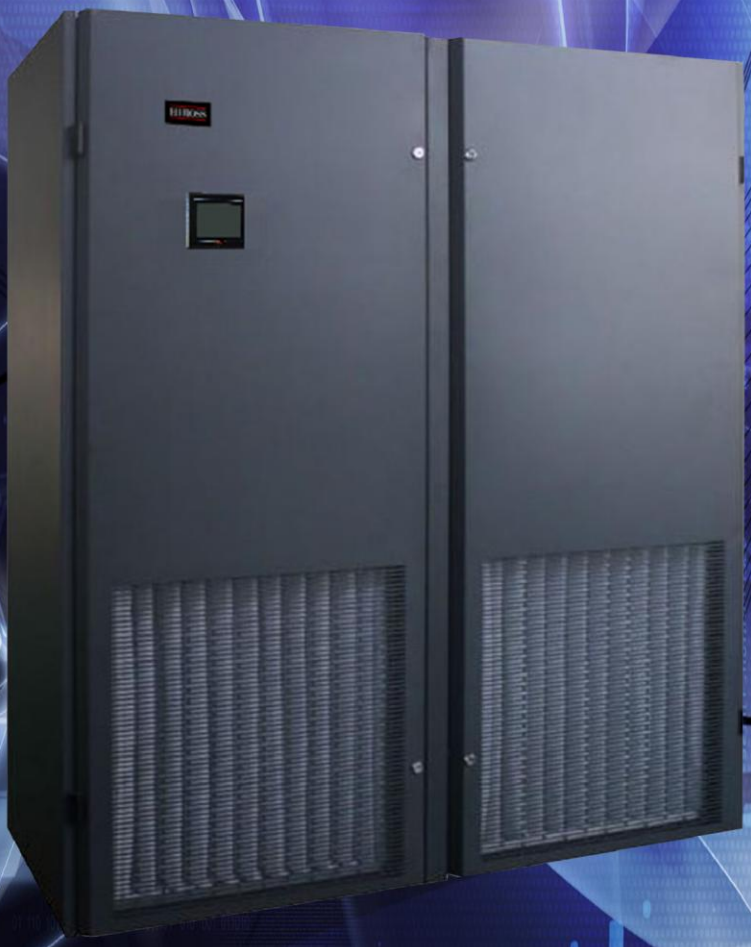
HIROSS

HIMOD Q series

中/大型机房解决方案



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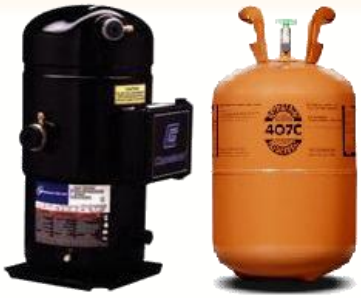
Features of HIMOD Q series（HIMOD Q 系列产品特点）：



Compressor (压缩机)

Enclosed scroll rotary compressor has the advantages such as high efficiency, low noise, less leakage, and simple maintenance (compared with semi enclosed or piston compressor). Its horse power is from 4 to 13. Other features also include fewer moving parts with damping and liquid resistance device.

高效、低噪音、少泄漏、维护方便的全封闭旋转式压缩机(对比半封闭或活塞压缩机），其功率从 4 到 13 匹，标配更少运动部件含减振支座及耐液击等。

Evaporator (蒸发器)

Because the size of evaporator is increased, the enthalpy difference is up to 0.95 to improve the efficiency for heat exchange. The surface of evaporator is used of non stick water coating treatment technology. It reduces the residence time of the condensed water on the surface and is applied the international standard of ASTMD572799 to solve the problem that the condensed water drops in the air duct. The efficiency ratio of heat transfer is up to 1:4.

增大了蒸发器面积，使焓差值提高到 0.95，提高了热交换效率。蒸发器的表面经过特殊的不粘水涂层表面处理技术减少了冷凝水在其表面的停留时间，使用国际 ASTMD572799 标准以解决冷凝水滴入风道的问题，整机换热效率高达 1:4。

Fan (风机)

The world's original radial direct driven fan is based on the principle of the jet engine. The impeller fan is used the new type of eddy current, reverse rotating blades, suction and exhaust at the same time to improve the efficiency of supply air. Because of the use of oil-bearing fan and dynamic and static balance correction, the noise is greatly reduced. For the 20-level speed control fan, the air pressure can be adjusted from 50Pa to 450Pa. The user can regulate the corresponding pressure according to the distance of supply air in the room. The farthest distance of supply air is up to 150 meters. The fan is located in the central of air conditioner. The lower part of air conditioner is used as the plenum noise in order to avoid supply air form bottom directly to the ground caused by air turbulence. The air pressure is adjustable in the field to meet a variety of environment. To compare with belt type fan, the impeller fan is more efficient – loss negligible, low noise - less vibration, less maintenance - not necessarily periodic replacement of the belt and the necessary belt adjustment, and clean room - the belt grinding dust is extremely harmful to the machine and personnel.

