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First got the refrigeration equipment
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AIRCONDITIONING TERMINALS 空调末端系列 B2-2

KDS (X) Series Of Suspended Ceiling Jet Type Air Handling Unit

KDS(X)系列吊顶射流空调机组



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德州亚太集团是国内大型中央空调制冷系统集成供应商。

集多年潜心研究，博采众长自成体系，打造出一流的中央空调全套设备和众多精品工程。国内以中央电视台新址、酒泉卫星发射中心、国家质检总局、三峡工程及近二十个北京奥运场馆等为代表，国外以巴基斯坦乌奇电厂、柬埔寨金边市大都会广场、印度帕帕多拉工程为代表的重点项目，采用了亚太中央空调设备，长期稳定，节能环保，获得了广泛的赞誉。

ISO9001、14001、3C、UL、CE、CRAA 等一系列认证；主机列入节能产品政府采购清单、数十项国家专利、国家级高新技术企业、中国驰名商标，充分标明了亚太集团的管理水平和产品水平。

与荷兰阿波罗合资，以欧洲标准制造的洁净设备全部返销发达国家、中央空调设备相继进入十几个国家和地区，展示亚太集团已经步出国门，与国际接轨。

植根齐鲁大地，秉持“以人为本”的经营理念，崇尚“以德待人”的儒家文化，亚太集团愿与您共同开创明天的辉煌。

Dezhou Yatai Group is a supplier of large central air conditioning and refrigeration system in China.

Yatai has developed whole set of advanced central air conditioner and lots of wonderful projects based on long-term research and features of the others. Many famous projects adopted Yatai central air conditioners that run smoothly, save energy, protect environment and won good reputation widely like the New CCTV, the Jiuquan Satellite Launching Center, the General Bureau of National Quality Inspection, Three-gorge Engineering Project, over 20 Beijing Olympic Stadiums and others in China; the UCH Power Plant in Pakistan, the Phnom Penh Capital Squire in Cambodia, the Priyadarshini Jurala Project in India and others across the world.

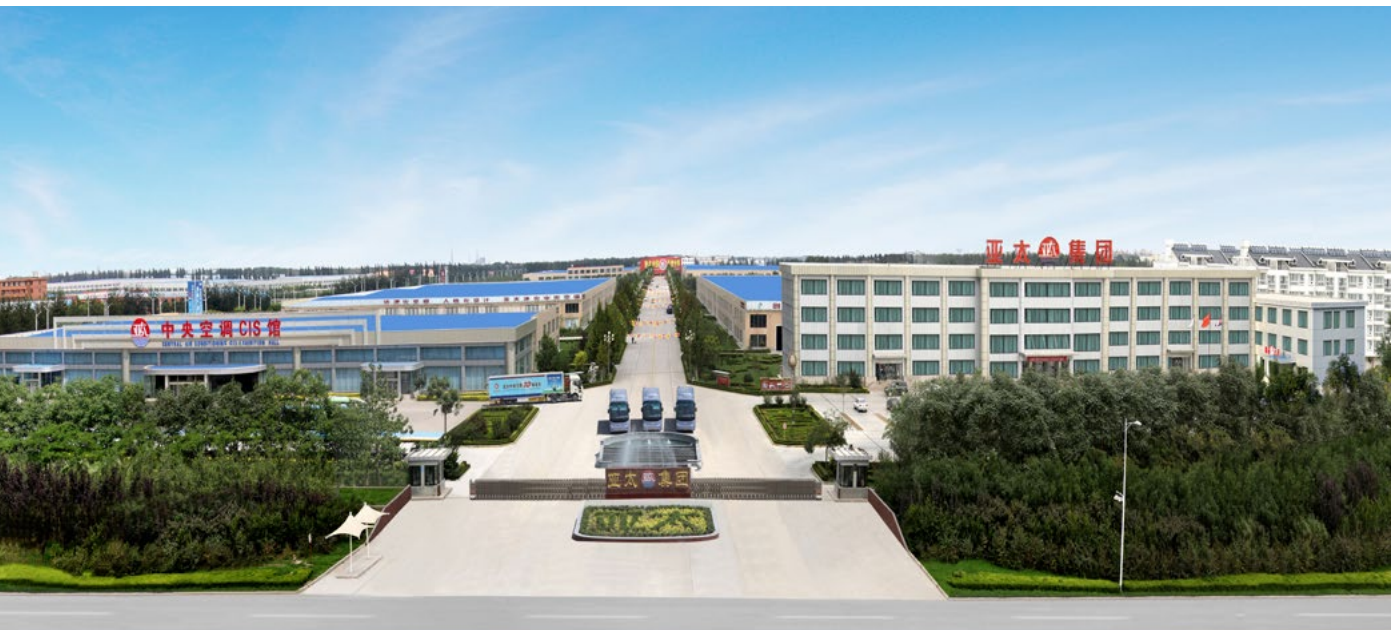
Yatai has certified by ISO9001, 14001, 3C, UL, CE, CRAA and others; its chiller names have been put on the government purchasing list as energy saving products and obtained dozens of national patents, National High-technology Enterprise and Chinese Famous Trademark, which show the managements and product qualities of Yatai Group.

The filtering equipment made by the joint venture, co-invested with Dutch Afro Company, according to the European Standards air exported fully to the developed countries; the central air conditioners have exported to over 10 countries or regions, which show that Yatai Group has stepped into oversea market and been in the line with the international.

