KYSOR WARREN REFRIGERATION SCHEDULE

Kysor Warren Systems
5 Corporate Ridge Pkwy
Columbus, GA 31907
800-866-5596

Store / Cust:	Food Lion	Rack A	
Location:	Edgemere, MD	Rack Model:	
Store #:	2560	Salesman	Kim Austin
Job #:	708916	Prepared By:	Kim Austin — Date Originated 8/12/19

Kysor Warren Cases
5201 Transport Blvd.
Columbus, GA 31907
800-866-5596

Rev.	Date	By:	Revision:
APR	9/26/19	Kim Austin	Revised for remodel
ARS	10/30/19	Kim Austin	Updated per A1.01_ARS - MEDIUM
A1	1/14/20	Kim Austin	Added ROF filters per walk through notes

Electrical Specs	Volt / Hz / Phase
Line	208/60/3
Control	208/60/1
MCA	
Max. Overcurrent	

Controller:	CPC
Single or Dual Point Pwr:	Single
Case Manufacturer	
Fixture Plan:	

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Sys No	Size	Model	Heat Exchr.	Expansion Valve	Temp Probe	Application	Load Load	Evap ° F	Def Type	Fans Amps	Fans Volts/1	Amps @ 120V Lights	Amps @ 120V Htrs	Watts @ 120V Fans	Watts @ 120V Lights	Watts @ 120V Htrs	Refrig. Valves Hot Gas	Refrig. Valves Liquid	Refrig. Valves Suction	Len. Run	Suction Horiz	Suction Riser	Liquid Horiz
1	8'8'8'12'	36' LSB			1	MD Meat N80-N83	54.3	23	Off Cycle	6.0	115	8.5		688	978				SORIT 20	40	1 3/8	1 1/8	5/8
2	8'12'12'	32' D5			1	Lunch Meat 17-19	45.1	21	Off Cycle	5.6	115	6.5		644	748				SORIT 20	30	1 3/8	1 1/8	5/8
3						SPARE													SORIT 12				
4	730 SQ.FT.	2)FL36-100	EXISTING			Meat Prep	40.2	30	Off Cycle	3.6	115			414					SORIT 12	60	1 1/8	1 1/8	1/2
5	13X21X8.5	AE36-140	EXISTING			Meat Cooler	18.0	20	Off Cycle	4.8	115								SORIT 12	80	1 1/8	7/8	1/2
6	14X21X8.5	2)FL36-135	EXISTING			Produce Cooler	18.3	25	Off Cycle	6.6	115			759					SORIT 12	120	1 1/8	7/8	1/2
7	617 SQ.FT.	RWF130	EXISTING			Produce Prep	27.7	30	Off Cycle	1.6	115			184					SORIT 12	160	1 1/8	7/8	1/2
8						SPARE													SORIT 12				
9	12'12'/12'	12'QD6L1,12'O5DM,12'DX6LD			1	Produce/Doors 14,15,N74	37.4	23	Off Cycle	2.1	115	4.0	1.8	242	460	207			SORIT 15	180	1 1/8	1 1/8	1/2
10	12'12'/4'	24' DX6LN/PF-4			1	Produce/Floral N71-N73	32.2	28	Off Cycle	1.1	115	4.1		127	472				SORIT 15	210	1 3/8	1 1/8	5/8
11	8'8'12'	28' LSB			1	MD Meat N75-N77	42.2	23	Off Cycle	4.6	115	6.6		529	753				SORIT 15	120	1 3/8	1 1/8	5/8
12																			SORIT 12				
13	12'12'	24' DX6LN			1	SS Deli N63,N64	28.4	26	Off Cycle	0.8	115	3.8		92	437				SORIT 15	325	1 3/8	1 1/8	5/8
14	6'8'8'8'	PT,PT,PTD,PT				Deli/Bakery N65-N68	27.7	26	Off Cycle	4.3	115	8.1		495	932				SORIT 15	300	1 3/8	1 1/8	5/8
15						SPARE													SORIT 12				
16	8X11X8.5	FL36-100	EXISTING			Deli Cooler	7.5	27	Off Cycle	1.6	115			230					SORIT 12	300	7/8	7/8	1/2
17	12'12'12'	36' D5			1	Dairy Doors 31-33	18.0	30	Off Cycle	6.3	115	7.0	3.0	725	805	345			SORIT 15	180	1 1/8	7/8	1/2

General Specifications

Refrigerant Type	
Condensing Temp	
Outside Air Temp.	
Required Load Group 1	
Comp. Capacity Group 1	
Effective capac. with subcooling	
% Excess Capacity Group 1	
Rej. Heat (MBH) Group 1	
Required Load Group 2	
Comp. Capacity Group 2	
Effective capac. with subcooling	
% Excess Capacity Group 2	
Rej. Heat (MBH) Group 2	
Required Load Group 3	
Comp. Capacity Group 3	
Effective capac. with subcooling	
% Excess Capacity Group 3	
Rej. Heat (MBH) Group 3	
Total Rej. Heat (MBH)	
Heat Reclaim Avail. (MBH)	
Compressor Capacity (Tons)	
Rack Size	
Estimated Rack Weight Lbs.	