全球独创径向离心直驱风机，借鉴喷气式飞机的发动机原理，风机的叶轮采用新型涡流式、双叶片反向转动、吸气和排气同时运行，提高了送风效率。风机采用含油轴承并经过动、静平衡校正，其噪音大大地降低。风机电机采用 20 级调速控制，送风压力可从 50Pa 到 450Pa，用户可根据机房送风距离调整相应的风压。最远送风距离可达 150 米，风机放置在空调中部，空调下部作为消音的静压箱，以避免风机设在底部直接吹向地面所引起的空气扰动。风压在现场连续可调，满足各种送风环境；与皮带式风机相比：更高效-可忽略的传输损耗；低噪音-更小的震动；更少的维护-不必周期性更换皮带及必要的皮带调整；更洁净的机房-皮带磨下的粉尘(对机器及人员极有害)会随着送风带入机房空间。

EC fan

DC fan

AC fan

Heater (加热器)

The electric heater is equipped with overheating protection function and anti ionization, and there are various heating methods (water heating or electric heating) for the base station of small heat load in highly cold area that can be satisfied with the requirements of the environment.

电加热器具有完善过热保护功能和防电离作用，有多种加热方式（水加热或电加热等）对于高寒地区小热负荷的基站机房，可以满足环境的要求。

Humidifier (加湿器)

The electrode humidifier can be disassembly and cleaning repeatedly. The humidifier adopts advanced fuzzy intelligent control with automatic adjustment of water level and detection of current according to the different scale of humidifying and the flushing rate. The electrode humidifier can be cleaned and replaced in the field. Humidifier can be reused for a long time. The humidifying pot with the green material can be dissolved. The humidifying capacity is 9kg/h (can also be adjustable according to the needs of users). It includes the automatic cleaning sewage capacity and the convenient maintenance. The advantage of electrode humidifier is that high efficiency which is over 90% and high humidity control precision that has fast response time to adapt to the water quality. Comparison of infrared humidifier, the infrared humidifying efficiency is lower than 60% and has slow response time. The replacement parts of infrared humidifier are very expensive and there are certain requirements on water quality. Comparison of ultrasonic humidification, the ultrasonic humidification generates aerosol which is no good for equipment and easy to cause harmful bacteria.

可反复拆卸清洗的电极式加湿器。加湿器运行采用高级微处理器模糊智能控制加湿，并自动调整加湿器水位、检测加湿电流大小、根据水质不同控制加湿时的水垢冲洗速率；所选用电极加湿器的电极可以在场地进行清理及更换。加湿器可以重复利用及长期使用。空调内的加湿罐为绿色环保材质是可洚解，加湿量为 9kg/h（也可以根据用户的需求增加加湿量）；具自动清洗排污能力和检修拆卸方便。电极加湿的优点：高效（高于 90%）、湿度控制精确、响应时间快、适应一般水质。对比红外加湿：加湿效率低（低于 60%）、响应慢、更换部件费用昂贵、对水质有一定要求。对比超声波加湿：加湿所产生的气雾对设备有不好的影响且容易造成细菌滋生。

Dehumidification (除湿器)

It takes less time for dehumidification. Dehumidification solenoid valve with special structure is used to reduce the thermal compensation and the power consumption of dehumidification process.

除湿器具备快速除湿能力，专门的除湿电磁阀结构可减少热补偿需求及降低除湿过程的耗电量。

Humidity controller (湿度控制器)

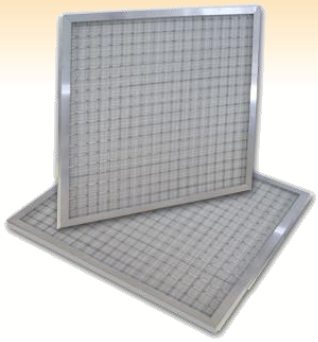
It adopts the advanced energy saving absolute humidity control mode. According to the absolute humidity to adjust relieves the room temperature fluctuations in the relative humidity change which causes unnecessary operation increasing the power consumption.

