



HARK Equipment & Engineering Co., Ltd.

Marine Gas Freeing Fan& Dehumidifier System 船用驱气风机&除湿机系统



HARK EQUIPMENT & ENGINEERING CO., LTD



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HARK Equipment & Engineering Co., Ltd — the professional engineering company focused on Marine & Offshore HVAC&R solutions , the leader in gas freeing fan & dehumidifier system and application technology solutions in marine industry in China. With strong technical & service background and experience in the markets of Marine industry , HARK are also committed to provide the reliable parts and world-class service.

HARK owns strong capabilities to provide satisfied products such as air conditioner, dehumidifiers, gas freeing fans, special ventilation system for customer's application of marine & offshore HVAC.

Our mission is to provide the customers with technically innovative ,advanced, safe, cost efficient and environmentally friendly solutions for marine and offshore .

骇舸实业（上海）有限公司是一家专业的船用空调、除湿机及通风系统的集成厂家，是船舶行业领先的驱气风机/除湿机系统及应用技术解决方案提供商。质量可靠、证书齐全、服务周到、极致性价比是公司的核心理念。

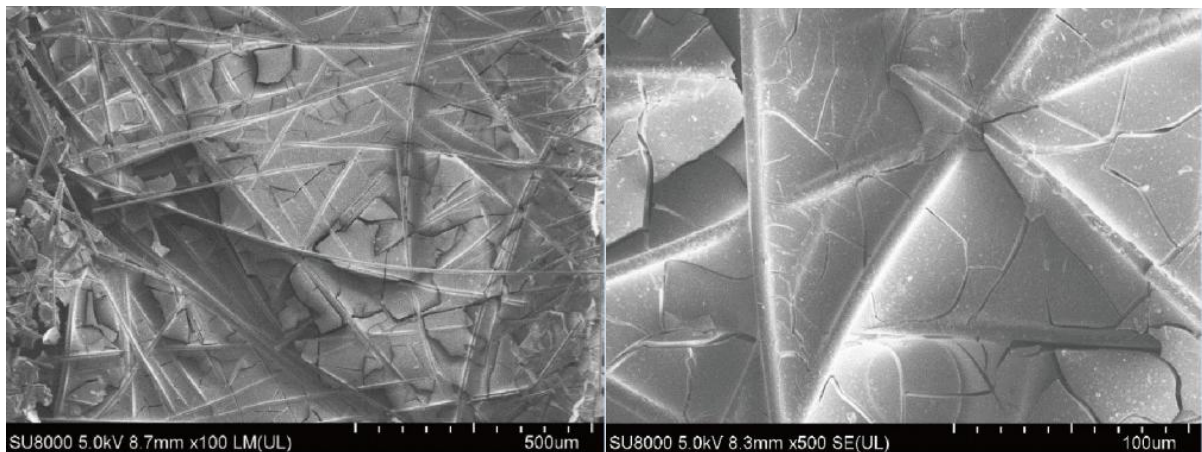
公司致力于为客户提供专业的**定制化**的空调、除湿机及通风系统的解决方案，产品范围包括船用空调、柜式空调、冷藏、公共冷藏、低硫油冷却系统、除湿机、驱气风机、除雾器、电加热除雾器、百叶窗、防火风闸等；同时，还可以提供船用空调、除湿机及通风系统的 CFD 模拟、系统设计及集成、产品生产及供应、系统安装及调试等完整的系统服务。

公司拥有实力雄厚的技术及服务团队，成长稳健，办公室在上海市宝山区，以满足客户的业务和工程需求，配合中国市场的快速发展，并更好地适应中国业务的需要，为客户提供持续的优质服务。



Product features: The key to make a silica gel desiccant rotor is the organic combination of silica gel and the substrate material. We take advantage of the substrate material's feature (thin, light and porous), adopts the chemical reaction method, realizing the firmly combination between the absorption material and the substrate. Meanwhile, the addition of other chemical additives can increase the adhesion amount of the adsorption material.

产品特性：硅胶除湿转轮的关键是硅胶与基材的有机结合。我们的产品利用基材薄、轻、多孔隙的功能特性，采用化学反应的方法将吸附材料与基材牢固均匀地结合在一起，同时其他化学助剂的加入也提高了吸附材料在基材上的附着量。

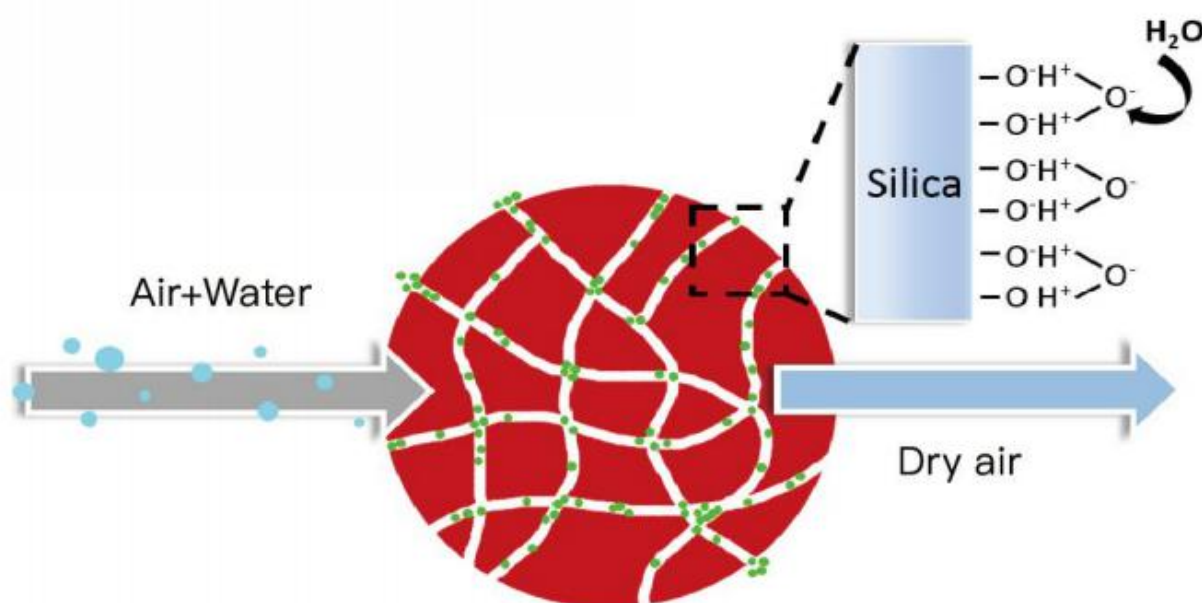


Adsorption Principle: Silica gel adsorbent is a porous solid. The silica gel skeleton is a silicon-oxygen tetrahedron with silicon atoms as the center and oxygen atoms as the apex. The group that plays a role in adsorption is the hydroxyl group on the silanol group. The presence of hydroxyl groups on the oxide surface eliminates coordination unsaturation. The surface of silica gel is covered by various silanol

