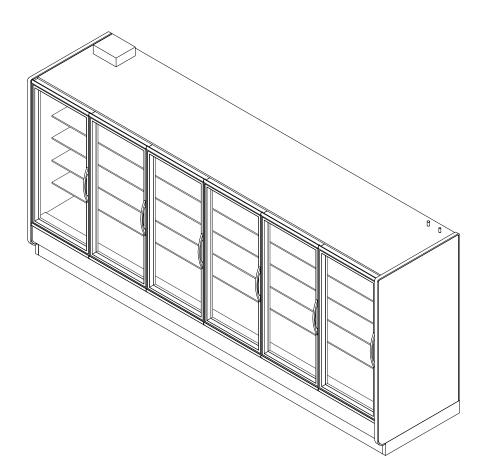
GENERAL NOTES:

- 4-foot cases Bi-Swing consist of 2 (24") doors.
- 6-foot cases Bi-Swing swing consist of 3 (24") doors.
- 8-foot case Bi-swing consist of 4 (24") doors.
- 12-foot cases Bi-swing consist of 6 (24") doors.
- · Lighting controls occupancy sensors are required.
- Option 1: OEM Provided: Lighting controls (on/off) are standard unless otherwise specified.

- Option 2: End User Provided: Lighting controls should be based on occupancy sensors. Store level A/S control should be set to 30 minimum off time at 75°F/55%RH.



SHIPPING W	/EIGHT
Case	Weight
ORB	



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ELECTRICAL DATA

		High Effic	iency Fans
Case	Fans Per	120	Volts
Length	Case	Amps	Watts
1 Door	1	0.22	26
2 Door	2	0.44	53
3 Door	3	0.66	79
4 Door	4	0.88	106
5 Door	5	1.10	132
6 Door	6	1.32	158
4'	1	0.22	26
6'	2	0.44	53
8'	2	0.44	53
12'	3	0.66	79

LIGHTING DATA

LIGHTING										
		OP	45	· · · ·	OP55 (French Swing Only)		· · · · · · · · · · · · · · · · · · ·		OP7 French Swing	
Case		120 \	/olts	120	Volts	120	Volts	120 \	Volts	
Length	Door Size	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
1 Door	31"	0.18	21.0			0.14	16.8			
2 Door	30"	0.36	43.1			0.28	33.0			
3 Door	30"	0.54	65.2			0.41	49.2			
4 Door	30"	0.73	87.3			0.55	65.4			
5 Door	30"	0.91	109.4			0.68	81.6			
6 Door	30"	1.10	131.5			0.82	97.8			
4'	24"			0.26	31.0			0.23	28.0	
6'	24"			0.52	61.9			0.44	52.3	
8'	24"			0.52	61.9			0.44	52.3	
12'	24"			0.77	92.8			0.64	76.6	

ANTI CONDENSATE DATA

			101 F	rames	Vista F	rames
			Un Heat	ed Doors	Un Heate	ed Doors
			ELMD, E	LMH, 190	Vista	C, 160
		Number of	120	Volts	120	Volts
Case Length	Door Size	Doors	Amps	Watts	Amps	Watts
1 Door	31"	1	0.16	19	0.16	19
2 Door	30"	2	0.32	38	0.32	38
3 Door	30"	3	0.50	60	0.50	60
4 Door	30"	4	0.69	83	0.69	83
5 Door	30"	5	0.86	103	0.86	103
6 Door	30"	6	1.06	127	1.06	127
4'	24"	2	0.18	22	0.18	22
6'	24"	3	0.35	42	0.35	42
8'	24"	4	0.39	47	0.39	47
12'	24"	6	0.63	76	0.63	76



COMPONENT ALL MEASUREMENTS ARE TAKEN PER ASHRAE-72-2005 SPECIFICATIONS. HILLPHOENIX REFRIGERATED DISPLAY CASES FOR SALE IN THE UNITED STATES MEET OR EXCEED DEPARTMENT OF ENERGY 2017 REQUIREMENTS.