Located at Shandong Province, insisting on business idea of "humanism" and advocating the Confucianism of "getting along with people by morality" Yatai Group wishes to create a brilliant future with you.



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Honorable Qualification



AIRCONDITIONING
TERMINALS
空调末端系列

KDS (X) Series Of Suspended Ceiling
Jet Type Air Handling Unit
KDS(X)系列吊顶射流空调机组

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组合式空调机组
Combination air-handling units



吊顶式空调机组KD(X)系列
Computer-controlling fiberglass winding pipes



KDS(X) 系列吊顶射流空调机组
KDS (X) Series Of Suspended Ceiling Jet Type Air Handling Unit



风机盘管机组
Fan-coils



概述 Profile

KDS (X) 系列吊顶射流空调机组是我公司博采众长, 结合多年实际生产经验而研发的新品之一, 可满足不同工况下的降温、去湿、加热、加湿等空气处理要求。该产品结构简单、性能优越, 主要零部件精心设计、择优选配。KDS (X) 系列吊顶射流空调机组通过强制射流实现远程送风, 取消了传统的送回风管道。尤其是通过可调节送风方向的球形喷嘴, 实现冷热远距离送风的不同流态, 使制冷制热在同一设备中完美兼顾。彻底克服了传统空调的不足和缺陷, 广泛用于剧场、工矿企业、体育馆、厂房车间、展厅、大型场所的空调工程, 更好的适应高大空间远距离送风之要求。

The KDS (X) series of suspended ceiling jet type air handling unit is one of the new products developed and researched by our company based on our many years of production experiences and borrowing strong points from others, which can handle air like cool, dehumidify, heat, humidify and so on to meet the requirements of different conditions. It has many features like simple structure, fine performance, good designed parts and preferred arrangement. Can supply air to a long distance by the forced jet and the traditional air supply and return ducts are unnecessary. Particularly, the global nozzle which can adjust air supply direction makes it possible to cool and heat by one device and can supply air remotely by different flow regimes. In this case completely overcome the traditional shortcomings and failures. It can be used in large-sized air conditioning projects like theatre, industrial and mining enterprises, gymnasium, exhibition, workshop and so on.

产品特点 Product features

- ◆ 箱体: 箱体采用高密封性型材框架加装彩钢板制作的低热阻壁板组合而成。框架为铝合金或ABS型材骨架; 壁板为聚氨脂整体发泡, 导热系数小于 $0.022\text{w/m}\cdot^{\circ}\text{C}$, 也可采用高密度聚苯乙烯壁板或玻璃棉壁板。
- ◆ 风机: 采用低噪声高效率外转子或皮带传动离心风机, 风机经精密动平衡校正, 确保机组运行平稳, 具有低噪声和较高全压的特点。
- ◆ 换热器: 换热器主体采用优质无缝紫铜管和高纯度铝箔, 经先进的机械胀结后经 2.5MPa 液压密封检漏测试, 性能符合GB/T14294-2008标准之要求, 保证了产品优越的性能和可靠的质量。

- ◆ 干式凝水盘：精心设计的凝水盘和特厚内衬保温材料确保机组在恶劣工况下无凝露现象。凝水盘倾斜式设计，更有利于凝结水的排放。同时凝结水管按非满状态计算，排放能力为机组正常运行时排放量的5倍以上。凝结水的及时排放减少了凝水盘的“触水”时间，即有利于减轻凝水盘的腐蚀又避免凝水盘滋生细菌。
- ◆ 风口：采用射流性能优越的球型喷口作为送风口，可以实现无风管远距离送风。球型风口的出风方向可选择水平和垂直送风两种方式。特别适合高大空间，尤其是大面积车间的暖风下送。水平送风时，送风角度可以在60° 范围内手动或使用控制器上下调节，使冷热风能够送达所需位置。垂直送风时，可以按照用户要求配置自动摆动控制器，冬季球型喷口固定，垂直下送，长距离送风，热风可以达到指定位置；夏季球型喷口可在60° 范围内左右自动摇摆，模拟自然风，避免了冷风导致不舒适感觉，解决了冬季热风和夏季冷风难以兼顾的矛盾。
- ◆ 空气过滤器：特别设计的专用板式过滤器可任意从机组左右、上下方便地抽出，所以特别适用于空间紧凑场合的维护清洗。滤料可采用锦纶凹凸网或无纺布材质。
- ◆ 控制：可选配本公司设计制造的智能调速系统，根据空调负荷，自动调节空调机组送风量，过渡季节可采用全新风运行。
- ◆ 本公司独创技术，视需要可在机组出风侧加设消声射流静压箱，专利号（ZL200820027217.1）

◆ Housing: The housing is combined by low thermal resistance panels which are made of high sealing profile frame and color plate. Frame for aluminum alloy or ABS profiles; the panel is polyurethane foamed, the conductivity factor λ is less than 0.022w/m.°C. Of course, high density polystyrene panels or glass wool board are options.

◆ Fan: equipped with silent and efficient outer rotor or belt driven centrifugal fan, the fan corrected by precise dynamic balance to make sure the running is stable, silent and total pressure is high.

◆ Heat exchanger: Its body is made of high quality seamless copper tube and high purity aluminium foil and expanded by advanced mechanical expansion and tested by 2.5 Mpa hydraulic leak test. Its performances meet the requirements of GB/T14294-2008 standard, to ensure its superior performance and reliable quality.