groups, with hydrogen bonds, polarity and weak electron transfer adsorption

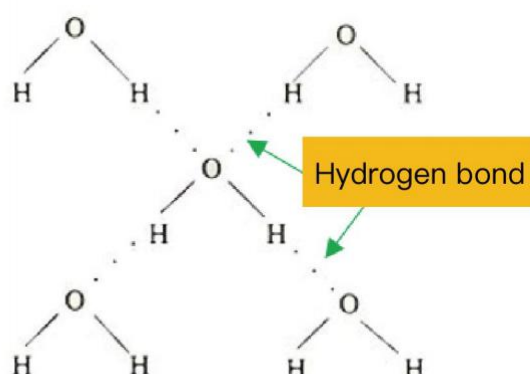
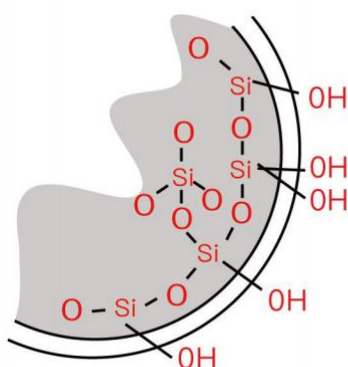
sites. When SiO_2 is in contact with humid air, silicon atoms and water produce silanol groups, forming chemical adsorption, and there is physical adsorption on the surface.

硅胶吸附原理：硅胶吸附剂是多孔固体，硅胶骨架是以硅原子为中心，氧原子为顶点的硅氧四面体，其起到吸附作用的基团是硅醇基上的羟基。氧化物表面羟基的存在，可以认为是氧化物表面非氧原子为消除配位不饱和所采取的方式之一。硅胶表面被各种羟基覆盖，具有氢键、极性和弱电子转移吸附位。 SiO_2 和湿空气接触，硅原子和水产生硅羟基，形成化学吸附，此外，表面的物理吸附也有极其重要的作用。



In liquid water, several water molecules are often combined through hydrogen bonds to form $(H_2O)_n$. Therefore, the adsorption and desorption of water molecules by silica gel in practical applications can be understood to a certain extent as silanol at a certain temperature.

在液态水中，通常是几个水分子通过氢键结合起来形成 $(H_2O)_n$ ，硅胶在实际应用中对水分子的吸附及脱附可以从一定程度上理解为一定温度下硅羟基键与水分子的氢键进行破坏与修复的正逆反应过程。

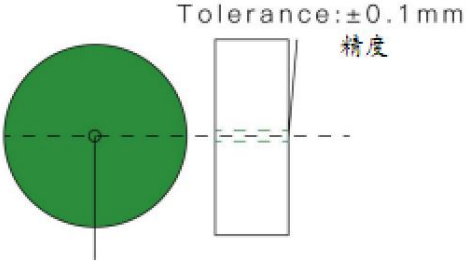


Production Process: Adopting inorganic ceramic paint with high temperature resistance, strong weather resistance, anti-corrosion, no odor and high hardness, energy-saving and environmental protection, can be used in food, pharmaceutical, marine and other industries.

生产工艺：采用耐高温、防腐、无异味、高硬度的无机陶瓷涂料，节能环保，可以用于锂电、制药、塑胶干燥、热泵烘干、造船等行业。

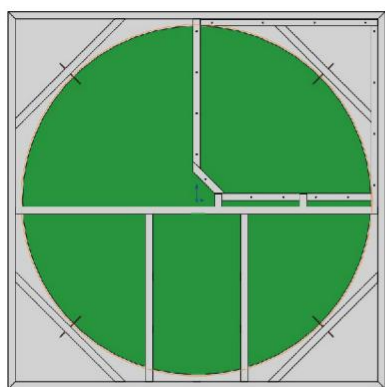
Desiccant Rotor 除湿转轮



	
Axis Perpendicularity Error Precision 轴心垂直精度	Surface strength 表面强度
±0.1mm ($\phi < 1500\text{mm}$) ±0.2~0.3mm ($\phi 1500 \sim 3000\text{mm}$)	500N/cm² {50kgf/cm²}
Improve tightness, reduce friction, reduce the probability of rotor cracking, prolong drive system and motor service life.	High surface strength, prolong service life. 表面强度高, 转轮使用寿命长。

Cassettes: We have launched different desiccant rotors with cassettes, suitable for different applications, which are simple to use, easy to install and adjust the airflow.

转轮框架：我们推出不同的除湿转轮框架，适用于不同的应用场景。使用简单，安装方便，易于维护，附带压差管便于风量调节。



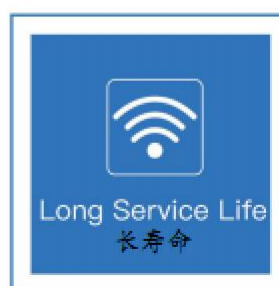
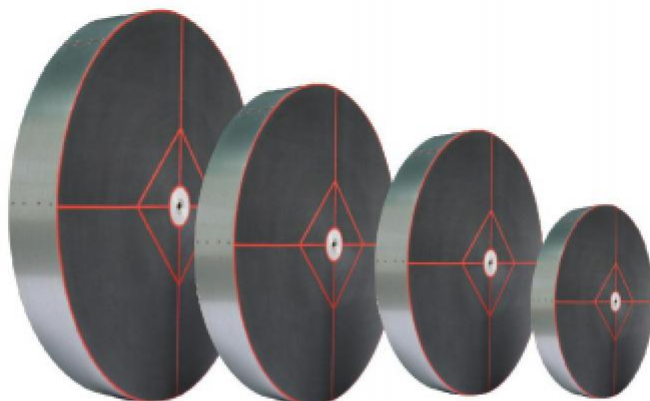
Desiccant Rotor

除湿转轮



Main Products:PSS Regular Desiccant Rotor

主营产品:常规转轮



Test Record of PSS (1: 3) Dehumidification Performance

(Process airflow inlet: T=15°C 95% / T=12°C 95%)

