

迷你自立式空调器

Mini Selfstanding Heating & Cooling Convactor

技术解决方案

TECHNOLOGY
SOLUTIONS

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Mini Selfstanding Heating & Cooling
Convactor

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3年

56个项目通过 LEED 认证

过去的三年中，我们完成了近百个项目，
其中 56 项通过 leed 认证，10 项荣获金级认证，1 项铂金级认证。



56

项目通过 leed 认证



10

项目荣获金级认证



1

项目荣获铂金级认证

In the past three years,
we have completed almost hundred of projects, where in 56 projects have been certified by LEED, 10 projects have been granted golden certification and 1 project
has been granted platinum certification.





迷你自立式空调器

Mini Selfstanding Heating & Cooling Convactor

迷你自立式空调器常布置于酒店大厅、公共空间、机场候机厅等大型空间。可按需自由布置于空间内，有效利用室内空间，提高环境舒适度；同时，部分迷你自立式空调器还具有座椅的功能，提高产品的可利用价值，促进人因环境舒适度的提升。

Mini Selfstanding Heating & Cooling Convactor is generally provided in large spaces such as hotel lobby, public space and airport lounge. It can be freely provided in spaces as required, to effectively use indoor space and improve the environmental comfort level; meanwhile, partial Mini Selfstanding Heating & Cooling Convactor can also be used for sitting, to improve utilization value of the product and increase human's comfort level in the environment.



MAIN FUNCTION AND FEATURES

产品主要功能及特点

产品特点

Product Features



温暖舒适

迷你自立式空调器通过对流换热形式对室内供热，温度分布均匀，舒适性高；

Warm and comfortable

Mini Selfstanding Heating & Cooling Convactor supplies heat to indoor space in form of heat convection and thus achieves even temperature distribution and high comfort level;



造型美观

迷你自立式空调器造型简约流畅，精致典雅，拥有诸多外观样式可供选择，不仅适用于公共和商业办公环境，同时可应用于家居环境中，增添生活情趣；

Beautiful modeling

Mini Selfstanding Heating & Cooling Convactor modeling is in simple and smooth lines, looks classic and gracious and has many appearance patterns for selection. It not only applies to public and commercial office environments but also applies to home environment to increase pleasures of life;



一体融合

迷你自立式空调器进出水管与流量调节阀隐蔽在壳体内，调节方便，装饰效果好。

Integrated

Mini Selfstanding Heating & Cooling Convactor inlet and outlet piping and flow control valve are hidden in the casing, easy to control and have good decorative effect.

产品类型

Product Type



冷暖两用型 ❄️ 🔥

使用特制表冷器，搭载全进口贯流风机，具有优异的制冷和制热效果。

Cooling and heating type

This type adopts special surface air cooler, carries with fully imported cross flow fan and thus has excellent cooling and heating effects.



强制单热型 🔥

使用优质铜铝散热元件，搭载全进口贯流风机，具有良好的制热能力。

Forced heating type

This type adopts excellent copper-aluminum radiator element, carries with fully imported cross flow fan and thus has good heating effect.



自然对流型 🔥

使用优质铜铝散热元件，通过自然对流，具有较好的制热能力。

Natural convection type

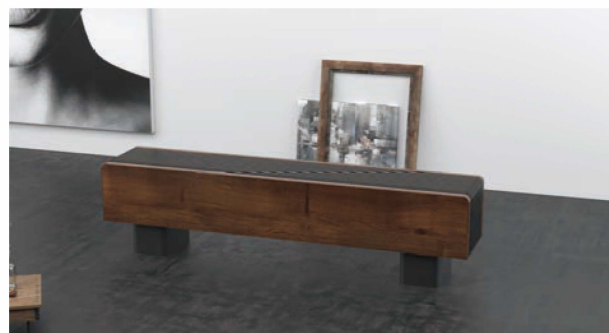
This type adopts excellent copper-aluminum radiator element and has good heating effect by taking advantage of natural convection.



01 冷暖两用型 ❄️☀️

冷暖型迷你自立式空调器外形精致雅观，具有较强的艺术性彰显性。机组内置低噪高效贯流风机，以强制对流形式向室内供冷供热，空间温度分布均匀，极大地提高室内舒适度。该款空调器广泛适用于商业建筑、民用建筑等各类建筑群体。

冷暖型迷你自立式空调器，亦可连续布置，佛瑞德技术团队可结合空间功用、设计风格和客户要求制定出优秀的技术解决方案，精心点缀您的生活空间。



Freestanding convector with fan for heating/cooling convection

Warm - and - cool mini - self - standing air conditioner exquisite appearance, with a strong artistic highlight. The unit is equipped with a low noise and high efficiency cross-flow fan, which provides heating and cooling to the room in the form of forced convection. The air conditioner is widely used in commercial buildings, civil buildings and other building groups.