◆ Dry type condensation basin: The carefully designed condensation basin and very thick lining insulation make sure the air handling unit does not dew under harsh working conditions. The basin tilting design makes sure the condensed water drains smoothly. Meanwhile, the diameter of condensation water pipe is big enough, its discharge behavior is 5 times as much as that of normal running. The quick drainage make it possible to reduce the basin "touch water" time and in this case there is no basin corrosion and bacterial growth.

◆ Air outlet: Adopts fine jet global nozzle as air supply outlet, by this mean can supply air to long distance no air duct for help. There are 2 types of air supply, horizontal and vertical. Especially for large space like large-sized workshop to supply warm air down. When supply air horizontally, the air supply angle can be adjusted within 60° by hands or controller, make sure the cold/hot air can reach its destination. When vertically, can equipped with automatic swing controller according to user requirements; in winter the nozzle is fixed, vertical down-blowing, for long distance and warm air can reach its destination; in summer, the nozzle can swing automatically within 60°, simulating natural wind, avoid discomfort caused by cold air, thus two purposes of warm air in winter and cold air in summer can be reached by one device.

◆ Air filters: The special designed panel filters can be drawn out from right/left or top/bottom, so it is very suitable for the cleaning and maintenance at compact space. The nylon bump or non-woven cloth can be used as filtering material.

◆ Control: The intelligent control system designed and produced by our company is optional, it can regulate air supply volume automatically according to the air conditioning load, full fresh air can be supplied during the transition period.

◆ Our original technology, adding noise-reducing jet static pressure box at air supply side if necessary, the patent number (ZL200820027217.1)



型号命名 Model designations

KDS (X) - □ □ □ □

0: 0° 送风 180: 180° 送风
0: 0° Air supply 180: 180° Air supply

Z: 左式接管 Y: 右式接管 (机组左右式判定方法: 顺着气流看接管位置, 在左侧为左式, 反之为右式)
Z: Pipe connection on left Y: Pipe connection on right (How to know on right type or left type: Look the pipe connection along the air current, if it is on left, the left type, or else, the right type)

换热器排数: 4、6、8
Row number of heat exchanger: 4、6、8

额定风量: 10³m³/h
Rated air flow: 10³m³/h

吊顶射流 (新风) 空调机组
Suspended ceiling jet type (fresh air) air handling unit



组合式空调机组
Combination air-handling units



吊顶式空调机组KD(X)系列
Computer-controlling fiberglass winding pipes



KDS(X) 系列吊顶射流空调机组
KDS (X) Series Of Suspended Ceiling Jet Type Air Handling Unit



风机盘管机组
Fan-coils

性能参数

Performance parameters

形式 Layout	型号 Model	风量 m³/h Air flow rate	表冷器排数 Row number of surface cooler	回风工况 Return air condition		新风工况 Fresh air condition		水量 m³/h Water flow rate	水阻力 Kpa Water resistance	机外噪声dB(A) External noise	功率 kW Power	重量 kg Weight
				冷量 kW Cooling capacity	热量 kW Heating capacity	冷量 kW Cooling capacity	热量 kW Heating capacity					
水平吊装式 Horizontal suspended type	KDS(X)-1.5	1500	4	8.4	13.1	17.1	15.4	1.2	2.8	≤ 55	0.32	84
			6	11.6	17.1	21.7	20.1	1.6	4.7			86
			8	14.8	22.1	25.2	26	2.0	6.8			91
	KDS(X)-2	2000	4	11.2	17.4	22.8	20.5	1.9	6.2	≤ 58	0.55	86
			6	15.5	22.8	29	26.8	2.7	10.3			90
			8	19.7	29.5	33.5	34.7	3.4	15.1			96
	KDS(X)-2.5	2500	4	13.9	21.8	33.8	25.6	2.4	2.5	≤ 58	0.55	103
			6	19	28.5	40.9	33.5	3.3	4.0			108
			8	24.6	36.9	47.8	43.4	4.2	6.0			116
	KDS(X)-3	3000	4	16.8	26.1	40.6	30.8	2.9	3.3	≤ 59	0.75	105
			6	23.2	34.2	49	40.2	4.0	5.5			112
			8	29.6	44.2	57.2	52.1	5.1	8.0			120
	KDS(X)-4	4000	4	22.3	34.8	52.2	39.9	3.8	5.2	≤ 60	0.55 × 2	156
			6	30.4	45.6	64.9	53.7	5.2	8.4			163
			8	39.3	59	85.1	69.4	6.8	12.5			176
	KDS(X)-5	5000	4	27.9	43.6	65.7	51.3	4.8	7.4	≤ 62	0.55 × 2	169
			6	38.7	57	81.3	67.1	6.7	12.2			175
			8	49.4	73.7	105.2	86.8	8.5	17.8			184
	KDS(X)-6	6000	4	33.4	52.3	68.5	61.6	5.75	9.7	≤ 62	0.75 × 2	179
			6	45.6	68.3	86.9	80.5	7.84	15.7			190
			8	50.9	88.4	126	104.2	8.75	18.6			207
	KDS(X)-7	7000	4	39.1	61	92	71.8	6.73	9.08	≤ 63	0.8 × 2	185
			6	54.2	79.7	101	93.9	9.31	15			201
			8	69.1	103.2	135	121.5	11.9	21.9			243
	KDS(X)-8	8000	4	44.6	69.7	105.1	82.1	7.66	9.7	≤ 63	0.8 × 2	204
			6	60.8	91.1	115.8	107.3	10.5	15.7			222
			8	75.6	117.9	147.7	138.9	13.0	22.1			257
	KDS(X)-10	10000	4	57.6	87.1	114.2	102.6	9.91	11.4	≤ 66	1.5 × 2	245
			6	78.7	113.9	144.8	134.1	13.5	18.5			267
			8	93.8	147.4	167.7	173.6	16.1	24.2			308
	KDS(X)-12	12000	4	69.6	104.5	137.1	123.1	12.0	12.4	≤ 69	1.8 × 2	318
			6	88	136.7	173.7	161	15.1	17.8			346
			8	112.5	176.9	201.2	208.3	19.4	26.1			399
	KDS(X)-13.5	13500	4	78.3	117.6	154.2	138.5	13.5	13.6	≤ 72	2.2 × 2	359
			6	106.4	153.8	195.5	181.1	18.3	21.8			398
			8	126.6	199	226.4	234.4	21.8	28.6			452
	KDS(X)-15	15000	4	93.5	130.7	171.4	153.9	16.1	16.3	≤ 73	3.0 × 2	410
			6	120.3	170.9	217.2	201.2	20.7	24.1			446
			8	140.6	221.1	251.5	260.4	24.2	30.7			490

