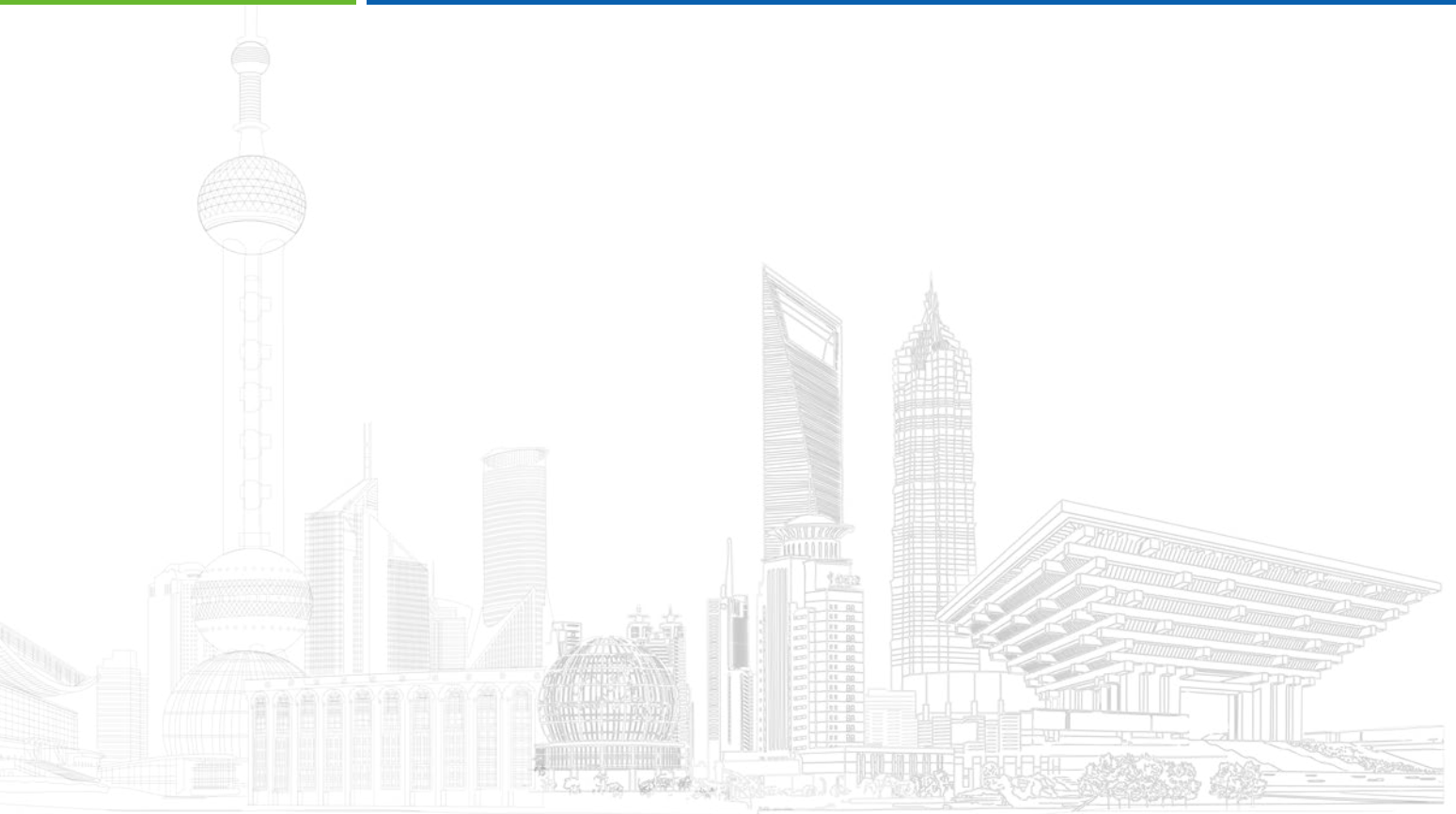


Compact Heat Recovery Air Conditioning Unit



Beijing Holtop Air Conditioning Co., Ltd.



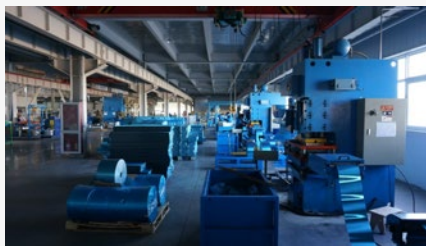
COMPANY PROFILE

Holtop is the leading manufacturer in China specializing in the production of air to air heat recovery equipments. Founded in 2002, it is dedicated to the research and technology development in the field of heat recovery ventilation and energy saving air handling equipments for more than 15 years.

Holtop headquarters is located in the foot of Beijing Baiwangshan Mountain, covering area of 30,000 square meters. The manufacturing base is in Beijing's Badaling Economic Development Zone, covering an area of 60 acres, with an annual production capacity of 200,000 units of air heat recovery equipments. Holtop builds a sound certificate system of ISO9001, ISO14001 and OHSAS18001 as well as product certification systems. Moreover, it has a laboratory certified by nation authority. As a well-known manufacturer in the field of heat recovery, Holtop has a strong R&D team and possesses dozens of national invention patents, and has participated in the compilation work of several national standards, and is also certified as Zhongguancun High-Tech Enterprise.