Warm and cool mini self-standing air conditioner can be arranged continuously, Freedom's technical team can combine space function, design style and customer requirements to develop excellent technical solutions, carefully decorate your living space.



Type	Length mm	Width mm	Height mm	Fan Speed	Air Flow m ³ /h	SPL dB(A)	Power W	Cooling output W	Heating Output W
FSTCK190-1500/240	1500	240	190	100%	252	39	16	882	1675
				80%	214	36	15	786	1493
				60%	176	34	12	647	1229
				40%	139	32	10	511	970
FSTCK190-2250/240	2250	240	190	100%	504	40	32	1720	3268
				80%	428	37	28	1533	2912
				60%	353	35	23	1261	2395
				40%	277	33	19	997	1894
FSTCK190-3000/240	3000	240	190	100%	756	42	48	2558	4857
				80%	643	39	42	2280	4329
				60%	529	36	35	1877	3564
				40%	416	35	27	1482	2813
FSTCK220-1500/290	1500	290	220	100%	403	40	32	1227	2331
				80%	343	37	28	1106	2101
				60%	282	35	23	944	1794
				40%	222	33	19	777	1477
FSTCK220-2250/290	2250	290	220	100%	806	41	64	2392	4545
				80%	685	38	55	2157	4096
				60%	564	36	46	1841	3498
				40%	444	34	36	1515	2881
FSTCK220-3000/290	3000	290	220	100%	1210	43	96	3558	6760
				80%	1028	48	83	3207	6093
				60%	847	36	68	2738	5207
				40%	665	35	54	2254	4283
				20%	544	34	44	1946	3698

Cooling Condition: 7/12/27°C; Heating Condition: 60/50/21°C.

Type	Length mm	Width mm	Height mm	Fan Speed	Air Flow m ³ /h	SPL dB(A)	Power W	Cooling output W	Heating Output W
FSTCK260-1500/340	1500	340	260	100%	490	42	51	1715	3258
				80%	416	39	44	1543	2931
				60%	343	37	37	1349	2563
				40%	269	35	29	1163	2209
				20%	220	34	24	1046	1987
FSTCK260-2250/340	2250	340	260	100%	1142	43	102	3344	6353
				80%	971	40	88	3008	5716
				60%	800	39	72	2630	4998
				40%	628	38	57	2267	4308
				20%	514	36	47	2039	3875
FSTCK260-3000/340	3000	340	260	100%	1469	45	153	4974	9941
				80%	1248	42	131	4475	8501
				60%	1028	40	108	3912	7433
				40%	808	38	85	3372	6406
				20%	661	37	70	3303	5762



02 强制单热型

强制单热型迷你自立式空调器外观继承于迷你·雅散热器，但机组内部在迷你·雅散热器的基础上增设低噪高效贯流风机，既能保证散热单元与气流之间高效换热，又能将热量源源不断输入室内空间，提高室内舒适度。该款空调器广泛适用于各类的民用建筑群体，可实现大空间和局部供热。

Fan-assited freestanding convector for forced heating only

The appearance of Forced heating type mini self-powered convection device inherits from mini -- elegant radiator, but low noise and high efficiency cross-flow fan is added on the basis of mini -- elegant radiator inside the unit, which can not only ensure efficient heat exchange between heat dissipation unit and airflow, but also continuously input heat into indoor space to improve indoor comfort. The convection unit is widely applicable to all types of civil building groups, which can achieve large space and local heating.



Type	Length mm	Width mm	Height mm	Fan Speed m ³ /h	SPL dB(A)	Power W	Heating Output			
							95/70/18°C	80/60/18°C	60/45/18°C	
FSTCQ190-1500/240	1500	240	190	100%	252	38	16	2678	2142	1344
				80%	214	37	15	2425	1926	1212
				60%	176	35	12	2112	1702	1056
				40%	139	34	10	1760	1396	881
				20%	113	33	8	1506	1205	753
FSTCQ190-2250/240	2250	240	190	100%	504	39	32	5222	4176	2621
				80%	428	38	28	4728	3755	2363
				60%	353	37	23	4118	3318	2059
				40%	277	36	19	3432	2722	1717
				20%	227	34	15	2936	2349	1468
FSTCQ190-3000/240	3000	240	190	100%	756	40	48	7767	6212	3898
				80%	643	39	42	7034	5585	3514
				60%	529	38	35	6124	4935	3062
				40%	416	39	27	5104	4048	2554
				20%	340	40	23	4367	3494	2183
FSTCQ220-1500/290	1500	290	220	100%	403	40	32	4164	3224	2082
				80%	343	38	28	3765	2952	1943
				60%	282	37	23	3313	2632	1692
				40%	222	36	19	2725	2294	1480
				20%	181	35	15	2332	1991	1273
FSTCQ220-2250/290	2250	290	220	100%	806	40	64	7911	6125	3955
				80%	685	38	55	7153	5608	3691
				60%	564	37	46	6294	5000	3214
				40%	444	36	36	5177	4358	2812
				20%	363	35	30	4430	3782	2418
FSTCQ220-3000/290	3000	290	220	100%	1210	41	96	11867	9188	5933
				80%	1028	40	83	10730	8413	5537
				60%	847	39	68	9442	7501	4822
				40%	665	38	54	7766	6537	4218
				20%	544	37	44	6646	5674	3628

