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air



NON-INVERTER  
CONDENSING UNIT

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# Structure of High-Pressure Chamber Compressor

## LOW VIBRATION & NOISE

The compressor has a spacious internal area, which also acts as a large muffler. Another muffler is not necessary. It also possesses sufficient plate thickness to dampen vibrations.

## METER FOR LUBRICATING OIL LEVEL

The motor of the high-pressure chamber is designed to be immersed in oil, so it has high durability and is not easy to overheat due to insufficient cooling, and almost no mechanical problems will occur.

## OPTIMIZATION OF OIL FEED SYSTEM

The pressure difference of high and middle pressure can be used to fully feed lubricating oil and achieve a stable oil level. There is no special mandatory oil supply mechanism. The oil supply system is simple and reliable, and the failure rate is low.

## LOW LOSS RATE OF LUBRICATING OIL

The lubricating oil is sucked and transported to the mechanisms through the oil feed pipe for lubrication by using the high and low pressure difference method. After lubrication, it is stored in the original oil storage place at the bottom. Therefore, the oil level always remains stable. There is no boiling and foaming when starting operation or liquid reflux. Few refrigerant will go to the piping lines.

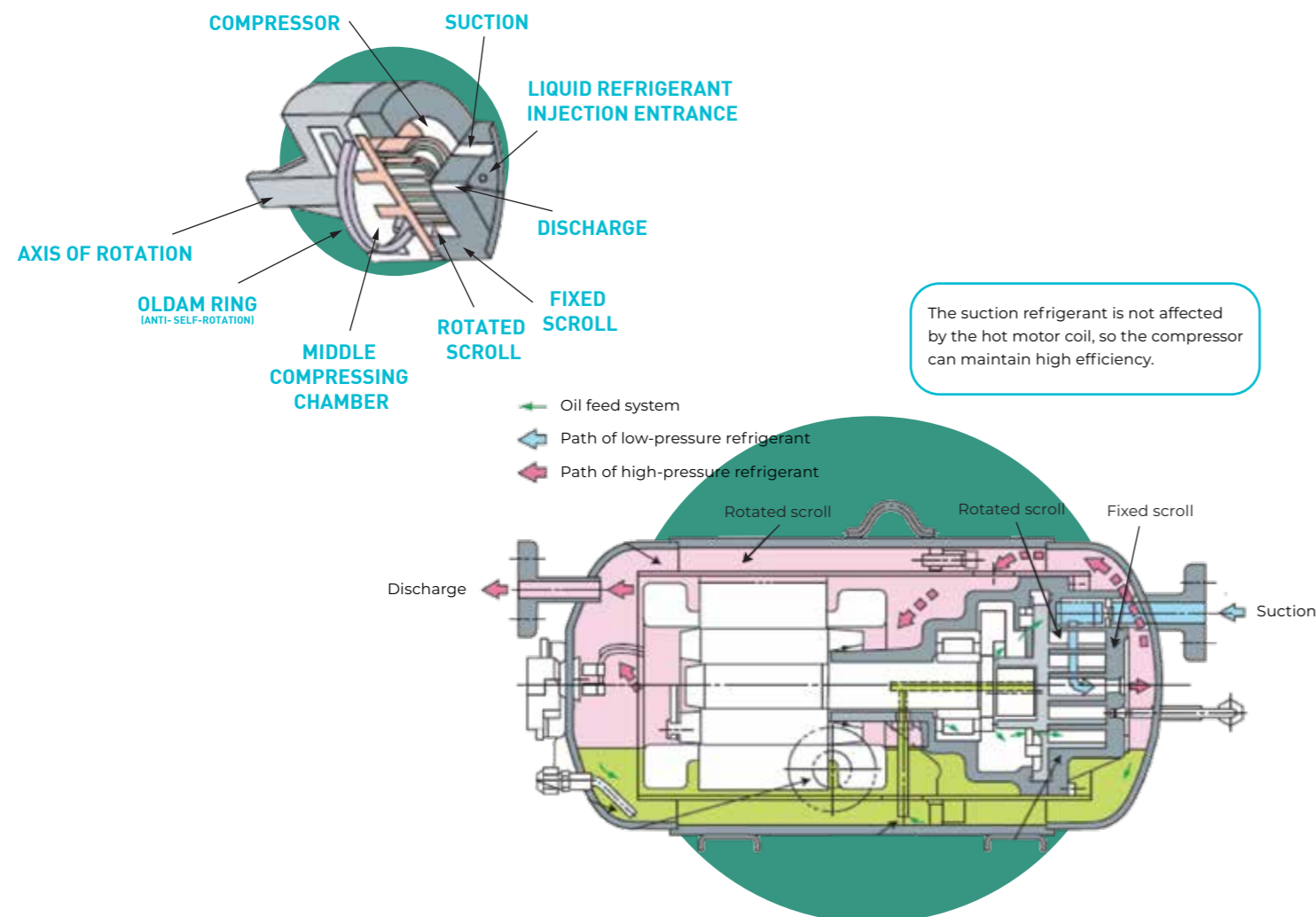
## PRECISION OPERATION WITH HIGH DURABILITY

Due to the reliable tightness between the scrolls of the high-pressure chamber, there is no need for the o-ring and anti-thrust bearing such as low-pressure chamber. The structure is simple and precise with better performance and durability.

## COOL DOWN BY LIQUID REFRIGERANT INJECTION

The temperature range for evaporation is broader and can vary from  $-45$  to  $+5$ . There will be no high discharge temperature and oil deterioration, guaranteeing a lengthy lifespan for the compressor.

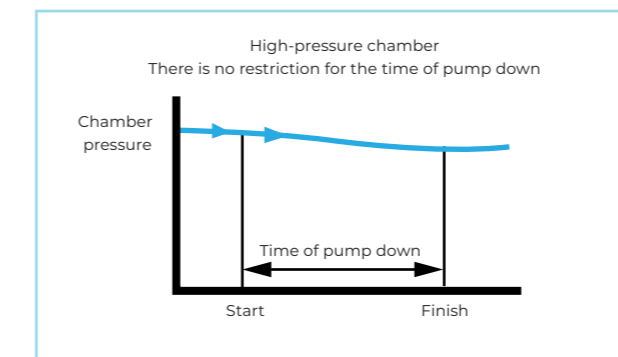
## Liquid refrigerant injection



## No boiling or foaming in pump down

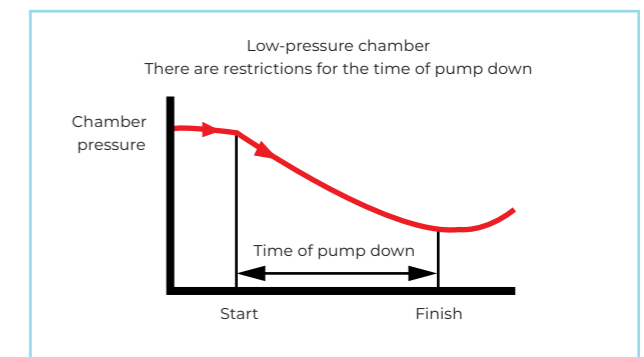
### HITACHI HIGH-PRESSURE CHAMBER COMPRESSOR

During pump down, the pressure decreases slightly in the high-pressure chamber, preventing the refrigerant dissolved in the oil from evaporating. There is an absence of boiling and foaming. Hence, the refrigerant oil must be retained within the body to uphold the lubrication of the compressor parts.



### OTHER LOW-PRESSURE CHAMBER COMPRESSOR

During the pump down process, the pressure decreases quickly in the low-pressure chamber, leading to the formation of boils and foaming. The compressor releases a large quantity of foamy refrigerant oil into the piping. The compressor parts did not receive adequate lubrication and are currently experiencing a malfunction. Therefore, it is necessary to limit both the pressure drop and the time required for the pump to reach its full capacity.

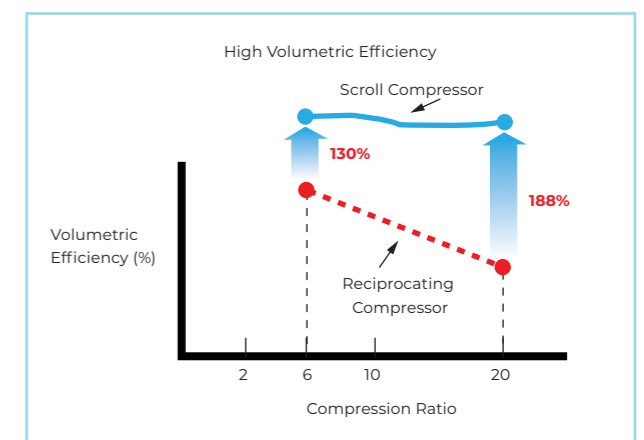
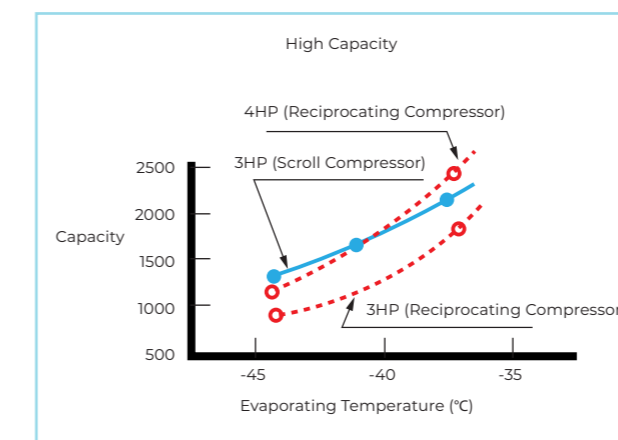


### MORE STABLE IN OVERLOAD OPERATION

Control of the temperature inside the high-pressure chamber is maintained by regulating the temperature as refrigerant is evaporated and suctioned, ensuring stability in the motor and oil temperatures. However, it is challenging to manage the significant temperature fluctuations in the low-pressure chamber. The motor is likely to break down.

