

# Air Handling Unit

## Introduction

ATD Air Handling Units(AHU) are designed with high quality and efficiency to meet the most demanding requirements. They provide cooling, heating and ventilation to conditioned space. These units are suitable for hotels, hospitals, large halls, banks, super markets and other applications.

## The advantage of modular design

ATD Air Handling Unit are manufactured in modular sections, where each module contains one or more components. Several modules compose a unit.

The whole air handling unit is shipped completely assembled as standard but partially assembled units can be shipped as an option.

The flexible modular design allows various section arrangements according to the task requirement.

- 1) Wide capacity range (1500m<sup>3</sup>/h to 40000m<sup>3</sup>/h). Larger capacities can be made as special units.
- 2) Ideal selection for controlling the indoor air quality so that the right degree of filtration, humidification, cooling, heating and also noise level can be achieved.
- 3) High efficiency centrifugal fans, excellent vibration absorption and high efficient heat exchangers are integrated to ensure reliable performance of the unit.
- 4) Air tight construction.
- 5) Rugged base frame adds strengths to the unit rigged construction.
- 6) High efficiency with high quality materials and components.
- 7) Long life with easy inspection and maintenance through access doors and access panels.
- 8) Different kinds of accessories and options can be selected and added to this modular design.
- 9) Modular design unit is suited to match application requirements.

## Outstanding features

Design Versatility

Unit capacities in AHU have a wide range depending on the design requirements, also units can be constructed almost in any shape and dimensions to meet client's restricted spaces in mechanical room, roof etc.

## Structure quality

All frames are made of high quality extruded metal profile, and the frame rigidity is achieved through the use of a special construction. This rigid structure supports the whole unit to prevent bends due to external loads.

## Service ability

The unit construction facilitates easy accessibility for operators to maintain and service. This accessibility is reflected in the number of doors provided for the unit and easy removing panels.

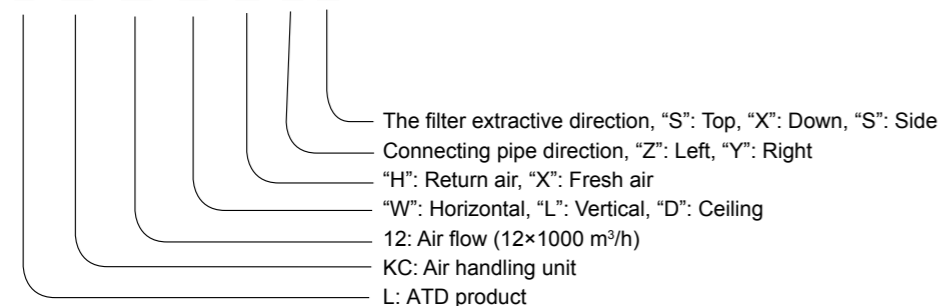
This serviceability will positively affect the unit expected life.

## Options diversity

There is a vast variety of filtration, cooling, heating fan, and controls options that can be provided for AHU series, which enhance our unit's performance.