Holtop has mastered the core technology of heat recovery, independently developing products like plate and rotary heat exchangers, various heat & energy recovery systems and air handling units. Products have been exported to more than 41 countries and regions. Holtop continuously ranks the top in domestic market of heat and energy recovery ventilators.

Holtop will always committed to the mission of delivering highly efficient and energy saving products and solutions to improve indoor air quality, to ensure people's health and protect our earth.



CERTIFICATION

After years of dedication to the research and technology development in the filed of heat recovery and indoor air quality, Holtop has many achievements on the product innovation and quality management, which is certified by National and International authorities.



Product Patent Certificates



Test Lab Verification Certificates

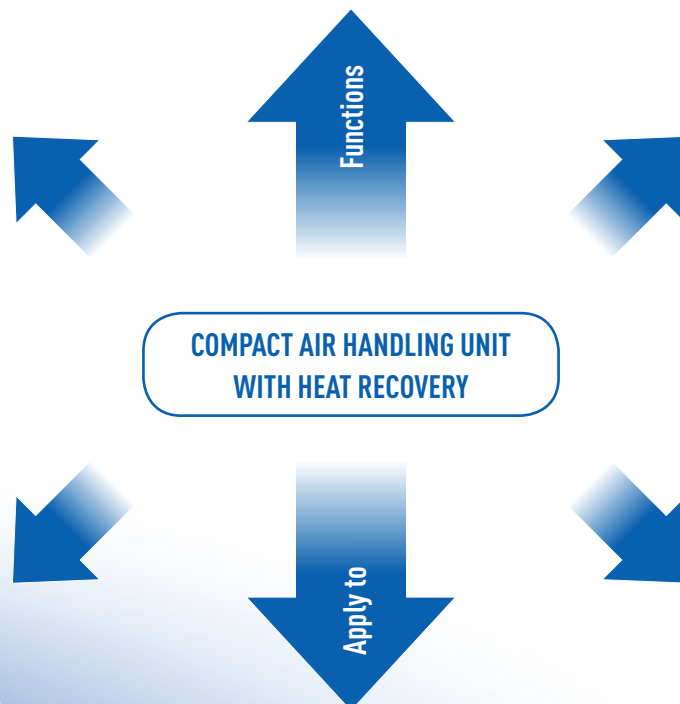


Energy Saving Product Certificates



ISO9001 / ISO14001 / OHSAS18001 Certificates

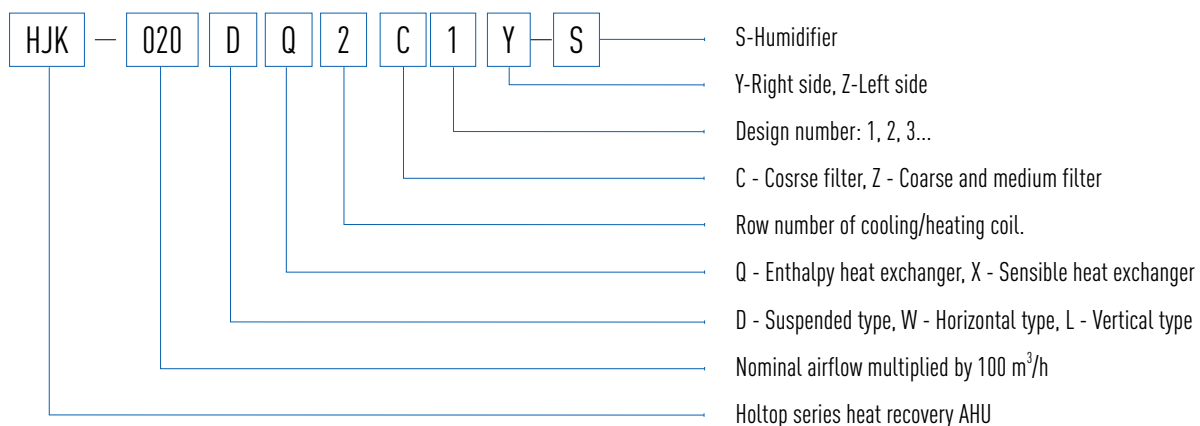
Due to the large size and complicated structure, traditional air handling unit with heat recovery faced the limitation of room to install and maintenance in commercial and industrial application. In order to find solutions for the fast developing market of limited space, HOLTOP take its core air to air heat recovery technology to develop the compact type air handling unit with heat recovery. The compact configurations include flexible combinations of filter, energy recovery, cooling, heating, humidification, airflow regulation, etc., aiming to meet the ventilation, air conditioning and energy saving requirements in green modern buildings.



