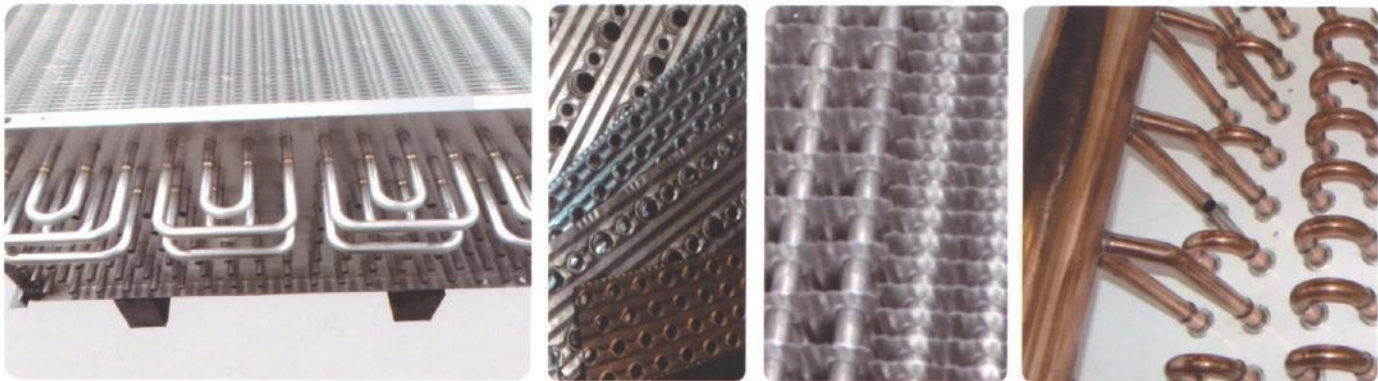


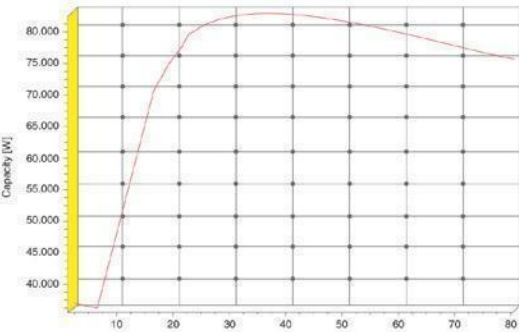
SL-D 氟系列吊顶冷风机⁺

SL-D Fluorine Series Ceiling Air Cooler



■ 盘管概况 /Coil pipe situation

- Φ16mm紫铜管或Φ20mm不锈钢管（304或316L）
 - ☑Φ16mm red copper pipe or Φ20mm stainless steel pipe（304 or 316L）
- 正弦波高导热波纹翅片
 - ☑Sinusoidal wave high thermal conductivity corrugated fin
- 翅片材料可选用铝、铝镁合金、不锈钢和涂层片
 - ☑Fin material can choose from aluminium, aluminium-magnesium alloy, stainless steel and coated sheet
- 常用翅片间距4.5mm, 7mm, 10mm, 12mm
 - ☑Spacing of fins in common use 4.5mm, 7mm, 10mm, 12mm
- 根据用户特殊应用要求可以定制其他翅片间距
 - ☑Other spacing of fins can be customized according to request for applications of user.



■ 优化的设计 / Optimized design

- 冷风机外观和结构采用3D设计软件整体参数化设计，可以快速设计定型产品
 - ☑Appearance and structure of air cooler uses 3D design software with whole parametric design which can design customized product quickly.
- 先进的盘管性能设计软件模拟实际运行的换热状况，通过对管路的调整，保证了制冷量最大化
 - ☑Advanced design software for coil pipe performance simulates the actual operation of the heat exchange, ensures the maximum refrigeration capacity through the adjustment of the pipeline.
- 可以为定制用户提供最真实可靠的数据
 - ☑Provide the most realistic and reliable data for customized user.
- 检修门的设计为安装，可能的维护和维修带来便利
 - ☑Design of maintenance door needs to be installed which brings convenience for maintenance and repair.
- 支撑脚的设计为产品的搬运和安装提供了方便，也可以根据用户要求作为底部安装支持来使用
 - ☑The design of the supporting foot provides convenience for the handling and installation of the product, and also can be used as bottom installation support according to requests of user.
- 标准外壳材质镀锌板，表面喷涂RAL9018白色，可根据用户要求选用镀锌板和不锈钢材质
 - ☑Standard shell material is galvanized sheet, surface is sprayed with RAL9018 white, can be used according to the requirements of aluminium zinc plate or stainless steel material.



■ 安全运行的保证 / Guarantee for safety in operation

- 不锈钢管道运行压力高达5.0Mpa,爆破压力达50Mpa
 - Operating pressure of stainless steel pipeline is up to 5.0Mpa, blasting pressure up to 50Mpa
- 3.0Mpa 耐压测试，保压时间24小时
 - 3.0Mpa pressure test ,pressure holding time 24 hours
- 不锈钢涡流探伤确保原材料管道的可靠性
 - Stainless steel eddy current inspection to ensure the reliability of raw material pipeline.
- 弯头焊接采用全自动氩弧焊，焊缝成型美观，焊接强度高，保证了焊接的质量
 - Full-automatic argon-arc welding method is adopted for elbow welding which has elegant shape of weld joint and high welding strength, thus ensuring the quality of welding.
- 盘管采用浮动盘管技术。穿管悬浮在固定板中间，避免在运行中和运输中穿管和固定板之间的摩擦，而造成的泄露
 - Coil pipe uses floating coil technology. The perforated pipe is suspended in the middle of the retaining plate to avoid the leakage caused by friction between the perforated pipe and the retaining plate during operation and transportation.



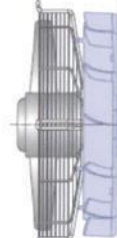
冷风机不带增程器和风筒
The air cooler is not equipped with range extender device and air duct.



冷风机带增程器和风筒
The air cooler is equipped with range extender device and air duct.



长射程增程器
Long range extender device



普通射程增程器
Common range extender device



Duct axial fan 风筒式轴流风机
Air duct type axial flow fan

■ 风机系统 / Blower system

- 选用增程器，送风距离可达70m
 - Used range extender device, air supply range up to 70m
- 电机防护等级IP54，绝缘等级F
 - Motor protection class IP54, insulation grade F
- 风筒式轴流风机选用高强度压铸铝材质扇叶
 - Air duct type axial flow fan uses high strength die-casting aluminium flabellum
- 电机适用温度范围：-45℃~50℃
 - Applicable temperature range of motor : -45℃~50℃
- 可根据用户应用需求选用超低噪音风机
 - Ultra low noise fan can be selected according to requests of user.
- 可根据用户应用需求选用不锈钢扇叶风机
 - Stainless steel flabellum blower can be selected according to requests of user.
- 电机功率会随着空气温度的高低以及外部风阻的改变而变化
 - The power of motor will change with the change of the air temperature and the external windage.

■ 快速融霜系统 / High-speed defrosting system

- 电化霜-采用可靠的不锈钢电加热管，电热管，电热管分布盘管、水盘和风机
 - Electrochemical defrosting-adopts reliable stainless steel electric heating tube, heating element, heating element distributed in the coil pipe, water pond and blower
- 水冲霜-淋水盘式冲霜，冲霜更均匀，效率更高，减少冲霜水外溅外置冲霜水盘，方便以后拆卸清洗或者更换，降低维护成本
 - Water defrosting-watering disc defrosting, more well-distributed and efficient. Set external defrosting water tray to reduce the splash of water, in order to remove for cleaning or replacement, reducing maintenance costs
- 热气冲霜-水盘铺设热气管，节能、高效的冲霜方式，清除管内积油
 - Hot-gas defrosting-hot gas pipe laid in the water pond, energy-efficient and high-efficient defrosting method, clean out cumulated oil in the pipe
- 可以根据应用需求组合冲霜
 - Combined defrosting methods can be implemented according to request.

SL-D 氟系列吊顶冷风机⁺

SL-D Fluorine Series Ceiling Air Cooler

型号说明 / Model description

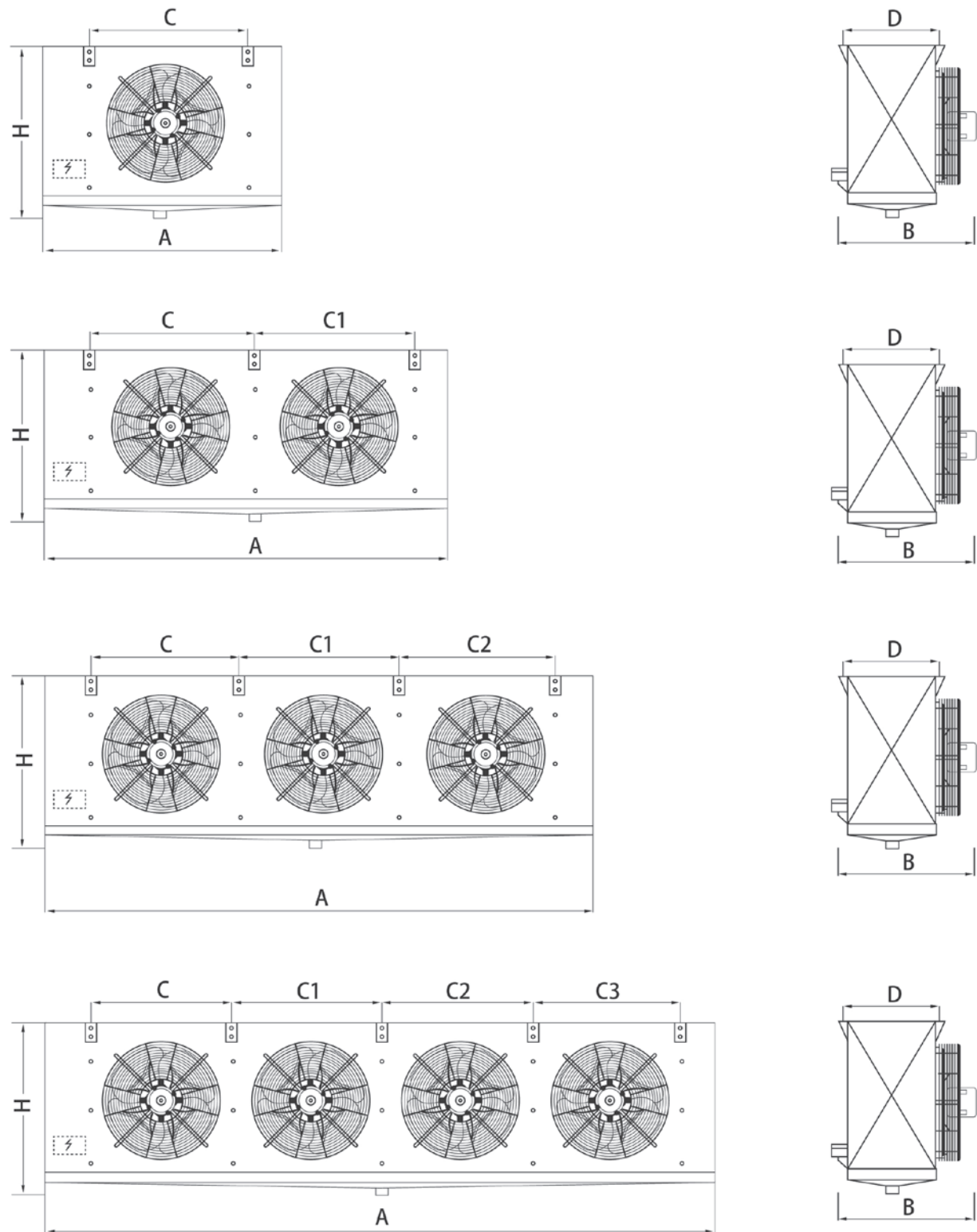
SL - D 55 - 150 E / 2 6 F

	表示：氟	Said: Fluorine
	表示：片距	Said: Pitch of fins
	表示：风机台数	Said: Quantity of blowers
	表示：电融霜	Said: Electrochemical defrosting
	表示：换热面积	Said: Heat exchange area
	表示：轴流风机直径	Said: Diameter of axial flow fan
	表示：吊顶式	Said: Ceiling type
	表示：品牌	Said: Brand

外形图 / Outline drawing



外形结构图 / Outline structure drawing



SL-D 氟系列吊顶冷风机⁺

SL-D Fluorine Series Ceiling Air Cooler

■ 技术参数表 / Technical Parameter Sheet

氟用电融霜吊顶铜管铝片冷风机——中高温（片距4.5mm）
Fluorine electric defrosting ceiling copper pipe aluminum air cooler——Medium-high temperature（Pitch of fins 4.5mm）

型号 Model		换热面积 Heat exchange area			制冷量 Refrigerating capacity		轴流风机 Axial flow fan			电融霜			水冲霜			冷媒接口		外形尺寸 Outline dimension				吊点尺寸 Ceiling point size			
										Electric defrosting			Electric defrost			Cooling medium interface									
										电热管总功率 Total power of electric heating element	电源 Power supply	泄水口 Water discharge	冲霜水量 Derosing water yield	进水量 Water inlet	泄水量 Wateroutlet	Feed liquid inlet									
		回气口 Gas return port																							
		m ²	kw	kw	Φmm	kw	m ³ /h	kw	v	Φ	T/h	Φ	Φ	Φ	Φ	mm	mm	mm	mm	mm	mm	mm	mm	mm	
 One Fans	SL-D45-50E/1.4.5F	50	10.5	8	450	0.25	5415	3.2	380/3/50	32	2	38	76	16	32	960	696	700	570	670					
	SL-D50-65E/1.4.5F	65	13.65	10.4	500	0.414	7395	4	380/3/50	32	3	38	76	16	32	1150	696	700	570	860					
	SL-D50-80E/1.4.5F	80	16	12	500	0.414	7395	4.4	380/3/50	32	5	38	76	19	45	1330	696	700	570	1040					
	SL-D55-90E/1.4.5F	90	18.45	13.5	550	0.6	8920	5.2	380/3/50	32	5	38	76	19	45	1450	696	700	570	1160					
	SL-D60-104E/1.4.5F	104	21.1	16.12	600	0.78	11000	6	380/3/50	32	6	38	76	19	45	1450	696	800	570	1160					
	SL-D60-110E/1.4.5F	110	22.33	17.05	600	0.78	11000	6	380/3/50	32	6	38	76	19	45	1510	696	800	570	1220					
	SL-D63-125E/1.4.5F	125	25	19.4	630	0.8	12420	6.4	380/3/50	47	7	47	89	19	45	1330	796	800	570	1040					
	SL-D71-143E/1.4.5F	143	28.4	22.3	710	0.9	15120	9	380/3/50	47	7	47	89	19	45	1670	795	900	570	1380					
 Two Fans	SL-D45-108E/2.4.5F	108	21.9	17.3	450	0.25x2	10830	7.5	380/3/50	47	6	47	89	19	45	1680	696	700	570	695					
	SL-D50-130E/2.4.5F	130	26.4	20.6	500	0.414x2	14790	8	380/3/50	47	7	47	89	19	45	1950	696	700	570	830					
	SL-D50-144E/2.4.5F	144	28.6	22.5	500	0.414x2	14790	9	380/3/50	47	7	47	89	19	45	1680	796	700	670	695	695				
	SL-D50-150E/2.4.5F	150	30.3	23.1	500	0.414x2	14790	10	380/3/50	47	7	47	89	22	45	1730	796	700	670	720	720				
	SL-D55-163E/2.4.5F	163	32.6	25.2	550	0.6x2	17840	12	380/3/50	47	8	47	89	22	45	2080	696	800	570	895	895				
	SL-D55-174E/2.4.5F	174	34.7	26.5	550	0.6x2	17840	12	380/3/50	47	8	47	89	22	54	2200	696	800	570	955	955				
	SL-D55-181E/2.4.5F	181	36.2	28.1	550	0.6x2	17840	12.5	380/3/50	47	8	47	89	22	54	2270	696	800	570	990	990				
	SL-D45-165E/3.4.5F	165	33	25.9	450	0.25x3	16245	10	380/3/50	47	8	47	89	22	54	2400	696	700	570	703	703	703			
 Three Fans	SL-D50-195E/3.4.5F	195	37.1	29.3	500	0.414x3	22185	13.2	380/3/50	47	9	47	89	22	54	2770	696	700	570	826	826	826			
	SL-D50-214E/3.4.5F	214	40.7	32.1	500	0.414x3	22185	14	380/3/50	47	9	47	89	22	54	3000	696	700	570	903	903	903			
	SL-D50-230E/3.4.5F	230	43.7	34.6	500	0.414x3	22185	16	380/3/50	47	9	47	108	22	54	3200	696	700	570	970	970	970			
	SL-D55-247E/3.4.5F	147	46.9	37.1	550	0.6x3	26760	16	380/3/50	47	10	47	108	22	54	3000	696	800	570	900	900	900			
	SL-D55-255E/3.4.5F	255	48.5	38.3	550	0.6x3	26760	17	380/3/50	47	10	47	108	22	54	3090	696	800	570	926	926	926			
	SL-D55-267E/3.4.5F	267	50.8	40.1	550	0.6x3	26760	17	380/3/50	47	10	47	108	22	54	3210	696	800	570	966	966	966			
	SL-D50-270E/4.4.5F	270	51.4	40.5	500	0.414x4	29580	18	380/3/50	47	11	47	108	22	54	3800	696	700	570	875	875	875	875		
	SL-D50-295E/4.4.5F	295	54.6	42.8	500	0.414x4	29580	18	380/3/50	47	12	47	108	28	67	3520	696	800	570	802	802	802	802		
 Four Fans	SL-D55-350E/4.4.5F	350	66.5	52.5	550	0.6x4	35680	20	380/3/50	47	14	57	133	22x2	54x2	3650	696	900	570	845	845	845	845		
	SL-D60-430E/4.4.5F	430	81.8	62.4	600	0.78x4	44000	22	380/3/50	47	16	57	133	22x2	54x2	4290	696	900	570	995	995	995	995		
	SL-D60-450E/4.4.5F	450	85.1	65.3	600	0.78x4	44000	22	380/3/50	47	17	57	133	22x2	54x2	4580	696	900	570	1065	1065	1065	1065		