注：1、回风工况：供冷进风干球温度27℃、湿球温度19.5℃；进水温度7℃、进出水温差5℃；供热进风干球温度15℃，进水温度60℃，进出水温差10℃。

2、新风工况：供冷进风干球温度35℃、湿球温度28℃；进水温度7℃，进出水温差5℃；供热进风干球温度7℃，进水温度60℃，进出水温差10℃。

3、上表给出功率仅供参考，实际选型时按最优值标定。

4、射流机组基本配置为六极电机，如客户要求较远射程，另配四极电机。

Remarks :1.Air return working condition: Air feeding dry-bulb temperature when cooling is 27℃, wet-bulb is 19.5℃, water feeding temperature is 7℃, the water temperature difference between feeding and leaving is 5℃; air feeding dry-bulb temperature when heating is 15℃, water feeding temperature is 60℃, the water temperature difference between feeding and leaving is 10℃.

2.Fresh air working conditions: Air feeding dry-bulb temperature when cooling is 35℃, wet-bulb is 28℃, water feeding temperature is 7℃, the water temperature difference between feeding and leaving is 5℃; air feeding dry-bulb temperature when heating is 7℃, water feeding temperature is 60℃, the water temperature difference between feeding and leaving is 10℃.

3.The power values provided on the above table are only for reference, when selecting model actually, mark the optimal values.

4.The basic configuration of the jet unit is six pole motor. If the customer requests a longer range, the other four pole motors are required.

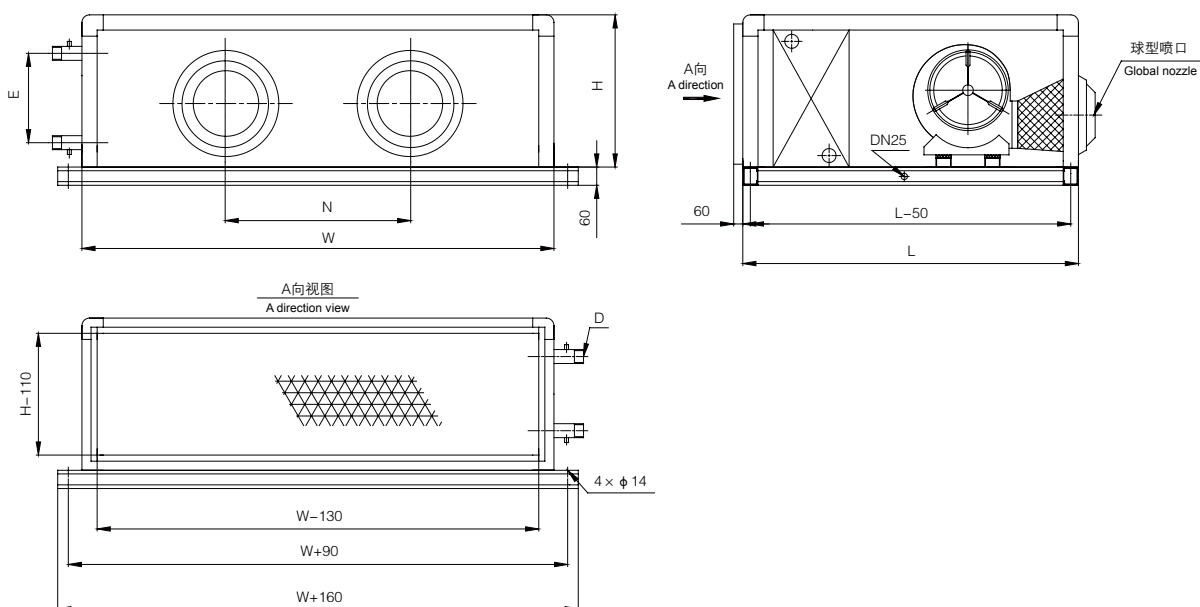
KDS远程射流空调机组水平送风射程选用推荐表

The recommended preferred horizontal blowing-in ranges of KDS series of remote jet type air handling unit