**COMPACT AIR HANDLING UNIT
WITH HEAT RECOVERY**



► HJK AHU model descriptions



► Features

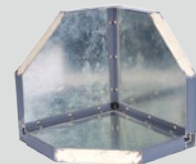
- 1) The AHU has functions of air conditioning with air to air heat recovery. Slim and compact structure with flexible way of installation. It greatly reduces construction cost and improve the utilization rate of space.
- 2) The AHU equipped with sensible or enthalpy plate heat recovery core. Heat recovery efficiency can be higher than 60%.
- 3) 25mm panel type integrated framework, it's perfect to stop cold bridge and enhancing the intensity of the unit
- 4) Double-skin sandwiched panel with high density PU foam to prevent cold bridge.
- 5) Heating/cooling coils are made of hydrophilic and anticorrosive coated aluminum fins, effectively eliminate "water bridge" on the gap of fin, and reduces the ventilation resistance and noise as well as the energy consumption, the thermal efficiency can be increased by 5%.
- 6) The unit apply unique double beveled water drain pan to ensure condensed water from the heat exchanger (sensible heat) and coil discharge completely.
- 7) Adopt high efficiency outer rotor fan, which is low noise, high static pressure, smooth operation and reduce maintenance costs
- 8) The external panels of the unit are fixed by nylon leading screws, effectively solved the cold bridge, making it easier to maintain and examination in limit space.
- 9) Equipped with standard draw-out filters, reducing maintenance space and costs.