Type	Length mm	Width mm	Height mm	Fan Speed m ³ /h	SPL dB(A)	Power W	Heating Output			
							95/70/18°C	80/60/18°C	60/45/18°C	
FSTCQ260-1500/340	1500	340	260	100%	490	42	51	4818	3756	2205
				80%	416	41	44	4298	3436	2016
				60%	343	39	37	3773	3064	1829
				40%	269	38	29	3183	2601	1614
				20%	220	36	24	2713	2273	1466
FSTCQ260-2250/340	2250	340	260	100%	1142	42	102	9298	7249	4601
				80%	971	41	88	8295	6631	4226
				60%	800	39	72	7281	5913	3792
				40%	628	38	57	6143	5019	3367
				20%	514	37	47	5236	4386	3041
FSTCQ260-3000/340	3000	340	260	100%	1469	42	153	13875	10817	6284
				80%	1248	41	131	12378	9895	5745
				60%	1028	40	108	10866	8824	5212
				40%	808	39	85	9167	7490	4599
				20%	661	38	70	7813	6546	4178





03 自然对流型

自然对流型空调器外观优雅，做工精细，边角处理圆润顺畅，流线感强，极具时尚气息，不仅适用于家居环境，在商务建筑、公共建筑等也效果显著。机组通过对流换热形式对室内供热，温度分部均匀，舒适性高。进出水管与流量调节阀隐藏在壳体内，调节方便，装饰效果好。

Natural convection type

Natural convection radiator with elegant appearance, fine workmanship, smooth edge processing, streamline sense, very fashionable atmosphere, not only for the home environment, in business buildings, public buildings and other significant effects. Unit through convection heat transfer form of indoor heating, temperature distribution uniformity, high comfort. Through the outlet pipe and the flow control valve hidden in the shell, easy to adjust, good decorative effect.



FSTC180-L/135 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC180-10/135	789	600	356	180	135	1000
FSTC180-12/135	1040	791	469	180	135	1200
FSTC180-14/135	1290	981	583	180	135	1400
FSTC180-16/135	1541	1172	696	180	135	1600
FSTC180-18/135	1792	1362	809	180	135	1800
FSTC180-20/135	2042	1553	922	180	135	2000
FSTC180-22/135	2293	1744	1035	180	135	2200

FSTC180-L/185 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC180-10/185	1001	755	442	180	185	1000
FSTC180-12/185	1319	995	582	180	185	1200
FSTC180-14/185	1637	1235	722	180	185	1400
FSTC180-16/185	1955	1475	863	180	185	1600
FSTC180-18/185	2272	1715	1003	180	185	1800
FSTC180-20/185	2590	1955	1143	180	185	2000
FSTC180-22/185	2908	2194	1284	180	185	2200

FSTC180-L/235 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC180-10/235	1216	914	530	180	235	1000
FSTC180-12/235	1601	1204	699	180	235	1200
FSTC180-14/235	1987	1494	867	180	235	1400
FSTC180-16/235	2373	1784	1035	180	235	1600
FSTC180-18/235	2759	2074	1203	180	235	1800
FSTC180-20/235	3145	2364	1372	180	235	2000
FSTC180-22/235	3531	2654	1540	180	235	2200

FSTC240-L/135 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC240-10/135	936	704	410	240	135	1000
FSTC240-12/135	1233	928	540	240	135	1200
FSTC240-14/135	1530	1152	671	240	135	1400
FSTC240-16/135	1827	1375	801	240	135	1600
FSTC240-18/135	2124	1599	931	240	135	1800
FSTC240-20/135	2421	1823	1061	240	135	2000
FSTC240-22/135	2718	2046	1192	240	135	2200

FSTC240-L/185 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC240-10/185	1174	870	492	240	185	1000
FSTC240-12/185	1547	1146	648	240	185	1200
FSTC240-14/185	1920	1423	804	240	185	1400
FSTC240-16/185	2293	1699	960	240	185	1600
FSTC240-18/185	2666	1975	1116	240	185	1800
FSTC240-20/185	3038	2251	1272	240	185	2000
FSTC240-22/185	3411	2528	1428	240	185	2200