### HIGH CAPACITY

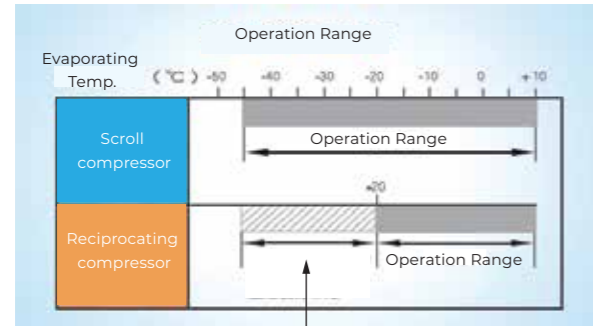
There is a distinctive intermediate compression chamber that has control over cooling through the injection of liquid refrigerant. Thus, if the evaporation temperature decreases while in operation, it can result in improved cooling capacity at low evaporation temperatures compared to the reciprocating compressor. Furthermore, as the refrigerant is compressed, both the suction and discharge absolute pressures increase, without reducing the volumetric efficiency or decreasing the cooling capacity.



## Wider Operation Range

-45°C~+10°C wider operation range

When the discharge gas temperature is excessive, it leads to a decrease in the motor's cooling capacity. Following the temperature detection by the sensor, the scroll intermediate compressing chamber undergoes liquid refrigerant injection cooling control. If the R404A refrigerant is used at low evaporating temperatures (below -20°C), the discharged temperature will not increase abnormally and the cooling capacity will be maintained because the suction refrigerant amount will not decrease. Reciprocating compressors are unable to accomplish this task. Hence, the evaporating temperature is capable of reaching -45°C to +10°C while providing strong freezing and refrigerating capabilities. It can be used in industries that require low temperature freezing or refrigeration, such as CVS, supermarkets, food factories, wafer manufacturing facilities, laboratories, logistics centers, and more.

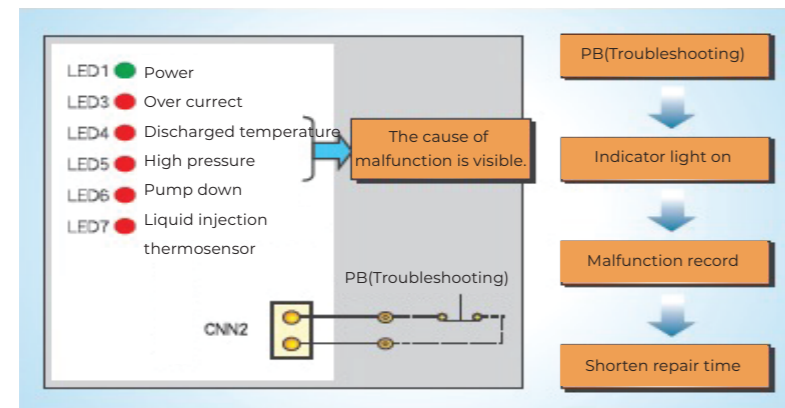


Due to the elevated temperature during discharge, the lubricating oil degrades resulting in reduced efficiency. Therefore, the compressor's lifespan will be brief.

## High Efficiency Maintenance

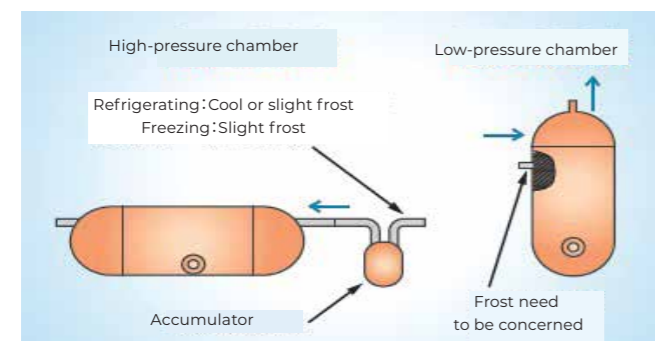
Malfunction record

When a problem arises, it can be quickly detected and resolved, reducing maintenance duration.



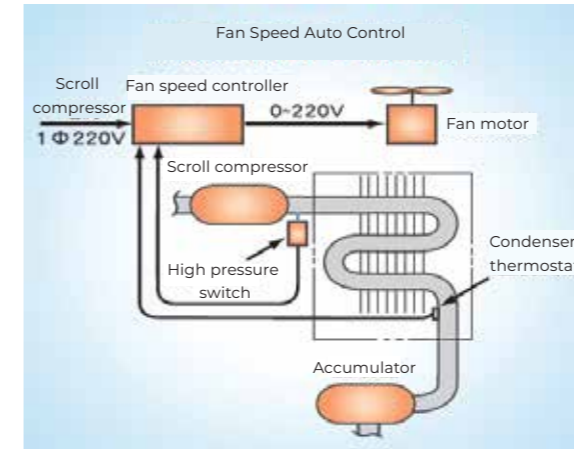
## Expansion Valve Selection Is Easier

Regardless of freezing or refrigerating, there is only slight frost, so the selection of expansion valves is simpler than low-pressure carcasses.



## Low noise and power saving control

The condensing unit has two modes of operation available - one for low noise and the other for energy saving. Customers have the ability to switch it as required for the installation. The unit can automatically control the fan speed based on both the outdoor temperature and the temperature of the liquid refrigerant. Therefore, the noise can be minimized while operating at night or in winter.



## Multi-compressors in single refrigerant loop

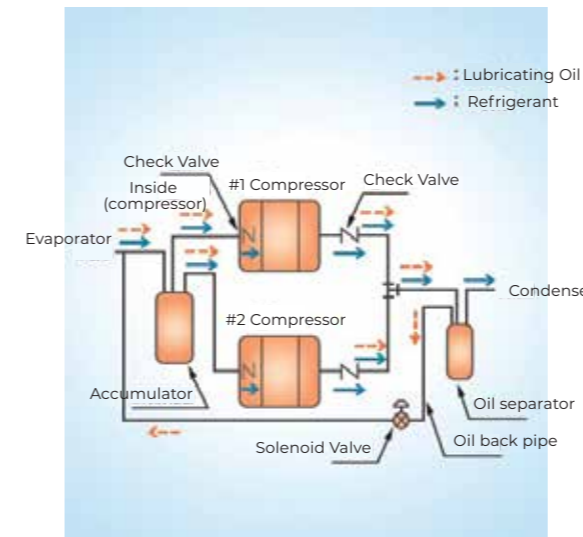
Hitachi uses its leading low temperature technology to overcome the difficulties and create the design of multi compressors in single refrigerant loop. Hitachi makes the piping work simpler and reduces the costs.

Lubricating oil be feeded evenly

Utilizing Hitachi's high-pressure chamber scroll compressor's low loss rate feature of lubricating oil, incorporating an oil separator to prevent oil from entering the system, in order to achieve the most effective design.

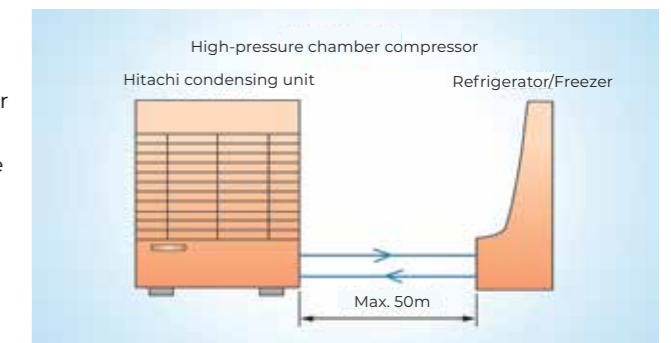
Two Stages Capacity Control

It can maintain stable storage temperature and ensure the freshness of frozen and refrigerated goods.



## Long distance piping without risk

The rate of lubricating oil loss in the Hitachi high-pressure chamber scroll compressor is minimal, requiring little to no additional oil to be added. There is no danger for long distance piping. The loss rate is significant for the low-pressure chamber scroll compressor. Therefore, it is essential to include additional oil, or else lengthy piping should be avoided.



