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Website

LONGWELL®
Turn to Experts - HVAC&R

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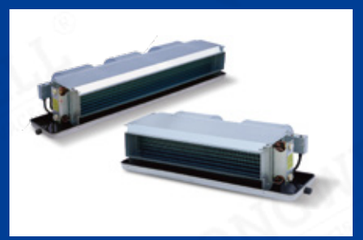


Longwell Technology Ventilation Equipment

Precision Constant Temperature and Humidity Unit

Ningbo Longwell Electric Technology Co., Ltd

Ningbo Longwell Electric Technology Co., Ltd
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Fan Coil Unit



Combined Air Conditioner



Air Source Heat Pump Unit



Screw-Type Air-Cooled Chiller Heat Pump Unit



Precision Constant Temperature and Humidity Unit



Rooftop Air Conditioning Unit



Screw-Type Water-Cooled Chiller Unit



Water and Ground Source Heat Pump Unit



Cabinet Air Handling Unit--Suspended Ceiling



Air Handling Unit-Horizontal



Remote Jet Unit



Air Handling Unit-Vertical

CATALOGUE

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About Longwell

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The Ventilation and Drive Technology Partner for Mission-Critical Environments

Longwell Technology - Ventilation Equipment Division - primarily engages in the production and sales of central air conditioning equipment. Our products are sold all over the country and exported to more than 50 countries and regions worldwide. LONGWELL central air conditioning series includes a comprehensive range of products, such as air source heat pump units, Air-cooled chillers (heat pump) units, water (ground) source heat pump units, sewage source heat pump units, seawater source heat pump units, water-cooled chiller units, constant temperature and humidity units, heat pump drying units, combined air conditioners, roof air conditioning units, air handling units, remote jet units, fan coil units, etc. These products are widely used in factories, schools, hotels, hospitals, office buildings, shopping malls, residential communities, and other buildings.

We have passed the ISO9001 Quality Management System Certification, ISO45001 Occupational Health and Safety Management System Certification, ISO14001 Environmental Management System Certification, etc. Our company is committed to survival by product quality and development by technological innovation, continually researching and producing green, clean, environmentally friendly and energy-saving innovative products. With full work enthusiasm, swift and decisive actions, higher standards, continuous improvement, and innovation, we will strive to create more value for our customers.



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Factory Display

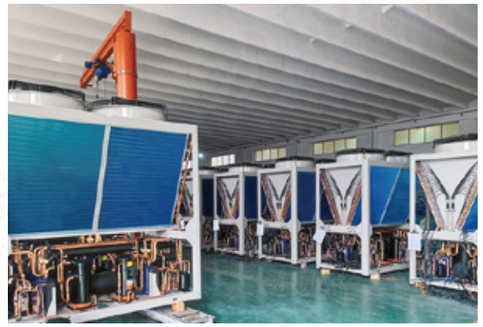
LONGWELL central air conditioning series includes a comprehensive range of products, such as air source heat pump units, Air-cooled chillers (heat pump) units, water (ground) source heat pump units, sewage source heat pump units, seawater source heat pump units, water-cooled chiller units, constant temperature and humidity units, heat pump drying units, combined air conditioners, roof air conditioning units, air handling units, remote jet units, fan coil units, etc. These products are widely used in factories, schools, hotels, hospitals, office buildings, shopping malls, residential communities, and other buildings.















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Certificate Display

We have passed the ISO9001 Quality Management System Certification, ISO45001 Occupational Health and Safety Management System Certification, ISO14001 Environmental Management System Certification, etc.


Patent


Patent


ISO


ISO


CRAA


CRAA


CRAA


CRAA


Patent


Patent


Patent


Patent

Type Code

LW H F 18 N G V

Energy modulation method
V-Variable frequency
None-Fixed frequency

Refrigerant
G-R410A None-R22

Structural type
N-Compressor mounted in indoor unit
W-compressor installed in outdoor unit

Cooling capacity(KW)

Condenser type
F- Air-cooled

H-Constant temperature and humidity type

LW-Longwell

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Precision Constant Temperature and Humidity Unit



High-Efficiency Compressor

Utilizes the latest technology in low-noise compressors, offering high efficiency, safety, and reliability. The compressor has strong liquid impact resistance and high oil return capability.

Customizable for Personalization

Capable of non-standard design according to various special requirements of users.

High-Quality Electronic Expansion Valve

Utilizes well-known brand electronic expansion valves with reliable quality, excellent performance, and strong regulation capability. These valves can prevent changes in static superheat due to load variations.

Durable Motor

Utilizes well-known brand motors with F-class insulation and IP55 protection rating. The motor offers excellent heat dissipation and can meet the requirements of variable frequency speed control within a certain range. It has a long service life and is suitable for various harsh environmental conditions.

AMCA Certified Fans

Utilize well-known brand dual-inlet multi-blade centrifugal fans, with impellers and the entire machine undergoing strict dynamic and static balance tests. They feature high efficiency, aerodynamic characteristics, precise operating points, no overload during operation, and a wide high-efficiency range. All fans are AMCA (Air Movement and Control Association International) certified. Additionally, well-known brand axial fans are used, offering accurate operating parameters, high mechanical efficiency, low vibration, low noise, corrosion resistance, and long service life.

Matched with High-Quality Filters

Matched with high-quality filters that feature low air resistance, strong corrosion resistance, easy installation, and convenient cleaning.

Stainless Steel Finned Electric Heater

Utilizes specially designed stainless steel finned electric heaters with large heat transfer area, low surface temperature, long service life, and reliable safety.

High-Efficiency Energy-Saving Electrode Humidifier

Utilizes a well-known brand high-efficiency energy-saving electrode humidifier to ensure effective and accurate adjustment of indoor relative humidity.