注： 1：DT是空气进口温度与蒸发温度之差，Te指制冷剂的蒸发温度
2：冷风机的制冷量是在R404A情况下的计算结果
3：SC1工况，DT=7K，蒸发温度-25℃，环境温度-18℃，相对湿度95%
4：SC2工况，DT=6K，蒸发温度-31℃，环境温度-25℃，相对湿度95%
5：适用膨胀阀供液方式
6：如果采用水冲霜，高度增加140mm
7：如果是其他运行工况，请与我公司联系

Remark：• DT is difference between air inlet temperature and evaporating temperature,Te is evaporating temperature of cryogen.
• Refrigerating capacity of air cooler is calculated under the condition of R404A
• SC1 working condition,DT=7K, evaporating temperature -25℃,ambient temperature -18℃,relative temperature 95%
• SC2 working condition,DT=6K, evaporating temperature -31℃,ambient temperature -25℃,relative temperature 95%
• Expansion valve liquid supply mode is applicable
• If water defrosting is adopted, height will be increased for 140mm
• If there’ s other working condition,please contact with our company

■ 技术参数表 / Technical Parameter Sheet

氟用电融霜吊顶铜管铝片冷风机——中低温（片距6mm）
Fluorine electric defrosting ceiling copper pipe aluminum air cooler——Medium-low temperature（Pitch of fins 6mm）

型号 Model		换热面积 Heat exchange area			制冷量 Refrigerating capacity		轴流风机 Axial flow fan			电融霜			Electric defrosting			水冲霜			冷媒接口		外形尺寸 Outline dimension			吊点尺寸 Ceiling point size			
										电热管总功率 Total power of electric heating element	电源 Power supply	泄水口 Water discharge	Electric defrost			Cooling medium interface											
													冲霜水量 Derosing water yield	进水量 Water inlet	泄水量 Water outlet	供液口 Feed liquid inlet	回气口 Gas return port										
		m ²	kw	kw	Φmm	kw	m ³ /h	kw	v	Φ	T/h	Φ	Φ	Φ	Φ	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		
 One Fans	SL-D50-60E/1.6F	60	10.2	7.8	500	0.414	7395	5.4	380/3/50	32	3	38	76	16	32	1190	696	800	570	900							
	SL-D50-70E/1.6F	70	11.9	9.1	500	0.414	7395	5.4	380/3/50	32	3	38	76	16	32	1330	696	800	570	1040							
	SL-D55-83E/1.6F	83	14.2	10.8	550	0.6	8920	6	380/3/50	32	5	38	76	19	45	1520	696	800	570	1230							
	SL-D55-92E/1.6F	92	15.6	12	550	0.6	8920	6	380/3/50	32	5	38	76	19	45	1650	696	800	570	1360							
	SL-D60-107E/1.6F	107	18.2	13.9	600	0.78	11000	6	380/3/50	32	6	38	76	19	45	1480	796	800	670	1190							
	SL-D63-120E/1.6F	120	20.3	15.5	630	0.8	12420	6.4	380/3/50	32	6	47	89	19	45	1620	796	800	670	1330							
	SL-D71-151E/1.6F	151	25.6	19.6	710	0.9	15120	9	380/3/50	47	7	47	89	19	45	2220	796	900	670	1930							
 Two Fans	SL-D45-110E/2.6F	110	18.5	14.3	450	0.25x2	10830	6	380/3/50	47	6	47	89	19	45	1900	696	800	570	805	805						
	SL-D50-135E/2.6F	135	22.8	17.5	500	0.414x2	14890	8	380/3/50	47	7	47	89	19	45	2250	696	800	570	980	980						
	SL-D50-147E/2.6F	147	24.9	19.1	500	0.414x2	14790	9	380/3/50	47	7	47	89	19	45	1910	796	800	670	810	810						
	SL-D55-160E/2.6F	160	27.1	20.7	550	0.6x2	17840	9	380/3/50	47	8	47	89	22	45	2050	796	800	670	880	880						
	SL-D55-175E/2.6F	175	29.7	22.6	550	0.6x2	17840	10	380/3/50	47	9	47	89	22	45	2210	796	800	670	960	960						
	SL-D60-189E/2.6F	189	31.1	24.4	600	0.78x2	22000	12	380/3/50	47	10	47	108	22	54	2370	796	900	670	1030	1030						
	SL-D60-210E/2.6F	210	35.5	27.1	600	0.78x2	22000	14	380/3/50	47	10	47	108	22	54	2600	796	900	670	1140	1140						
 Three Fans	SL-D45-150E/3.6F	150	25.4	19.4	450	0.25x3	16245	9	380/3/50	47	7	47	108	19	45	2500	696	800	570	726	726	726					
	SL-D50-190E/3.6F	190	32.1	24.4	500	0.414x3	22185	12	380/3/50	47	10	47	108	22	54	3080	696	800	570	920	920	920					
	SL-D50-200E/3.6F	200	33.8	25.6	500	0.414x3	22185	14	380/3/50	47	10	47	108	22	54	3220	696	800	570	966	966	966					
	SL-D50-220E/3.6F	220	37.2	28.4	500	0.414x3	22185	14	380/3/50	47	10	47	108	22	54	2720	796	800	670	800	800	800					
	SL-D55-250E/3.6F	250	42	32.1	550	0.6x3	16760	16	380/3/50	47	10	47	108	22	54	3040	796	800	670	906	906	906					
	SL-D55-270E/3.6F	270	45.7	35.1	550	0.6x3	16760	16	380/3/50	47	11	47	108	22	54	3260	796	800	670	980	980	980					
 Four Fans	SL-D50-280E/4.6F	280	43.8	34.8	500	0.414x4	29580	18	380/3/50	47	11	47	108	22	54	3360	796	800	670	760	760	760	760				
	SL-D50-300E/4.6F	300	46.7	35.7	500	0.414x4	29580	18	380/3/50	47	12	47	108	28	67	3580	796	800	670	815	815	815	815				
	SL-D55-330E/4.6F	330	51.1	39.7	550	0.6x4	35680	18	380/3/50	47	13	47	108	28	67	3900	796	800	670	895	895	895	895				
	SL-D55-354E/4.6F	354	53.3	42.6	550	0.6x4	35680	20	380/3/50	47	14	57	133	22x2	54x2	3680	796	900	670	840	840	840	840				
	SL-D60-440E/4.6F	440	66	54.7	600	0.78x4	44000	22	380/3/50	47	16	57	133	22x2	54x2	3660	896	900	770	835	835	835	835				

SL-D 氟系列吊顶冷风机

SL-D Fluorine Series Ceiling Air Cooler

■ 技术参数表 / Technical Parameter Sheet

氟用电融霜吊顶铜管铝片冷风机——低温（片距10mm）
Fluorine electric defrosting ceiling copper pipe aluminum air cooler——Low temperature（Pitch of fins 10mm）

型号 Model		换热面积 Heat exchange area			制冷量 Refrigerating capacity		轴流风机 Axial flow fan			电融霜			水冲霜 Electric defrost			冷媒接口 Cooling medium interface		外形尺寸 Outline dimension				吊点尺寸 Ceiling point size			
										Electric defrosting															
							风机直径 Ceiling point size	电机功率 Motor power	总风量 Total air flow	电热管总功率 Total power of electric heating element	电源 Power supply	泄水口 Water discharge	冲霜水量 Defrosting water yield	进水口 Water inlet	泄水口 Water outlet	拱液口 Feed liquid inlet	回气口 Gas return port								
		m²	kw	kw	Φmm	kw	m³/h	kw	v	Φ	T/h	Φ	Φ	Φ	Φ	mm	mm	mm	mm	mm	mm	mm	mm		
 One Fans	SL-D45-56E/1.10F	56	8.4	6.72	450	0.25	5415	3	380/3/50	32	2	38	76	16	32	1330	796	800	670	1040					
	SL-D50-56E/1.75F	75	11.2	9	500	0.414	7398	4	380/3/50	32	3	38	76	16	32	1670	796	800	670	1380					
	SL-D55-82E/1.10F	82	12.2	9.8	550	0.6	8920	4.4	380/3/50	32	4	38	76	16	32	1790	796	800	670	1500					
	SL-D55-90E/1.10F	90	13.4	10.7	550	0.6	8920	5.2	380/3/50	32	5	38	76	16	32	1730	796	900	670	1440					
	SL-D60-105E/1.10F	105	15.7	12.5	600	0.78	11000	6	380/3/50	32	6	38	76	19	45	1970	796	900	670	1680					
	SL-D60-113E/1.10F	113	16.8	13.4	600	0.78	11000	6	380/3/50	32	6	47	89	19	45	2090	796	900	670	1800					
	SL-D63-120E/1.10F	120	18	14.4	630	0.8	12420	6.4	380/3/50	47	7	47	89	19	45	1830	896	900	770	1540					
 Two Fans	SL-D63-131E/1.10F	131	19.5	15.7	630	0.8	12420	6.4	380/3/50	47	7	47	89	19	45	1970	896	900	770	1680					
	SL-D71-145E/1.10F	145	21.7	17.2	710	0.9	15120	8	380/3/50	47	7	47	89	22	54	2150	896	900	770	1860					
	SL-D50-127E/2.1F	127	19	15.2	500	0.414x2	14790	6.4	380/3/50	47	7	47	89	19	45	2310	796	900	670	1010	1010				
	SL-D50-145E/2.1F	145	21.7	17.2	500	0.414x2	14790	8	380/3/50	47	7	47	89	22	54	2590	796	900	670	1150	1150				
	SL-D55-164E/2.1F	164	24.6	19.7	550	0.6x2	17840	12	380/3/50	47	8	47	89	22	54	2380	896	900	770	1045	1045				
	SL-D55-178E/2.1F	178	26.6	21.3	650	0.6x2	17840	12	380/3/50	47	9	47	89	22	54	2570	896	900	770	1130	1130				
	SL-D60-190E/2.1F	190	28.4	22.3	600	0.78x2	22000	13.2	380/3/50	47	9	47	89	22	54	2730	896	900	770	1210	1210				
 Three Fans	SL-D60-220E/2.1F	220	32.8	26.3	600	0.78x2	22000	14	380/3/50	47	9	47	89	22	54	3100	896	900	770	1395	1395				
	SL-D50-215E/3.10F	215	32.8	25.6	500	0.414x3	22185	14	380/3/50	47	9	47	89	22	54	3040	896	900	770	910	910	910			
	SL-D50-230E/3.10F	230	34.4	27.5	500	0.414x3	22185	14	380/3/50	47	9	47	108	22	54	3230	896	900	770	973	973	973			
	SL-D55-245E/3.10F	245	36.7	29.3	550	0.6x3	26760	16	380/3/50	47	10	47	108	22	54	3410	896	900	770	1033	1033	1033			
	SL-D55-260E/3.10F	260	38.5	31	550	0.6x3	26760	17	380/3/50	47	10	47	108	22	54	3600	896	900	770	1096	1096	1096			
	SL-D55-275E/3.10F	275	40.2	32	550	0.6x3	26760	18	380/3/50	47	11	47	108	22	54	3800	896	900	770	1160	1160	1160			
 Four Fans	SL-D45-200E/4.10F	200	29.5	23.7	450	0.25x4	21660	13.2	380/3/50	47	9	47	108	22	54	3470	796	900	670	790	790	790	790		
	SL-D45-215E/4.10F	215	32.2	25.6	450	0.25x4	21660	14	380/3/50	47	9	47	108	22	54	3710	796	900	670	850	850	850	850		
	SL-D50-300E/4.10F	300	44.5	35.6	500	0.414x4	29580	18	380/3/50	57	12	57	133	28	67	4100	896	900	770	947	947	947	947		
	SL-D55-360E/4.10F	360	50.4	41.4	550	0.6x4	35680	20	380/3/50	57	14	57	133	22x2	54x2	4350	896	1000	770	1010	1010	1010	1010		
	SL-D60-460E/4.10F	460	64.6	55.2	600	0.78x4	44000	22	380/3/50	57	17	57	133	22x2	54x2	4180	996	1100	870	967	967	967	967		

注： 1：DT是空气进口温度与蒸发温度之差，Te指制冷剂的蒸发温度
2：冷风机的制冷量是在R404A情况下的计算结果
3：SC1工况，DT=7K，蒸发温度-25℃，环境温度-18℃，相对温度95%
4：SC2工况，DT=6K，蒸发温度-31℃，环境温度-25℃，相对温度95%
5：适用膨胀阀供液方式
6：如果采用水冲霜，高度增加140mm
7：如果是其他运行工况，请与我公司联系

Remark：• 1：DT is difference between air inlet temperature and evaporating temperature,Te is evaporating temperature of cryogen
• Refrigerating capacity of air cooler is calculated under the condition of R404A
• SC1 working condition,DT=7K, evaporating temperature -25℃,ambient temperature -18℃, relative temperature 95%
• SC2 working condition,DT=6K, evaporating temperature -31℃,ambient temperature -25℃, relative temperature 95%
• Expansion valve liquid supply mode is applicable
• If water defrosting is adopted, height will be increased for 140mm
• If there' s other working condition,please contact with our company

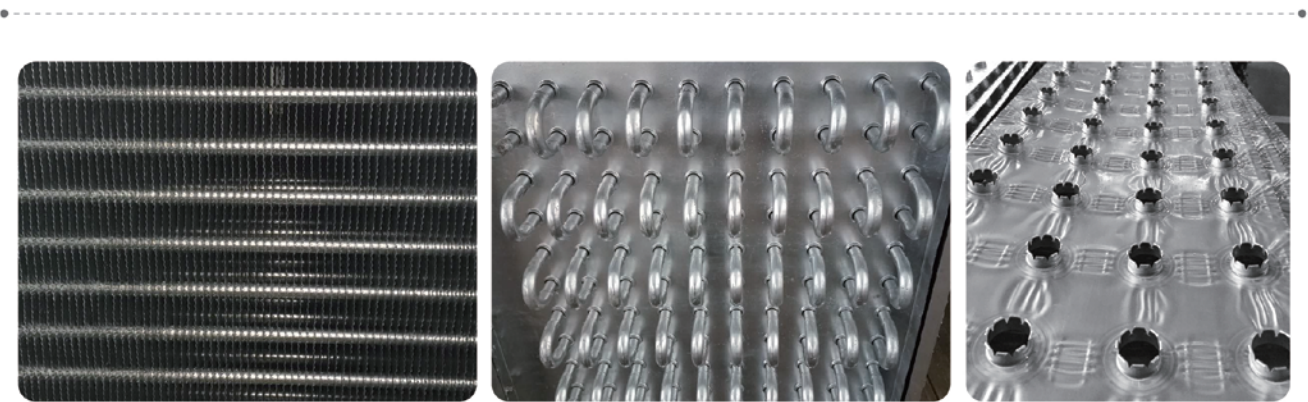
SL-D 氨系列吊顶冷风机

SL-D Ammonia Series Ceiling Air Cooler

■ 产品特点 / Product Features

D系列高效空气冷却器采用新型设计、新型材料和新型工艺的高效热交换设备，与同类产品相比，具有轻型、耐用、高效的特点。
D series high efficiency air cooler adopts high efficiency heat exchange equipment with new design, new materials and new technology, who has features of light, durable, efficient compared with similar products.

- 翅片采用进口翅片生产线。片形设计先进，整体波纹状翅片即使在结霜过程仍可保持高的热交换效率。
 - 换热管与翅片组成的盘管组，采用整体热浸锌，传热效率高，热阻小，耐腐蚀性能好，融霜迅速。
 - 风机选用高效能、低噪音的进口外转子轴流风机，采用碳钢新型导流风筒，风量大、功率低、射程远。
 - 壳体采用镀锌钢板及防锈烤漆喷塑工艺，耐腐蚀、美观、清洁、易于拆卸。
- The fins use imported fin production line.The shape of the fin is advanced, and the whole corrugate fin can maintain high heat exchange efficiency even in the frosting process.
 - The coil pipe set composed by heat exchange tube and fin adopts whole hot dip galvanizing which has the features of high heat exchange efficiency,small thermal resistance,good corrosion resistance and quick defrosting.
 - High efficient and low noise imported external rotor axial flow fan is adopted.Carbon steel new type draft duct is used who has features of large air,low power and long range.
 - The shell uses galvanized steel plain sheet and antirust paint spraying process, which is corrosion resistant, beautiful, clean and easy to disassemble.



■ 产品用途 Product Usage

D系列高效空气冷却器多用于大型冷冻间、各种速冻、冷却或高低温的储存库。
D series high efficiency air coolers are widely used in refrigeration room, all kinds of deepfreeze and cooling or high and low temperature storage.