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GUIDLINES AND CONTROL D	ΑΤΑ							
		Door	BTUH/D	oor	Superheat Set Point @ Bulb		Discharge	Discharge Air Velocity
Application	Doors	Size	Conventional	Parallel	(°F)	Evaporator (°F)	Discharge Air (°F)	(FPM)
Beverage	1 - 6 Door	30"	500	460	4 - 6	34	40	215
Beverage	4'	24"	400	365	4 - 6	34	40	215
Beverage	6'	24"	400	365	4 - 6	34	40	215
Beverage	8'	24"	400	365	4 - 6	34	40	215
Beverage	12'	24"	400	365	4 - 6	34	40	215
Bakery/Cut Produce/Dairy/Deli	1 - 6 Door	30"	560	510	4 - 6	30	36	215
Bakery/Cut Produce/Dairy/Deli	4'	24"	445	405	4 - 6	30	36	215
Bakery/Cut Produce/Dairy/Deli	6'	24"	445	405	4 - 6	30	36	215
Bakery/Cut Produce/Dairy/Deli	8'	24"	445	405	4 - 6	30	36	215
Bakery/Cut Produce/Dairy/Deli	12'	24"	445	405	4 - 6	30	36	215
Meat/Seafood	1 - 6 Door	30"	595	545	4 - 6	28	34	215
Meat/Seafood	4'	24"	475	435	4 - 6	28	34	215
Meat/Seafood	6'	24"	475	435	4 - 6	28	34	215
Meat/Seafood	8'	24"	475	435	4 - 6	28	34	215
Meat/Seafood	12'	24"	475	435	4 - 6	28	34	215

DEFROST CONTROLS

	Timed-Off Defrost					
Defrosts Per Day	Fail-Safe (Min)	Termination Temp (°F)				
4	30	47				

NOTES:

• "---" indicates that this feature is not an option for this case model.

- · Data listed is for Optimax Radiant. For other lighting options, please contact your sales representative.
- · Anti-condensate heat values represent a door with no heat on the glass.
- · Listed discharge air velocity represents the average velocity at the peak of defrost.

• Temperature and defrost settings listed above are recommended start-up settings. Final operational settings may need to be adjusted for the store conditions in which the case operates.

• The recommended evaporator temperatures may need to be adjusted based on system setup, store conditions, etc. The minimum recommended evaporator temperature is 4°F below the listed evaporator temperature.

• Light wattages above reflect 100% run time. To determine actual daily energy usage at 75°F/55%RH conditions, reduce the light wattage by 42%.



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SECOND NATURE DATA

SECOND NATURE D								
	No. of			BTUH/C)oor	GPM/ft	Supply Fluid	Discharge Air
Case Model	Coils	Application	Front Sill height	Conventional	Parallel	(DR)	Temp (°F)	Temp (°F)
ORB (30" DOOR)	1	Beverage	Std. Reach In	500	460	0.05	20	38
ORB (30" DOOR)	1	Deli/Dairy	Std. Reach In	560	510	0.08	20	36
ORB (30" DOOR)	1	Meat	Std. Reach In	595	545	0.11	20	34
ORB (30" DOOR)	1	Beverage	Std. Reach In	500	460	0.08	25	38
ORB (30" DOOR)	1	Deli/Dairy	Std. Reach In	560	510	0.13	25	36
ORB (30" DOOR)	1	Meat	Std. Reach In	595	545	0.16	25	34
ORB (PER FOOT)	1	Beverage	Std. Reach In	200	183	0.02	20	38
ORB (PER FOOT)	1	Deli/Dairy	Std. Reach In	223	203	0.03	20	36
ORB (PER FOOT)	1	Meat	Std. Reach In	238	218	0.04	20	34
ORB (PER FOOT)	1	Beverage	Std. Reach In	200	183	0.03	25	38
ORB (PER FOOT)	1	Deli/Dairy	Std. Reach In	223	203	0.05	25	36
ORB (PER FOOT)	1	Meat	Std. Reach In	238	218	0.06	25	34

