

XR Series

Intelligent Hot Gas Defrost System



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PRODUCT OVERVIEW

Intelligent Hot Gas Defrost System

It is widely used in scenarios such as fruit, vegetable and aquatic product preservation, medical vaccine storage, and fungus cultivation and breeding.



Product Description

- 1 This complete set of units adopts advanced thermal fluorine defrosting technology to achieve on-demand defrosting, no frost, and short defrosting time. During defrosting, the unit operates in heat pump mode, absorbing heat from the outside for defrosting, and defrosting consumes less power. After defrosting, Small temperature fluctuation with the cold room, saving energy and reducing carbon emissions.
- 2 During the thermal fluorine defrosting process, the oil accumulation on the inner wall of the air cooler or aluminum row is effectively removed to improve the heat exchange efficiency of the air cooler.
- 3 Gentle defrosting: the refrigerant hot gas temperature and mass flow rate gradually increase; the thickened air cooler copper tube is more resistant to cold and hot shocks.
- 4 Improving heat transfer efficiency: adopting EVI economizer with reasonable intervention timing, increasing cooling capacity by more than 20% and energy efficiency by more than 15%; And it is much higher in cooling capacity and energy efficiency than using flash evaporation tanks, achieving energy conservation and emission reduction.
- 5 The electronic expansion valve PID coefficient is reasonable and the response speed is fast; it uses a low-temperature special compressor for R404A, R507A, R448A, R449A refrigerant.
- 6 Simplified operation and maintenance: pre-charged with refrigerant, easy installation, only need to connect the liquid supply and return steam pipelines; remote monitoring, can detect various parameters in real time through a computer or mobile phone, remote start and stop; it has the function of pump-down and timed start and stop.



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2. Model Description

Unit Model Description

X R D 05 E 3 X

Compressor Brand
G: Copeland X: XECOM
Y: Invotech

Power Supply
1: 220V / 1P / 50Hz
3: 380V / 3P / 50Hz

Oil Type
E: POE Oil — R404A / R507A / R448A / R449A
G: 3GS Refrigeration Oil — R22

05: 5 HP

D: Low Temperature
Z: Medium Temperature

R: Hot Gas Series

X: Sauverain Brand Code



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3. Technical Data

3HP Medium Temperature Complete Machine Parameters

Cold Storage Temp. -5°C to 5°C		Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRZ03E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)	
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-20°C	-15°C	-10°C	-5°C	0°C	5°C	
30°C	4300/1770	5250/1770	6350/1770	7600/1760	9050/1750	10750/1750	
40°C	3700/2240	4550/2240	5500/2230	6600/2220	7850/2210	9300/2190	
50°C	3100/2830	3750/2830	4550/2820	5500/2810	6550/2790	7750/2770	
AXIAL FAN	Speed R/Min H, M and L		Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W
	1400/1180/850		1	4483	400	220V/50Hz/1P	225/165/135
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	980*560*700	550X440	12.7	16	R507 3Kg	380V/50Hz/3P	2845
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	1400/515/590	1030/380	57	2	4000	380V/50Hz/3P	390

3HP Low Temperature Complete Machine Parameters

Cold Storage Temp. -25°C to -18°C		Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRD03E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)	
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-40°C	-35°C	-30°C	-25°C		-20°C	-15°C
30°C	2288/1643	2826/1705	3458/1769	4188/1836		5020/1907	5950/1982
40°C	2182/2070	2684/2112	3272/2163	3950/2224		4720/2296	5579/2381
50°C	2079/2659	2544/2694	3084/2746	3705/2816		4405/2904	5182/3013
AXIAL FAN	Speed R/Min H, M and L		Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W
	1400/1180/850		1	4483	400	220V/50Hz/1P	225/165/135
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	980*560*700	550*440	12.7	16	R507 3Kg	380V/50Hz/3P	2820
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	1400*515*590	1030*380	57	2	4000	380V/50Hz/3P	390



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5HP Medium Temperature Complete Machine Parameters