■ 型号说明 / Model Description

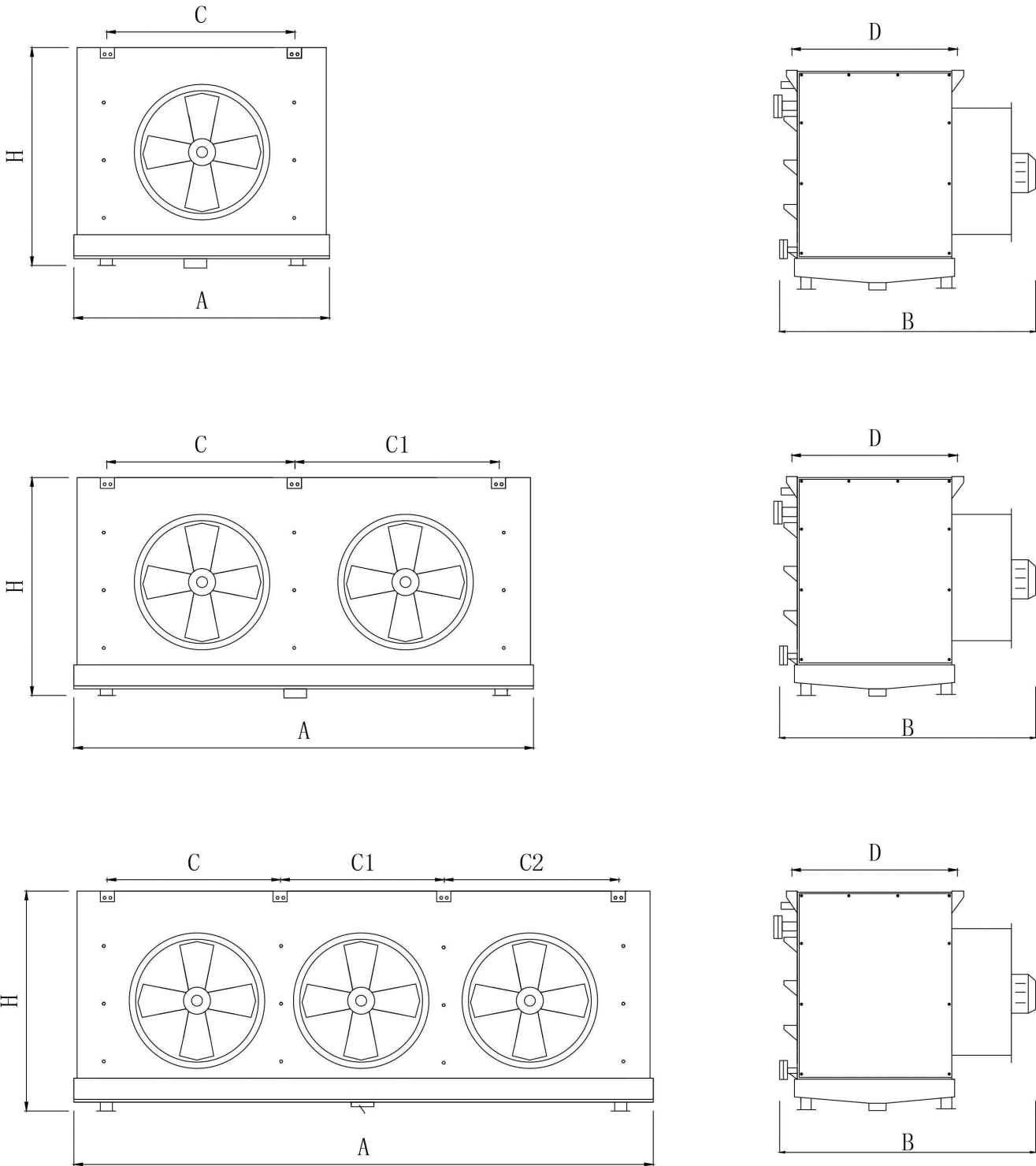
SL D 091 - 426 W / 3 10 A G

- 表示：钢管材质 Said: Steel material
- 表示：氨 Said: Ammonia
- 表示：片距 Said: Pitch of fins
- 表示：风机台数 Said: Quantity of blowers
- 表示：水冲霜 Said: Water defrosting
- 表示：热换面积 Said: Heat exchange area
- 表示：轴流风机直径 Said: Diameter of axial flow fan
- 表示：吊顶式 Said: Ceiling type
- 表示：品牌 Said: Brand

SL-D 氨系列吊顶冷风机

SL-D Ammonia Series Ceiling Air Cooler

外形结构图 Outline Structure Drawing



技术参数表 / Technical Parameter Sheet

氨用水冲霜钢管钢片冷风机——中高温（片距10mm）
Ammonia water defrosting steel pipe and steel disc air cooler——Medium-high temperature（Pitch of fins 10mm）

型号 Model		换热面积 Heat exchange area	制冷量 Refrigerating capacity	轴流风机 Axial flow fan			水冲霜 Water defrosting			冷媒接口 Cooling medium interface		外形尺寸 Outline dimension			吊点尺寸 Ceiling point size				
			Te=-8℃	风机直径 Diameter of blower	电机功率 Motor power	总风量 Total air flow	冲霜水量 Defrosting water yield	进水口 Water inlet	泄水口 Water outlet	供液口 Feed liquid inlet	回气口 Gas return port								
			m²	kw	Φmm	kw	m³/h	T/h	Φ	Φ	Φ	Φ	mm	mm	mm	mm	mm	C1	C2
 One Fans	SL-D60-100W/1.10A	100	21	600	1.5	12000	5	47	89	38	57	1620	1160	1200	720	1230			
	SL-D60-120W/1.10A	120	25.2	600	1.5	12000	5	47	89	38	57	1870	1160	1200	720	1480			
	SL-D70-150W/1.10A	150	31.4	700	2.2	16000	6	47	108	38	57	1930	1160	1350	720	1540			
	SL-D70-165W/1.10A	165	34.6	700	2.2	16000	6	47	108	38	57	1660	1320	1350	870	1270			
	SL-D80-195W/1.10A	195	40.8	800	3	21000	8	47	108	38	57	1900	1320	1350	870	1510			
  Two Fans	SL-D60-200W/2.10A	200	41	600	1.5*2	24000	8	47	108	38	57	2450	1160	1370	720	1030	1030		
	SL-D60-225W/2.10A	225	46.1	600	1.5*2	24000	9	47	108	38	57	2700	1160	1350	720	1155	1155		
	SL-D70-275W/2.10A	275	56.3	700	2.2*2	32000	10	47	108	38	57	2510	1320	1350	870	1060	1060		
	SL-D70-300W/2.10A	300	60.8	700	2.2*2	32000	10	47	108	38	57	2700	1320	1350	870	1155	1155		
	SL-D70-320W/2.10A	320	64.7	700	2.2*2	32000	12	47	108	38	57	2860	1320	1350	870	1235	1235		
	SL-D80-360W/2.10A	360	71.8	800	3*2	42000	14	57	133	57	76	2620	1470	1350	1020	1115	1115		
   Three Fans	SL-D60-350W/3.10A	350	71.6	600	1.5*3	36000	14	57	133	57	76	3100	1320	1350	870	903	909	903	
	SL-D70-430W/3.10A	430	96.3	700	2.2*3	48000	16	57	133	57	76	3710	1320	1350	870	1106	1106	1106	
	SL-D70-450W/3.10A	450	90	700	2.2*3	48000	16	57	133	57	76	3870	1320	1350	870	1160	1160	1160	
	SL-D70-500W/3.10A	500	96.3	700	2.2*3	48000	18	57	133	57	89	3480	1470	1350	1020	1030	1030	1030	
	SL-D80-600W/3.10A	600	115.6	800	3*3	63000	20	76	150	76	108	4100	1470	1350	1020	1236	1236	1236	
	SL-D80-700W/3.10A	700	132.4	800	3*2	72000	22	76	150	76	108	4100	1680	1350	1200	1203	1203	1203	

注： 1：DT是空气进口温度与蒸发温度之差，Te指制冷剂的蒸发温度
2：冷风机的制冷量是在NH3情况下的计算结果
3：如果是其他运行工况，请与我公司联系

Remark: • DT is difference between air inlet temperature and evaporating temperature,Te is evaporating temperature of cryogen.
• Refrigerating capacity of air cooler is calculated under the condition of NH3
• If there' s other working condition,please contact with our company

SL-D 氨系列吊顶冷风机

SL-D Ammonia Series Ceiling Air Cooler

■ 技术参数表 Technical Parameter Sheet

氨用水冲霜钢管钢片冷风机——中低温（片距12mm）
Ammonia water defrosting steel pipe and steel disc air cooler——Medium-low temperature（Pitch of fins 12mm）

型号 Model		换热面积 Heat exchange area	制冷量 Refrigerating capacity	轴流风机 Axial flow fan			水冲霜 Water defrosting			冷媒接口 Cooling medium interface		外形尺寸 Outline dimension			吊点尺寸 Ceiling point size				
			Te=8℃	风机直径 Diameter of blower	电机功率 Motor power	总风量 Total air flow	冲霜水量 Defrosting water yield	进水口 Water inlet	泄水口 Water outlet	供液口 Feed liquid inlet	回气口 Gas return port								
m²	kw	Φmm	kw	m³/h	T/h	Φ	Φ	Φ	Φ	A	B	H	D	C	C1	C2	C3		
 One Fans	SL-D60-120W/1.12A	120	20.4	600	1.5	12000	5	47	89	38	57	1870	1160	1350	720	1480			
	SL-D70-145W/1.12A	145	24.6	700	2.2	16000	6	47	89	38	57	1730	1320	1350	870	1340			
	SL-D70-155W/1.12A	155	26.3	700	2.2	16000	6	47	108	38	57	1830	1320	1350	870	1440			
	SL-D70-163W/1.12A	163	27.7	700	2.2	16000	6	47	108	38	57	1500	1470	1350	1020	1210			
	SL-D80-210W/1.12A	210	35.6	800	3	21000	8	47	108	38	57	1720	1470	1520	1020	1330			
  Two Fans	SL-D60-220W/2.12A	220	37.4	600	1.5*2	24000	8	47	108	38	57	2430	1320	1350	870	1020	1020		
	SL-D60-240W/2.12A	240	40.7	600	1.5*2	24000	9	47	108	38	57	2620	1320	1350	870	1115	1115		
	SL-D70-280W/2.12A	280	47.5	700	2.2*2	32000	10	47	108	38	57	3000	1320	1350	870	1305	1305		
	SL-D70-295W/2.12A	295	50.1	700	2.2*2	32000	10	47	108	38	57	2580	1470	1350	1020	1095	1095		
	SL-D70-315W/2.12A	315	53.5	700	2.2*2	32000	12	47	108	38	57	2730	1470	1350	1020	1170	1170		
	SL-D80-400W/2.12A	400	67.8	800	3*2	42000	14	57	133	57	76	3380	1470	1350	1020	1495	1495		
   Three Fans	SL-D60-360W/3.12A	360	61.1	600	1.5*3	36000	12	57	133	57	76	3740	1320	1350	870	1116	1116		
	SL-D60-375W/3.12A	375	63.5	600	1.5*3	36000	12	57	133	57	76	3180	1470	1350	1020	930	930	930	
	SL-D70-445W/3.12A	445	75.4	700	2.2*3	48000	16	57	133	57	76	3700	1470	1350	1020	1103	1103	1103	
	SL-D70-480W/3.12A	480	81.3	700	2.2*3	48000	18	57	133	57	89	3450	1470	1530	1020	1020	1020	1020	
	SL-D70-550W/3.12A	550	93.2	700	2.2*3	48000	18	76	150	57	89	3900	1470	1530	1080	1203	1203	1203	
	SL-D80-650W/3.12A	650	110.3	800	3*3	63000	20	76	150	76	108	3850	1620	1530	1200	1153	1153	1153	

注： 1：DT是空气进口温度与蒸发温度之差，Te指制冷剂的蒸发温度
2：冷风机的制冷量是在NH3情况下的计算结果
3：如果是其他运行工况，请与我公司联系

Remark：• DT is difference between air inlet temperature and evaporating temperature,Te is evaporating temperature of cryogen.
• Refrigerating capacity of air cooler is calculated under the condition of NH3
• If there’ s other working condition,please contact with our company

■ 技术参数表 /technical Parameter Sheet

氨用水冲霜钢管钢片冷风机——低温（片距14mm）
Ammonia water defrosting steel pipe and steel disc air cooler——Low temperature（Pitch of fins 14mm）

型号 Model		换热面积 Heat transfer area	制冷量 Cooling capacity	轴流风机 Axial Fan			水冲霜 Electric defrost			冷媒接口 Refrigerant interface		外形尺寸 Refrigerant interface			吊点尺寸 Refrigerant interface				
			Te= 8℃	风机直径 Fan diameter	电机功率 Motor Power	总风量 Total air volume	冲霜水量 Red water	进水口 Water intake	泄水口 Water discharge	供液口 For the mouth	回气口 Return air								
		m²	kw	Φmm	kw	m³/h	T/h	Φ	Φ	Φ	Φ	mm	mm	mm	mm	C	C1	C2	C3
 One Fans	SL-D60-115W/1.14A	115	14.8	600	1.5	12000	5	47	89	38	57	1640	1320	1350	870	1250			
	SL-D70-140W/1.14A	140	18.2	700	2.2	16000	6	47	108	38	57	1600	1470	1350	1020	1210			
	SL-D70-150W/1.14A	150	19.4	700	2.2	16000	7	47	108	38	57	1690	1470	1350	1020	1300			
	SL-D70-165W/1.14A	165	21.3	700	2.2	16000	7	47	108	38	57	1820	1470	1350	1020	1460			
	SL-D80-205W/1.14A	205	26.6	800	3	21000	8	47	108	38	57	1910	1470	1530	1020	1520			
  Two Fans	SL-D60-200W/2.14A	200	25.8	600	1.5*2	24000	8	47	108	38	57	2560	1320	1350	870	1085	1085		
	SL-D60-225W/2.14A	225	29.2	600	1.5*2	24000	9	47	108	38	57	2350	1470	1350	1020	980	980		
	SL-D60-240W/2.14A	240	31.1	600	1.5*2	24000	9	47	108	38	57	2480	1470	1350	1020	1045	1045		
	SL-D60-250W/2.14A	250	32.4	600	1.5*2	24000	10	47	108	38	57	2560	1470	1350	1020	1085	1085		
	SL-D70-300W/2.14A	300	38.8	700	2.2*2	32000	12	47	108	38	57	3000	1470	1350	1020	1305	1305		
	SL-D70-320W/2.14A	320	41.4	700	2.2*2	32000	12	47	108	38	57	3180	1470	1350	1020	1398	1395		
   Three Fans	SL-D60-350W/3.14A	350	43.7	600	1.5*3	36000	12	47	108	38	57	3440	1470	1350	1020	1016	1016	1016	
	SL-D60-370W/3.14A	370	46.2	600	1.5*3	36000	14	47	108	57	76	3080	1620	1350	1200	896	896	896	
	SL-D70-400W/3.14A	400	51	700	2.2*3	48000	14	57	133	57	76	3380	1620	1350	1200	996	996	996	
	SL-D70-450W/3.14A	450	56.3	700	2.2*3	48000	16	57	133	57	76	3660	1620	1350	1200	1090	1090	1090	
	SL-D70-480W/3.14A	480	61.4	700	2.2*3	48000	18	57	133	57	89	3880	1620	1350	1200	1163	1163	1163	
	SL-D80-600W/3.14A	600	72.6	800	3*3	63000	20	76	155	76	108	4120	1620	1530	1200	1243	1243	1243	

注： 1：DT是空气进口温度与蒸发温度之差，Te指制冷剂的蒸发温度
2：冷风机的制冷量是在NH3情况下的计算结果
3：如果是其他运行工况，请与我公司联系

Remark：• DT is difference between air inlet temperature and evaporating temperature,Te is evaporating temperature of cryogen.
• Refrigerating capacity of air cooler is calculated under the condition of NH3
• If there’ s other working condition,please contact with our company

SL型蒸发式冷凝器
SL model evaporative condenser



NL型蒸发式冷凝器
NL Model Evaporative Condenser

因蒸发式冷凝器是冷凝器，冷却水塔，水泵和水池几合一的产品，其结构紧凑，与老式冷凝系统相比，因安装与屋顶不占用宝贵的土地资源，且安装方便，时间短，费用少。因此就初期投资而言，蒸发式冷凝器的费用比老式冷凝系统省。

Evaporative condenser is a combination of condenser, cooling tower, water pump and water tank which has compact structure. Compared with the old condensing system, because of the installation and the roof does not take up valuable land resources. And easy installation, short time and less cost at the same time. Thus, in terms of initial investment, evaporative condenser costs less than the old condensing system.

蒸发式冷凝器

Evaporative Condenser

机组选型程序 / Unit Model Selection Procedure

确定制冷系统的总排热量 Ensure The Total Heat Rejection Of The Refrigerating System

- 制冷系统的排热量 (KW) =制冷量 (KW) +压缩机轴功率 (KW)

• 确定设计条件冷凝温度和湿球温度

再根据冷凝器型式及制冷剂种类、查表1~表4中的排热量的校正系数

• 总排热量= (1) x (2) kw
- Heat rejection of the refrigerating system (KW) = Refrigerating capacity (KW) +Compressor shaft power (KW)

•Ensure design conditions for condensing temperature and wet bulb temperature

Then check sheet 1~ 4 for the correction factor of the heat rejection according to the condenser type and the type of cryogen.