Enthalpy plate Heat exchanger



Sensible plate heat exchanger



Double-skin sandwiched panel



Heating/Cooling coils



Outer rotor fan

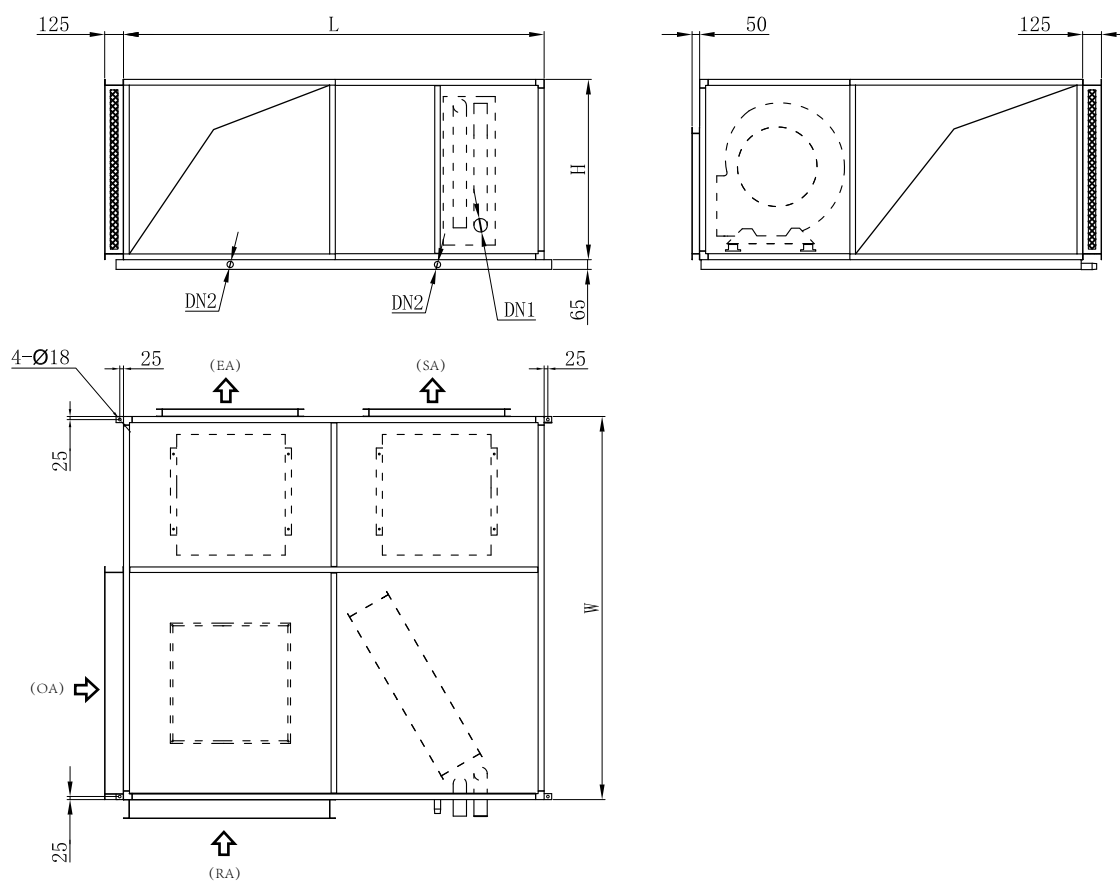


► Parameter charts

Model	Airflow (m³/h)	Heat recovery efficiency (%)	Cooling cap. (kw)			Heating cap. (kw)			Water flow (T/H)			Water press drop (k Pa)			Supply fan power (kW)	Supply fan E.S.P. (Pa)			Exhaust fan power (kW)	Exhaust fan E.S.P. (Pa)	Weight (Kg)
			2 row	4 row	6 row	2 row	4 row	6 row	2 row	4 row	6 row	2 row	4 row	6 row		2 row	4 row	6 row			
HJK-020D***	2000	60%	11.4	21.0	26.1	12.1	21.0	23.5	2.0	3.6	4.5	12.0	24.6	39.2	0.7-4p	176	126	92	0.55-4p	173	185
HJK-025D***	2500	60%	14.5	25.0	31.9	15.5	25	28.9	2.5	4.3	5.5	14.3	12.1	26.3	0.7-4p	192	142	108	0.55-4p	189	200
HJK-030D***	3000	60%	17.9	30.0	38.7	18.9	30.0	35	3.1	5.1	6.6	17.0	15.5	30.6	1.5-4p	352	302	269	1-4p	359	250
HJK-035D***	3500	60%	21.2	36.0	45.6	22.3	36.0	41	3.6	6.2	7.8	19.3	17.5	34.1	1.5-4p	283	233	199	1-4p	290	280
HJK-040D***	4000	60%	24.3	41.4	52.2	25.4	41.0	46.9	4.2	7.1	8.9	22.7	19.0	40.5	1.5-4p	242	191	157	1-4p	250	320
HJK-050D***	5000	60%	26.0	54.4	63.4	28.6	53.7	57.5	4.5	9.3	10.9	5.5	36.5	23.4	2.2-4p	361	311	277	1.5-4p	219	420
HJK-060D***	6000	60%	37.8	63.5	85	38.4	58.1	75	6.5	10.9	14.6	23.7	19.4	41.3	4-4p	446	381	338	2.2-4p	526	490
HJK-070D***	7000	60%	45.2	75.4	94	45.8	68.8	85	7.7	12.9	16.1	33.7	27.2	19.8	4-4p	446	380	337	4-4p	509	590
HJK-080D***	8000	60%	52.5	87.1	109	52.9	79.5	98	9.0	14.9	18.7	41.2	30.2	24.5	4-4p	419	354	310	4-4p	480	635
HJK-090D***	9000	62%	60.1	99.2	125	60.5	90.5	111	10.3	17.0	21.4	35.9	36.4	26.8	4-4p	431	367	325	4-4p	460	660
HJK-100D***	10000	62%	65.8	108.9	137.6	66.3	99.7	123	11.3	18.7	23.6	36.9	37.3	27.7	5.5-6p	438	371	328	4.5-6p	450	750

Remarks:

1. Outdoor air conditions: Cooling: DB/WB=35°C/28°C, heating: 5°C DB.
2. Inlet / outlet water temp. : Cooling: 7°C/12°C, heating: 60°C/50°C.
3. Optional 100 mm thick direct drainage wet film humidifier, air supply E.S.P. reduces by 50Pa.
4. Outdoor air inlet can select optional G3 + F5 combination filters, air supply E.S.P. reduces by 60Pa.
5. If selecting wet film humidifier and combination filters at the same time, air supply E.S.P. reduces by 110Pa.
6. The "****" in the above unit models are codes of different functions, can be filled in according to actual needs.
7. The above mentioned weight is the complete unit weight with 6 row cooling coils.



► Dimensions

Model	Dimensions L x W x H (mm)	OA inlet W x H (mm)	RA inlet W x H (mm)	SA/EA outlet W x H (mm)	DN1		
					2 row	4 row	6 row
HJK-020D***	1580 x 1380 x 610	560 x 450	530 x 450	400 x 250	32	32	40
HJK-025D***	1580 x 1420 x 610	600 x 450	530 x 450	400 x 250	32	40	50
HJK-030D***	1700 x 1580 x 750	640 x 590	630 x 590	400 x 320	32	50	50
HJK-035D***	1860 x 1600 x 750	670 x 590	760 x 590	400 x 320	32	50	50
HJK-040D***	1860 x 1620 x 770	690 x 610	760 x 610	400 x 400	40	50	65
HJK-050D***	1950 x 1780 x 770	840 x 610	760 x 610	500 x 400	40	65	65
HJK-060D***	2130 x 1850 x 880	940 x 720	860 x 720	500 x 500	50	65	65
HJK-070D***	2300 x 2030 x 880	1050 x 720	960 x 720	520 x 500	50	65	65
HJK-080D***	2300 x 2030 x 940	1120 x 780	960 x 780	630 x 500	65	65	80
HJK-090D***	2350 x 2060 x 1010	1150 x 850	960 x 850	630 x 500	65	80	80
HJK-100D***	2450 x 2240 x 1130	1180 x 970	1060 x 970	800 x 500	65	80	80

Note: DN2 of all models is 25 mm.