除湿性能测试

Face Velocity (m/s)	Regen. Temp. (°C)	Speed of Rotor (r/h)	Regen. Inlet Air	Process Inlet Air		Process Outlet Air		Moisture Removal (g/kg)
			Humidity Ratio(g/kg)	Temp. (°C)	Humidity Ratio(g/kg)	Temp. (°C)	Humidity Ratio(g/kg)	
2	120	12	19.36	15.01	10.09	38.33	2.76	7.33
3	120	12	19.44	15.02	10.11	35.60	3.05	7.06
2	120	12	19.47	12.30	8.30	35.20	2.00	6.30
3	120	12	19.53	12.10	8.30	33.00	2.10	6.20
2	140	12	20.00	15.00	10.10	40.30	2.20	7.90
2	140	12	20.00	12.00	8.30	36.50	1.60	6.70

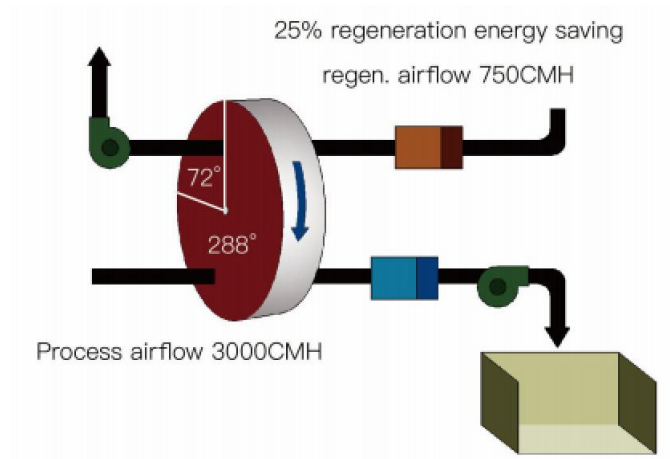
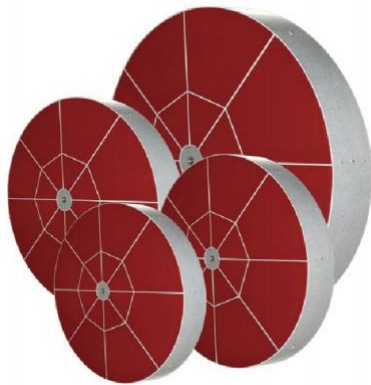


Desiccant Rotor 除湿转轮



Main Products:PST Energy-Saving Desiccant Rotor

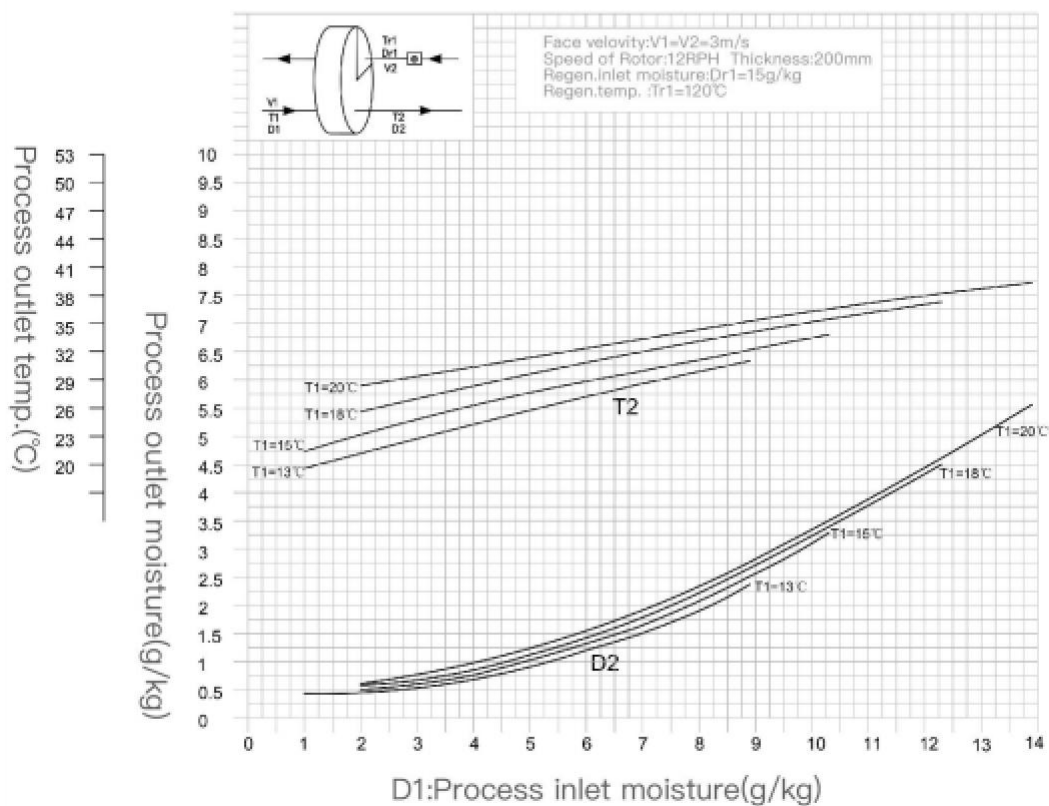
主营产品:节能型转轮



PST-1:4

DESICCANT WHEEL PST 1:4 PERFORMANCE CURVE

除湿性能曲线



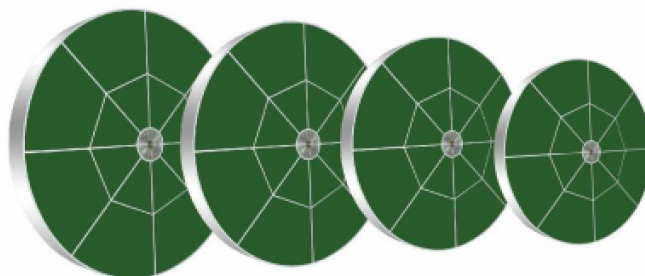
Desiccant Rotor

除湿转轮



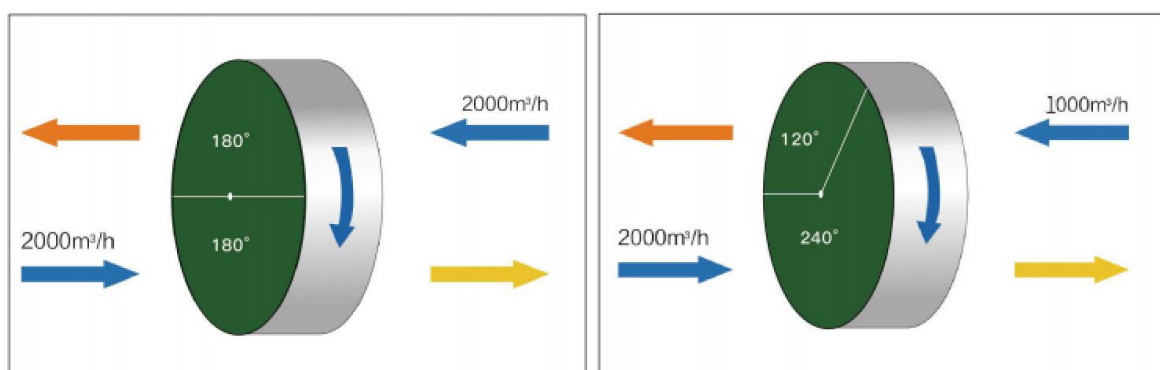
Main Products: PSL Low Regeneration Temperature Desiccant Rotor