Ultra-Quiet Design

All connecting copper pipes in the system are equipped with vibration isolation measures, effectively reducing unit vibrations, lowering noise, and enhancing operational reliability.

Compact Structure

The unit features a compact, simple, and streamlined overall structure. It uses special air conditioning insulation panels with excellent soundproofing effects.

High-Efficiency Heat Exchanger

Utilizes advanced high-efficiency heat exchange tubes, offering high heat transfer efficiency and strong anti-fouling capabilities to ensure the unit maintains high heat transfer efficiency.

Comprehensive Safety Protection

Equipped with various safety protection functions, such as compressor overload protection, fan motor overload protection, high discharge pressure protection, as well as circuit protection, frequent compressor start-up protection, and low voltage startup delay protection.

Precision Constant Temperature and Humidity Unit

Precise Constant Temperature and Humidity Air Conditioning Units feature renowned brand compressors, refrigeration components, and microcomputer controllers. They offer multiple functions including air supply, cooling, heating, humidification, dehumidification, and air purification. These products are characterized by reliable performance, easy operation, high automation, energy efficiency, and high control precision. They are widely used in archives, wine cellars, research laboratories, electronics, chemical industry, textile industry, tobacco industry, theaters, medical facilities, nuclear power projects, hydropower engineering, as well as industrial and mining enterprises, aiming to create a comfortable air conditioning environment with precise control of temperature and humidity.

To meet the demands of controlling higher temperature and humidity environments, we offer high-precision variable frequency constant temperature and humidity air conditioning units. These units feature renowned brand variable frequency scroll compressors with a frequency range of 30-100Hz. The refrigerant flow is precisely controlled by electronic expansion valves. Combined with advanced compressor electronic expansion valves and synchronous adaptive PID control methods, these units can achieve a controlled environment temperature control accuracy of ±0.3°C and relative humidity control accuracy of ±3%RH.

Precision Constant Temperature and Humidity Unit/Outdoor Unit





Precision Constant Temperature and Humidity Unit/Indoor Unit







Product Features and Applicability

Series Specifications:

Precision constant temperature and humidity air conditioning units come in various specifications and models, with a cooling capacity ranging from 7.6 to 230 kW, an air volume range from 1800 to 37000 m^3/h, and an external static pressure range from 0 to 650 Pa.

Compliance Standards:

Precision constant temperature and humidity air conditioning units comply with the national standard GB/T17758-2010 "Unitary Air Conditioners". They can also be provided in compliance with the national standard GB/T20108-2017 "Unitary Air Conditioners for Low Temperature", with performance parameters and dimensions not included in the sample.

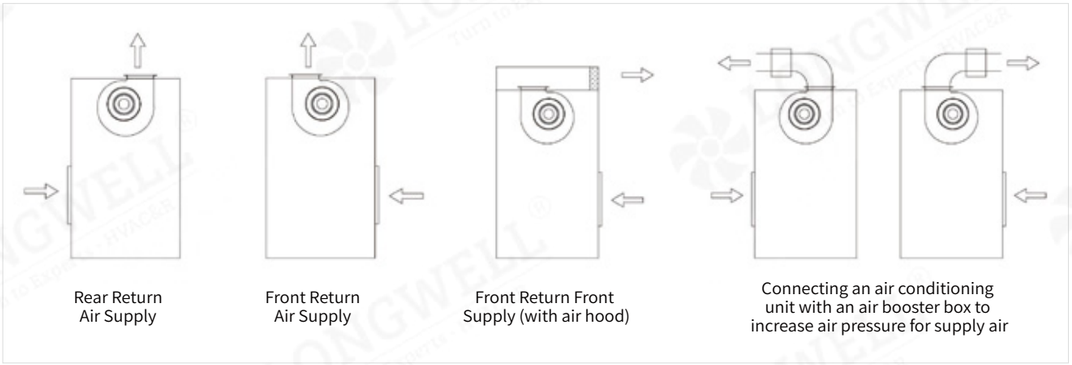
Fresh Air Type:

Air conditioning units can be provided with partial fresh air or full fresh air return. Performance parameters and dimensions are not included in the sample.

Wine Cellar Air Conditioning:

Wine cellar air conditioning units can be provided, with performance parameters and dimensions not included in the sample.

Selectable Return Air Supply Methods



Nominal Cooling Capacity Determination

For air-cooled air conditioning units, the cooling capacity is determined under the following conditions: air inlet dry bulb temperature of 23°C and wet bulb temperature of 17°C; condenser air inlet dry bulb temperature of 35°C and wet bulb temperature of 24°C.

Special Operating Environments

If the outdoor ambient temperature exceeds the national standard GB/T17758-2010 "Unitary Air Conditioners," the company can provide customized designs. Additionally, when the altitude exceeds 1000m, the air conditioning unit operates at reduced capacity, and the company can also provide customized designs.

Air-Cooled Precision Constant Temperature and Humidity Unit Performance Parameters (R410a)