# UNITS

## Freeze & Refrigerate

### Specifications

Type			Model	HP	Evaporating Temp(°C)
Air-cool	Freeze & Refrigerate	Split	KX-R21CB + RCR-R21S	2	-45 ~ -5
			KX-R31CB + RCR-R31S	3	-45 ~ -5
			KX-R51C+RCR-R51S	5	-45 ~ -5
			KX-R81C +RCR-R81S	8	-45 ~ -5
			KX-R101C + RCR-R101S	10	-45 ~ -5
			KX-R161C + RCR-R161F	16	-45 ~ -5
			KX-R201C + RCR-R201F	20	-45 ~ -5
			KX-R301C + RCR-R161Fx2	30	-45~-5
			KX-R401C + RCR-R201Fx2	40	-45 ~ -10
	Refrigerate	Unity	KX-R21AB	2	-45 ~ 0
			KX-R32A	3	-45 ~ -5
			KX-R51A	5	-45 ~ -5
			KX-R81A	8	-45 ~ -5
			KX-R101A	10	-45 ~ -5
		Unity (Split)	KX-R161A	16	-45 ~ -5
			KX-R201A	20	-45 ~ -5
		Unity	KX-R21AHB	2	-15 ~ 10
			KX-R32AH	3	-15 ~ 10
			KX-R51AM	5	-20 ~ 8
Unity (Split)	KX-R81AH	8	-15 ~ 10		
	KX-R101AH	10	-15 ~ 8		
	KX-R161AH	16	-15 ~ 10		
Water-cool	Freeze & Refrigerate	Unity	KX-R201AH	20	-15 ~ 10
			KX-R51W	5	-45 ~ 5
			KX-R81W	8	-45 ~ 5
			KX-R101W	10	-45 ~ 5
			KX-R161W	16	-45 ~ 5
			KX-R201W	20	-45 ~ 5
			KX-R301W	30	-45 ~ 5
KX-R401W	40	-45 ~ 5			

SCROLL

# KX-R21CB + RCR-R21S

## Freeze & Refrigerate (Split Type)



### Specifications (Compressor Assembly) 【Indoor Installation Type】

Item	Model	KX-R21CB	
Dimension	W x D x H	mm	1000 x 375 x 250
Power Supply	-		AC 1, 220V/60Hz
Compressor	Type	-	DS1834X0
	RPM	-	3510
	Discharge	m <sup>3</sup> /h	7.14
Running Current	A		10.1
Starting Current	A		65
Refrigerant Oil	Type	-	α68HES-H
	Charge	L	1
Refrigerant	-		R404A or R507A(not mix)
Evaporating Temperature	°C		-45 ~ -5
Outdoor Temperature	°C		2 ~43
Protection Devices	-		High & Low Pressure SW、Discharge Temperature Protector、Electrical Overcurrent Protector、Fuse、Liquid Injection Controller
Accessories	-		User's and Service Technical Manual
Weight	Kg		50
Piping Size	Gas Line Inlet	mm	Φ19.05(Nut)
	Gas Line Outlet	mm	Φ12.7(Nut)
	Liquid Line Inlet	mm	Φ12.7(Nut)
	Liquid Line Outline	mm	Φ9.53(Nut)

### Specifications (Condenser Assembly)

Item	Model	RCR-R21S	
Dimension	W x D x H	mm	1000 x 300 x 350
Power Supply	-		AC 1Φ, 220V/60Hz
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	Φ246x2
	Flow Rate	CMM	27.6
Condenser Motor	Output	W	20x2
	Pole	-	4
Reservoir Inner Volume	L		2.6
Weight	Kg		25
Piping Size	Gas Line Inlet	mm	Φ12.7(Brazing)
	Gas Line Outlet	mm	-
	Liquid Line Inlet	mm	-
	Liquid Line Outline	mm	Φ12.7(Brazing)

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R31CB + RCR-R31S

Freeze & Refrigerate  
(Split Type)



Specifications (Compressor Assembly) 【Indoor Installation Type】

Item	Model	KX-R31CB	
Dimension	W x D x H	mm	1000 x 515 x 275
Power Supply		-	AC 1, 220V/60Hz
Compressor	Type	-	DS2244X0
	RPM	-	3470
	Discharge	m <sup>3</sup> /h	9.24
Running Current		A	12.2
Starting Current		A	115
Refrigerant Oil	Type	-	α 68HES-H
	Charge	L	1
Refrigerant		-	R404A or R507A(not mix)
Evaporating Temperature		°C	-45 ~ -5
Outdoor Temperature		°C	2 ~40
Protection Devices		-	High & Low Pressure SW、Discharge Temperature Protector、Electrical Overcurrent Protector、Fuse、Liquid Injection Controller
Accessories		-	User's and Service Technical Manual
Weight		Kg	60
Piping Size	Gas Line Inlet	mm	Φ19.05(Nut)
	Gas Line Outlet	mm	Φ12.7(Nut)
	Liquid Line Inlet	mm	Φ9.53(Nut)
	Liquid Line Outlet	mm	Φ9.53(Nut)

Specifications (Condenser Assembly)

Item	Model	RCR-R31S	
Dimension	W x D x H	mm	890 x 285 x 885
Power Supply		-	AC 1, 220V/60Hz
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	Φ440
	Flow Rate	CMM	50
Condenser Motor	Output	W	130
	Pole	-	6
Reservoir Inner Volume		L	7.5
Weight		Kg	45
Piping Size	Gas Line Inlet	mm	Φ12.7(Brazing)
	Gas Line Outlet	mm	-
	Liquid Line Inlet	mm	-
	Liquid Line Outline	mm	Φ9.53(Brazing)

Notice : The Above data is based on these conditions  
O.D. Temperature 32°C, Evaporating Temperature -15°C  
Compressor Inlet Temperature 18°C  
Refrigerant R404A

## KX-R51C + RCR-R51S

Freeze & Refrigerate  
(Split Type)



Specifications (Compressor Assembly) 【Indoor Installation Type】

Item	Model	KX-R51C	
Dimension	W x D x H	mm	850 x 520 x 620
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz
Compressor	Type	220V	-
		380V	-
	RPM	-	3470
	Discharge	m <sup>3</sup> /h	18.7
Running Current		220V	A
		380V	A
Starting Current		220V	A
		380V	A
Refrigerant Oil	Type	-	FVC32D
	Charge	L	3.2
Reservoir Inner Volume		L	-
Refrigerant		-	R404A or R507A(not mix)
Evaporating Temperature		°C	-45 ~ -5
Outdoor Temperature		°C	2 ~40
Protection Devices		-	High & Low Pressure SW、Discharge Temperature Protector、Electrical Overcurrent Protector、Fuse、Liquid Injection Controller、Reverse Phase Protector
Accessories		-	User's and Service Technical Manual
Weight		Kg	105
Piping Size	Gas Line Inlet	mm	Φ25.4(Brazing)
	Gas Line Outlet	mm	Φ15.88(Nut)
	Liquid Line Inlet	mm	Φ12.7(Nut)
	Liquid Line Outlet	mm	Φ12.7(Nut)

Specifications (Condenser Assembly)

Item	Model	RCR-R51S	
Dimension	W x D x H	mm	1300 x 520 x 620
Power Supply		-	AC 1, 220V/60Hz
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	Φ440x2
	Flow Rate	CMM	80
Condenser Motor	Output	W	130x2
	Pole	-	6
Weight		Kg	65
Piping Size	Gas Line Inlet	mm	Φ15.88(Brazing)
	Gas Line Outlet	mm	-
	Liquid Line Inlet	mm	-
	Liquid Line Outline	mm	Φ12.7(Brazing)

Notice : The Above data is based on these conditions  
O.D. Temperature 32°C, Evaporating Temperature -15°C  
Compressor Inlet Temperature 18°C  
Refrigerant R404A

## KX-R81C + RCR-R81S

Freeze & Refrigerate  
(Split Type)



Specifications (Compressor Assembly) 【Indoor Installation Type】

Item	Model	KX-R81C		
Dimension	W x D x H	mm	1650 x 600 x 630	
Power Supply	-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz		
Compressor	Type	220V	-	FL800EL-144A3
		380V	-	FL800EL-144C3
	RPM	-	3470	
	Discharge	m <sup>3</sup> /h	30	
Running Current	220V	A	25.8	
	380V	A	15.1	
Starting Current	220V	A	194	
	380V	A	72	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	3	
Reservoir Inner Volume	L	27		
Refrigerant	-	R404A or R507A(not mix)		
Evaporating Temperature	°C	-45 ~ -5		
Outdoor Temperature	°C	2 ~ 40		
Protection Devices	-	High & Low Pressure SW、Discharge Temperature Protector、Electrical Overcurrent Protector、Fuse、Liquid Injection Controller、Reverse Phase Protector		
Accessories	-	User's and Service Technical Manual		
Weight	Kg	255		
Piping Size	Gas Line Inlet	mm	Φ 31.7(Brazing)	
	Gas Line Outlet	mm	Φ 19.05(Nut)	
	Liquid Line Inlet	mm	Φ 15.88(Nut)	
	Liquid Line Outlet	mm	Φ 15.88(Nut)	

Specifications (Condenser Assembly)

Item	Model	RCR-R81S		
Dimension	W x D x H	mm	1170 x 690 x 1310	
Power Supply	-	AC 1, 220V/60Hz		
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	Φ 710	
	Flow Rate	CMM	170	
Condenser Motor	Output	W	350	
	Pole	-	6	
Weight	Kg	139		
Piping Size	Gas Line Inlet	mm	Φ 19.05(Brazing)	
	Gas Line Outlet	mm	-	
	Liquid Line Inlet	mm	-	
	Liquid Line Outline	mm	Φ 15.88(Brazing)	

Notice : The Above data is based on these conditions  
O.D. Temperature 32°C, Evaporating Temperature -15°C  
Compressor Inlet Temperature 18°C  
Refrigerant R404A

## KX-R101C + RCR-101S

Freeze & Refrigerate  
(Split Type)