型号 (KDS) Model	1.5	2	2.5	3	4	5	6	7	8	10	12	13.5	15
射程 (m) Jet range	12	16	18	20	22	24	24	26	26	28	30	32	34
使用距离 (m) Serviceable range	18	22	24	26	28	30	30	32	32	34	36	38	40

KDS (X) 系列远程射流空调机组外形尺寸

Physical dimensions of KDS (X) series of remote jet type air handling unit



型号 Model	W	L	H	K	N	E	D(in/DN)	配套球型喷口 Equipped with global nozzle
KDS(X)-1.5	700	1103	550	60		356	1 $\frac{1}{4}$ /32	φ 315
KDS(X)-2	840	1103	550	60		356	1 $\frac{1}{4}$ /32	φ 400
KDS(X)-2.5	980	1103	550	60		356	1 $\frac{1}{2}$ /40	φ 400
KDS(X)-3	1120	1103	550	60		356	1 $\frac{1}{2}$ /40	φ 400
KDS(X)-4	1400	1103	550	60	600	356	1 $\frac{1}{2}$ /40	φ 400 × 2
KDS(X)-5	1680	1103	550	60	700	356	1 $\frac{1}{2}$ /40	φ 400 × 2
KDS(X)-6	1960	1103	550	80	760	356	1 $\frac{1}{2}$ /40	φ 400 × 2
KDS(X)-7	1960	1103	680	80	760	381	1 $\frac{1}{2}$ /40	φ 500 × 2
KDS(X)-8	1960	1103	680	80	820	445	2/50	φ 500 × 2
KDS(X)-10	2080	1305	680	80	820	508	2/50	φ 500 × 2
KDS(X)-12	2180	1305	740	80	900	572	2/50	φ 500 × 2
KDS(X)-13.5	2280	1305	780	80	900	604	2/50	φ 500 × 2
KDS(X)-15	2340	1305	810	80	1000	635	2/50	φ 500 × 2

注：KDS-10 (含) 以上型号冷凝水管在机组两侧均布。

Note:The KDS-10(including) type condensate tube is on the both sides of the unit.



KDS (X) 系列远程射流空调机组设计选型

Design lectotype of KDS (X) series of remote jet type air handling unit

采用球型喷口作为送风口的远程射流空调机组与普通吊顶式空调机组不同，这种空调机组不接风管，主要用于远距离直接送风。空调机组的热工性能参数计算与普通空调机组相同，设计选型主要是气流组织计算。对于某建筑物，当送风距离、空调机组安装高度、送风温度、室内温度、送风量大致确定后，需要选择合适的远程射流空调机组，使该机组风口送出的冷热射流可以满足以下要求：