Unit				LWHF13NG	LWHF20NG	LWHF26NG	LWHF32NG
Performance	Refrigerating Capacity(KW)			12.6	19.6	26	31.6
	Energy Control(%)			100.0	100.0	100.50.0	100.50.0
	Heating Capacity (Electric Heating/KW)			9.0	12.0	18.0	21.6
	Air Volume (m^3/h)			2800	4500	5600	6500
	External Static Pressure (Pa)			25 100 200	50 150 250	75 200 250	75 200 300
	Unit Noise(dBA)			61 63 67	62 65 70	64 68 73	65 69 73
	Temperature Control Range and Sensitivity(℃)			Temperature control range: 18~25, sensitivity ±0.8			
	Humidity Control Range and Sensitivity(%)			Humidity control range: 45~70, sensitivity ±4			
	Power Supply(V/Hz)			AC380 3N~50Hz			
	Nominal Operating Power Input(KW)			4.88	7.29	9.97	12.05
Indoor Unit	Refrigerant(Working Medium)			R410a			
	Control Method			External balanced thermal expansion valve / Electronic expansion valve			
	Evaporator(Type)			Copper tube with aluminum fins			
	Supply Air System	Supply Fan(Type)		Centrifugal			
		Filter(Primary Filtration)		Nylon mesh			
	Humidifier	Form		Electrode type			
		Humidifier(kg/h)		3	3	3	3
		Inlet Pipe Diameter(mm)		Φ8	Φ8	Φ8	Φ8
	Dimensions	Length(mm)		1045	1245	1245	1445
		Width(mm)		625	625	625	625
		Height (mm)	Supply Air	1725	1875	1875	1875
			With Air Hood	2045	2195	2195	2195
	Weight(kg)			240	325	390	410
Outdoor Unit	Model			5HPN	7.5HPN	5HPN	6HPN
	Fan	Tpye		High-efficiency axial flow fan			
		Number of Units×Air Volume (m^3/h)		1×7600	1×10600	2×7600	2×7600
	Condenser(Type)			Copper tube with aluminum fins			
	Dimensions	Length(mm)		675	1070	675	675
		Width(mm)		670	920	670	670
		Height(mm)		1105	1125	1105	1105
	Number of Units(Unit)			1	1	2	2
	Weight(kg/Unit)			110	137	110	120
Outdoor to Indoor Unit Connecting Pipes	Supply Liquid Copper Pipes			Φ12	Φ16	Φ12	Φ12
	Quantity (Piece)			1	1	2	2
	Discharge Copper Pipes			Φ12	Φ22	Φ12	Φ12
	Quantity (Piece)			1	1	2	2
	Connection Type			Welding			

Remarks: 1. The external static pressure for the front return with air hood unit is OPa. 2. The compressor type is fully enclosed scroll type, installed in the indoor unit.

Air-Cooled Precision Constant Temperature and Humidity Unit Performance Parameters (R410a)

Unit				LWHF41NG	LWHF54NG	LWHF63NG	LWHF81NG	LWHF93NG
Performance	Refrigerating Capacity(KW)			40.5	54.2	63.1	81.0	92.8
	Energy Control(%)			100.50.0	100.50.0	100.50.0	100.67.33.0	100.67.33.0
	Heating Capacity (Electric Heating/KW)			24.0	27.0	36.0	42.0	42.0
	Air Volume (m^3/h)			8600	10500	13500	17000	18500
	External Static Pressure (Pa)			75 250 350	100 300 400	100 300 400	120 350 450	120 350 450
	Unit Noise(dBA)			66 70 75	68 73 77	70 75 78	71 76 80	71 77 80
	Temperature Control Range & Sensitivity(℃)			Temperature control range: 18~25, sensitivity ±0.8				
	Humidity Control Range & Sensitivity(%)			Humidity control range: 45~70, sensitivity ±4				
	Power Supply(V/Hz)			AC380 3N~50Hz				
	Nominal Operating Power Input(KW)			15.12	20.47	24.25	30.58	36.03
Indoor Unit	Refrigerant(Working Medium)			R410a				
	Control Method			External balanced thermal expansion valve / Electronic expansion valve				
	Evaporator(Type)			Copper tube with aluminum fins				
	Supply Air System	Supply Fan(Type)		Centrifugal				
		Filter(Primary Filtration)		Nylon mesh				
	Humidifier	Form		Electrode type				
		Humidifier(kg/h)		8	8	13	13	13
		Inlet Pipe Diameter(mm)		Φ8	Φ8	Φ8	Φ8	Φ8
	Dimensions	Length(mm)		1750	1750	2045	2150	2150
		Width(mm)		855	855	855	1025	1025
		Height (mm)	Supply Air	1875	1875	1875	1910	1910
			With Air Hood	2252	2252	2252	-	-
	Weight(kg)			570	660	710	900	970
Outdoor Unit	Model			7.5HPN	10HPN	12HPN	10HPN	12HPN
	Fan	Tpye		High-efficiency axial flow fan				
		Number of Units×Air Volume (m^3/h)		2×10600	2×13500	2×13500	3×13500	3×13500
	Condenser(Type)			Copper tube with aluminum fins				
	Dimensions	Length(mm)		1070	1070	1070	1070	1070
		Width(mm)		920	920	920	920	920
		Height(mm)		1125	1140	1140	1140	1140
	Number of Units(Unit)			2	2	2	3	3
	Weight(kg/Unit)			137	150	150	150	150
Outdoor to Indoor Unit Connecting Pipes	Supply Liquid Copper Pipes			Φ16	Φ16	Φ16	Φ16	Φ16
	Quantity (Piece)			2	2	2	3	3
	Discharge Copper Pipes			Φ22	Φ22	Φ22	Φ22	Φ22
	Quantity (Piece)			2	2	2	3	3
	Connection Type			Welding				

Remarks: 1. The external static pressure for the front return with air hood unit is OPa. 2. The compressor type is fully enclosed scroll type, installed in the indoor unit.