主营产品: 低再生温度型转轮



The regular desiccant rotor needs higher regeneration temperature of 100-140°C, utilizing electricity, steam and gas as regeneration heating sources. It seriously restricts the large-scale application of desiccant rotors in HVAC area and industrial production area with strict process demanding. PSL take full advantage of low-grade energy as regeneration sources, such as condensation waste heat, solar energy and industrial waste heat.

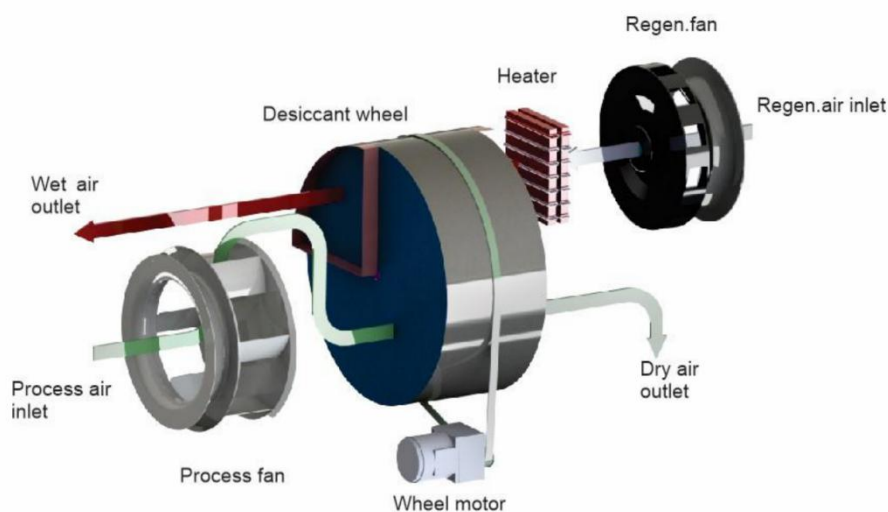
常规的除湿转轮需要较高的再生温度 100-140°C，再生热源需要电加热、蒸汽加热、燃气加热等高品质热能，严重制约了除湿转轮在 HVAC 领域的规模化应用，只能用于一些工艺性要求严格的工业化生产领域。PSL 除湿转轮可采用低品位热源，如制冷机冷凝热、太阳能、空压机废热或其他废热作为再生能源。



Portable Dehumidifiers 可移动除湿机



Working Principle 工作原理



Technical Specification 技术规格型号

Type	HARK-SD-200KPV	HARK-SD-200KSV	HARK-SD-300KPV	HARK-SD-300KSV
Moisture Removal (@20°C ,60%)	0.6kg/hr	0.6kg/hr	1.1kg/hr	1.1kg/hr
Process Air airflow	200 m3/hr	200 m3/hr	300 m3/hr	300 m3/hr
Regen. Air airflow	60 m3/hr	60 m3/hr	100 m3/hr	100 m3/hr
Rotor Size	200*50mm	200*50mm	250*50mm	250*50mm
Voltage / Frequency	220V / 50-60 Hz	220V / 50-60 Hz	220V / 50-60 Hz	220V / 50-60 Hz
Operating Current	4-8A	4-8A	4-8A	4-8A
Operating Rating	1.72KW	1.72KW	1.75KW	1.75KW
Heated Power	1.5KW	1.5KW	1.5KW	1.5KW
Regen. Fan Power	0.06KW	0.06KW	0.065KW	0.065KW
Process Fan Power	0.08 KW	0.08 KW	0.16 KW	0.16 KW
Controller Type	LCD + Button	LCD + Button	LCD + Button	LCD + Button
Process Air Filter	Primarily G4	Primarily G4	Primarily G4	Primarily G4
Regen. Air Filter	Primarily G4	Primarily G4	Primarily G4	Primarily G4
Electric Shock Protection	Type I	Type I	Type I	Type I
Waterproofing Grade	IPX3	IPX3	IPX3	IPX3
Frame Material	Cold Rolled Sheet	Stainless Steel	Cold Rolled Sheet	Stainless Steel
Weight	34KG	40KG	36KG	42KG
Dimension	360*330*730mm	360*330*730mm	400*360*735mm	400*360*735mm



Portable Dehumidifiers

可移动除湿机



Type	HARK-SD-500KPV	HARK-SD-500KSV	HARK-SD-550KPH	HARK-SD-600KPV	HARK-SD-600KSV
Moisture Removal (@20℃ ,60%)	2.5kg/hr	2.5kg/hr	2.7kg/hr	3kg/hr	3kg/hr
Process Air airflow	500 m3/hr	500 m3/hr	550 m3/hr	600 m3/hr	600 m3/hr
Regen. Air airflow	150 m3/hr	150 m3/hr	200 m3/hr	200 m3/hr	200 m3/hr
Rotor Size	300*100mm	300*100mm	300*100mm	350*100mm	350*100mm
Voltage / Frequency	220V / 50-60 Hz	220V / 50-60 Hz	220V / 50-60 Hz	220V / 50-60 Hz	220V / 50-60 Hz
Operating Current	12-21A	12-21A	12-21A	12-21A	12-21A
Operating Rating	3.3KW	3.3KW	3.3KW	3.3KW	3.3KW
Heated Power	3KW	3KW	3KW	3KW	3KW
Regen. Fan Power	0.1KW	0.1KW	0.1KW	0.1KW	0.1KW
Process Fan Power	0.16 KW	0.16 KW	0.16 KW	0.16 KW	0.16 KW
Controller Type	LCD + Button	LCD + Button	LCD + Button	LCD + Button	LCD + Button
Process Air Filter	Primarily G4	Primarily G4	Primarily G4	Primarily G4	Primarily G4
Regen. Air Filter	Primarily G4	Primarily G4	Primarily G4	Primarily G4	Primarily G4
Electric Shock Protection	Type I	Type I	Type I	Type I	Type I
Waterproofing Grade	IPX3	IPX3	IPX3	IPX3	IPX3
Frame Material	Cold Rolled Sheet	Stainless Steel	Cold Rolled Sheet	Cold Rolled Sheet	Stainless Steel
Weight	44KG	52KG	45KG	52KG	60KG
Dimension	450*400*785mm	450*400*785mm	655*400*450mm	500*450*785mm	500*450*785mm