Specifications (Compressor Assembly) 【Indoor Installation Type】

Item	Model	KX-R101C		
Dimension	W x D x H	mm	1650 x 600 x 630	
Power Supply	-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz		
Compressor	Type	220V	-	FL1000EL-180A3
		380V	-	FL1000EL-180C3
	RPM	-	3470	
	Discharge	m <sup>3</sup> /h	37.5	
Running Current	220V	A	32.1	
	380V	A	17.7	
Starting Current	220V	A	242	
	380V	A	118	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	3	
Reservoir Inner Volume	L	27		
Refrigerant	-	R404A or R507A(not mix)		
Evaporating Temperature	°C	-45 ~ -5		
Outdoor Temperature	°C	2 ~ 40		
Protection Devices	-	High & Low Pressure SW、Discharge Temperature Protector、Electrical Overcurrent Protector、Fuse、Liquid Injection Controller、Reverse Phase Protector		
Accessories	-	User's and Service Technical Manual		
Weight	Kg	260		
Piping Size	Gas Line Inlet	mm	Φ 31.7(Brazing)	
	Gas Line Outlet	mm	Φ 19.05(Nut)	
	Liquid Line Inlet	mm	Φ 15.88(Nut)	
	Liquid Line Outlet	mm	Φ 15.88(Nut)	

Specifications (Condenser Assembly)

Item	Model	RCR-R101S		
Dimension	W x D x H	mm	1170 x 690 x 1310	
Power Supply	-	AC 1, 220V/60Hz		
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	Φ 710	
	Flow Rate	CMM	160	
Condenser Motor	Output	W	350	
	Pole	-	6	
Weight	Kg	145		
Piping Size	Gas Line Inlet	mm	Φ 19.05(Brazing)	
	Gas Line Outlet	mm	-	
	Liquid Line Inlet	mm	-	
	Liquid Line Outline	mm	Φ 15.88(Brazing)	

Notice : The Above data is based on these conditions  
O.D. Temperature 32°C, Evaporating Temperature -15°C  
Compressor Inlet Temperature 18°C  
Refrigerant R404A



## KX-R161C + RCR-R161F

Freeze & Refrigerate  
(Split Type)

Specifications (Compressor Assembly) 【Indoor Installation Type】

Item		Model	KX-R161C	
Dimension	W x D x H	mm	1800 x 976 x 92.6	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL800EL-144A3x2
		380V	-	FL800EL-144C3x2
	RPM	-	3470	
	Discharge	m <sup>3</sup> /h	30x2	
Running Current	220V	A	54.3	
	380V	A	31.6	
Starting Current	220V	A	221	
	380V	A	94	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	6.0x2	
Reservoir Inner Volume	L	57		
Refrigerant	-	-	R404A or R507A(not mix)	
Evaporating Temperature	°C	-45 ~ -5		
Outdoor Temperature	°C	2 ~40		
Protection Devices	-	-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories	-	-	User's and Service Technical Manual	
Weight	Kg	460		
Piping Size	Gas Line Inlet	mm	Φ 38.0(Brazing)	
	Gas Line Outlet	mm	Φ 25.4(Brazing)	
	Liquid Line Inlet	mm	Φ 19.05(Brazing)	
	Liquid Line Outlet	mm	Φ 19.05(Nut)	

Specifications (Condenser Assembly)

Item		Model	RCR-R161F
Dimension	W x D x H	mm	1800 x 900 x 930
Power Supply		-	AC 1, 220V/60Hz
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	Φ 710x2
	Flow Rate	CMM	360
Condenser Motor	Output	W	380x2
	Pole	-	6
Weight	Kg	205	
Piping Size	Gas Line Inlet	mm	Φ 25.4(Brazing)
	Gas Line Outlet	mm	-
	Liquid Line Inlet	mm	-
	Liquid Line Outline	mm	Φ 19.05(Brazing)

Notice : The Above data is based on these conditions  
O.D. Temperature 32°C, Evaporating Temperature -15°C  
Compressor Inlet Temperature 18°C  
Refrigerant R404A



## KX-R201C + RCR-R201F

Freeze & Refrigerate  
(Split Type)

Specifications (Compressor Assembly) 【Indoor Installation Type】

Item		Model	KX-R201C	
Dimension	W x D x H	mm	1800 x 976 x 92.1	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL1000EL-180A3x2
		380V	-	FL1000EL-180C3x2
	RPM	-	3470	
	Discharge	m <sup>3</sup> /h	37.5x2	
Running Current	220V	A	68.0	
	380V	A	38.2	
Starting Current	220V	A	277	
	380V	A	164	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	6.0x2	
Reservoir Inner Volume	L	57		
Refrigerant	-	-	R404A or R507A(not mix)	
Evaporating Temperature	°C	-45 ~ -5		
Outdoor Temperature	°C	2 ~40		
Protection Devices	-	-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories	-	-	User's and Service Technical Manual	
Weight	Kg	465		
Piping Size	Gas Line Inlet	mm	Φ 38.0(Brazing)	
	Gas Line Outlet	mm	Φ 25.4(Brazing)	
	Liquid Line Inlet	mm	Φ 19.05(Brazing)	
	Liquid Line Outlet	mm	Φ 19.05(Nut)	

Specifications (Condenser Assembly)

Item		Model	RCR-R201F
Dimension	W x D x H	mm	1800 x 900 x 930
Power Supply		-	AC 1, 220V/60Hz
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	Φ 710x2
	Flow Rate	CMM	320
Condenser Motor	Output	W	380x2
	Pole	-	6
Weight	Kg	227	
Piping Size	Gas Line Inlet	mm	Φ 25.4(Brazing)
	Gas Line Outlet	mm	-
	Liquid Line Inlet	mm	-
	Liquid Line Outline	mm	Φ 19.05(Brazing)

Notice : The Above data is based on these conditions  
O.D. Temperature 32°C, Evaporating Temperature -15°C  
Compressor Inlet Temperature 18°C  
Refrigerant R404A



## KX-R301C + RCR-R161FX2

Freeze & Refrigerate  
(Split Type)

Specifications (Compressor Assembly) 【Indoor Installation Type】

Item	Model		KX-R301C
Dimension	W x D x H	mm	1750 x 1080 x 1080
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz
Compressor	Type	220V	FL1000EL-180A3x3
		380V	FL1000EL-180C3x3
	RPM	-	3470
	Discharge	m <sup>3</sup> /h	37.5x3
Running Current	220V	A	97.0
	380V	A	58.2
Starting Current	220V	A	306
	380V	A	156
Refrigerant Oil	Type	-	FVC32D
	Charge	L	7.0x3
Reservoir Inner Volume	L		80
Refrigerant		-	R404A or R507A(not mix)
Evaporating Temperature	°C		-45 ~ -5
Outdoor Temperature	°C		2 ~ 40
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Liquid Injection Controller \ Reverse Phase Protector
Accessories		-	User's and Service Technical Manual
Weight	Kg		780
Piping Size	Gas Line Inlet	mm	Φ 50.8(Brazing)
	Gas Line Outlet	mm	Φ 38.0(Brazing)
	Liquid Line Inlet	mm	Φ 25.4(Brazing)
	Liquid Line Outlet	mm	Φ 25.4(Nut)

Specifications (Condenser Assembly)

Item	Model		RCR-R161F
Dimension	W x D x H	mm	1800 x 900 x 930
Power Supply		-	AC 1φ, 220V/60Hz
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	Φ 710x2
	Flow Rate	CMM	360
Condenser Motor	Output	W	380x2
	Pole	-	6
Weight	Kg		205
Piping Size	Gas Line Inlet	mm	Φ 25.4(Brazing)
	Gas Line Outlet	mm	-
	Liquid Line Inlet	mm	-
	Liquid Line Outline	mm	Φ 19.05(Brazing)

Notice : The Above data is based on these conditions  
O.D. Temperature 32°C, Evaporating Temperature -15°C  
Compressor Inlet Temperature 18°C  
Refrigerant R404A



## KX-R401C + RCR-R20FX2

Freeze & Refrigerate  
(Split Type)

Specifications (Compressor Assembly) 【Indoor Installation Type】

Item	Model		KX-R401C
Dimension	W x D x H	mm	1750 x 1080 x 1080
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz
Compressor	Type	220V	FL1000EL-180A3x4
		380V	FL1000EL-180C3x4
	RPM	-	3470
	Discharge	m <sup>3</sup> /h	37.5x4
Running Current	220V	A	135.0
	380V	A	81.0
Starting Current	220V	A	338
	380V	A	185
Refrigerant Oil	Type	-	FVC32D
	Charge	220V L	7.0x4
		380V L	8.0x4
Reservoir Inner Volume	L		100
Refrigerant		-	R404A or R507A(not mix)
Evaporating Temperature	°C		-45 ~ -10
Outdoor Temperature	°C		2 ~ 40
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Liquid Injection Controller \ Reverse Phase Protector
Accessories		-	User's and Service Technical Manual
Weight	Kg		880
Piping Size	Gas Line Inlet	mm	Φ 50.8(Brazing)
	Gas Line Outlet	mm	Φ 38.0(Brazing)
	Liquid Line Inlet	mm	Φ 25.4(Brazing)
	Liquid Line Outlet	mm	Φ 25.4(Nut)

Specifications (Condenser Assembly)