- ◆ 冷热风送到指定位置；
- ◆ 冷射流不会中途下落，导致人体不适；
- ◆ 热风可以达到要求的送风距离和位置；
- ◆ 末端温差满足设计要求；

设计选型应考虑多个机组送风口之间的相互影响和共同作用。射流的扩散宽度大约是射程的0.4倍，机组布置密度以略小于扩散宽度为宜。

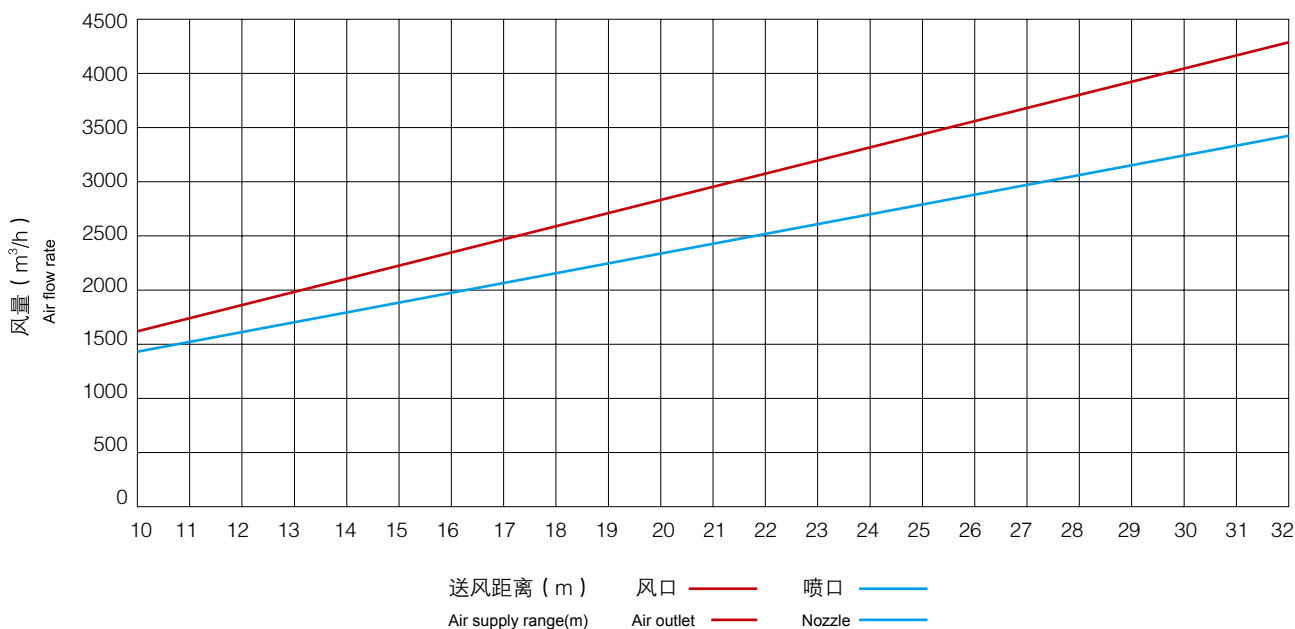
如机组紧贴天花板，应考虑贴附的影响。贴附气流射程约是一般气流的1.4倍。

The remote jet type air handling unit which adopts global nozzle as air supply outlet is different with the conventional type, it is without air ducts and mainly supply air for long distance directly. The thermal performance parameter calculation is same as that of the conventional type, the important one is air-flow organization calculation. As for one building, if parameters have been established roughly like air supply distance, AHU installation height, air feeding temperature, room temperature and air supply volume, the following requirements on hot/cold air of the AHU jetted shall be met when selecting suitable remote jet type AHU.

- ◆ The cold/hot air shall be supplied to the required place;
- ◆ The cold jet shall not fall down on the half-way and let human feel uncomfortable;
- ◆ The hot air can reach the required distance and place;
- ◆ The end temperature difference shall meet the design requirements;

When lectotyping, should pay attention on the AHUs' air supply outlet interactions. The jet diffusion width is about 0.4 times as much as the range, so the layout density should be slightly wider than the diffusion width.

If the AHU is stuck fast to the ceiling, surface effect should be considered. The attaching jet range is 1.4 times as much as the common current.



注：

- 1、图中风量为单风口风量，对双风口机组，风口风量为机组风量的50%；
- 2、射程系轴心风速0.5m/s处距风口距离；
- 3、尽量选较大规格风口，小规格风口送风阻力较大，有可能需增加电机功率。

Remarks:

- 1.The air flow rates provided on the graph is those of single air outlet, as for the twin air outlets, the air flow rates are 50% of the AHU's;
- 2.The range is the distance from the point where the axial air speed is 0.5m/s to the air outlet;
- 3.Select the large-sized air outlet as much as possible, for the air supply resistance of small-sized one is bigger, maybe increase the motor load.

KDS (X) 系列远程射流空调机组安装、使用维护

Installation, operation and maintenance of KDS (X) series of remote jet type air handling unit

◆ 安装

- 1、机组安装时确保水平，吊装机组的吊具有足够的强度确保牢固。严禁机组倾斜，防止冷凝水外溢。
- 2、机组的四周应留有800mm以上的检修空间，并保证过滤器能方便抽出便于机组维修。
- 3、机组冷凝水管须设水封，且水封设置需按附图所示设置，否则易导致排水不畅从而漏水。
- 4、外部管路必须清洗干净方可与换热器连接，以免损坏换热器或堵塞换热器。
- 5、换热器接管为下进上出，在进水口处应加装截止阀、过滤器。
- 6、机组安装定位及外部管路连接时，应避免机组各水管接头过分受力，以免损坏相关部件。
- 7、机组的进出风口与风道间应有软管过渡，与机组连接的风道和水管的重量不得由机组承受。
- 8、机组供电电源为380V、50Hz。电源符合要求方可与电机相联，接通电源后，应检查风机转向是否正确，如反转，应停机将电源相序改变。
- 9、风机电机应有良好的接地，另须有过载、过热、缺相等其他可靠保护。另电机功率大于15kW时应实施降压启动。

◆ 维护使用

- 1、机组冷热媒应为洁净的软化水，冷冻水进水温度一般为7℃，最低不得低于5℃，热媒进水温度一般为60℃，最高不应超80℃，要求水质清洁软化，且水温25℃时PH值为6.8~8（参照GB50050-2007）。特殊情况须在订货时注明，我公司可针对特殊情况进行优化设计。
 - 2、冷（热）水在换热器内的流速宜调至0.6~1.8m/s，其工作压力不超过1.6MPa。
 - 3、冬季严寒地区及全新风机组开机制热时，应先开加热器5~10min，再启动送风机，防止大量冷空气在换热器内形成冰塞；停机时应先关闭新风阀，后关闭加热器，最后关闭送风机。
 - 4、机组在冬季长期不用时，应将盘管内存水排空，并用压缩空气吹干，如存水不能吹干净，应在管内加防冻液。如机组在冬季短时间暂时不运行，应保证管内有热水循环，以防锈、防冻。除冬季外，换热器在其他季节停用时，也应将换热器充满水，以减少锈蚀。
 - 5、过滤器应定期清洗，以保证机组使用效果，如发现风量减小，一般为过滤器积尘过多所致。
 - 6、机组运行二至三年后，应进行全面保养，清除换热器管内水垢，用压缩空气或水清洗换热器翅片。风机、电机等润滑部位应定期加注润滑油。
 - 7、换热器的冷凝水管须安装水封（见图一），并确保排水通畅，水封用户自备。
 - 8、机组供电电源为380V/50Hz，电器接线图（见图二）。机组应接在具有过载、短路及过热等必备保护装置的电源上，机壳须接地。
- 注：本公司拥有最终解释权。

◆ Installation

1. When installing, make sure its bed is horizontal, the AHU hanger should be strong enough. Tilt is forbidden and in case condensed water spilled.
2. The maintenance space over 800mm around the AHU should be available to make sure the air filters can be drawn out easily and maintenance is convenient.
3. Water closing should be available in condensed water pipes, and it should be arranged according to the attached figure, or else would lead to poor drainage and water leakage.
4. External pipeline should be cleaned before connecting with the heat exchanger, in case the heat exchanger is blocked and damaged.
5. Water shall be fed at top of heat exchanger and left at its bottom, at the feeding area stop valve and filter shall be available.
6. When locating and external pipe-connecting, excessive force on pipe joints is forbidden in case relative parts damaged.
7. Flexible connction should be available between AHU's air feeding/leaving outlet and air duct, the weights of air duct or water pipe should not be born by the AHU.
8. The power supply shall be 380V, 50Hz. Only meet this requirement, shall connect the motor. After powered, check the fan running direction is right or wrong, if wrong, switch off and change the phase order.
9. The motor shall be put to earth, and reliable protections shall be available like over-load, over-heat, phase-lack and so on. If the motor power is more than 15KW, reduced voltage starter shall be available.