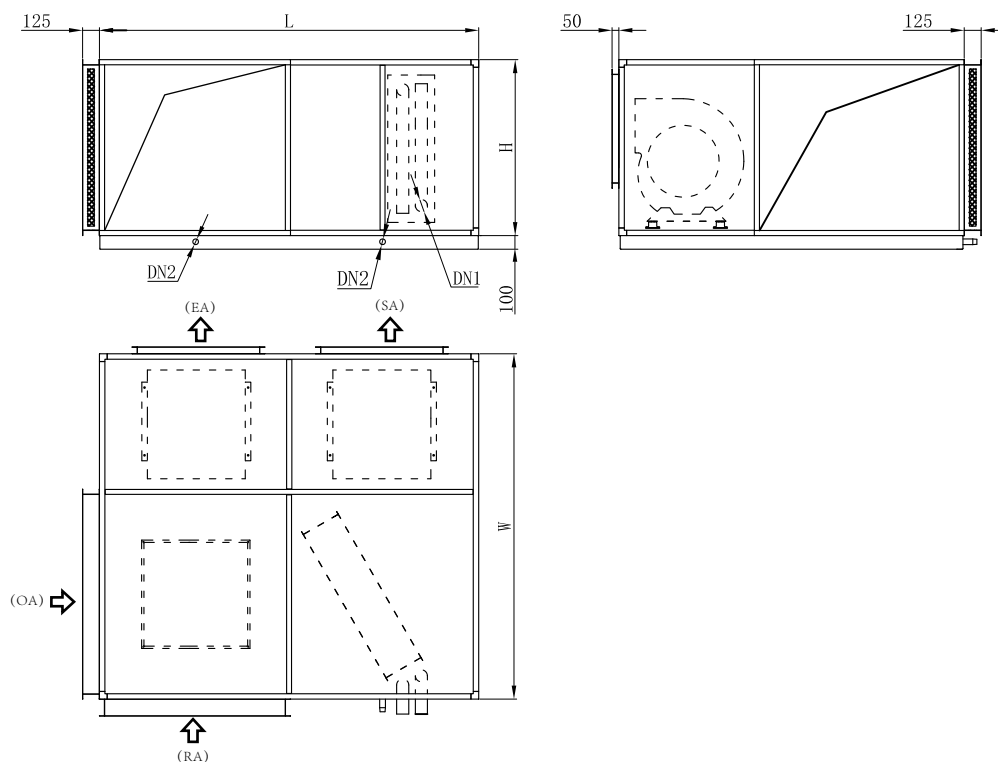


► Parameter charts

Model	Airflow (m³/h)	Heat recovery efficiency (%)	Cooling cap. (kw)			Heating cap. (kw)			Water flow (T/H)			Water press drop (k Pa)			Supply fan power (kW)	Supply fan E.S.P. (Pa)			Exhaust fan power (kW)	Exhaust fan E.S.P. (Pa)	Weight (Kg)
			2 row	4 row	6 row	2 row	4 row	6 row	2 row	4 row	6 row	2 row	4 row	6 row		2 row	4 row	6 row			
HJK-020w***	2000	60%	11.0	21.0	26.1	12.0	21.0	23.5	1.9	3.6	4.5	11.0	24.0	39.0	0.7-4p	163	113	79	0.55-4p	160	195
HJK-025w***	2500	60%	15.0	25.0	32.0	15.5	25.0	29	2.6	4.3	5.5	4.9	12.0	26.0	0.7-4p	200	150	116	0.55-4p	197	210
HJK-030w***	3000	60%	18.0	30.0	38.7	19.0	30.0	35	3.1	5.1	6.6	16.9	15.5	30.6	1.5-4p	343	293	258	1-4p	349	260
HJK-035w***	3500	60%	21.2	36.0	45.6	22.2	35.0	41	3.6	6.2	7.8	19.0	17.5	34.2	1.5-4p	279	229	195	1-4p	286	320
HJK-040w***	4000	60%	24.0	41.4	51.4	25.0	41.0	46.5	4.1	7.1	8.8	22.7	19.0	39.1	1.5-4p	260	210	167	1-4p	268	370
HJK-050w***	5000	60%	26.0	54.0	63.4	28.0	54.0	57.5	4.5	9.3	10.9	5.7	36.5	23.4	2.2-4p	386	335	301	1.5-4p	243	480
HJK-060w***	6000	60%	37.8	63.5	85.0	38.2	58.1	75	6.5	10.9	14.6	23.7	19.4	41.2	4-4p	382	305	262	2.2-4p	450	580
HJK-070w***	7000	60%	45.2	75.3	93.0	45.7	68.6	85	7.7	12.9	15.9	27.2	22.5	16.0	4-4p	460	384	342	4-4p	477	630
HJK-080w***	8000	60%	51.8	86.5	107.5	52.5	78.8	97.5	8.9	14.8	18.4	34.2	25.1	20.0	4-4p	517	441	398	4-4p	535	680
HJK-090w***	9000	62%	58.1	97.1	120.0	58.9	88.4	109.5	10.0	16.6	20.6	31.6	25.7	18.4	4-4p	546	469	426	4-4p	562	750
HJK-100w***	10000	62%	65.7	109.1	136	66.4	99.5	122.8	11.3	18.7	23.3	41.4	32.4	13.6	5.5-6p	503	429	386	4.5-6p	503	850
HJK-130w***	13000	62%	85.6	142.0	178.0	86.4	130.1	160	14.7	24.3	30.5	41.4	33.1	24.4	9-4p	700	635	592	7.5-6P	580	1000
HJK-150w***	15000	62%	101.6	166.2	211.0	101.4	152.8	187	17.4	28.5	36.2	44.2	45.6	34.0	9-4p	593	530	487	7.5-6P	473	1250
HJK-170w***	17000	62%	113.9	186.8	238.7	114.1	172.5	211.5	19.5	32.0	40.9	49.2	42.1	35.0	9-6p	499	430	389	7.5-6P	380	1420
HJK-200w***	20000	62%	135.5	221.9	282.4	135.2	203.8	250	23.2	38.0	48.4	38.0	45.2	34.2	9-6p	479	416	374	7.5-6P	359	1500

Remarks:

1. Outdoor air conditions: Cooling: DB/WB=35°C/28°C, heating: 5°C DB.
2. Inlet / outlet water temp. : Cooling: 7°C/12°C, heating: 60°C/50°C.
3. Optional 100 mm thick direct drainage wet film humidifier, air supply E.S.P. reduces by 50Pa.
4. Outdoor air inlet can select optional G3 + F5 combination filters, air supply E.S.P. reduces by 60Pa.
5. If selecting wet film humidifier and combination filters at the same time, air supply E.S.P. reduces by 110Pa.
6. The "****" in the above unit models are codes of different functions, can be filled in according to actual needs.
7. The above mentioned weight is the complete unit weight with 6 row cooling coils.