Air-Cooled Precision Constant Temperature and Humidity Unit Performance Parameters (R410a)

	Unit		LWHF100NG	LWHF120NG	LWHF142NG	LWHF170NG	LWHF200NG
Performance	Refrigerating Capacity(KW)		100	120	142.4	170	200
	Energy Control(%)		100.50.0	100.50.0	100.50.0	100.50.0	100.50.0
	Heating Capacity (Electric Heating/KW)		48.0	60.0	72.0	84.0	96.0
	Air Volume (m^3/h)		20000	22500	26000	33100	37000
	External Static Pressure (Pa)		150 400 550	150 450 600	200 500 600	200 500 650	200 500 650
	Unit Noise(dBA)		74 79 83	77 81 85	79 84 87	81 86 88	83 87 89
	Temperature Control Range & Sensitivity(℃)		Temperature control range: 18~25, sensitivity ±0.8				
	Humidity Control Range & Sensitivity(%)		Humidity control range: 45~70, sensitivity ±4				
	Power Supply(V/Hz)		AC380 3N~50Hz				
	Nominal Operating Power Input(KW)		37.46	46.18	55.56	70.33	83.27
Indoor Unit	Refrigerant(Working Medium)		R410a				
	Control Method		External balanced thermal expansion valve / Electronic expansion valve				
	Evaporator(Type)		Copper tube with aluminum fins				
	Supply Air System	Supply Fan(Type)	Centrifugal				
		Filter(Primary Filtration)	Nylon mesh				
	Humidifier	Form	Electrode type				
		Humidifier(kg/h)	13	13	23	23	23
		Inlet Pipe Diameter(mm)	Φ8	Φ8	Φ8	Φ8	Φ8
	Dimensions	Length(mm)	2280	2280	2680	2980	2980
		Width(mm)	1300	1300	1300	1450	1450
		Height (mm) Supply Air	2025	2025	2270	2405	2405
		Height (mm) With Air Hood	-	-	-	-	-
	Weight(kg)		910	1040	1400	1470	1530
Outdoor Unit	Model		20HPW	25HPW	30HPW	30/40HPW	40HPW
	Fan	Tpye	High-efficiency axial flow fan				
		Number of Units×Air Volume (m^3/h)	2×10600	2×13500	2×13500	3×10600 3×13500	6×13500
	Condenser(Type)		Copper tube with aluminum fins				
	Dimensions	Length(mm)	1800	1800	2590	2590	2590
		Width(mm)	920	920	920	920	920
		Height(mm)	1125	1140	1125	1125/1395	1395
	Number of Units(Unit)		2	2	2	1/1	2
	Weight(kg/Unit)		460	530	600	600/690	690
Outdoor to Indoor Unit Connecting Pipes	Supply Liquid Copper Pipes		Φ22	Φ22	Φ28	Φ28	Φ28
	Quantity (Piece)		2	2	2	2	2
	Discharge Copper Pipes		Φ42	Φ42	Φ42	Φ42	Φ42
	Quantity (Piece)		2	2	2	2	2
	Connection Type		Welding				

Remarks: 1. When connecting the indoor and outdoor units with pipes, an additional Φ12 adjustment pipe is required. 2. The compressor type is fully enclosed scroll type, installed in the outdoor unit.

High-Precision Inverter Precision Constant Temperature and Humidity Unit Performance Parameters (R22)

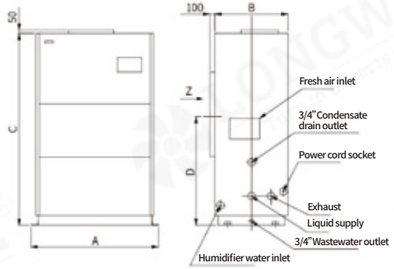
	Unit		LWHF18NV	LWHF33NV
Performance	Refrigerating Capacity(90Hz KW)		18	120
	Energy Control(%)		0-25%~100%	0-25%~100%
	Heating Capacity (Electric Heating/KW)		12	18
	Air Volume (m^3/h)		5000	6600
	External Static Pressure (Pa)		100	150
	Unit Noise(dBA)		64	66
	Temperature Control Range & Sensitivity(℃)		Temperature control range: 18~25, sensitivity ±0.3	
	Humidity Control Range & Sensitivity(%)		Humidity control range: 45~70, sensitivity ±3	
	Power Supply(V/Hz)		AC380 3N~50Hz	
	Nominal Operating Power Input(KW)		7.1	12
Indoor Unit	Refrigerant(Working Medium)		R22	
	Control Method		Electronic expansion valve	
	Compressor	Type	Inverter Scroll Compressor	Inverter + Fixed-Speed Scroll Compressor
		Inverter Frequency Range	30~100Hz	
	Evaporator(Type)		Copper tube with aluminum fins	
	Supply Fan(Type)		Centrifugal	
	Primary Filtration		Nylon mesh	
	Humidifier	Form	Electrode type	
		Number of Units x Power(KW)	1×2.3	
		Humidifier(kg/h)	3	
		Inlet Pipe Diameter(mm)	Φ8	
	Dimensions	Length(mm)	1245	1580
		Width(mm)	625	750
		Height(mm)	1875	1950
	Weight(kg)		325	410
Outdoor Unit	Model		6HPN	
	Fan	Tpye	Axial flow fan	
		Number of Units×Air Volume (m^3/h)	1×10600	2×10600
	Condenser(Type)		Copper tube with aluminum fins	
	Dimensions	Length(mm)	1070	
		Width(mm)	920	
		Height(mm)	1125	
	Number of Units(Unit)		1	2
	Weight(kg/Unit)		120	120
Outdoor to Indoor Unit Connecting Pipes	Supply Liquid Copper Pipes		Φ12	Φ12
	Quantity (Piece)		1	2
	Discharge Copper Pipes		Φ16	Φ16
	Quantity (Piece)		1	2
	Connection Type		Welding	

Remarks: The control precision of the unit is greatly influenced by the airflow organization and the enclosure structure of the controlled room. For higher precision requirements, please contact our technical department.