Real Product Photo 产品实物图片



HARK-SD-200KPV



HARK-SD-200KSV



HARK-SD-300KPV



HARK-SD-300KSV



HARK-SD-500KPV



HARK-SD-500KSV



Portable Dehumidifiers
可移动除湿机



HARK-SD-550KPH

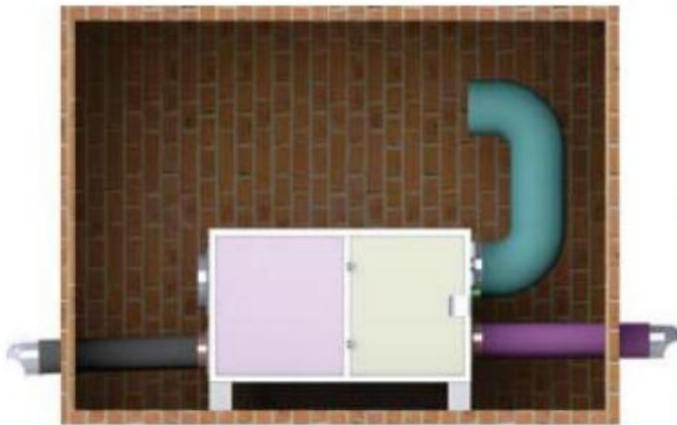


HARK-SD-600KPV



HARK-SD-600KSV

Installation Guide 安装说明



Indoors installation



Outdoors installation



Gas Freeing Fan System for Cargo-hold 货舱驱气风机系统



A lot of cargo, such as chemical tanker, tankers,MPV (Multi-purpose Vessels) , cargo-hold need to wash after unloading the good, in order to ensure the cleanliness of the cargo air, using fan to get rid of the residual gas after washing is essential steps. The main functions of gas freeing fan are swabbing, condensation, ventilation, deodorization, drying and dust removal. There are at least four kinds of methods to realize according to different applications.

化学品船、油船、多用途船的货舱在卸货后为了保持清洁或者为了装载新的货品需要清洗，清洗之后的货舱需要使用驱气风机系统进行干燥。驱气风机系统的主要功能就是驱气、通风、除臭、干燥、除尘等。根据不同的应用，至少有四种方式可以实现货舱的干舱。



Portable Gas Freeing Fan (Water or air driven)

便携式驱气风机（水力驱动或者气动）



Methods one: Using gas freeing fan to send fresh air to cargo-hold directly.

Features: Simple, but needing more time to dry the cargo-hold.

方式一：使用驱气风机直接把室外的新鲜空气送到货舱进行干舱。

特点：该方式简单，但是干舱时间长。



Gas Freeing Fan System for Cargo-hold

货舱驱气风机系统

Gas freeing fan +Heater



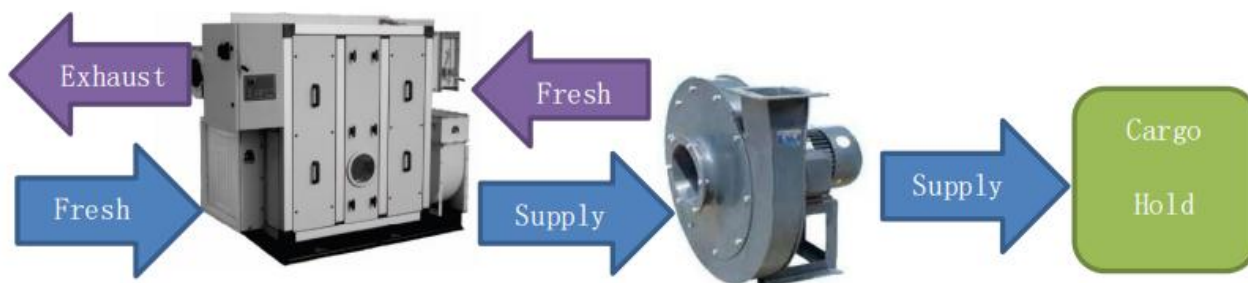
Methods two: Using gas freeing fan with heaters to send heated fresh air to cargo-hold.

Features: Needing less time to dry the cargo-hold with heated fresh air than fresh air, but energy consumption is high.

方式二：使用驱气风机和加热器把加热后的新鲜空气送到货舱进行干舱。

特点：热空气的干舱时间更短，但是能耗高。

Gas freeing fan +Dehumidifier



Methods three: Using gas freeing fan with dehumidifiers to send dry fresh air to cargo-hold.

Features: Needing less time to dry the cargo-hold with dry fresh air, and energy consumption is low, but initial cost is expensive.