Rack Model:

Compressor Group #	Comp #	Compressor	Cap	Suct ° F	HP	RPM	RLA	LRA	New Compressor Model	Capacity Control	Circuit Breaker	Contactor	Wire Size (AWG)

Compressor Specifications

Rack Components

Oil Separator -- Group 1		Drain Regulator			Air reclaim		Head Fan LT/MT
Oil Separator -- Group 2		Master Solenoid			Water Reclaim		Crankcase Htrs.
Disch. Check Valve -- Grp 1		Surge Solenoid			Line size To		
Disch. Check Valve -- Grp 2		Surge Ball Valve			Line size From		
Disch. Reg. / Mas Liq		Surge Check			Bypass Valve		
Bypass Regulator		Surge Style			Split Cond. Valve		
Oil Filter		Attron			Ext. Cond. Bleed		
Brand / Number					Receiver H / V		
Suction Filter -- Group 1		Subcooler			Dia. x Length		
Suction Filter -- Group 2		Liquid Temp Out			Lbs @ 90% PD		
Drier		TEV					

Condenser

Model #	
T.D.	
F P I	
Voltage	
FLA	
MCA	
MOPD	
Weight	
Size	
# of Fans	
Line To	
Line From	

Suction Crossover / Load Shed

Suction Group	1	2	3
Ball Valve			
Check Valve			
Solenoid			
C P R			
From / To			

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Store / Cust:	Food Lion	Rack A	
Location:	Edgemere, MD	Rack Model:	EXISTING HUSSMANN
Store #:	2560	Salesman	Kim Austin
Job #:	708916	Prepared By:	Kim Austin — Date Originated 8/12/19

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ARS	10/30/19	Kim Austin	Updated per A1.01_ARS - MEDIUM
A1	1/14/20	Kim Austin	Added ROF filters per walk through notes

Electrical Specs	Volt / Hz / Phase
Line	208/60/3
Control	208/60/1
MCA	367.0
Max. Overcurrent	400

Controller:	CPC
Single or Dual Point Pwr:	Single
Case Manufacturer	
Fixture Plan:	

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Sys No	Size	Model	Heat Exchr.	Expansion Valve	Temp Probe	Application	Load Load	Evap ° F	Def Type	Fans Amps	Fans Volts/1	Amps @ 120V Lights	Amps @ 120V Htrs	Watts @ 120V Fans	Watts @ 120V Lights	Watts @ 120V Htrs	Refrig. Valves Hot Gas	Refrig. Valves Liquid	Refrig. Valves Suction	Len. Run	Suction Horiz	Suction Riser	Liquid Horiz
18	8'8'12'12'12'	40' D5/12'DX6LD			1	Dairy Doors 34-37,N84	23.6	30	Off Cycle	7.4	115	9.5	7.9	851	1093	909			SORIT 15	240	1 1/8	7/8	1/2
19	20X25X8.5	2)AA38-195	EXISTING			Dairy Cooler	37.0	20	Off Cycle	9.6	115			690					SORIT 15	140	1 1/8	1 1/8	1/2
20						SPARE													SORIT 12				
21						SPARE													SORIT 12				
SC						Subcool Rack B	44.0	35	NONE												1 1/8		5/8

General Specifications

Refrigerant Type	R-448A
Condensing Temp	115
Outside Air Temp.	100
Required Load Group 1	501.60
Comp. Capacity Group 1	608.40
Effective capac. with subcooling	608.40
% Excess Capacity Group 1	18%
Rej. Heat (MBH) Group 1	821.34
Required Load Group 2	
Comp. Capacity Group 2	
Effective capac. with subcooling	
% Excess Capacity Group 2	
Rej. Heat (MBH) Group 2	
Required Load Group 3	
Comp. Capacity Group 3	
Effective capac. with subcooling	
% Excess Capacity Group 3	
Rej. Heat (MBH) Group 3	
Total Rej. Heat (MBH)	821.34
Heat Reclaim Avail. (MBH)	410.67
Compressor Capacity (Tons)	50.7
Rack Size	
Estimated Rack Weight Lbs.	