Cold Storage Temp. -5°C to 5°C		Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRZ05E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)	
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-20°C	-15°C	-10°C	-5°C	0°C	5°C	
30°C	6879/2648	8513/2774	10433/2897	12675/3014	15280/3121	18294/3216	
40°C	5870/3188	7290/3336	8965/3477	10927/3608	13214/3726	15866/3827	
50°C	4804/3868	6003/4046	7424/4212	9097/4365	11056/4500	13338/4709	
AXIAL FAN	Speed R/Min H, M and L		Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W
	1400/1180/850		2	8966	400	220V/50Hz/1P	450/330/270
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	980*560*1100	550*440	16	19	R507 5Kg	380V/50Hz/3P	4700
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	1700*560*730	1330*430	85	2	6000	380V/50Hz/3P	480

5HP Low Temperature Complete Machine Parameters

Cold Storage Temp. -25°C to -18°C		Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRD05E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)		
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)								
Condensing Temperature	-40°C	-35°C	-30°C	-25°C		-20°C	-15°C	
30°C	3915/2542	4836/2639	5917/2738	7167/2841		8589/2950	10181/3067	
40°C	3733/3203	4593/3268	5599/3346	6760/3441		8076/3553	9546/3685	
50°C	3557/4114	4353/4169	5278/4249	6339/4357		7537/4494	8867/4662	
AXIAL FAN	Speed R/Min H, M and L		Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W	
	1400*1180*850		2	8966	400	220V/50Hz/1P	450/330/270	
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG		Voltage	Total Power W
	980*560*1100	550*440	16	19	R507 5Kg		380V/50Hz/3P	4700
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour		Voltage	Total Power W
	1700*560*730	1330*430	85	2	6000		380V/50Hz/3P	480



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8HP Medium Temperature Complete Machine Parameters

Cold Storage Temp. -5°C to 5°C	Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRZ08E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)		
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-20°C	-15°C	-10°C	-5°C	0°C	5°C	
30°C	10367/4056	12789/4260	15627/4467	18950/4675	22852/4882	27453/5085	
40°C	8934/4826	11035/5064	13502/5300	16395/5531	19796/5755	23816/5971	
50°C	7358/5725	9139/6001	11242/6270	13723/6529	16655/6776	20137/7008	
AXIAL FAN	Speed R/Min H, M and L	Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W	
	1380/900/650	2	13906	500	220V/50Hz/1P	960	
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	1130*580*1300	700*460	19	28	R507 8Kg	380V/50Hz/3P	7319
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	2400*560*730	2030*430	125	3	9000	380V/50Hz/3P	720

8HP Low Temperature Complete Machine Parameters

Cold Storage Temp. -25°C to -18°C	Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRD08E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)		
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-40°C	-35°C	-30°C	-25°C	-20°C	-15°C	
30°C	5776/3700	7135/3841	8729/3985	10573/4135	12672/4294	15021/4463	
40°C	5507/4662	6776/4756	8261/4871	9972/5008	11915/5171	14083/5363	
50°C	5248/5988	6421/6068	7786/6185	9352/6341	11120/6540	13081/6785	
AXIAL FAN	Speed R/Min H, M and L	Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W	
	1380/900/650	2	13906	500	220V/50Hz/1P	960	
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	1130*580*1300	700*460	19	28	R507 8Kg	380V/50Hz/3P	7319
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	2400*560*730	2030*430	125	3	9000	380V/50Hz/3P	720



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10HP Medium Temperature Complete Machine Parameters

Cold Storage Temp. -5°C to 5°C	Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRZ10E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)		
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-20°C	-15°C	-10°C	-5°C	0°C	5°C	
30°C	14507/5667	17897/5952	21868/6241	26519/6532	31979/6822	38418/7105	
40°C	12502/6743	15443/7076	18894/7405	22943/7728	27703/8042	33328/8343	
50°C	10296/8000	12790/8385	15732/8761	19203/9122	23307/9467	28180/9792	
AXIAL FAN	Speed R/Min H, M and L		Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W
	1380/900/650		2	13906	500	220V/50Hz/1P	960
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	1620*850*1250	700*758	19	35	R507 10Kg	380V/50Hz/3P	8675
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	2200*690*830	1830*530	145	2	11500	380V/50Hz/3P	1096