► Dimensions

Model	Dimensions L x W x H (mm)	OA inlet W x H (mm)	RA inlet W x H (mm)	SA/EA outlet W x H (mm)	DN1		
					2 row	4 row	6 row
HJK-020w***	1580 x 1380 x 560	560 x 400	530 x 400	400 x 250	32	32	40
HJK-025w***	1580 x 1420 x 610	600 x 450	530 x 450	400 x 250	32	40	50
HJK-030w***	1700 x 1580 x 690	640 x 530	630 x 530	400 x 320	32	50	50
HJK-035w***	1850 x 1600 x 720	670 x 560	760 x 560	400 x 320	32	50	50
HJK-040w***	1860 x 1620 x 780	690 x 620	760 x 620	400 x 400	40	50	65
HJK-050w***	1940 x 1780 x 780	840 x 620	760 x 620	500 x 400	40	65	65
HJK-060w***	2030 x 1850 x 900	940 x 740	760 x 740	500 x 500	50	65	65
HJK-070w***	2160 x 1900 x 1000	990 x 840	860 x 840	520 x 500	50	65	65
HJK-080w***	2180 x 1960 x 1000	1050 x 840	860 x 840	630 x 500	65	65	80
HJK-090w***	2180 x 1960 x 1200	1050 x 1040	860 x 1040	630 x 500	65	80	80
HJK-100w***	2410 x 2190 x 1200	1120 x 1040	1060 x 1040	800 x 500	65	80	80
HJK-130w***	2600 x 2320 x 1400	1250 x 1240	1160 x 1240	800 x 630	65	80	80
HJK-150w***	2800 x 2470 x 1400	1400 x 1240	1260 x 1240	800 x 630	80	80	80
HJK-170w***	2800 x 2550 x 1600	1390 x 1440	1260 x 1440	800 x 800	65 x 2	65 x 2	80 x 2
HJK-200w***	2800 x 2550 x 1800	1390 x 1640	1260 x 1640	900 x 800	65 x 2	80 x 2	80 x 2

Note: DN2 of all models is 25 mm.