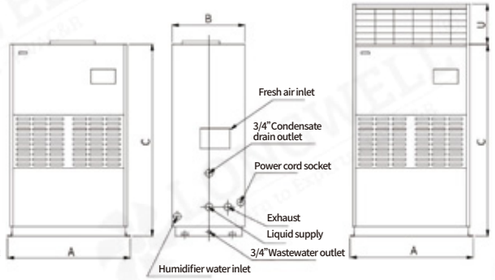
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Air-Cooled Precision Constant Temperature and Humidity Unit Indoor Unit Dimensional Drawing(LWHF13NG~LWHF63NG)

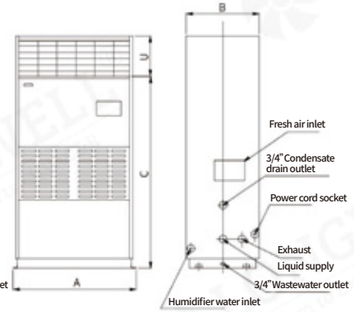
Rear Return and Discharge



Front Return and Discharge



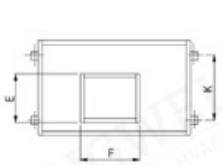
Front Return Air (with Air Hood)

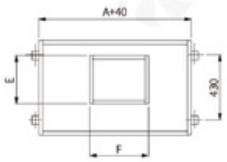


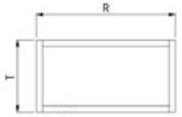
Note: When used for LWHF13NG unit, the positions of liquid supply and exhaust in the diagram are swapped



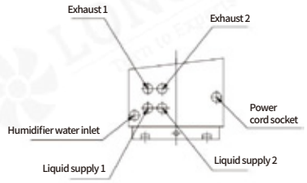
Z Direction: Return Air Flange







Fresh Air Inlet Size (Can be installed on left or right side)

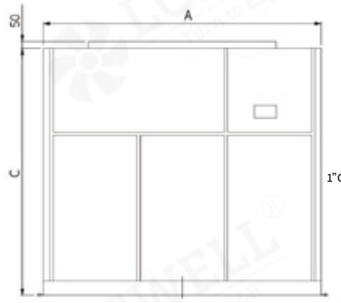


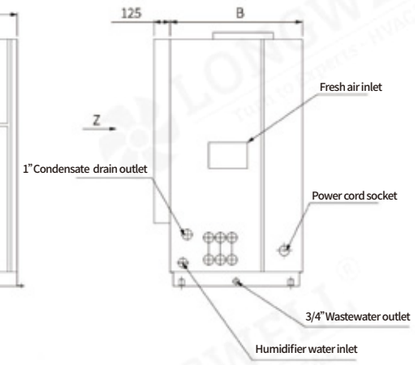
Note: This diagram is only applicable for units numbered 3, 4, 5, and 6.

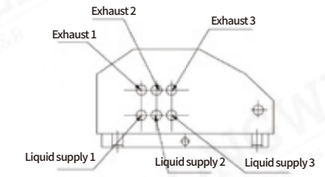
No.	Model	A	B	C	D	E	F	P	Q	R	T	U	K
1	LWHF13NG	1045	625	1725	910	312	345	995	465	202	152	320	430
2	LWHF20NG	1245	625	1875	980	355	465	1195	530	202	152	320	430
3	LWHF26NG	1245	625	1875	980	355	465	1195	530	202	152	320	430
4	LWHF32NG	1445	625	1875	980	355	465	1395	530	202	152	320	430
5	LWHF41NG/LWHF54NG	1750	855	1875	996	410	538	1692	602	298	228	377	700
6	LWHF63NG	2045	855	1875	996	347	1187	1692	602	298	228	377	700

Air-Cooled Precision Constant Temperature and Humidity Unit Indoor Unit Dimensional Drawing

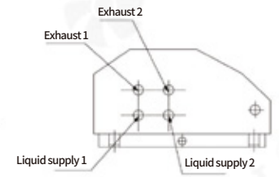
(LWHF81NG~LWHF200NG LWHF100WG~LWHF200WG)



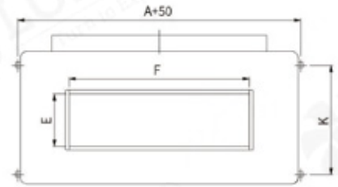


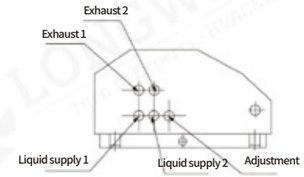


Note: This diagram is only applicable for unit number 1.



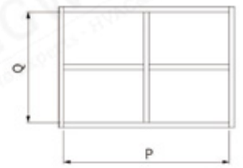
Note: This diagram is only applicable for unit number 2.



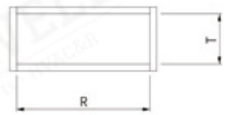


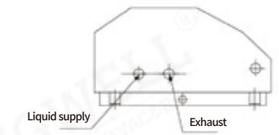
Note: This diagram is only applicable for units numbered 3, 5, and 7.

Z Direction: Return Air Flange



Fresh Air Inlet Size (Can be installed on left or right side)





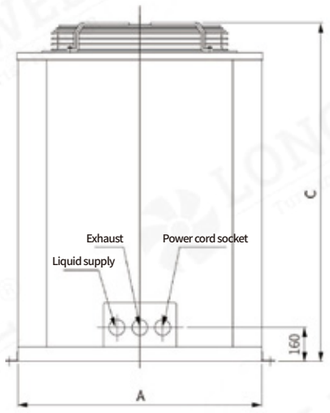
Note: This diagram is only applicable for units numbered 4 and 6.

Note: For units numbered 3, 5, and 7, each indoor unit is paired with two outdoor units, with one of the outdoor units requiring an additional Φ12 adjustment pipe.