10HP Low Temperature Complete Machine Parameters

Cold Storage Temp. -25°C to -18°C		Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRD10E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)	
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-40°C	-35°C	-30°C	-25°C	-20°C	-15°C	
30°C	8033/5136	9923/5331	12141/5531	14706/5740	17625/5960	20891/6197	
40°C	7659/6472	9425/6603	11490/6761	13870/6952	16573/7179	19587/7445	
50°C	7300/8313	8931/8423	10829/8585	13007/8803	15466/9079	18194/9419	
AXIAL FAN	Speed R/Min H, M and L		Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W
	1380/900/650		2	13906	500	220V/50Hz/1P	960
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	1620*850*1250	700*758	19	28	R507 8Kg	380V/50Hz/3P	7319
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	2200*690*830	1830*530	125	2	11500	380V/50Hz/3P	720



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12HP Medium Temperature Complete Machine Parameters

Cold Storage Temp. -5°C to 5°C	Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRZ12E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)		
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-20°C	-15°C	-10°C	-5°C	0°C	5°C	
30°C	16531/6500	20394/6827	24919/7160	30219/7493	36441/7825	43778/8150	
40°C	14246/7735	17598/8116	21530/8494	26144/8865	31569/9225	37978/9570	
50°C	11730/9176	14574/9619	17928/10049	21883/10464	26559/10860	32112/11233	
AXIAL FAN	Speed R/Min H, M and L	Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W	
	1380/900/650	2	13906	500	220V/50Hz/1P	960	
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	1620*850*1250	700*758	22	35	R507 10Kg	380V/50Hz/3P	8675
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	2200*690*830	1830*530	145	2	11000	380V/50Hz/3P	1096

12HP Low Temperature Complete Machine Parameters

Cold Storage Temp. -25°C to -18°C	Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRD12E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)		
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-40°C	-35°C	-30°C	-25°C	-20°C	-15°C	
30°C	9151/5916	11305/6141	13832/6371	16753/6611	20079/6865	23800/7138	
40°C	8726/7454	10737/7605	13089/7788	15801/8008	18880/8269	22314/8575	
50°C	8316/9575	10175/9702	12337/9889	14818/10139	17620/10458	20727/10849	
AXIAL FAN	Speed R/Min H, M and L	Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W	
	1380/900/650	2	13906	500	220V/50Hz/1P	960	
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	1620*850*1250	700*758	22	28	R507 8Kg	380V/50Hz/3P	8675
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	2200*690*830	1830*530	125	2	11000	380V/50Hz/3P	720



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15HP Medium Temperature Complete Machine Parameters