## Instruction of model

L KC 12 W H Z S



## Ceiling Type Air Handling Unit Performance Parameters(Return Air)

Product type	Rated air volume m <sup>3</sup> /h	Rated cooling capacity		Rated heating capacity		External static pressure		Motor power kW	Water flow		Water resistance		Noise dB(A)	Weight		Dimension L×W×H mm
		4R	6R	4R	6R	4R	6R		4R	6R	4R	6R		4R	6R	
		kW	kW	kW	kW	Pa	kW		L/s	kPa	kg					
LKCD1.5A	1500	8.1	11.1	12.1	16.5	180	130	0.32	0.39	0.53	3.9	7.6	55	74	77	900×750×550
LKCD2A	2000	11.1	14.9	16.5	22.2	200	150	0.32	0.53	0.71	4.6	8.6	56	80	84	940×800×600
LKCD2.5A	2500	13.2	18.2	19.7	27.1	230	180	0.55	0.63	0.87	7.4	13.8	57	93	97	940×950×600
LKCD3A	3000	15.2	22.2	22.6	33.1	190	140	0.55	0.73	1.06	8.7	18.9	58	101	106	940×1090×600
LKCD4A	4000	21.3	29.4	31.7	43.8	250	200	1.1	1.02	1.4	12.7	28	59	139	146	1000×1300×640
LKCD4B	4000	24.2	31.7	36.1	47.2	200	150	0.32×2	1.16	1.51	18.8	14.1	59	131	137	940×1360×600
LKCD5A	5000	32.9	37.9	49	56.5	280	280	1.5	1.57	1.81	13.2	25.5	60	165	173	1100×1420×680
LKCD5B	5000	31.9	39.8	47.5	59.3	230	180	0.55×2	1.52	1.9	22.7	21.3	60	152	161	940×1650×600
LKCD6A	6000	33.6	45.7	50.1	68.1	250	200	1.5	1.6	2.18	11.5	20.7	61	192	202	1150×1500×750
LKCD6B	6000	36.6	48	54.5	71.5	190	140	0.55×2	1.75	2.29	24.3	19.5	61	182	193	940×1920×600
LKCD7A	7000	40.2	53.9	59.9	80.3	200	200	1.5	1.92	2.57	13.8	22.7	62	214	226	1250×1550×820
LKCD7B	7000	43.5	56.5	64.8	84.2	200	200	1.1×2	2.08	2.7	14.8	25.8	62	256	268	1100×2100×640
LKCD8A	8000	48.1	63.5	71.7	94.6	250	250	2.2	2.3	3.03	14.8	30.7	62	244	256	1250×1720×820
LKCD8B	8000	51.5	65.4	76.7	97.4	200	200	1.1×2	2.46	3.12	17.8	34.8	62	272	285	1100×2350×640
LKCD9A	9000	52.8	70.8	78.7	106	300	300	3	2.52	3.38	9.5	18.4	63	265	279	1300×1720×890
LKCD9B	9000	57.5	73.2	85.7	109	200	200	1.1×2	2.74	3.49	18.8	39.8	63	300	314	1150×2350×680
LKCD10A	10000	59.9	78.9	89.3	118	350	350	3	2.86	3.77	11.2	17.7	64	278	295	1300×1900×890
LKCD10B	10000	66.9	83.7	99.7	125	300	300	1.5×2	3.19	4	26.8	48.5	64	312	329	1150×2450×700
LKCD12A	12000	72.8	95.9	109	143	400	400	4	3.47	4.58	14.7	21.2	65	335	354	1400×1900×1000
LKCD12B	12000	79.3	100	118	149	350	350	2.2×2	3.79	4.77	30.8	48.8	65	366	384	1200×2550×780
LKCD14A	14000	87.4	113	130	168	400	400	5.5	4.17	5.39	14.9	26.7	65	383	405	1400×2050×1050
LKCD14B	14000	92.3	117	138	174	350	350	2.2×2	4.41	5.58	29.2	58.2	65	397	419	1500×2550×880

## Performance values refer to the following conditions:

- Cooling capacity is measured under the condition:  
Air inlet temperature DB 27°C/WB 19.5°C, water inlet temperature 7°C, water temperature difference 5°C.
- Heating capacity is measured under the condition:  
Air inlet temperature DB 21°C, water inlet temperature 60°C.