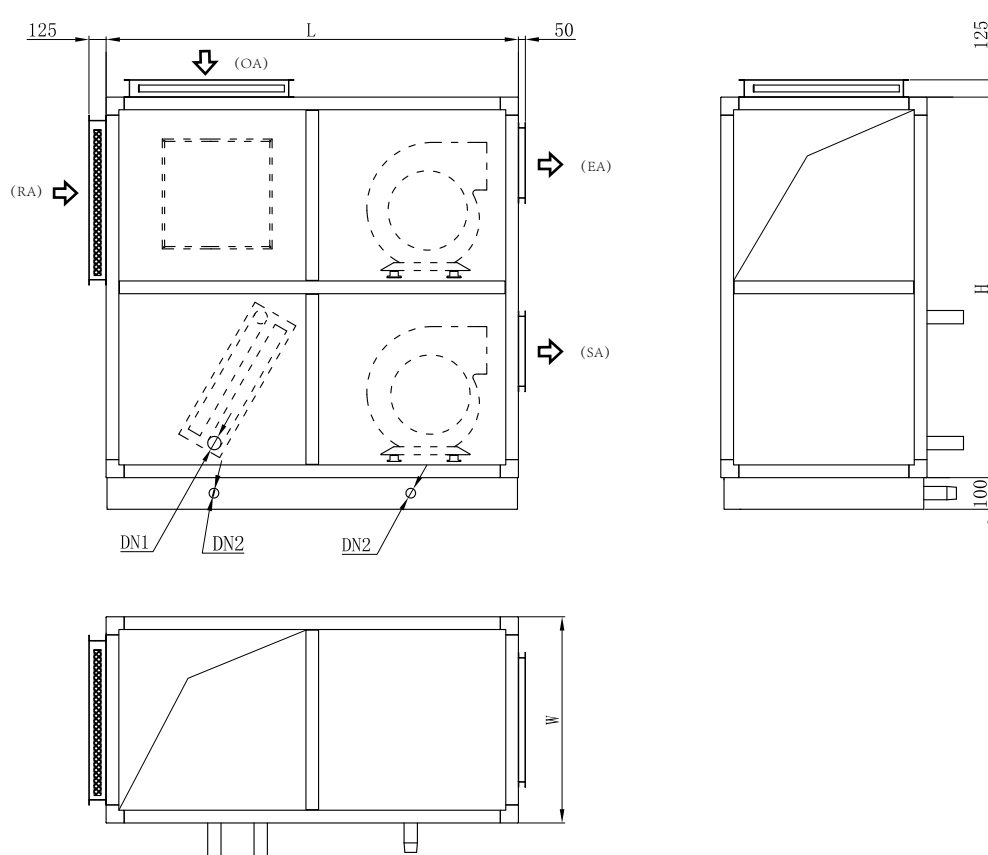


► Parameter charts

Model	Airflow (m³/h)	Heat recovery efficiency (%)	Cooling cap. (kw)			Heating cap. (kw)			Water flow (T/H)			Water press drop (k Pa)			Supply fan power (kW)	Supply fan E.S.P. (Pa)			Exhaust fan power (kW)	Exhaust fan E.S.P. (Pa)	Weight (Kg)
			2 row	4 row	6 row	2 row	4 row	6 row	2 row	4 row	6 row	2 row	4 row	6 row		2 row	4 row	6 row			
HJK-020L***	2000	60%	11.6	20.0	25.7	12.3	19.8	23.2	2.0	3.4	4.4	19.5	27.8	42.8	0.7-4p	197	144	108	0.55-4p	198	187
HJK-025L***	2500	60%	14.8	25.6	32.0	15.7	25.5	28.9	2.5	4.4	5.5	18.4	17.1	26.9	0.7-4p	166	118	85	0.55-4p	161	196
HJK-030L***	3000	60%	16.8	31.8	37.5	18.1	31.5	34.2	2.9	5.5	6.4	12.2	32.5	23.2	1.5-4p	361	309	272	1-4p	372	260
HJK-035L***	3500	60%	20.0	37.4	43.6	21.0	37.0	39.8	3.4	6.4	7.5	12.0	34.0	21.9	1.5-4p	347	296	260	1-4p	357	290
HJK-040L***	4000	60%	23.8	40.5	51.7	25.2	40.3	46.6	4.1	6.9	8.9	18.4	15.5	33.5	1.5-4p	349	299	265	1-4p	356	350
HJK-050L***	5000	60%	30.3	51.6	63.2	31.6	51.2	55.8	5.2	8.8	10.8	27.9	23.6	16.6	2.2-4p	447	395	359	1.5-4p	309	460
HJK-060L***	6000	60%	37.2	66.4	84.5	38.3	60.8	74.9	6.4	11.4	14.5	19	43.1	33.6	4-4p	439	375	333	2.2-4p	518	510
HJK-070L***	7000	60%	45.0	75.3	100.0	45.8	68.6	88.6	7.7	12.9	17.1	27.7	22.5	42.0	4-4p	532	467	425	4-4p	561	570
HJK-080L***	8000	60%	51.0	85.4	114.5	51.8	78	100.8	8.7	14.6	19.6	33.1	24.3	46.4	4-4p	513	446	402	4-4p	546	650
HJK-090L***	9000	62%	58.5	97.3	130.0	59.2	88.9	114	10.0	16.7	22.3	37.1	30.0	42.0	4-4p	542	477	434	4-4p	573	700
HJK-100L***	10000	62%	63.8	106.8	143.2	64.8	97.6	126.1	10.9	18.3	24.5	33.0	27.0	46	5.5-6p	517	450	407	4.5-6p	530	780
HJK-130L***	13000	62%	85.7	143.0	183.5	85.8	132.3	162.4	14.7	24.5	31.5	42.0	48.5	37.0	9-4p	714	649	605	7.5-6P	595	930
HJK-150L***	15000	62%	100.0	164.0	210.7	100.6	151.2	186.5	17.1	28.1	36.1	50.0	39.6	37.8	9-4p	688	622	577	7.5-6P	572	1140

Remarks:

1. Outdoor air conditions: Cooling: DB/WB=35°C/28°C, heating: 5°C DB.
2. Inlet / outlet water temp. : Cooling: 7°C/12°C, heating: 60°C/50°C.
3. Optional 100 mm thick direct drainage wet film humidifier, air supply E.S.P. reduces by 50Pa.
4. Outdoor air inlet can select optional G3 + F5 combination filters, air supply E.S.P. reduces by 60Pa.
5. If selecting wet film humidifier and combination filters at the same time, air supply E.S.P. reduces by 110Pa.
6. The "****" in the above unit models are codes of different functions, can be filled in according to actual needs.
7. The above mentioned weight is the complete unit weight with 6 row cooling coils.