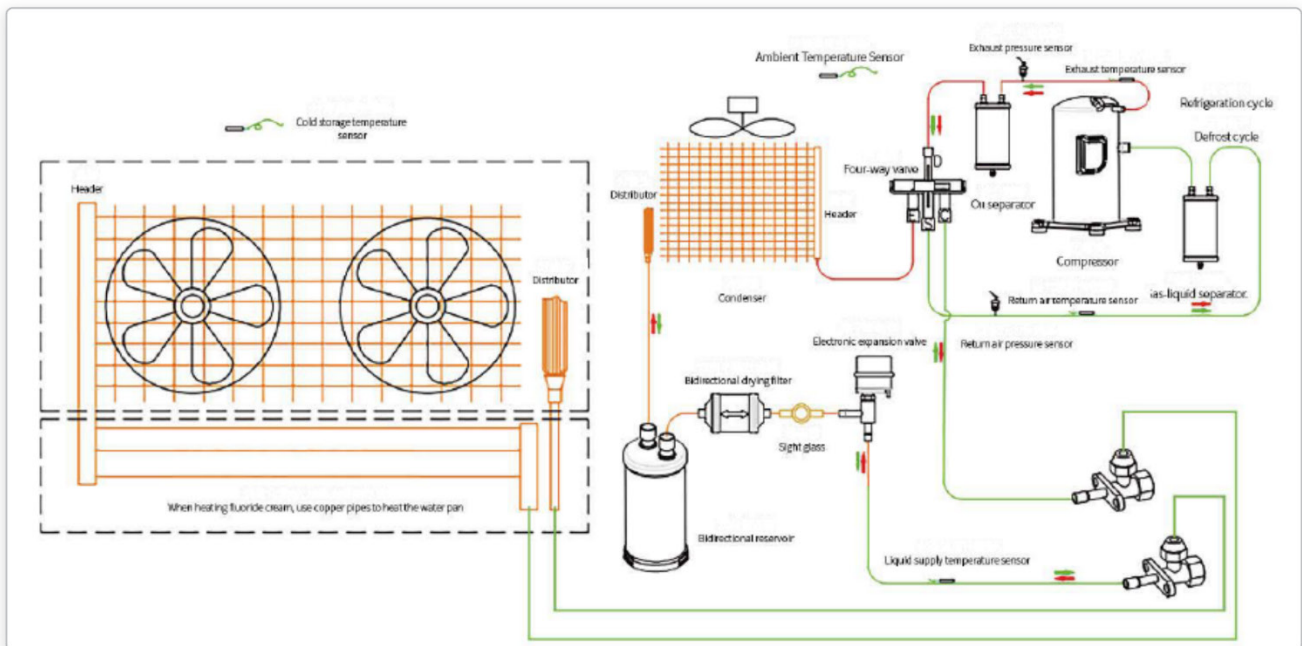
Cold Storage Temp. -5°C to 5°C	Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRZ15E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)		
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-20°C	-15°C	-10°C	-5°C	0°C	5°C	
30°C	19936/7945	24594/8344	30051/8751	36443/9159	43945/9564	52794/9962	
40°C	17180/9455	21222/9920	25964/10382	31528/10835	38070/11275	45799/11696	
50°C	14149/11216	17576/11756	21620/12283	26389/12790	32028/13274	38725/13729	
AXIAL FAN	Speed R/Min H, M and L		Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W
	1380/900/650		2	13906	500	220V/50Hz/1P	960
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	1920*805*1200	800*858	22	35	R507 10Kg	380V/50Hz/3P	13417
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	3100*700*830	2730*530	205	3	17300	380V/50Hz/3P	1644

15HP Low Temperature Complete Machine Parameters

Cold Storage Temp. -25°C to -18°C	Refrigerant R404A / R507A / R448A / R449A		Condensing Unit XRZ15E3X		Capacity Basis Cooling Capacity Q / Input Power P (W)		
Evaporation Temperature °C Cooling Capacity Q / Input Power P (W)							
Condensing Temperature	-40°C	-35°C	-30°C	-25°C	-20°C	-15°C	
30°C	11185/7229	13817/7504	16905/7785	20476/8078	24541/8389	29089/8722	
40°C	10665/9108	13123/9292	15998/9516	19313/9785	23076/10103	27273/10478	
50°C	10164/11699	12435/11855	15079/12083	18111/12389	21535/12778	25334/13256	
AXIAL FAN	Speed R/Min H, M and L		Fan QTY	Air Volume m³/hour	Fan DIM: mm	Voltage	Total Power W
	1380/900/650		2	13906	500	220V/50Hz/1P	960
UNIT PARAMETERS	Unit Size	Installation Dimensions	Liquid Pipe Size	Suction Pipe Size	Pre-charge Refrigerant KG	Voltage	Total Power W
	1920*805*1200	800*858	22	35	R507 10Kg	380V/50Hz/3P	13417
AIR COOLER	Air-cooler Dimension	Installation Dimensions	Net Weight Kg	Fan QTY	Total Air Volume m³/Hour	Voltage	Total Power W
	3100*700*830	2730*530	205	3	17300	380V/50Hz/3P	1644



4. Hot Gas Defrosting Cold Storage Refrigeration System Diagram



5. Hot Gas Defrosting + Economizer Cold Storage Refrigeration System Diagram