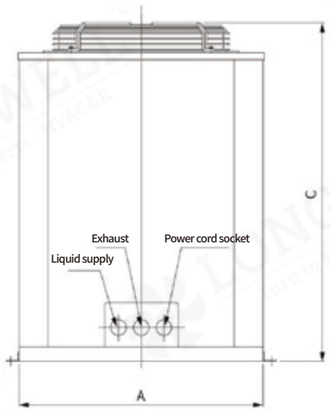
No.	Model	A	B	C	E	F	P	Q	R	T	K
1	LWHF81NG/LWHF93NG	2150	1025	1910	411	1391	1600	1362	298	228	845
2	LWHF100NG/LWHF120NG	2280	1300	2025	484	1265	1970	1465	298	228	1120
3	LWHF100WG/LWHF120WG	2280	1300	2025	484	1265	1970	1465	298	228	1120
4	LWHF142NG	2680	1300	2270	484	1648	2370	1566	398	328	1120
5	LWHF142WG	2680	1300	2270	484	1648	2370	1566	398	328	1120
6	LWHF170NG/LWHF200NG	2980	1450	2405	664	1850	2670	1773	398	328	1270
7	LWHF170WG/LWHF200WG	2980	1450	2405	664	1850	2670	1773	398	328	1270

Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

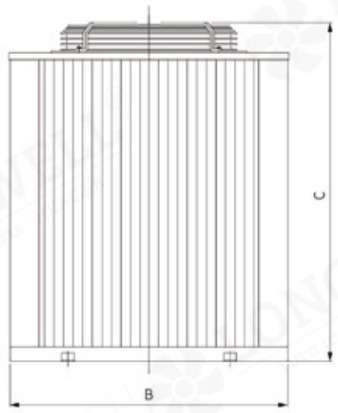
Air-Cooled Precision Constant Temperature and Humidity Unit Outdoor Unit Dimensional Drawing(5~12HPN)

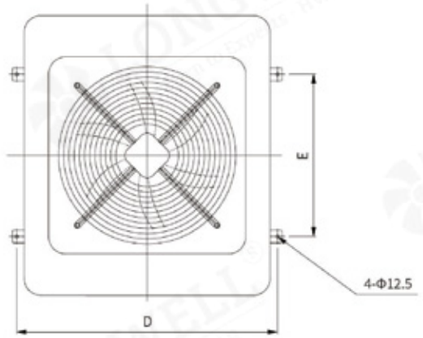


For 5~6HP outdoor unit



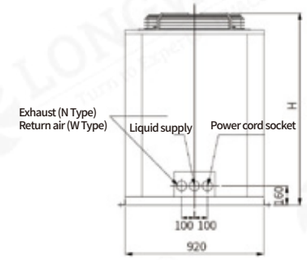
For 7.5~12HP outdoor unit

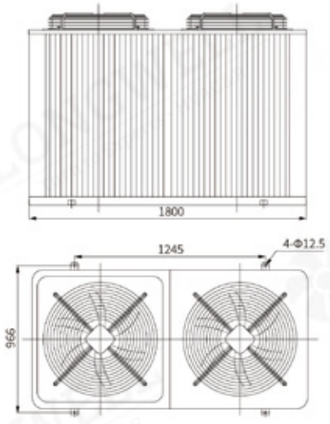




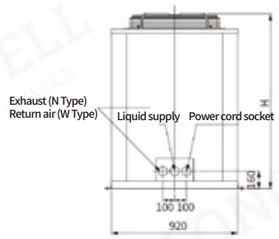
No.	Model	A	B	C	D	E
1	5HPN	670	675	1105	716	445
	6HPN	670	675	1105	716	445
2	7.5HPN	920	1070	1125	966	765
	10HPN	920	1070	1140	966	765
	12HPN	920	1070	1140	966	765

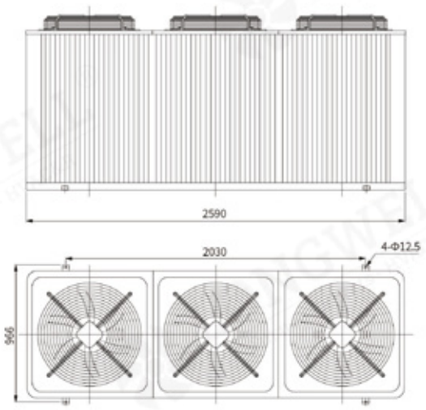
Air-Cooled Precision Constant Temperature and Humidity Unit Outdoor Unit Dimensional Drawing(20~40HPW)