采用先进节能的绝对湿度控制方式，根据绝对湿度来调节，不会因机房温度波动使相对湿度变化，造成不必要的加湿、除湿误操作，增大功耗。

Filter (过滤器)

The grade of high efficient filter is up to G4 (DIN EN 779), and the filter can guarantee the room cleanness reached to Class A requirements for an equipment room.

高效的灰尘粒子浓度过滤网达到国际 G4 标准，能保证机房的洁净度达到 A 级的要求。



Condenser (冷凝器)

The casing of condenser is used the anti corrosion alloy to ensure the lifetime and appearance of product. With external rotor type axial flow fan is designed to meet the requirements of environmental protection and noise reduction. Fan speed control is based on different environmental temperature to ensure suitable operation for the purpose of energy saving.

冷凝器外壳由抗腐蚀合金制成，保证了使用寿命和美观。采用转子外置式轴流风机的设计以满足噪音的环保要求。风机调速控制可依据不同环境温度而做调整，以保证良好运行效果来达到节能的目的。

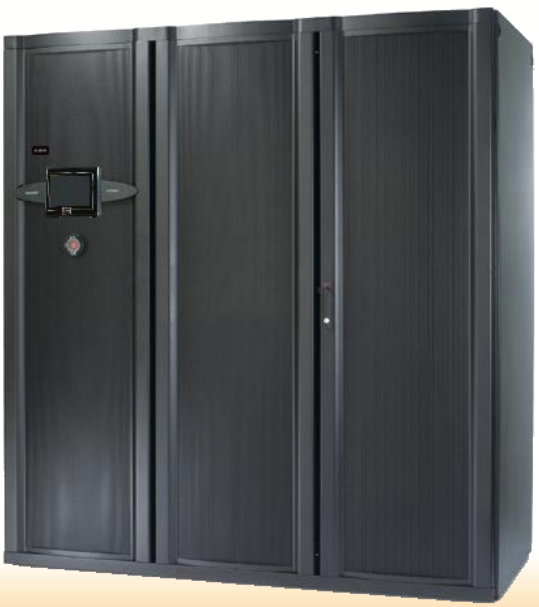
Control system (控制系统)

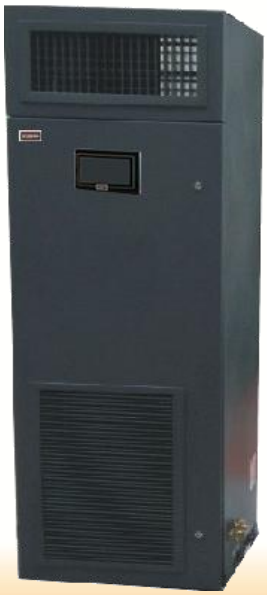
Control system adopts advanced microprocessor to provide accurate operation. The precision for temperature is ± 0.2 ℃, as well as the precision for humidity is ± 3%. Using intelligent (touch) graphical controller can provide 20-page and 60-strip/page status reports (7 languages can be selected including Chinese). Low power operation automatically executes during the night and holidays for energy saving and prolong the lifetime of equipment. Up to 128 units in a network and a variety of central monitoring can realize the real-time remote control for the air conditioner. Control system with multiple password protection is used to against accidental operation. The system also supports the local network, the remote network, building automation system, power and environment monitoring network.

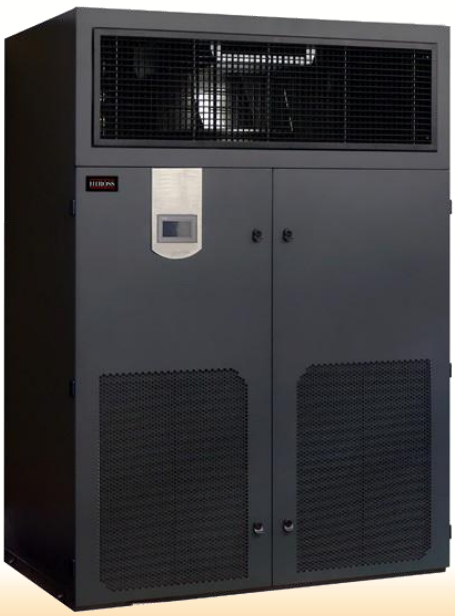
控制系统采用先进的微处理器，提供更加准精确的运行状况。精密地控制温湿度变化，系统温度控制精度达±0.2℃，湿度控制精度达±3%。采用智能化（可触摸式）图形控制器可提供 20 页及每页 60 条带时间记录的状态报告（有 7 种语言可以选择，包括中文）。夜间及节假日时自动执行低功耗运行，来达到节能及延长设备寿命的目的。最多可达 128 台机组联网及多种联网集中监控方式可以实现对空调机组的实时远程监控。控制系统具有多级密码保护功能以防治意外操作。该系统也支持本地网、远程网、楼宇自控系统、和动力环境集中监控网等。