•Total heat rejection= (1) x (2) kw

表1 R22和R134a蒸发式冷凝器排热量的校正系数 Sheet 1 Correction factor of R22 and R134a evaporative condenser heat rejection

冷凝温度 (°C) Condensing Temperature (°C)	进风空气湿球温度 (°C) Air Intake Warm Bulb Temperature (°C)																		
	10	12	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
30	1.07	1.15	1.25	1.38	1.47	1.57	1.70	1.85	2.00	2.25	2.52	2.81	3.36						
32	0.94	1.01	1.09	1.18	1.26	1.33	1.14	1.51	1.62	1.76	1.93	2.10	2.36						
34	0.85	0.90	0.97	1.04	1.10	1.15	1.20	1.27	1.34	1.44	1.55	1.66	1.80	1.99					
35	0.80	0.85	0.91	0.97	1.02	1.06	1.11	1.15	1.21	1.29	1.37	1.46	1.55	1.68	1.87	2.11	2.41	2.77	
36	0.77	0.81	0.86	0.92	0.96	1.00	1.04	1.07	1.13	1.19	1.26	1.34	1.42	1.53	1.69	1.89	2.14	2.43	
38	0.70	0.74	0.78	0.82	0.85	0.88	0.90	0.93	0.96	1.01	1.06	1.11	1.17	1.25	1.35	1.47	1.62	1.78	
40	0.65	0.67	0.70	0.73	0.76	0.78	0.80	0.83	0.86	0.89	0.93	0.97	1.01	1.07	1.13	1.21	1.31	1.43	
40.6	0.63	0.65	0.68	0.72	0.74	0.75	0.77	0.80	0.83	0.87	0.90	0.94	0.98	1.02	1.08	1.15	1.23	1.33	
42	0.59	0.61	0.64	0.67	0.68	0.70	0.72	0.74	0.77	0.80	0.83	0.86	0.89	0.93	0.98	1.04	1.10	1.18	
44	0.54	0.56	0.58	0.61	0.62	0.63	0.65	0.66	0.68	0.70	0.73	0.73	0.78	0.82	0.85	0.89	0.93	0.97	

表2 氨 (R717) 蒸发式冷凝器排热量的校正系数 Sheet 2 Correction factor of Ammonia (R717) evaporative condenser heat rejection

冷凝温度 (°C) Condensing Temperature (°C)	进风空气湿球温度 (°C) Air intake warm bulb temperature (°C)																		
	10	12	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
30	0.97	1.04	1.14	1.25	1.34	1.43	1.55	1.68	1.83	2.05	2.29	2.56	3.06						
32	0.86	0.92	0.99	1.09	1.15	1.21	1.29	1.37	1.48	1.60	1.76	1.91	2.15						
34	0.77	0.82	0.88	0.95	1.00	1.05	1.10	1.15	1.22	1.30	1.41	1.51	1.64	1.81					
35	0.73	0.77	0.82	0.88	0.93	0.97	1.01	1.05	1.10	1.17	1.24	1.33	1.41	1.53	1.70	1.92	2.20	2.52	
35.7	0.71	0.75	0.79	0.84	0.88	0.92	0.95	0.99	1.04	1.10	1.16	1.24	1.32	1.42	1.57	1.76	2.00	2.29	
36	0.70	0.74	0.78	0.83	0.87	0.90	0.94	0.97	1.02	1.07	1.15	1.21	1.29	1.39	1.53	1.71	1.94	2.21	
38	0.63	0.67	0.71	0.75	0.77	0.80	0.82	0.85	0.88	0.92	0.96	1.01	1.06	1.14	1.22	1.33	1.47	1.63	
40	0.58	0.61	0.64	0.67	0.69	0.71	0.73	0.76	0.78	0.81	0.85	0.89	0.92	0.98	1.03	1.11	1.20	1.29	
42	0.54	0.56	0.58	0.61	0.62	0.64	0.66	0.68	0.70	0.72	0.75	0.78	0.81	0.85	0.89	0.94	1.00	1.07	
44	0.50	0.51	0.53	0.55	0.56	0.57	0.59	0.61	0.62	0.64	0.66	0.69	0.72	0.74	0.77	0.80	0.84	0.89	

根据总排热量选择本公司相应型号 Select The Corresponding Model According To Total Heat Rejection

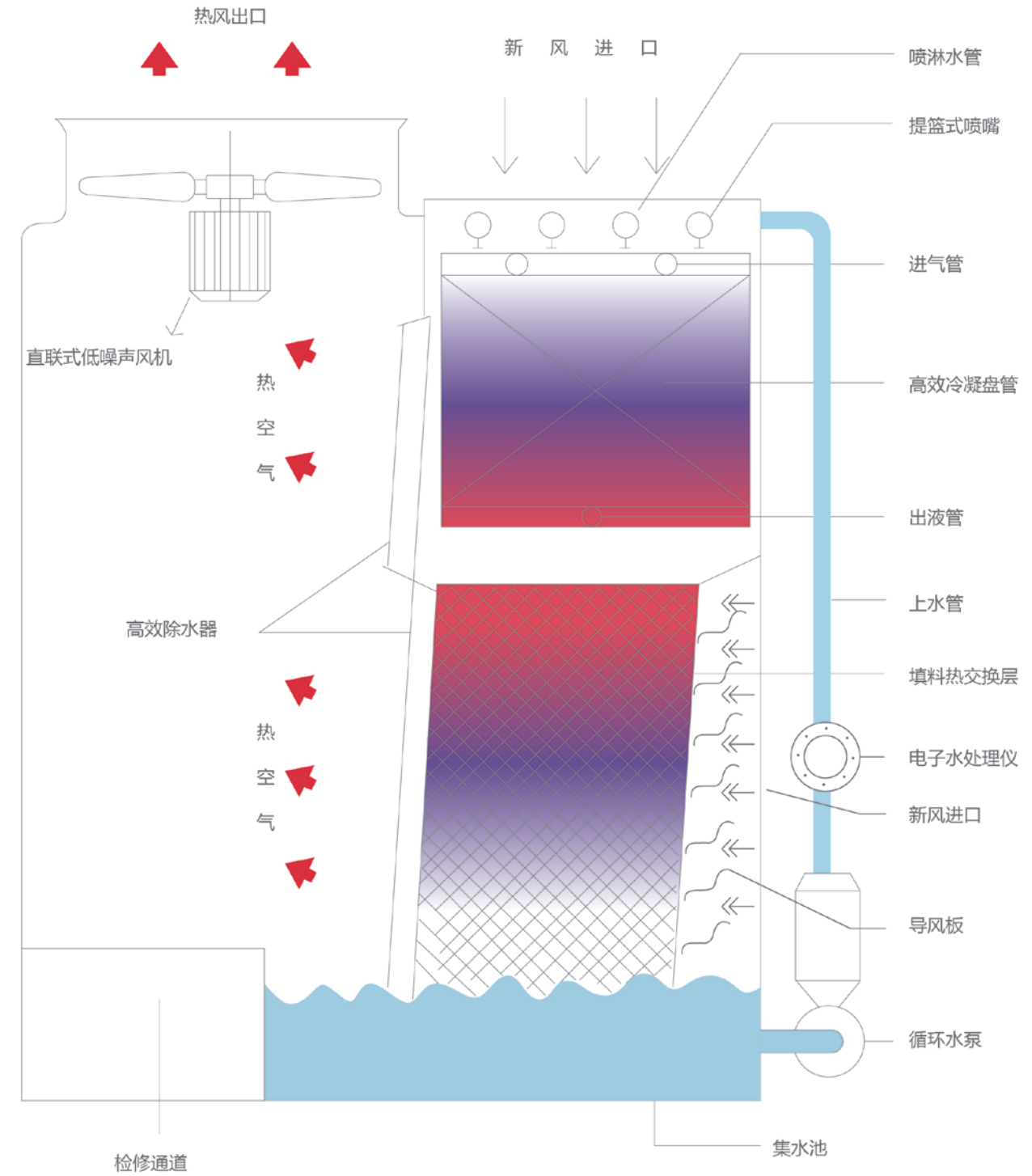
制冷剂如果采用螺杆机，其中油冷却水用其他方式获得可以在总排热量中减去这部分热量。
If the screw machine is used in the refrigerating machine,the oil cooling water can be subtracted from the total heat input in other ways.

【实例】
制冷剂：氨 (R717) / 制冷量：1000kw / 冷凝温度：36℃ / 压缩机功率：300kw / 湿球温度：26℃
【Example】
Refrigerating machine: Ammonia (R717) / Refrigerating capacity: 1000kw / Condensing temperature: 36℃ / Compressor power: 300kw / Wet bulb temperature: 26℃

如选用查表2得校正系数为1.39修正后排热量为1300x1.39=1807 可以选用SL900 2台
If use sheet 2,correction factor is 1.39, heat rejection is 1300x1.39=1807 after modification can choose SL900 2 sets

蒸发式冷凝器

Evaporative Condenser



蒸发式冷凝器⁺

Evaporative Condenser

■ 采用进口镀铝锌板 / Use Imported Aluminium Zinc Plate

SL产品外壳采用进口镀铝锌板，是当今耐腐蚀性能最强的镀锌板之一，使用寿命是普通镀锌板的3~6倍，并且具有阻热性强、耐热性优、外表美观等优点。

注：外壳材质须在订货时说明。

SL shell uses imported aluminium zinc plate, which is one of the strongest corrosion resistant galvanized sheet.It's service life is 3~6 times of common galvanized sheet, and has the advantages of strong heat resistance, excellent heat resistance, beautiful appearance etc..
Remark: The material should be specified in the order.

循环泵 Circulation pump

循环泵采用不受转向限制的优质机械密封，无泄漏，寿命长，具有小功率、大流量、低噪音、高效率等特点。

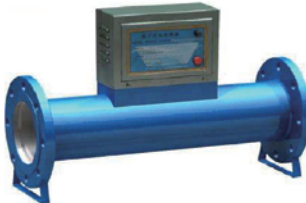
The circulating pump adopts the high quality mechanical seal which is free from the limit of the steering, no leakage, long service life, low power, large flow, low noise and high efficient.



装置电子水除垢仪 Set electronic water descaling apparatus

配置先进的电子水除垢仪，其利用电子脉冲技术可对循环水水质进行处理，有效的避免了盘管壁、填料上污垢的形成。

Set an advanced electronic water descaling apparatus, electronic pulse technique can be used to do the treatment of scale removal, sterilization and algae removal. You only need to turn on the 220V power supply to treat the circulating water quality, which can effectively avoid the formation of fouling on the wall of the coil pipe and filler.



PVC填料热交换层 PVC filler heat exchange layer

特殊设计的PVC蜂窝式横流填料，捷径的横进风结构，能最大限度的发挥水和空气的热交换，提高水冷却效果。阻燃性好、风阻系数小、抗老化、不易变形等优点。

The special designed PVC honeycomb fashion crosscurrent filler, the transverse wind structure of shortcut, can maximize the develop of heat exchange between water and air, improve water cooling effect. It has advantages of good flame resistance, small drag coefficient, anti-aging, not easy to deformation, etc..



直联式轴流风机 Direct-connected axial flow fan

SL通风系统采用铝合金叶片的专用轴流风机。前倾式风叶、流线型入口风筒、无皮带轮传动的结构设计，并采用全封闭自冷式低噪声专用电机。具有体积小、重量轻、起动性能佳、运行可靠、经久耐用等优点。

SL ventilation system adopts special axial flow fan with Aluminum alloy vane. The structure design of forerake wind vane, streamline inlet duct, and no belt wheel transmission is adopted. And also the fully enclosed self cooling low noise special motor is adopted. It has advantages of small size, light weight, good switching performance, reliable operation, durable.



先进的水分配系统 Advanced water distribution system

SL产品冷却水喷淋系统采用大流量防堵塞的提篮式喷嘴，保证布水连续均匀的喷洒在盘管组件上，在引风的作用下最大限度的覆盖盘管表面，使水、空气与制冷剂充分进行热交换，从而提高了传热效果。喷嘴扣接于喷淋支管上，当清洗喷嘴及喷淋支管时可方便将其拆卸。

SL cooling water spraying system uses large flow anti clogging basket type nozzle clogging basket type nozzle to ensure the water continuously and uniformly sprayed on the coil pipe assembly. Maximum covering the surface of coil pipe under the action of the induced wind, so that the water, the air and the cryogen are fully heat exchanged, thereby improving the heat transfer effect. The nozzle is connected with the spraying branch pipe, and can be conveniently disassembled when cleaning the nozzle and the spraying branch pipe.

可拆式除水器 Removable dehydrator

SL产品独创的可拆式除水器采用耐腐蚀PVC材料，其结构使气流流向改变后能有效去除从盘管中出来的湿空气水份，使水的飘逸率达到0.001%。当清洗除水器或填料时，可方便的将除水器卸除。

SL original removable dehydrator uses corrosion resisting PVC material. The structure of the utility model can effectively remove the moisture of the wet air coming out of the coil pipe after changing the flow direction of the air flow, and make the water flowing rate up to 0.001%. The dehydrator can be easily removed when cleaning the dehydrator or filler.



蒸发式冷凝器⁺

Evaporative condenser

■ 投资省，使用寿命长，运行费用低 / Less Investment, Long Service Life, Low Operating Costs

- 因蒸发式冷凝器是冷凝器，冷却水塔，水泵和水池几合一的产品，其结构紧凑，与老式冷凝系统相比，因安装与屋顶不占用宝贵的土地资源，且安装方便，时间短，费用少。因此就初期投资而言，蒸发式冷凝器的费用比老式冷凝系统省。
- 老式冷凝器系统无任何防腐措施，而蒸发式冷凝器因其主要部件均为整体热浸锌，试用期大大超过前者。
- 蒸发式冷凝器维修费用极低，加之节能的优点，使之运行费用和其他类型的冷凝系统相比较明显降低。

• Evaporative condenser is a combination of condenser, cooling tower, water pump and water tank which has compact structure. Compared with the old condensing system, because of the installation and the roof does not take up valuable land resources. And easy installation, short time and less cost at the same time. Thus, in terms of initial investment, evaporative condenser costs less than the old condensing system.

• Old condensing system doesn't have any corrosion prevention. Due to main parts of the evaporative condenser are all hot dip galvanizing, the probation period is much longer than the old condensing system.

• Evaporative condenser maintenance costs are very low, and also has advantage of energy saving, so that the operating costs is significantly reduced compared to other types of condensing system.

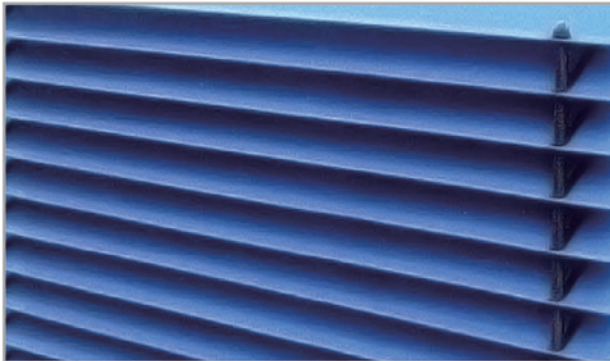


■ 冷凝盘管 / Condensing Coil Pipe

冷凝盘管由优质的Φ25mm无缝钢管或Φ26.7mm椭圆型高频焊接管制成，设计压力为1.97MPa，盘管焊接、组装和热浸锌后在水中经2.5MPa的气密性试验三次以确保无泄漏。装配完毕后整体经超厚热浸锌处理。盘管沿制冷剂流向倾斜便于液体派出，盘管压力降较低。

Condensing coil pipe is made of high quality 25mm seamless steel tube or 26.7mm elliptic type high frequency welding pipe. Design pressure is 1.97MPa. Go through the gas leakage test for three times under 2.5MPa in water after coil pipe welding, assembly and hot dip galvanizing, to ensure there's no leakage. After the completion of the whole assembly, then get super thickness hot dip galvanizing treatment. Coil pipe lean to the direction which cryogen flows, convenient for liquid dispatch, and coil pipe pressure drop lower.

High efficient dehydrator



高效脱水器

蒸发式冷凝器 +

Evaporative Condenser

■ 安装使用说明 / Instructions For Installation And Usage

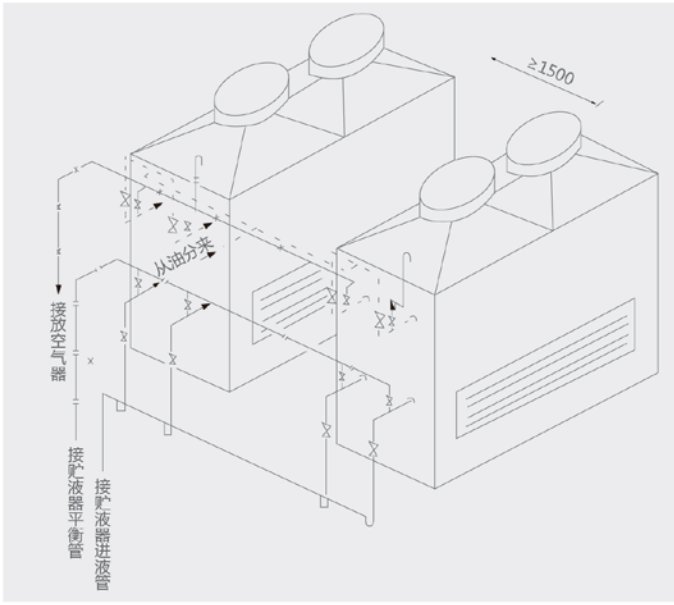
- 蒸发式冷凝器宜安装在空气温湿度适宜、屋顶空气流通的地域，也可在地平面、空气畅流、安装高度符合制冷工艺要求的场合。
Evaporative condenser should be installed in the place that is suitable for air temperature and humidity and roof air circulation area,also in the ground level, air flow, the place installation height meets the requirements of refrigerating process.

- 安装接管图请参阅附图（一）进行

•Installation and pipe connecting drawing please refer to Drawing (1)

▲ 管道、设备安装要求如下：

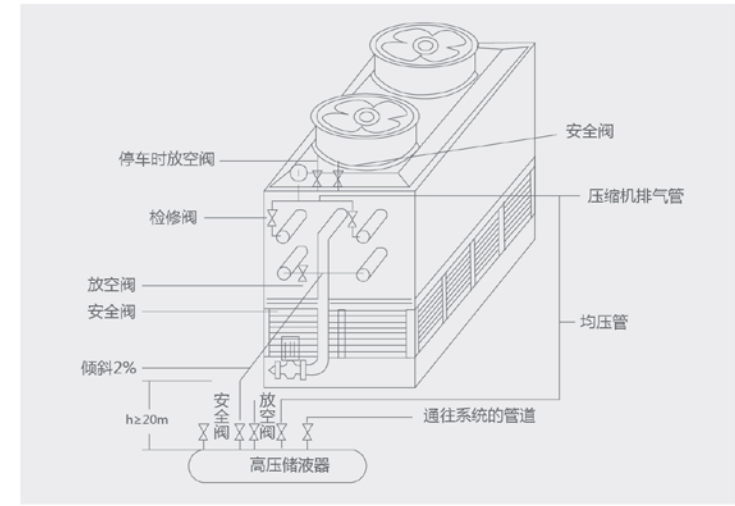
- 1) 出液阀门应垂直安装，进汽阀门可以水平或垂直安装。
 - 2) 出液管至贮存液桶前设一个U形存液弯头，以保证多台冷凝器之间有相同的压降。单台冷凝器可不设存液弯头。
 - 3) 冷凝器和贮液桶之间有一根平衡管，可以在水平出液管上方接出，以保证贮液桶中的压力稳定和液体能畅流到贮液桶。
 - 4) 多台冷凝器之间应保持1.5M距离，以保持外界空气顺利进入设备。
- 1) The liquid outlet valve should be installed vertically, the gas inlet valve can be installed horizontally or vertically.
 - 2) The liquid outlet pipe is provided with a U shaped liquid storage elbow before the liquid storage tank, so as to ensure the same pressure drop between multiple condensers. It's not necessary to set a liquid storage elbow in single condenser.
 - 3) There's a balance pipe between condenser and liquid storage tank which can be connected above the horizontal outlet pipe to ensure the pressure in the liquid storage tank is stable and the liquid can flow into the liquid storage tank.
 - 4) 1.5M distance should be kept between each condenser in order to keep ambient air entries into the equipment successfully.