Item	Model		RCR-R201F
Dimension	W x D x H	mm	1800 x 900 x 930
Power Supply		-	AC 1, 220V/60Hz
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	Φ 710x2
	Flow Rate	CMM	320
Condenser Motor	Output	W	380x2
	Pole	-	6
Weight	Kg		227
Piping Size	Gas Line Inlet	mm	Φ 25.4(Brazing)
	Gas Line Outlet	mm	-
	Liquid Line Inlet	mm	-
	Liquid Line Outline	mm	Φ 19.05(Brazing)

Notice : The Above data is based on these conditions  
O.D. Temperature 32°C, Evaporating Temperature -15°C  
Compressor Inlet Temperature 18°C  
Refrigerant R404A



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## KX-R21AB

### Freeze & Refrigerate (Unity)

#### Specifications

Item	Model		KX-R21AB
Dimension	Width	mm	1060
	Depth	mm	458
	Height	mm	940
Power Supply	-	-	AC 1, 220V/60Hz
Compressor	Type	-	LS1836Z0
	RPM	-	3470
	Discharge	m <sup>3</sup> /h	7.5
Running Current	A	-	11.0
Starting Current	A	-	72
Refrigerant Oil	Type	-	α 68HES-H
	Charge	L	0.85
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	φ544
	Flow Rate	CMM	84
Condenser Motor	Output	W	140
	Pole	-	6
Refrigerant	-	-	R404A or R507A(not mix)
Working Range Temp.	Evaporating	°C	-45 ~ 0
	Outdoor	°C	2 ~ 43
Protection Devices	-	-	High Pressure SW、Overcurrent Relay、Compressor Overheat Protector、Fuse
Accessories	-	-	User's and Service Technical Manual
Weight	Kg	-	90
Piping Size	Gas Line	mm	φ19.05(Nut)
	Liquid Line	mm	φ9.53(Nut)

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

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## KX-R32A

### Freeze & Refrigerate (Unity)

#### Specifications

Item	Model		KX-R32A	
Dimension	Width	mm	1060	
	Depth	mm	458	
	Height	mm	940	
Power Supply	-	-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL300DH-56A1
		380V	-	FL300DH-56C1
	RPM	-	3470	
Discharge	m <sup>3</sup> /h	-	11.7	
Running Current	220V	A	12.0	
	380V	-	6.9	
Starting Current	220V	A	90.0	
	380V	-	51.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	2.6	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ544	
	Flow Rate	CMM	84	
Condenser Motor	Output	W	140	
	Pole	-	6	
Reservoir Inner Volume	L	-	4.1	
Refrigerant	-	-	R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-45 ~ -5	
	Outdoor	°C	2 ~ 43	
Protection Devices	-	-	High & Low Pressure SW、Discharge Temperature Protector、Electrical Overcurrent Protector、Fuse、Liquid Injection Controller	
Accessories	-	-	User's and Service Technical Manual	
Weight	Kg	-	105	
Piping Size	Gas Line	mm	φ19.05(Length<35M) ; φ22(Length 35~50M)(Nut)	
	Liquid Line	mm	φ9.53(Nut)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R51A

### Freeze & Refrigerate (Unity)



#### Specifications

Item	Model		KX-R51A	
Dimension	Width	mm	1122	
	Depth	mm	385	
	Height	mm	1285	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	FL500DH-90A1	
		380V	FL500DH-90C1	
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	18.7
Running Current		220V	A	16.8
		380V		9.1
Starting Current		220V	A	114.0
		380V		56.0
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	2.2	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ500x2	
	Flow Rate	CMM	115	
Condenser Motor	Output	W	105+125	
	Pole	-	6	
Reservoir Inner Volume		L	13.5	
Refrigerant		-	R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-45 ~ -5	
	Outdoor	°C	2 ~ 40	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	150	
Piping Size	Gas Line	mm	φ22(Length<35M) ; φ25.4(Length 35~50M)(Nut)	
	Liquid Line	mm	φ12.7(Nut)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R81A

### Freeze & Refrigerate (Unity)



#### Specifications

Item	Model		KX-R81A	
Dimension	Width	mm	950	
	Depth	mm	750	
	Height	mm	1645	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	FL800EL-144A3	
		380V	FL800EL-144C3	
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	30
Running Current		220V	A	28.2
		380V		16.8
Starting Current		220V	A	194.0
		380V		72.0
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	3.0	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ644	
	Flow Rate	CMM	160	
Condenser Motor	Output	W	420	
	Pole	-	6	
Reservoir Inner Volume		L	23.8	
Refrigerant		-	R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-45 ~ -5	
	Outdoor	°C	2 ~ 40	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	285	
Piping Size	Gas Line	mm	φ31.75(Brazing)	
	Liquid Line	mm	φ15.88(Brazing)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R101A

### Freeze & Refrigerate (Unity)



#### Specifications

Item	Model		KX-R101A	
Dimension	Width	mm	950	
	Depth	mm	750	
	Height	mm	1645	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL1000EL-180A3
		380V	-	FL1000EL-180C3
	RPM	-	3470	
	Discharge	m <sup>3</sup> /h	37.5	
Running Current	220V	A	35.5	
	380V		20.8	
Starting Current	220V	A	242.0	
	380V		118.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	3.0	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ644	
	Flow Rate	CMM	147	
Condenser Motor	Output	W	420	
	Pole	-	6	
Reservoir Inner Volume		L	23.8	
Refrigerant		-	R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-45 ~ -5	
	Outdoor	°C	2 ~ 40	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	295	
Piping Size	Gas Line	mm	φ31.75(Brazing)	
	Liquid Line	mm	φ15.88(Brazing)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R161A

### Freeze & Refrigerate Unity (Split)



#### Specifications

Item	Model		KX-R161A	
Dimension	Width	mm	1800	
	Depth	mm	900	
	Height	mm	1852	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL800EL-144A3x2
		380V	-	FL800EL-144C3x2
	RPM	-	3470	
	Discharge	m <sup>3</sup> /h	30x2	
Running Current	220V	A	54.3	
	380V		31.6	
Starting Current	220V	A	221.0	
	380V		94.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	6.0x2	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ710x2	
	Flow Rate	CMM	360	
Condenser Motor	Output	W	380x2	
	Pole	-	6	
Reservoir Inner Volume		L	57	
Refrigerant		-	R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-45 ~ -5	
	Outdoor	°C	2 ~ 40	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	720	
Piping Size	Gas Line	mm	φ38(Brazing)	
	Liquid Line	mm	φ19.05(Brazing)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R201A

### Freeze & Refrigerate Unity (Split)



#### Specifications

Item	Model		KX-R201A	
Dimension	Width	mm	1800	
	Depth	mm	900	
	Height	mm	1852	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL1000EL-180A3x2
		380V	-	FL1000EL-180C3x2
	RPM	-	3470	
	Discharge	$\frac{3}{m^3/h}$	37.5x2	
Running Current	220V	A	68.0	
	380V		38.2	
Starting Current	220V	A	277.0	
	380V		164.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	6.0x2	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ710x2	
	Flow Rate	CMM	320	
Condenser Motor	Output	W	380x2	
	Pole	-	6	
Reservoir Inner Volume		L	57	
Refrigerant		-	R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-45 ~ -5	
	Outdoor	°C	2 ~ 40	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	750	
Piping Size	Gas Line	mm	φ38(Brazing)	
	Liquid Line	mm	φ19.05(Brazing)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R21AHB

### Freeze & Refrigerate (Unity)



#### Specifications

Item	Model		KX-R21AHB
Dimension	Width	mm	1060
	Depth	mm	458
	Height	mm	940
Power Supply		-	AC 1, 220V/60Hz
Compressor	Type	-	LS1836Z0
	RPM	-	3470
	Discharge	$\frac{3}{m^3/h}$	7.5
Running Current		A	11.9
Starting Current		A	75
Refrigerant Oil	Type	-	α68HES-H
	Charge	L	0.85
Condenser	Type	-	Multi-Pass Cross-Finned Tube
	Fan Diam.	mm	φ544
Condenser Motor	Flow Rate	CMM	84
	Output	W	140
Pole		-	6
Refrigerant		-	R404A or R507A(not mix)
Reservoir Inner Volume		L	4.1
Working Range Temp.	Evaporating	°C	-20 ~ 0
	Outdoor	°C	2 ~ 40
Protection Devices		-	High Pressure SW \ Overcurrent Relay \ Compressor Overheat Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector
Accessories		-	User's and Service Technical Manual
Weight		Kg	90
Piping Size	Gas Line	mm	φ19.05(Nut)
	Liquid Line	mm	φ9.53(Nut)

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

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## KX-R32AH

### Freeze & Refrigerate (Unity)

#### Specifications

Item	Model		KX-R32AH	
Dimension	Width	mm	1060	
	Depth	mm	458	
	Height	mm	940	
Power Supply	-		AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FM300DH-47A1
		380V	-	FM300DH-47C1
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	9.8
Running Current	220V	A	11.1	
	380V		6.0	
Starting Current	220V	A	90.0	
	380V		52.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	1.5	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ544	
	Flow Rate	CMM	84	
Condenser Motor	Output	W	140	
	Pole	-	6	
Reservoir Inner Volume	L		4.1	
Refrigerant	-		R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-15 ~ 10	
	Outdoor	°C	2 ~ 43	
Protection Devices	-		High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller	
Accessories	-		User's and Service Technical Manual	
Weight	Kg		105	
Piping Size	Gas Line	mm	φ19.05(Length<35M) ; φ22(Length 35~50M)(Nut)	
	Liquid Line	mm	φ9.53(Nut)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