FSTC240-L/235 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC240-10/235	1373	1023	584	240	235	1000
FSTC240-12/235	1809	1348	770	240	235	1200
FSTC240-14/235	2244	1672	955	240	235	1400
FSTC240-16/235	2680	1997	1140	240	235	1600
FSTC240-18/235	3116	2322	1326	240	235	1800
FSTC240-20/235	3552	2647	1511	240	235	2000
FSTC240-22/235	3988	2971	1697	240	235	2200

FSTC300-L/135 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC300-10/135	1006	751	431	300	135	1000
FSTC300-12/135	1326	990	568	300	135	1200
FSTC300-14/135	1645	1229	704	300	135	1400
FSTC300-16/135	1965	1467	841	300	135	1600
FSTC300-18/135	2284	1706	978	300	135	1800
FSTC300-20/135	2604	1944	1115	300	135	2000
FSTC300-22/135	2923	2183	1251	300	135	2200

FSTC300-L/185 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC300-10/185	1250	925	520	300	185	1000
FSTC300-12/185	1647	1218	686	300	185	1200
FSTC300-14/185	2044	1512	851	300	185	1400
FSTC300-16/185	2441	1805	1016	300	185	1600
FSTC300-18/185	2838	2099	1181	300	185	1800
FSTC300-20/185	3235	2392	1347	300	185	2000
FSTC300-22/185	3632	2686	1512	300	185	2200

FSTC300-L/235 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC300-10/235	1446	1072	606	300	235	1000
FSTC300-12/235	1905	1412	798	300	235	1200
FSTC300-14/235	2364	1752	990	300	235	1400
FSTC300-16/235	2823	2092	1183	300	235	1600
FSTC300-18/235	3282	2433	1375	300	235	1800
FSTC300-20/235	3741	2773	1567	300	235	2000
FSTC300-22/235	4201	3113	1760	300	235	2200

FSTC350-L/135 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC350-10/135	1111	823	464	350	135	1000
FSTC350-12/135	1463	1084	612	350	135	1200
FSTC350-14/135	1816	1345	759	350	135	1400
FSTC350-16/135	2168	1606	907	350	135	1600
FSTC350-18/135	2521	1867	1054	350	135	1800
FSTC350-20/135	2874	2128	1202	350	135	2000
FSTC350-22/135	3226	2390	1349	350	135	2200

FSTC350-L/185 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC350-10/185	1314	972	547	350	185	1000
FSTC350-12/185	1731	1280	721	350	185	1200
FSTC350-14/185	2148	1589	894	350	185	1400
FSTC350-16/185	2565	1897	1068	350	185	1600
FSTC350-18/185	2982	2205	1242	350	185	1800
FSTC350-20/185	3399	2514	1415	350	185	2000
FSTC350-22/185	3816	2822	1589	350	185	2200

FSTC350-L/235 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC350-10/235	1511	1118	630	350	235	1000
FSTC350-12/235	1990	1473	831	350	235	1200
FSTC350-14/235	2470	1828	1031	350	235	1400
FSTC350-16/235	2949	2183	1231	350	235	1600
FSTC350-18/235	3429	2538	1431	350	235	1800
FSTC350-20/235	3909	2893	1631	350	235	2000
FSTC350-22/235	4388	3248	1831	350	235	2200

FSTC400-L/135 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC400-10/135	1295	957	538	400	135	1000
FSTC400-12/135	1706	1261	709	400	135	1200
FSTC400-14/135	2117	1565	880	400	135	1400
FSTC400-16/135	2528	1869	1051	400	135	1600
FSTC400-18/135	2939	2173	1222	400	135	1800
FSTC400-20/135	3350	2477	1393	400	135	2000
FSTC400-22/135	3761	2780	1564	400	135	2200

FSTC400-L/185 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC400-10/185	1486	1097	615	400	185	1000
FSTC400-12/185	1957	1445	810	400	185	1200
FSTC400-14/185	2429	1793	1005	400	185	1400
FSTC400-16/185	2901	2141	1200	400	185	1600
FSTC400-18/185	3372	2489	1396	400	185	1800
FSTC400-20/185	3844	2837	1591	400	185	2000
FSTC400-22/185	4316	3185	1786	400	185	2200

FSTC400-L/235 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC400-10/235	1638	1209	678	400	235	1000
FSTC400-12/235	2158	1593	893	400	235	1200
FSTC400-14/235	2678	1977	1109	400	235	1400
FSTC400-16/235	3198	2361	1324	400	235	1600
FSTC400-18/235	3719	2745	1539	400	235	1800
FSTC400-20/235	4239	3129	1755	400	235	2000
FSTC400-22/235	4759	3512	1970	400	235	2200

FSTC450-L/135 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC450-10/135	1397	1030	577	450	135	1000
FSTC450-12/135	1840	1358	761	450	135	1200
FSTC450-14/135	2284	1685	944	450	135	1400
FSTC450-16/135	2727	2012	1127	450	135	1600
FSTC450-18/135	3170	2339	1311	450	135	1800
FSTC450-20/135	3614	2666	1494	450	135	2000
FSTC450-22/135	4057	2993	1677	450	135	2200