附图（一） / Drawing (1)

- 本器长轴方向宜安装在主导风向不大于40度的范围内，请参看下附图（二）

The long axis of the device should be installed in the main wind direction which should not be greater than 40 degrees, please refer to the following Drawing (2)



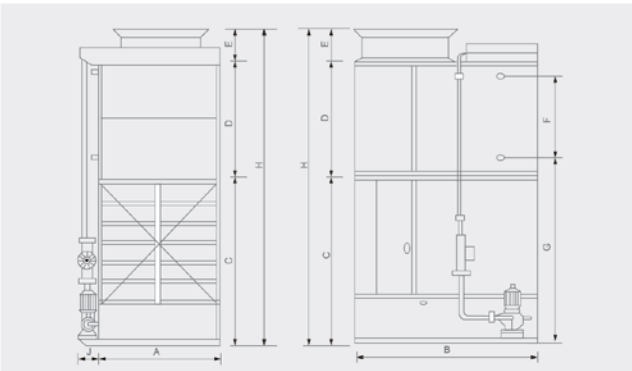
附图（二） / Drawing (2)



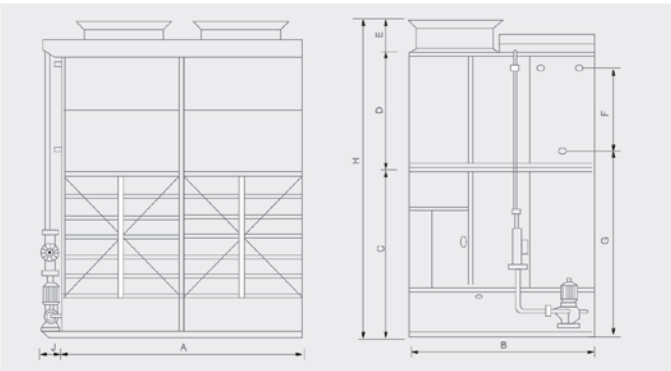
蒸发式冷凝器 —— SL型号 +

Evaporative condenser —— SL model

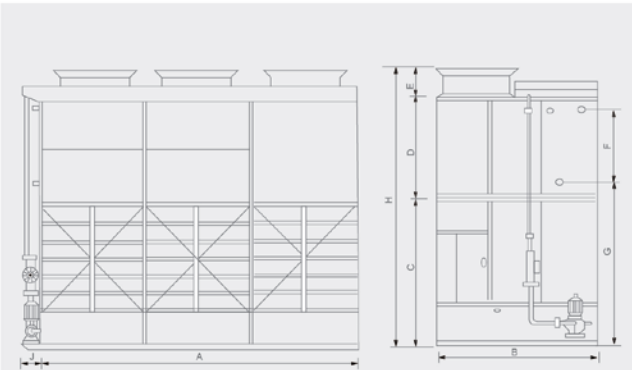
■ SL-蒸发式冷凝器外形图 / Outline Drawing Of SL - Evaporative Condenser



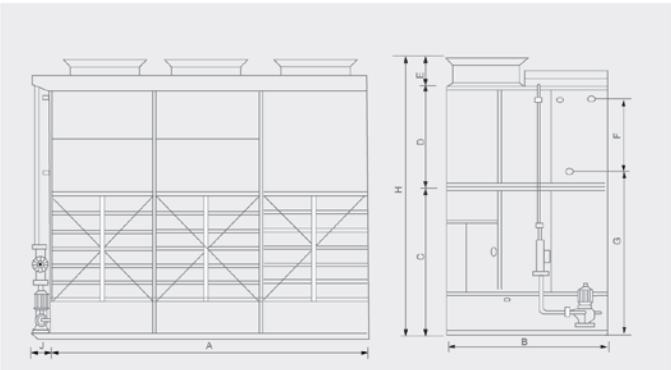
单室 / Single room
ZFL-430~780



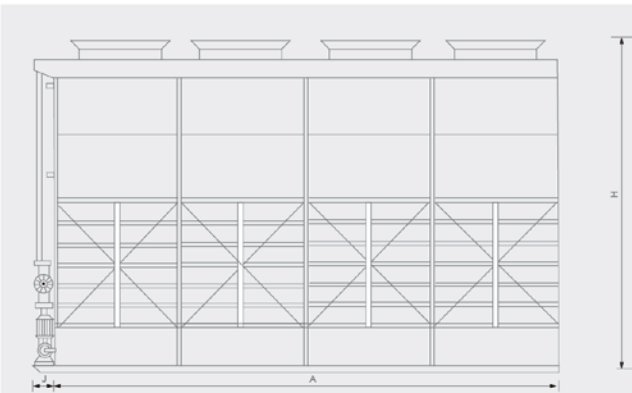
双室 / Double room
ZFL-1165~1335 ZFL-960~1490



三室 / Three rooms
ZFL-1575~1960



三室 / Three rooms
ZFL-1765~2010 ZFL-2140~2620



四室 / Four rooms
ZFL-2830~3000

蒸发式冷凝器 —— SL型号 +

Evaporative Condenser —— SI Model

■ 技术参数表 / Technical Parameter Sheet

型号 Model	名义工况排热量 Nominal working condition heat rejection	轴流风机 Axial flow fan			循环水泵 Circulating pump		(约) 重量 (Approximately) Weight	
		台数 Quantity	风量 Air volume	功率 Power	流量 Rate of flow	功率 Power	净重 Net weight	运行 Working
			m³/h	kw	m³/h	kw	kg	约Kg
SL-430	430	1	45000	4	65	1.5	2900	4628
SL-475	475	1	45000	4	65	1.5	3100	4830
SL-495	495	1	45000	4	65	1.5	3200	4940
SL-550	550	1	60000	5.5	65	1.5	3250	5666
SL-595	595	1	60000	4	65	1.5	3350	5816
SL-670	670	1	71000	5.5	80	2.2	3420	6208
SL-700	700	1	71000	5.5	80	2.2	3500	6300
SL-735	735	1	71000	5.5	80	2.2	3600	6420
SL-780	780	1	77000	5.5	80	2.2	3650	6650
SL-870	870	2	2X45000	2X4	80	2.2	3700	7686
SL-940	940	2	2X45000	2X4	130	3	3750	7660
SL-960	960	2	2X45000	2X4	130	3	3800	7710
SL-1000	1000	2	2X45000	2X4	130	3	3850	7860
SL-1050	1050	2	2X45000	2X4	130	3	4000	7970
SL-1165	1165	2	2X60000	2X5.5	130	3	4100	8796
SL-1285	1285	2	2X60000	2X5.5	130	3	4400	8990
SL-1335	1335	2	2X71000	2X5.5	130	3	4450	9290
SL-1420	1420	2	2X71000	2X5.5	170	4	4750	9740
SL-1490	1490	2	2X71000	2X5.5	170	4	4850	9940
SL-1575	1575	3	3X45000	3X4	170	4	5100	10788
SL-1620	1620	3	3X45000	3X4	170	4	5200	11963
SL-1690	1690	3	3X60000	3X5.5	170	4	5400	12235
SL-1765	1765	3	3X60000	3X5.5	170	4	5800	13674
SL-1935	1935	3	3X71000	3X5.5	170	4	6300	14347
SL-2010	2010	3	3X71000	3X5.5	170	4	6500	14614
SL-2140	2140	3	3X71000	3X5.5	230	5.5	6750	15682
SL-2245	2245	3	3X71000	3X5.5	230	5.5	6900	15940
SL-2350	2350	3	3X77000	3X5.5	230	5.5	7100	16439
SL-2620	2620	3	3X77000	3X5.5	230	5.5	7800	17415
SL-2830	2830	4	4X71000	4X5.5	230	5.5	8200	18030
SL-2860	2860	4	4X71000	4X5.5	230	5.5	8300	20248
SL-3000	3000	4	4X71000	4X5.5	230	5.5	9000	20948

注： 本公司产品不断改良， 以上数据仅供参考 Remark: Our company's products keep being improved continuously, the above data are for reference only.

蒸发式冷凝器 —— SL型号 +

Evaporative Condenser —— SI Model

■ 外形尺寸、接管尺寸图标 / Outline Dimension, Pipe Connecting Dimension Icon

型号 Model	尺寸 Dimension								补充水管 Supplementary waterpipe	排污管 Sewage pipe	溢流管 Overflow pipe	进气管 Gas inlet pipe	出液管 Liquid outlet pipe
	A	B	C	D	E	F	H	G					
SL-430	1830	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-475	1830	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-495	1930	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-550	1930	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-595	1930	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-670	1930	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-700	1930	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-735	1930	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-780	2000	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-870	3580	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-940	3580	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-960	3580	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-1000	3580	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-1050	3580	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-1165	3780	2700	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-1285	3780	2700	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-1335	3780	2700	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-1420	3780	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-1490	3780	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	2DN100	DN100
SL-1575	5320	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-1620	5320	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-1690	5320	2400	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-1765	5620	2700	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-1935	5620	2700	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-2010	5620	2700	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-2140	5620	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-2245	5620	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-2350	5780	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-2620	5780	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-2830	5780	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-2860	7465	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100
SL-3000	7465	3000	2050	1950	500	1380	4500	2390	DN25	DN50	DN25	4DN100	2DN100

注： 本公司产品不断改良， 以上数据仅供参考 Remark: Our company's products keep being improved continuously, the above data are for reference only.

蒸发式冷凝器——NL型号

Evaporative Condenser —— NI Model

产品特点介绍 / Product Features Introduction

- NL系列蒸发式冷凝器是我公司科研人员参照国外先进技术潜心研究并经多名专家指导而开发的新一代制冷设备。
- NL series evaporative condenser is new generation of refrigerating equipment, which is developed by our scientific research personnel with reference to foreign advanced technology.

投资省，安装方便 Less investment, easy installation

- 蒸发式冷凝器设计精巧。结构紧凑，集壳管式冷凝器，冷却塔，循环水池，循环水泵于一体，占地小，重量轻，耐腐蚀，整体安装方便，可以最大限度地降低安装工程量，投资低于使用其他冷凝方式的总费用。
- The evaporative condenser has exquisite design and compact structure.Shell-and-tube type condenser, cooling tower,circulating tank and circulating waterpump are integrated into a whole machine.It has advantages of small footprint, light weight, corrosion resistance, easy installation,which can maximum reduce the amount of installation work, and make investment lower than the total cost of using other condensation mode.

高效传热盘管 / High Efficiency Heat Exchange Coil Pipe

- NL蒸发式冷凝器采用国外先进技术，盘管采用椭圆形无缝管，它能增大管子与水接触的表面积，缩小管子间距，减少空气流阻力，使热交换更充分，是一种高效传热盘管。
- NL evaporative condenser adopts foreign advanced technology.The coil pipe adopts oval seamless tube which can increase the contact surface area of the pipe and water,reduce pipe spacing,reduce air flow resistance and make heat exchange more fully.It's a high efficiency heat exchange coil pipe.

高效水分配置系统 / High Efficient Water Distribution System

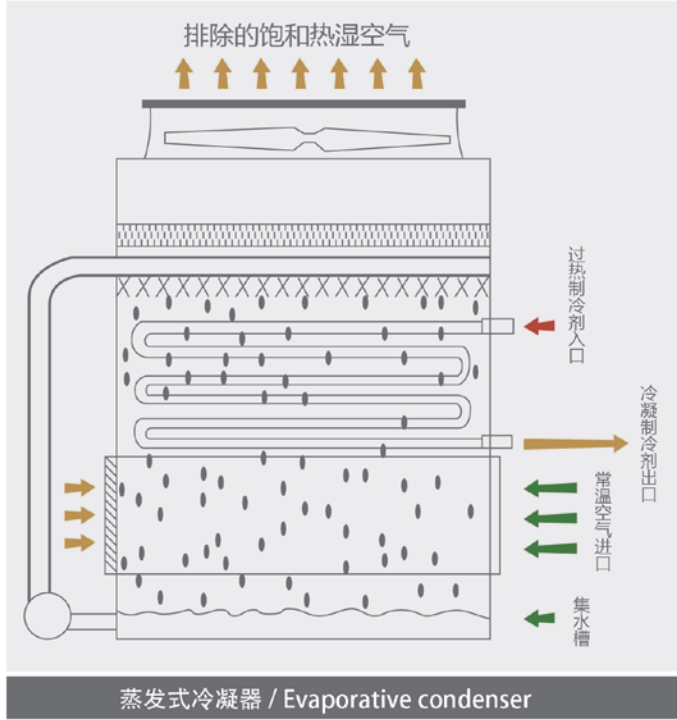
- NL蒸发式冷凝器装有超大流量的防堵大喷嘴，能均匀喷雾状的水覆盖盘管，在风机的吸力下造成负压状态，致使雾状的水蒸发产生蒸发潜热。水、空气通过管壁与制冷剂进行充分的热交换，带走热量。
- NL evaporative condenser is equipped with a super large flow anti clogging nozzle which can spray well-distributed mist water to cover the coil pipe.Negative pressure state is caused under the suction of the blower, and evaporate the mist water producing the vaporization heat.Water and air have adequate heat exchange with cryogen through the pipe wall,then take away the heat.

运行费用低 / Low Operating Costs

- NL蒸发式冷凝器装有高校PVC挡水部件，热空气中的水被挡水板截住，进入集水槽继续循环使用，水飘失率低。配置的喷淋水泵流量大，功率小，进入冬季可停开水泵，单开风机，运行时比壳管式冷凝器更节电，节水。由于制作采用超厚度整体热浸锌工艺，外壳为双层隔热套式，面板均为防腐材料，设备无需维修，因此运行费用低。

The NL evaporative condenser is equipped with high efficient PVC water blocking parts,the water in the hot air will be stopped by the water blocking plate, and then enters into the water collecting tank to be recycled,low water loss rate.The equipped spray pump has ample flow but small power.The waterpump can be stopped when goes into winter.Single blower is more energy-saving and water-saving than shell-and-tube type condenser when running. Due to the adoption of super thick whole hot dip galvanizing treatment,the shell is double layer heat insulation sleeve type,panels are all anti-corrosion materials.The equipment does not need to be repaired which means the running cost is low.

运行原理图 / Operation Principle Diagram



蒸发式冷凝器——NL型号

Evaporative Condenser —— NI Model

技术参数表 / Technical Parameter Sheet

型号 Model	名义工况排热量 Nominal working condition heat rejection	轴流风机 Axial flow fan			循环水泵 Circulating water pump		重量 Weight
		台数 Quantity	风量 Air volume	功率 Power	流量 Rate of flow	功率 Power	净重 Net weight
			m³/h	kw	m³/h	kw	kg
NL-250	250	1	25000	2.2	34	0.75	1950
NL-280	280	1	25000	2.2	34	0.75	2000
NL-300	300	1	30000	2.2	34	0.75	2185
NL-350	350	1	30000	2.2	34	0.75	2300
NL-380	380	1	40000	3	42	1.1	2450
NL-400	400	1	40000	3	42	1.1	2600
NL-430	430	1	45000	4	42	1.1	2700
NL-450	450	1	45000	4	65	1.5	2900
NL-500	500	1	45000	4	65	1.5	3150
NL-600	600	1	71000	5.5	80	2.2	3800
NL-650	650	1	71000	5.5	80	2.2	4300
NL-800	800	1	77000	5.5	130	3	4850
NL-950	950	2	2X45000	2x4	130	3	5000
NL-1000	1000	2	2x45000	2x4	130	3	5300
NL-1200	1200	2	2x71000	2x5.5	130	3	5600
NL-1500	1500	2	2x77000	2x5.5	170	4	7100
NL-1600	1600	2	2x77000	2x5.5	170	4	8800
NL-1800	1800	3	3x71000	3x5.5	170	4	9400
NL-2000	2000	3	3x71000	3x5.5	170	4	9650
NL-2400	2400	3	4x71000x	3x5.5	230	5.5	10300

外形尺寸、接管尺寸图标 / Outline Dimension,pipe Connecting Dimension Icon

型号 Model	尺寸 Dimension				补充水管 Supplementary Waterpipe D3	排污管 Sewage Pipe D5	溢流管 Overflow Pipe D4	进气管 Gas Inlet Pipe D1	出液管 Liquid Outlet Pipe D2
	A	B	C	H					
NL-250	2300	1400	500	3300	DN25	DN50	DN25	DN100	DN100
NL-280	2300	1500	500	3300	DN25	DN50	DN25	DN100	DN100
NL-300	2300	1600	500	3300	DN25	DN50	DN25	DN100	DN100
NL350	2300	1700	500	3300	DN25	DN50	DN25	DN100	DN100
NL-380	2300	1800	500	3300	DN25	DN50	DN25	DN100	DN100
NL-400	2500	1400	500	3300	DN25	DN50	DN25	DN100	DN100
NL-430	2500	1500	500	3300	DN25	DN50	DN25	DN100	DN100
NL-450	2500	1600	500	3300	DN25	DN50	DN25	DN100	DN100
NL-500	2500	1600	500	3300	DN25	DN50	DN25	2DN100	2DN100
NL-600	2500	2000	500	3300	DN25	DN50	DN25	2DN100	2DN100
NL-650	2900	2150	500	3300	DN25	DN50	DN25	2DN100	2DN100
NL-800	3600	2100	500	3500	DN25	DN50	DN25	2DN100	2DN100
NL-950	3600	2300	500	3500	DN25	DN50	DN25	2DN100	2DN100
NL-1000	3600	2400	500	3500	DN25	DN50	DN25	2DN100	2DN100
NL-1200	3400	2900	500	3500	DN25	DN50	DN25	3DN100	3DN100
NL-1500	3860	2900	500	3500	DN25	DN50	DN25	3DN100	3DN100
NL-1600	4200	2900	500	3500	DN25	DN50	DN25	4DN100	4DN100
NL-1800	4700	2900	500	3500	DN25	DN50	DN25	4DN100	4DN100
NL-2000	5800	2900	500	3500	DN25	DN50	DN25	5DN100	5DN100
NL-2400	6800	2900	500	3500	DN25	DN50	DN25	6DN100	6DN100

注：

1：表中规格数据只供参考，机组的设计将随产品的发展有所变更，修改不另行通知。（请以我公司随机组提供的技术文件为准）

2：制冷剂冲罐量是指在标准运行工况下制冷剂R717的冲罐量，要使用R22为制冷剂确定冲罐量时请乘以1.93；要使用R134A为制冷剂确定冲罐量时请乘以1.98。

Remark：

- The specifications and data in the sheet are for reference only.The design of the unit will be changed with the development of the product.There will not be notice if revise.(Please refer to the technical documents provided by our random group)
- Cryogen tank volume means tank volume of cryogen R717 under standard operating condition.Please multiply by 1.93 if using R22 as assured cryogen tank volume.And please multiply by 1.98 if using R134A as assured cryogen tank volume.