方式三：使用驱气风机和除湿机把干燥后的新鲜空气送到货舱进行干舱。

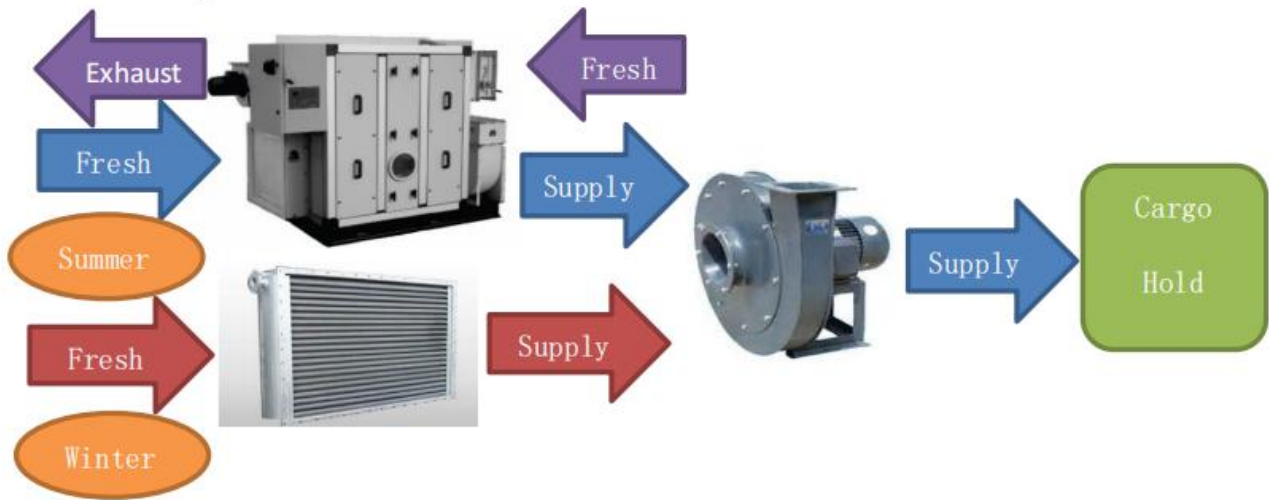
特点：干空气的干舱时间更短，能耗低，但是初始成本高。



Gas Freeing Fan System for Cargo-hold 货舱驱气风机系统



Gas freeing fan + Heater + Dehumidifier



Methods four: In summer, the fresh air humidity is very high, and the air temperature is very high as well, in this condition we use gas freeing fan and dehumidifiers to send dry fresh air to cargo-hold; in winter, the fresh air humidity is very low, and the air temperature is very low as well, in this condition we use gas freeing fan and heaters to send heated fresh air to cargo-hold

Features: No matter in winter or in summer, the drying effect is very good, and the drying time is very short, but the initial cost is very expensive.

方式四：在夏季，因为室外新鲜空气湿度高，温度也高，使用除湿机和驱气风机把干燥的新鲜空气送到货舱进行干燥即可；在冬季，室外新鲜空气的湿度很低，同时温度也低，使用加热器和驱气风机把加热的新鲜空气送到货舱进行干燥。

特点：无论是在夏季还是冬季，干燥效果好，干燥时间快，但是初始投入高。



Gas Freeing Fan System for Cargo-hold

货舱驱气风机系统

Real Picture on Board

装船实物介绍



25000DWT Chemical Tankers



Installed on the deck house



Gas Freeing Fan System for Cargo-hold 货舱驱气风机系统



Rotor Dehumidifiers



Steam Heaters



Fresh air intake
for the deck house



Process air intake



Reactivation air intake



Temp. Humidity Transmitter
(in the process supply air)



Gas Freeing Fan System for Cargo-hold 货舱驱气风机系统



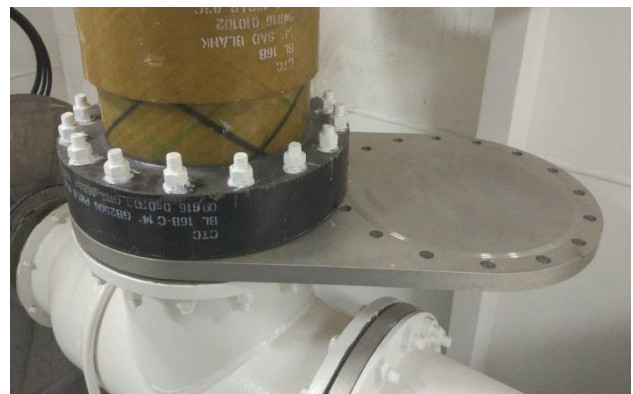
High pressure centrifugal fan



High pressure centrifugal fan(Standby)



Supply air pipe



Flange



Outlet



Outlet

Remark:

The control system is in the engine room, and it can achieve remote control in cargo control room.

控制系统布置在机舱，可以在货控室遥控操作。



Dehumidifiers system for Cargo-Hold 货舱除湿系统

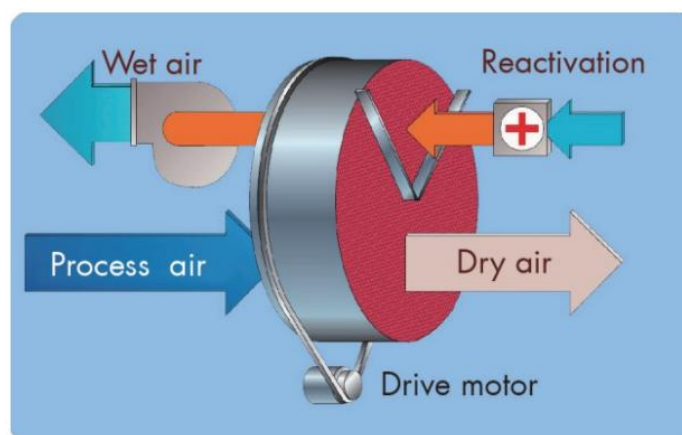
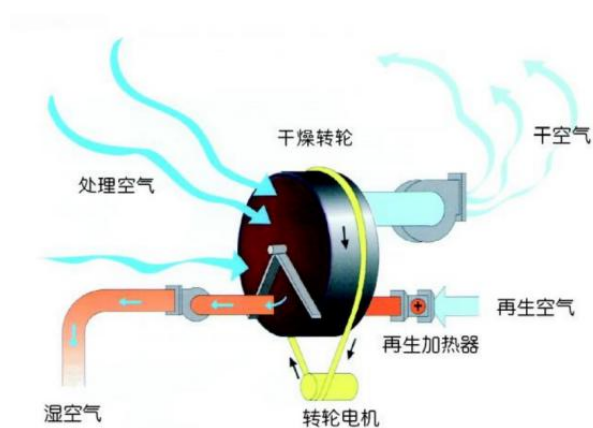


A lot of cargo, such as Ro-Lo ship, MPV(Multi-purpose Vessels),MPC,Wood ships, Pulp ships,the cargo-hold need to use dehumidifiers system to maintain the constant temperature and humidity after the ship is loaded with cargo such as chips,paper pulp,in order to ensure the goods is in a suitable condition.The main function of dehumidifiers system is to adjust the temperature and humidity in the cargo-hold.