### Horizontal Type Air Handling Unit Performance Parameters(Return Air)

Product type	Rated air volume	Rated cooling capacity		Rated heating capacity		External static pressure		Motor power	Water flow		Water resistance		Noise	Weight		Dimension
		4R	6R	4R	6R	4R	6R		4R	6R	4R	6R		4R	6R	
	m³/h	kW		kW		Pa		kW	L/s		kPa		dB(A)	kg		mm
LKCW2A	2000	11.1	14.9	16.5	22.2	200	150	0.32	0.53	0.71	4.6	8.6	56	81	85	940×800×620
LKCW3A	3000	15.2	22.2	22.6	33.1	190	140	0.55	0.73	1.06	8.7	18.9	58	102	107	940×1090×620
LKCW4A	4000	21.3	29.4	31.7	43.8	250	200	1.1	1.02	1.4	12.7	28	59	142	149	1000×1300×680
LKCW5A	5000	32.9	37.9	49	56.5	280	280	1.5	1.57	1.81	13.2	28.5	60	169	178	1100×1420×720
LKCW6A	6000	33.6	45.7	50.1	68.1	250	200	1.5	1.6	2.18	11.5	20.7	61	196	206	1150×1500×770
LKCW7A	7000	40.2	53.9	59.9	80.3	200	200	1.5	1.92	2.57	13.8	22.7	62	224	236	1250×1550×880
LKCW8A	8000	48.1	63.5	71.7	94.6	250	250	2.2	2.3	3.03	14.8	30.7	62	251	266	1250×1720×880
LKCW9A	9000	52.8	70.8	78.7	106	300	300	3	2.52	3.38	9.5	18.4	63	272	286	1350×1720×920
LKCW10A	10000	59.9	78.9	89.3	118	300	300	3	2.86	3.77	11.2	17.7	64	286	303	1350×1900×920
LKCW12A	12000	72.8	95.9	109	143	350	350	4	3.47	4.58	14.7	21.2	65	347	367	1450×1900×1030
LKCW14A	14000	87.4	113	130	168	400	400	5.5	4.17	5.39	14.9	26.7	65	390	412	1450×2050×1070
LKCW16A	16000	102	131	152	195	400	400	5.5	4.85	6.27	18.9	36.8	66	516	553	1650×2000×1230
LKCW18A	18000	115	147	171	219	400	400	5.5	5.48	7.05	21.3	39.7	67	538	580	1650×2200×1230
LKCW20A	20000	128	164	191	244	400	400	7.5	6.12	7.83	23.1	38.7	68	604	653	1800×2200×1350
LKCW25A	25000	162	207	241	308	400	400	7.5	7.75	9.9	32.1	40.5	68	732	793	1850×2280×1580
LKCW30A	30000	195	248	291	370	400	400	11	9.33	11.9	20.9	43.8	70	836	908	1850×2480×1700
LKCW35A	35000	233	296	347	441	450	450	15	11.2	14.1	33.1	68.8	71	980	1063	2000×2830×1700
LKCW40A	40000	266	340	396	507	450	450	15	12.7	16.3	41.3	67.8	72	1027	1122	2000×3050×1780

#### Performance values refer to the following conditions:

- Cooling capacity is measured under the condition:  
Air inlet temperature DB 27°C/WB 19.5°C, water inlet temperature 7°C, water temperature difference 5°C.
- Heating capacity is measured under the condition:  
Air inlet temperature DB 21°C, water inlet temperature 60°C.

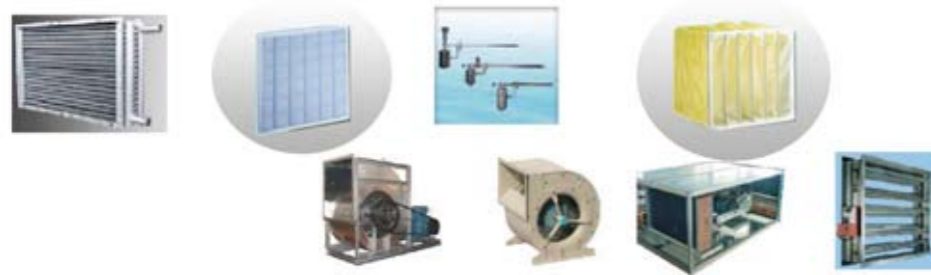
### Vertical Type Air Handling Unit Performance Parameters(Return Air)