注：

表中规格数据只供参考，机组的设计将随产品的发展有所变更，修改不另行通知。（请以我公司随机组提供的技术文件为准）

Remark：

- The specifications and data in the sheet are for reference only.The design of the unit will be changed with the development of the product.There will not be notice if revise.(Please refer to the technical documents provided by our random group)



SL-ZDLM型电动冷库门

SL-zdIm Model Electric Refrigerator Door

概述 / Outline

- SL-ZDLM型系列电动冷库门，引进国外先进技术并结合国内用户实际使用状况研制而成的目前国内最新型冷库门，该门结构合理，造型美观，性能优越，是减轻冷库工作人员的劳动强度和冷库进出货物实行机械化操作最理想的配套设备。

SL-ZDLM model electric refrigerator door,foreign advanced technology is introduced and combined with the actual use of domestic users to develop the status of the latest domestic cold storage door.The utility model has the advantages of reasonable structure, beautiful appearance and superior performance. It is the most ideal equipment for reducing the labor intensity of the cold storage workers and the mechanical operation of the cold storage in and out of the goods.

适用范围 / Application Scope

- 适用于温度为-40℃~+50℃的普通冷藏库，冻结间库等。

It is suitable for the common cold storage room and freezing room etc. with the temperature of -40℃~+50℃.。

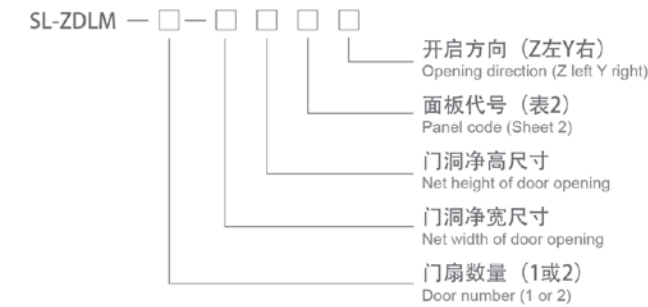
结构特点 / Design Features

- 门体：门体的结构是我公司经过多年研究后的一个重大突破，为国内首创。
 - a.门扇：采用全封闭整体无框架结构，从根本上解决了钢木结构或玻璃钢结构冷库门笨重，木材不防腐、防潮、玻璃钢对食品有污染等缺点，门正面边角加工成弧形，门体极其坚固，轻便可靠。
 - b.面板：采用优质SUS304不锈钢板或彩钢板。
 - c.保温：高压发泡机自动灌注聚氨酯，有可靠的保温隔热性能。
- 密封条：采用两道我厂特质的耐低温、耐油、高弹力橡胶密封条。
- 电加热：36v或220V自动恒温PTC电加热。
- 轨道：高强度变线式铝合金，尼龙轮，行走平稳，开启时自行上升并离开门框，关闭时自行下降并压紧门框。
- 电机：铝合金外壳，电机同减速器为一整体。
 - 380V 0.55KW 50H.
- 离合器：电磁离合，停电时仍能手动开启自如。
- 速比：1:40
- 开启速度：0.30m/S（比链传动快0.10m/S）。
- 传动：齿轮齿条。
- 电路：微功耗、抗干扰逻辑电路或PLC控制电路。
- 开关：拉线、按钮、遥控。
- 安全：
 - a、当员工误锁在库内时可旋转内把手脱险；
 - b、门在关闭时感应到物体即后退或停止。

型号说明 / Model Description

- SL-ZDLM型系列电动冷库门，引进国外先进技术并结合国内用户实际使用状况研制而成的目前国内最新型冷库门，该门结构合理，造型美观，性能优越，是减轻冷库工作人员的劳动强度和冷库进出货物实行机械化操作最理想的配套设备。

SL-ZDLM model series electric refrigerator door,foreign advanced technology is introduced and combined with the actual use of domestic users to develop the status of the latest domestic cold storage door.The utility model has the advantages of reasonable structure, beautiful appearance and superior performance. It is the most ideal equipment for reducing the labor intensity of the cold storage workers and the mechanical operation of the cold storage in and out of the goods.



例/Example：SL-ZDLM-1-1220AZ

表示：单扇电动冷库门，门洞净空尺寸：宽1200mm,高2000mm。开启方向为左开，门正，侧面为不锈钢板，反面为彩钢板

Said: Single electric refrigerator door,net vacancy of door opening: width 1200mm,height 2000mm.The opening direction is left open, the door is straight, the side face is stainless steel plate, the reverse side face is color steel plate.

•Door body: The structure of the door is a major breakthrough of our company after years of research, is the domestic pioneering.

a.Door leaf: The fully enclosed whole frameless construction, fundamentally solve the structure of wood or glass steel structure of refrigerator door too heavy, wood no corrosion proof, non-moistureproof,and glass steel has disadvantages such as pollution of food.The front side edge of the door is processed into an arc, and the door body is extremely firm, light and reliable.

b.Panel: Use high quality SUS304 stainless steel sheet and plate or color steel plate.

c.Heat preservation: High pressure foaming machine automatically pouring polyurethane, with reliable insulation performance.

•Sealing strip: Use two idiosyncratic low temperature resistant, oil resistant, high elastic rubber sealing strips produced by our company.

•Electric heating: 36v or 220V automatic constant temperature PTC electric heating.

•Track: High strength variable line type aluminum alloy, nylon wheel, running smoothly. open up and leave the door frame, closed down and press the door.Rise voluntarily and leave the door frame when opening,drop voluntarily and press the door frame.

•Electric machinery: Aluminum alloy shell, motor and reducer are an integrated whole.

380V 0.55KW 50H.

•Clutch: Electromagnetic clutch,can still be manually opened when power cut

•Speed ratio: 1:40

•Opening speed: 0.30m/S（Faster than chain transmission 0.10m/S）。

•Transmission: gear and rack.

•Electric circuit: micro power,anti-jamming logic circuit or PLC control circuit.

•Switch: bracing wire,button,remote control.

•Security: a- When the staff is mistakenly locked in the refrigeratory ,he can turn the rotate inside handle to come out.

b- The door will go back or stop if inducing objects while being closed.

表/Table 1：

门洞净空Net vacancy of door opening【宽(W)mmX 高(H)mm】	代号/Code
900x2000单扇/Single fan	1-0920
1200x2000单扇/Single fan	1-1220
1500x2200单扇/Single fan	1-1522
1600x2200单扇/Single fan	1-1622
1800x2500单扇/Single fan	1-1825
2100x2700单扇/Single fan	1-2127
2400x2700单扇/Single fan	1-2427
2600x3000双扇/Single fan	2-2630
3000x3000双扇/Single fan	2-3030

表/Table 2：

面板 Panel	面板材料 Panel material
A	正、侧面为不锈钢板，反面为彩钢板 The front and side face are stainless steel plate, the reverse side face is color steel plate.
B	正、侧、反面均为不锈钢板 The front ,side and reverse face are all stainless steel plate.
C	正、侧、反面均为彩钢板 The front ,side and reverse face are all color steel plate.

定货须知：定货时必须弄清门洞净空尺寸、开启方向（人在库外正对门，向左开即为左开，反之为右开）、面板材料、门体厚度。

Ordering instructions: Net vacancy of the door opening,opening direction(People stay outside the door facing the door, turn left is left open,otherwise is right open.),panel material and thickness of door body should be clear when ordering



SL-SDPLM型手动平行冷库门

SL-sdplm Model Manual Operation Translational Cold-storage Door

概述 / Outline

- SL-SDPLM型系列手动平行冷库门，门体通用于SL-ZDLM型系列电动冷库门，方便用户手动门升级为电动，同时该门解决了普通手动旋转冷库门开启笨重，占地大和电动冷库门造价高的诸类问题。在开启，传动、密封等方面都有独到之处，深受用户青睐。

SL-SDPLM model series manual operation translational cold-storage door,the door body is generally used in SL-ZDLM model series electric cold-storage door,which is convenient of customers to upgrade the manually operated door to electric one.At the same time, the utility model solves the problems that the ordinary manual rotating cold storage door with problems of heavy opening, large occupied area and high cost electric refrigerator door. The utility model has its own knack in opening, transmission, sealing, etc., and is well received by customers

适用范围 / Application Scope

- 适用于温度为-40℃~+50℃的普通冷藏库，冻结间库，高温箱体等。

Applicable to the temperature of -40 ℃ ~ +50 ℃ ordinary cold storage, frozen room, high temperature box and so on.

结构特点 / Design Feature

- 门体的结构是我公司经过多年研究后的一个重大突破，为国内首创。
 - a.门扇：采用全封闭整体无框架结构，从根本上解决了钢结构或玻璃钢结构冷库门笨重，木材不防腐、防潮、玻璃钢对食品有污染等缺点，门正面边角加工成弧形，门体极其坚固，轻便可靠。
 - b.面板：采用优质SUS304不锈钢板或彩钢板。
 - c.保温：高压发泡机自动灌注聚氨酯，有可靠的保温隔热性能。
- 密封条：采用两道我厂特质的耐低温、耐油、高弹力橡胶密封条。
- 电加热：36v或220V自动恒温PTC电加热。
- 轨道：高强度变线式铝合金，尼龙轮，行走平稳，开启时自行上升并离开门框，关闭时自行下降并压紧门框。
- 五金件：不锈钢精密浇铸件。

•The structure of the door is a major breakthrough of our company after years of research, is the domestic pioneering.

a.Door leaf: The fully enclosed whole frameless construction, fundamentally solve the structure of wood or glass steel structure of refrigerator door too heavy, wood no corrosion proof, non-moistureproof,and glass steel has disadvantages such as pollution of food.The front side edge of the door is processed into an arc, and the door body is extremely firm, light and reliable.

b.Panel: Use high quality SUS304 stainless steel sheet and plate or color steel plate.

c.Heat preservation: High pressure foaming machine automatically pouring polyurethane, with reliable insulation performance.

•Sealing strip: Use two idiosyncratic low temperature resistant, oil resistant, high elastic rubber sealing strips produced by our company.

•Electric heating: 36v or 220V automatic constant temperature PTC electric heating.

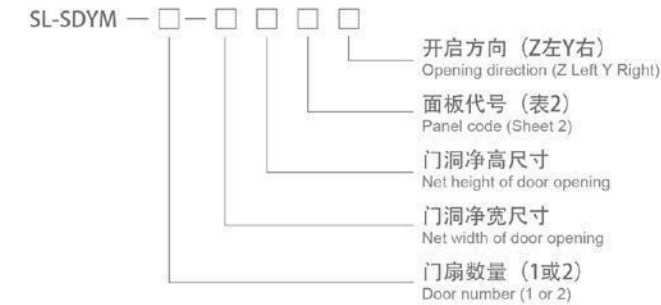
•Track: High strength variable line type aluminum alloy, nylon wheel, running smoothly. open up and leave the door frame, closed down and press the door.Rise voluntarily and leave the door frame when opening,drop voluntarily and press the door frame.

•Hardware: Stainless steel precision casting parts.

类型及规格 / Type And Specification

- 为了满足各种冷库的具体要求，按照门洞的大小可分为：小型库门、中型库门、大型库门和冻结间库门，常用规格见表1，特殊规格可代为设计加工。

In order to meet the specific requirements of various cold storage, the doors can be divided into: small-sized door, medium-sized door, large-scale door and freezing room door according to the size of the openings , common specifications are shown in Sheet 1, special specifications we can help design and process.



例/Example：SL-SDPLM-1-1220AZ

表示：单扇手动平移冷库门，门洞净空尺寸，宽1200mm，高2000mm。开启方向为左开，们正，侧面为不锈钢板，反面为彩钢板。

Said: Single manual translational cold storage door, net vacancy of door opening, width 1200mm, height 2000mm. Opening direction of left open, the door is straight,the side face is stainless steel plate, the reverse side face is color steel plate.

表/Table 1：

库门名称 Name of the door	小型库门 Small-sized door	中型库门 Medium-sized door	大型库门 Large-scale door
手动平移冷库门 Manual translational cold storage door	手动平移冷库门 Manual translational cold storage door	通行手推车 Passing handcart	通行电瓶车 Passing electromobile
门洞净空（宽x高） Net vacancy of door opening (Width x Height)	900x2000	1500x2000	1800x2500
门扇规格（宽x高） Specification of door leaf (Width x Height)	1010x2040	1610x2240	1910x2540
土建墙体洞口（宽x高） Cave dimension of civil wall (Width x Height)	1200x2150	1800x2350	2100x2650

表/Table 2：

面板 Panel	面板材料 Panel material
A	正、侧面为不锈钢板，反面为彩钢板 The front and side face are stainless steel plate, the reverse side face is color steel plate.
B	正、侧、反面均为不锈钢板 The front ,side and reverse face are all stainless steel plate.
C	正、侧、反面均为彩钢板 The front ,side and reverse face are all color steel plate.

定货须知：定货时必须弄清门洞净空尺寸、开启方向（人在库外正对门，向左开即为左开，反之为右开）、面板材料、门体厚度。

Ordering instructions: Net vacancy of the door opening,opening direction (People stay outside the door facing the door, turn left is left open,otherwise is right open),panel material and thickness of door body should be clear when ordering.



SL-ZYM型自由门⁺

SL-zym Model Free Gate

■ 概述 / Outline

- SL-ZYM型自由门，结实耐用，明亮简洁，利用门在不同开启角度重心位置不同，自然回位，适用于各类食品加工车间，空调恒温车间的需要。

SL-ZYM model free gate,firm and durable,bright and succinct.The door returns back naturally due to the different centre-of-gravity position from different opening angle.It's applicable to all kinds of food processing workshop, air conditioning constant temperature workshop.

■ 结构特点 / Design Feature

- 门体：铝合金骨架或木架，外层为不锈钢板或彩钢板，夹层为高密度聚氨酯，门板厚度为45mm，具有抗高压、防潮、不透气、耐腐蚀、导热系数低、环保的特性，门体四周配有耐磨密封条，能够保证门洞良好的密封性。
- 门铰：重型自重力式不锈钢门铰。
- 透明窗口：透明窗口为符合安全标准的有机玻璃制成，窗口尺寸及位置可调。
- 防撞板：采用特殊的合成工程材料甩铸成型，具有很好的抗冲击性和耐用性。

•Door body: Aluminum Alloy frame or wooden frame,the outer layer is a stainless steel plate or color steel plate and intercalary strata is high density polyurethane.The thickness of the door sheet is 45mm, which has the characteristics of high pressure resistance, moisture resistance, air proof, corrosion resistance, low thermal conductivity and environmental protection.The door body is surrounded with wearable sealing strip which can ensure the tightness of the door opening.

•Door hinge: Heavy type dead load stainless steel door hinge.

•Transparent window: Transparent window are made of plexiglass which compliance with safety standards,the window size and position are adjustable.

•Bumper: Use special synthetic engineering materials casting and shaping, which has good shock resistance and durability.

■ 类型及规格 / Type And Specification



面板 Panel	面板材料 Panel material
B	正、侧、反面均为不锈钢板 The front ,side and reverse face are all stainless steel plate
C	正、侧、反面均为彩钢板 The front ,side and reverse face are all color steel plate

SL-RLZYM型软帘自由门⁺

SL-RLZYM Model Soft Curtain Free Door

■ 概述 / Outline

- SL-RLZYM型软帘自由门，主要用于物流冷库冷藏缓冲间使用，通过该产品的使用，能有效的隔断库内与库外冷热空气的对流交换。

SL-RLZYM model soft curtain free door,mainly used in refrigerated buffer room of logistics refrigerator .Convection exchange between cold and hot air inside and outside the refrigerator can be effectively separated through the use of SL-RLZYM product.

■ 结构特点 / Design Feature

- 门体：a、门体采用原装进口耐低温柔性聚乙烯软板加工而成，低温零下40度，不变形，不开裂。b、门体框架采用304不锈钢板加工。C、门体下部加装有PE抗刮耐磨涂层布，避免叉车频繁出入划伤门板。
- 门框：门框采用60×40高档不锈钢方管制作。
- 精确回位铰链：铰链采用最新设计的精确回位铰链，该铰链反应灵敏，开门力矩小，回位平稳、准确。铰链为不锈钢精密铸造工艺制作，材质304。

•Door body: a.The door body is made of imported low temperature resistant flexible polyethylene soft board , no deformation and no cracking under the low temperature 40 degrees below zero.

b.304 stainless steel plate is used in the door frame.

