply			AC3Ø 460V/60Hz			
Cooling		kW	70.3	80.9	105	
	Capacity	kcal/h	60,480	69,600	90,300	
		Btu/h	240,000	276,000	358,000	
	Power Input	kW	21.3	26	34	
	EER	Btu/h.W	11.3	10.6	9.9	
	IEER	Btu/h.W	19	18.3	17.1	
Heating	Capacity	kW	70.3	80.9	109.6	
		kcal/h	60,480	69,600	94,200	
		Btu/h	240,000	276,000	373,900	
	Power Input	kW	20.8	25	33	
	COP	w/w	3.38	3.24	3.02	
	Fin Type -		Louvered Fin			
Indoor Coil	Tube Size	mm(inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	
	(Rows× Columns× Fins per inch) × No.	-	(4× 44× 16) × 2	(4× 44× 16) × 2	(5× 44× 16) × 2	
	Туре	-		EC Fan Motor		
Indoor Fan	Diameter	mm(inch)	560(22)	560(22)× 2	560(22)× 2	
	Motor Output	W	3841	3841 × 2	3841 × 2	
indoorran	Air Flow Rate	m³/min	227	261	261	
		ft³/min	8,000	9,200	9,200	
	Drive Type	-		DC		
	Туре	-		DC Inverter		
Compressor	Output Volume	CC	63.9	84.8	84.8	
	Oil Type	-		FVC68		
	Oil Charge	ml	2000	2000	2000	
Outdoor Coil	Fin Type	-	Wide Louvered Fin(Black)			
	Tube Size	mm(inch)	7 (9/32)	7 (9/32)	7 (9/32)	
	(Rows× Columns× Fins per inch) × No.	-	(3× 52× 14) × 2 (3× 52× 14) × 2		(4× 52× 14) × 2	
Outdoor Fan	Туре	-		Propeller fan		
	Diameter	mm(inch)	680 (26 - 25/32)	680 (26 - 25/32)	644	
	Air Flow Rate	m³/mirk No.	105 × 4	105 × 4	105 × 4	
		ft³/mir≮ No.	3,700 × 4	3,700 × 4	3,700 × 4	
	Drive Type -		DC Inverter			
Discharge Direction -		-	Horizontal			
Drainage Connection -		External thread NPT 1"	External thread NPT 1"	External thread NPT 1"		
Refrigerant	Туре	-		R410A		
	Precharged Amount	kg	9	9	10	
Dimension(W× H× D)		mm	2,230 × 1,242 × 3,520	2,230 × 1,242 × 3,520	2,230 × 1,242 × 3,520	
		inch	87 - 25/32 × 48 - 29/32 × 138 - 19/32	87 - 25/32 × 48 - 29/32 × 138 - 19/32	87 - 25/32 × 48 - 29/32 × 138 - 19/32	
Net Weight kg(lbs)		915 (2,017)	915 (2,017)	915 (2,017)		
Sound Pressure Level dB(A)		77	77	78		
Operation	Cooling Mode	°C (°F) DB	5 ~ 52 (41 ~ 125.6)	5 ~ 52 (41 ~ 125.6)	5 ~ 52 (41 ~ 125.6)	
Range	HeatingMode	°C (°F) WB	-10~ 24 (14 ~ 75.2)	-10~ 24 (14 ~ 75.2)	-10~ 24 (14 ~ 75.2)	

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