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## KX-R51AM

### Freeze & Refrigerate (Unity)

#### Specifications

Item	Model		KX-R51AM	
Dimension	Width	mm	1122	
	Depth	mm	385	
	Height	mm	1285	
Power Supply	-		AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FM500DH-80A1
		380V	-	FM500DH-80C1
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	16.7
Running Current	220V	A	16.9	
	380V		9.8	
Starting Current	220V	A	132.0	
	380V		65.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	2.2	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ500x2	
	Flow Rate	CMM	115	
Condenser Motor	Output	W	125+125	
	Pole	-	6	
Reservoir Inner Volume	L		13.5	
Refrigerant	-		R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-20 ~ 8	
	Outdoor	°C	2 ~ 40	
Protection Devices	-		High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories	-		User's and Service Technical Manual	
Weight	Kg		140	
Piping Size	Gas Line	mm	φ22(Length<35M) ; φ25.4(Length 35~50M)(Flange)	
	Liquid Line	mm	φ12.7(Nut)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -0°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R81AH

### Freeze & Refrigerate Unity (Split)



#### Specifications

Item	Model		KX-R81AH	
Dimension	Width	mm	1650	
	Depth	mm	595	
	Height	mm	1573	
Power Supply	-		AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL751EL-128A3
		380V	-	FL751EL-128C3
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	26.65
Running Current	220V	A	28.0	
	380V		15.0	
Starting Current	220V	A	180.0	
	380V		92.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	3.0	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ 440x3	
	Flow Rate	CMM	160	
Condenser Motor	Output	W	130x2+105	
	Pole	-	6	
Reservoir Inner Volume	L		27	
Refrigerant	-		R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-15 ~ 10	
	Outdoor	°C	2 ~ 40	
Protection Devices	-		High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories	-		User's and Service Technical Manual	
Weight	Kg		335	
Piping Size	Gas Line	mm	φ 31.75(Brazing)	
	Liquid Line	mm	φ 15.88(Nut)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -0°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R101AH

### Freeze & Refrigerate Unity (Split)



#### Specifications

Item	Model		KX-R101AH	
Dimension	Width	mm	1650	
	Depth	mm	595	
	Height	mm	1833	
Power Supply	-		AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FM1001EL-160A3
		380V	-	FM1001EL-160C3
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	33.3
Running Current	220V	A	34.5	
	380V		19.2	
Starting Current	220V	A	230.0	
	380V		126.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	3.0	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ 440x3	
	Flow Rate	CMM	150	
Condenser Motor	Output	W	130x2+105	
	Pole	-	6	
Reservoir Inner Volume	L		27	
Refrigerant	-		R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-15 ~ 8	
	Outdoor	°C	2 ~ 40	
Protection Devices	-		High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories	-		User's and Service Technical Manual	
Weight	Kg		420	
Piping Size	Gas Line	mm	φ 31.75(Brazing)	
	Liquid Line	mm	φ 15.88(Nut)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -0°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

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## KX-R161AH

### Freeze & Refrigerate Unity (Split)

#### Specifications

Item	Model	KX-R161AH		
Dimension	Width	mm	1800	
	Depth	mm	900	
	Height	mm	1852	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FM751EL-128A3x2
		380V	-	FM751EL-128C3x2
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	26.65x2
Running Current	220V	A	55.0	
	380V		31.0	
Starting Current	220V	A	223.0	
	380V		115.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	4.0x2	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ710x2	
	Flow Rate	CMM	360	
Condenser Motor	Output	W	380x2	
	Pole	-	6	
Reservoir Inner Volume		L	57	
Refrigerant		-	R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-15 ~ 10	
	Outdoor	°C	2 ~ 40	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	720	
Piping Size	Gas Line	mm	φ38(Brazing)	
	Liquid Line	mm	φ19.05(Nut)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -0°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

SCROLL



## KX-R201AH

### Freeze & Refrigerate Unity (Split)

#### Specifications

Item	Model	KX-R201AH		
Dimension	Width	mm	1800	
	Depth	mm	900	
	Height	mm	1852	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FM1001EL-160A3x2
		380V	-	FM1001EL-160C3x2
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	33.3x2
Running Current	220V	A	63.0	
	380V		40.0	
Starting Current	220V	A	260.0	
	380V		145.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	4.0x2	
Condenser	Type	-	Multi-Pass Cross-Finned Tube	
	Fan Diam.	mm	φ710x2	
	Flow Rate	CMM	320	
Condenser Motor	Output	W	380x2	
	Pole	-	6	
Reservoir Inner Volume		L	57	
Refrigerant		-	R404A or R507A(not mix)	
Working Range Temp.	Evaporating	°C	-15 ~ 10	
	Outdoor	°C	2 ~ 40	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	750	
Piping Size	Gas Line	mm	φ38(Brazing)	
	Liquid Line	mm	φ19.05(Nut)	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -0°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A

## KX-R51W

### Freeze & Refrigerate (Unity)



#### Specifications

Item	Model		KX-R51W	
Dimension	Width	mm	1130	
	Depth	mm	576	
	Height	mm	956	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FM500DH-90A1
		380V	-	FM500DH-90C1
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	18.7
Running Current		220V	A	16.0
		380V		8.4
Starting Current		220V	A	137.0
		380V		66.0
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	2.2	
Condenser	Type	-	Shell and Tube	
	Inner Volume	L	30	
	Water Flow Rate	m <sup>3</sup> /h	3.0	
Refrigerant		-	R404A or R507A(not mix)	
Evaporating Temperature		°C	-45 ~ 5	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Relief Plug \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	185	
Piping Size	Gas Line	mm	φ25.4(Brazing)	
	Liquid Line	mm	φ12.7(Nut)	
	Condensing Water Inlet	FPT"	1	
	Condensing Water Outlet	FPT"	1	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A  
 Fouling Factor = 0.0002 m<sup>2</sup>h°C/kcal

## KX-R81W

### Freeze & Refrigerate (Unity)



#### Specifications

Item	Model		KX-R81W	
Dimension	Width	mm	1150	
	Depth	mm	650	
	Height	mm	1000	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL800EL-144A3
		380V	-	FL800EL-144C3
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	30
Running Current		220V	A	23.2
		380V		13.0
Starting Current		220V	A	194.0
		380V		72.0
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	3.0	
Condenser	Type	-	Shell and Tube	
	Inner Volume	L	55	
	Water Flow Rate	m <sup>3</sup> /h	4.8	
Refrigerant		-	R404A or R507A(not mix)	
Evaporating Temperature		°C	-45 ~ 5	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Relief Plug \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	340	
Piping Size	Gas Line	mm	φ31.75(Brazing)	
	Liquid Line	mm	φ15.88(Nut)	
	Condensing Water Inlet	FPT"	1-1/2	
	Condensing Water Outlet	FPT"	1-1/2	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A  
 Fouling Factor = 0.0002 m<sup>2</sup>h°C/kcal



## KX-R101W

### Freeze & Refrigerate (Unity)



#### Specifications

Item	Model		KX-R101W	
Dimension	Width	mm	1150	
	Depth	mm	650	
	Height	mm	1000	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL1000EL-180A3
		380V	-	FL1000EL-180C3
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	37.5
Running Current		220V	A	30.2
		380V		17.1
Starting Current		220V	A	242.0
		380V		118.0
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	3.0	
Condenser	Type	-	Shell and Tube	
	Inner Volume	L	51	
	Water Flow Rate	m <sup>3</sup> /h	5.9	
Refrigerant		-	R404A or R507A(not mix)	
Evaporating Temperature		°C	-45 ~ 5	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Relief Plug \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	340	
Piping Size	Gas Line	mm	φ31.75(Brazing)	
	Liquid Line	mm	φ15.88(Nut)	
	Condensing Water Inlet	FPT"	1-1/2	
	Condensing Water Outlet	FPT"	1-1/2	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A  
 Fouling Factor = 0.0002 m<sup>2</sup>h°C/kcal

## KX-R161W

### Freeze & Refrigerate (Unity)



#### Specifications

Item	Model		KX-R161W	
Dimension	Width	mm	1560	
	Depth	mm	720	
	Height	mm	1020	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL800EL-144A3x2
		380V	-	FL800EL-144C3x2
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	30x2
Running Current		220V	A	49.4
		380V		30.5
Starting Current		220V	A	238.0
		380V		110.0
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	6.0x2	
Condenser	Type	-	Shell and Tube	
	Inner Volume	L	94.2	
	Water Flow Rate	m <sup>3</sup> /h	7.3	
Refrigerant		-	R404A or R507A(not mix)	
Evaporating Temperature		°C	-45 ~ 5	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Relief Plug \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	548	
Piping Size	Gas Line	mm	φ38.0(Brazing)	
	Liquid Line	mm	φ19.05(Nut)	
	Condensing Water Inlet	FPT"	2	
	Condensing Water Outlet	FPT"	2	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A  
 Fouling Factor = 0.0002 m<sup>2</sup>h°C/kcal