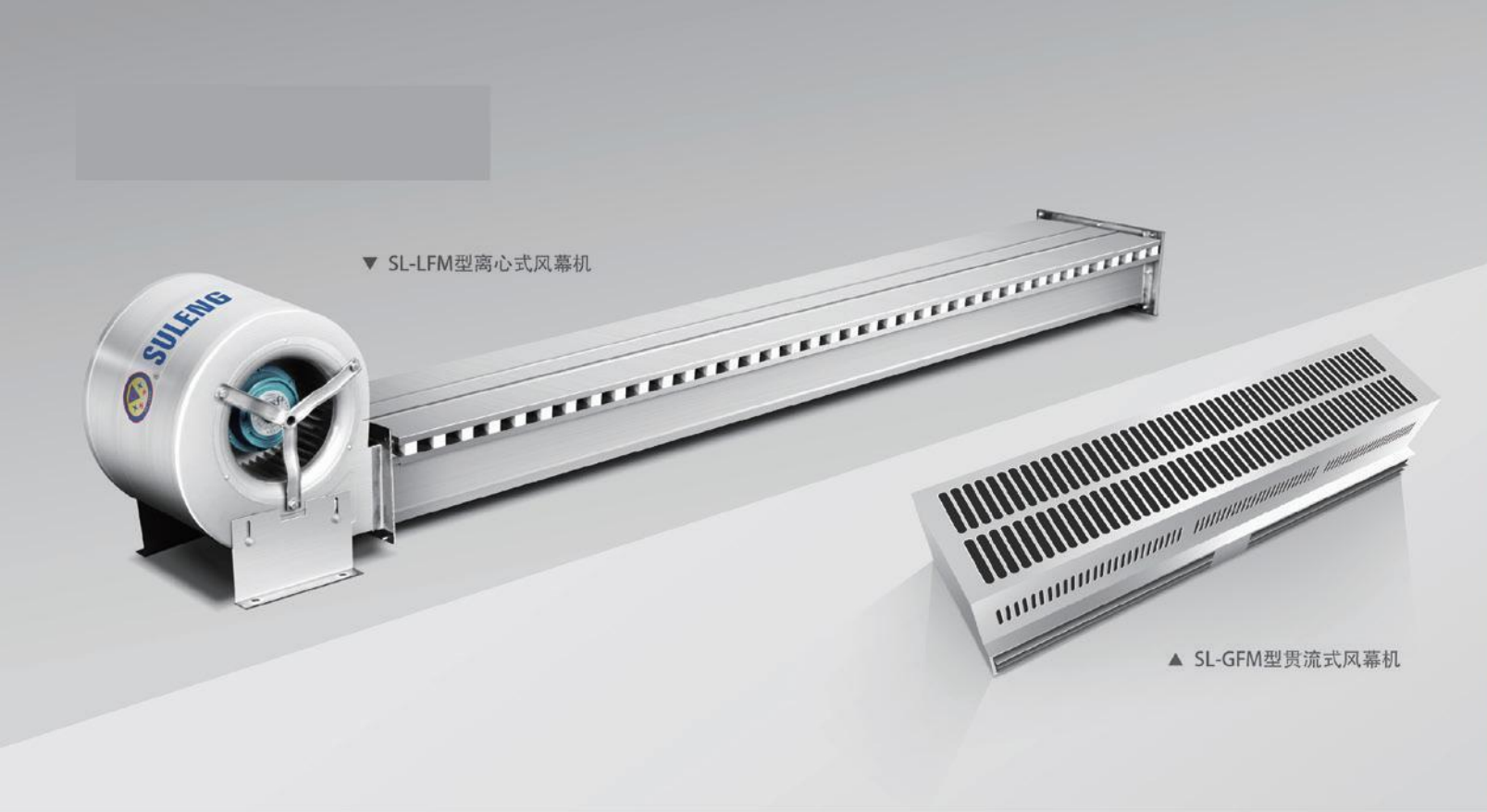
c.The bottom of the door body is equipped with PE anti-scratch and wear-resistant coating cloth to avoid frequent come in and go out of forklift scratching the door sheet.

•Door frame: The door frame is made of 60 * 40 high-grade stainless steel square tubes.

•Accurate returning hinge: The hinge uses the latest designed accurate returning hinge, which has the advantages of quick response, small opening moment and smooth and accurate returning. The hinge is made of stainless steel precision casting process with material 304.

■ 类型及规格 / Type And Specification





SL-离心式风幕机/贯流式风幕机⁺

SL- Centrifugal Air Curtain Machine / Tubular Air Curtain Machine

■ 概述 /Outline

SL-LFM型离心式风幕机、SL-GFM型贯流式风幕机是专门为冷库使用需要而设计的一款产品，通过该产品的使用，能有效地隔断冷热空气、污染空气的对流交换，并能阻隔蚊虫、蝇及其他能飞小虫的入侵。

SL-LFM model centrifugal air curtain machine- SL-GFM model tubular air curtain machine is a product specially designed for the use of cold storage. Through the use of the product, the utility model can effectively separate the convection exchange of cold& hot air with polluted air, and can prevent the invasion of mosquitoes, flies and other flying insects.

■ 主规格及技术参数 /main Specifications And Technical Parameters

SL-LFM型离心式风幕机 / SL-LFM model centrifugal air curtain machine

型号 Model		电压 (V) Voltage	频率 (HZ) Frequency	电机功率 (W) Motor power	风口风速 (M/S) Wind velocity of tuyere	风量 (m³/h) Blowing rate	噪声 (dB) Noise	重量 (kg) Weight
风筒长 Duct length	风机厂 Fan factory							
LFM900~1400	360	380	50	550	8-10	30-40	≤64	23~27
LFM1500~2000	380	380	50	750	9-11	40-53	≤66	36~39
LFM2000~2500	400	380	50	750	10-12	47-64	≤68	42~45
LFM2500~3000	400	380	50	1100	13-15	47-64	≤70	45~50

SL-GFM型贯流式风幕机 / SL-GFM model tubular air curtain machine

性能 Performance	转速 (转/分) Rotation rate (R / min)	叶轮 直径 (mm) Impeller diameter	出口 风速 (m/s) Outlet wind speed	1米 处风速 (m/s) 1 meter wind speed	2米 处风速 (m/s) 2 meter wind speed	3米 处风速 (m/s) 3 meter wind speed	风量 (m³/h) Blowing rate	电压 (V) Voltage	功率 (W) Power	噪声 (dB) Noise	外形尺寸mm (长x宽x高) Outline dimension mm (Length x Width x Height)
GFM-1809	1400	180	>16	>12.5	>11.5	>10	≥3100	380	250	≤72	950x210x260
GFM-1810	1400	180	>16	>12.5	>11.5	>10	≥3100	380	250	≤72	1050x210x260
GFM-1812	1400	180	>17.5	>14	>12.5	>10.5	≥4200	380	400	≤72	1250x210x260
GFM-1815	1400	180	>17.5	>14	>12.5	>10.5	≥4200	380	400	≤72	1550x210x260

SL-SJT型升降平台⁺

SL-sjt Model Lifting Platform

■ 概述 / Outline

- 装卸平台是实现货物快速装卸的专用辅助设备，SJT型装卸平台是我公司为冷库专门设计制造的装卸货操作平台，它的高度调节功能使货车与库房的货台之间架起一座桥梁，叉车等搬运车辆直接驶入货车内部进行货物的批量装卸，仅需单人作业，即可实现货物的快速装卸，它可使企业减少大量劳动力，提高效率，满足了现代冷链物流运输作业要求，深的用户好评。

Loading and unloading platform is a special auxiliary equipment who can realize quick loading and unloading of goods.SJT model loading and unloading platform is designed and manufactured by our company particularly for cold storage.it's height adjustment function makes a bridge between the truck and the refrigeratory.Forklift trucks and other industrial truck can directly drive into the truck to carry out the batch loading and unloading.Only single assignment could realize rapid loading and unloading.The utility model can reduce the large labor force and improve efficiency,meanwhile meet the requirements of the modern cold chain logistics transportation operation.

■ 结构特点 / Design Feature

- 全液压驱动，单键式按钮，可选配的安全锁死系统，跟HSM型滑升门配合使用，避免了一般升降平台与滑升门因工作不一致而产的事故，操作方便运行可靠。
- 采用进口密封件，保障液压系统具有优良的密封性能。
- 防滑花纹钢板台面，使平台有良好的防滑性能。
- 主梁采用矩形管回弹性设计焊接，即使重力不在平台重心，平台仍有一定平稳性，结构坚固耐用。
- 唇板与平台采用整长轴连接，强度高，可靠性好。
- 为了保障维护人员进入登车桥内部维护，产品随机配备安全支撑杆。
- 同MF型固定式门封配合使用，唇板设计为480mm宽，独特设计更为实用。

- Fully hydraulic drive, single button, optional safety lock system can be worked in with HSM model sliding doors,and the utility model can avoid the accidents caused by the inconsistency of the general lifting platform and the sliding door.The operation is convenient and reliable.
- Imported seals components to ensure the hydraulic system with excellent sealing performance.
- Anti-skid figure steel table makes the platform have good skid resistance.
- The main beam is welded with the elastic design of the rectangular pipe, even if the gravity is not at the center of gravity of the platform, the platform still has a certain stability, and the structure is firm and durable.
- The lip plate and the platform are connected with the whole long axis, which has high strength and good reliability.
- In order to ensure the maintenance personnel to enter the bridge for maintenance, the product is equipped with safety support rod.
- To work in with MF model stationary type door seal, lip plate is designed for 480mm width, and the unique design is more practical.

■ 类型及规格 / Type And Specification

- 为了满足各种冷库的具体要求，按照门洞的大小可分为：小型库门、中型库门、大型库门和冻结间库门，常用规格见表1，特殊规格可代为设计加工。
- In order to meet the specific requirements of various cold storage, the doors can be divided into: small-sized door, medium-sized door, large-scale door and freezing room door according to the size of the openings , common specifications are shown in Sheet 1, special specifications we can help design and process.

SJT —  吨位（荷载6-10吨任选）
Tonnage (Load 6-10 tons optional)

■ 技术参数 / Technical Parameter

型号 Model	荷载 (kg) Load(kg)	平台尺寸 (mm) Platform size (mm)	唇板 (mm) Lip plate(mm)	行程 (mm) Schedule		功率 (kw) Power(kw)	地坑尺寸 (mm) The pit size (mm)		
				上倾 Updip	下倾 Downdip		长 Length	宽 Width	高 Height
SJT-6	6000	2000x2200	480	400	300	0.75	2040	2280	606
SJT-8	8000	2000x2200	480	400	300	0.75	2040	2280	606
SJT-10	10000	2000x2200	480	400	300	0.75	2040	2280	606

■ 质量服务 / Quality Service

- 本厂本产品自交货之日起一年内，若产品质量有问题（非使用不当或人为造成）全额免费维修。另外有专业技术人员对本厂产品质量负责终身维护，用户若对本厂产品有任何意见，都可以与本厂联系，请多提宝贵意见。
- If there's quality problems(not used improperly or artificially) our company can provide full free maintenance within one year from the date of delivery.In addition, there are professional and technical personnel responsible for the quality of our products for lifelong maintenance. If there are any comments about the product, you can contact with our company, and please give more valuable advice.

■ 注意事项 / Matters Need Attention

- 预埋管可以从任何位置引入地坑。

Embedded pipe can be introduced into the pit from any position.
- 安装缓冲用铁膨胀螺栓固定即可。

Iron expansion bolt can be used to fix installation buffer.
- 缓冲垫安装位置应注意高度及宽度尺寸的合理，以确保缓冲垫与车辆有良好接触部位。

The cushion installation position should be paid attention to the height and width of the reasonable size, to ensure that the cushion and the vehicle has good contact position.
- 两根预埋管分别走动力电源线及控制电源线，走向视电源接线位置及操作按钮安装位置。
- 月台的高度视用户通常使用货车的车厢高度，通常1400毫米左右。
- 地坑尺寸误差应小于5毫米，地坑平面矩形方正，坑壁垂直，坑底平实。

The power supply lines and power control lines are respectively connected with the two embedded pipes to move towards the position of the visual power-line connection and the installation position of the operating button.
The usual carriage height of truck used by highly visible user of platform is usually about 1400 mm.
Deviation of pit size should be less than 5 mm.The pit plane is rectangle,vertical wall and flat at the bottom.

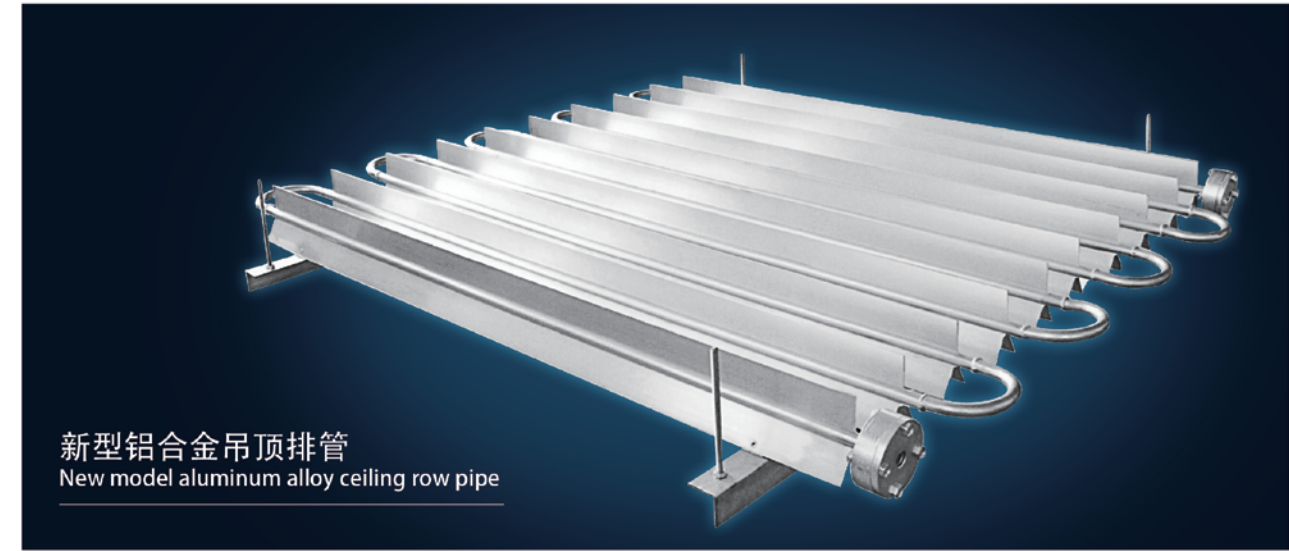
新型铝合金吊顶排管

New Model Aluminum Alloy Ceiling Row Pipe

■ 概述 / Outline

- 新型铝合金吊顶排管是我公司科研人员根据市场需求，经专家指导研制而成的新型制冷设备，该设备解决了原国内市场的无缝钢管吊顶排管诸多问题，并在结构、性能、安装方面均有独特之处，通过使用深受用户好评。

New model aluminum alloy ceiling row pipe is a new type of refrigerating equipment developed by our scientific research personnel with the experts' guidance according to the needs of the market.The utility model solves the problems of the seamless steel tube ceiling row pipe in the domestic market, and has the unique characteristics in structure,performance and installation.It is well received by users.



■ 主要特点 / Main Characteristics

- 新型铝合金吊顶排管是我公司科研人员根据市场需求，经专家指导研制而成的新型制冷设备，该设备解决了原国内市场的无缝钢管吊顶排管诸多问题，并在结构、性能、安装方面均有独特之处，通过使用深受用户好评。

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1.独特的设计 Unique Design

新型铝合金吊顶排管单管采用外翼片外形组合，主管外表带有三条加强型散热片分三角排列，即增加了有效的散热面积，又加强了单管强度。成型的铝排管平行固定，分组组合成若干个平等通道，当制冷系统启动后冷空气就会在通道内形成烟道效应面快速下沉，加快空气对流；因此有效的增加了降温效果。

Single pipe of new model aluminum alloy ceiling row pipe adopts outboard wing piece appearance combination.The surface of the main pipe is provided with three reinforced air-cooling fins which are arranged in a triangular arrangement, which increases the effective heat dissipation area and enhances the strength of the single pipe.The formed aluminum row pipes are fixed in parallel, and grouped into several equal channels.When the refrigerating system is started, the cold air will form an airflow stack effect surface in the channel and sink rapidly,which accelerates air convection.Therefore, the cooling effect is effectively increased.

2.良好的导热能力及低温性能 Good Thermal Conductivity And Low Temperature Performance

- 1) 同样的环境下：
铝管的导热系数为：210W/(m²/°C)，而钢管的导热系数为：46W/(m²/°C)，相对照可显出铝管比钢管的导热能力更优良。
- 2) 铝合金的使用温度：
下限为-269℃，而GB/T8163国际无缝钢管的使用温度下限为-29℃。目前国内低温冷藏库温一般要求在-20℃~~25℃，相对应的蒸发温度为-30℃~~35℃。由此可见，铝合金吊顶排管更能胜任超低环境的使用。

新型铝合金吊顶排管

New Model Aluminum Alloy Ceiling Row Pipe

3) 安装方便：

铝合金吊顶排管在整体重量比无缝钢管吊顶排管要轻很多，使吊装的工作更轻便、更安全，并且能减轻建筑结构载荷，安装时可分组分片组装，且带有ABS材质的模块成底座，整体组装及其方便。

4) 减少制冷剂用量：

铝合金吊顶排管是外翼片结构，其排管和制冷剂充注量要比无缝钢管吊顶排管少得多，而相对应制冷系统的辅助设备容积也相对应减少。因此，既能节省制冷剂费用又降低了制冷设备的成本。

5) 优化现场环境：

铝合金吊顶排管表面均覆抗氧化膜，使用过程中不用防腐处理，而无缝钢管吊顶排管在低温高湿的使用环境中容易生锈，需作不定期防腐处理，而且在定期融霜过程中，排管的腐朽层及霜层会一起掉落在产品或地面上，很容易污染产品，其处理过程既花费资金，又浪费时间，更影响公司的正常生产，而铝合金吊顶排管就根本不存在这些问题。

6) 融霜及气密：

铝合金吊顶排管内部均作防氧化处理，内壁光滑，管内流速快，传热效果好且不易存集油垢和污物。可采用热氟融霜或热氨融霜其效果很好。铝合金吊顶排管在制作时其测试压力达到1200kpa时，其强度试验压力为2400kpa，密封性试验压力为1600kpa，且作气压、水压、保压三道工序，气密稳定性很强。

1) Under the same condition:

Thermal conductivity of aluminium pipe is : 210W/(m²/C),but thermal conductivity of steel pipe is: 46W/(m²/C).According to the comparison, it can be shown that the aluminum pipe is better than the steel pipe.