FSTC450-L/185 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC450-10/185	1558	1148	642	450	185	1000
FSTC450-12/185	2052	1512	846	450	185	1200
FSTC450-14/185	2547	1877	1049	450	185	1400
FSTC450-16/185	3041	2241	1253	450	185	1600
FSTC450-18/185	3536	2606	1457	450	185	1800
FSTC450-20/185	4030	2970	1661	450	185	2000
FSTC450-22/185	4525	3334	1864	450	185	2200

FSTC450-L/235 散热量

Type	Heating Output (W)			Height (mm)	Width (mm)	Length (mm)
	64.5°C (95/70/18°C)	52°C (80/60/18°C)	34.5°C (60/45/18°C)			
FSTC450-10/235	1688	1246	698	450	235	1000
FSTC450-12/235	2224	1641	920	450	235	1200
FSTC450-14/235	2760	2037	1142	450	235	1400
FSTC450-16/235	3295	2432	1364	450	235	1600
FSTC450-18/235	3831	2827	1585	450	235	1800
FSTC450-20/235	4367	3223	1807	450	235	2000
FSTC450-22/235	4907	3618	2029	450	235	2200



案例介绍

PRESENTATION OF CASES

北京·建设部院

所用产品: 迷你自立式空调器

项目简介: 建设部大院位于北京市海淀区三里河路9号院内,北临车公庄西路,南至增光路,东侧为主路三里河路,西侧首体南路,学区划片二里沟小学,小区环境是周边公房小区的示范区,干净整齐,管理规范,周边基础设施齐全,餐饮娱乐,银行超市,应有尽有生活非常方便,交通四通八达。

Beijing MOC Courtyard

Product used:Mini Selfstanding Heating & Cooling Convector

Project overview: The MOC courtyard is located at No. 9 courtyard of Sanlihe Road, Haidian District, Beijing, at north it faces West Chegongzhuang Road; at south it reaches Zengguang Road; at east lies the main road - Sanlihe Road; and at west it borders Shoutinan Road. Erligou Primary School serves the courtyard according to school district classification. Environment here is an example for surrounding public house communities, clean and order and under good management. It has complete surrounding infrastructures, boasting dining and entertainment facilities, banks and supermarkets, and convenient transportation.

北京·联想总部

设计公司: RTKL 国际有限公司、华通设计顾问工程有限公司

所用产品: 迷你自立式空调器

建筑奖项: LEED 认证级

项目简介: 联想总部位于北京市海淀区中关村软件园西北侧,项目面积约36万平方米,可容纳一万名员工。园区内部餐厅、咖啡吧、便利店、攀岩墙、健身中心、托管中心等各式生活配套服务设施一应俱全,充分满足员工的餐饮、休闲、健身等生活所需。在环保创新方面按照 LEED 金级标准打造智能型绿色建筑,采用独立新风系统、PM2.5 过滤系统以及二氧化碳智能检测系统,大幅提升办公环境的空气质量。除此之外,先进的智能照明系统和车位引导系统则高效提升园区性能,降低办公能源消耗。

Beijing Lenovo HQ

Design company: RTKL International Co., Ltd、Walton Design & Consulting Engineering Co., Ltd.

Product used: Mini Selfstanding Heating & Cooling Convector.

Architecture award: LEED certification grade.

Project overview: Lenovo HQ lies at the northwest side of Zhongguancun software park in Haidian District, Beijing, has area of about 360,000m2, may accommodate 10,000 staff. There are complete dining room, coffee bar, convenience store, climbing wall, fitness center, and care center, etc. all sorts of life supporting facilities inside the park, adequately meeting the catering, relaxation, fitness and other life demands of staff. In environmental innovation aspect, LEED gold level standard was used to create intelligent green building; and independent fresh air system, PM2.5 filtration system and carbon dioxide intelligent detection system are used, greatly improving air quality of office environment. In addition, advanced intelligent lighting system and parking guidance system efficiently improve park performance and reduce office energy consumption.



北京·超级蜂巢

所用产品: 迷你自立式空调器

项目简介: 北京房山超级蜂巢定福庄国际传媒走廊腹地，北京东贸中心传媒时尚文化产业园规划为“传媒座SOHO、商务办公、会展中心、创意商业、配套商业”五大板块，对与传媒文化领域相关的商务、办公、生产、制作、展览、服务、消费、体验等“一条龙”式的完整产业链条和多维度时尚商务、生活空间进行深度组合，精细打造“集成产业链+商务平台+生活方式”的新传媒生活方式。北京东贸中心传媒时尚文化产业园旨在打造国家级文化产业园。北京东贸中心传媒时尚文化产业以传媒座为中心，打造国家级传媒产业基地，创造传媒+时尚的新型文化产业平台，并充分发挥双方优势，为北京乃至国际的传媒企业之间，提供相互合作、分享互惠、产业延展的共赢平台。

Super hive Beijing

Product used: Mini free-standing convector.