## KX-R201W

### Freeze & Refrigerate (Unity)



#### Specifications

Item		Model		KX-R201W
Dimension	Width	mm		1560
	Depth	mm		720
	Height	mm		1020
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL1000EL-180A3x2
		380V	-	FL1000EL-180C3x2
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	37.5
Running Current		220V	A	60.7
		380V		39.1
Starting Current		220V	A	273.0
		380V		145.0
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	6.0x2	
Condenser	Type	-	Shell and Tube	
	Inner Volume	L	88.9	
	Water Flow Rate	m <sup>3</sup> /h	9.6	
Refrigerant		-	R404A or R507A(not mix)	
Evaporating Temperature		°C	-45 ~ 5	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Relief Plug \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	554	
Piping Size	Gas Line	mm	φ 38.0(Brazing)	
	Liquid Line	mm	φ 19.05(Nut)	
	Condensing Water Inlet	FPT"	2	
	Condensing Water Outlet	FPT"	2	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A  
 Fouling Factor = 0.0002 m<sup>2</sup>h°C/kcal

## KX-R301W

### Freeze & Refrigerate (Unity)



#### Specifications

Item		Model		KX-R301W
Dimension	Width	mm		1750
	Depth	mm		1080
	Height	mm		1080
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL1000EL-180A3x3
		380V	-	FL1000EL-180C3x3
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	37.5x3
Running Current		220V	A	97.9
		380V		56.4
Starting Current		220V	A	306.0
		380V		154.0
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	6.0x3	
Condenser	Type	-	Shell and Tube	
	Inner Volume	L	106	
	Water Flow Rate	m <sup>3</sup> /h	12.1	
Refrigerant		-	R404A or R507A(not mix)	
Evaporating Temperature		°C	-45 ~ 5	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Relief Plug \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	780	
Piping Size	Gas Line	mm	φ 50.8(Flange)	
	Liquid Line	mm	φ 25.4(Nut)	
	Condensing Water Inlet	FPT"	3	
	Condensing Water Outlet	FPT"	3	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A  
 Fouling Factor = 0.0002 m<sup>2</sup>h°C/kcal

# KX-R401W

## Freeze & Refrigerate (Unity)



### Specifications

Item	Model	KX-R401W		
Dimension	Width	mm	1750	
	Depth	mm	1080	
	Height	mm	1080	
Power Supply		-	AC 3, 220V/60Hz ; AC 3, 4W, 380V/60Hz	
Compressor	Type	220V	-	FL1000EL-180A3x4
		380V	-	FL1000EL-180C3x4
	RPM		-	3470
	Discharge		m <sup>3</sup> /h	37.5x4
Running Current	220V	A	139.1	
	380V		72.25	
Starting Current	220V	A	346.0	
	380V		172.0	
Refrigerant Oil	Type	-	FVC32D	
	Charge	L	6.0x4	
Condenser	Type	-	Shell and Tube	
	Inner Volume	L	96	
	Water Flow Rate	m <sup>3</sup> /h	17.4	
Refrigerant		-	R404A or R507A(not mix)	
Evaporating Temperature		°C	-45 ~ 5	
Protection Devices		-	High & Low Pressure SW \ Discharge Temperature Protector \ Electrical Overcurrent Protector \ Relief Plug \ Fuse \ Liquid Injection Controller \ Reverse Phase Protector	
Accessories		-	User's and Service Technical Manual	
Weight		Kg	880	
Piping Size	Gas Line	mm	φ 50.8(Flange)	
	Liquid Line	mm	φ 25.4(Nut)	
	Condensing Water Inlet	FPT <sup>1</sup>	3	
	Condensing Water Outlet	FPT <sup>1</sup>	3	

Notice : The Above data is based on these conditions  
 O.D. Temperature 32°C, Evaporating Temperature -15°C  
 Compressor Inlet Temperature 18°C  
 Refrigerant R404A  
 Fouling Factor - 0.0002m<sup>2</sup>h °C/kcal

# CAPACITY TABLE

## Freeze & Refrigerate (60hz)

This capacity table is based on the standard condition - O.D. 32°C, please consider the actual status to increase the safety margin.

MODEL	CAPACITY	Evaporating Temperature (°C)									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	0
KX-R21CB+ RCR-R21S	kW	1.2	1.5	1.9	2.3	2.8	3.3	4.0	4.7	5.5	-
	kcal/hr	1040	1300	1660	2020	2385	2870	3430	4000	4750	-
KX-R31CB+ RCR-R31S	kW	1.8	2.1	2.5	3.0	3.6	4.3	5.2	6.1	7.0	-
	kcal/hr	1530	1820	2130	2560	3110	3710	4440	5250	6060	-
KX-R51C+ RCR-R51S	kW	2.9	3.8	4.7	5.7	6.9	8.3	9.9	11.5	13.6	-
	kcal/hr	2470	3240	4050	4900	5900	7100	8500	9920	11660	-
KX-R81C+ RCR-R81S	kW	4.8	6.2	7.7	9.5	11.5	14.2	17.0	19.7	23.0	-
	kcal/hr	4160	5300	6610	8120	9910	12200	14580	16930	19750	-
KX-R101C+ RCR-R101S	kW	6.0	7.4	9.6	11.7	13.8	17.0	20.1	23.3	27.4	-
	kcal/hr	5160	6400	8230	10070	11900	14590	17280	20060	23550	-
KX-R161C+ RCR-R161F	kW	9.6	12.3	15.9	19.4	23.0	27.9	32.7	39.3	45.9	-
	kcal/hr	8220	10570	13640	16720	19790	23970	28160	33830	39500	-
KX-R201C+ RCR-R201F	kW	12.0	15.1	18.9	22.7	26.6	32.4	38.2	45.9	53.6	-
	kcal/hr	10310	12970	16260	19560	22860	27860	32860	39470	46090	-
KX-R301C+ RCR-R161Fx2	kW	15.3	19.5	25.5	31.5	37.5	45.6	53.8	65.4	77.0	-
	kcal/hr	13170	16780	21930	27080	32230	39240	46250	56230	66210	-
KX-R401C+ RCR-R201Fx2	kW	20.2	25.8	33.0	40.2	47.4	58.5	69.6	82.8	-	-
	kcal/hr	17330	22170	28370	34580	40780	50320	59860	71210	-	-
KX-R21AB	kW	1.2	1.5	1.9	2.4	2.8	3.5	4.2	5.2	6.1	7.2
	kcal/hr	1040	1300	1660	2030	2430	3030	3620	4400	5250	6200
KX-R32A	kW	1.8	2.4	3.0	3.6	4.4	5.2	6.3	7.5	8.8	-
	kcal/hr	1570	2040	2550	3100	3740	4490	5380	6410	7540	-
KX-R51A	kW	2.9	3.8	4.7	5.7	6.9	8.3	9.9	11.5	13.6	-
	kcal/hr	2470	3240	4050	4900	5900	7100	8500	9920	11660	-
KX-R81A	kW	4.7	6.0	7.5	9.3	11.5	13.8	16.5	19.2	22.5	-
	kcal/hr	4070	5120	6440	7990	9850	11830	14160	16550	19370	-
KX-R101A	kW	5.8	7.3	8.9	10.9	13.3	15.9	18.9	22.3	25.8	-
	kcal/hr	5020	6240	7640	9360	11410	13680	16260	19210	22160	-
KX-R161A	kW	9.4	12.1	15.6	19.1	22.6	27.6	32.7	39.1	45.5	-
	kcal/hr	8100	10370	13390	16410	19420	23750	28080	33610	39130	-
KX-R201A	kW	12.0	15.1	18.9	22.7	26.6	32.4	38.2	45.9	53.6	-
	kcal/hr	10310	12970	16260	19560	22860	27860	32860	39470	46090	-

Note: This table is based on these conditions  
 O.D. Temperature 32°C, Suction Temperature of Compressor 18°C

## Refrigerate (60hz)

This capacity table is based on the standard condition - O.D. 32°C, please consider the actual status to increase the safety margin

MODEL	CAPACITY	Evaporating Temperature (°C)							
		-20	-15	-10	-5	0	5	8	10
KX-R21AHB	kW	-	3.9	4.7	5.7	6.8	7.9	8.5	8.9
	kcal/hr	-	3380	4060	4890	5830	6790	7310	7680
KX-R32AH	kW	-	5.1	6.9	8.2	9.5	11.0	12.0	12.7
	kcal/hr	-	4410	5920	7020	8200	9490	10320	10930
KX-R51AM	kW	6.4	9.2	10.7	12.6	15.0	17.3	18.6	-
	kcal/hr	5480	7920	9180	10830	12920	14840	16000	-
KX-81AH	kW	-	12.8	16.2	19.6	23.0	27.4	30.0	31.7
	kcal/hr	-	11040	13950	16860	19790	23530	25770	27270
KX-R101AH	kW	-	15.4	19.2	22.9	26.7	31.1	33.7	-
	kcal/hr	-	13270	16480	19690	22920	26720	29000	-
KX-R161AH	kW	-	26.7	33.5	40.2	46.9	53.9	58.1	60.9
	kcal/hr	-	23000	28780	34550	40300	46360	49980	52400
KX-R201AH	kW	-	31.0	39.1	47.2	55.3	63.7	68.7	72.1
	kcal/hr	-	26520	33600	40590	47560	54790	57110	62000

Note: This table is based on these conditions O.D. Temperature 32°C  
 Suction Temperature of Compressor 18°C