Product type	Rated air volume	Rated cooling capacity		Rated heating capacity		External static pressure		Motor power	Water flow		Water resistance		Noise	Weight		Dimension
		4R	6R	4R	6R	4R	6R		4R	6R	4R	6R		4R	6R	
	m³/h	kW		kW		Pa		kW	L/s		kPa		dB(A)	kg		mm
LKCL2A	2000	11.1	14.9	16.5	22.2	200	150	0.32	0.53	0.71	4.6	8.6	56	90	94	550×850×1180
LKCL3A	3000	15.2	22.2	22.6	33.1	190	140	0.55	0.73	1.06	8.7	18.9	58	109	114	550×1150×1200
LKCL4A	4000	21.3	29.4	31.7	43.8	250	200	1.1	1.02	1.4	12.7	28	59	162	169	650×1460×1270
LKCL5A	5000	32.9	37.9	49	56.5	280	280	1.5	1.57	1.81	13.2	28.5	60	183	192	670×1500×1350
LKCL6A	6000	33.6	45.7	50.1	68.1	250	250	1.5	1.6	2.18	11.5	20.7	61	213	224	730×1600×1480
LKCL7A	7000	40.2	53.9	59.9	80.3	200	200	1.5	1.92	2.57	13.8	22.7	62	241	252	760×1680×1640
LKCL8A	8000	48.1	63.5	71.7	94.6	250	250	2.2	2.3	3.03	14.8	30.7	62	258	271	760×1680×1700
LKCL9A	9000	52.8	70.8	78.7	106	300	300	3	2.52	3.38	9.5	18.4	63	293	307	820×1840×1740
LKCL10A	10000	59.9	78.9	89.3	118	300	300	3	2.86	3.77	11.2	17.7	64	303	318	820×1880×1790
LKCL12A	12000	72.8	95.9	109	143	350	350	4	3.47	4.58	14.7	21.2	65	379	399	920×1920×2030
LKCL14A	14000	87.4	113	130	168	400	400	5.5	4.17	5.39	14.9	26.7	65	420	442	920×2000×2100
LKCL16A	16000	102	131	152	195	400	400	5.5	4.85	6.27	18.9	36.8	66	557	594	1040×2270×2200
LKCL18A	18000	115	147	171	219	400	400	5.5	5.48	7.05	21.3	39.7	67	576	618	1040×2350×2260
LKCL20B	20000	128	164	191	244	300	300	3×2	6.12	7.83	23.1	38.7	68	591	640	820×2550×2040
LKCL25B	25000	162	207	241	308	350	350	4×2	7.75	9.9	32.1	40.5	68	750	810	920×2840×2280
LKCL30B	30000	195	248	291	370	400	400	5.5	9.33	11.9	20.9	43.8	70	889	959	1040×3100×2350

#### Performance values refer to the following conditions:

- Cooling capacity is measured under the condition:  
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- Heating capacity is measured under the condition:  
Air inlet temperature DB 21°C, water inlet temperature 60°C.

# Modular Air Handling Unit

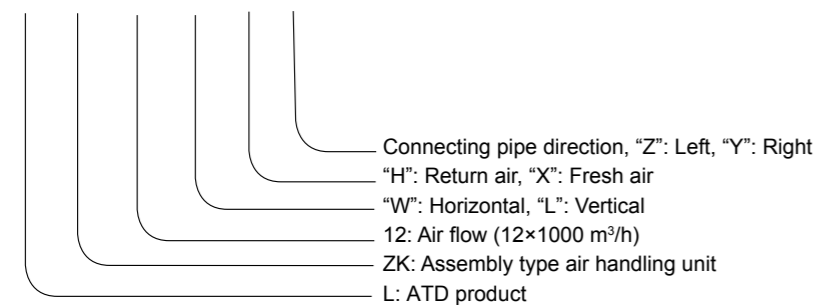


## Features

- ATD's Modular Air Handling Units give you the flexibility to meet the requirements of your application, including horizontal and vertical units.
- Wide application as hotel, apartment, factory, shopping center, office building, school, etc.
- Modular design, assemble flexible, installation convenient.
- Compact, lightweight design conserves space.
- Smooth operation, low noise, and high total pressure.
- Multiple coil design.
- Chilled water evaporator coil or DX type coil with direct expansion remote condensor.
- Multiple arrangements including top discharge and side discharge.
- Good sealing, low leakage rate, high heat transfer efficiency.
- Nice appearance, corrosion resistance, convenient maintenance.

## Instruction of model

L ZK 12 W H Z



## Additional

Please declare the direction of inlet/outlet air.