SECOND NATURE DATA

						Timed-C	Off Defrost	Warm Fl	uid Defrost
	No. of			Supply Fluid	No. of	Fail-Safe	Termination	Fail-Safe	Termination
Case Model	Coils	Application	Front Sill height	Temp (°F)	Defrost	(Min)	Temp (°F)	(Min)	Temp (°F)
ORB (30" DOOR)	1	Beverage	Std. Reach In	20	4	60	47	26	49
ORB (30" DOOR)	1	Deli/Dairy	Std. Reach In	20	4	60	47	26	49
ORB (30" DOOR)	1	Meat	Std. Reach In	20	4	60	47	26	49
ORB (30" DOOR)	1	Beverage	Std. Reach In	25	4	45	47	26	49
ORB (30" DOOR)	1	Deli/Dairy	Std. Reach In	25	4	45	47	26	49
ORB (30" DOOR)	1	Meat	Std. Reach In	25	4	45	47	26	49
ORB (PER FOOT)	1	Beverage	Std. Reach In	20	4	60	47	26	49
ORB (PER FOOT)	1	Deli/Dairy	Std. Reach In	20	4	60	47	26	49
ORB (PER FOOT)	1	Meat	Std. Reach In	20	4	60	47	26	49
ORB (PER FOOT)	1	Beverage	Std. Reach In	25	4	45	47	26	49
ORB (PER FOOT)	1	Deli/Dairy	Std. Reach In	25	4	45	47	26	49
ORB (PER FOOT)	1	Meat	Std. Reach In	25	4	45	47	26	49

NOTES:

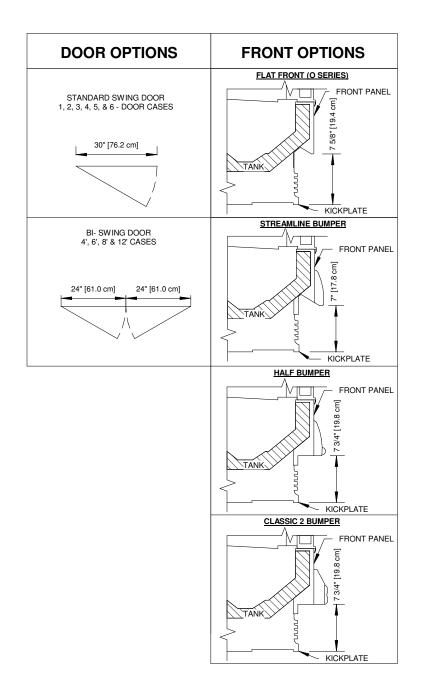
- All medium temperature data listed is for 35% by wt. PROPYLENE GLYCOL.
- Inhibited Propylene Glycol solution with water, such as Dowfrost or equivalent. (Dowfrost is a trademark of the Dow Chemical Company).
- · Flowrates are determined by ASHRAE test conditions and may need to be adjusted based on store conditions.
- ** Flowrates are per case



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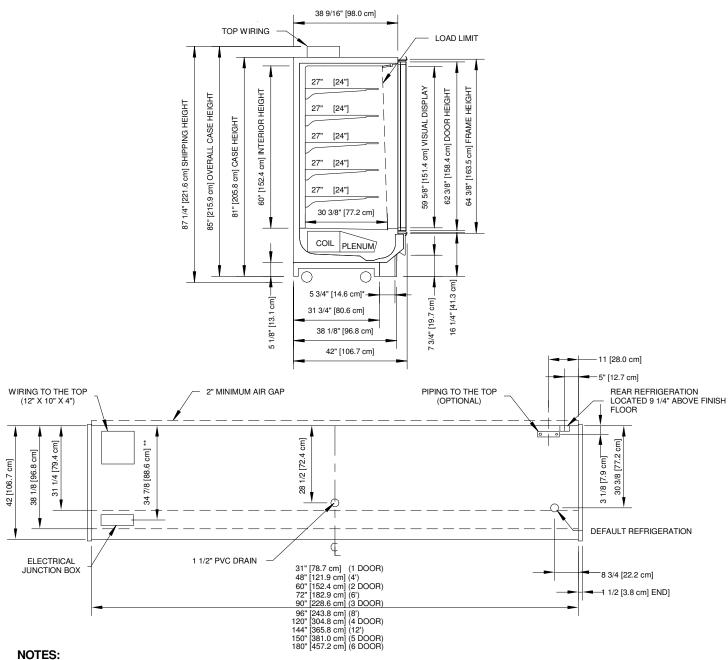




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NOTES:

* : STUB-UP AREA

- ** : RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS
- Ends add aproximately 1" to case height, 1/2" to the back & 1" to the front.



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