Project overview: Beijing fang shan magmatic super honeycomb dingfu village international media corridor hinterland, east of Beijing trade center for media fashion culture industrial park planning as "media SOHO, business office, conference and exhibition center, creative business, supporting business" five major parts, the media culture related business, office, production, production, exhibition, service, consumption and experience "one-stop" complete industry chain and multi-dimensional depth combined fashion business, living space, fine building "+ integrated industry chain business platform + lifestyle" of the new media way of life. Beijing east trade center media fashion culture industrial park aims to build a national cultural industrial park. Beijing east trade center media fashion and culture industry center on the media seat, to create a national media industry base, the creation of media + fashion new cultural industry platform, and give full play to the advantages of both sides, for Beijing and international media enterprises, to provide mutual cooperation, mutual benefit, industry extension of win-win platform.



北京·回龙观小学

设计公司:

所用产品: 迷你自立式空调器

建筑奖项:

项目简介: 育翔小学是北京市西城区平安大道以北地区的一所小学。于1954年11月23日在天津市和平区云南路成立，是北京军区空军子弟寄宿制小学，1958年1月迁到北京。原西城区教育局、西城劳动局、新街口东街小学本校为育翔小学的本部和分部。1964年交西城区教育局管理，1967年迁到现在的校址--德外新风街5号。学生来源仍为空军子弟。1967年至1972年与四十六中分开，恢复了“育翔小学”的校名。

育翔小学回龙观分校不仅拥有育翔小学的高水平师资力量，同时，各种现金教学设备一应俱全。具有极高的知名度和广泛的社会影响力。

Beijing Huilongguan Primary School

Design company:

Product used: Mini free-standing convector.

Architecture award:

Project overview: Yuxiang primary school is a primary school in the area north of pingan avenue, xicheng district, Beijing. It was founded in yunnan road, heping district, tianjin city on November 23, 1954. It is a boarding primary school for children of the air force of Beijing military area command. It was moved to Beijing in January 1958. The original xicheng district education bureau, xicheng labor bureau, xinjiekou dongjie primary school for yuxiang primary school headquarters and branches. In 1964, it was managed by the education bureau of xicheng district. In 1967, it was moved to the current school site -- no. 5, xinfeng street, dewai. The students are still from the air force. From 1967 to 1972, yuxiang primary school was separated from no. 46 middle school and its name was restored.

Yuxiang primary school huilongguan branch not only has yuxiang high level teachers, at the same time, a variety of cash teaching equipment. Has a high visibility and a wide range of social influence.