滚吊船、多用途船、重吊船、木片船、纸浆船等在装载货品之后，其货舱需要使用除湿机系统来维持货舱稳定的合适的温度和湿度，来确保货舱里面的货品如木片、纸浆等不受损坏。除湿机系统的主要功能就是维持货舱的温度和湿度在要求的范围之内。

The principle of the dehumidifier

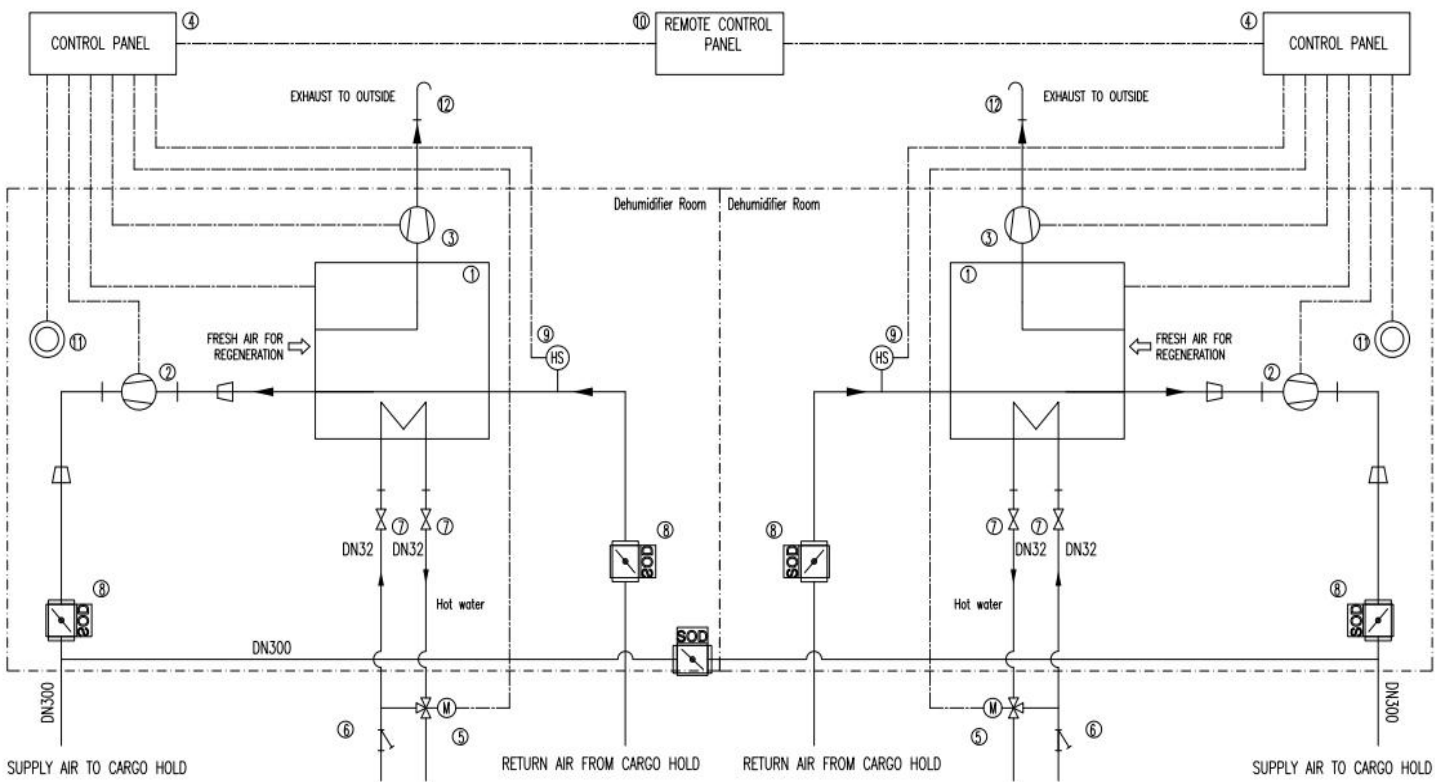
除湿机的原理



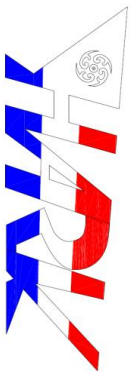
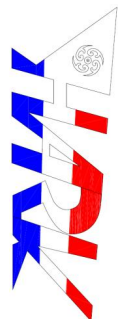
Dehumidifiers system for Cargo-Hold 货舱除湿系统

Principle Drawing for Dehumidifiers System

除湿机系统的原理图纸



12	2	Goose neck ventilator
11	2	Emergency Stop Box
10	1	Remote Control Panel
9	2	Humidity Sensor
8	5	Shut Off Damper
7	4	Stop Valve
6	2	Water Strainer
5	2	3 Way Regulation Water valve
4	2	Control Panel
3	2	Reactivation Fan
2	2	Process Fan
1	2	Dehumidifier
No.	Qty.	Description