Specifications for HIMOD Q series (HIMOD Q 系列规格):

Direct expansion air-cooling/water-cooling A/W（Air flow: above/below）								
直接膨胀风冷,水冷型-A/W(送风方式:上送风/下送风)								
Model (型号)		**Q11**	**Q14**	**Q17**	**Q19**	**Q22**	**Q25U**	**Q29U**
Characteristics (性能)								
Total cooling cap. (总冷量)	kW	40.1	45.1	60.2	69.8	79.7	90.8	106.1
Humidity cap. (湿冷量)	kW	36.6	44.8	55.4	63.5	72.5	83.0	95.0
Hud. Heat ratio (湿热比)		0.91	0.99	0.92	0.91	0.91	0.91	0.90
EER (效能比)		3.90	3.59	3.60	3.72	3.83	3.92	3.80
The cold air ratio(冷风比)	$w/m^3/h$	3.65	3.5	4.10	4.13	4.11	4.03	4.08
Compressor Q. (压缩机数量)	n	2	2	2	2	2	2	2
Input power (输入功率)	kW	7.6	8.8	11.8	13.8	15.8	17.1	21.6
Wind rate (风量)	m^3/h	11000	12900	14700	16900	19400	22500	24000
Max. Pressure (最大风压-上/下风送)	Pa	50 Max. to 450(最大可调整到 450)						
Fan input power (风机输入功率)	kW	2.68	3.78	4.94	4.96	5.02	6.08	6.3
Noise (噪音)	dB(A)	58	58	59	61	63	64	65
Humidity (加湿量)	kg/h	13	13	13	13	13	13	13
Power of hum.(加湿功率)	kW	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Heating power (加热功率)	kW	15	15	15	15	15	15	15
Temperature accuracy (温度控制精度)	℃	+/－0.5						
Humidify accuracy (湿度控制精度)	%	+/－2						
Length (长度)	mm	1500	1850	1900	1900	2200	2300	2300
Width (宽度)	mm	800	850	950	950	950	1080	1080
Height (高度)	mm	2000	2000	2150	2150	2150	2200	2200
Weight (重量)	kg	590	600	650	655	670	940	990





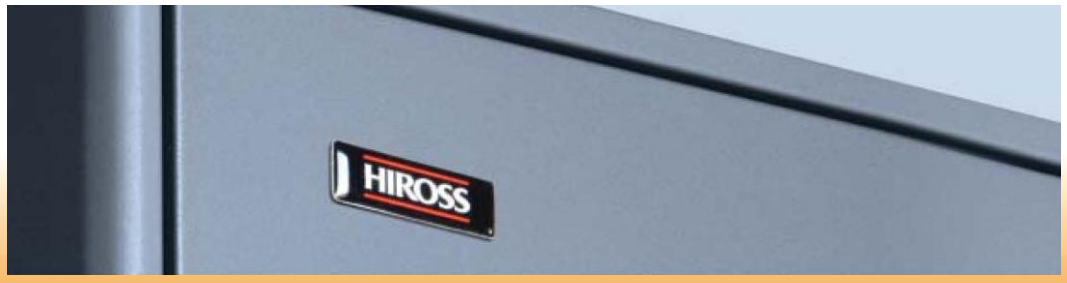


The standard diameter and electrical data series (标准管径及电气技术数据):