CONTROL SYSTEM OF INTELLIGENT INTERNET OF THINGS

智能物联控制系统

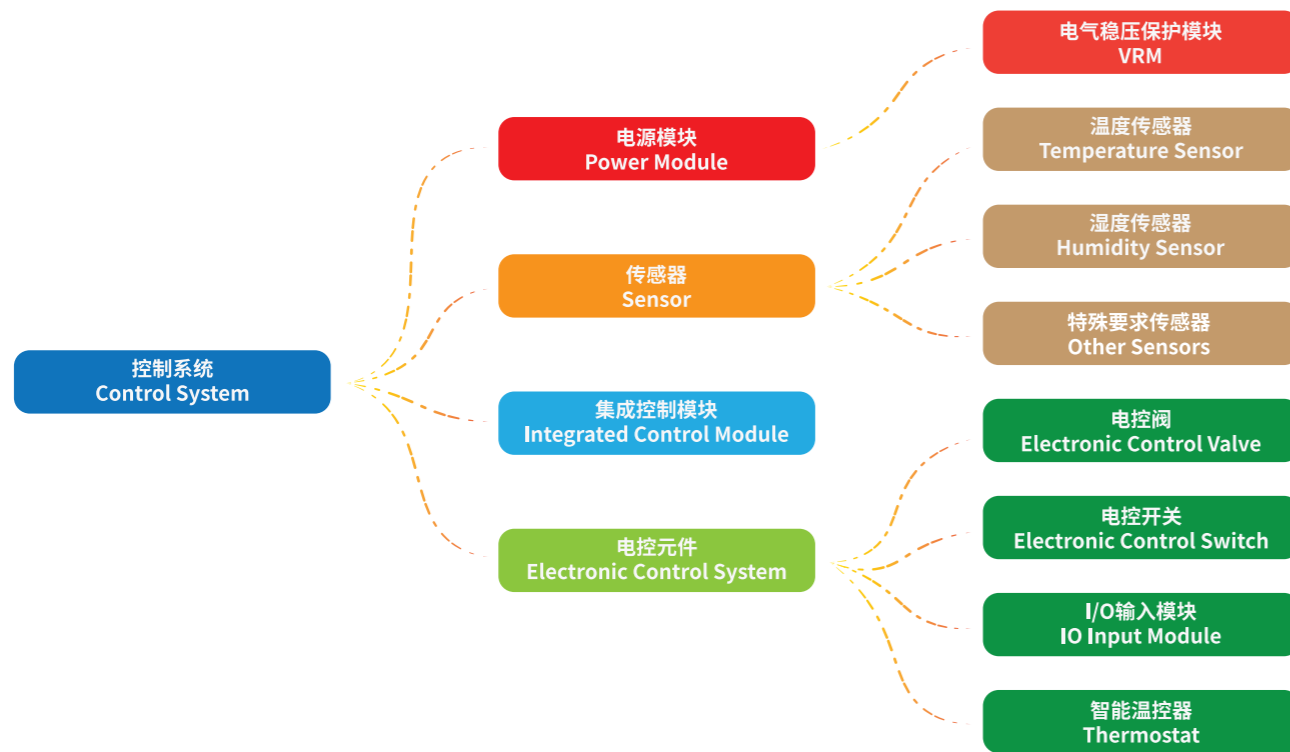
01

控制系统解决方案

佛瑞德控制系统严格按照 BAS 系统相关技术要求设计。系统自身具备稳定可靠的控制保护功能，整体实现一拖多机的集联集控，同时在应用层中与其他平台进行数据交换。

SOLUTION FOR CONTROL SYSTEM

Freedom control system is designed in strict accordance with relevant technical requirement for BAS system. This system itself has stable and reliable control protection functions, realizes a concentrated linkage and control on many units in overall and can make data exchange between application layer and other platform.



电气控制系统控制结构

控制系统由电源模块、控制集成板、传感器、电控元件组成。

Control structure of electrical control system

The control system is composed of power module, integrated control module, sensor and electronic control system.

02

佛瑞德楼宇控制（BA）系统

- a 佛瑞德 BA 控制系统支持 BACnet 通信控制协议。系统植入性强，可便捷的与各类主要通信网络（以太网、ARCNET、LONTALK）兼容。具有良好的伸缩性和扩展性。系统内部组网可以不受设备接入点数量的制约。
- b 佛瑞德 BA 控制系统兼容 ZIGBEE 协议通信，物理通信符合 IEEE 802.15.4 技术规范。系统可以实现设备与设备点对点自行组网通信，也可以配合具有 ZIGBEE 功能的传感器，控制模块进行组网通信、信息共享，实现对于周边环境、个性化功能的设定与控制。相比传统设备减少了配线压力，系统的稳定性大幅度提高，能耗与成本都有明显的降低。
- c 佛瑞德 BA 控制系统集成了传统通信模块，支持 GPRS、WIFI 等系统通信方式。二氧化碳、PM2.5、PM10、温湿度传感采用集成模块化设计、具备分布式检测控制能力。
- d 佛瑞德 BA 控制系统可以集成 MODBUS、CAN、CANBUS 总线等工业集成控制。在工业控制中可以和现有的系统完美融合与扩展。

Freedom BA control system

Freedom control system is designed in strict accordance with relevant technical requirement for BAS system. This system itself has stable and reliable control protection functions, realizes a concentrated linkage and control on many units in overall and can make data exchange between application layer and other platform.

Freedom BA control system is compatible with ZIGBEE protocol communication, and physical communication conforms to IEEE802.15.4 technical specification. The system can realize point-to-point self-networking communication between equipment and equipment, and also can cooperate with a sensor with ZIGBEE function and realize networking communication and information sharing by the control module, so as to realize the setting and control of surroundings and personalized functions. Compared with traditional equipment, the wiring pressure has been reduced, the stability of the system has been greatly improved, and the energy consumption and cost have been significantly reduced.

Freedom BA control system integrates traditional communication module, supporting GPRS, WIFI and other system communication mode. The integrated modular design with distributed detection and control capabilities is adopted for the sensing of CO2, PM2.5, PM10, temperature and humidity.

Freedom BA control system can integrate industrial integration control such as MODBUS, CAN and CANBUS bus. It can perfectly integrate and expand with existing systems in industrial control.

COMPANY QUALIFICATIONS 公司资质

国内领先的定制化 暖通空调设备集成商

佛瑞德（郑州）工业股份有限公司是国家高新技术企业，中国著名建筑定制化暖通空调设备集成服务商，研发、设计、制造、安装可与建筑完美融合的暖通空调末端产品。

迄今为止，佛瑞德已为众多代表中国建筑行业最高水准的城市地标型建筑，提供过全方位建筑融合式空调末端产品定制服务。

作为具有 20 余年研发、设计、生产、创新经验的暖通空调全流程集成服务商，佛瑞德擅长解决各类空调末端与建筑空间的协调配合难题，可实现产品设计、制造、工程技术指导分析、以及与施工配合的全方位高质量产品服务，创建超出客户预期的高舒适度宜人环境。

National leading customized HVAC equipment integrator

Freedom (Zhengzhou) Industrial Co., Ltd. is a national high-tech enterprise, China's famous building customized HVAC equipment integration service provider, it researches and develops, designs, manufactures and installs HVAC terminal products that can be perfectly integrated with buildings.