Dehumidifiers system for Cargo-Hold 货舱除湿系统



Main Components of Dehumidifier System

除湿机系统的主要组件



Dehumidifier 转轮除湿机



Ex-proof Fan 防爆风机



Steam Heater
蒸汽加热器



Electric Heater
电加热器



Control System
控制系统



Temperature Sensor
温度传感器



Humidity Sensor
湿度传感器



Pressure Sensor
压力传感器



Dehumidifiers system for Cargo-Hold

货舱除湿系统

Reference Dimension

参考尺寸



设备型号	处理风			再生风			再生加热		设备总尺寸			整机重量		噪音最大 值	除湿量 (20°C 60%RH)
	风量	外压	风机 功率	风量	外压	风机 功率	电加热	蒸汽 加热	长	宽	高	电加热	蒸汽 加热		
	m³/h	Pa	Kw	m³/h	Pa	Kw	Kw	Kg/h	mm	mm	mm	Kg	Kg		
PCD-HT-020	2000	300	0.3	700	300	0.1	24	39	1850	1227	1894	510	560	59	13.3
PCD-HT-025	2500	300	0.3	850	300	0.1	29	49	1850	1227	1894	570	600	61	17.2
PCD-HT-030	3000	350	0.5	1000	350	0.2	34	55	1850	1227	1894	610	640	63	20.6
PCD-HT-035	3500	350	0.6	1200	350	0.2	40	66	1850	1447	2114	660	690	65	24.1
PCD-HT-040	4000	380	0.7	1500	350	0.2	51	76	1850	1447	2114	680	710	67	27.8
PCD-HT-045	4500	380	0.8	1500	350	0.2	51	82	1850	1447	2114	720	750	68	30.5
PCD-HT-050	5000	400	0.9	1700	400	0.3	57	94	1950	1530	2245	750	780	69	34.4
PCD-HT-055	5500	400	1.0	1900	350	0.3	64	101	1950	1530	2245	760	790	70	37.9
PCD-HT-060	6000	400	1.1	2000	350	0.3	67	112	1950	1530	2245	780	800	71	40.3
PCD-HT-065	6500	400	1.2	2200	350	0.4	74	119	1950	1645	2365	810	830	72	44.8
PCD-HT-070	7000	400	1.3	2500	350	0.4	84	129	1950	1645	2365	850	880	72	47.4
PCD-HT-075	7500	400	1.4	2500	350	0.4	84	136	2050	1745	2465	880	930	73	53.1
PCD-HT-080	8000	450	1.7	2700	350	0.4	91	144	2050	1745	2465	900	950	73	56.6
PCD-HT-085	8500	450	1.8	2900	350	0.5	98	155	2050	1745	2465	950	1000	74	56.5
PCD-HT-090	9000	450	1.9	3000	400	0.6	101	163	2050	1745	2465	1000	1050	75	59.8
PCD-HT-095	9500	450	2.0	3200	350	0.5	108	171	2050	1745	2465	1020	1080	77	63.8
PCD-HT-100	10000	450	2.1	3400	350	0.6	114	183	2450	1800	2665	1050	1100	78	70.8
PCD-HT-125	12500	450	2.6	4200	350	0.7	141	224	2450	1800	2665	1100	1200	78	83.1
PCD-HT-150	15000	450	3.1	5000	450	1.0	168	266	2450	2000	2750	1350	1360	79	99.7
PCD-HT-175	17500	450	3.6	5900	400	1.1	199	312	2450	2000	2750	1550	1550	80	116.3
PCD-HT-200	20000	450	4.2	6800	400	1.3	229	362	2450	2000	2750	1650	1700	80	132
PCD-HT-225	22500	450	4.7	7500	400	1.4	253	421	2550	2465	1930	1790	1830	81	153.9
PCD-HT-250	25000	450	5.2	8500	400	1.6	286	477	2550	2465	1930	1860	1910	83	169.2
PCD-HT-275	27500	450	5.7	9300	400	1.7	313	522	2550	2650	2240	1900	1960	83	179.5
PCD-HT-300	30000	450	6.3	10000	400	1.9	337	561	2550	2650	2240	1930	1980	83	203
PCD-HT-325	32500	450	6.8	11000	400	2.0	370	617	2550	2650	2240	1930	1980	83	214.5
PCD-HT-350	35000	450	7.3	11800	400	2.2	397	662	2650	3000	3800	2110	2160	85	239.4
PCD-HT-375	37500	450	7.8	12500	400	2.3	421	701	2650	3000	3800	2180	2230	87	261
PCD-HT-400	40000	450	8.3	13500	400	2.5	455	757	2650	3000	3800	2180	2230	87	273.6

备注：因技术和实际调整，表中各数据可能有变更，请以最终确认的技术参数为准。





Project 项目: 19700DWT Chemical Tankers
Quantity 数量: 2 ships Class 船级社: BV Shipowner 船东: Singapore
Scope of supply 供货范围: Dehumidifier system **excluding** gas freeing fan



Project 项目: 11960DWT Chemical Tankers
Quantity 数量: 1 ships Class 船级社: CCS Shipowner 船东: China
Scope of supply 供货范围: Dehumidifier system with gas freeing fan

目前中国最高端、最前沿、最高效的不锈钢化学品船





Project 项目: 13000DWT DF Chemical Tankers
Quantity 数量: 2+2 ships Class 船级社: BV Shipowner 船东: Netherland
Scope of supply 供货范围: Gas freeing fan system with VFD



Project 项目: 7000DWT DF Ro-Lo Ship
Quantity 数量: 3 ships Class 船级社: DNV-GL Shipowner 船东: Finnish
Scope of supply 供货范围: Dehumidifier System with Ventilation Fans



Project 项目: 7000DWT MPV

Quantity 数量:4 ships Class 船级社:BV Shipowner 船东:Germany

Scope of supply 供货范围:Dehumidifier System with Ventilation Fans (Delivery to be confirmed.)



Project 项目: 62000DWT MPV

Quantity 数量:4 ships Class 船级社:CCS Shipowner 船东:China

Scope of supply 供货范围:Dehumidifier System with Ventilation Fans

Newest Reference List

最新业绩表



No.	Shipyard	Description	Hull No.	Product	Shipowner	Class	Flag
1	China Merchants Jinling Dingheng 招商局金陵鼎衡	11900DWT Chemical Tanker	AD0075	Dehumidifier System with Gas Freeing Fan	Yonghua Shipping	CCS	China
2	Wuhu Shipyard 芜湖新联造船	7000DWT RO-LO Ship	W1911	Dehumidifier System	Bore	DNV-GL	Finnish
3	Wuhu Shipyard 芜湖新联造船	7000DWT RO-LO Ship	W1912	Dehumidifier System	Bore	DNV-GL	Finnish
4	Wuhu Shipyard 芜湖新联造船	7000DWT RO-LO Ship	W1913	Dehumidifier System	Bore	DNV-GL	Finnish
5	New Yangzi Shipbuilding 新扬子造船	13000DWT DF Chemical Tanker	YZJ2019 -1257	Gas Freeing Fan system	Tarbit tanker	BV	Netherland
6	New Yangzi Shipbuilding 新扬子造船	13000DWT DF Chemical Tanker	YZJ2019 -1258	Gas Freeing Fan system	Tarbit tanker	BV	Netherland
7	Nanjing Jinling Shipyard 南京金陵船厂	62000DWT MPV	JLZ9200401	Dehumidifier System	Ming Wah Shipping	CCS	China
8	Nanjing Jinling Shipyard 南京金陵船厂	62000DWT MPV	JLZ9200402	Dehumidifier System	Ming Wah Shipping	CCS	China
9	Nanjing Jinling Shipyard 南京金陵船厂	62000DWT MPV	JLZ9200403	Dehumidifier System	Ming Wah Shipping	CCS	China
10	Nanjing Jinling Shipyard 南京金陵船厂	62000DWT MPV	JLZ9200404	Dehumidifier System	Ming Wah Shipping	CCS	China
11	Panlink Logistics 泛联船舶	Ship-Repair	Sunshine X	Dehumidifier System	Chengxi Shipyard	CCS	China
12	Panlink Logistics 泛联船舶	Ship-Repair	Sunway X	Dehumidifier System	Chengxi Shipyard	CCS	China
13	Wuchang Shipyard 武船船舶	19700DWT Chemical Tanker	BG0026A09M	Dehumidifier System with Gas Freeing Fan	Raffles Shipping	BV	Singapore
14	Wuchang Shipyard 武船船舶	19700DWT Chemical Tanker	BG0027A09M	Dehumidifier System with Gas Freeing Fan	Raffles Shipping	BV	Singapore





Marine Gas freeing fan/Dehumidifier System 船用驱气风机/除湿机系统



Innovation make us different, and we do special and customized Marine Gas Freeing Fan/Dehumidifier System to create added value for you to make a better world.

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