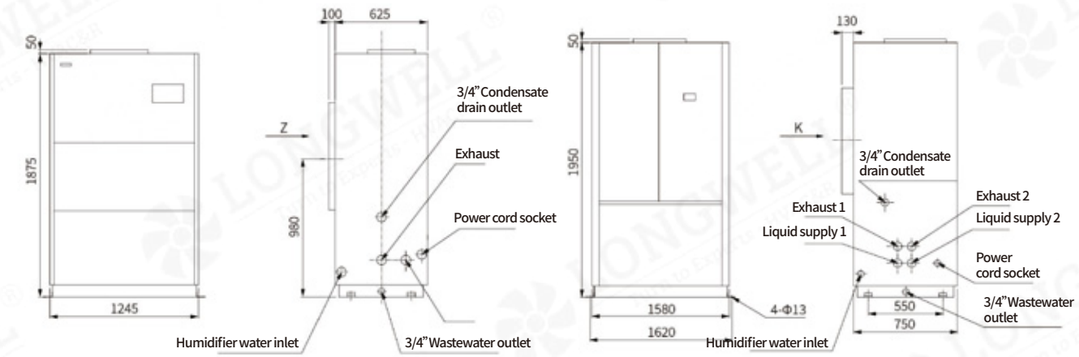
No.	Model	H
1	20HPW	1125
2	25HPW	1140

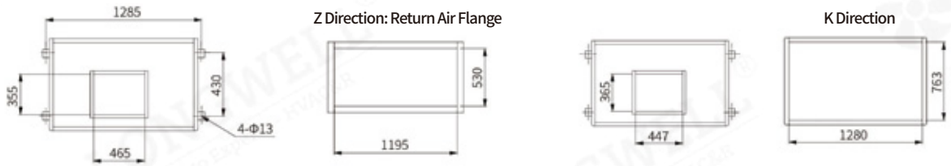




No.	Model	H
1	30HPW	1125
2	40HPW	1395

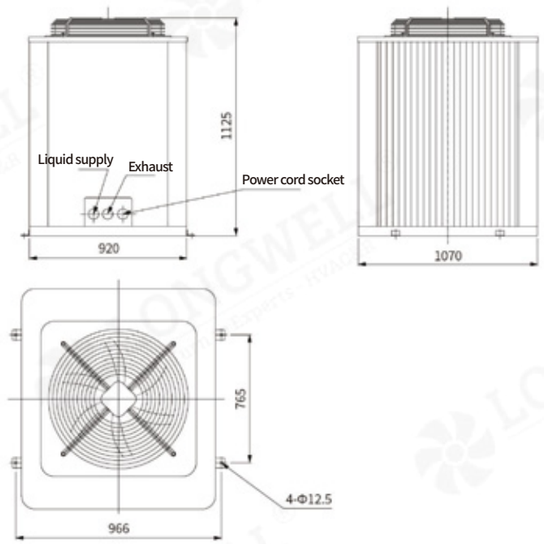
High-Precision Inverter Constant Temperature and Humidity Unit Dimensional Drawing





LWHF18NV Indoor Unit Dimensional Drawing

LWHF33NV Indoor Unit Dimensional Drawing



LWHF18NV/LWHF33NV Outdoor Unit Dimensional Drawing

Air Conditioner Power Distribution

1. The power supply provided for the unit must be stable at AC380V ±5%. If the voltage is too high or too low, the unit may malfunction.
2. The power wiring and installation must strictly comply with national standards or local regulations and meet the power distribution requirements of this unit.
3. To ensure personal safety, the unit should be reliably grounded. All wires must be copper, and the cross-sectional area should not be less than the data provided below.
4. To avoid the impact of short circuits on other circuits and ensure safe troubleshooting, it is required to install an air switch before the power enters the unit.
5. All external wiring and air switches for the equipment should be provided by the user (it is recommended not to use a leakage circuit breaker).

Air-Cooled Precision Constant Temperature and Humidity Unit

Model	Distribution Power (KW)	Main Power Switch(A)	Power Cable Specifications 3*S+N(mm^2)	Ground Wire(mm^2)
LWHF13NG	18	40	3×10+1×6	10
LWHF20NG	24	63	3×16+1×6	16
LWHF26NG	35	80	3×16+1×6	16
LWHF32NG	40	80	3×25+1×10	16
LWHF41NG	51	100	3×25+1×10	16
LWHF54NG	59	125	3×35+1×10	16
LWHF63NG	80	160	3×35+1×10	16
LWHF81NG	94	200	3×50+1×16	25
LWHF93NG	99	200	3×50+1×16	25
LWHF100NG/LWHF100WG	109	250	3×70+1×25	35
LWHF120NG	134	250	3×70+1×25	35
LWHF142NG	165	300	3×95+1×35	50
LWHF170NG	193	350	3×120+1×35	70
LWHF200NG	218	400	3×150+1×50	70
LWHF120WG	136	250	3×70+1×25	35
LWHF142WG	165	320	3×120+1×35	70
LWHF170WG	193	350	3×150+1×50	95
LWHF200WG	218	400	3×185+1×50	95

High-Precision Inverter Precision Constant Temperature and Humidity Unit

Model	Distribution Power (KW)	Main Power Switch(A)	Power Cable Specifications 3*S+N(mm^2)	Ground Wire(mm^2)
LWHF18NV	23	50	3×16+1×10	16
LWHF33NV	32	80	3×25+1×10	16

Indoor and Outdoor Unit Connection Wires

Air-Cooled Precision Constant Temperature and Humidity Unit

Model	Air-cooled		
	Condenser Fan/Number*Cross-sectional Area(mm^2)	Outdoor Control Cable/Number*Cross-sectional Area(mm^2)	Ground Wire(mm^2)
LWHF13NG	3×1.5 Outdoor Unit×1	4×1.0	1.5
LWHF20NG	3×1.5 Outdoor Unit×1	4×1.0	1.5
LWHF26NG	6×1.5 Outdoor Unit×2	8×1.0	1.5
LWHF32NG	6×1.5 Outdoor Unit×2	8×1.0	1.5
LWHF41NG	6×1.5 Outdoor Unit×2	8×1.0	1.5
LWHF54NG	6×1.5 Outdoor Unit×2	8×1.0	1.5
LWHF63NG	6×1.5 Outdoor Unit×2	8×1.0	1.5
LWHF81NG	9×1.5 Outdoor Unit×3	12×1.0	1.5
LWHF93NG	9×1.5 Outdoor Unit×3	12×1.0	1.5
LWHF100NG	8×2.5 Outdoor Unit×2	4×1.0	2.5
LWHF120NG	8×2.5 Outdoor Unit×2	4×1.0	2.5
LWHF142NG	4×4 Outdoor Unit×1	2×1.0	4
LWHF170NG	4×4 Outdoor Unit×1	2×1.0	4
LWHF200NG	4×4 Outdoor Unit×1	2×1.0	4
LWHF100WG	6×10+8×2.5 Outdoor Unit×2	20×1.0	10
LWHF120WG	6×16+8×2.5 Outdoor Unit×2	20×1.0	16
LWHF142WG	6×16+8×2.5 Outdoor Unit×2	20×1.0	16
LWHF170WG	6×25+8×2.5 Outdoor Unit×2	20×1.0	25
LWHF200WG	6×25+8×2.5 Outdoor Unit×2	20×1.0	25