◆ Maintenance and operation

1. The cooling/heating medium should be clean softened water, the chilled water feeding temperature is 7℃ generally, the minimum should be more than 5℃. The heating medium feeding temperature is 60℃ generally, the maximum should be less than 80℃. the water shall be soft-treated and if the water temperature is 25℃, the PH value should be 6.8-8 (Refer to GB50050-2007). we will give an optimal design according to the special situation.
2. The flow rate of the medium flowing in heat exchanger should be adjusted to 0.6-1.8m/s, its running pressure shall not exceed 1.6Mpa.
3. If running in winter sub-zero weather and in full fresh air mode, first turn on the heater for 5-10min, then start the blower, in case ice jam generated in the heat exchanger caused by a large number of cold air; if stop the AHU, first turn off the fresh air damper, the turn off heater, finally switch off the blower.
4. If dead in winter for a long time, should drain the coil and dry it by compressed air, if the sealed water can not be removed completely, shall add antifreeze in the tube. If the AHU has a rest in winter temporarily, shall ensure that there are hot water circulating in the tube in case rust and frost generated. The heat exchanger shall be filled with water when having rest in case rust and corrosion happened but not including in winter.
5. The air filters should be cleaned regularly to make sure its efficiency. If air flow rate decreases, it is generally caused by dust accumulated in the filters.
6. Completely maintain the AHU after 2 or 3 years of running, remove deposit inside the heat exchanger and clean fins of heat exchanger by compressed air or clean water. Lubricant oil



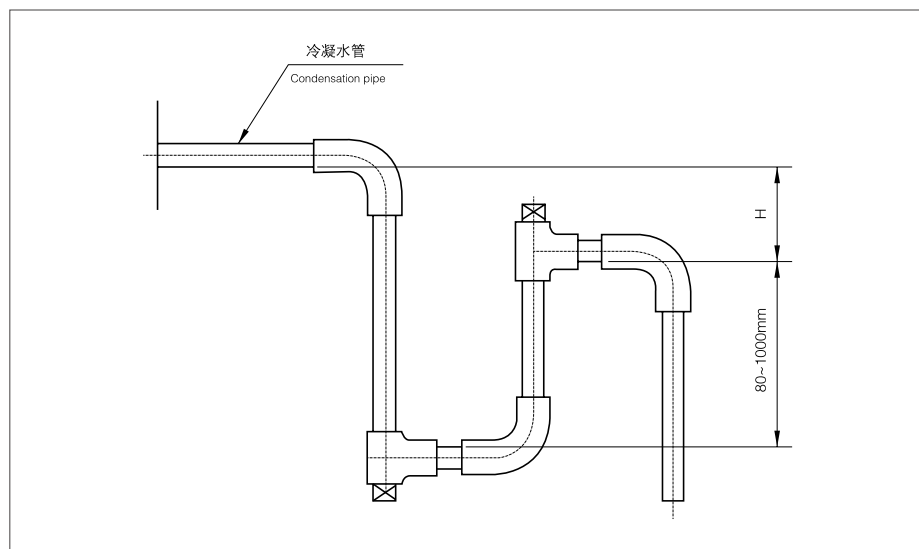
shall be charged into oil sites of the fan and motor.

7. Water closing (see the picture 1) shall be fixed at the condensation water pipe of the heat exchanger to make sure the water flow smoothly, the water closing is provided by user itself.

8. The power supply should be V/50Hz, the electrical wiring diagram (see the Picture 2). The necessary protection devices like over-load, over-heat, short-circuit and so on should be available, the AHU housing shall be put to earth.

图 (一)

Picture 1



注:

1、 $H=P/10+20$ (mm)

2、P为机组最大负压 (Pa)