Up to now, Freedom has provided a full range of architectural fusion air-conditioning terminal products with bespoke design for many urban landmark buildings that represent the highest level of China's construction industry.

As a HVAC integrated service provider for whole process with more than 20 years of researching and development, design, production and innovation experience, Freedom is good at solving various types of problems of coordination and cooperation between air conditioning terminals and architectural space, which can realize product design, manufacturing, engineering and technical guidance analysis, and all-round high-quality product service matched with construction, and create a highly comfortable and pleasant environment beyond the customer's expectations.

国家 高新技术企业

国家 许可机电安装资质

高水平专业 协作团队

暖通设计 / 产品造型设计 /
产品结构 设计 / 现场服务设计 / 智能控制设计

完善的售后服务 和跟踪体系

专业的售后服务团队 / 全局售后服务和跟踪体系

National hi-tech enterprise

National authorized qualification of machinery & electrical equipment installation

High-level professional cooperative team

HVAC design / Product modeling design / Product structure design / Site service design / Intelligent control design

Perfect after-sales service and follow-up system

Professional after-sales service team
All-round after-sales service and follow-up system

国际 先进设备

佛瑞德精选国际先进的生产设备，选用通快 T-RUMPF、阿玛达 AMADA、爱克 Accurpress、依路达等行业内知名设备供应商产品进行生产制造。

先进制造设备：

德国通快
美国爱克
日本阿玛达

智能化软件驱动

德国通快
美国爱克
日本阿玛达

专业实验室

焓差实验室
半消音实验室

项目 遍及国内百余座城市

北上广深等地设有分公司及办事处
项目遍及国内主要城市地标性建筑

出口认证及 海外市场

佛瑞德拥有 CE、ETL 等国际认证，产品远销欧美市场。
CE 认证标识和证书 / ETL 标识

International advanced equipment

Freedom selects international advanced production equipment of brands such as TRUMPF, AMADA, Accurpress and Eurotec and other industrial famous equipment suppliers.

Advanced manufacture equipment

Germany TRUMPF
America Accurpress
Japan AMADA

Advanced manufacture equipment

Germany TRUMPF
America Accurpress
Japan AMADA

Professional laboratory

Enthalpy difference laboratory
Semi-anechoic laboratory

With projects all over more than hundred cities in China

Having branches and offices in Beijing, Shanghai, Guangzhou, Shenzhen and other cities

With projects of landmarks in major cities in China

Export certification and overseas market

Freedom has CE and ETL and other international certificates, with products sold to markets in Europe and America.

CE certification identification and certificate / ETL identification

国际先进设备

01 先进制造设备



Amada 激光切割机



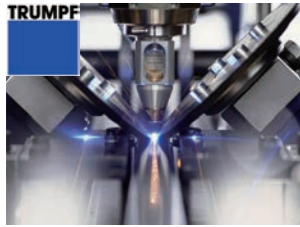
Amada 数控冲床



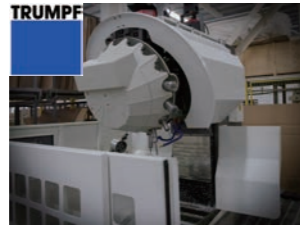
德国通快



爱克折弯机



德国通快



德国通快



英国依路达喷涂线

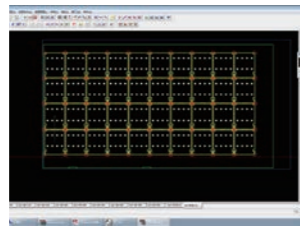


英国依路达喷涂线

02 智能化软件驱动



Amada 智能加工系统



Amada 智能加工系统

03 专业实验室



半消音实验室



焓差实验室

出口认证及海外市场



EMC certificate



LVD certificate



CE 认证



ETL 认证



合作设计院



艾麦欧建筑设计公司



B+H建筑设计事务所
(贝加艾奇)



MAD建筑事务所



哈尔滨工业大学
建筑设计研究院



WSP科进



巴马丹拿建筑设计咨询(上海)
有限公司



北京市建筑设计研究院
有限公司



同济大学建筑设计研究院



华东建筑设计研究总院



中国建筑设计研究院



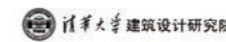
中元国际工程设计研究院



上海现代建筑设计(集团)
有限公司



北京世纪千府国际工程
设计有限公司



清华大学建筑设计
研究院



中国建筑东北设计研究院
有限公司



悉地国际CCDI