High-Precision Inverter Precision Constant Temperature and Humidity Unit

Model	Air-cooled		
	Condenser Fan/Number*Cross-sectional Area(mm^2)	Outdoor Control Cable/Number*Cross-sectional Area(mm^2)	Ground Wire(mm^2)
LWHF18NV	3×1.5 Outdoor Unit×1	4×1.0	1.5
LWHF33NV	6×1.5 Outdoor Unit×2	8×1.0	1.5

Product Selection Guide

1. When facing the controller side as the front, if the main duct of the air conditioner is on the left side, it's referred to as left-handed; if it's on the right side, it's referred to as right-handed. Standard models are left-handed, please specify if you need a right-handed model when placing an order.
2. The performance parameters table provides the nominal cooling capacity and rated air volume of the air conditioner. If the operating conditions differ from the nominal conditions, adjustments should be made accordingly.
3. The unit noise refers to the indoor unit noise.
4. Heating method: The standard unit heating method is electric heating. If users have special requirements, they can also use hot water heating (inlet/outlet water temperature 90/60°C) or steam heating (steam pressure 0.15~0.2MPa gauge pressure) as non-standard products when placing an order.
5. Humidification method: The standard unit uses electrode humidifiers. If there are special requirements, other humidification methods such as dry steam humidification, electric heating humidification, or other humidification methods can be used as non-standard products when placing an order.
6. Compressor installation position: The standard unit compressor is installed in the indoor unit. Users can also choose to install the compressor in the outdoor unit as a non-standard product when placing an order.
7. The air supply duct resistance of the air conditioning system should match the external static pressure of the air conditioner.
8. Estimation of the air conditioning cooling load for some buildings:

Unit		Sensible Cooling Load (W/m^2)	Total Cooling Load (W/m^2)	Occupants (m^2/)	Lighting (W/m^2)	Airflow Volume ($m^3/h \cdot m^2$)
Office	Central Area	65	95	10	60	18
	Perimeter Area	110	160	10	60	22
	Personal Office	160	240	15	60	29
	Meeting Room	185	270	3	60	33
School	Classroom	130	190	2.5	40	33
	Library	130	190	6	30	33
	Automated Restaurant	150	260	1.5	30	36
Apartment	High-rise, Facing South	110	160	10	20	36
	High-rise, Facing North	80	130	10	20	33
Theater, Auditorium		110	260	1	20	44
Laboratory		150	230	10	50	36
Library, Museum		95	150	10	40	29
Hospital	Operating Room	110	380	6	20	29
	Public Place	50	150	10	30	29
Health Clinic		130	200	10	40	36
Barbershop, Beauty Salon		110	200	4	50	36
Department Store	Underground	150	250	1.5	40	44
	Middle Level	130	225	2	60	36
	Upper Level	110	200	3	40	29
Pharmacy		110	210	3	30	36
Retail Store		110	160	2.5	40	36
Boutique		110	160	5	30	36
Bar		130	260	2	15	36
Dining room		110	320	2	17	44
Restaurant	Room	80	130	10	15	26
	Public Place	110	160	10	15	29
Factory	Assembly Room	150	260	3.5	45	33
	Light Industry	160	260	15	30	36

Remarks: The calculation of air conditioning load in a place is related to factors such as building orientation, local climate, indoor environment, etc. The best solution depends on the actual situation.

9. Correction factors for refrigeration capacity due to the length of indoor and outdoor unit connecting pipes and the height difference between indoor and outdoor unit installations:

Correction Facto / Height Difference	Horizontal Distance	5	10	20	30	40	50	60	70
Outdoor Unit Higher than Indoor Unit	0	1	0.97	0.96	0.91	0.88	0.85	0.82	0.79
	5	1	0.95	0.93	0.9	0.87	0.84	0.81	-
	10	0.96	0.96	0.91	0.88	0.85	0.82	0.79	-
	15	0.95	0.92	0.9	0.86	0.83	0.8	-	-
	20	0.93	0.91	0.88	0.85	0.82	0.79	-	-
	25	0.91	0.9	0.86	0.83	0.8	-	-	-
	30	0.9	0.88	0.85	0.82	0.79	-	-	-
Outdoor Unit Lower than Indoor Unit	5	0.91	0.88	0.87	0.83	0.8	0.78	0.75	-
	10	0.85	0.83	0.81	0.77	0.74	0.72	0.69	-
	15	0.79	0.77	0.75	0.71	0.68	0.66	-	-
	20	0.73	0.71	0.69	0.68	0.62	0.6	-	-
	25	0.67	0.65	0.63	0.62	0.56	-	-	-

Remarks:
1. The correction factors for cooling capacity in the table are based on the theoretical values of a specific compressor.
2. The actual cooling capacity correction may vary depending on the insulation of the connecting pipes and the ambient temperature on-site.
3. When the outdoor unit is lower than the indoor unit, the compressor should be placed in the outdoor unit.
4. For every additional bend in the connecting pipe, the total length of the connecting pipe must be reduced by 1 meter.
5. Avoid placing the outdoor unit lower than the indoor unit as much as possible. If the total length of the connecting pipes exceeds 30 meters or the height difference is greater than 15 meters, a non-standard design is required, and the amount of refrigerant and lubricating oil should be appropriately increased.