Rack Model: EXISTING HUSSMANN

Compressor Specifications

Compressor Group #	Comp #	Compressor	Cap	Suct ° F	HP	RPM	RLA	LRA	New Compressor Model	Capacity Control	Circuit Breaker	Contactor	Wire Size (AWG)
	1	2DC3-050L	36.6	20	5		22.3		2DC3R53KL-TFC		30A	25A	#10
	2	3DA3A075L	75.6	20	7.5		41		3DA3R10ML-TFC		60A	50A	#6
	3	3DA3A075L	75.6	20	7.5		41		3DA3R10ML-TFC		60A	50A	#6
	4	3DB3A100L	90.3	20	10		43.6		3DB3R12ML-TFC		60A	50A	#6
	4	3DB3A100L	90.3	20	10		43.6		3DB3R12ML-TFC		60A	50A	#6
	6	3DS3A150L	120.0	20	15		59.6		3DS3R17ML-TFC		80A	60A	#4
	7	3DS3A150L	120.0	20	15		59.6		3DS3R17ML-TFC		80A	60A	#4

Condenser

Model #	VRQ 117
T.D.	13.0
F P I	10
Voltage	208/1
FLA	28.0
MCA	30.0
MOPD	40
Weight	4400
Size	96X242"
# of Fans	10
Line To	2) 2 1/8
Line From	2) 1 5/8

Rack Components

Oil Separator -- Group 1	S-5608	Drain Regulator			Air reclaim	16D17B
Oil Separator -- Group 2		Master Solenoid			Water Reclaim	
Disch. Check Valve -- Grp 1		Surge Solenoid	REMOVE		Line size To	2 1/8
Disch. Check Valve -- Grp 2		Surge Ball Valve	1 5/8		Line size From	2 1/8
Disch. Reg. / Mas Liq		Surge Check			Bypass Valve	
Bypass Regulator		Surge Style			Split Cond. Valve	16D17B-SC
Oil Filter	ADD ROF	Attron			Ext. Cond. Bleed	
Brand / Number					Receiver H / V	
Suction Filter -- Group 1		Subcooler			Dia. x Length	
Suction Filter -- Group 2		Liquid Temp Out			Lbs @ 90% PD	
Drier		TEV				

Head Fan LT/MT	NO
Crankcase Htrs.	NO

Suction Crossover / Load Shed

Suction Group	1	2	3
Ball Valve			
Check Valve			
Solenoid			
C P R			
From / To			

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Job #:	708916	Prepared By:	Kim Austin — Date Originated 8/12/19

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A1	1/14/20	Kim Austin	Added ROF filters per walk through notes

Electrical Specs	Volt / Hz / Phase
Line	208/60/3
Control	208/60/1
MCA	260.7
Max. Overcurrent	300

Controller:	CPC
Single or Dual Point Pwr:	Single
Case Manufacturer	
Fixture Plan:	

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Sys No	Size	Model	Heat Exchr.	Expansion Valve	Temp Probe	Application	Load Load	Evap ° F	Def Type	Fans Amps	Fans Volts/1	Amps @ 120V Lights	Amps @ 120V Htrs	Watts @ 120V Fans	Watts @ 120V Lights	Watts @ 120V Htrs	Refrig. Valves Hot Gas	Refrig. Valves Liquid	Refrig. Valves Suction	Len. Run	Suction Horiz	Suction Riser	Liquid Horiz
1	10X11X8.5	AG34-105	EXISTING		1	Meat Freezer	9.4	-15	KG	1.5	230/1						E14S250	ME14S250	SORIT 12	80	7/8	7/8	5/8
2	3,3	6Dr QIV5V14			1	Frozen Bakery N69,N70	8.6	-18	KG	1.3	115	0.9	5.4	145	104	623	E14S250		SORIT 12	300	1 1/8	7/8	5/8
3	8X28X8.5	2)AG24-085	EXISTING		1	Bakery Freezer	12.5	-15	KG	4.0	230/1						E14S250	ME14S250	SORIT 12	350	1 1/8	1 1/8	5/8
4	5,5,3	13Dr RL				Frozen Food 60-62	13.9	-11	KG	9.1	115	8.0	15.2	1046.5	920	1748	E14S250		SORIT 12	120	1 1/8	1 1/8	5/8
5	5,5	10 Dr RL				Frozen Food 58,69	13.0	-11	KG	7.0	115	6.0	11.7	805	690	1346	E14S250		SORIT 12	160	1 1/8	1 1/8	5/8
6	5,5,3	13Dr RL				Frozen Food 47-49	13.9	-11	KG	9.1	115	8.0	15.2	1046.5	920	1748	E14S250		SORIT 12	140	1 1/8	1 1/8	5/8
7	5,5	10 Dr RL				Frozen Food 45,46	13.0	-11	KG	7.0	115	6.0	11.7	805	690	1346	E14S250		SORIT 12	160	1 1/8	1 1/8	5/8
8	5,5,3	13Dr RL				Frozen Food 53-55	13.9	-11	KG	9.1	115	8.0	15.2	1046.5	920	1748	E14S250		SORIT 12	160	1 1/8	1 1/8	5/8
9	5,5,5	15Dr RL				Frozen Food 50-52	19.5	-11	KG	10.5	115	9.0	17.5	1207.5	1035	2013	E14S250		SORIT 12	140	1 1/8	1 1/8	5/8
10	5,3,3	11Dr RL				Ice Cream 42-44	15.1	-19	KG	7.7	115	7.0	12.8	885.5	805	1472	E14S250		SORIT 12	160	1 1/8	1 1/8	5/8
11	4,3	7Dr RL				Frozen Meat 30,38	9.1	-11	KG	4.9	115	4.5	8.2	563.5	518	943	E14S250		SORIT 12	60	1 1/8	7/8	5/8
12	4,4,4,2	14Dr RL				Ice Cream 2,39-41	19.1	-19	KG	9.6	115	9.5	17.5	1104.0	1093	2013	E14S250		SORIT 15	210	1 3/8	1 1/8	5/8
13						SPARE											E14S250		SORIT 12				
14	11X16X8.5	ITG24-325	NEW		1	Ice Cream Freezer	13.2	-18	KG	4.6	230/1						E14S250	ME14S250	SORIT 12	60	1 1/8	7/8	5/8
15	11X34X8.5	2)AG34-105	EXISTING		1	Storage Freezer	22.0	-15	KG	3.0	230/1						E14S250	ME14S250	SORIT 12	80	1 3/8	1 1/8	5/8
16	8'8'	16' QIL1				Meat Promo N78,N79	6.0	-17	KG	1.3	115		2.0	147		225	E14S250		SORIT 12	80	7/8	7/8	5/8
17						SPARE											E14S250		SORIT 12				
18	5,4	9Dr RL				Frozen Food 56,57	11.7	-11	KG	7.0	115	6.0	11.7	805.0	690	1346	E14S250		SORIT 12	160	1 1/8	1 1/8	5/8