2) Operating temperature of aluminum alloy:

The lower limit is -269℃, and lower limit of the GB/T8163 international seamless steel pipe is -29℃. At present, request for low temperature of general cold storage in domestic is -20℃~-25℃,the corresponding evaporating temperature is -30℃~-35℃.Thus, the aluminum alloy ceiling pipe can be competent for the use of ultra low environment.

3) Easy installation:

Aluminum alloy ceiling row pipe is much lighter than seamless steel tube ceiling row pipe in overall weight which makes hoisting lighter and safer and can reduce the the building structural load.The utility model can be divided into slices and assembled, and is provided with ABS material into a base when installation.Integral assembly is very convenient.

4) Reduce consumption of cryogen:

Aluminum alloy ceiling row pipe adopts outboard wing piece structure.The row pipes and filling quantity of cryogen are less than that of the seamless steel tube ceiling row pipes,the auxiliary equipment volume of the corresponding refrigerating system also reduce.Therefore, the utility model can save both cost of the cryogen and refrigerating equipment.

5) Optimize the on-site environment :

Surface of the aluminum alloy ceiling row pipe are covered with anti oxidation film,which means there's no need to do antiseptic treatment.But the seamless steel tube ceiling row pipe is easy to rust in low temperature and high humidity environment, which means needed to be do anticorrosive treatment regularly.And during the regular defrosting process, the rotten layer and frost layer of the row pipe will drop on the product or on the ground, which is easy to pollute the product.The process is not only to spend money, but also a waste of time,even affect the company's normal production.But aluminum alloy ceiling row pipe does not exist these problems.

6) Defrosting and air tightness:

Aluminum alloy ceiling row pipes all have internal anti oxidation treatment, smooth inner wall, rapid flow velocity in pipes, good heat transfer effect,grease and dirt are not easy to be deposited. The utility model has good effect on hot fluorine defrosting or hot ammonia defrosting.Test pressure of the aluminum alloy ceiling row pipe is up to 1200kpa when operating,and the strength test pressure is 2400kpa,tightness test pressure is 1600kpa.And there are three processes respectively air pressure, water pressure, pressure maintaining, which means air tight stability is very strong.

■ 注意事项 / Matters Need Attention

• 铝合金吊顶排管的冲霜：

铝合金吊顶排管采用热氨或热氟融霜，融霜时不应敲击排管。

• 铝合金吊顶排管的供液与回气：

为保障铝合金吊顶排管供液均匀，每路管道所供支路不宜过多。

• 每路铝合金吊顶排管的管道设计要求：

制冷系统为氨泵供液，纵肋型铝合金管的单路设计管道不宜超过40m；制冷系统为膨胀阀供液，纵肋型铝合金管的单路设计管道不宜超过30m；如单路设计管道过长，在单路管道末端会形成过热状态，增加阻力，影响制冷效果。

•Defrosting of aluminum alloy ceiling row pipes：

Aluminum alloy ceiling row pipes use hot ammonia or hot fluorine defrosting,the row pipes should not be knocked while defrosting.

•Liquid supply and air return of aluminum alloy ceiling row pipes:

In order to protect the aluminum alloy ceiling row pipe for liquid uniform, each pipeline for the branch should not be too much

•Piping design requirements of each aluminum alloy ceiling row pipe:

If refrigerating system is supplied by ammonia pump for liquid,single channel design of longitudinal rib type aluminum alloy pipe should not exceed 40m.If refrigerating system is supplied by expansion valve for liquid,single channel design of longitudinal rib type aluminum alloy pipe should not exceed 30m.If single channel design is too long,end of the single pipeline will be formed into over heating state, and increase resistance, so as to affect the refrigerating effect.

新型铝合金吊顶排管

New Model Aluminum Alloy Ceiling Row Pipe

■ 蒸发面积计算 / Evaporation Area Calculated

• 例：Φ21铝排长 5米x10排=50米

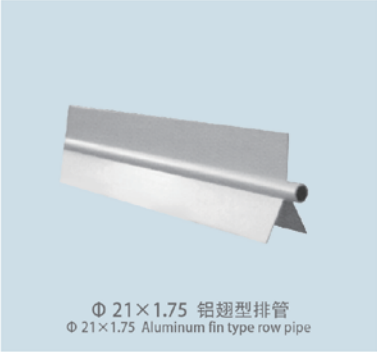
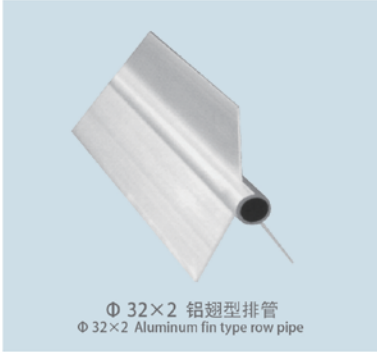
50米x0.365m²=18.25m²+弯头面积

Example: Φ21 length of aluminium row 5 m x10 =50 m
50 mx0.365m²=18.25m²+ Elbow area

• 例：Φ32铝排长 5米x10排=50米

50米x0.495m²=24.75m²+弯头面积

Example: Φ32 length of aluminium row 5 mx10=50 m
50mx0.495m²=24.75m²+Elbow area



■ 铝排管蒸发面积的计算 / Evaporation area calculation of aluminum row pipe

• 铝排蒸发面积=铝翅片管总长x翅片管外周长

Aluminum row pipe evaporation area=Total length of aluminum fin pipe x Outer circumference of fin pipe

• 例：Φ21型管 管总长x0.365m²=蒸发排管的蒸发面积

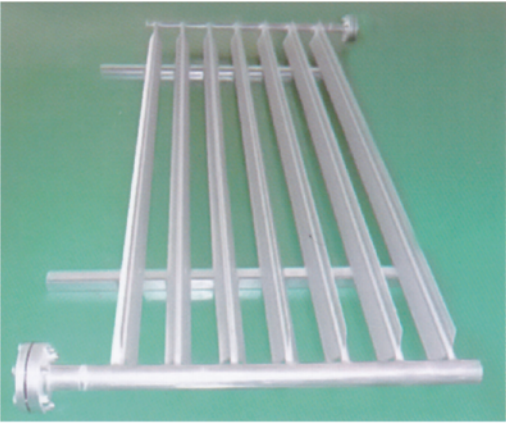
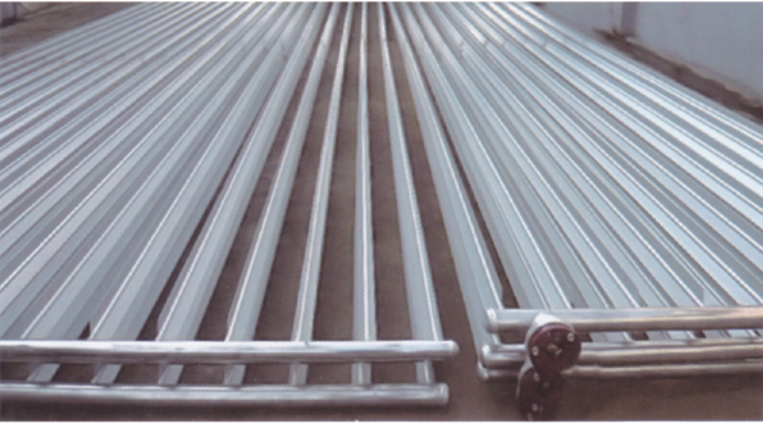
Example: Φ21 model pipe Total length of pipe x0.365m²=Evaporation area of evaporating row pipe

• 例：Φ32型管 管总长x0.495m²=蒸发排管的蒸发面积

Example: Φ32 model pipe Total length of pipe x0.495m²=Evaporation area of evaporating row pipe

* 铝排定作长度可根据用户要求制作

Ordered length of aluminium row can be customized by consumer



■ 铝排选用流程 / Aluminium Row Selection Process

• 根据《冷库设计规范》①按库容或地面面积及工艺要求的最低温度估算热负荷；②按铝排的K值计算所需的铝排总的蒸发面积；③根据所计算铝排的总蒸发面积和冷库顶面结构尺寸确定所选铝排的规格和数量。

According to the 《Code for design of cold-storage》①Estimate the thermal load according to storage capacity or ground area and minimum required temperature. ②Calculate the total needed aluminum row evaporation area due to the K value of aluminum row.③According to the calculation of the total aluminum row evaporation area and the structure dimension of the top surface of the cold storage to determine the specification and quantity of the selected aluminum row.

新型铝合金吊顶排管

New Model Aluminum Alloy Ceiling Row Pipe

■ 铝合金翅片顶排管特点 / Characteristics Of Aluminum Alloy Fin Ceiling Row Pipe

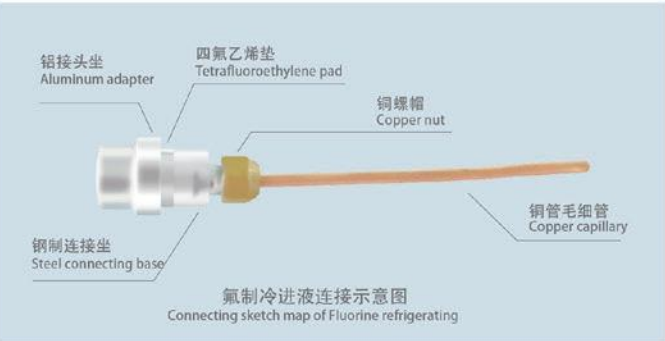
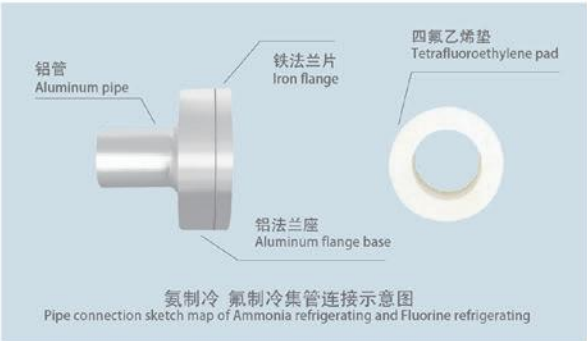
- 新型铝合金吊顶排管是我公司科研人员根据市场需求，经专家指导研制而成的新型制冷设备，该设备解决了原国内市场的无缝钢管吊顶排管诸多问题，并在结构、性能、安装方面均有独特之处，通过使用深受用户好评。

New model aluminum alloy ceiling row pipe is a new type of refrigerating equipment developed by our scientific research personnel with the experts' guidance according to the needs of the market.The utility model solves the problems of the seamless steel tube ceiling row pipe in the domestic market, and has the unique characteristics in structure,performance and installation.It is well received by users.

- 1.有良好的导热能力：
在相同的温度条件下，铝的导热系数210w/(m²/°C)，铁的导热系数46w/(m²/°C)，根据科学特殊的对比，铝的导热能力应是铁的导热能力的4.56倍。
- 2.独特的结构设计：
铝翅片排管采用一次成型，耐压高，重量轻，安装方便，建筑结构载荷小能减少建筑结构投资。
- 3.组装好后的铝排管平行固定：
组成多路平分通道，当制冷系统工作时，冷空气在通道内会形成烟道效应，加速冷气下沉，空气的对流加快，所以纵向型铝合金排管具有降温快，缩短了机组的运行时间，节省了电能的消耗。
- 4.制冷剂用量少：
铝合金翅片顶排管制冷剂的充注量比无缝钢管顶排管的充注量少的多，能节省制冷剂的充注量，节省制冷剂费用投资，制冷剂充注量的减少，使制冷系统的辅助设备容积也相对减少，制冷设备也降低了投资。
- 5.铝合翅片排管的低温性能好：
铝合金顶排管和无缝钢管顶排管，相比更适用于低温环境，根据国际GBT8163无缝钢管的使用温度下限-29℃，铝合金排管使用温度下限-269℃。
- 6.铝合金排管的管壁光滑，洁净：
对制冷剂阻力小，流速大不易生油垢，外表面抗氧化处理，使用中不用定期防腐处理，无缝钢管排管使用时间长了会生锈除霜后会随锈一起掉落到产品上，造成污染产品。

- 1.Good thermal conductivity:
Under the same temperature condition,thermal conductivity of aluminium is 210w/(m²/°C),thermal conductivity of iron is 46w/(m²/°C).According to the special scientific comparison, it can be shown that the thermal conductivity of aluminum is 4.56 times of iron.
- 2.Unique structure design:
Aluminum fin row pipe adopts one-time molding, which has characteristics of high pressurization, light weight, easy installation, small building structure load so that can reduce investment in building structures.
- 3.Assemble aluminum row pipe fixed in parallel:
Composed to multichannel deuce passageways.When the refrigerating system is working, the cold air will form an airflow stack effect surface in the channel and sink rapidly,which accelerates air convection.Thus,the longitudinal aluminum alloy row pipe has the advantages of quick cooling, shortening the running time of the unit, and saving the energy consumption.
- 4.Less cryogen dosage:
The filling quantity of cryogen of aluminum alloy fin ceiling row pipe is much less than that of seamless steel tube ceiling row pipe which can save the filling quantity and cost of cryogen.The reduction of cryogen makes the auxiliary equipment volume of the refrigerating system relatively reduced,also makes the refrigerating equipment reduced investment.
- 5.Low temperature performance of aluminum alloy fin row pipe:
Aluminum alloy ceiling row pipe and seamless steel tube ceiling row pipe , are more suitable for low temperature condition relatively.Operating temperature limit of the seamless steel tube is -29 °C and operating temperature limit of the aluminum alloy row pipe is -269 °C according to the international GBT8163 .
- 6.The pipe wall is smooth and clean:
The cryogen resistance is small, and the large flow rate makes the grease not easy to be deposited.With anti oxidation treatment outside surface,there's no need to do regular anti-corrosion treatment while operating.Seamless steel tube row pipe will get rusty after long utility time and will drop together with the rust on the product,resulting in contaminated products.

■ 铝排管的进出口配制 / Compounding Of Inlet And Outlet Of Aluminum Row Pipe



- 订货须知：1、客户可根据样本及铝排规格型号表直接定购。2、公司做铝排销售合同，客户确认。3、客户按合同要求付款。4、公司按合同要求按时发货。5、客户如需非标产品或有技术方面的疑问，可打电话向公司咨询，我们会尽快为您做出方案帮您选型。
- Ordering instructions: 1.Customers can directly order according to the sample and aluminum row specification sheet. 2.Our company make aluminum row pipe sales contract, customer confirmed. 3.Customers pay according to contract. 4.Our company deliver goods on time according to the contract. 5.If customers need non-standard products or have doubt about technical aspects, please call us, we will help you design and choose the model as soon as possible.



SL-LFF冷库专用风机

SL-lff Special Blower For Cold Storage

■ 概述 / Outline

- SL-LFF型冷库风机主要用于冷库冻结物冷藏间，冷藏间的各类制冷空调设备通风。风机按机号分为5#-8#二十三种规格，系列风量从5500-30000m³/h，全压范围从200~500Pa。

SL-LFF model blower for cold storage is mainly used for all kinds of refrigerating and air conditioning equipment ventilation in cold storage and springhouse.The blowers are classified to twenty-three specifications from 5#-8# according to the blower number,series blowing rate from 5500-30000m³/h,range of total pressure from 200~500Pa.

■ 技术参数 / Technical Parameter

型号 Model	风机直径 (mm) Diameter of the blower (mm)	风量 Blowing rate	全压Pa Total pressure Pa	电机功率KW Electrode power KW	转速r/min Speed r / min	重量Kg Weight Kg
LFF-5-1	500	6000	250	0.75	1450	55
LFF-5-2		5000	400	1.1	2800	55
LFF-6-1	600	8400	250	1.1	1150	84
LFF-6-2		12000	250	1.5	1450	84
LFF-6-3		15000	250	2.2	1450	87
LFF-6-4		10000	380	2.2	1450	87
LFF-6-5		8500	380	1.5	1450	87
LFF-7-1		10000	250	1.5	1450	102
LFF-7-2	700	16000	270	2.2	1450	105
LFF-7-3		20000	270	3	1450	112
LFF-7-4		18000	380	4	1450	112
LFF-7-5		16000	450	4	1450	112
LFF-7-6		10000	420	2.2	1450	105
LFF-8-1		21000	270	3	1450	122
LFF-8-2	800	24000	250	3	1450	130
LFF-8-3		30000	270	4	1450	150
LFF-8-4		25000	450	5.5	1450	160
LFF-8-5		20000	500	5.5	1450	160

- 上表性能指标的标准状态ct=20℃ r=50% P=760mmHg的数据，风机在冷库中运转时，其全压值可由下式换算H=[(273+20)/(273+t℃)]H标，t℃--冷库中的气温；H—在冷库中风机的全压pa，H标—标准状态的风机的全压pa。

Standard status of performance indicators on the sheet,ct=20 °C r=50% P=760mmHg.While the blower is working in the cold storage,the total pressure be converted by the formula below H=[(273+20)/(273+t℃)]H mark,t℃--Temperature in cold storage,H—Total pressure of the blower in cold storage pa,H mark—Total pressure of standard state blower pa.