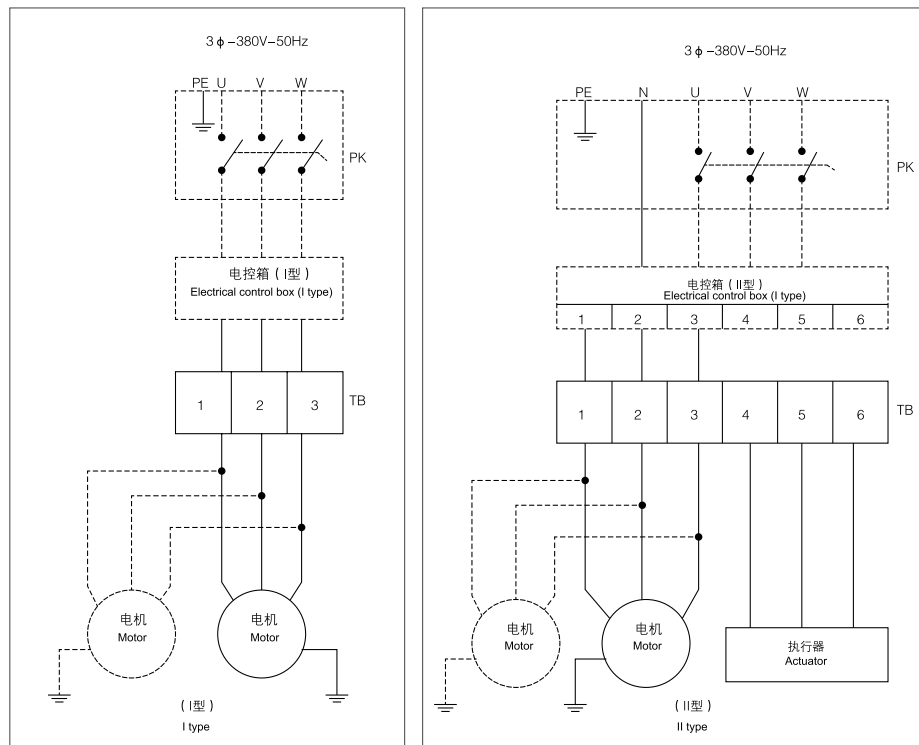
Remarks:

1. $H=P/10+20$ (mm)

2. P is the AHU's maximum negative pressure (Pa)

图 (二)

Picture 2



PK-电器保护开关 TB-接线端子

PK-Appliance protection switch TB-Terminals



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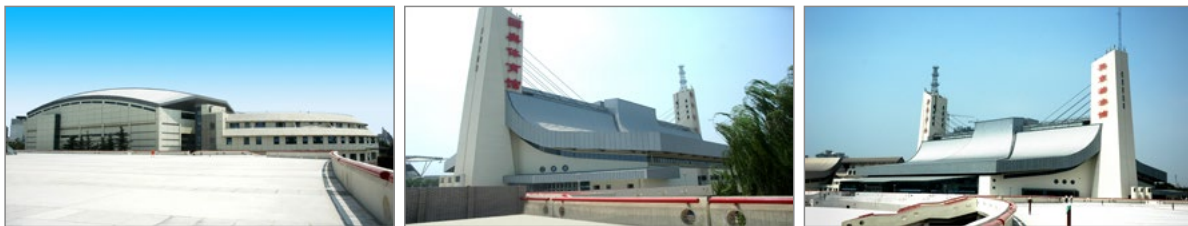
continue to produce more products with high quality

We will nourish and set up a steadfast client group

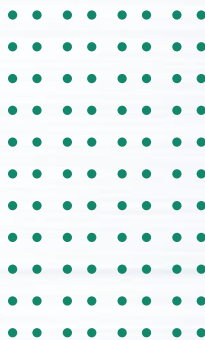
to realise the stable and steadfast expansion of the sales net

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www.yatai.cc



地址：德州市大学东路
电话：(0534) 2551888 传真：(0534) 2551887
电子信箱：yatai@yatai.cc
Add:East of University Road,Dezhou City
Tel: (0534) 2551888 Fax: (0534) 2551887
[Http://www.yatai.cc](http://www.yatai.cc) E-mail:yatai@yatai.cc

亚太集团各办事处联系方式：How to contact the branches of Yatai Group:

北京办事处 电话：(010)51908328 传真：(010)51908329 Beijing Office Tel:(010)50918328 Fax:(010)50918329	天津办事处 电话：(022)28350313 传真：(022)28350323 Tianjin Office Tel:(022)28350313 Fax:(022)28350323	山西办事处 电话：(0351)3377255 传真：(0351)3377256 Shanxi Office Tel:(0351)3377255 Fax:(0351)3377256	陕西办事处 电话：(029)87998107 传真：(029)87998105 Shanxi Office Tel:(029)87998107 Fax:(029)87998105	内蒙古办事处 电话：(0471)6914102 传真：(0471)6914103 Neimenggu Office Tel:(0471)6914102 Fax:(0471)6914103	河南办事处 电话：(0371)66205099 传真：(0371)66205228 Henan office Tel:(0371)66205099 Fax:(0371)66205228	辽宁办事处 电话：(024)31963712 传真：(024)31963711 Liaoning Office Tel:(024)31963712 Fax:(024)31963711
青岛办事处 电话：(0532)55669351 传真：(0532)55669350 Qingdao Office Tel:(0532)55669351 Fax:(0532)55669350	安徽办事处 电话：(0551)64274878 传真：(0551)64274868 Anhui Office Tel:(0551)64274878 Fax:(0551)64274868	四川办事处 电话：(028)83317691 传真：(028)83317692 Sichuan Office Tel:(028)83317691 Fax:(028)83317692	甘肃办事处 电话：(0931)8426317 传真：(0931)8426357 Gansu Office Tel:(0931)8426317 Fax:(0931)8426357	吉林办事处 电话：(0431)81232178 传真：(0431)81232178 Jilin Office Tel:(0431)81232178 Fax:(0431)81232178	徐州办事处 电话：(0516)83061415 传真：(0516)83061462 Xuzhou office Tel:(0516)83061415 Fax:(0516)83061462	黑龙江办事处 电话：(0451)51757348 传真：(0451)51754348 Heilongjiang office Tel:(0451)51757348 Fax:(0451)51754348
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