# Model of Air Handling Unit

Model	Air flow	Total pressure	Motor power	Total pressure	Motor power	Total pressure	Motor power
	m³/h	Pa	kW	Pa	kW	Pa	kW
LZK2	2000	800	0.75	1200	1.5	1600	2.2
LZK4	4000	800	1.5	1200	2.2	1600	3
LZK6	6000	800	2.2	1200	3	1600	4
LZK8	8000	800	3	1200	4	1600	5.5
LZK10	10000	800	4	1200	5.5	1600	7.5
LZK12	12000	800	5.5	1200	7.5	1600	7.5
LZK15	15000	800	5.5	1200	7.5	1600	11
LZK18	18000	800	7.5	1200	11	1600	11
LZK20	20000	800	7.5	1200	11	1600	15
LZK25	25000	800	11	1200	15	1600	15
LZK30	30000	800	11	1200	15	1600	18.5
LZK35	35000	800	15	1200	18.5	1600	22
LZK40	40000	800	15	1200	22	1600	30
LZK50	50000	800	18.5	1200	30	1600	30
LZK60	60000	800	22	1200	30	1600	37
LZK70	70000	800	30	1200	37	1600	45
LZK80	80000	800	30	1200	37	1600	55
LZK90	90000	800	37	1200	45	1600	55
LZK100	100000	800	45	1200	55	1600	75

# Return Air & Cooling Condition

Model	Air flow m³/h	4R				6R				8R			
		TC	SC	Water flow	Water resistance	TC	SC	Water flow	Water resistance	TC	SC	Water flow	Water resistance
		kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa
LZK2	2000	11.0	8.8	1.9	3.9	15.1	12.0	2.6	8.4	17.5	14.0	3.1	21.8
LZK4	4000	21.4	17.1	3.7	16.2	29.5	23.6	5.1	34.4	34.6	27.6	6.0	40.2
LZK6	6000	33.6	26.0	7.2	28.7	46.7	37.4	8.1	38.6	54.1	43.3	9.4	13.6
LZK8	8000	42.2	32.3	8.2	47.6	61.8	49.4	10.7	42.3	71.6	57.3	12.4	30.2
LZK10	10000	58.9	47.2	10.2	10.60	78.5	62.8	13.6	21.40	90.4	72.3	15.6	14.2
LZK12	12000	71.0	55.4	12.1	14.60	92.9	74.7	16.3	21.70	109.4	87.5	18.9	18.4
LZK15	15000	84.9	69.9	15.0	13.46	104.3	83.4	18.0	18.36	121.8	97.4	21.0	30.3
LZK18	18000	106.4	83.1	18.9	22.20	137.9	108.3	24.5	43.50	167.7	134.1	28.9	36
LZK20	20000	118.4	92.7	21.2	24.50	155.9	122.7	27.2	39.20	187.4	150.0	32.3	32.3
LZK25	25000	145.2	112.1	27.1	39.30	189.4	149.5	32.9	28.70	220.7	176.5	38.1	39.2
LZK30	30000	200.7	160.6	34.6	30.20	241.8	193.5	41.7	26.60	266.9	213.5	46.0	28.9
LZK35	35000	237.7	190.2	41.0	40.50	285.1	228.1	49.2	36.50	317.1	253.6	54.7	68.9
LZK40	40000	271.8	217.4	46.9	45.50	327.5	262.0	56.5	41.90	361.1	288.8	62.2	91.4
LZK50	50000	330.4	264.3	57.0	39.30	398.7	319.0	68.7	28.70	441.3	353.1	76.1	25.2
LZK60	60000	401.4	321.1	69.2	30.20	483.6	386.9	83.4	26.60	533.9	427.1	92.0	67
LZK70	70000	475.5	380.4	81.9	40.50	570.2	456.1	98.3	36.50	634.1	507.3	109.3	80.7
LZK80	80000	493.0	394.4	85.0	45.50	655.0	524.0	112.9	41.90	722.1	577.7	124.4	108
LZK90	90000	539.8	431.9	93.0	54.75	695.7	556.6	119.9	86.83	792.7	634.1	136.6	121
LZK100	100000	660.7	528.6	113.9	76.84	797.4	637.9	137.4	88.53	882.7	706.1	152.1	125

Performance values refer to the following conditions:

Air inlet temperature DB 27°C/WB 19.5°C , water inlet temperature 7°C, water temperature difference 5°C.