General Specifications

Refrigerant Type	R-22
Condensing Temp	110
Outside Air Temp.	100
Required Load Group 1	213.78
Comp. Capacity Group 1	223.95
Effective capac. with subcooling	279.71
% Excess Capacity Group 1	24%
Rej. Heat (MBH) Group 1	353.841
Required Load Group 2	
Comp. Capacity Group 2	
Effective capac. with subcooling	
% Excess Capacity Group 2	
Rej. Heat (MBH) Group 2	
Required Load Group 3	
Comp. Capacity Group 3	
Effective capac. with subcooling	
% Excess Capacity Group 3	
Rej. Heat (MBH) Group 3	
Total Rej. Heat (MBH)	353.841
Heat Reclaim Avail. (MBH)	176.92
Compressor Capacity (Tons)	18.7
Rack Size	
Estimated Rack Weight Lbs.	

Rack Model: EXISTING HUSSMANN

Compressor Specifications

Compressor Group #	Comp #	Compressor	Cap	Suct ° F	HP	RPM	RLA	LRA	New Compressor Model	Capacity Control	Circuit Breaker	Contactor	Wire Size (AWG)
	1	3DA3A0600	26.3	-20	6		30.3				40A	40A	#8
NEW	2	2DF3F16KL-TFC-441	15.2	-20	10		16.8				30A	30A	#10
	3	3DS3A100L	42.5	-20	10		42				60A	50A	#6
	4	4DT3F76KE	70.0	-20	22		66				90A	75A	#3
	5	4DT3F76KE	70.0	-20	22		66				90A	75A	#3
		CHANGE 3DS3A100L TO 2DF3F16KL-TFC-441											

Condenser

Model #	VRQ 67
T.D.	10.6
F P I	10
Voltage	208/3
FLA	16.8
MCA	18.0
MOPD	25
Weight	2500
Size	96 X 146"
# of Fans	6
Line To	2) 1 5/8
Line From	2)1 3/8

Rack Components

Oil Separator -- Group 1	S-5604	Drain Regulator			Air reclaim	12D13B
Oil Separator -- Group 2		Master Solenoid			Water Reclaim	12D13B
Disch. Check Valve -- Grp 1		Surge Solenoid	REMOVE		Line size To	1 5/8
Disch. Check Valve -- Grp 2		Surge Ball Valve	1 1/8		Line size From	1 5/8
Disch. Reg. / Mas Liq		Surge Check			Bypass Valve	
Bypass Regulator		Surge Style			Split Cond. Valve	12D13B-SC
Oil Filter	ADD ROF	Attron			Ext. Cond. Bleed	
Brand / Number					Receiver H / V	
Suction Filter -- Group 1		Subcooler			Dia. x Length	
Suction Filter -- Group 2		Liquid Temp Out			Lbs @ 90% PD	
Drier		TEV				TANK ISO VALVES

Head Fan LT/MT	YES
Crankcase Htrs.	

Suction Crossover / Load Shed

Suction Group	1	2	3
Ball Valve			
Check Valve			
Solenoid			
C P R			
From / To			