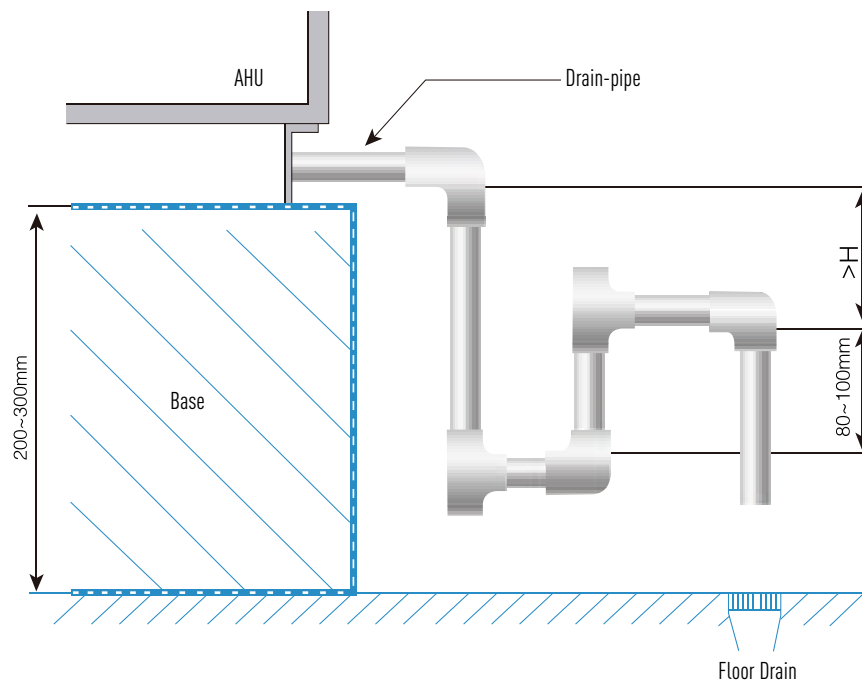
► Dimensions

Model	Dimensions L x W x H (mm)	OA inlet W x H (mm)	RA inlet W x H (mm)	SA/EA outlet W x H (mm)	DN1		
					2 row	4 row	6 row
HJK-020L***	1350 x 680 x 1300	600 x 640	520 x 460	400 x 250	32	32	40
HJK-025L***	1350 x 710 x 1350	630 x 640	550 x 460	400 x 250	32	40	50
HJK-030L***	1500 x 800 x 1600	720x 690	640 x 660	400 x 320	32	50	50
HJK-035L***	1550 x 800 x 1600	720x 740	640 x 660	400 x 320	32	50	50
HJK-040L***	1550 x 900 x 1600	820 x 740	740 x 660	400 x 400	40	50	65
HJK-050L***	1650 x 950 x 1700	870 x 840	790 x 710	500 x 400	40	65	65
HJK-060L***	1700 x 1100x 1800	1020 x 840	940 x 710	500 x 500	50	65	65
HJK-070L***	1700 x 1250 x 1800	1170 x 840	1090 x 710	520 x 500	50	65	65
HJK-080L***	1900 x 1250x 1900	1170 x 1010	1090 x 790	630 x 500	65	65	80
HJK-090L***	1900x 1300 x 1900	1220 x 1010	1140 x 730	630 x 500	65	80	80
HJK-100L***	2150 x 1250 x 2250	1170 x 1110	1090 x 970	800 x 500	65	80	80
HJK-130L***	2150 x 1550 x 2250	1470 x 1110	1390 x 970	800 x 630	65	80	80
HJK-150L***	2250 x 1550 x 2400	1470 x 1210	1390 x 1010	800 x 630	80	80	80

Note: DN2 of all models is 32 mm.

► Confirmation before installation

1. Holtop standard compact AHU should be installed indoor (special design is required if installed outdoor), and take measures to avoid rain, straight sunlight and dusts.
2. When the temp. of installation place over 30°C or the humidity over 85%, the outside surface of the unit may cover condensations, and the drainage of condensations should be considered.
3. Examine the pipe and connection of heating/cooling coils, check if any worn in humidifier connection.
4. Check if any fault in rotor (examine by manual rotation).
5. Check if any fault in the appearance of unit and its accessories.
6. Make sure the product specification according to the order (check the nameplate).
7. Check if any loose of bolts or nuts.



$$H = \text{E.S.P. (mmH}_2\text{O)} + 20$$

► Installation

1. For maintenance purpose, leave enough space at the side of the service door and water inlet/outlet.
2. Place the AHU on a smooth base of cement or groove steel. Length and width of base should be designed according to the unit and keep it in level.
3. Should not apply excessive pressure to the side pipe of the unit (bend, spin or compress, etc.). Make gentle connection in order to protect the coil.
4. Avoid the rubbish, dusts and other wastes getting into the pipes, supply or exhaust fan.
5. Clean all the water paths before connect them to the unit. Install valves to water pipes outside the unit and make the unit be free of any burden of these pipes and valves.
6. Use soft fittings to connect the air inlet/outlet and ducts.
7. Motor over-current protection device must be installed to protect supply/ exhaust fan from over loading.
8. Interlock the supply fan and humidifier if humidifier is installed.
9. Connect motors to power supply with protection and connect the unit to ground.

► Operation and maintenance

1. Unit uses TN-S/AC3-380V+N+PE power supply.
2. The unit should not run without phase or in the situation of lopsided three-phase power or voltage.
3. Should not use the unit in the situation over the range of design specifications.
4. Not operating or adjusting the unit if the access door opened.
5. Before starting the blower, turn the rotor slowly to check if it touches with other sections. Check and make sure motor runs at right direction and freely. The unit and all the electric parts should be checked without fault before running by a professionals.
6. Adjust the system before blowers work. Motor should run at rated current. Don't close all the air inlet & outlet to avoid distortion.
7. Should not shut off all the inlet valve to avoid worn or torn.
8. Cooling & heating coil should use clean demineralized water as medium, and the working pressure should $\leq 1.6\text{MPa}$.
9. Drain the heating/cooling coils and fill anti-freezing liquid if unit sleeps through the whole winter.
10. Examine the filters regularly, clean or replace them if resistance comes to the end resistance.



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Data is subject to changes without notification due to product improvement