Model (型号)	Tube diameter for air (气管直径) (mm)	Tube diameter for liquid (液管直径) (mm)	Running current (运行电流) FLA(A)	Current protection (断路器保护电流) IΔ n=0.3A(400V)	Min. cable diameter (最小电缆线直径) (mm)
S03/S04/S05/W03/W04/W05	12×1	12×1	16.9	32A	6
S07/W08	16×1	12×1	17.5	32A	6
S10/W10	16×1	12×1	18.5	32A	6
S12	16×1	12×1	20	32A	6
S13/W13	18×1	16×1	22	32A	6
S16/S17/S18/W16/W18	18×1	16×1	24	32A	10
S20/S21/W21	18×1	16×1	28	50A	10
S23/W23	18×1	16×1	30	50A	10
S25/M25/W26	22×1	18×1	31	50A	10
S29/M29	22×1	18×1	43.1	50A	10
M32	22×1	18×1	45.2	50A	10
M34	18×1	16×1	45.4	50A	16
M35	28×1	22×1	47.9	63A	10
M41	28×1	22×1	52.7	63A	16
M42	22×1	18×1	46.8	63A	16
M47	28×1	22×1	57.5	63A	16
M50	22×1	18×1	64.5	80A	25
M58	22×1	22×1	68.3	80A	25
M66	28×1	22×1	69.3	80A	25
28A/W/F/D/H	22×1	18×1	45.2	50A	10
34A/W/F/D/H	28×1	22×1	47.9	50A	10
40A/W/F/D/H	28×1	22×1	52.7	63A	16
26A/W/F/D/H	18×1	18×1	40.2	50A	16
32A/W/F/D/H	18×1	18×1	44.4	50A	16
42A/W/F/D/H	22×1	18×1	46.8	63A	16
46A/W/F/D/H	22×1	18×1	55.2	63A	25
55A/W	22×1	18×1	69.3	80A	25
65A/W	28×1	22×1	69.3	80A	25
81A/W	28×1	22×1	75.2	100A	35
99A/W	28×1	22×1	83.6	100A	35

P.S. The diameter of gas or liquid tube and electrical parameters will be adjusted in accordance with local regulations. The list above is for reference only.

附：气/液管径及电气参数会依照当地法规规定而调整，上述表列仅供参考。

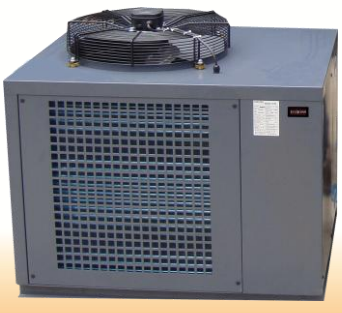


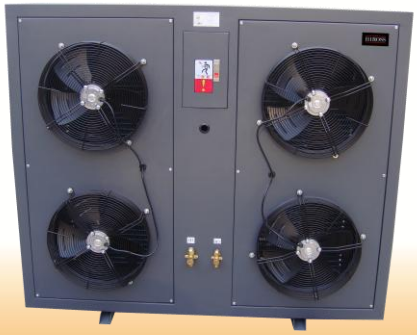
Parameters for outdoor units (室外机参数):

Model (型号)	Length (长度) (mm)	Width (宽度) (mm)	Height (高度) (mm)	Weight (重量) (kg)
S03/S04/W03/W04	780	260	540	45
S05/S07/W05	840	285	610	50
S08/W08	830/880	310/360	710/800	52/55
S10/W10	880	360	800	55
S12/S13/W13	830/930	310/390	1260/1270	60/64
S16/S17/S18/W16/W18	930	390	1270	68
S20/S21/S23/S25/M25/P06/W21/W23/W26	1220	450	1180	80
S20/S21/S23/S25/M25/P06/W21/W23/W26 (Optional)	940	1120	935	83
S29/M29/P07/P08/P09/E08/26U/28U	1220	450	1180	95
S29/M29/P07/P08/P09/E08/26U/28U (Optional)	940	1120	1195	99
M32/M34/M35/P10/32U/34U	1500	450	1180	130
M32/M34/M35/P10/32U/34U (Optional)	940	1120	1195	133
M41/M42/Q11/P11/E14/42U	1500	450	1425	149
M41/M42/Q11/P11/E14/42U (Optional)	1190	1190	1425	154
M47/M50/Q14/P16/40U	2165	450	1180	168
M47/M50/Q14/P16/40U (Optional)	1880	1120	1030	172
M58/P17/E16/E17/46U/55U	2165	450	1180	184
M58/P17/E16/E17/46U/55U (Optional)	1880	1120	1030	189
Q17/E18	2400	450	1180	246
Q17/E18 (Optional)	1880	1120	1195	252
M66/Q19/65U	2640	450	1180	260
M66/Q19/65U (Optional)	1880	1120	1195	268
L83U	2820	1120	1030	281
Q22/Q25U	2820	1120	1195	293
L99U/Q29U	2820	1120	1195	311

P.S. (备注): The parameters for non-standard products do not shown in here, if necessary, please contact the manufacturer. The new design of components and structures for the unit will change depending on the actual situation.

非标准型号机型参术不列在此处，如果有需要，请和生产厂家联系。新机型所使用的元件及机组内部的设计会根据实际状况而有所变动。



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