### Freeze & Refrigerate (60hz)

MODEL	CHILLED WATER TEMP.	CAPACITY	Evaporating Temperature (°C)										
			-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
KX-R51W	32°C	kW	3.1	3.9	5.0	6.2	7.4	9.1	10.7	13.0	15.2	18.1	21.1
		kcal/hr	2640	3340	4340	5340	6340	7780	9220	11140	13060	15600	18140
	34°C	kW	3.0	3.8	4.9	6.0	7.0	8.6	10.2	12.4	14.7	17.2	19.7
		kcal/hr	2540	3250	4180	5120	6050	7410	8780	10700	12630	14800	16970
	36°C	kW	2.9	3.6	4.7	5.8	6.8	8.4	10.0	12.2	14.3	16.8	19.3
		kcal/hr	2520	3120	4040	4960	5880	7230	8570	10450	12330	14450	16560
KX-R81W	32°C	kW	5.2	6.4	8.1	10.2	12.4	15.3	18.2	21.9	25.6	30.8	36.0
		kcal/hr	4450	5530	6990	8810	10630	13140	15640	18830	22010	26510	31000
	34°C	kW	5.1	6.4	8.0	10.1	12.1	15.0	17.8	21.4	25.0	30.2	35.3
		kcal/hr	4360	5490	6850	8640	10420	12870	15310	18400	21480	25920	30350
	36°C	kW	5.0	6.3	7.8	9.8	11.8	14.6	17.4	20.9	24.4	29.5	34.5
		kcal/hr	4270	5410	6710	8430	10140	12550	14960	17980	20990	25330	29670
KX-R101W	32°C	kW	6.4	8.1	10.1	12.7	15.3	18.7	22.0	26.9	31.8	37.8	43.9
		kcal/hr	5460	6980	8650	10920	13180	16060	18930	23130	27330	32520	37720
	34°C	kW	6.3	7.9	9.9	12.4	15.0	18.3	21.6	26.4	30.8	37.0	43.1
		kcal/hr	5390	6790	8480	10700	12910	15750	18580	22670	26530	31810	37090
	36°C	kW	6.2	7.7	9.7	12.2	14.6	17.9	21.2	25.8	30.0	36.0	42.0
		kcal/hr	5300	6610	8300	10450	12590	15390	18190	22210	25790	30970	36140

Note: This table is based on these conditions  
R404A Refrigerant, Suction Temperature of Compressor 18°C  
Fouling Factor = 0.0002m<sup>2</sup>h°C/kcal

### Freeze & Refrigerate (60hz)

MODEL	CHILLED WATER TEMP.	FLOW RATE	Evaporating Temperature (°C)										
			-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
KX-R51W	32°C-36°C	m <sup>3</sup> /h	1.5	1.6	1.9	2.1	2.4	2.7	3.0	3.5	3.9	4.6	5.2
KX-R81W			2.4	2.5	2.8	3.2	3.6	4.2	4.8	5.5	6.2	7.2	8.2
KX-R101W			2.9	3.3	3.6	4.1	4.6	5.3	5.9	6.8	7.7	8.8	9.8

Note: This table is based on these conditions  
R404A Refrigerant, Suction Temperature of Compressor 18°C  
Fouling Factor = 0.0002m<sup>2</sup>h°C/kcal

### Freeze & Refrigerate (60hz)

MODEL	CHILLED WATER TEMP.	CAPACITY	Evaporating Temperature (°C)										
			-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
KX-R161W	32°C	kW	9.2	11.6	14.3	18.1	21.8	26.4	31	38	45.7	54.5	63.2
		kcal/hr	7940	9980	12340	15550	18760	22690	26620	32690	39330	46830	54330
	34°C	kW	9	11.3	14	17.7	21.3	25.8	30.2	37.2	44.7	53.1	61.5
		kcal/hr	7740	9720	12010	15150	18290	22150	26010	31950	38460	45690	52920
	36°C	kW	8.8	11	13.6	17.2	20.7	25.1	29.5	36.3	43.7	51.8	59.8
		kcal/hr	7550	9470	11690	14760	17820	21620	25410	31220	37590	44500	51410
KX-R201W	32°C	kW	11.4	14.8	18.8	23.7	28.6	35	41.3	50.2	60	71.2	82.3
		kcal/hr	9780	12750	16180	20390	24590	30060	35520	43190	51570	61170	70770
	34°C	kW	11.1	14.4	18.2	23	27.8	34	40.2	49	58.7	69.5	80.3
		kcal/hr	9510	12380	15690	19790	23880	29230	34580	42170	50490	59770	69050
	36°C	kW	10.7	14	17.7	22.4	27	33.1	39.1	47.9	57.5	67.9	78.3
		kcal/hr	9240	12010	15200	19190	23180	28410	33630	41160	49410	58390	67360

Note: This table is based on these conditions  
R404A Refrigerant, Suction Temperature of Compressor 18°C  
Fouling Factor = 0.0002m<sup>2</sup>h°C/kcal

### Freeze & Refrigerate (60hz)

MODEL	CHILLED WATER TEMP.	FLOW RATE	Evaporating Temperature (°C)										
			-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
KX-R161W	32°C-36°C	m <sup>3</sup> /h	4.1	4.1	4.6	5.3	6.0	6.7	7.3	8.5	9.8	11.2	12.5
KX-R201W			5.0	5.0	5.7	6.7	7.6	8.6	9.6	11.1	12.7	14.5	16.3

Note: This table is based on these conditions  
R404A Refrigerant, Suction Temperature of Compressor 18°C  
Fouling Factor = 0.0002m<sup>2</sup>h°C/kcal

## Freeze & Refrigerate (60hz)

MODEL	CHILLED WATER TEMP.	CAPACITY	Evaporating Temperature (°C)										
			-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
KX-R301W	32°C	kW	16.5	20.7	26.3	33.1	39.9	49.7	59.4	72.2	84.9	99.8	114.7
		kcal/hr	14230	17800	22600	28480	34340	42710	51070	62080	73040	85820	98600
	34°C	kW	16.3	20.4	25.9	32.6	39.3	48.9	58.5	71.1	83.7	98.3	112.9
		kcal/hr	14010	17530	22260	28040	33820	42070	50300	61140	71950	84540	97130
	36°C	kW	16.0	20.1	25.5	32.1	38.7	48.2	57.6	70.0	82.4	96.8	111.2
		kcal/hr	13800	17270	21920	27620	33310	41430	49550	60220	70840	83250	95650
KX-R401W	32°C	kW	21.1	27.7	34.6	42.2	49.9	62.0	74.1	89.9	107.5	127.3	147.2
		kcal/hr	18170	23840	29740	36330	42910	53320	63730	77280	92410	109510	126600
	34°C	kW	20.5	26.8	33.4	40.8	48.2	59.8	71.4	86.7	104.2	123.5	142.7
		kcal/hr	17660	23040	28720	35080	41420	51400	61370	74580	89610	106180	122750
	36°C	kW	19.9	26.2	32.8	40.2	47.5	58.6	69.8	85.4	102.6	121.3	139.9
		kcal/hr	17130	22570	28240	34530	40810	50430	60040	73470	88260	104300	120330

Note: This table is based on these conditions  
R404A Refrigerant, Suction Temperature of Compressor 18°C  
Fouling Factor = 0.0002m<sup>2</sup>h°C/kcal

## Freeze & Refrigerate (60hz)

MODEL	CHILLED WATER TEMP.	FLOW RATE	Evaporating Temperature (°C)										
			-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
KX-R301W	32°C-36°C	m <sup>3</sup> /h	7.2	7.5	8.6	9.8	10.9	12.5	14.1	16.1	18.2	20.4	22.5
KX-R401W			9.7	9.7	10	11.7	13.3	15.4	17.4	20	22.9	26.2	29.5

Note: This table is based on these conditions  
R404A Refrigerant, Suction Temperature of Compressor 18°C  
Fouling Factor = 0.0002m<sup>2</sup>h°C/kcal

## Adjustment capacity value superheat (TsSh) when suction temperature is 18 °C

Evaporating Temp °C \ Superheat (TsSh)	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10
10deg	84.9	86.3	87.7	89.2	90.3	91.5	93.1	94.5	96.1	97.8	99.2	100.0(*)
15deg	86.3	87.8	89.1	90.7	91.8	92.9	94.7	96.3	97.6	99.0	-	-
20deg	87.8	89.2	90.7	92.1	93.3	94.4	95.2	97.7	99.2	-	-	-
25deg	89.3	90.7	92.1	93.5	94.8	95.9	97.7	99.1	-	-	-	-
30deg	90.7	92.2	93.6	95.0	96.2	97.4	99.2	-	-	-	-	-

Remark: This table is built for R404A with the outdoor temperature of 32 °C  
(\*) Because the, axomum suction temperature is 180 °C, so the setting of the superheat is 8°C when the evaporating temperature is 10 °C

## Adjustment capacity value superheat (TsSh) when suction temperature is 18 °C

Evaporating Temp °C \ Superheat (TsSh)	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10
10deg	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	18(*)
15deg	-30	-25	-20	-15	-10	-5	0	5	10	15	-	-
20deg	-25	-20	-15	-10	-5	0	5	10	15	-	-	-
25deg	-20	-15	-10	-5	0	5	10	15	-	-	-	-
30deg	-15	-10	-5	0	5	10	15	-	-	-	-	-

Remark: This table is built for R404A with the outdoor temperature of 32 °C  
(\*) Because the, axomum suction temperature is 180 °C, so the setting of the superheat is 8°C when the evaporating temperature is 10 °C

